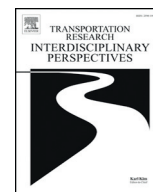




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Effect of social capital on the life satisfaction of paratransit drivers in Sri Lanka

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ABSTRACT

The three-wheeler, a Sri Lankan form of paratransit, is a popular and important mode of transport in Sri Lankan cities due to largely insufficient public transport systems. However, knowledge of the three-wheeler industry including the role of drivers' groups and the effect of these groups' social capital related factors on the driver's life satisfaction is scarcely available. Thus, the objectives of this study are to clarify the actual condition of the industry and to identify the social capital related factors that affect drivers' life satisfaction in three cities in Sri Lanka. To this end, extensive interviews were conducted and revealed that national and local governments do not control the numbers or management of three-wheeler drivers and vehicles, but they do receive rent for using public road space for parking. In order to determine the effect of social capital factors, including working conditions and societal trust levels, on three-wheeler drivers' life satisfaction, we developed an ordered logit model based on questionnaire surveys in three target cities. In addition, the differences among the cities examined regarding provincial policies for three-wheelers, the percentage of drivers who have other jobs, and relationships between drivers' societies were revealed. As a result of the analysis, we identified differences between drivers based in the three cities regarding the social capital and work-related variables that have the greatest impact on their life satisfaction. In particular, we found that drivers based in the city of Kandy emphasized general social capital variables over work conditions and salary, but the opposite was obtained for the cities of Colombo and Moratuwa.

1. Introduction

Paratransit is defined as a middle transport mode between public and private transport and, in many developing Asian countries where public transport availability and service are relatively poor, it plays an important role (Phun and Yai, 2016). A primary reason for paratransit's importance is that it is a form of social-economic activity and an employment opportunity for poor and/or low-skilled people (Cervero and Golub, 2007). Concurrently, however, paratransit has often been criticized for having an adverse effect on traffic, such as by contributing to traffic accidents, and also for causing environmental issues (Cervero, 2000). Further, paratransit is considered to be an unreliable transport service with minimal comfort and an informal industrial structure (Joewono and Kubota, 2007a). As a result, the paratransit market is currently receiving little public investment, subsidies, or policy interventions (Joewono and Kubota, 2007b). Consequently, the local governments and councils of many Asian cities have discussed eliminating paratransit from city transport systems

(Fujiwara and Zhang, 2013; Loo, 2007; Tangphaisankun et al., 2009), and a number of actions have been suggested for improving the efficiency of paratransit and improving urban mobility in developing countries (Shimazaki and Rahman, 1996). A Sri Lankan form of paratransit, the three-wheeler (3W), acts as an important transport mode in the country, boasting a high modal share and growth rate. For instance, in 2014 the modal share of the 3W in Sri Lanka was approximately 13.3% in terms of passenger-km, and the number of registered vehicles was 7.3 times higher than in 2001, indicating dramatic growth (National Transport Commission, 2015, p. 22). Further, by July 2017, there were 1,009,921 3W operating in the country; the Western Province alone recorded 326,087 3Ws (Central Bank of Sri Lanka, 2018). Despite recognizing the importance of the 3W as a means of transport and an employment opportunity for drivers and vehicle-maintenance shops, the local governments of the Sri Lankan cities of Colombo and Moratuwa revealed that they have intentions to reduce the number of 3Ws, as there is currently an oversupply situation (Kumarage et al., 2010). On the other hand, Kandy, the former-capital city in Sri Lanka, has adopted a more severe attitude toward the 3W industry, including its drivers. Kandy's local government is attempting to reduce paratransit (Kumarage, 2014) and plans to introduce a bus transit system across the city. The city is employing means such as imposing high rental fees on 3W parking lots (spaces where

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3Ws wait for passengers); this fee is approximately 10 times higher than those in Colombo and Moratuwa according to the interview results gathered by this research. Further, within the city, a uniflow traffic system has been introduced, which has made the commute time of 3Ws longer (Kumarage, 2014). Thus, the working environment of 3W drivers in Kandy is worsening.

In response to this situation, the 3W industry has made several attempts to adapt to the local government's policies and improve drivers' lives. For example, a trade union for 3W drivers was established in Kandy in order to protect drivers' jobs and reduce drivers' burdens (e.g., in regard to payment of rental fees for 3W parking lots). Further, Sri Lankan paratransit drivers have also organized unique groups, called "societies," which offer several welfare services to member drivers. Societies are being established in all surveyed cities in Sri Lanka. The 3W drivers are strengthening their relationships with other individuals, groups, and organizations to establish the means to facilitate their 3W operation. In emergency situations, such as traffic accidents, they can expect assistance from other members of their societies or groups, which secures their lives. On the contrary, if 3W drivers do not trust their government, they feel uncomfortable, which may have a negative impact on their lives. Therefore, enriching their relationships with other objects can be considered likely to improve their lives; this corresponds to the creation of social capital networks, which are networks with shared norms, values, and understanding that facilitate relationships within or among groups (Portes, 1998; Putnam et al., 1994). Further, social capital networks can exist among friends, family members, former colleagues, and so on (Portes, 1998). In line with its general definition, social capital is defined in this study as the richness of the relationships among the stakeholders in the 3W industry (e.g., the relationship between drivers and local governments and that between drivers and their societies). According to Currie and Stanley (2008), social capital describes the advantage held by individuals and communities in gaining the benefits of social participation, mutual assistance, and trust. In this context, social capital possibly ensures 3W drivers' well-being and their existence in the society. Hence, if we can identify the social capital related to the 3W industry as an important factor affecting the life satisfaction of 3W drivers, we can improve the drivers' life satisfaction by enriching the social capital. This is particularly relevant in Kandy, where the relationship between the 3W industry and the local government is currently worsening (Kumarage, 2014).

Considering the above information, the objectives of this study are to clarify the actual condition of the industry and to identify the social capital related factors that affect the life satisfaction of 3W drivers in the three cities of Colombo, Moratuwa, and Kandy in Sri Lanka. Few previous studies have examined Sri Lankan 3Ws, particularly in relation to supply-side issues (i.e., drivers and governments). Kumarage et al. (2010) analyzed fundamental information regarding 3W drivers in Moratuwa, including their education level and salary. Meanwhile, Somasundaraswaran et al. (2006) analyzed the personal characteristics of 3W drivers, such as their age and family size, while Kirkorowicz (2012) examined the health problems experienced by 3W drivers in Galle City. However, these studies performed only fundamental analyses and mainly addressed the attributes of 3W drivers in Sri Lanka and, to date, no study has examined the 3W industry's operation system or specifically conducted social capital based transportation research. Utsunomiya (2016) studied social capital formation in public transportation from the perspective of developed countries, such as Japan. The study revealed that the service level of public transportation is correlated with the level of social capital. Stanley et al. (2010) and Stanley et al. (2012) found that the ability to establish effective bridging networks is related to an increase in travel and the promotion of social inclusion. However, these studies do not discuss public transport users' perspectives on the impact of social capital and the social capital related factors that affect drivers' life satisfaction. Further, to date, there have been no studies on social capital

and transportation considering the Sri Lankan context. However, a few Sri Lankan studies on social capital are available; for example, studies on livelihood development in rural communities (Gunasekara et al., 2017), fisheries (Somaratne et al., 2011), and agriculture (Uphoff and Wijayarathna, 2000). Such studies analyzed collective action and cooperation, information and communication, and trust and solidarity as part of social capital; thereby, they considered how these activities enriched social welfare, as well as people's lives.

The remainder of this paper is organized as follows. Section 2 describes the methodology, including the process for interviews and questionnaire surveys, as well as the study area. In Section 3, the actual situation of the 3W industry, focusing on supply-side factors, is discussed. This information is based on extensive interviews with several stakeholders in the 3W industry, including a number of drivers. In Section 4, descriptive analysis of the data collected from the questionnaire surveys is performed in order to identify the fundamental characteristics of the sample. Subsequently, in Section 5, 3W drivers' satisfaction with their lives is estimated through condensing social capital relationships, which includes their relationship with their local governments and societies. Finally, a conclusion is provided in Section 6.

2. Methodology

2.1. Study area

In order to compare different types of cities, three cities were selected as study areas; namely, Colombo and Moratuwa in Sri Lanka's

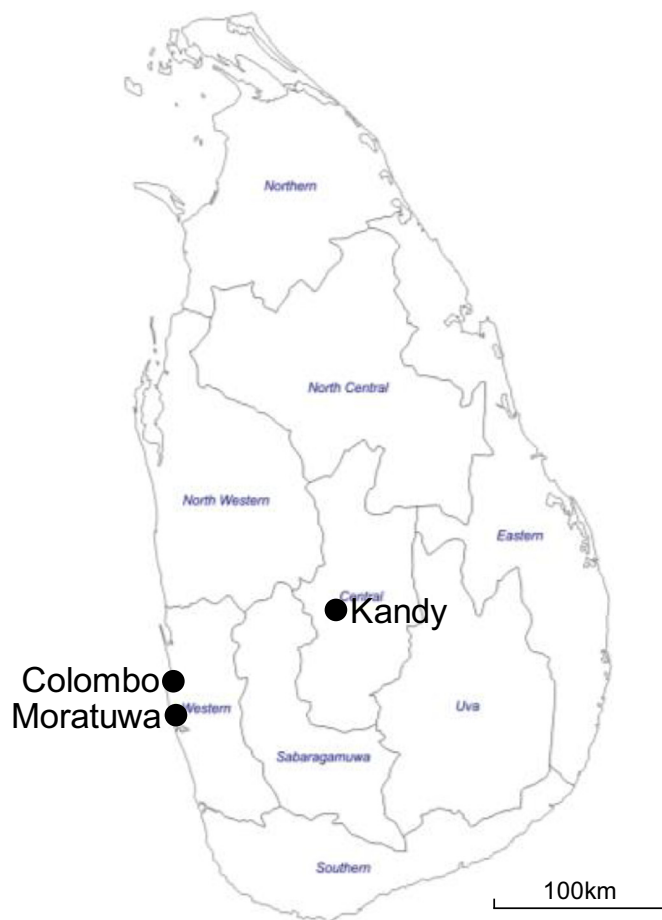


Fig. 1. Location of the three study areas in Sri Lanka.

Table 1
Characteristics of the three cities.

City (Province)	Population ^a (year)	Characteristics
Colombo (Western)	752,993 (2011)	<ul style="list-style-type: none"> - The largest city in Sri Lanka in terms of economy and population - Commercial area - Has bus and train routes
Moratuwa (Western)	167,160 (2011)	<ul style="list-style-type: none"> - Commercial and residential area - Has bus and train routes
Kandy (Central)	125,400 (2011)	<ul style="list-style-type: none"> - The capital city of Central Province - Commercial, residential, and tourism area - Former capital and a place of historical significance - Has bus and train routes

^a Source: Department of Census, and Statistics, Sri Lanka (2012).

Western Province, and Kandy in the country's Central Province. The location and fundamental characteristics of each city are shown in Fig. 1 and Table 1. Colombo is the largest city in Sri Lanka in terms of both economy and population (Department of Census, and Statistics, Sri Lanka, 2012). Meanwhile, Moratuwa is a satellite city of Colombo and a commercial and residential area in Western Province. In these two cities, a number of buses are operated both privately and publicly, which represent the primary mode of transport for commuting and shopping (JICA, 2014). Trains are also operated and used for longer-distance trips than buses; however, buses and trains are not well integrated and there is an insufficient linkage of networks (JICA, 2014). In general, as shown in the interviews addressed in the next section, 3Ws act as a mode of feeder transport for the buses and trains in Colombo and Moratuwa. Kandy is the capital city of Central Province and the former-capital city of Sri Lanka. Kandy is the home of The Temple of the Tooth Relic, one of the sacred places of worship in the Buddhist world which was declared a world heritage site by UNESCO in 1988. Thus, many foreign tourists visit Kandy and 3Ws are widely used by foreign tourists as well as local people. Similar to Colombo and Moratuwa, buses and trains are available in the city and, in general, 3Ws act as feeder transport for the buses and trains. However, the relationship between buses and 3Ws in Kandy is more competitive compared to that in Colombo and Moratuwa (Global Vision, 2018; University of Moratuwa, 2011).

2.2. Data collection

2.2.1. Interview surveys

Interviews were conducted in order to determine the operational systems, the welfare services for 3W drivers, and the relationships among stakeholders regarding the 3W industry in Sri Lanka. A “society” is a driver's group comprised of residents of the neighborhood (details will be provided in Section 3). Table 2 provides an overview of the interviews. Face-to-face interviews were conducted between October 2nd and 7th and December 5th and 9th, 2016, with several stakeholders in the 3W industry. National-level organizations were interviewed in order to obtain an overview of the 3W industry in Sri Lanka. Interviews were also conducted with members of local governments, the All-Island 3W Drivers and Owners Association, and the Kandy 3W Drivers' Trade Union in order to obtain an understanding of the 3W industry's actual operation system, the welfare services that are available for drivers, the main problems that exist in the industry, and the relationships among stakeholders. Local governments are in charge of managing the 3W industry in terms of allocating 3W parking lots and determining rental fees. Further, city transport policies are also determined by local governments. We also conducted interviews with a number of 3W drivers to understand 3W operation and

Table 2
Overview of the interview surveys.

Items	Contents
Survey objectives	<ul style="list-style-type: none"> - To understand the operation system of the 3W industry - To identify the welfare services available for 3W drivers - To reveal the relationships among stakeholders in the 3W industry
Survey period	2–7th October 2016 and 5–9th December 2016
Survey method	Face-to-face interview
Interviewees	<p><u>Colombo</u></p> <ul style="list-style-type: none"> - Ministry of Transport - National Transport Commission - Department of Motor Traffic - Western Province Passenger Transport Authority - Colombo Municipal Council - All-Island 3W Drivers' and Owners' Association <p><u>Moratuwa</u></p> <ul style="list-style-type: none"> - Moratuwa Municipal Council - Four societies* (3W driver groups) <p><u>Kandy</u></p> <ul style="list-style-type: none"> - Municipal Council - Kandy 3W Drivers' Association - Three societies - Peradeniya Police (Peradeniya is a suburb in Kandy)
Survey contents	<ul style="list-style-type: none"> - Revealing the interviewed institution/associations' roles in the 3W industry - Revealing the roles, problems, and policies regarding 3Ws in each city - Revealing the relationships among stakeholders - Revealing the system of 3W operation and management - Revealing the role and system of the societies - Revealing future transport plans and roles of 3Ws

management systems, welfare services for drivers, and relationships among stakeholders.

2.2.2. Questionnaire survey

In addition to the interview survey, questionnaire surveys were conducted to identify the fundamental attributes of 3W drivers and their satisfaction with their working conditions, and also to collect input data for the model that was developed to identify the factors affecting the life satisfaction of 3W drivers. The questionnaire surveys were conducted between December 5th and 9th, 2016, with 20 surveyors in each city. In each city, the location distribution of the 3W society in the city was provided by the local government. To avoid selection bias, surveyors were proportionally distributed in each area of the city. Further, the questionnaire survey was conducted face-to-face with each driver to ensure that the data which was collected was reliable. Therefore, the collected data should be sufficiently reliable; however, it is difficult to check the representativeness of the sample since population data on 3W drivers are lacking.

As shown in Table 3, the questionnaire included several variables pertaining to factors that might affect the life satisfaction of drivers based on several earlier studies (i.e., Currie and Stanley, 2008; Orłowski and Wicker, 2015; Portes, 1998; Putnam et al., 1994; Stanley et al., 2010; Stanley et al., 2012; Utsunomiya, 2016). The influence of these variables on life satisfaction was clarified through model development; hence, in this stage, as many variables as possible were selected. In this study, as shown in Table 3, social capital is assessed in two aspects (i.e. general social capital and 3W drivers' specific social capital). It is noted that the questionnaire form used in this study is shown in Appendix A.

Personal information includes socio-demographic factors, such as drivers' age, education level, marriage status, average daily income,

Table 3
Overview of the questionnaire survey.

Items	Questionnaire survey
Survey objectives	<ul style="list-style-type: none"> - To identify the fundamental attributes of 3W drivers - To determine satisfaction with working conditions and life as a whole - To collect input data for the model
Survey period	5–9th December, 2016 (December 5th in Moratuwa, 6th in Colombo, and 9th in Kandy)
Survey method	Face-to-face interviews with 3W drivers on the roadside.
Survey target	400 drivers in each city (20 samples from each of the 20 surveyors in each city)
Survey contents	<p>General matters</p> <p>(1) Personal information</p> <ul style="list-style-type: none"> - Respondent's age, marital status, number of children, average daily income, education level, whether he/she had a previous job, whether he/she had a second job <p>(2) Connectedness</p> <ul style="list-style-type: none"> - [Informal participation] Importance of family and friends, importance of meeting nice people during leisure time - [Formal participation] Importance of being a member of voluntary organization, importance of performing voluntary work for a voluntary organization - [Interpersonal trust] Whether the respondent trusts people in general situations, trusts people to be fair, trusts people to be helpful - [Institutional trust] Level of confidence in institutions - [Individual trust] Level of trust in other individuals <p>3W job related matters</p> <p>(3) 3W driver related information</p> <ul style="list-style-type: none"> - [Satisfaction] Satisfaction with the 3W driver job, salary, parking space fees, welfare service, quality of the 3W vehicle, and whether the respondent is proud of his/her 3W job/feels it to be worthwhile - [Working condition] Whether the respondent is a society member, has a parking space, has access to a welfare service, is registered with a 3W association <p>(4) 3W drivers' specific social capital</p> <ul style="list-style-type: none"> - [Connectedness] Relationship with the municipal/provincial government, importance of relationship with other 3W drivers, importance of having reliable 3W driver friends, importance of communicating with passengers, importance of the society's welfare service - [Trust] Respondent's trust in his/her society, in 3W group, members, passengers, municipal and provincial government, and in other 3W drivers

and time spent with family. These personal attributes might also affect life satisfaction. Regarding general social capital, the variables were prepared by referring to [Orlowski and Wicker \(2015\)](#), which comprehensively covers general social capital variables. Thus, the variables shown in [Table 3](#) have been recognized as influential social capital factors for determining life-satisfaction levels for not only 3W drivers, but also general citizens. The general social capital variables applied in this study can mainly be divided into connectedness and trust in other subjects. Connectedness includes informal and formal connectedness. Informal connectedness concerns participation in civil society and was determined by measuring the importance for respondents of family, friends, and meeting nice people during leisure time (measured using a six-point scale). Meanwhile, formal participation in civil society was measured through two variables that reflect the number of voluntary organizations respondents were members of, and for which they performed unpaid work, such as voluntary work. These two variables were measured using a two-point scale (i.e., yes or no). Trust in other parties was measured by analyzing interpersonal trust, institutional trust, and trustworthiness of individuals. In this

study, interpersonal trust was determined through three indicators: “trust in people,” “trust people to be fair,” and “trust people to be helpful.” Regarding institutional trust, one variable was computed based on a set of questions that inquired into the respondents' level of confidence in 15 different institutions (question 3.13 of the questionnaire form, as shown in [Appendix A](#)). This was measured using a four-point scale. The trustworthiness of individuals was determined through a set of eight questions measuring the extent to which respondents justified untrustworthy or non-virtuous behavior (question 3.14 of [Appendix A](#)). This was also measured using a four-point scale.

3W job related social capital variables are also extracted on the basis of the questionnaire surveys described in [Table 3](#). This section of the survey is divided into two parts: connectedness and trust. Regarding connectedness, the importance of having friendly and reliable relationships with other 3W drivers, communicating with passengers, having access to a welfare service, etc., were considered. For trust, trust in other drivers, passengers, trade unions, the municipal council (or provincial government), etc., were examined. All of these variables were measured using a six-point scale. To collect 3W driver related information, questions concerning satisfaction with working conditions, such as in regard to fees for parking spaces, are included in the survey. Further, working conditions, such as whether the respondent is a society member and whether he/she has a parking space, are examined. Since 3W drivers have various relationships with several organizations and individuals, 3W drivers' specific social capital factors are incorporated into the questionnaire.

2.2.3. Analysis method

The main objectives of this study are the (i) clarification of the current situation and characteristics of the 3W industry and (ii) identification of the social capital related factors that affect the life satisfaction of 3W drivers in three cities, Colombo, Moratuwa, and Kandy, in Sri Lanka. To realize the first objective, we conducted extensive interviews with various stakeholders, as mentioned in [Section 2.2.1](#). Based on these interviews, we summarized fundamental information on the actual operation system and extracted details regarding prominent operation and management systems of the 3W industry, such as society and the allocation of parking lots, etc.

To realize the second objective, we conducted questionnaire surveys with 3W drivers as discussed in [Section 2.2.2](#). Prior to conducting the model analysis, descriptive analysis was conducted to understand the fundamental characteristics of the collected samples. Subsequently, model analysis was conducted to identify the social capital related factors that affect the life satisfaction of 3W drivers by employing the ordered logit model. This model was considered suitable since the degrees of life satisfaction differed among individuals, and there might be differing degrees of satisfaction for each independent variable. For example, when drivers report that they are satisfied with their lives, one individual may be completely satisfied, whereas another may only be relatively satisfied. In an ordered logit model, differences in the threshold of each utility can be considered to represent potential psychological differences ([Train, 2003](#)). The probability of choosing the m th ($m = 1, 2, \dots, 10$ for life satisfaction) category P_m and the respondent's utility V are expressed by Eqs. (1) and (2), respectively, as follows:

$$P_m = \frac{1}{1 + \exp(V - \theta_{m-1})} - \frac{1}{1 + \exp(V - \theta_m)} \tag{1}$$

$$V = \beta_1 x_1 + \beta_2 x_2 + \Lambda + \beta_n x_n \tag{2}$$

Here, θ_m denotes the m th threshold and β_i represents the unknown parameters for n explanatory variables that explain utility V . The number n depends on the model being applied. The explanatory variables discussed in [Section 2.2.2](#) are considered.



Fig. 2. Signs for societies' parking lots in Moratuwa.

3. Present situation and characteristics of the 3W industry in Sri Lanka

In this section, prominent characteristics of the 3W industry in Sri Lanka are addressed on the basis of the results of the interviews mentioned in Section 2.2.1.

3.1. Society: A group of 3W drivers

A “society” is a group of 3W drivers. According to the interviews with each municipal council, as of December 2016, there are 1050, 200, and 160 parking lots allocated to societies in Colombo, Moratuwa, and Kandy, respectively.¹ The number of societies and that of parking lots are the same. A society is formed as a social group by neighboring people living along collector streets. Since societies are not officially overseen by national or local governments, societies organize themselves to obtain recognition from the local government. This is necessary because they use the roadside as their parking lots and the roadside falls under the local government's administrative area. Once a society is formed, its members apply for parking lots for their vehicles and the local government issues a signboard denoting the number of 3Ws allowed to operate in these parking lots. Therefore, the local government is aware of the number of societies functioning in its administrative area. Once a society is registered, its members are liable for paying the parking fee to the local government. Further, only society members can park and operate their 3Ws in the society's parking lot, and non-members are barred from entering the parking lot by the society's members. Membership in the society grants a 3W driver the right to operate from the

parking lot. However, the assignment of drivers is not performed by anyone in the society. Drivers occupying the front of the parking lot are prioritized to pick up passengers, whereas the incoming drivers accept the following turns. There is no designated route for the operation, similar to general taxi services.

In general, each society consists of 15–25 drivers. In large cities such as Colombo, Moratuwa, and Kandy, there is generally at least one society along every collector street that is connected to an arterial road. This means that 3Ws are easily available in almost every location in these cities. Drivers and passengers generally know each other well; thus, passengers usually have a good perception of the security of this mode of transport. Currently, most societies are not accepting any new drivers, as a result of the present oversupply in the 3W market. The upper limit of the number of drivers in a society is determined by the societies themselves, on the basis of supply-and-demand. In cases when a society driver retires, in principle his/her relatives assume the driving position, meaning outsiders rarely become members of a 3W society. In general, each society collects membership fees from member drivers, which is the obligation of the society member, and these are mainly used for the rental fees of 3W parking lots and for welfare services for member drivers. Although joining a society is almost impossible for outsiders, any holder of a driver's license can be a 3W driver, as there are no laws or regulations prohibiting individual business as a 3W driver. In each of the three cities examined in this study, there are drivers who are not members of a 3W society (i.e., they do not have a parking lot space); such drivers are called “free drivers.” Some free drivers also have other jobs, helping them to earn higher salaries. In fact, according to our interviews with several free drivers, public officials in municipal councils, national hospitals, military services, and police departments often work as part-time 3W drivers to increase their earnings.

3.2. Parking lots

Municipal councils allocate each society a parking lot with rental fees. Settlement of a new parking lot requires permission from the respective municipal council. After a municipal council has received a request from a 3W society and/or drivers, traffic police perform a site survey to investigate the

¹ 3W parking lots allocated for societies by Colombo municipal council were officially removed (through a special Gazette) in July 2017, and there are now no specific parking lots for societies in Colombo as of April 2019. In this study, all interviews and questionnaire surveys were carried out before the removal of 3W parking lots in Colombo.

safety of the site; if the police judge the site to be appropriate, they give their approval to the municipal council. After granting the society's request, a sign indicating that the area is a parking space is installed by the municipal council close to the parking lot (an example of such a sign is shown in Fig. 2).

In Kandy and Colombo, new parking lots are no longer allocated as a result of the current oversupply situation and transport policy; however, the number of free drivers is increasing. Only Moratuwa municipal council continues to establish new parking lots for societies, mainly because the 3W industry provides employment opportunities for drivers and vehicle maintenance shops. Parking lots provide society drivers with an advantage over free drivers in regard to attracting passengers. However, while society drivers are only allowed to pick-up passengers at their parking lots, free drivers can pick-up passengers everywhere except, based on an unwritten rule, close to 3W parking lots (i.e., societies' territories). Nevertheless, as a result of the prevalence of society parking lots, free drivers have limited areas to obtain passengers in the city. It is relatively easier for free drivers to obtain passengers in Colombo, as there is high passenger demand for 3Ws. Thus, the interviews with free drivers in Colombo showed that they are not dissatisfied with their municipal government.

On the other hand, in Kandy, since passenger demand is not as high as in Colombo, the settlement of new 3W parking lots is limited by local government and this causes dissatisfaction, especially for free drivers. Further, the number of free drivers is increasing in all cities, as there are no regulations controlling the entry of new drivers; therefore, the oversupply situation worsens yearly. Society drivers in Kandy are also experiencing a challenging situation, as the Kandy municipal government has set high parking fees for societies. Annual parking fees in the Kandy City area are now 5000 Rs (1 Rs = 0.0066 USD as of December 2016) per parking lot, while those in Colombo

and Moratuwa are free and 500 Rs, respectively. These values are obtained from each municipal government. In Colombo and Moratuwa, parking fees are relatively low because the respective municipal governments still consider the 3W industry to be important in terms of its contributions to social welfare. On the other hand, since the fee of 5000 Rs/year is too expensive for societies in Kandy, the trade union of 3W drivers in Kandy, which comprised approximately 2500 drivers, has sought negotiations with the Kandy municipal government. Further, in Kandy, parking spaces are sometimes eliminated or relocated, without the societies' consent. Thus, the policy of Kandy's municipal government in regard to 3Ws embodies their stance that 3Ws are an undesirable mode of transport (in terms of their detrimental effects on the environment and traffic congestion), and promotes public transport (i.e., buses) in their stead.

3.3. Welfare service

3.3.1. Society

One of the most prominent characteristics of a society is the welfare service provided for member drivers as a means of increasing drivers' life satisfaction. This service is provided using membership fees collected from drivers of the society. According to our interview surveys with four societies in Moratuwa and three societies in Kandy, on average 280 Rs/month are collected from each driver. These fees are deposited in bank accounts owned by the societies. The welfare service generally includes financial support for drivers' life-related events, such as wedding expenses, funeral expenses, and medical expenses, as well as drivers' work-related expenses, such as those incurred as a result of traffic accidents and vehicle maintenance. However, a pension service, which is the most desirable welfare service for drivers, remains absent from almost all societies, since management of a pension system is difficult for societies. Social security for 3W drivers in Sri Lanka is relatively poor; for instance, some 3W drivers cannot obtain life insurance policies, as a 3W job is considered to be unstable and to have a low salary. Free drivers do not have any welfare services since they are not affiliated with a society.

3.3.2. Developments in Western province

In Western Province (Colombo and Moratuwa), a new policy for 3W drivers was implemented in 2016. In this new policy, 3W drivers in Western Province must register with the Western Province Passenger Transport Authority (WPPTA), which is a body of the Western provincial government. Through this policy, the WPPTA aims to make the 3W industry professional. For example, registered drivers must perform six months of medical training in order to learn emergency treatment procedures in case of being involved in traffic accidents. All 3W drivers, including society and free drivers, in Western Province can register by showing their drivers' license and paying 350 Rs for initial registration and 400Rs in annual membership fees. Overall, approximately 25,000 drivers, out of the approximately 83,000 drivers in Western Province, had registered by October 2016. In cases where drivers are caught operating 3Ws without registration, they are fined Rs 5000. Once they are registered, drivers receive an ID card and a sticker that they should affix to the windshield of their vehicle. Concurrently, the WPPTA is providing several services to 3W drivers (e.g., a hot-line service for cases when there is trouble with passengers, a medical insurance service for drivers and their families, rental of a GPS taxi meter, discounts on tires, etc.) to make their job professional and increase their life-satisfaction levels. In general, drivers appreciate these WPPTA policies. This is because drivers would like to be socially recognized and have an official and professional job, even though they need to pay registration and annual fees. Overall, the relationship between drivers and the local governments in Western Province (i.e., Colombo and Moratuwa) is rather good. On the other hand, the Central Province government (i.e., Kandy) does not provide any such services to 3W drivers.

Table 4
Sample characteristics and average scores for selected variables.

	Colombo	Moratuwa	Kandy
Sample size	459	457	500
Valid sample	379 (82.6%)	378 (82.7%)	421 (84.2%)
Number of society drivers (free drivers) per valid sample	131 (248)	145 (233)	191 (230)
Average life satisfaction ^a	7.33	7.42	8.36
Average satisfaction with the 3W driver job ^b (Average feeling that the 3W job is worthwhile)	4.11 (4.15)	4.18 (3.93)	4.78 (4.58)
(Average feeling of pride in the 3W job)	(4.27)	(4.02)	(4.67)
Average satisfaction with salary ^b (Average daily income) ^c	4.26 (Rs 2124)	4.02 (Rs 1846)	3.87 (Rs 1792)
(Average daily income of society drivers)	(Rs 2137)	(Rs 1808)	(Rs 1812)
(Average daily income of free drivers)	(Rs 2085)	(Rs 1943)	(Rs 1764)
Average satisfaction with welfare service ^b (question for society drivers only)	4.64	3.90	3.46
Average desire to join a society ^b (question for free drivers only)	3.14	3.26	3.52
Importance of friends, family ^a	6.54	6.63	7.82
Importance of having reliable friends, family members ^a	4.35	4.51	5.85
Average satisfaction with the municipal government ^a	3.26	2.85	2.67
Having a previous job	45.1%	47.9%	37.0%

^a Unsatisfied or undesired (1)–satisfied or desired (10).

^b Unsatisfied or undesired (1)–satisfied or desired (6).

^c In Sri Lanka, the minimum wage rate per month was Rs 10,000 in 2016 (Central Bank of Sri Lanka, 2019), whereas the poverty line salary level was Rs. 4692 per month in 2018 (Department of Census and Statistics, 2019). Hence, the average monthly salary of 3W drivers (Rs. 2000/day * 20 days = Rs. 40,000/month) exceeds the minimum wage and poverty line monthly income.

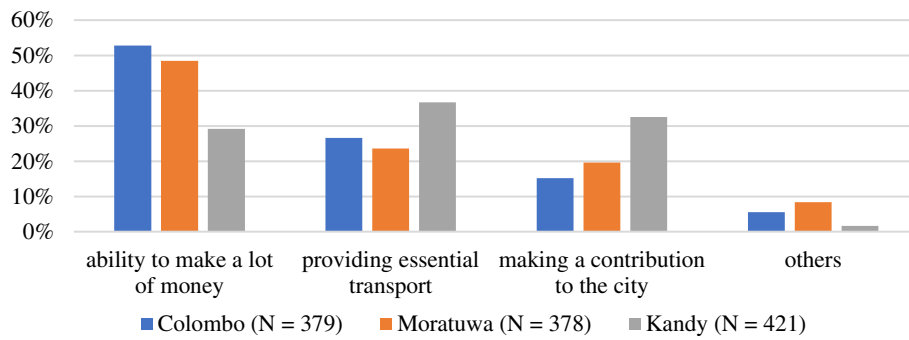


Fig. 3. Reasons that 3W job is worthwhile, in percentages for each city.

4. Descriptive analysis

4.1. Sample characteristics

The characteristics of the sample collected through the questionnaire surveys are shown in Table 4. In total, 459, 457, and 500 samples were obtained in Colombo, Moratuwa, and Kandy, respectively. Overall, approximately 80–85% of all samples were valid. Among the collected samples, approximately 60% of the drivers in Moratuwa and Kandy were affiliated with a society, while this percentage was relatively higher in Colombo, at 74.1%. All drivers who were not members of a society were free drivers. It is noted that the share of society and free drivers shown in Table 4 represents the results of the survey sample, and do not reflect the share of the cities' overall populations.

Regarding age and education level, although these data are not shown in Table 4, no prominent difference among the cities was observed. The respondents' ages ranged from 19 to 72 years, with drivers between 20 and 49 years accounting for 81% of the total sample. According to the interview results, these figures reflect the reality of the market.

4.2. Satisfaction with life, the 3W driver job, and the government

The average level of satisfaction with life among the respondents in each city is shown in Table 4. Kandy received the highest score in this regard (8.36), while Colombo and Moratuwa received 7.33 and 7.42, respectively. In Kandy, although average income and satisfaction levels were lower than in other cities, satisfaction with being a 3W driver, as well as the sense that the 3W job is worthwhile and a source of pride, was higher

than in the other cities. Fig. 3 shows the main reasons that respondents reported feeling that the 3W driver job is worthwhile, distinguishing the results among each city. It is of note that the answer rate of “ability to make a lot of money” is low for Kandy drivers. This result indicates that economic issues might not be significant for Kandy drivers in comparison with Colombo and Moratuwa drivers. Instead, drivers in Kandy may feel their role is worthwhile because they provide essential transport services to the city. Meanwhile, in Colombo and Moratuwa, economic issues (i.e., ability to make a lot of money) are listed as the primary reason that drivers feel the job is worthwhile (Fig. 3).

4.3. Society-related factors

Society drivers in Colombo have high satisfaction with their society's welfare service, while that in Kandy is rather low, as shown in Table 4. In Colombo, the welfare service is relatively rich since the municipal government does not charge parking fees (i.e., the society can spend its deposit on the welfare service). On the other hand, the parking fees in Kandy are relatively high; thus, the welfare service tends to be relatively poor in Kandy. The respondents' opinions regarding the most important advantages of belonging to a society, stratified by city, are shown in Fig. 4. This figure shows that a welfare service is most desired in Kandy, while in Colombo and Moratuwa this desire is of rather lower importance. Also, Fig. 4 shows that, for all three cities, the relationship with other members in the society is the most important reason for joining a society. Evidently, this factor can enrich people's lives. Hence, societies may play an important role in increasing drivers' life satisfaction.

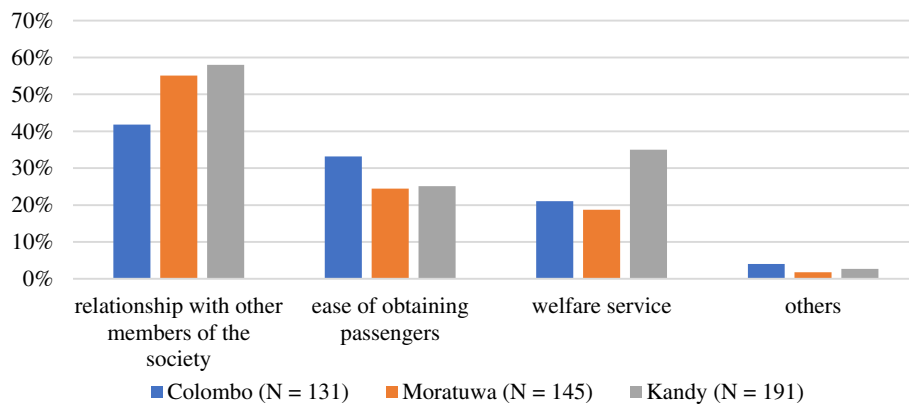


Fig. 4. Important benefits of belonging to a society. (This question is only for society drivers.)

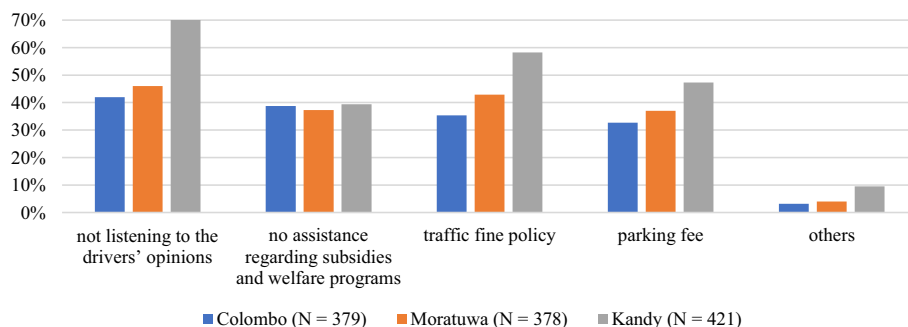


Fig. 5. Reasons for dissatisfaction with local governments.

4.4. Social capital factors

The general social capital factors (“Importance of friends, family” and “Importance of having reliable friends, family members”) were of relatively high importance for Kandy, as shown in Table 4. According to the interview surveys, Kandy is a city that contains a holy site for Sri Lankan Buddhists and, for the Sinhalese, is significant as it was the capital of the last dynasty of the Kingdom of Kandy. Thus, relationships with others are possibly valued more highly here than in other cities. Regarding average satisfaction with the municipal government, Colombo returned the highest score, whereas Kandy returned the lowest, as shown in Table 4. This is a logical result since the relationship between the drivers and the municipal government is relatively bad in Kandy. Fig. 5 shows the reasons drivers feel dissatisfied with the local governments of each city. As expected, “parking fee” was most frequently reported by drivers in Kandy, but the main overall reason for dissatisfaction with municipal governments was “not listening to the drivers' opinions.” From this result, it can be understood that, even though high parking fees can cause dissatisfaction with municipal governments, a lack of communication with the municipal government has a greater negative effect on drivers' satisfaction levels.

5. Model development and discussion

5.1. Specification of the utility function

Using the variables shown in Section 2.2.2, ordered logit models for explaining 3W drivers' life satisfaction were developed for each city and driver type (i.e., society and free drivers). Results of parameter estimation are shown in Table 5. The values in parentheses indicate the t -value of each parameter. The correlation coefficients of all combinations of variables were checked in order to avoid multicollinearity and to develop a robust model. In cases where high correlations were found between variables, one of the variables was excluded from the model. Meanwhile, several combinations of explanatory variables were tested by referring to statistical values (i.e., t -values and likelihood ratios). The likelihood ratios of all of the developed models exceeded 0.4 for Colombo and Moratuwa and 0.3 for Kandy. In general, values more than 0.3 are sufficiently reliable for the logit model (Train, 2003). In addition, all parameters with significance levels of over 10% satisfied the expected sign conditions, excluding unknown sign conditions. It is noted that the parameters estimated at a 1% significance level could be interpreted to have only a 1% possibility of being zero in reality, based on the estimated parameter. Regarding the threshold values θ_m , which are estimated when applying the ordered logit model, although they are not indicated in Table 5 due to space limitations, most indicated statistical significance, with levels greater than 10%, and parameter threshold values became larger as choice categories became more positive.

This means that, for higher expected levels of life satisfaction based on the variables measured, respondents consistently chose the higher values for life satisfaction. From this result, the application of the ordered logit model was regarded as appropriate and, thus, 3W drivers' life satisfaction could be measured.

5.2. Discussion

5.2.1. Personal information

Regarding personal information, most of the variables such as age, marital status, number of children, and education level were not relevant to drivers' life satisfaction. However, “no other jobs available” in Moratuwa was significant, having a negative effect on life satisfaction, which means that in the case that a driver begins the 3W job because he/she has no other job available, their life satisfaction tends to be lower. In Colombo, “daily income from a 3W job” was significant for all society and free drivers, which implies that salary issues are an important factor for Colombo. On the other hand, the level of income is not an influential factor for improving drivers' life satisfaction in Moratuwa and Kandy. In Colombo and Kandy, “have another job” was negatively significant, which implies that the drivers who have another job have lower satisfaction in their life. As shown in Table 4, in Colombo and Kandy, the average salary of all 3W drivers is 2124 Rs and 1792 Rs per day, respectively, whereas that of 3W drivers who have another job is only 1713 Rs and 1497 Rs per day, respectively, which is a substantially lower-than-average salary. Thus, as their salaries are comparatively low, the life satisfaction of such drivers tends to be lower. Additionally, according to the interviews with 3W drivers, working in another job makes drivers exhausted.

5.2.2. General social capital

General social capital variables are obviously influential in Kandy, in comparison to Colombo and Moratuwa. Connectedness variables and trust variables were also estimated to be positively significant. These results show that life satisfaction of drivers in Kandy is greatly influenced by general social capital variables. According to interviews, Kandy citizens' sense of values is generally quite different to that of citizens in Western Province (i.e., in Colombo and Moratuwa). Kandy citizens have higher religious piety, and they place greater importance on social relationships such as friends and family. Concurrently, economic factors are not high priorities for people in Kandy. Thus, the results of the model seem to be reasonable, showing that Kandy-based drivers could increase their life satisfaction by spending more time with people who are important to them (i.e., family and friends), rather than spending more time on their work.

Among the trust variables of general social capital, “avoiding public transport fares is justified” is an important factor, with a positive

Table 5
Results of parameter estimation.

		Colombo				Moratuwa				Kandy				
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	
		(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	
(1) Personal information	No other jobs available ^a					-0.36 (-1.57)	-0.57 (-2.45**)							
	Have another job ^a	-0.38 (-2.08**)	-0.19 (-1.05)		-1.01 (2.04**)								-0.90 (2.27**)	
	Daily income from 3W job		0.06 (2.11**)		0.04 (3.35***)									
(2) General social capital	Connectedness	Friends are important	0.01 (1.48)			0.21 (1.55)				0.28 (3.22***)		0.36 (3.23***)		
		Having reliable friends is important		0.12 (0.85)				0.17 (0.33)		0.41 (4.41***)			0.64 (4.75***)	
		Family is important								0.59 (4.73***)	0.70 (5.65***)	0.48 (3.05***)	0.35 (1.78*)	
	Trust	Trust press									0.48 (3.96***)	0.49 (3.99***)	0.76 (4.87***)	0.36 (2.04**)
		Trust dealer									0.22 (2.83***)	0.26 (3.58***)		
		Trust that other people will provide help												0.25 (2.54**)
		Accepting bribes is justified	0.42 (2.99***)	0.44 (3.16***)	0.25 (3.14***)		0.59 (4.62***)		0.71 (4.49***)			0.04 (0.36)		
	(3) 3W driver-related information	Satisfaction	Avoiding public transport fares is justified		0.33 (2.66***)	0.24 (2.35***)			0.41 (2.78***)	0.58 (3.17***)		0.05 (0.49)		
			Driving a 3W is worthwhile and fulfilling	0.81 (8.20***)			0.62 (4.05***)	0.86 (8.68***)		0.64 (5.44***)	1.34 (7.43***)			
			Proud of having a 3W job		0.78 (8.11***)				0.65 (6.84***)	0.61 (5.16***)	0.74 (4.55***)			
Satisfaction with the 3W job			1.40 (12.94***)			0.93 (5.20***)	1.15 (10.45***)		1.27 (9.27***)	1.23 (6.97***)				
Satisfaction with the salary of a 3W driver			0.52 (5.59***)		0.62 (5.37***)			0.19 (2.18**)	0.26 (2.30**)					
Possibility to earn as much as is wanted			0.54 (6.16***)		0.44 (3.98***)				0.21 (2.25**)					
Satisfaction with fuel and maintenance costs							0.24 (3.46***)	0.31 (4.36***)	0.28 (3.09***)		0.16 (2.08**)	0.35 (3.27***)		
Working condition	Satisfaction	Satisfaction with the flexibility as a 3W driver		0.25 (2.64***)									0.26 (2.04**)	
		Driving is interesting				0.36 (2.82***)								
		Satisfaction with local government								0.33 (2.92***)				
		Interesting job (reason to begin 3W job) ^a	0.94 (2.92***)	1.02 (3.19***)	0.16 (1.50)	1.13 (2.24**)	0.71 (2.96***)	0.68 (2.89***)	0.62 (2.01**)	0.80 (2.11**)				
		Easy to get this job ^a												0.93 (2.30**)
						-0.26 (-4.22***)	-0.21 (-3.39***)							

(continued on next page)

Table 5 (continued)

			Colombo				Moratuwa				Kandy				
			Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	
			(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	(Entire sample)	(Entire sample)	(Society drivers)	(Free drivers)	
(4) 3W drivers' specific social capital	Connectedness	Appreciate the flexibility of 3W driver ^a	0.44 (2.17**)	0.35 (1.77*)											
		Satisfaction with the flexibility of 3W driver					0.17 (1.76*)	0.12 (2.23***)							
		The quality of the 3W-vehicle is important							0.47 (2.73***)						
		Communicate with other members/friends					0.12 (1.16)	0.19 (1.20)			0.02 (2.24**)			0.58 (3.77***)	
		Have a friendly relationship with other drivers									0.12 (2.71***)	0.24 (2.80***)		0.36 (3.21***)	
	Trust	Enjoy communicating with passengers					0.12 (1.27)				0.14 (2.58**)			0.38 (3.27***)	
		Communicating with passengers is important								0.79 (4.93***)		0.48 (2.06**)		0.29 (2.45**)	
		Trust the 3W trade union	0.40 (3.83***)	0.34 (3.26***)	0.24 (1.74*)	0.57 (3.83***)							-0.61 (-2.65***)	-0.42 (-2.12**)	-0.39 (-2.56***)
		Trust other society members							0.33 (0.75)		0.45 (3.21***)				
		Trust police				0.25 (2.09**)									
Trust people to be fair												0.21 (1.94*)			
ρ^2		0.40	0.41	0.44	0.42	0.47	0.42	0.44	0.43	0.31	0.30	0.30	0.30		
Sample size		459	459	131	248	457	457	145	233	500	500	191	230		

* 10% significance.

** 5% significance.

*** 1% significance.

^a Dummy variable (1: Yes, 0: No).

sign, for both Colombo and Moratuwa. This variable was measured using a four-point scale (1: always, 4: never); thus, it can be interpreted that the life satisfaction of 3W drivers in Colombo and Moratuwa increases if they believe that avoiding the payment of fare is a bad thing. This can be explained by the level of tension in the relationship between 3W drivers and public transport as an alternative mode of transport. In Colombo and Moratuwa, the relationship between public transport and 3Ws is rather better than in Kandy, as 3Ws and other modes of public transport such as buses and trains operate in a complementary relationship. Therefore, avoiding payment of public transport is unacceptable for 3W drivers in Colombo and Moratuwa.

5.2.3. 3W driver related information

In Colombo and Moratuwa, several parameters of 3W driver related information were found to be significant, having a positive impact on drivers' life satisfaction; however, most of these variables were not significant among Kandy-based drivers. According to the interviews with the 3W trade union in Kandy, Kandy citizens tend to have relatively high place attachment with their city, as a result of the high standard of living and Kandy's rich history. As shown in Fig. 3, the main reasons Kandy drivers felt their job to be worthwhile were that they were providing "essential transport" and making a "contribution to the city," which are reasons that are distinct from income-related factors. This shows that, although Kandy drivers suffer as a result of the Kandy municipal council's transport policy and their relationship with the council, it does not affect their life satisfaction. This result indicates that Kandy-based drivers are not strongly influenced by work-related factors.

In Colombo and Moratuwa, "driving a 3W is worthwhile and fulfilling" was a significant variable; Fig. 3 shows that 3W drivers in these cities feel that their job is worthwhile as a result of their earnings. Further, also for Colombo and Moratuwa, both "satisfaction with the salary of a 3W driver" and "possibility to earn as much as is wanted" were significant. In these cities, 3W drivers' satisfaction with their lives was highly affected by their income, unlike in Kandy. Further, in the comparison of society and free drivers in these cities, society drivers emphasized salary, as shown in Table 5. Since there is no regulation limiting the number of drivers in Sri Lanka, the number of free drivers is increasing. Thus, the salary of 3W drivers, especially society drivers, is decreasing annually. Therefore, to increase the satisfaction of existing society drivers in Colombo and Moratuwa, it is important to establish entry limitations for new drivers.

5.2.4. 3W drivers' specific social capital

Similar to general social capital variables, several variables regarding 3W drivers' specific social capital, especially connectedness, were significant among Kandy-based drivers but not in Colombo and Moratuwa. This reinforces the suggestion that social capital variables, and particularly the connectedness factor, are significant for increasing the life satisfaction levels of Kandy-based drivers. However, among Kandy-based drivers, these variables are only significant for free drivers. The questionnaire survey showed that many of the free drivers in Kandy are willing to join a 3W society as a result of a desire to communicate with other drivers in their communities. Thus, for Kandy-based free drivers, joining a society would effectively increase their life-satisfaction levels.

On the other hand, "trust the 3W trade union" was negatively significant for Kandy-based drivers and positively significant for Colombo-based drivers. This means that in Kandy life satisfaction tends to be lower among 3W drivers who trust trade unions, and vice-versa in Colombo. In Kandy, the trade union regularly expresses drivers' dissatisfaction with the municipal government, and spends considerable efforts in negotiations, since the policy of the Kandy municipal government toward 3Ws is fundamentally negative. Therefore, when drivers trust their trade union more, they feel more acutely dissatisfied with the municipal government and, consequently, their life satisfaction decreases.

6. Conclusion

This study clarified the operation system of the 3W industry in Sri Lanka, along with the factors that affect the life satisfaction of 3W drivers in three of the nation's cities. These aspects were clarified through extensive interviews and questionnaire surveys. In Sri Lanka, societies, which are drivers' groups comprising neighboring drivers, are important organizations in the 3W industry. Societies provide welfare services to drivers, encompassing not only 3W-work-related aspects but also events in their personal lives, such as weddings and medical fees. The descriptive analysis clarified that the availability of a welfare service is one of the most important reasons for wanting to belong to a society, particularly for drivers based in Kandy.

The fundamental hypothesis background of this study is that social capital, which expresses the strength of the relationship among the 3W industry stakeholders, significantly affects the life satisfaction of 3W drivers. To analyze this hypothesis, we developed an ordered logit model to measure the life satisfaction of the 3W drivers. Throughout the model analysis, general social capital variables were found to be influential factors affecting drivers' life satisfaction in Kandy, but not in Colombo or Moratuwa. In particular, connectedness variables were significant in Kandy, whereas work-related factors were not significant in Kandy. Therefore, Kandy drivers apparently assign more importance to general social capital than work-related factors. On the contrary, salary and working conditions were important considerations for drivers in Colombo and Moratuwa, whereas the connectedness social capital factor was found to be less important for these drivers. In Kandy, the relationship between drivers and the municipal council is particularly bad due to negative policies toward the 3W industry. However, based on the model analysis, the relationship with the municipal council was not found to be a significant variable affecting 3W drivers' life satisfaction. A possible reason for this trend is that Kandy-based drivers do not consider work-related factors to be a significant determinant of their life satisfaction.

This study examines social capital formation from the supply side perspective and provides concrete evidence to ascertain that, under minimum regulation, social capital formation in the informal transport sector results in the sector's establishment within the industry. This ensures the future operation of the industry and enables the establishment of the sector's position as a market player in public transportation. Furthermore, the results suggest that social capital networks are important for the industry's ability to satisfy its needs by utilizing the public sector. Several issues remain for further research. For example, the application of the model to small rural cities would be beneficial for obtaining a deeper understanding of Sri Lanka's 3W industry, since this study only considered large cities in Sri Lanka. In fact, rural cities have a different operation system; for example, some of the cities have no society system. Further, parking lots allocated for societies by Colombo municipal council were officially removed in July 2017, thus an evaluation of 3W drivers' life satisfaction in Colombo after the elimination of parking lots should be carried out. Further, examining the effect of social capital on the life satisfaction of paratransit drivers in other countries and comparing the satisfaction levels in other countries with those in Sri Lanka would be beneficial. This is another aspect to be examined by future studies.

Acknowledgments

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Appendix A. Questionnaire form for 3W drivers

Section I About your life

1.1 Are you satisfied with your life?

Extremely *unsatisfied* 1 2 3 4 5 6 7 8 9 10 Extremely *satisfied*

1.2 How **Family** is important for your life?

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

1.3 How **Friends** are important for your life?

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

1.4 How much important to meet nice people in leisure time?

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

1.5 In dealing with people, would you say that most people can be trusted or you have to be too careful?

Cannot be too careful . 1 2 3 4 5 6 *Most people can be trusted*

1.6 Do you think that most people would try to take advantage of you if they got the chance, or they would try to be fair?

Most people would try to take advantage of you 1 2 3 4 5 6 *Most people would try to be fair*

1.7 Would you say that most of the time people try to be helpful or they are mostly care about only themselves?

People mostly care about only themselves 1 2 3 4 5 6 *People mostly try to be helpful*

Section II Job information

Overall

2.1 How many years are you working as 3W driver?

_____ years

2.2 What are the reasons to start 3W driver job and continue 3W driver until now? (*Multiple answers are allowed)
Also, how much the reason is important?

**Even though you do not select several reasons for starting 3W driver job and continuing 3W driver job, how much you think that the reasons are important for you.

<i>Choices of reason</i>	<i>Reason to start 3W driver job</i>	<i>Reasons to still continue 3W driver job</i>	<i>How much the reason is important for continuing 3W driver jobs</i>
<i>To earn living expenses</i>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Extremely unimportant</i> 1 2 3 4 5 6 <i>Extremely important</i>
<i>To earn entertainment expenses</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Interesting job</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Easy to get the job</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>There is no other jobs to be able to get</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>No need to be under supervise of someone else</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Prefer flexible job(Time and freedom)</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Necessity to continue parent's job</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Prefer welfare service in society or group</i>	<input type="checkbox"/>	<input type="checkbox"/>	1 2 3 4 5 6
<i>Other reasons _____</i>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 1 2 3 4 5 6 ▼

About 3W society

2.3 How much is it important to have friendly relationship with other 3W drivers?

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

2.4 A-Do you belong to a 3W driver society? Yes (go to B-E) No (go to F-i)

B-How much you trust members?

Extremely *mistrust* 1 2 3 4 5 6 Extremely *trust*

C- What is the important points for you to be in a society? (*Multiple answers are allowed)

Relationship with members Ease to get passenger

Welfare service Others _____

D- How much are you satisfied with/do you think as important the welfare service in society?

Extremely *unsatisfied* 1 2 3 4 5 6 Extremely *satisfied*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

E- How much are you satisfied with/do you think as important the parking space system?

Extremely *unsatisfied* 1 2 3 4 5 6 Extremely *satisfied*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

F-i Do you want to belong to a society?

Extremely *no* 1 2 3 4 5 6 Extremely *yes*

F-ii If you choose “1, 2 or 3”, what are the reasons for not willing to belong in a society? (*Multiple are answers are allowed)

Relationship with members is troublesome

Already have friends outside of society

Difficulty to get passengers

Difficulty to trust members

Dislike welfare services in the society

Earn as you want

Others _____

F-iii If you choose “4, 5 or 6”, what are the reasons for willing to belong in a society? (*Multiple answers are allowed)

Want relationship with members

Currently not having many driver friends

Ease to get passengers

Expect to get trust members

Welfare service

Get much or stable salary

Others _____

G-i Do you have specific parking space? Yes No (go to G-iii)

G-ii-If “Yes in question G-i”, how much are you satisfied with/ do you think as important the parking space system? (go to H-i)

Extremely *unsatisfied* 1 2 3 4 5 6 Extremely *satisfied*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

G-iii If “No in question G-i”, how much you want parking spaces/ do you think as important the parking space system?

Extremely *unnecessary* 1 2 3 4 5 6 Extremely *want*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

H-i Do you belong to some sort of group (not society)? Yes No (go to I-i)

H-ii- How much do you trust your members?

Extremely *mistrust* 1 2 3 4 5 6 Extremely *trust*

I-i Do you have a welfare service in the group? Yes No (go to I-iii)

I-ii If “Yes in question I-i”, how much are you satisfied with/ do you think as important the service? (go to 2.5)

Extremely *unsatisfied* 1 2 3 4 5 6 Extremely *satisfied*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

I-iii If “No in question I-i”, how much you want welfare services/ do you think as important the service?

Extremely *unnecessary* 1 2 3 4 5 6 Extremely *want*

Extremely *unimportant* 1 2 3 4 5 6 Extremely *important*

About welfare service

2.5 What kind of welfare service do you have? (Please check your welfare service.) And how the service is important for you? **Even if you do not have welfare service in society or some sort of group, please imagine the service and answer the importance level of the service.

	Extremely unimportant	1	2	3	4	5	6	Extremely important		Extremely unimportant	1	2	3	4	5	6	Extremely important
<input type="checkbox"/> Your wedding expenses:		1	2	3	4	5	6		<input type="checkbox"/> Family's wedding expenses:		1	2	3	4	5	6	
<input type="checkbox"/> Your funeral expenses:		1	2	3	4	5	6		<input type="checkbox"/> Family's funeral expenses:		1	2	3	4	5	6	
<input type="checkbox"/> Your expenses for accident:		1	2	3	4	5	6		<input type="checkbox"/> Family's expenses for accident:		1	2	3	4	5	6	
<input type="checkbox"/> Your medical expenses:		1	2	3	4	5	6		<input type="checkbox"/> Family's medical expenses:		1	2	3	4	5	6	
<input type="checkbox"/> Your pension system:		1	2	3	4	5	6		<input type="checkbox"/> Others _____:		1	2	3	4	5	6	

About your motivation for the job

2.6 i-Do you think 3W driver job is worthwhile and fulfilling?

Extremely no worthwhile and fulfilling 1 2 3 4 5 6 Extremely worthwhile and fulfilling

<p>ii-If you choose “1, 2 or 3”, what are the reasons for <u>not</u> worthwhile and fulfilling? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Get little money</p> <p><input type="checkbox"/> No influence for the region</p> <p><input type="checkbox"/> Everyone can do the job</p> <p><input type="checkbox"/> Others _____</p>	<p>iii- If you choose “4, 5 or 6”, what are reasons for worthwhile and fulfilling? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Get much money</p> <p><input type="checkbox"/> Essential transport for the region</p> <p><input type="checkbox"/> Contribute to public transport in the region</p> <p><input type="checkbox"/> Others _____</p>
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2.7 i-Are you proud of your 3W driver job?

Extremely **not** be proud of 1 2 3 4 5 6 Extremely be proud of

<p>ii- If you choose “1, 2 or 3”, what are reasons for <u>not</u> being proud? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Not contribute to public transport in the region</p> <p><input type="checkbox"/> Not essential transport for the religion</p> <p><input type="checkbox"/> Others _____</p>	<p>iii- If you choose “4, 5 or 6”, what are reasons for being proud? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Contribute to public transport in the region</p> <p><input type="checkbox"/> Essential transport for the religion</p> <p><input type="checkbox"/> Others _____</p>
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2.8 How much important you think to communicate with passenger?

Extremely unimportant 1 2 3 4 5 6 Extremely important

2.9 How much do you trust passengers?

Extremely mistrust 1 2 3 4 5 6 Extremely trust

2.10 How much do you trust drivers who do not belong to your society or your group?

Extremely mistrust 1 2 3 4 5 6 Extremely trust

2.11 How much do you trust your region’s municipal council and provincial government?

Extremely mistrust 1 2 3 4 5 6 Extremely trust

2.12 i-How much are you satisfied with your region’s municipal council and provincial government?

Extremely unsatisfied 1 2 3 4 5 6 Extremely satisfied

<p>ii- If you choose “1, 2 or 3”, what are reasons for dissatisfaction? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Parking fare <input type="checkbox"/> Their system about 3W <input type="checkbox"/> Traffic fine policy</p> <p><input type="checkbox"/> No assistance like subsidy or pension</p> <p><input type="checkbox"/> They do not listen driver’s opinion and voice</p> <p><input type="checkbox"/> Others _____</p>	<p>iii- If you choose “4, 5 or 6”, what are reasons for satisfaction? (*Multiple answers are allowed)</p> <p><input type="checkbox"/> Parking fare <input type="checkbox"/> Their system about 3W</p> <p><input type="checkbox"/> Their assistance like subsidy or pension</p> <p><input type="checkbox"/> They listen driver’s opinion and voice</p> <p><input type="checkbox"/> Others _____</p>
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2.13 Have you already registered with Western Province Passenger Authority? Yes No

2.14 How much you are satisfied with/ do you think as important the quality of your 3W vehicle? Extremely satisfied 1 2 3 4 5 6 Extremely unsatisfied
Extremely unimportant 1 2 3 4 5 6 Extremely important

2.15 Do you want to buy high quality 3W vehicle even though you need to pay much money than now?

<i>Do not want to buy definitely</i>	<i>Not want to buy very much</i>	<i>If anything, not want to buy</i>	<i>If anything, want to buy</i>	<i>Want to buy even though high price</i>	<i>Want to buy definitely</i>
1	2	3	4	5	6

About your satisfaction and opinion

2.16 Do you agree or disagree with following sentences?

Sentences	Strongly disagree	Strongly agree
3W driver is easy job.	1 2 3 4 5 6	
3W driver job make you to earn as you want.	1 2 3 4 5 6	
You are satisfied with your salary as 3W driver.	1 2 3 4 5 6	
You are satisfied with flexibility of 3W driver job.	1 2 3 4 5 6	
You are satisfied with 3W driver job's unrestricted characteristic.(Ex. no instruction from boss)	1 2 3 4 5 6	
Driving is interesting.	1 2 3 4 5 6	
I like to communicate with members/friends.	1 2 3 4 5 6	
I like to communicate with passengers.	1 2 3 4 5 6	
You have 3W driver members/friends who help you if you face some trouble.	1 2 3 4 5 6	
You have reliable 3W driver friends.	1 2 3 4 5 6	
Handling of people's complaints during working as 3W driver can be compromise thing.	1 2 3 4 5 6	
I'm satisfied with the price of fuel cost, service cost and maintain cost	1 2 3 4 5 6	

2.17 Are you satisfied with 3W driver job? Extremely unsatisfied 1 2 3 4 5 6 Extremely satisfied

About another job

2.18 A-Do you have another job other than 3W driver job? Yes No (go to 3.1)

B-What kind of another job are you doing? _____

C-Which is your main job? 3W driver Another job Both

D-How much do you earn from another job per day? _____ Rs per day

E-i Are you satisfied with your another job (not 3W driver)?
Extremely unsatisfied 1 2 3 4 5 6 Extremely satisfied

E-ii If you choose "1, 2 or 3", what are reasons for dissatisfaction? (*Multiple answers are allowed)

- Unsatisfactory income
- Boring job
- Bad relationship with members, passengers and other drivers
- Tough job
- Unsatisfactory welfare service
- Inflexibility
- No freedom (no free time and no discretion)
- Others _____

E-iii If you choose "4, 5 or 6", what are reasons for satisfaction? (*Multiple answers are allowed)

- Satisfactory income
- Interesting job
- Good relationship with members and other drivers
- Easy job
- Satisfactory welfare service
- Flexibility
- Freedom (free time and discretion)
- Others _____

Section III personal information

- 3.1 Age:** _____ years old **3.2 Sex:** Male Female
- 3.3 A-Do you have previous job?** Yes No (go to 3.4)
- B- If “Yes”, what kind of jobs did you do before?** _____
- C- If “Yes”, what are reasons to quit the job?** Salary To take parent’s place Welfare Others _____
- (*Multiple answers are allowed)
- 3.4 Fuel cost per day for 3W driver job** _____ Rs per day
- 3.5 Income per day for 3W driver job** _____ Rs per day
- 3.6 Monthly household income** _____ Rs per month
- 3.7 A-How many family members are you living together?** _____ persons
- B-Married status:** Single Married **C-How many children do you have?** _____ child(ren)
- 3.8 How many time do you spend with your family?** Weekday: _____ hours Holiday: _____ hours
- 3.9 What is your highest education degree attainment?**

- Never study Primary school, grade 1-6 Secondary school, grade 7-9 High school, grade 10-12
- Bachelor degree Master degree Others _____

- 3.10 What kind of insurance you have?** Life insurance Property insurance Welfare Others _____
- (*Multiple answers are allowed)

3.11 If you are memberships of following voluntary organization, please check. (*Multiple answers are allowed)

3.12 If you are working in following voluntary organization, please check. (*Multiple answers are allowed)

Voluntary organizations	3.11 membership	3.12 voluntary-work
Social welfare service for elderly, handicapped or deprived people	<input type="checkbox"/>	<input type="checkbox"/>
Religious	<input type="checkbox"/>	<input type="checkbox"/>
Education, arts music or cultural activities	<input type="checkbox"/>	<input type="checkbox"/>
Trade unions	<input type="checkbox"/>	<input type="checkbox"/>
Political parties or groups	<input type="checkbox"/>	<input type="checkbox"/>
Local community action (poverty, employment, housing, racial equality)	<input type="checkbox"/>	<input type="checkbox"/>
Human right	<input type="checkbox"/>	<input type="checkbox"/>
Conservation, the environment, ecology, animal right	<input type="checkbox"/>	<input type="checkbox"/>
Professional associations	<input type="checkbox"/>	<input type="checkbox"/>
Youth work (e.g. scouts, guides, youth club etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Sports or recreation	<input type="checkbox"/>	<input type="checkbox"/>
Women’s group	<input type="checkbox"/>	<input type="checkbox"/>
Health	<input type="checkbox"/>	<input type="checkbox"/>
Other groups _____	<input type="checkbox"/>	<input type="checkbox"/>

3.13 How much trust do you have in the following sections?

	Extremely mistrust	Extremely trust		Extremely mistrust	Extremely trust		Extremely mistrust	Extremely trust	
Religious place:	1	2	3	4	Police:	1	2	3	4
Armed force:	1	2	3	4	Parliament:	1	2	3	4
Education system:	1	2	3	4	Civil service:	1	2	3	4
Press:	1	2	3	4	Social security system:	1	2	3	4
Trade unions:	1	2	3	4	Health care system:	1	2	3	4
					Justice system:	1	2	3	4
					Major companies:	1	2	3	4
					Political parties:	1	2	3	4
					Government:	1	2	3	4
					Environmental organization:	1	2	3	4

3.14 Do you justify the following sections? If you think that the section’s action is extremely bad and strongly want to extinguish is, please choose 4, Never. Vice-versa.

	Always	Never		Always	Never		Always	Never	
Cheating on tax:	1	2	3	4	Lying in own interest:	1	2	3	4
Joyriding:	1	2	3	4	Adultery:	1	2	3	4
Taking soft drugs:	1	2	3	4	Accepting a bribe:	1	2	3	4
					Paying cash to avoid taxes:	1	2	3	4
					Avoiding fare public transport:	1	2	3	4

* Joyriding: to drive around in a stolen vehicle with no particular goal other than the pleasure or thrill of doing so.

* Avoiding fare public transport: In some area, it is possible to use public transportation like buses or trains without ticket. In that situation, whether people buy a ticket or not depend on the level of his norm consciousness.

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