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Ride-Hailing Drivers' Preference for Fairwork Principles of Trustworthy Labour-Platform Management and Greater Worker-Autonomy and Willingness to Form and Join Worker-Platform Co-Operatives in Kenya

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Abstract

Ride-hailing worker-platform co-operatives had emerged as part of and for at least fairwork principles. Moreover, studies on e-drivers have recommended the formation of worker-platform co-operatives in Kenya. The actual worker-platform co-operatives by e-drivers are yet to be established. It was against this backdrop that a study was conducted to determine the extent of ride-hailing drivers' preference for fairwork principles of trustworthy labour-platform management, greater worker-autonomy and willingness to form and join worker-platform co-operatives. The study was grounded in the social exchange theory, affective theory of social exchange, and utility theory. The researcher applied critical-realism research philosophy and multimethod research designs of discrete choice experiments and sequential explanatory mixed method research designs. Using the Yamane sampling formula, the study used quantitative data from 497 respondents from sampled 600 of the 20,000 e-drivers in the Nairobi Metropolitan Region. The quantitative data was analysed using multinominal logistic regression. Moreover, the study used qualitative data from 11 participants, analysed using thematic analysis. Results indicated that the two fairwork principles were statistically significant to e-drivers' willingness to form and join worker-platform co-operatives. The trustworthy platform management (TPM) principle, in particular, was a highly preferred fairwork principle in terms of e-drivers' willingness to form and join worker-platform co-operative model (Coeff=2.62; SE = 0.400, Z = 6.54, p< .001), compared to the greater worker-autonomy contract (GAC) principle (Coeff=1.565, SE = 0.202, Z = 7.74, p< .001). This study brings practical and theoretical contributions to improve the e-drivers' benefits from the ride-hailing sector. Policymakers, promoters, and platform workers like e-drivers could understand how best to promote worker-platform co-operatives to succeed in the country's societal context.

Key Words: *Drivers' Preference, Trustworthy Labour-Platform Management, Greater Worker-Autonomy, Worker-Platform Co-Operatives*

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1.0 Background

The platform or digital economic sector is growing worldwide, especially with corresponding Digital Labour Platforms (DLPs) used by myriad platform workers (Constantinides et al., 2018). The International Labour Organisation (ILO) recognises the potential of the platform gig economy to change how work is organised and performed and the quality and content of jobs (Johnston & Land-Kazlauskas, 2018). There were estimated to be up to 40 million platform workers in the Global South alone (Heeks, 2019). In the beginning, DLPs have been lauded for creating job opportunities and commodifying labour with a sense of 'freedom', 'flexibility', 'inclusivity' and 'impartiality' (Anwar & Graham, 2022; Anwar et al., 2022; Anwar & Graham, 2021), making workers more productive and formalised (Lakemann & Lay, 2019), enhancing institutionalisation of outsourcing and flexibilisation of labour (Acs et al., 2020; Conaty et al., 2018), and transforming the future of work and facilitating the economic inclusivity of informal workers in the world (Rani et al., 2021). The country's Nairobi Metropolitan Region alone has approximately 20,000 e-drivers (Kiplagat, 2023). Okedi and Yano's (2020) study on "sector forces influencing the performance of online application-based taxi drivers in Kenya revealed that the ride-hailing sector market is valued at USD 200 to 300 million annually. It is, therefore, considered among the fastest-growing industries in the country.

However, e-drivers face challenges worldwide, including in Kenya (Saner et al., 2019; de Peuter et al., 2022). The increase in ride-hailing platforms does not mean that their quality and ethical standards are improving for favourable use by e-drivers. First, the unfair pay distribution, since there are no or there are limited and unenforced regulatory frameworks for employment standardisation and classification, minimum wage, lack of social protections, and risk-shift from investor owners to workers (Conaty et al., 2018; Eum, 2019). The ride-hailing platforms overcharge riders and underpay drivers (Montgomery, 2024). This reinforced Scholz's (2018) observation that 'platform capitalism' has monopoly syndrome, and people who sign on to it still struggle to make a living. Second, the stressed working conditions, where workers experience negative fluctuating platform network effects (McCann & Yazici, 2018), unstable and insufficient work, low pay, late payment, high fees, long hours, isolation, and surveillance (Bellini & Lucciarini, 2019; Wood et al., 2019; Rani et al., 2021; CECOP, 2021). Third, there is a lack of voice and transparency on digital labour platforms (DLPs) like ride-hailing platforms, given that the workers sign on these digital platforms as independent contractors, thus having one-sided service contracts (Schwettmann, 2020; Rani et al., 2021), they lack "bargaining and negotiation power" (de Peuter et al., 2022). Unclear algorithms also regulate them, and they have no control over their data (Bellini & Lucciarini, 2019; Borkin, 2019). Fourth, exclusion and discrimination, with notable cases of underrepresentation of women workers and racialised workers (Boyle & Oakley, 2018); occupational and task segregation based on gender (Rani et al., 2021); and service rating systems of ride-hailing platforms based on the worker's skin colour (Schor & Eddy, 2020). Gurumurthy and Chami (2020) observe that platform capitalism is "intensifying informality" and compounding and concealing labour hierarchies along gender, class, and race dimensions.

Due to the unfairness in the sector, issues of fairwork principles emerged. According to Rogers and Richmond (2016), fair work offers a compelling voice, opportunity, security, fulfilment, and

respect to workers. Essentially, worker-platform co-operatives are emerging in line with the fairwork framework principle of 'representation' (Graham et al., 2020). Platform co-operatives embed co-operative identity's six values (of self-help, self-responsibility, democracy, equality, equity, and solidarity), four ethical values (of honesty, openness, social responsibility, and caring for others), and seven principles (voluntary and open membership, democratic member control, members' economic participation, autonomy and independence, education, information and training, cooperation among co-operatives, and concern form community) (International Co-operative Alliance, 1995 as cited by Muldoon, 2020). Notably, worker-platform co-operatives benefit from platform work in several ways. Lawrence et al. (2019) state that co-operatives build justice and fairness goals into their mission and structure. They are "purposeful by design, established to serve specific socio-economic needs and populations, exhibiting fairwork principles' outcomes". First, worker-platform co-operatives counter various work-related problems in the digital economy and achieve several beneficial outcomes – such as resiliency, ameliorating and combating economic inequalities and injustices such as lower pay inequality and broader wealth spreads due to shared ownership (de Peuter et al., 2022). Second, worker-platform co-operatives address precarious work and the digitalisation of labour (Novkovic, 2019). Third, worker-platform co-operatives create a more humane and ethical digital economy (Chatterton & Pusey, 2019) and advance workers' rights (Scholz et al., 2021). Worker-platform co-operatives benefit e-drivers by fostering solidarity and voluntary labour standards (Schor & Eddy, 2020).

This study examined the extent of ride-hailing drivers' preference for fairwork principles of trustworthy labour-platform management and greater worker-autonomy and willingness to form and join worker-platform co-operatives.

2.0 Literature Review

2.1 Empirical Review

In the growing platform economic system and a rallying call for deepening co-operative identity, 'platform cooperativism' (platform co-operatives) has emerged (as a co-operative typology and platform workers' social 'representation') to counter platform capitalism (the concentration of ownership in the ascendant platform economy) of the tools and spaces that people rely on for work, sociality, and entertainment (CECOP, 2021; Aznar, 2016, as cited by de Caputo et al., 2018; Wegner et al., 2022; Cañada et al., 2023). Generally, platform co-operatives are at the crossroads of four movements. They react to the sharing and gig economies (where they temporarily access underutilised assets and labour, respectively) as they build on the positive of the free and open-source software (for collective action in the digital world) and co-operative movement (in terms of co-operative identity, values and principles) (Rijpens et al., 2023). Platform co-operatives, therefore, find themselves in a complex environment.

E-drivers are an example of 'location-based workers' in the on-demand sharing and gig economy. Therefore, they usually form worker-platform co-operatives, joining mono-stakeholder platform co-operatives or other ride-hailing platform actors like app developers, riders, and car owners to form multistakeholder platform operatives. The ride-hailing ecosystem is a complex system with different actors. Pasquali et al. (2022) conducted a qualitative study on a multi-faceted account of how "ride-hailing platforms, e-drivers, and riders are reshaping the mobility landscape in Accra, Ghana". The scholars observed how e-drivers depend on the broader ride-hailing ecosystem of actors. The ride-hailing ecosystem of actors illustrates four main groups of actors: regulators,

platforms, traditional transport actors, and international investors. However, in some instances, actors in the same group can be very competitive, like the ride-hailing platforms. Significantly, actors depend on each other in relationships, and their balance can evolve according to changes in different parts of the system of actors. For instance, the competition between ride-hailing platforms may result in negotiations for e-drivers' beneficial working conditions. Moreover, regulators' prospective decision to set a fixed price for rides may result in competition between platforms, and some platforms may depend on the volume of subscriptions for both e-drivers and riders. These scholars further observe that asymmetries exist among many actors regarding power and information diffusion. These asymmetries determine the actor's position and benefits in the system. For instance, local fleet managers evoke international investors or drivers to discuss car ownership issues. Ride-hailing platforms rely on local investments by drivers and car owners and the actions of regulators and traditional transport actors.

Studies reveal that e-drivers have formed worker-platform co-operatives to run jointly owned ride-hailing platforms to mitigate the fluctuating network effects of capitalistic ride-hailing platforms and in a case study of the 'Yamuv' Co-operative Federation in West Yorkshire, United Kingdom, McCann and Yazici (2018) observed this achievement. The worker-platform co-operative, jointly owned by the workers and users, highly protects the employment and human rights of those who participate and has developed business plans and strategies for members to leverage positive ride-hailing platforms' network effects without falling foul of negative ones. In addition, Mannan (2020) found that e-driver members of the 'Eva' co-operative in Quebec, Canada, have developed its matchmaking platform. With such jointly owned ride-hailing platforms, e-drivers receive more feedback than capitalistic ride-hailing platforms. The worker-platform co-operative had been equally exploring a social franchise system as a scale-up strategy, given the indicative case of the 'Trip Rider' co-operative in South Africa, which sought to collaborate with 'Eva' on the same (Farouk, 2022). Parikh (2023) observed that the Drivers' Co-operative (Co-Op Ride) in New York, United States, developed its platform dubbed the 'Co-Op Ride' platform. It serves about 2,5000 drivers. Rijpens et al.'s (2023) qualitative study on empowering communities with platform co-operatives as a catalyst for local development also found a 'Co-op Taxi' case in Edmonton, Canada, which provided drivers with a digital interface and cars while sharing profit among its stakeholders mainly the co-operative workers which gives them emotional stability.

These worker-platform co-operative cases from Canada, the US, and the UK have succeeded in the innovation management space of trustworthy ride-hailing platforms. Capitalistic ride-hailing platform administrators primarily focus on maximising profits for investors; the co-operative ride-hailing platform focuses on meeting the needs of its e-driver members, which often leads to more innovative solutions that adapt to the changing market environment. The success cases of worker-platform co-operatives in developing and managing trustworthy digital labour platforms can be attributed to Bühler et al. (2023) conceptualisation of a "co-operative as a pathway for data sovereign, innovative and equitable digital communities". The scholar's systematic review study contends that such ride-hailing platform's network effects, dis-economies of scale, and lock-in effects increasingly lead to a concentration of digital resources and capabilities, hindering the accessible and equitable development of digital entrepreneurship and jobs by platform workers, making them suffer emotionally, and sometimes quitting the ride-hailing job.

2.2 Theoretical Review

2.2.1 Social Exchange Theory and Fairwork Principles

The Social Exchange Theory (SET) emerged in 1958 when American sociologist George Homans published the article 'Social Behaviour as Exchange'. The scholar used a reductionist approach to explain the relationships between people (like in the ride-hailing worker-platform co-operative members) through reinforcement mechanisms, whereby the behaviour of social actors (like the e-drivers) is reinforced by rewards and inhibited by punishments. That stream of research viewed behaviour (of, for example, e-drivers working or not working together) as a result of a learning process through the positive and negative consequences that such behaviour entails (Homans, 1961, as cited by Davlembayeva & Alamanos, 2023).

To apply the SET theory in this study, the researcher conjectures a correspondence framework of the four SET dimensions to the four proposed independent variables of fairwork principles. SET is premised on four mechanisms. First is the social structure and social capital mechanism, in which social structures and capital factors stimulate social exchange relations. Second is the reciprocity mechanism, which creates obligations between the parties and the interdependence between social actors. Third is the exchange mechanism, where resources are exchanged based on the subjective cost-reward analysis. Fourth is the reinforcement mechanism, in which exchanging rewards or benefits and resources underpins individuals' motivation to engage in social interaction. This study's four independent variables took the theoretical direction of the SET mechanisms.

2.2.2 Affective Theory of Social Exchange and E-Divers' Willingness to Form and Join Worker-Platform Co-operatives

The affective theory of social exchange (ATSE) is an extension of social exchange theory (SET) (Davlembayeva & Alamanos, 2023). ATSE aimed to understand the conditions in which social exchange (like within the ride-hailing ecosystem) leads social actors (like e-drivers) towards attaching global negative and positive emotions (i.e. feeling good and feeling bad) to social objects (like owning ride-hailing platforms) and developing enduring negative and positive feelings toward them (like by forming or joining specific worker-platform co-operative subtype). ATSE contends that exchange (like within the ride-hailing ecosystem) almost invariably generates positive or negative individual (e-driver's) feelings. ATSE explains and predicts, through the endogenous process, how such individuals' (e-drivers') emotions and feelings impact social relations, networks, and groups (like worker-platform co-operatives) – from exchange to emotion to cohesion. The exchange structure (like worker-platform co-operatives) and its effects on social order (cohesion, commitment, and solidarity) are emphasised.

From the social exchange theory's (SET's) view, ATSE explains how rational choices (like by e-drivers) are interrelated with affective states (like their willingness to form and join worker-platform co-operatives), thus providing implications for developing social order (like either through 'TypeA' or 'TypeB' worker-platform co-operatives) (Lawler, 2002). ATSE holds that structural dimensions (like worker-platform co-operative subtypes create variations in the jointness of exchange (like between the e-drivers and the ride-hailing platform owners and managers). The jointness of exchange takes precedence over repetitive or frequent exchange as a source of order. ATSE aims to explain person-to-unit (like the e-drivers to ride-hailing platform ecosystem) ties and theorise how these develop from person-to-person (like one e-driver to another) interactions. ATSE, therefore, distinguishes the primary social objects (like ride-hailing

platforms) in exchange contexts (like ride-hailing ecosystem tasks, individual e-drivers, and other sector actors) and specifies the conditions in which positive or negative emotions (like e-drivers) are attributed to social units (like worker-platform co-operatives) rather than to self or other.

2.2.3 Utility Theory and E-Drivers' Preferences for Fairwork Principles and Willingness to Form and Join Worker-Platform Co-operatives

The Utility Theory (UT) was initially hypothesised by Bernoulli (Bernoulli, 1738; 1954) as a solution to the St. Petersburg paradox, in which diminishing marginal utility explains human risk aversion in a game of chance. This hypothesis was later grounded by von Neumann and Morgenstern (VNM), such that as long as one's (like e-driver's) preferences satisfied certain rationality maxims, one's (e-driver's) behaviour could be explained as maximisation of some utility function (like willingness to form and join worker-platform co-operatives and subtypes) in expectation (of like the fulfilment of fairwork principles) (von Neumann & Morgenstern, 1947 as cited by Shakerinava & Ravanbakhsh, 2022). UT seeks to explain the individuals' (like e-drivers') observed behaviour and preferences. UT makes four assumptions (Shakerinava & Ravanbakhsh, 2022): completeness (individuals can rank order all possible preferences, irrespective of how many preferences are placed before); 'more-is-better' (individuals choose a package which contains more of everything); 'mix-is-better' (individuals are indifferent to the choice between one or the other good); and rationality (individuals' innate preferences are fixed, regardless of the context and time). UT has been applied in various preference studies, including marketing, labour, and investment studies. Ahlheim et al. (2017) developed a discussion paper on considering labour as a unit of measure based on UT. Shi and Wang (2019) applied UT in a study on the decision-making of marketing risk management. Omar (2023) applied UT in a study on investment decisions in Kenya. In essence, this study is focused on determining e-drivers' utility expectation or decision (in terms of forming and joining worker-platform co-operatives) in a platform economic system (in terms of the ride-hailing ecosystem) in Kenya from the perspectives of the preferences of fairwork principles.

3.0 Research Methodology

The target population were taxi drivers of 'four-wheeler' vehicles using ride-hailing platforms in the Nairobi Metropolitan Region (NMR). The study's 'population of interest' was the 'four-wheeler' vehicle e-drivers in Kenya using ride-hailing platforms to access taxiing jobs. In the Nairobi Metropolitan Region (NMR) alone, there are approximately 20,000 e-drivers (Kiplagat, 2023). The 'accessible population' was e-drivers as a 'digital taxi group' in the NMR and members of related e-driver organisations such as the Digital Taxi Association of Kenya (DTAK), Organisation of Online Drivers (OOD), and 'Ubba' Savings and Credit Co-operative Society (SACCO). The 'accessible population' constituted the 'sampling frame'.

In this study, the 'sampling frame' was organised using existing 'digital taxi groups' such as the Digital Taxi Association of Kenya (DTAK), Organisation of Online Drivers (OOD), and 'Ubba' SACCO, and the geographical unit of Nairobi Metropolitan Region (NMR) and the names and positions of leaders in the e-driver's groups (Casteel & Bridier, 2021).

The study employed probabilistic and non-probabilistic techniques to select 'samples' for the quantitative and qualitative research. Probabilistic simple random sampling without replacement

(SRSWR) was used for the quantitative part of this study (Tabachnick & Fidell, 2018). Non-probabilistic purposive sampling was used for the qualitative part of the study. The researcher intentionally selected e-drivers because of their characteristics and qualities, which interest the researcher and those in pre-co-operatives or related group leadership positions (Etikan et al., 2016, as cited by Casteel & Bridier, 2021). However, the qualitative text data from purposively sampled participants contributed to gaining more insights into the research problem, explaining the quantitative results per the DCE and SEMMR designs and not generalising results to the population of interest.

For the quantitative design, the researcher determined the sample size based on the population of interest, which was 20,000 e-drivers in the Nairobi Metropolitan Region (Kiplagat, 2023). The researcher used the Yamane sampling formula (Olonite, 2022) to calculate the sample size:

$$n = \frac{N}{1 + N(\varepsilon)^2}$$

Where: n = the sample size, 1 = Booster or Step-down, N = the estimated size of the 'population of interest'. In this proposed study, the population of interest is about 20,000 e-drivers in the Nairobi Metropolitan Region. 'ε' is the margin of error—the variation between samples selected from the same 'population of interest', expressed as a percentage (%) expressed as a probability. This study's proposed margin of error is 0.05 (5% acceptable error or precision).

Calculation:

$$n = \frac{20{,}000}{1+20{,}000(0.05)^2} = 392$$

Therefore, the estimated sample size based on the given parameters was to be at least 392. The study relied on quantitative and qualitative data. Quantitative data were represented numerically, including anything that could be counted, measured, or given a numerical value. Qualitative (or categorical) data approximated and characterised and could be observed and recorded—to be arranged categorically based on the attributes and properties of a phenomenon.

Moreover, the research used qualitative data to determine the particular frequency of traits or characteristics and allow the researchers to form parameters for more extensive data sets to be observed and quantified. Qualitative data was about people's emotions, perceptions, and feelings. Qualitative analysis was critical to getting valuable insights from the data, figuring out its rich context, and finding subtle patterns and themes. The researcher utilised questionnaires to collect quantitative primary data. Questionnaires provided structured and standardised responses, reducing biases and intrusiveness from many respondents. Within two weeks, they quickly resulted in a high rate of responses at a low cost and made the analysis process more streamlined and less time-consuming (Pozzo et al., 2019). While the respondents' opinions were not numerical, assigning a 'numerical value' allowed the researcher to perform tasks like finding their average opinions.

Both discrete choice experiment (DCE) and sequential explanatory mixed method research (SEMMR) designs have some advantages in terms of the reduction of sources of bias, where

respondents can compensate between the various characteristics of the good, the breakdown of the significant variables into the more minor sub-variable questions, the obtainment of more information by the respondents, and a decreased incidence of ethical protests (Guerrero et al., 2020). Once the questionnaire had been designed, the researcher pre-tested it with the target group of e-drivers to validate it, providing the most direct evidence for the validity of the questionnaire data for most items (Hilton, 2017). The pilot test was conducted among 12 e-drivers in Nairobi City in June 2024 who were not included in the study sample. At this time, most e-drivers were sceptical of revealing their details, including telephone contacts, car registration numbers, and approximate incomes. The pilot-test participants offered several comments and suggestions regarding the questionnaire's areas of improvement. To ensure higher participants' receptiveness to the study and the subsequent security of the research assistants, other questions were expunged from the questionnaire. Some socio-economic characterisation questions were re-arranged for better flow. To ensure clarity, some questions were also reframed.

4.0 Results

4.1 Trustworthy Labour-Platform Management Principle and Willingness to Form and Join Worker-Platform Co-operatives

Table 1: Model of Fit Measure with only TPM Principle in the Model

Model Fit Measures

				Overall Model Test		
Model	Deviance	AIC	R^2_{McF}	χ^2	df	p
1	349	357	0.325	168	2	< .001

Note. Models estimated using sample size of N=497

Omnibus Likelihood Ratio Tests

Predictor	χ^2	df	p
TPM Principle	168	2	< .001

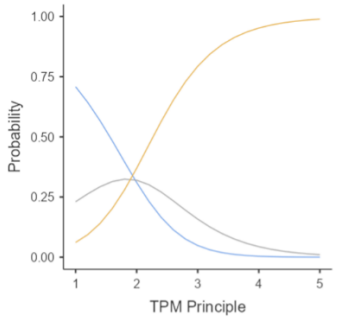
The variable had a significant p-value of < .001, indicating that as a predictor, it carries substantial weight and has a meaningful impact on the model, a finding of great importance. It significantly improved the model fit as an individual variable and was associated with the outcome of e-drivers' willingness to form or join worker-platform co-operatives, given the chi-square value of 168.

The Model Coefficients (in appendix 1) show that for the 'no preference' of the platform work-structure category relative to the 'investor-owned firm' (reference category), the coefficient for the TPM principle is 1.15 (SE = 0.408, Z = 2.82, p= 0.005), with a 95% confidence interval of (0.352, 1.951). The corresponding odds ratio (OD) was 3.16426. This means that for every agreement level decrease for the IOF's compliance with the TPM principle, the log odds of choosing to have 'no preference' increase by 1.15 units (or odds ratio of 216.426%), holding all other variables constant.

On the other hand, the Model Coefficients (appendix 1) show that for the 'worker-platform co-operative' category relative to the investor-owned firm' (reference category), the coefficient for the TPM principle is 2.62 (SE = 0.400, Z = 6.54, p< .001), with a 95% confidence interval of (1.835, 3.404). The corresponding odds ratio (OD) was 13.72874. This means that for every agreement level increase for the existing IOFs' compliance with the TPM principle, the log odds of choosing to form or join the worker-platform co-operative (as opposed to working directly with

the investor-owned firms) increase by 2.62 units (or odds ratio of 1,272.874%), holding all other variables constant. Considering the relatively higher positive coefficients, p-values, and odds ratios in both comparisons, the results indicated that the TPM principle significantly affected e-drivers' willingness to form or join worker-platform co-operatives, compared to no preference and IOF choices.

The graphic results (Figure 1) showed the TPM principle's agreement levels determining the e-drivers' choice of platform work structures.



Estimated Marginal Means - TPM Principle

TPM Principle	Platform Work Structure	Probability	SE	95% Confidence Interval Lower	95% Confidence Interval Upper
2.83 [-]	Investor Owned Firm	0.07084	0.02156	0.01097	0.13071
	No Preference	0.18959	0.02734	0.11369	0.26550
	Worker Platform Co-op	0.73957	0.03260	0.64905	0.83009
3.87 [a]	Investor Owned Firm	0.00585	0.00399	-0.00523	0.01693
	No Preference	0.05215	0.01231	0.01798	0.08632
	Worker Platform Co-op	0.94200	0.01302	0.90586	0.97814
4.92 [+]	Investor Owned Firm	3.98e-4	4.32e-4	-8.03e−4	0.00160
	No Preference	0.01181	0.00480	-0.00153	0.02515
	Worker Platform Co-op	0.98779	0.00486	0.97429	1.00129

Note. [-] mean - 1SD, [a] mean, [+] mean + 1SD

Figure 1: Probability Graph for Trustworthy Labour Platform Management Principle

The probability graph results show that as the TPM principle's compliance by existing IOFs deteriorates, the probability of e-drivers being 'strongly disagree' and 'disagree' increases for worker-platform co-operatives, while the probability of being 'strongly agree', 'agree' and 'neutral' declines for 'no-preference' and 'investor-owned firm'. This indicates a stronger disagreement level increase on the TPM principle's compliance by existing IOFs, strongly associated with increased e-drivers' choice of worker-platform co-operatives.

4.2 Greater Worker-Autonomy Contracts Principle and Willingness to Form and Join Worker-Platform Co-operatives

Table 2: Model of Fit Measure with only GAC Principle in the Model

Model Fit Measures

				Overall Model Test		
Model	Deviance	AIC	R^2_{McF}	χ^2	df	p
1	388	396	0.249	129	2	< .001

Note. Models estimated using sample size of N=497

Omnibus Likelihood Ratio Tests

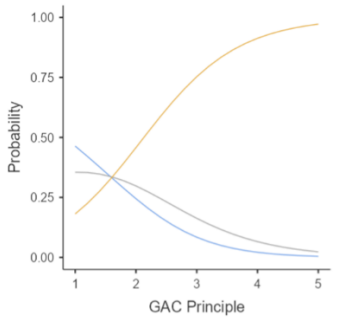
Predictor	χ^2	df	p
GAC Principle	129	2	< .001

The variable had a significant p-value of < .001, indicating that as a predictor, it carries substantial weight and has a meaningful impact on the model, a finding of great importance. It significantly

improved the model fit as an individual variable and was associated with the outcome of e-drivers' willingness to form or join worker-platform co-operatives, given the chi-square value of 129. The Model Coefficients (in appendix 2) show that for the 'no preference' of the platform work-structure category relative to the 'investor-owned firm' (reference category), the coefficient for the GAC principle is 0.464 (SE = 0.209, Z = 2.21, p= 0.027), with a 95% confidence interval of (0.0529, 0.874). The corresponding odds ratio (OD) was 1.5897. This means that for every agreement level decrease for the IOF's compliance with the GAC principle, the log odds of choosing to have 'no preference' of platform-work structure increase by 0.464 units (or odds ratio of 58.97%), holding all other variables constant.

On the other hand, the Model Coefficients (in appendix 2) show that for the 'worker-platform co-operative' category relative to the investor-owned firm' (reference category), the coefficient for the GAC principle is 1.565 (SE = 0.202, Z = 7.74, p< .001), with a 95% confidence interval of (1.1685, 1.961). The corresponding odds ratio (OD) was 4.7822. This means that for every e-drivers' agreement level decrease for the existing IOFs' compliance with the GAC principle, the log odds of choosing to form or join the worker-platform co-operative (as opposed to working directly with the investor-owned firms) increase by 1.565 units (or odds ratio of 378.22%), holding all other variables constant.

The graphic results (Figure 2) showed the GAC principle's agreement levels determining the e-drivers' choice of platform work structures.



Estimated Marginal Means - GAC Principle

GAC Principle	Platform Work Structure	Probability	SE	95% Confidence Interval Lower	95% Confidence Interval Upper
2.90 ⁻	Investor-Owned Firm	0.09498	0.02016	0.03899	0.15096
	No Preference	0.17567	0.02549	0.10490	0.24644
	Worker Platform Co-op	0.72935	0.03134	0.64233	0.81638
4.01 ᵐ	Investor-Owned Firm	0.02091	0.00754	-1.40e−5	0.04183
	No Preference	0.06474	0.01272	0.02943	0.10004
	Worker Platform Co-op	0.91436	0.01468	0.87360	0.95511
5.13 ⁺	Investor-Owned Firm	0.00392	0.00219	-0.00216	0.00999
	No Preference	0.02031	0.00657	0.00207	0.03855
	Worker Platform Co-op	0.97577	0.00714	0.95596	0.99559

Note. ⁻ mean - 1SD, ᵐ mean, ⁺ mean + 1SD

Figure 2: Probability Graph for Greater Worker-Autonomy Contracts Principle

The probability graph results show that as the GAC principle's compliance by existing IOFs deteriorates, the probability of e-drivers being 'strongly disagree' and 'disagree' increases for worker-platform co-operatives, while the probability of being 'strongly agree', 'agree' and 'neutral' declines for 'no-preference' and 'investor-owned firm'. This indicates a stronger disagreement level increase on the GAC principle's compliance by existing IOFs, strongly associated with increased e-drivers' choice of worker-platform co-operatives.

5.0 Conclusions and Recommendations

5.1 Conclusions

The study concludes that adherence to the fair work principles, particularly regarding trustworthy platform management (TPM) and greater worker-autonomy (GAC), plays a pivotal role in influencing e-drivers' willingness to form and join worker-platform co-operatives in Kenya. Findings indicate that e-drivers show significant concern for management practices that uphold

honesty, transparency, accountability, and respect for worker rights. The study concludes that drivers are far more inclined to organise and participate in co-operatives to counter the adverse effects of low compliance with these principles. This inclination is particularly strong where drivers feel their employment rights are undermined or personal data is mishandled, as they seek to mitigate issues such as fluctuating network effects, dis-economies of scale, and lock-in effects—challenges also identified in studies across regions like the UK (McCann & Yazici, 2018) and North America (Parikh, 2023). Additionally, the study concludes that e-drivers' preference for platforms that allow greater worker autonomy reflects a broader desire for enhanced ownership, contract fairness, and decision-making influence within the ride-hailing industry. The findings suggest that e-drivers in Kenya, similar to those in other regions, are increasingly willing to explore collective labour models to safeguard their autonomy, voice, and fair treatment, marking a potential shift in labour organisation within platform-based economies.

5.2 Recommendations

Government agencies should draw lessons and benchmarks in countries – especially in Eastern Europe and North America – with thriving ride-hailing ecosystems where the e-drivers are at the core through the worker (Bunders et al., 2022) or in Africa countries like Ghana where there is an established relationship between e-drivers and riders (Pasquali et al., 2022) or in South Africa, where worker-platform co-operatives by e-drivers such as 'Trip Rider SA' co-operative are emerging (Farouk, 2022). They should also draw lessons and benchmark the regulatory framework and its enforcement, especially in Eastern Europe and North America (Pentzien, 2020; Parikh, 2023; Rijpens et al., 2023).

Notably, the co-operative legal and regulatory frameworks are not isolated; they are cognizant of the jurisdictions' constitutions and related policies, laws and regulations in other enterprises, non-profit organisations, and sectors (Henry, 2021). Legal frameworks usually affect the development of co-operatives in a particular jurisdiction (Matabi et al., 2022). The legal and regulatory frameworks should be developed or reviewed accordingly to reinforce the rights of e-drivers and riders in the ride-hailing sector by defining, mitigating, and addressing relationships between them and the ride-hailing platform owners and managers in the country's societal contexts.

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Appendices

Appendix 1: Model Coefficients – Preferred Platform Work Structure with only TPM Principle

Model Coefficients – Platform Work Structure

Platform Work Structure	Predictor	Estimate	95% Confidence Interval		SE	Z	p	Odds ratio	95% Confidence Interval	
			Lower	Upper					Lower	Upper
No Preference – Investor-Owned Firm	Intercept	-2.27	-4.125	-0.423	0.944	-2.41	0.016	0.10289	0.0162	0.6549
	TPM Principle	1.15	0.352	1.951	0.408	2.82	0.005	3.16426	1.4225	7.0387
Worker Platform Co-op – Investor-Owned Firm	Intercept	-5.06	-6.908	-3.221	0.941	-5.38	< .001	0.00632	10.00e-4	0.0399
	TPM Principle	2.62	1.835	3.404	0.400	6.54	< .001	13.72874	6.2641	30.0889

Appendix 2: Model Coefficients – Preferred Platform Work Structure with only GAC Principle

Model Coefficients – Platform Work Structure

Platform Work Structure	Predictor	Estimate	95% Confidence Interval		SE	Z	p	Odds ratio	95% Confidence Interval	
			Lower	Upper					Lower	Upper
No Preference – Investor-Owned Firm	Intercept	-0.730	-1.8397	0.379	0.566	-1.29	0.197	0.4817	0.1589	1.461
	GAC Principle	0.464	0.0529	0.874	0.209	2.21	0.027	1.5897	1.0544	2.397
Worker Platform Co-op – Investor-Owned Firm	Intercept	-2.504	-3.6289	-1.378	0.574	-4.36	< .001	0.0818	0.0265	0.252
	GAC Principle	1.565	1.1685	1.961	0.202	7.74	< .001	4.7822	3.2171	7.109

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Jared M.O. Matabi: Writing – original draft, methodology, investigation, formal analysis, data curation, conceptualisation. Prof. Esther Njoki Gicheru: Supervision. Prof. Lucy Maina Kiganane: Supervision.

Compliance with Ethical Standards

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