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OIL PRICES AND EMPLOYMENT IN THE TRANSPORT SECTOR: EVIDENCE FROM INDIA

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Abstract: The impact of macroeconomic shocks, viz. rise in oil price on the sub-national wages of unorganized sector workers is little discussed in the literature. This paper uses three rounds of unit level data to show that moving from formal to informal facilities in the large transport sector in India is generally penalizing for the workers, albeit, higher educational qualification of the individual helps to raise real wages. Rise in oil price may lead to contraction of the informal transport sector owing to direct pass-through effects with varied sub-national welfare impact. Additionally, labor market reforms may increase wage of informal workers in the event of oil price shocks.

Keywords: Oil price; informal sector; regional transport; district fixed effects; India. *JEL classification*: F42, O17, O18.

1. Introduction

The implications of energy price shocks are varied. The developing and transition countries around the world have previously been negatively affected by the waves of oilprice shocks much more than any other exogenous crisis of similar magnitudes. However, the global recession of 1973-75, 1978-80 and 1990-1993 caused predominantly by the Organization of Petroleum Exporting Countries (OPEC)-led high prices of crude oil have not recurred in the recent years despite its higher prices following the two Gulf wars. Instead, Nordhaus (2007) points out that output grew, unemployment fell and inflation remained moderate while cohabiting with oil-prices three times as high as that prevalent in the pre-war years. It is not automatic, however, that other sectors adjust quickly and favorably. During economic downturns, which might accompany an oil price shock, some sectors and some locations may be more affected than others (Fields 1988). How does the transport sector itself, especially those in the urban areas and their workers, cope with this? It is also important to inquire if the observed adjustments are outcomes of a more liberal regime and would have been negligible if India maintained the same policy structures as in the pre-reform era. We discuss briefly, how the previous attitude towards gradualist economic reforms allowed the country to maintain a relative stability even during the epitome of first generation reforms. Naturally, with lesser controls adopted by the government, the transfer of economic shocks would be direct. Under the circumstances, if the benefits of exposing the internal economies to external forces outweigh the costs, which may happen due to strong institutional characteristics of a country, then the subject remains wide open for empirical verifications.

This chapter explores the wage and employment conditions of transport sector workers in India, the larger proportion of which is engaged predominantly in the informal sector (ILO 1972; NCEUS 2007; Chaudhuri and Mukhopadhyay 2009; Marjit and Kar 2011). Does the relatively high oil prices observed in the last few years (notwithstanding the all-time low prices in the last few months of 2015-16), affect the wages and employment of informal transport workers adversely? To the best of our knowledge, this question remains unanswered in the concerned literature. The flipside of the problem is that during historically low prices, should wages and employment of such workers then receive unprecedented impetus? The welfare implications of such impact on a sizable section of the labor force associated with transport services in developing countries is unmistakable. Presently, we address this question empirically by drawing on the primary survey data available from the National Sample Survey of India and offer a general equilibrium model in order to generalize these results. The analytical section shows that the informal sector contracts and faces lower nominal and real wages when oil price rises. Interestingly, in our model the traded sectors expand and leave the effect of oil price shock on national income, ambiguous. We are nonetheless aware of the fact that the sectoral or regional impact on the income of the poor may be quite deterministic as many of them depend on urban transport. This has been distinctly taken up earlier by Glaeser, Kahn and Rappaport (2008).

Indeed, the impact of oil price shock as a trigger for economic crisis is much more common for countries that use lesser administrative controls internally. India, for example, practiced price control on essential items including petroleum since independence even going a few years into the economic reforms of 1990s. The gradualist approach to economic reforms that India adopted over a sustained period of time helped internal adjustments much better than rapid transitions into uncharted territories that disrupted economic and social circumstances in more recent times. Importantly, India also practiced managed float exchange rate system during the early reforms and had not allowed a full convertibility of the capital accounts. Both of these required continuous monitoring and intervention by the central bank. In fact, the economic reforms of the 1990s not only raised economic growth to an unprecedented level, but it also managed to maintain relative economic stability - of course, not without the costs that any reform brings about. The government control on capital account has been especially favorable for protecting India from the Asian financial crisis (See Marjit and Kar, 1998). Unlike, the East and South-East Asian countries allowing short-term foreign portfolio investments to leave the countries at short notices thus bringing about the crisis, India preferred long-term foreign investments and disallowed dollar-for-dollar repatriation to the source. In other words, India used several monetary and fiscal instruments to insulate itself from various external sources of crisis, and even a globally spread out oil-price rise would make a limited impact owing to partial pass-through on to the local markets.

In addition, it is argued that the 'Great Moderation' in macroeconomic shocks consequent primarily on reduced volatility is the driving force behind this unexpected non-crisis. Some of the earlier contributions (viz. Nordhaus 2007; Segal 2011) suggest that the oil price shocks have fairly limited impact on the growth and distribution in most countries, because the earlier tradition of reorienting the monetary policy to allow dollarto-dollar pass through of oil price shocks have of late been replaced. In fact, the usual monetary policy response to oil price pass-through had so far been a rise in the interest rate, which in turn slowed growth. In recent times, the reactions from the central banks have been moderate in the face of oil price shocks because the monetary policy seems to be more concerned with core inflation, which excludes the energy component. Nevertheless, possible impact in sectors directly dependent on consumption of oil can hardly be ignored. The price of crude oil increased in India from USD 32.37 in April 2004 to 132.47 in July 2008. It fell sharply for six months following that and rose to USD 123.67 in March 2012 (see Figure 1 in Appendix 1). This upward trend continued till August 2013 and since then the oil price has started falling significantly and stayed at USD 40 mark in March 2016 (see Figure 2 in Appendix 1).

To reiterate, the extant literature, dealing with energy prices and sectoral readjustments, does not discuss the pass through of oil prices on to wages, viz. in the domestic transport services. The transport services we deal with in the empirical section include both formal and informal activities. This seems to be an appropriate depiction of the range of activities in the transport sector in developing countries and is also formalized in the generalized model we develop next. We categorically estimate the wage impact of switching from the formal to the informal sector – a plausible feature of this labor market associated with rising oil prices. The presence of urban informal sector has several implications associated with use of fuel and impact on environment, largely because they are often outside the monitoring circuit of the local governments (Kahn and Pfaff 2000). While we discuss the scope in detail shortly, to clear any confusion presently, the idea is to observe if the formal transport fails to cope with rising oil prices and contracts employment, leading to relocation of workers to the informal sector. Does it lead to a definitive fall in real wages when workers move from the formal to the

informal transport services? This is what we estimate, with rising oil price as the source of change. We accommodate a number of other variables to substantiate this effect calculated between 2004-05 and 2011-12.¹ The fall in real wage of transport workers is a testable proposition because the switch from formal to informal also implies that the service provider would no longer have to bear the 'institutional costs' (including adherence to labor laws, environmental strictures, various taxes, etc.) of running formal services and therefore, the workers need not necessarily settle for a lower real wage.² In the related literature, Radchenko (2014) offers an interesting technique to identify the heterogeneity of labor markets in poor countries. The proposition that the displaced lose out is similar in spirit to the 'movers and stayers' hypothesis in Davidson and Matusz (2006).

In section 2 we offer the data and scope of the empirical investigation. In section 3 we determine the impact of oil price rise on the wages of workers that switch jobs, and section 4 concludes.

2. Empirical Observations

¹ It is unfortunate that the data and report of the NSSO on Unorganized Enterprise Survey was published after this chapter was completed. Importantly, the data is unlikely to display considerable changes since it was collected within one year of the term of the government formed in 2014, and would have shown substantial fall in employment and wages if the survey covered the period of demonetization in November 2016. Nevertheless, we have included some indicators of the transport sector enterprises and employment over the two rounds, below.

² See, 'Man with a Van' written by John Tierney, *New York Times Magazine*, August 10, 1997 and reproduced in *Economics: Principles and Applications*, (Ch. 15, Monopoly) by G. Mankiw (2007), Cengage Publishing. According to this article the state council of New York prevents private van operators from running transport services, simply by declining their licenses. The state transport service maintains a monopoly (veiled under the pretext that private van operators are more accident prone owing to competition for passengers) and charges a higher price by disallowing private operators, who nonetheless operate informally in specific locations, such as the 'curbs' near shopping centers. Here informal operation is synonymous with illegal operations. The developing countries like India on the other hand have institutionalized private informal service providers and the status of such facilities is not necessarily illegal. Also see Rizzo (2011) for Tanzania.

Data and Methodology

This section investigates the impact of sectoral mobility of workers on the real wage. Based on the National Industry Code (NIC1998; 2004; 2008) classification we can broadly divide employment in the transport sector in India into 4 categories (at the 4-digit level). Since the classifications changed from one year to another, they were not comparable. Therefore, we used concordance tables to convert them all into the latest NIC classification.³ In addition, the classifications are further disaggregated depending on whether they are formal or informal. We consider a broader definition of the term 'formal' sector that employs more than 10 people. We focus on the real wage of the road-transport industry worker. Our analysis leaves out railways transport since Indian Railways is still fully under the public sector. The categories of interest are therefore, 'urban or suburban passenger land transport - formal (USF)', 'urban or suburban passenger land transport -informal (USI)', 'other passenger land transport - formal (OF)', 'other passenger land transport - informal (OI)', 'freight transport by road formal (FF)' and 'freight transport by road – informal (FI)'. Dependence of these sectors on fossil fuel and diesel is very high. Given these categories, we investigate the wage response when workers from the urban or suburban passenger land transport (formal) potentially move to any of the other five categories.

The data is collected from two major sources for calculation of our dependent variable (real wage). We have collected information on nominal wage of the transport sector workers from the latest Employment Unemployment Surveys of the National

 $^{^{3}}$ To make the NIC-1998 and NIC-2004 comparable with NIC-2008 we have transferred some industries based on their four digit classification from one broad group to another or isolated them to form a new group as per the latest classification with the help of the concordance tables published by Central Statistical Organisation (CSO) of the Government of India.

Sample Survey Organization (NSSO). It is the primary source of data on various indicators of labor force at national and state level and provides vast set of information on each individual of the households selected in the sample. First, we identify individuals working in the land transport industry and calculate their nominal wages from 61st (2003-04), 66th (2009-10) and 68th (2011-12) round surveys on employment unemployment using NSSO usual principal activity status, respectively. In order to calculate the real wage of these workers (nominal wage deflated by the price level of the corresponding year), information on the price level has been collected from the All India Price Index (General) for Industrial Workers (CPIIW, Base-1982=100) of the Labor Bureau of the Government of India. Further, we have collected information on age, sex, highest levels of completed education of individual workers, and area of residence (rural or urban) from the same source as mentioned earlier. Before testing empirical association, we offer a framework, which enables us to shed some light on the methodology we have adopted. To briefly apprise on the subsequent information on transport and communication services as available from the 73rd round of sample survey by the NSSO (see footnote 1), we present Table I below. The table clearly shows that between 2011-12 and 2015-16, both the number of enterprises engaged with transport and communication belonging to the unorganized sector, and the employment of workers in such organizations, fell. Indeed, the direction of change corroborates our findings further, even though these information are not part of final set of regressions.

Industrial sector	67	7th Round:	2011-12	73r	d Round: :	2015-16		Growth	Rate	
	Rural	Urban	Rural+Urban	Rural	Urban	Rural+Urban	Rural	Urban	Rural+Urban	
Transport and communication: number of enterprises ('00) Transport and communication: number of	31449	26698	58147	32021	25941	57962	1.8	-2.8	-0.3	
workers ('000)	4027	3602	7628	4003	3521	7524	-0.6	-2.2	-1.4	
Source: NSS Report No.581: Operational Characteristics of Unincorporated Non-Agricultural Enterprises (Excluding Construction) in India										

Table I:	Changes in the Number of Enterprises and Number of Workers in
the Transpo	ort and Communication Services between 2011-12 and 2015-16

We have considered three land transport industries with their formal-informal divisions. There are 3,294, 2936, and 3,070 observations in the sample for workers who belong to these transport sectors according to the three rounds specified above. We provide a descriptive analysis on the distribution of the workers for these industries with respect to their levels of education and age groups in Appendix I. We also provide summary statistics on the daily wage rate of these workers. The analysis is done for rural and urban areas, separately, in order to understand regional variation in the possible outcomes. The reason behind this is also direct. The rural to urban migration is the well-known progenitor of the vast informal sector in the urban space of the developing world in general (see Harris and Todaro, 1970 and several works thereafter). The rural sector itself also has a large informal counterpart, and the low productivity of agricultural workers is primarily responsible for such outcomes. Thus, if the wage of informal transport workers in the urban area (as one form of informal jobs) is adversely affected

by an external factor, but the rural informal worker is differently affected, the migration pattern and consequently the wages may also respond to that.

Most of the rural transport workers are concentrated in informal sector of 'Freight transport industry' followed by 'Other passenger land transport'. This is also true for urban sample and for all the rounds we have considered. Table A1 gives the distribution of the workers in these six different industries with respect to their levels of education. Three major columns are representative of the three NSS rounds. We find that with education up to the secondary level, the transport workers are more likely to be in the informal sectors of these two sub-sectors. The percentage concentration of these workers in these sub-sectors has in fact increased over the last two rounds. For higher levels of education, participation in the formal sector of Urban or suburban passenger land transport rises irrespective of the residential area. However, for education level of twelfth standard and above the concentration in this sector falls between the 61st and the 66th round, but increases thereafter.

We have also grouped the transport industry workers according to their age groups into three cohorts, Youth (15-29), Adult (30-49) and Elderly (50 and above), respectively. Table A2 shows that youth transport workers are mostly concentrated in the informal sector of 'Freight transport by road' followed by the informal sector of the 'Other passenger land transport' industry. Concentration in the formal sector of the urban or sub-urban is highest among the older cohorts. However, in case of the formal sectors of the other two industries, participation is very low and almost similar among the 3 age cohorts. This in general is true for the three NSS rounds and for both the areas. Table A3 offers the daily wage distribution of these workers for the rural and urban areas, separately. We see that the transport industry wage is positively skewed. The variation in the wage rate is higher for the rural areas compared to their urban counterparts and it has also increased over the consecutive rounds. However, after deflating the wage by CPIIW, the variance falls. Subsequently, we take the log transformation of the real wage and obtain a normal distribution amenable to empirical investigation.

3. Empirical Analysis

Ordinary Least Square (OLS) Specifications

We aim to investigate empirically how different informal and formal transport service providing sectors influence change in the prevailing real wage when workers switch sectors.

$$\left(\frac{W}{P}\right)_{i} = \alpha + \beta_{j} \operatorname{transport}_{ji} + \gamma \operatorname{age}_{i} + \delta \operatorname{age}_{i}^{2} + \mu \operatorname{sex}_{i} + \theta_{k} \operatorname{edu}_{ki} + \vartheta_{l} \operatorname{district}_{li} + \varepsilon_{i}$$
(I)

Equation (I) is the conventional Mincer equation, which estimates the wage rate with inclusion of standard variables like age, age squared (measuring experience), levels of

education, etc. $\binom{W}{P}_i$ represents real wage of i^{th} worker in the transport industry. $transportt_{ji}$ is a categorical variable, which can be represented by a dummy. It can assume 6 categories depending on the sectors (formal/informal) we have classified earlier. The first one (USF) is treated as our base category. Therefore β_j measures the effect of movement from the base to the j^{th} category by the i^{th} individual, on the real wage. Depending on the highest level of education, we convert education into a categorical variable also. The categories are 'no elementary education', 'primary education (up to)', 'secondary education (up to)', 'higher secondary education' and 'tertiary education (more than twelfth standard)', respectively. The coefficient θ_k measures the impact of movement from no elementary (our base category) education to k^{th} level on the real wage. In order to take into account local labor market conditions, we have controlled for the district specific heterogeneities. $district_{ii}$ measures district-specific fixed effect. Finally, ε_i is the error term. The estimation has been considered for rural and urban areas separately and for three different time points (2004-05, 2009-10 and 2011-12). Interestingly, the high crude oil prices reported for India largely coincides with the rounds under consideration (Figure 1, Appendix 1). Table 1 contains the result of the OLS estimation. There are three major columns and sub columns corresponding to three different time points and the areas of residences respectively.

Table 1 here

Table 1 offers a number of noteworthy features. First, regardless of what sector a formal transport worker moves into during the period when the crude oil prices were high, the real wage outcome is usually negative and significant. This implies that change of sector has largely been unrewarding for the workers in the transport sector, unless the education level cushions the potential fall in real wage. Indeed, even workers with some education received the benefit of education while moving between the formal sector (USF) and any other sector. Education above twelfth standard leads to an almost 40% gain in real wage if the worker relocates from the USF to any city-based transport service facility. However, it may not be enough to reverse the strong negative effects arising

from spread and depth of such activities in various cities and towns of India. The fall in real wage particularly in the 61st and 66th rounds were generally larger compared to the 67th round. Movement of workers from the formal to the urban informal affects wages by a larger magnitude in more recent rounds. However, if the worker moved from USF to another formal sector in the rural area, the loss of real wage is stronger as compared to moving into the urban area in the same sub-sector (OF). If the worker moves to other informal sector, the fall in real wage is rather high for both rural and urban areas. It seems that on the one hand, the lack of opportunities in the rural areas for transport sector workers could be a potential reason for causing a steep decline in the real wage, and on the other hand, oversupply of such workers in the urban area is responsible for an almost equivalent fall in real wage. It is expected that most such workers are male and therefore sex has a weak impact on the observed change, although the age factor seems to have positive impact on the real wage in the earlier rounds, but the effect has dampened in the 68th round. More experience on the job still cannot reverse the loss in real wage completely, but the effect of job switching becomes rather small. The results are supported by adequate goodness of fit for the econometric model.

4. Concluding Remarks

This paper dealt with the wage response of a typical transport worker in a developing country that allows cohabitation of both formal and informal modes of transport. The underlying source of change in this paper arises from the international oil prices. It has been duly argued in the macroeconomics literature that the rising oil prices coexist with growth in most economies in the recent times and does not cause the economic crises observed in previous decades. The alignment of international oil prices with domestic prices without artificial buffers and the non-interference of monetary policy to counter oil price shocks have led to such outcomes in most countries. The literature does not, however, discuss other ensuing adjustments, namely those in the factor markets. This paper showed through an empirical exercise and an analytical model closely resembling the developing country structure that oil price rise is quite likely to affect the wages of the transport sector workers, negatively. In the empirical section, it was showed that the negative effect on workers wage is a result of potential mobility of such workers from the formal to the informal sub-sectors within the transport sector at large. The workers nevertheless get the benefit of educational capital when they might be forced to move from formal sector to informal sector due to looming job losses following steep rise in the oil prices, which the formal transport sector often cannot cope with due to other institutional inflexibilities. Notwithstanding, the possibility of wage loss is still rather compelling for transport workers in India. The three rounds of survey under consideration strictly coincided with the periods of high oil prices prevailing in India.

Indeed, the co-existence of high oil prices, high inflation and reasonable economic growth could be a realistic feature of the developing economies, although in terms of the internal readjustments, the wage of workers seems to bear a disproportionate burden of the negative impacts. Clearly, more research is needed to understand if the initial negative adjustments faced by the workers turn into permanent disadvantages for a large mass of population. The relationship with poverty and inequality is almost integral to such issues, which needs careful reconsideration.

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	61 st (2004-05)		66 th (2009-10)		68 th (2011-12)		
	Rural	Urban	Rural	Urban	Rural	Urban	
Variables	Real wage	Real wage	Real wage	Real wage	Real wage	Real wage	
		-	-				
USI	-0.698***	-0.686***	-0.444***	-0.617***	-0.425***	-0.469***	
	(0.073)	(0.075)	(0.099)	(0.100)	(0.074)	(0.075)	
OF	-0.396***	-0.256***	-0.117	-0.333***	-0.358***	-0.144*	
	(0.103)	(0.085)	(0.104)	(0.097)	(0.083)	(0.083)	
OI	-0.824***	-0.718***	-0.598***	-0.725***	-0.633***	-0.552***	
	(0.060)	(0.057)	(0.072)	(0.076)	(0.059)	(0.065)	
FF	-0.582***	-0.508***	-0.509***	-0.576***	-0.566***	-0.299***	
	(0.081)	(0.074)	(0.094)	(0.088)	(0.0790	(0.083)	
FI	-0.786***	-0.689***	-0.559***	-0.664***	-0.572***	-0.536***	
	(0.057)	(0.054)	(0.072)	(0.075)	(0.057)	(0.065)	
Age	0.0629***	0.0629***	0.0427***	0.0653***	0.0207**	0.0350***	
	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.009)	
Age 2	-0.00064***	-0.000637***	-0.000439***	-0.000698***	-0.000123	-0.00031***	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	
Sex	-0.318*	-0.428***	-0.369***	-0.229	-0.390***	-0.0619	
	(0.168)	(0.123)	(0.112)	(0.142)	(0.137)	(0.195)	
Primary	0.172***	0.0719	0.0832*	0.121**	-0.0920**	-0.00283	
	(0.042)	(0.046)	(0.047)	(0.059)	(0.044)	(0.057)	
Secondary	0.219***	0.218***	0.145***	0.300***	0.0739**	0.0962**	
	(0.037)	(0.038)	(0.041)	(0.047)	(0.036)	(0.046)	
Higher secondary (HS)	0.276***	0.418***	0.251***	0.334***	0.133**	0.272***	
	(0.067)	(0.066)	(0.068)	(0.071)	(0.056)	(0.067)	
More than HS	0.257***	0.543***	0.322***	0.581***	0.223***	0.436***	
	(0.079)	(0.066)	(0.082)	(0.0809)	(0.074)	(0.0713)	
						(0.507)	
Constant	-1.770***	-2.331***	-1.993***	-2.293***	-1.597***	-2.141***	
	(0.535)	(0.513)	(0.528)	(0.452)	(0.514)	(0.302)	
Observations	1,738	1,556	1,667	1,269	1,696	1,374	
R-squared	0.601	0.636	0.513	0.610	0.563	0.575	

Table 1: Ordinary Least Square Estimates

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 Source: Own calculations.

Appendix I

Area of residence	NSS rounds	61st								
Teshaence		Urban or a	Urban or suburban Other passenger land Frei							
	General education	Formal	Informal	Formal	Informal	Formal	Informal			
Rural	Below primary	2	3	1	21	7	66			
	Up to primarry	3	7	2	34	5	49			
	Secondary	11	9	2	35	4	40			
	Higher secondary	28	14	5	27	3	22			
	more than HS	45	9	11	17	6	12			
	Total	9	8	2	30	5	46			
Urban	Below primary	1	4	2	32	6	55			
	Up to primarry	4	7	3	38	7	41			
	Secondary	11	9	3	35	7	34			
	Higher secondary	30	9	5	27	8	21			
	more than HS	50	6	16	11	6	11			
	Total	12	8	4	33	6	38			
				1	66th					
Rural	Below primary	1	3	2	22	8	64			
	Up to primarry	2	2	1	37	4	53			
	Secondary	4	5	3	40	5	43			
	Higher secondary	13	4	9	35	3	35			
	more than HS	32	5	12	29	5	17			
	Total	5	4	3	35	6	47			
Urban	Below primary	1	3	2	22	8	64			
	Up to primarry	2	2	1	37	4	53			
	Secondary	4	5	3	40	5	43			
	Higher secondary	13	4	9	35	3	35			
	more than HS	32	5	12	29	5	17			
	Total	5	4	3	35	6	47			
					68th					
Rural	Below primary	1	3	2	26	6	62			
	Up to primarry	2	8	2	33	4	51			
	Secondary	7	9	4	34	4	41			
	Higher secondary	23	10	5	30	5	27			
	more than HS	34	2	14	27	6	17			
	Total	7	7	4	32	5	46			
Urban	Below primary	1	3	2	26	6	62			
	Up to primarry	2	8	2	33	4	51			
	Secondary	7	9	4	34	4	41			
	Higher secondary	23	10	5	30	5	27			
	more than HS	34	2	14	27	6	17			
	Total	7	7	4	32	5	46			

Table A1: Transport Industry participation rate by general education

Source: Own Calculations

Area of residence	NSS rounds	61st								
		Urban or suburban passenger land transport		Other passo trans	enger land port	Freight transport by road				
	Age group	Formal	Informal	Formal	Informal	Formal	Informal			
Rural	15-29	2	8	1	36	4	49			
	30-49	14	8	3	25	6	44			
	50 & above	30	3	6	13	5	44			
Urban	15-29	4	8	1	42	6	39			
	30-49	13	7	5	29	7	39			
	50 & above	33	8	9	18	4	27			
			66th							
Rural	15-29	1	4	2	37	5	51			
	30-49	6	4	4	35	6	45			
	50 & above	23	3	3	25	4	41			
U rban	15-29	2	4	4	41	9	39			
	30-49	7	6	7	37	7	36			
	50 & above	16	6	5	23	10	40			
					68th					
Rural	15-29	2	8	2	37	5	46			
	30-49	9	7	4	30	5	46			
	50 & above	17	9	8	20	5	42			
∐ rb an	15_29	А	13	3	30	5	36			
	30-49	4 Q	11	5	32	7	35			
	50 & above	26	12	8	52 21	6	55 27			
	1.20 00 0000	20	12	0	41	0	21			

 Table A2: Transport Industry participation rate by age group

Source: Own Calculations

	Table A3: Wage distribution of the transport workers						
Area of residence	NSS rounds				61st		
	variable	Number of observations	Mean	Median	SD	Skewness	Kurtosis
Rural	wage	1738	99	79	76	3	27
	realwage	1738	0.189	0.150	0.145	3.379	26.878
	log_realwage	1738	-1.883	-1.899	0.660	-0.107	3.843
Urban	wage	1556	115.634	85.714	94.839	2.822	17.308
	realwage	1556	0.220	0.163	0.181	2.822	17.308
	log_realwage	1556	-1.754	-1.812	0.677	0.222	3.318
					66th		
Rural	wage	1667	153.825	128.571	106.028	2.854	15.929
	realwage	1667	0.200	0.167	0.138	2.854	15.929
	log_realwage	1667	-1.788	-1.791	0.590	-0.135	4.448
Urban	wage	1269	176.615	142.857	147.520	4.227	34.420
	realwage	1269	0.229	0.185	0.191	4.227	34.420
	log_realwage	1269	-1.693	-1.686	0.642	0.133	4.044
					68th		
Rural	wage	1696	214.8079	178.5714	141.4818	2.164318	9.163108
	realwage	1696	0.23	0.19	0.15	2.16	9.16
	log_realwage	1696	-1.63	-1.65	0.58	-0.03	3.98
Urban	wage	1374	243.39	200.00	210.48	5.02	47.89
	realwage	1374	0.26	0.22	0.23	5.02	47.89
	log_realwage	1374	-1.55	-1.53	0.63	0.14	4.70

Source: Own Calculations



Source: Ministry of Petroleum, Government of India



Source: World Bank