

## **Exploring The Determinants and Perception of University Students on the Use of Ridesourcing Services for Social/Recreational Trips in Umuahia Metropolis**

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**ABSTRACT:** *The transportation sector in Nigeria is one of the sectors facing major disruptive innovations, and one of such innovations is ridesourcing. Ridesourcing is a GPS enabled mobile application for e-hailing taxis or tricycles in Nigeria, and it provides a mode choice for individuals to choose from for different types of trips. The introduction of ridesourcing into Nigeria has heighten competition within the transport sector, as drivers who enroll with the ridesourcing companies now compete with yellow cab taxis and other public transport services in Nigeria. The main objective of the study is to explore the determinants and the perception of the students on the usage of ridesourcing services for social/recreational trips in Umuahia Metropolis, Nigeria. The study adopted survey design in data collection and analysis. A structured questionnaire was administered to students of Michael Okpara University of Agriculture Umudike (MOUAU) Abia State, Nigeria. The findings show that the students have positive attitude/perception towards the use of ridesourcing services for social/recreational trips, and the major determinants for the use of ridesourcing services are: cost, shorter waiting time, door-to-door pick up, convenience, and safety. The study recommends an improvement in the waiting time, training to the drivers in map reading and navigating some routes during traffic jam. Besides, the payment system should be properly secured as most young people are avoiding online payment methods in order not to expose their account details to online fraudsters.*

**KEYWORDS:** ridesourcing, transportation, mobile application, perception, recreational trips.

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## INTRODUCTION

The rapid development of mobile and communication technologies have provided opportunities for innovative transportation choices offered to travelers. Ridesourcing companies are leveraging internet-based platforms to offer e-hailing services in many cities around the world (Wang & Yang, 2019). Companies such as Uber, Opay, Bolt, Enviaible, etc. connect passengers and drivers in real time and are disruptively changing the transportation industry, and especially the conventional taxi industry. They are creating new markets with the potential to replace traditional modes and revolutionizing the way people travel within various cities (Meyer & Shaheen, 2017).

Ridesourcing is one of the examples of transformative changes that is moving urban transport towards the sharing economy (Tarabay & Abou – Zeid, 2019). Sharing economy refers to “an online platform that enables individuals or small entities as buyers and sellers to interact effectively and efficiently or a market model that allows the sharing of access to goods and services” (Hu, 2019). Ridesourcing companies provide a platform for and/or intermediary means of connecting demands from passengers and supply from drivers. On this platform, according to Wang and Yang (2019), “passengers enter their travel request details on an e-hailing mobile apps, including trip origin, destination, departure time, and service type; idle drivers affiliated with the platform may cruise around the city or wait at specific locations. The online platform then enables a convenient match between passengers and drivers using matching and order dispatching algorithms. The platform charges a fare to passengers and pays a wage and/or bonus to drivers. The difference between the fare and the wage is the commission withheld by the platform, which is normally between 15% and 30%, depending on the time, region, and company. After each trip, passengers can rate the drivers who provided the transportation service, which helps to quantify the quality of service provided by the affiliated drivers”.

The business model of Uber has been replicated by other ridesourcing companies in different cities and countries, for example, the introduction Otrike (use of tricycle, popularly known as ‘Keke’) by Opay in Enugu metropolis in 2018, and has since revolutionized the transport system in other cities, such as Umuahia with Enviaible ridesourcing transport application. Residents, especially students of Michael Okpara University of Agriculture Umudike (MOUUAU) in Umuahia Metropolis now have the option of choosing to use ridesourcing for their different trips, or use other commercial vehicles available in the Metropolis. Besides, the introduction of ridesourcing in the metropolis came with a penetration strategy as the discounts offered by the company attracted many tech-savvy young adults to adopt the innovative technology for various types of trips purposes. Prior to the introduction of ridesourcing in Umuahia metropolis, there was an unregulated system of ‘Keke’ drivers and

they are characterized with reckless driving, resulting to accidents with various degrees of injuries to both the drivers and passengers. Some of the drivers also exhibit rude behaviour towards their passengers, which often lead to verbal or physical assaults, either by the drivers or the passengers. In contrast, those drivers that signed up with the ridesourcing company are trained in communication skills, complaint handling techniques, map reading, driving rules and skills to avoid over speeding, and time management, thereby improving on their courteous behaviours.

Meanwhile, the Transport Network Companies (TNCs), such as Uber, Bolt, Opay, Enviabile, in Nigeria use GPS – enabled mobile application that locates the trip origin, while the passengers enters the trip destination, then the platform matches the passenger with the available driver in real-time. The platform shows the waiting time and the passenger can track the location of the driver. When the driver gets to the point of the passenger, he clicks on the platform to indicate arrival and en route to the destination. Both the driver and the passenger can monitor their movement through same platform, and on getting to the destination, the driver clicks arrived on the platform and the passenger is prompted to make payments. After the payment, the passenger is asked to submit a review on his/her experience with the platform and rate the driver's behaviour.

This innovative technology attracted so many young adults who are 'innovators' and 'early adopters' of innovations, and the penetration pricing strategy also played a vital role in attracting people to download the application and make use of it. The initial success of the application is attributed to the pricing strategy, and the nature of transport system in Umuahia Metropolis. The ban on motorcycle riders popularly known as 'Okada' in the metropolis by the government ushered in tricycles and more yellow cabs to complement the services rendered by commercial buses. Meanwhile, the commercial buses only pick up and drop off passengers at the designated bus stops, the yellow cabs station at their designated parks while some drivers move around the metropolis for passengers to hail them. The tricycles move in an uncoordinated and unregulated manner, by picking and dropping off passenger, but the advantage of taking passengers to destinations such as streets, quarters that are far from the bus stops, and charges less fare compared to yellow cabs made them a preferable choice to most people in the metropolis.

### **Statement of The Problem**

Ridesourcing services are used for different types of trips purposes, such as work, educational, social/recreational, medical, personal business, etc., but various studies have shown that ridesourcing services have been mostly used for social/recreational trips (Tarabay & Abou-Zeid, 2019; Mahmoudifard et al; 2017; Rayle, et al; 2016; Chen, 2015) and these services have been attracting young, well-educated passengers (Tarabay & Abou-Zeid, 2019; Dias et al; 2017; Rayle, et al; 2016; Chen, 2015). Despite that ridesourcing has

been widely researched, in recent time by researchers in the United States, (Dawes, 2016; Deka & Fei, 2019), specifically in San Francisco (Rayle, et al; 2016), New York (Atkinson-Palombo et al; 2019; McKenzie & Baez, 2016), Chicago (Marten, 2015; Mahmoudifard, et al; 2017), Austin Texas (Yu & Peng, 2019), in Asia (Schechter & Hanson, 2017) and in the Middle East, specifically in Lebanon (Tarabay & Abou-Zeid, 2019), quantified evidence on the determinants and perception of residents and students on the use of ridesourcing services have not been established in Umuahia Metropolis where ridesourcing service (Enviabile Transport) was recently introduced.

This study seeks to explore the determinants and perception of residents on the use of ridesourcing services provided by Enviabile app for social/recreational trips in Umuahia metropolis. Being a new area of study in Nigeria, as most previous studies were done outside Africa, within the economies with adequate transportation system such as the United States. The study will bridge the gap in the literature, and also tries to provide insights on the determinants and perception of residents and students on the use of ridesourcing for the stakeholders in the transportation industry in Nigeria.

## **REVIEW OF RELATED LITERATURE**

Ridesourcing services as a disruptive innovation in transportation industry and factors influencing the use of the services has been studied by various researchers. In the study of Dias et al; (2017), the finding shows that users of ridesourcing services are young, well-educated, higher-income working individuals, who resides in high populated areas. Rayle, et al (2016) carried out a study in San Francisco, C.A. on the use of ridesourcing in comparison with taxis and found that young and well-educated people use ridesourcing the more. The study also found that majority of the respondents use ridesourcing for leisure/social purposes. Lavieri et al; (2017) found that people from high density area and that live tech-savvy lifestyle tend to use ridesourcing services more. The study of Gilibert et al. (2017) found that young people between the ages of 18 – 29 tend to use ridesourcing services the more.

Limpin (2018) investigated the factors influencing the use of ridesourcing in Philippines and found some factors such as employment status, sustainability, reproduction and economic benefits. Deka and Fei (2019) conducted a study to compare the personnel and neighbourhood characteristics associated with ridesourcing and transit use and find that people living near transit stations/stops use ridesourcing more frequently. Yu and Pang (2019) studied the impact of built environment on ridesourcing demand and found that greater population/employment/service job densities, road density, pavement completeness, land use mix and job accessibility by transit produce more ridesourcing demand. Atkinson-Palombo et al. (2019), conducted a study on the oversized use of ridesourcing services in

poor neighbourhood in New York City, and found that many of the outer borough neighbourhood in which ridesourcing trips originated are home to minority, relatively low-income populations with low car ownership rates. The trips are being taken by local residents to fill the gaps in mobility services, as these locations are less well-served by public transportation and other forms of vehicles such as yellow taxis. Alemi et al (2018) found that most people using ridesourcing services are highly educated, older millennial, travelers with a greater number of long-distance business trips, frequent users of transportation-related Smartphone apps, users with stronger pro-environmental, technology-embracing, and variety-seeking attitudes and in areas with greater land-use mix and regional accessibility by car.

Tarabay & Abou-Zeid (2019) in their study find that most students in Lebanon switch from traditional mode of transportation to ridesourcing services for social/recreational trips due to factors such as door-to-door travel time, waiting time for pick-up, and one-way fares. Zhen (2019) also finds that social and recreational trips are the predominant type of ridesourcing trips followed by work trips, and trip lengths are shorter and vehicle occupancy rates are greater than typical trip makers.

In summary, ridesourcing services as a model of transportation has been studied from the United States to Asia, and the Middle East. Most of the previous studies revealed several factors that influence the use of ridesourcing services, which include: attributes of the ridesourcing service, such as travel time, cost, individual characteristics and socio-demographics, such as age, income, educational status. Meanwhile, the majority of the ridesourcing service users were the young and well-educated, living in highly populated areas. Furthermore, ridesourcing services were mostly used for social/recreational trips. The available literature shows dearth of research works on determinants for demand of ridesourcing services and perception of residents in the use of ridesourcing in Nigeria, especially in Umuahia metropolis where Transport Network Company (TNC) known as Enviabile Transport started its operation recently with Tricycles popularly known as 'Keke'. Therefore, this study seeks to fill this gap by exploring the determinants and perception of residents and students on the use of ridesourcing services and determinants by particularly, a young educated group in Umuahia metropolis, represented by the students of Michael Okpara University of Agriculture Umudike for social/recreational trips to be precise.

## **METHOD OF INVESTIGATION**

This study adopted survey design in obtaining and analyzing data relating to resident's perception on the use of ridesourcing services for social/recreational trips in Umuahia metropolis. The target populations are students of the Michael Okpara University of Agriculture, Umudike from the ages of 18 years and above. A structured questionnaire was

administered to 650 randomly selected students out of which 422 were valid, and the retrieve rate was 64.9%. All the vital information were anonymously and voluntarily provided with prior consent of the respondents.

### **Instrument and Measurement**

This study made use of a structured questionnaire with three sections. The first section contains socio-demographic questions. The second section contains questions on the awareness and usage of ridesourcing app (Enviably) in Umuahia metropolis. Then, the third section contains question regarding attitudes and perceptions towards ridesourcing app attributes that are measured through several attitudinal statements addressing reliability, convenience, safety, modernity, comfort, real time tracking technology, rating system, automatic payment option, etc. These statements were measured on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) as adopted from Tarabay and Abou-Zeid (2019). Meanwhile, data collected with the research instrument were analyzed with the aid of a statistical programme IBM SPSS 20.0 for descriptive and inferential statistics.

### **RESULTS AND DISCUSSIONS**

The result from descriptive statistics (Table 1) shows that there are more female respondents (55%) than male respondents (45%). Majority of the respondents are between the ages of 18 – 22 (60%), followed by 23 – 27 (20%), then 28 – 32 (12%), and 33 – above (8%). This is in line with the study of Gilibert et al. (2017) and Dias et al. (2017), that young population between the ages of 18-29 use ridesourcing services the more. On educational status, majority are undergraduates (70%), while graduate students (30%). This confirms the finding by Alemi et al. (2018) and Dias et al. (2017), that ridesourcing services are mostly used by well-educated group. On the nationality of the students, all the respondents are Nigerians (100%).

**Table 1: Demographic of the Respondents**

Variables		Frequency	Valid Percent
Genders	Male	190	45
	Female	232	55
Age	18 – 22	253	60
	23 – 27	84	20
	28 – 32	51	12
	33 – above	34	8
Educational Status	Undergraduate	295	70
	Graduate	127	30
Nationality	Nigerian	422	100
	Foreigner	0	0

Source: Field Study

Table 2 shows the summary of data obtained from the general section of the survey. The majority of the students (92%) are aware of the availability of ridesourcing app (Enviabile) in Umuahia metropolis, while all the surveyed students own a Smartphone, 85% of them have made their trips using ridesourcing app. On the frequency of usage of the ridesourcing app in the last four months, 4% of the respondents did not use the app in the last four months, 40% used it few times (1 – 10 times), 11% used it once every month, 13% used the app once every week, 10% used it twice every week, while 22% used it 3 or more times per week. By trip purpose, the highest share of ridesourcing trips is for social/recreational (44%) confirming the findings of Zhen (2019) and Tarabay and Abou-Zeid (2019), followed by educational trips (23%) and personal business (16%); while 5% of the trips are for going to work, 3% for shopping and for medical trips, and 6% are for other purposes. The survey shows that respondents use ridesourcing services more during the day time (58%). There is also high usage at night (42%) and may be attributed to operating hours of buses in Umuahia metropolis (most of the buses stop plying some routes after 9pm) and also most passengers tend to be security conscious at night and prefer using ridesourcing services than commercial buses because ridesourcing services take them to their door steps instead of major bus-stops. Meanwhile, the most considered factors when choosing the mode of transport for social/recreational trips according to the survey were mainly travel cost, waiting time for pick-up, comfort, safety, door-to-door travel time, and convenience.

**Table 2: General Section Statistics**

Variables	Frequency	Percentage
Awareness of ridesourcing app (Enviabile)		
Yes	388	92
No	34	8
Total	422	100
Smartphone ownership		
Yes	422	100
No	0	0
Total	422	100
Ridesourcing app (Enviabile) use in Umuahia		
Yes	359	85
No	63	15
Total	422	100
Frequency of use (last 4 months)		
I did not use ridesourcing in the last 4 months	14	4
Few times (1 – 10 times)	144	40
Once every month	39	11
Once every week	46	13
Twice every week	37	10
3 or more times per week	79	22
Total	359	100

Trip purpose:		
Educational	83	23
Work	18	5
Social/recreational	158	44
Shopping	11	3
Personal business	57	16
Medical	11	3
Others	21	6
Total	359	100
Time of use		
Day	208	58
Night	151	42
Total	359	100
Factors mostly considered for choosing the mode of transport (social/recreational trips):		
Travel cost	108	30
Door-to-door travel time	43	12
Convenience	72	20
Comfort	18	3
Safety	53	15
Waiting time for pick-up	65	18
Total	359	100

**Source:** Field Study

Meanwhile, the main factors that people consider before choosing ridesourcing services were analyzed. Respondents were asked to indicate their level of agreement with statements relating to their choice of ridesourcing. These statements were related to the identified attributes of ridesourcing services in the literature, for example, cost of travel time, waiting time, for pick-up, safety, etc. From table 3, we observed that ridesourcing users reported positive attitude towards ridesourcing services as statements addressing ridesourcing services were rated positively.



**Table 3: Respondents' rating on choice of ridesourcing services**

Statement	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq	%	Freq.	%	Freq	%
I can count on ridesourcing to get me to my destination on time	134	37.3	172	47.9	10	2.8	23	6.4	20	5.6
Ridesourcing is a convenient mode of transport for me	137	38.2	180	50.1	15	4.2	17	4.7	10	2.8
Ridesourcing is safe	140	39.0	177	49.3	10	2.8	20	5.6	12	3.3
Ridesourcing makes me feel modern	100	27.9	150	41.8	30	8.4	40	11.1	39	10.9
Ridesourcing is comfortable	137	38.2	179	49.9	16	4.5	17	4.7	10	2.8
I like the technology platform based on real time tracking in ridesourcing	134	37.3	170	47.4	12	3.3	23	6.4	20	5.6
I like the rating system available after the trip in ridesourcing	130	36.2	159	44.3	30	8.4	30	8.4	10	2.8
I like the automatic payment option using credit or debit card in ridesourcing	100	27.9	160	44.6	30	8.4	39	10.9	30	8.4
I would like to use ridesourcing in bad weather conditions	140	39.0	176	40.9	10	2.8	21	5.8	12	3.3
I would like to use ridesourcing to avoid driving when intoxicated	137	38.2	178	49.6	17	4.7	18	5.0	9	2.5

**Source:** Field Study

The attitudinal and perceptual statements were tested with one sample T-test to ascertain the influence of the attributes on the use of ridesourcing services by the respondents. Table 4 shows that the attributes have positive influence on the choice of the respondents in using ridesourcing services in Umuahia metropolis. The results from the t-test show that ridesourcing attributes had significant influence on the use of ridesourcing for social/leisure trips. The attitudinal statements are positive with significant values less than 0.05, ["I can count on ridesourcing to get me to any destination in the city on time" (t = 71.266; p-value, 0.000); "Ridesourcing is a convenient mode of transport for me" (t = 86.046; p-value, 0.000); "Ridesourcing is safe" (t = 81.923; p-value, 0.000); "Ridesourcing makes me feel modern" (t = 53.541; p-value, 0.000); "Ridesourcing is comfortable" (t = 85.800; p-value, 0.000); "I like the technology platform based on real time tracking in ridesourcing" (t = 70.981; p-value, 0.000); "I like the rating system available after the trip in ridesourcing" (t = 75.097;

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p-value, 0.000); “I like the automatic payment option with credit or debit cards in ridesourcing” (t = 58.079; p-value, 0.000); “I would like to use ridesourcing in bad weather conditions” (t = 81.249; p-value, 0.000); “I would like to use ridesourcing to avoid driving when intoxicated” (t = 86.374; p-value, 0.000).

Table 4: One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
I can count on ridesourcing to get me to any destination in the city on time	71.266	358	.000	4.05014	3.9384	4.1619
Ridesourcing is a convenient mode of transport for me	86.046	358	.000	4.16156	4.0664	4.2567
Ridesourcing is safe	81.923	358	.000	4.15042	4.0508	4.2501
Ridesourcing makes me feel modern	53.541	358	.000	3.64624	3.5123	3.7802
Ridesourcing is comfortable	85.800	358	.000	4.15877	4.0635	4.2541
I like the technology platform based on real time tracking in ridesourcing	70.981	358	.000	4.04457	3.9325	4.1566
I like the rating system available after the trip in ridesourcing	75.097	358	.000	4.02786	3.9224	4.1333
I like the automatic payment option with credit or debit cards in ridesourcing	58.079	358	.000	3.72702	3.6008	3.8532
I would like to use ridesourcing in bad weather conditions	81.249	358	.000	4.14485	4.0445	4.2452
I would like to use ridesourcing to avoid driving when intoxicated	86.374	358	.000	4.15877	4.0641	4.2535

Source: SPSS 20

Prominent attributes are the waiting time, which is in conformity with the study of Rayle et al. (2016), door-to-door, safe to use especially at night, and the convenience it provides in terms of pick up, mostly at areas where there is no bus stop or very far from the bus stop.

## **CONCLUSION AND RECOMMENDATIONS**

The acceptability and usage of ridesourcing services as a mode of transportation is on the rise in Umuahia metropolis, especially among the population of students, young and educated. Ridesourcing as a disruptive innovation in the transportation industry is changing the way people engage in different trips, especially social/recreational trips in Umuahia metropolis. Reasons abound why most students, young and educated people use ridesourcing services, which includes the waiting time for pick-up is shorter with ridesourcing, ridesourcing pick-up passengers from their homes, streets and not at the bus stops, as in the case of buses and hailing of taxis on the road, ridesourcing is faster and picks passengers at their convenience, the fare is cheaper than commercially available tricycles and yellow cabs. Besides, the drivers of 'Keke' on the ridesourcing platform are more polite, and they do not over speed due to the tracking of the vehicle through GPS and the estimated time for the driver to get to his destination. This has increase the sense of being secured from the side of the passengers using ridesourcing services in the metropolis.

Since ridesourcing service is new in Umuahia metropolis and most people that use ridesourcing services for social/leisure are young, well-educated and those that reside in higher-density areas, the study recommends an improvement in the waiting time, training to the drivers in map reading and navigating some routes during traffic jam. Besides, the payment system should be properly secured as most young people are avoiding online payment methods in order not to expose their account details to online fraudsters.

This study contributes to the extant literature in the determinants and perception of residents on the use of ridesourcing for social/recreational trips, as well the characteristics of those using ridesourcing services. The results provide insights on the important factors for using ridesourcing services in the metropolis and how to manage the services for continuous patronage.

## **REFERENCES**

- Alemi, F. Circella, G. Handy, S. & Mokhtarian, P., (2018). What influences travelers to use Uber? Exploring the factors affecting the adoption of on-demand ride services in California. *Travel Behav. Soc.* 13, 88 – 104.

- Atkinson – Palombo, C., Varone, L. & Garrick, N. W., (2019). Understanding the surprising and oversized use of ridesourcing services in poor neighbourhood in New York City. *Transportation Research Record*, 1 – 10.
- Chen, Z., (2015). *Impact of ridesourcing on travel habits and transportation planning*. Master's thesis, University of Pittsburg.
- Dawes, M., (2016). *Perspectives on the ridesourcing revolution: surveying individual attitudes toward Uber and Lyft to inform urban transportation policymaking*. Master's thesis, Massachusetts Institute of Technology.
- Deka, D. & Fei, D., (2019). A comparison of the personal and neighbourhood characteristics associated with ridesourcing, transit use and driving with NHTS data. *Journal of Transport Geography* 76, 24 – 33.
- Dias, F. F., Lavieri, P. S., & Garikapati, V. M...., (2017). A behavioural choice model of the use of car-sharing and ridesourcing services transportation (*AMA*) 44, 1307-1323. <https://doi.org/10.1007/S11116-017-9797-8>
- Gilbert, M., Ribas, I. & Rodriguez-Donaire, S., (2017). Analysis of mobility patterns and intended use of shared mobility services in the Barcelona region. In: *European Transport Conference, Strands*, 1 – 20.
- Hu, M., (2019). *Sharing economy: making supply meet demand*. Springer.
- Lavieri, P., Garikapati, V. M. & Bhat, C. R. ...., (2017). Modeling individual preferences for ownership and sharing of autonomous vehicle technologies. *Transportation Research Record. Journal of the Transportation Research Board*, 2665, 1 – 10.
- Limpin, L., (2018). *Investigating the factors influencing the participation in ridesourcing: The case of the Philippines*. <https://www.researchgate.net/publication/328782145>
- Mahmoudifaid, S.M., Kermanshah, A., Shabanpour, R., & Mohammadian, A., (2017). *Assessing public opinion on Uber as a ridesourcing transportation system: explanatory analysis and results of a survey in Chicago area*. A paper presented at the 96<sup>th</sup> Annual meeting of the Transportation Research Board, Washington.
- Marten, L., (2015). *Assessing the demand for Uber*. Master's thesis, Northwestern University.
- McKenzie, G. & Baez, C., (2016). *Uber vs. Taxi: event detection and differentiation in New York City*. International Conference GISci. Short paper proceeding ICID, 2-5. <https://doi.org/10.21433/6311142K9g37h>
- Meyer, G. & Shaheen, S., (2017). *Disrupting mobility: impacts of sharing economy and innovative transportation on cities*. Lecture Notes in Mobility. Springer.
- Rayle, L., Dai, D., & Chan, N...., (2016). Just a better taxi? A survey-based comparison of taxis, transit and ridesourcing services in San Francisco. *Transportation policy* 45, 168-178. <http://doi.org/10.1016/j.tranpol.2015.10.004>
- Schechtner, K., & Hanson, M., (2017). *Shared mobility in Asian megacities; the rise of the apps*. In Meyer G., Shaheen, S. (eds.) *Disrupting mobility: Impacts of Sharing*

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Publication of the European Centre for Research Training and Development -UK

Economy and Innovative Transportation on Cities. Lecture Notes in Mobility, 77-88. Springer.

Tarabay, R. & Abou-Zeid, M., (2019). Modeling the choice to switch from traditional model to ridesourcing services for social/recreational trips in Lebanon *Transportation*. <https://doi.org/10.1007/S11116-019-09973-X>

Wang, A. & Yang, H., (2019). Ridesourcing systems: A framework and review. *Transportation Research Part B* 129, 122 – 155.

Yu, H. & Peng, Z., (2019). The impacts of built environment on ridesourcing demand: A neighbourhood level analysis in Austin, Texas. *Urban studies*, 1 – 24.