

KRISHNA RAJ RESEARCH FELLOWSHIP PROGRAMME 2013-14

A COMPARATIVE STUDY OF RICKSHAWS AND ELECTRIC RICKSHAWS IN DELHI

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INTRODUCTION

A potential worker will weigh the benefits-potential earnings and non-pecuniary returns-and costs-of training, foregone earnings, etc. of the occupations available to him-and then, invest in changing occupations if the returns are sufficiently large to make a particular change of occupation the most profitable use of his limited resources. We make this assumption in the report, and try to study two occupations with similar demographic characteristics pertaining to short-distance transport providers in various localities across New Delhi. The two occupations we study are rickshaw pedalers and erickshaw drivers.

Rickshaw pullers are a classic example of migrant, informal labor in the urban areas. They lack basic amenities such as human and physical capital (often, they lack any official proof of identity) and have restricted access to formal institutions of credit. As several of them are temporary/floating migrants, these problems are more acute for they lack adequate political representation in the city. As such, this group appears ideal for studying informal institutions in the urban labor market.

On the other hand, erickshaw drivers are a similar example of migrant informal labor in the urban areas and also, have the same demographic characteristics as rickshaw pedalers. This makes them ideal for comparison with rickshaw pedalers, as erickshaw driving is regarded as a high revenue high cost occupation, and rickshaw peddling as a low income low cost occupation.

Background on Rickshaws and Erickshaws (A part of informal transportation sector)

The informal transportation sector in India's megalopolis is one of the most important economic activities in which urban poverty is concentrated. Moreover, a very large number of poor rural-to-urban migrants tend to initiate their urban career in this sector.

At the present stage of India's development, cycle rickshaws remain a prevalent mode of transport in urban and semi-urban areas. The capital city, Delhi is still served by rickshaw pullers, notwithstanding the fact that its per capita income is the second highest in the country, next only to Chandigarh's (as of 2013). Rickshaw pullers can be easily seen transporting people in residential colonies of the city and also in its outskirts. In the city centre, the area covered by New Delhi, where the union Government has its seat, cycle rickshaws are not permitted to ply.

A recent upsurge of Erickshaws (electric rickshaws) in the NCT of Delhi has not only made life simpler for various passengers who are looking to travel on a shorter route but has also given a new avenue for employment. And the section of employment which has been affected most by the uprising of erickshaws in Delhi is the cycle rickshaw community. Electric rickshaws have been becoming more popular since 2011 as it serves as an alternative to auto rickshaws and, specially, cycle rickshaws

because of its low fuel cost (runs on a battery as compared to auto rickshaws which run on CNG) and less human effort compared to pulled rickshaws. Due to their low cost and high efficiency they were accepted with minimal resistance, by city commuters. However, Erickshaws in Delhi are currently facing legal issues (in greater detail in Appendix B) driven primarily by their generally reckless conduct on city streets that has resulted in several accidents, some of which have had particularly gruesome consequences (see references).

DESCRIPTIVE ANALYSIS

Sample:

Sampling procedure

Our study is based on the survey of 217 rickshaw and erickshaw drivers in New Delhi, conducted during May-June 2014. Areas covered under the survey were Chandni chowk, University of Delhi (North campus), Karol bagh, GTB nagar and Tis Hazari. All these places are either large market places or (in the case of North Campus) have a large number of educational institutions (student hubs), which has resulted in a huge demand for feeder transport options. Moreover, metro stations are an important place for this survey as the large number of rickshaws and erickshaws at metro stations provided a last mile option for everyday commuters.

We conducted a pilot survey of 10-15 rickshaw and erickshaw drivers, which suggested that erickshaw drivers do better than rickshaw pedalers in terms of net earnings. However, rickshaw pedalers were reluctant to shift to erickshaw driving. The survey conducted and the analysis included in this report are an effort to verify this hypothesis, and if true, to give reasons to the above contradicting statements.

We divided the rickshaw and erickshaw sample further into two categories each. For rickshaw pedalers:

1. Those who wanted to shift to erickshaw driving and were looking for a suitable opportunity.
2. Those who did not want the shift.

For Erickshaw drivers:

1. Drivers who were previously engaged in rickshaw peddling.
2. Drivers who came from other professions. These include migrant farmers, blue collar workers, taxi drivers and the unemployed.

The main purpose of the report is pertinent to the comparison of the section which made a shift from rickshaw peddling to erickshaw with other sections (in particular, those who continue to pedal rickshaws).

Our sample is somewhat lopsided (52 rickshaw pedalers against 165 erickshaw drivers). This is due to our focus on the "switch" group i.e. those who were erstwhile rickshaw pedalers but have made the switch to erickshaws. A larger number of erickshaw drivers had to be interviewed to gather a sufficiently large sample of switchers (despite claims from many respondents that around half of all erickshaw drivers were once rickshaws pedalers, we found only 41 switchers out of 165 respondents).

Sample Characteristics

The survey sample covers rickshaw and erickshaw drivers from diverse backgrounds and various demographic characteristics.

More than 80% of the drivers in the sample were migrants, however, migrants do not always immediately take up rickshaw pulling on coming to the city. Besides, some respondents took up rickshaw peddling temporarily, when income from other occupations, such as working in a decoration/catering business, factory, hotel or shop, was low. On the other hand, due to the recent introduction of erickshaws on Delhi roads, almost all erickshaw drivers had migrated much before they got into the occupation and were engaged in some or the other occupation before shifting. Moreover, most rickshaw pullers oscillate between their native village and the city, often going back home during the agricultural sowing and harvesting season while erickshaw drivers tend to have shifted to Delhi permanently.

For other sample characteristics, refer to the table below:

| Variable | Unit | Description | Number of observations | Mean | Standard deviation |
|--------------------------|--------|--------------------------------------|------------------------|-------|--------------------|
| <i>Age</i> | years | Age of the respondent | 217 | 31.2 | 8.7 |
| <i>months_city</i> | months | Months/year in the occupation | 217 | 10.3 | 8.5 |
| <i>months_occupation</i> | months | Total months spent in the occupation | 217 | 25.3 | 49.7 |
| <i>famsize</i> | count | Household size | 217 | 7.6 | 4.2 |
| <i>grossrevenue</i> | Rs. | Revenue per month | 217 | 14400 | 5900 |
| <i>dailyearning</i> | Rs. | Daily gross revenue/day | 217 | 543 | 189 |
| <i>dailyrent (rick)</i> | Years | Daily rent per day | 217 | 47 | 4.3 |
| <i>Dailyrent (erick)</i> | Rs. | Daily rent per day | 217 | 360 | 54.4 |

Occupational Characteristics

Due to limited finances and seasonal nature of their migration, rickshaw pullers usually rent vehicles from rickshaw maliks (fleet owners) in the city. We learnt of maliks who owned more than 700 rickshaws (although, since we have not interviewed any maliks, we cannot claim any truth in this figure) as well as of smaller ones with less than 20. In principle, this ownership is illegal as one person is not allowed to own more than one rickshaw. As a result most maliks have to pay bribes to run their business. Daily rent paid by pullers varied between Rs. 40 to Rs. 50 depending on area of operation.

On the other hand, erickshaw drivers both rent and own the erickshaw. In fact about 55% of the erickshaw drivers surveyed owned the erickshaw. However, a majority of owners had to invest almost all their savings into buying an erickshaw or had to resort to taking a loan. The erickshaw drivers operating on rent had to make a daily sacrifice in the range of Rs. 300-450 owing to rent.

EMPERICAL ANALYSIS

It emerged out of our field survey that Erickshaw drivers do better in earnings than rickshaw pedalers. This does not seem to be incentive enough for rickshaw pedalers to attempt a shift, though. In this section, we present our data analysis and try to explain the above choice patterns.

| Type | Age | Months | Family Size | Net Income | Count |
|--------------|-----------------|------------------|--------------------|----------------------|--------------|
| Rick | 31.63 (7.53) | 71.23 (88.26) | 7.23 (3.83) | 7060.73 (2584.12) | 52 |
| Erick | 30.98 (9.02) | 13.23 (23.05) | 7.78 (4.30) | 9958.90 (3751.96) | 165 |
| Total | 31.13 (8.67) | 26.64 (52.73) | 7.65 (4.19) | 9264.41 (3715.17) | 217 |

| educ1 | Rick | Rick(%) | Erick | Erick(%) | Total | Total(%) |
|--------------------------|-------------|----------------|--------------|-----------------|--------------|-----------------|
| Illiterate | 16 | 30.8% | 61 | 37.0% | 77 | 35.5% |
| Literate | 1 | 1.9% | 6 | 3.6% | 7 | 3.2% |
| Primary | 10 | 19.2% | 19 | 11.5% | 29 | 13.4% |
| Upper Primary | 19 | 36.5% | 35 | 21.2% | 54 | 24.9% |
| Secondary | 1 | 1.9% | 25 | 15.2% | 26 | 12.0% |
| High School | 4 | 7.7% | 14 | 8.5% | 18 | 8.3% |
| Above High School | 1 | 1.9% | 5 | 3.0% | 6 | 2.8% |
| Total | 52 | 100% | 165 | 100% | 217 | 100% |

A quick glance at some summary statistics (table-1, with standard deviations given in parentheses below numbers) shows us some interesting facts-

1. Both rickshaw pedalers and Erickshaw drivers display similar demographic characteristics-mean age and family size (members that the respondent provides for) are comparable. However, rickshaw pedalers have been in their current occupation for considerably longer than Erickshaw drivers (this is obvious as Erickshaws only came on the streets around 2 years ago).
2. Table-2 gives an "incidence of educational attainments" summary (refer to Appendix-A for classification of education qualification). We use this statistic repeatedly in later analysis. Surprisingly, our sample of Erickshaw drivers display a greater share of illiterates than rickshaw pedalers, but they also have a greater number of persons who have passed secondary school or higher.

3. Mean incomes (netting out costs) are considerably higher for Erickshaw drivers.

Despite the higher earnings of the 52 rickshaw pedalers surveyed, only 12 responded “Yes” to whether they wanted to shift to an Erickshaw. Of the 39 who replied in the negative, the most common cited reason for not wanting to shift involved the significantly higher costs involved (25 out of 39). An implication of perceived prohibitive costs was the impression that earnings from Erickshaws were highly unreliable. This coupled with a perceived reduced profitability due to the recent supply glut of Erickshaws has led to a reduction in migrations into Erickshaws from Rickshaws.

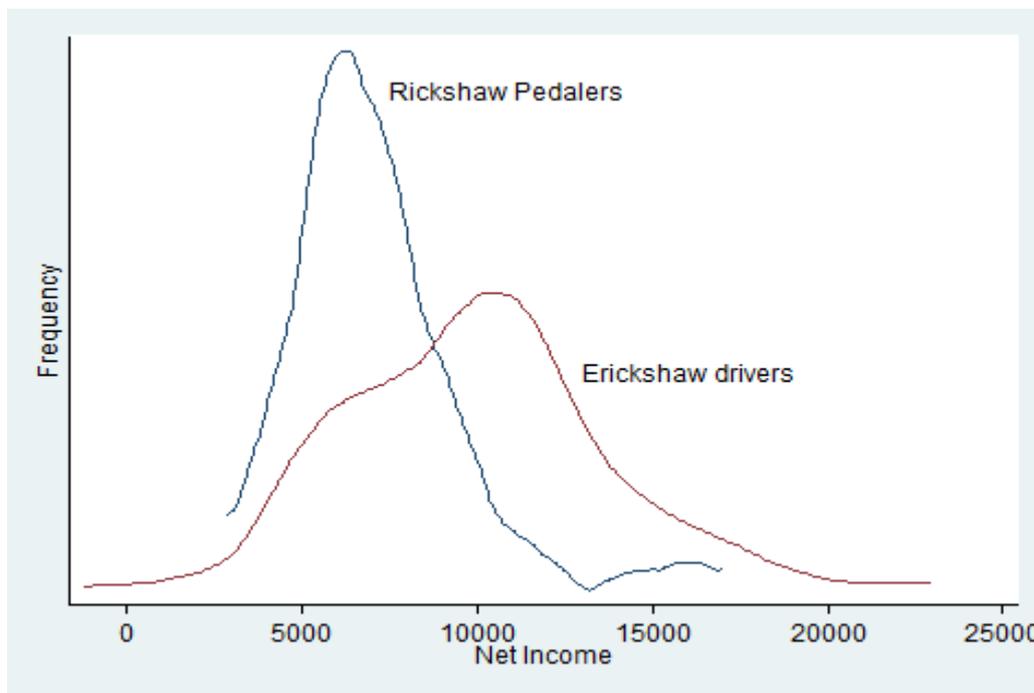


Figure 1- Kdensity plots of net income for Rickshaw pedalers and Erickshaw drivers

We use kernel density smoothing to derive sample distributions of net income of respondents. Figure 1 shows us that the spread in earnings (net income) is observably higher for those who ply on Erickshaws. This seems to validate the above given reasons for not wanting to move into Erickshaws. Table-1 also shows that the standard deviation of net incomes of rickshaw pedalers is 2584 as against 3752 for Erickshaw driver incomes. It can also be conjectured that the mean earnings of Erickshaw drivers is higher than that of Rickshaw pedalers. If we do a test for equality of mean incomes between rickshaw pedalers and erickshaw drivers (standard t-test) then we actually find that rickshaw pedalers have a statistically significant, lower net income than erickshaw drivers. The difference is highly significant, even at 1% level of significance).

To further explore the reasons for the above observations (and give credence to the hesitance of Rickshaw pedalers to switch) we now do an analysis of those who *have* switched into Erickshaws against those who continue to ply rickshaws.

| Table-3 | | |
|-------------------------------|-------------|-----------|
| Netincome | <i>mean</i> | <i>sd</i> |
| Rickshaw pedaler | 7060.7 | 2584.1 |
| Shifted into Erickshaw | 9668.3 | 3057.6 |

Table-3 shows a cross section of net income between rickshaw pedalers and Erickshaw drivers who have shifted from being rickshaw pedalers. Once again the benefits to earnings are appreciable.

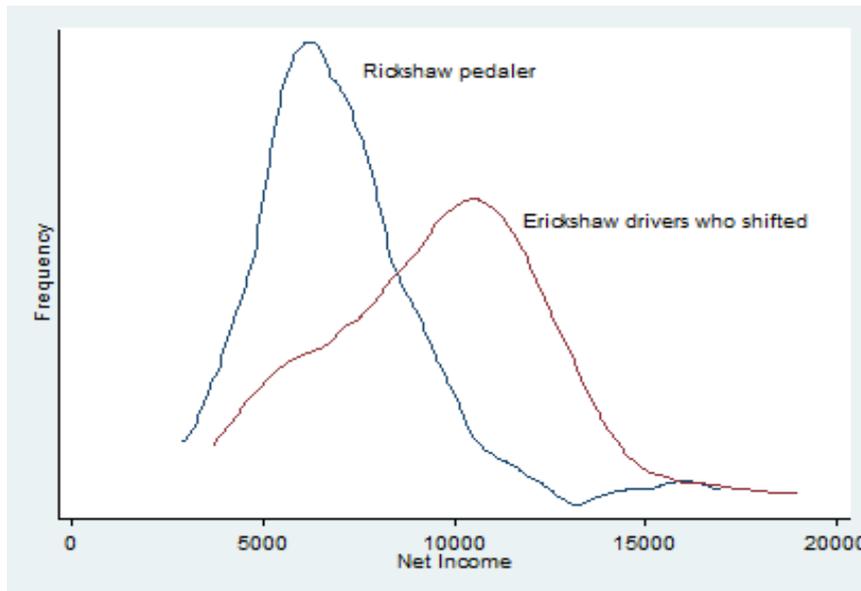


Figure 2-Shifters vs Rickshaw pedalers

Figure-2 further corroborates that mean income and its variance are higher for Erickshaw driver who shifted from Rickshaws. The figure implies that rickshaw pedalers typically earn lower than Erickshaw drivers. The risk averseness usually associated with lower income households might explain the reluctance of rickshaw pedalers towards shifting.

Besides the risk aversion, there exist barriers that prevent rickshaw pedalers from shifting. A common prerequisite for renting an erickshaw is the deposit of a valid id proof as security. Lack of personal id may be compensated by the id of a friend/contact. Additionally, theft of erickshaws is a prevalent fear specifically among those surveyed in Karol Bagh (several respondents allege that there is a high risk that a late night customer might knock them unconscious from the passenger seat and steal their vehicle. Such an event occurs with disturbing regularity, they say).

| Table-4 | | |
|----------------|-----------------|----------------------------------|
| | <i>Rickshaw</i> | <i>Erick (Shifted from Rick)</i> |
| No ID | 44% | 29% |
| Has ID | 56% | 71% |

| Table-5 | | |
|----------------|----------------------|-------------------------|
| | <i>City Contacts</i> | <i>Village Contacts</i> |
| Rick | 21 | 14 |
| Shifted | 33 | 34 |

| Table 6 | | |
|----------------------|-------------|-------------------|
| | <i>Rick</i> | <i>Rick Shift</i> |
| Illiterate | 30.8% | 58.5% |
| Literate | 1.9% | 4.9% |
| Primary | 19.2% | 14.6% |
| Upper Primary | 36.5% | 7.3% |
| Secondary | 1.9% | 9.8% |
| High School | 7.7% | 2.4% |
| Above HS | 1.9% | 2.4% |

Table 4 and Table 5 show that lack of id is less prevalent in those who shifted to Erickshaws than rickshaw pedalers in general. Moreover, those who have shifted claim to know a greater number of people both from the city and from their hometowns than those who continue to ply rickshaws.

Table 6 shows that literacy rate is considerably higher among those who did not shift to erickshaws than those who did. If we assume that higher educational qualifications lead to better decision making, then Table 6 agrees with hesitation associated with shifting. People who have attained higher level of education are more adept at recognizing the risk involved in shifting.

As further evidence that migration into Erickshaws has stagnated recently, we note (in table 7) that the average number of months spent driving an Erickshaw is higher for people who have shifted from rickshaw peddling than those who have shifted from other occupations.

Months in present occupation

| Table 7 | |
|---------------------------|---------------|
| | <i>Months</i> |
| Rickshaw pedaler | 71 |
| Shifted from Rick | 19 |
| Shifted from other | 11 |

In summation, there is an overwhelming negative response to Erickshaws as a potential, less strenuous job opportunity among rickshaw pedalers. This persists despite potentially higher income when operating the former. The cited reasons usually deal with a reduced profitability. Our analysis shows a larger variation in net incomes among Erickshaw drivers. This is borne out even when comparing incomes between rickshaw pedalers and just those Erickshaw drivers who were erstwhile rickshaw pedalers. In addition, it appears that those who did make the switch into Erickshaws typically possessed a lower education level, thereby lending credence to the argument that those who are better equipped to judge the risks involved in a shift of occupation(i.e. the better educated), usually choose not to do so. When it comes to other barriers to entry into Erickshaws, such as the lack of ID, we see that those who make the switch tend to have a larger social net in the city (possibly circumventing the issue of ID by providing an introduction to Erickshaw owners, who lease their vehicles on the merit of the merit of the introducer's reputation).

To convince ourselves that, from a savings perspective, those who shift into Erickshaws are not worse off than those who continue in rickshaws, we look at the debt structure of the two groups

along with corresponding values for those who had other occupations (apart from rickshaw peddling) and then began driving Erickshaws. The average loan amounts outstanding in a household were- Rs.32,700 for Rickshaw pedalers (15 households had outstanding debts), Rs.36,714 for those rickshaw pedalers who shifted to Erickshaws (14 households) and Rs.67,520 for those who shifted to driving Erickshaws from other previous occupations (25 households). It could be argued that the significantly larger debt amounts for those whose erstwhile occupations were not rickshaw peddling can be explained by the fact that about half of them (87 out of 165) own their own Erickshaws and may have taken large loans to pay for them. Those rickshaw pedalers who made the shift, presumably did not buy their own rickshaws and hence, have much lower loan amounts (17 out of 41 shifters now own their vehicles). The following table (Table-8) determines that is not the case.

| Purpose of debt | <i>Rickshaw</i> | <i>Shift(rick)</i> | <i>Shift(oth)</i> | <i>Total</i> |
|--|-----------------|--------------------|-------------------|--------------|
| Medical expenses | 5 | 3 | 3 | 11 |
| Educational expenses | 1 | 0 | 0 | 1 |
| other consumption expenses | 1 | 0 | 1 | 2 |
| Marriage and other ceremonial exp. | 2 | 0 | 0 | 2 |
| Purchase of land/construction of building | 2 | 4 | 12 | 18 |
| Repayment of loans | 0 | 0 | 2 | 2 |
| Purchase of Production assets | 1 | 2 | 6 | 9 |
| others | 2 | 2 | 1 | 5 |
| Total | 14 | 11 | 25 | 50 |

As can be seen, the most common cited reason for availing a loan, among those who shifted from Rickshaws and other occupations is actually Purchase of land/construction of building (a head that captures expansion and renovation of a respondent's home or purchase of land). It is not, Purchase of Production assets, as the aforementioned argument would imply. What emerges from this table is that upon shifting to Erickshaws, the debt structure suggests greater expenditure on home improvements rather than an inability to finance one's consumption expenditure (no instances).

It would appear that the predominant reason why agents do not wish to enter an occupation that offers greater earnings at a lower physical cost (26 out of 41 shifters cite "less hard work" as their reason for moving away from rickshaw pulling) is a degree of risk aversion, or rather a lack of belief in the earnings potential in Erickshaws. Those who shift do appear to earn more and nothing suggests that their lives are further immiserated by the move. However, it should also be noted that there is a difference in earnings between those who shift into Erickshaws from Rickshaws and *rent* them and those who have *bought* their own Erickshaws.

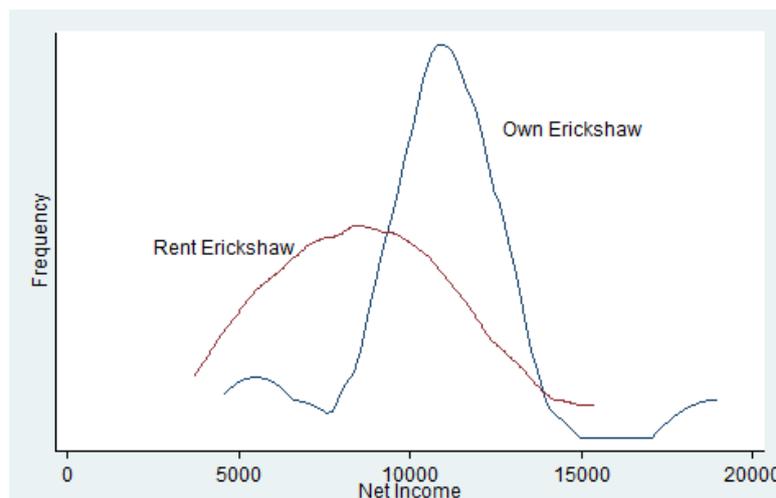
| Table 9 | |
|------------------------|----------|
| Rent Erickshaws | 8816.67 |
| Own Erickshaws | 10870.59 |
| Rickshaw | 7060.73 |

Table 9 shows that renters earn only Rs.1800 more than rickshaw pedalers. Those who have shifted and own their Erickshaws earn (on average) more than the average net income of Erickshaw drivers in general, which indicates that the lower average income of the entire group is probably due to lower earnings among those whose erstwhile occupations were not rickshaw peddling or those who rent their vehicle. This phenomenon, prima facie, validates the fear among rickshaw pedalers that switching may not lead to better earnings.

Perhaps even more startling is the variation in spread of earnings between these two groups (those who rent after shifting and those who own their vehicles). Figure 3 shows us exactly what Rickshaw pedalers believe will confront them if they begin plying Erickshaws. Net earnings for those who managed to purchase their own vehicles after the switch away from Rickshaws earn more, on average. Not only that, the variation in their net incomes is observably lower than that for switchers who rent their vehicle. Only 17 out of the 41 members who made the switch owned their vehicles.

If we return to table 8, only 2 members reported taking loans to “purchase production assets”, our label for loans taken to finance the Erickshaw. Although we cannot conclusively state that relatively affluent Rickshaw pedalers are switching to Erickshaws, the trend appears to agree with this point- yet, our sample does not indicate that only those rickshaw pedalers who are capable of buying their own Erickshaws are the ones making the change in larger numbers (the majority of the switchers surveyed were renting their vehicle).

Figure 3-Net Income by renters and owners



In conclusion, the following scenario emerges-Erickshaw drivers earn more (net of costs) than rickshaw pedalers. It is also broadly agreed that plying an Erickshaw is far less strenuous than peddling a rickshaw. Rickshaw pedalers, when asked whether they wanted to switch to Erickshaw driving overwhelmingly respond in the negative (39 out of 51). Our analysis shows that the reluctance to change over and the usual reason cited (lack of substantial earnings improvement) are

well founded. The variability in net incomes is much higher for those who switch to plying Erickshaws but rent their vehicles, compared to those who buy the Erickshaw (Figure 3). Net incomes are also higher for those who were able to buy their vehicle after the switch. Since there is no evidence that making the switch puts a household in a more precarious financial situation (analysis of household debt, above), the differences in net income may be attributed to costs differentials, specifically, the daily rent on Erickshaws.

Conclusion

Although our pilot survey suggested that Erickshaw drivers are better off, the reluctance among rickshaw pedalers is legitimate. Although, Erickshaw drivers *do* earn more than rickshaw pedalers, the improvement is only appreciable (and guaranteed) if the Erickshaw is owned by the driver. Those who chose to move into Erickshaws and have to rent their vehicles have lower incomes than those who own it. A considerable share of rented Erickshaw drivers also registered a decrease in net income. Apart from the income dimension, Erickshaws are far less strenuous to operate. About 63% of shifters cited “Less Hardwork” as one of the reasons for shifting.

Rickshaw pedalers prefer a “low revenue low risk” occupation to a “high revenue high risk” occupation. In short, they display the risk averse-ness characteristic of the lower income strata of society. One could make the claim that rickshaw pedalers aren’t optimizing over the long run, focusing instead on monthly earnings. We could do a discounted net earnings exercise to test whether, in the long run (or at least, on an annual scale), ericshaws provide unquestionably higher earnings, with no caveats whatsoever. However, given the fact that most rickshaw pedalers are seasonal and often spend only a small portion of the year in the city (choosing to remain in their home towns for the rest of the year), this seems to be an inappropriate method to follow. Erickshaws present themselves as a more “permanent” mode of employment and that too may motivate seasonal labourers, whose sole objective is to smoothen earnings over the agricultural lean season, to opt out.

APPENDIX-A

Questionnaire

[Investigator: Please remember that the questions below are addressed to an individual respondent. Make sure that the concerned person answers himself or herself. If at all possible, conduct the interview at home, and in any case not in a group. Before starting the interview, introduce yourself carefully and check that the respondent is willing to spare up to an hour or so for this discussion. If any question is not applicable, write "NA" in the relevant space. If you are unable to obtain a clear response, use the appropriate code (usually "9"), but please avoid this as far as possible! All those people who the respondent supports with his income is to be considered as a member of the household/ family.
]

Investigator's name(s):

Name of the respondent:

Date: _____

PART I (Respondent's Household Details)

1. Age (years): /_____/

2. Education level: /_____/

[1 = Illiterate; 2 = Literate (below primary); 3 = Primary (Class V complete); 4 = Upper Primary (class VIII complete); 5 = Secondary (class X complete); 6 = High School (class XII complete); 7 = Above High School; 9 = Unclear]

3. Do you have any proof of identity/ address proof? [1=yes, 2=no] _____

If yes, what is it? _____

4. Marital Status: /_____/

[1 = Married; 2 = Other]

5. Migrant Status –

Are you migrant? [1=yes, 2=no] /_____/

(Please consider a person not having any local address proof to be a migrant)

If yes, please tell us

i) Your permanent state of residence _____

ii) Do you come here for work for few months /_____/

[1-Yes, 2-No]

iii) Have you migrated permanently /_____/

[1=yes, 2=no]

If yes – since how many years _____

5. Religion: /_____/

[1 = Hindu; 2 = Muslim; 3 = Sikh; 4 = Other (specify); 9 = Unclear]

6. Caste group (if applicable) (Name of the Caste): /_____/

[1 = SC; 2 = ST; 3 = OBC; 4 = Caste Hindu; 5 = Other (specify); 9 = Unclear;]

7. How many months are you engaged in this occupation?

a. What do you do at other times?

8. Why do you prefer to operate in this location?

a. Do you operate in any other location also? [1-Yes, 2-No]

b. What are the other locations you operate in?

c. If yes, please give reasons for change in location?

9. Net Income in the last week from rickshaw (in Rs.) _____
- 10.a. Is there any other occupation you are engaged in (specify, if yes)? _____
- 10.b. If yes, then how much do you earn from it? _____
11. Father's occupation _____
12. How did you get into this occupation? _____
13. At which age did you start working in this occupation? _____
- OR
14. How long have you been doing this? _____
15. Were you engaged in any other occupation previously? [1-Yes, 2-No] _____
- If yes, what occupation were you engaged in previously? _____
- 16.a. How many people do you meet daily from your village? _____
- 16.b. How many of them are in the same occupation? _____
- 17.a. Apart from these people you must be knowing some people from the city, how many people are from other villages or cities? _____
- 17.b. How many of them are in the same occupation? _____
18. Where do you charge your e rickshaw? _____
19. Are there any soft loan options available to you, for paying off rent on your rickshaw? [1-Yes, 2-No] _____ (if yes, specify).
20. Does your local house have an electricity connection? [1-Yes, 2-No] _____
21. Type of ration card (local or back in the village): /_____/
- [1= APL; 2 =BPL; 3 =Antyodaya; 4 = Annapoorna; 5 = Other (specify); 6 = No ration card; 9 = Unclear]
22. Main occupation of the household: /_____/
- [1-self employment (agriculture), 2-self employment (non-agriculture), 3-casual labour (agriculture), 4-casual labour (non-agriculture), 5-regular employment (Naukri), 6-other (specify), 9-unclear]
23. Total Number of Family Member _____

| Category | No. of Members |
|-------------------------|----------------|
| Adult males | |
| Adult female | |
| Minor boys | |
| Minor girls | |
| Aged males (Above 60) | |
| Aged females (above 60) | |

24. Saving pattern of the Household: /_____/
- [1=Own saving, 2=Self help group Or Other Group Saving, 3=Bank Saving A/c, 4=Bank Fixed Deposit (FD), 5=No Saving, 6=Other]
25. Income in the last month (in Rs., on an average) _____

26. Indebtedness of household

| Sl.No. | Source* | Purpose* | Amount | Interest | Month/annually |
|--------|---------|----------|--------|----------|----------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

*Sources: [1-government, 2-co-operative society/SHGs, 3-bank, 4-employer/landlord, 5-occupational money lender, 6-shopkeeper/trader, 7-relative/friend, 8-others]

*Purpose: [1-medical expenses, 2-educational exp, 3-legal expenses, 4-other consumption exp., 5-marriage and other ceremonial exp. 6-purchase of land/construction of building, 7-repayment of loans, 8-purchase of production assets, 9-others]

PART -II (Revenue and cost)

(Investigator should strictly adhere to occupation related revenue and costs)

27. What is your gross revenue?

- a. On weekdays _____
- b. On weekends _____
- b. On monthly basis _____

28. How much cost do you incur in

- a. Maintenance _____
- b. (i) Rent on weekdays _____
- b. (ii) Rent on weekends _____
- c. Cost of installing additional battery _____
- d. In case of damage on rented rickshaws (Electric or cycle)
 - (i) Do you pay to the cover for repairs?
 - (ii) Does the owner pay for repairs?
 - (iii) .Is it shared between you and the owner?
- e. Others _____

A- For Rickshaw-walas

31.Are you planning to switch to an electric rickshaw? [1-Yes, 2-No] _____

31.a. If yes, Why?

31.b. If no, Why?

B- For Electric rickshaw drivers,

32.a. If previous occupation is rickshaw-walas, what were the reasons for shift?

32.b. If your previous occupation is not rickshaw pulling, what were the reasons for shift?

APPENDIX-B (Legal Background)

The Delhi high court on 7 August 2013 adjourned the hearing of a review petition filed against its order banning e-rickshaws in Delhi. The case has been adjourned till 20 August because the division bench of justices B.D. Ahmed and Siddharth Mridul, who had been hearing the matter previously, did not sit on Thursday. The Battery Rickshaw Welfare Association, the organization that had filed the review petition, informed the court that it will award the family of the three-year-old child who had died as a result of an e-rickshaw accident, the unfortunate incident that had triggered the ban, a sum of Rs.1,10,000 as compensation. On 31 July, the high court had banned e-rickshaws calling them “illegal”. A review petition against this order was filed by the Battery Rickshaw Welfare Association, representing the interests of the e-rickshaw drivers. On 5 August, additional solicitor general Pinky Anand had appeared for the government and urged the court to lift the ban till the case is disposed of. The court, instead of lifting the ban, allowed the government to come up with guidelines to regulate e-rickshaws. These guidelines were produced before the court on 8 August but the court refused to lift the ban as the guidelines did not include certain key aspects like mandating registration and licences for e-rickshaw drivers. The government produced amended guidelines on 11 August stating that it needed a period of two months to make the required changes to the Motor Vehicles Act and the relevant laws. The court said that it could not “permit something that is not provided under the law”. The ban has met with protests from e-rickshaw drivers whose plight was highlighted by member of Parliament Vijay Goel in the Rajya Sabha. Last week, the central government set up a panel to recommend rules for construction and maintenance of e-rickshaws so that they could resume plying in Delhi.

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