

# MIGRATION TO BRICK KILNS IN INDIA: AN APPRAISAL

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## SUMMARY

*This note expounds on migration to brick-kilns in India, based on estimates from the National Sample Survey (NSS) 2007-08 employment-unemployment and migration survey, and a review of field studies. Characterised by traditional modes of production, low capital-intensity, seasonal employment patterns and lack of adequate regulations, the brick industry is a significant site for interrogating variegated issues that lie at the intersection of migration, labour markets and urbanisation. The analysis herein sheds light on the spatial concentrations of brick-kiln workers, which are along urban peripheries and driven by migrants. The phenomenon of jodi labour, referring to family based labour (typically of husband and wife) that characterises brick-kiln work is explicated using NSS estimates. The analysis concludes that the modes and modalities of employment in brick-kilns combined with piece-rated wage payments raises complex issues that call for consideration. At the same time, an understanding of the spatial concentration of kilns could help with interventions with regard to expanding the outreach of the Construction Workers' Welfare Board (CWWB) and facilities for accompanying children of the migrant workers.*

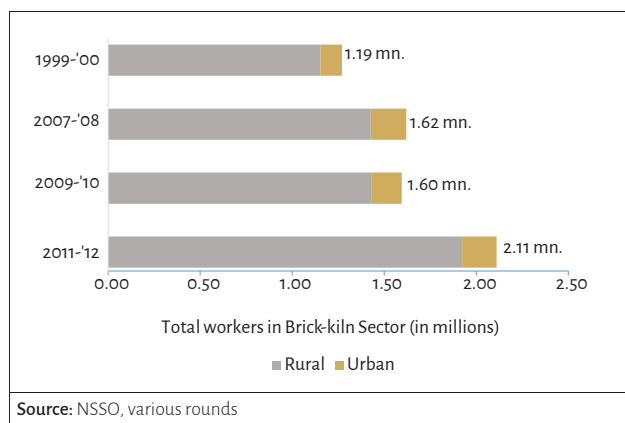
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## INTRODUCTION

Brick kilns in India are characterised by traditional modes of production, low capital-intensity, seasonal employment patterns and lack of adequate regulations. While there are no official estimates of brick production in the country, oft-cited figures from industry associations and experts suggest that there are over a lakh brick kilns in India, producing about 250 billion bricks annually (Lalchandani & Maithel, 2013; PSCST website). India accounts for about 10% of global brick production, next to China (PSCST website). The increasing demand for the production of bricks in the past decade or so has been closely linked to the spurt in construction sector, which grew at a Compound Annual Growth Rate (CAGR) of 10.3% between 2000-01 and 2010-11, and in 2015-16, contributed to 7.7% of the country's GDP (10, 64,068 crores) (RBI Database on Indian Economy).

Estimates for employment in brick-kilns are also varied. The ILO estimates that about 10 million workers are employed in brick manufacturing (cited in PCLRA, 2012, p.10). Recent estimates from the NSS 68th round (2011-12), on the other hand, suggest that about 2.1 million workers are employed in brick-kilns<sup>1</sup>, of which 84 % (1.8 million) are male.<sup>2</sup> In 2007-08, as per the statistics of the NSS 64th round, there were about 1.6 million workers in the brick sector, of which nearly 75 % (1.2 million) were male. Between 1999-00 and 2011-12, the workforce in brick-kilns has grown at a rate of 5.80% (see Figure 1). From Census 2001 data, it can be seen that there are about 1.2 million workers in brick-kiln and related sector.<sup>3</sup> The brick-kiln industry is a predominantly rural one, and the share of the brick-kiln workforce in rural areas grew more than that in urban areas between 1999-00 and 2010-11. In this period, while the rural brick-kiln workforce grew from 0.29 million to 0.38 million, the urban workforce grew only marginally from 0.03 million to 0.04 million (Figure 1).

Figure 1: Change in the size of Brick-kiln workforce



Source: NSSO, various rounds

## MAPPING THE BRICK-KILN WORKFORCE

### Brick-kiln workers are locally concentrated

A cursory look at the spatial distribution of the brick-kiln workforce shows that they are locally distributed, and are concentrated across some particular belts in the country: areas around Delhi-NCR which extend up to Gujarat through the eastern part of Rajasthan; Uttar Pradesh; coastal and inland Maharashtra; Gangetic West Bengal; Odisha, and parts of Andhra Pradesh and Tamil Nadu (Figure 2).<sup>4</sup> Of the 187 districts where brick-kiln workers are present, only 26 (about 14 %) are not neighbouring to each other, implying that they do not share a common boundary. This highlights the localised patterns of distribution of the brick-kiln workforce in the country.

### Spatial distribution of brick-kiln workers varies temporally

Using data from the NSS 2007-08 migration survey and the NSS 2011-12 employment-unemployment survey, it can be seen that the spatial distribution of the brick-kiln workforce has changed temporally. This can be seen from Figure 4, which shows that regions like Eastern UP or the Northern Ganga Plains have shown an increase in the intensity of the brick-kiln workforce.<sup>5</sup> These regions encompass districts like Basti, Rampur or Baghpat which have a high concentration of brick-kiln workers. On the other hand, regions like Coastal Maharashtra, Coastal TN or Southern Punjab have slipped

off in terms of the intensity of brick-kiln workforce over time. Some of the new regions which have emerged as hot-spots are the southern plains of West Bengal (including the peripheries of Kolkata), and the southern Upper Ganga Plains of UP, which includes districts around the National Capital Region (NCR), like Bulandshahar, Aligarh, Hathras, Agra or Mathura.

### The spatial concentration of brick-kiln workforce is driven by migrants

The intensity of the overall brick-kiln workforce is closely correlated with the intensity of migrants in districts. A list of the districts where the brick-kiln workforce and the migrant brick-kiln workforce is concentrated is given in Appendix I and II. In Figure 5, the intensity of the overall brick-kiln workforce is plotted on the x-axis and the intensity of migrant workforce in brick-kilns plotted on the y-axis. Each of the dots represent the values for NSS regions where these workers are present.

It can be seen that regions like the northern plains of UP or coastal Maharashtra which fall above the diagonal line are ones wherein the intensity of migrant workforce is higher than the intensity of the overall brick-kiln workforce.<sup>6</sup> Most of the brick-kiln migrants appear to head to these areas, while regions like southern Odisha which fall below the diagonal are dependent upon the local workforce. It can be inferred from this description that migrants drive the spatial concentration of brick-kiln workers in India.

Figure 2: Intensity of Brick-kiln Workforce

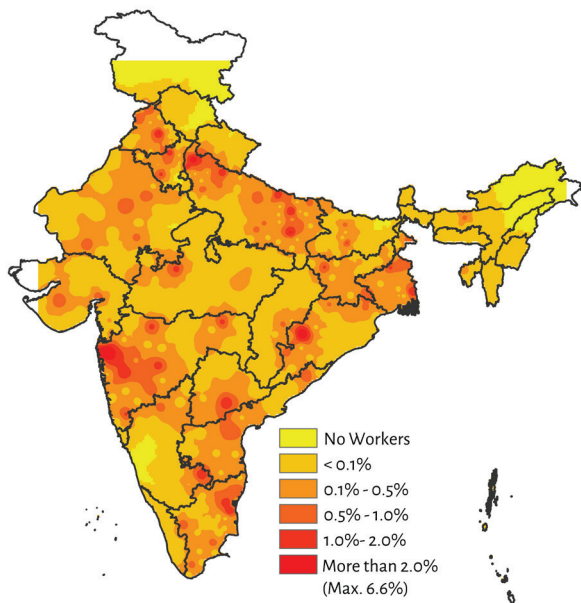
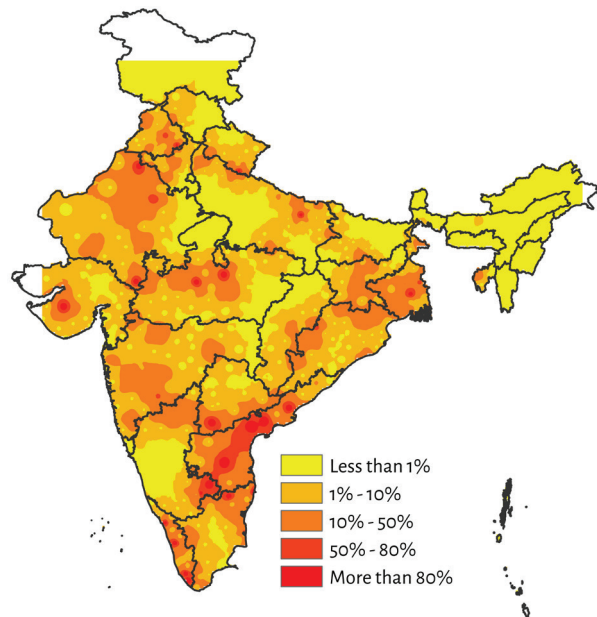


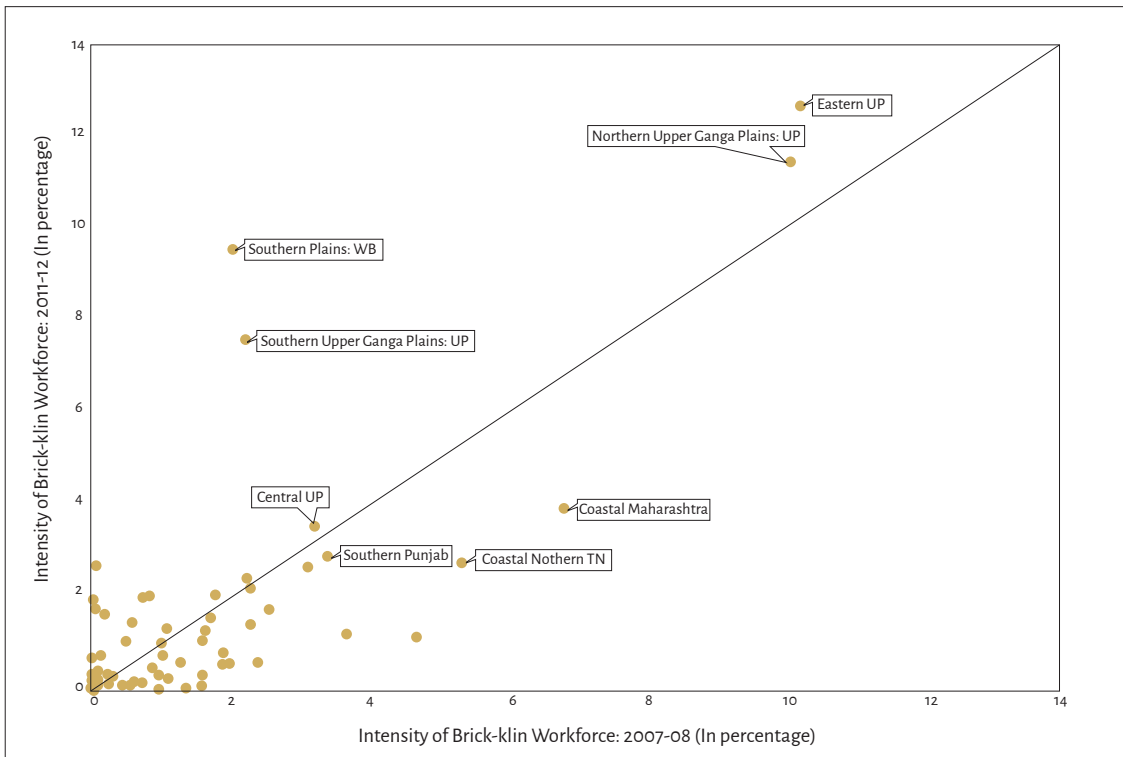
Figure 3: Share of Migrants to Total Workers



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

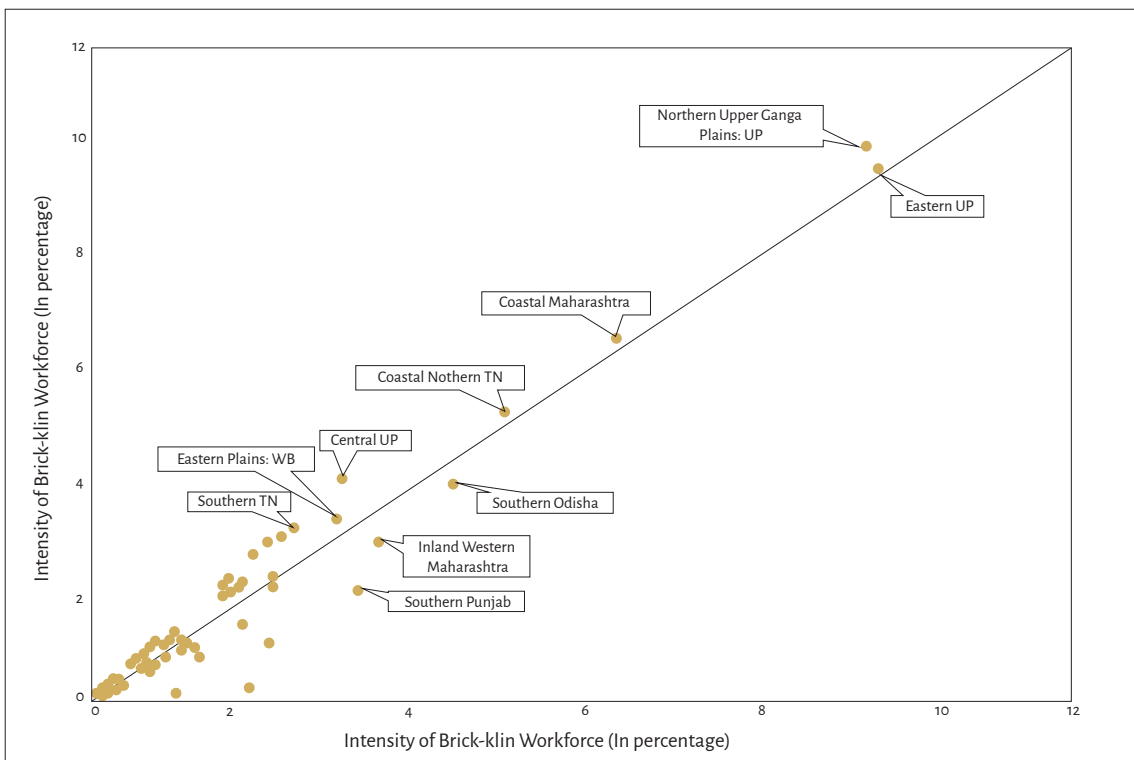
Note: Intensity here refers to the share of Brick-kiln workers in a district to those in all districts of the country.

Figure 4: Intensity of Brick-kiln Workforce: 2007-08 and 2011-12



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10. The data here pertains to two different NSS rounds, therefore, the estimates are not strictly comparable.

Figure 5: Spatial Concentration of Migrants in Brick-kilns



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

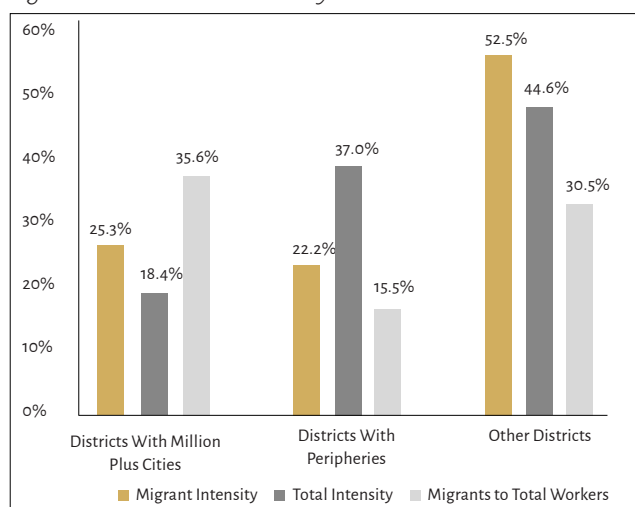
This pattern is also broadly supported by field studies. Some key migration streams in the brick kiln industry that can be identified from field studies include: from Bilaspur in Chattisgarh to Uttar Pradesh, Gujarat and Odisha (PCLRA, 2012); from western Odisha to Andhra Pradesh, Karnataka and Tamil Nadu (PCLRA, 2012); from Udaipur district in Rajasthan to North Gujarat (Joshi & Khandelwal, 2009); and from Jharkhand to West Bengal, Uttar Pradesh and Bihar (Shah, 2009).

#### *Brick-kiln workers are concentrated along urban peripheries*

Though the brick-kiln workforce is primarily rural in nature and, as we see later, migrant workers in the brick-kiln sector primarily move from rural to rural areas, the spatial distribution of brick-kiln workforce is closely linked to the urban areas. Figure 6 shows that about 54% of the brick-kiln workforce is concentrated in the rural areas of the districts which have a million plus city<sup>7</sup> or in the peripheral districts<sup>8</sup> of such cities. On the other hand, about 20.2% of the overall rural non-farm workforce is located in the million plus city districts or in the peripheries of these districts.

The participation of migrants in the total brick-kiln workforce is higher in districts with a million-plus city, and lowest in districts which are far from them.<sup>9</sup> This intensifies the growth of brick-kilns in relation to urban areas. The intensity of migrants in brick-kilns is also higher in comparison to that of the overall rural non-farm workforce: about half of the brick-kiln migrants are situated either in the rural part of the million-plus city districts or in their peripheral districts, while the corresponding share for the rural non-farm workers is 19.6%.

Figure 6: Brick-kiln Workers by Distance to Cities



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

## CHARACTERISTICS OF MIGRANT WORKERS IN BRICK-KILNS

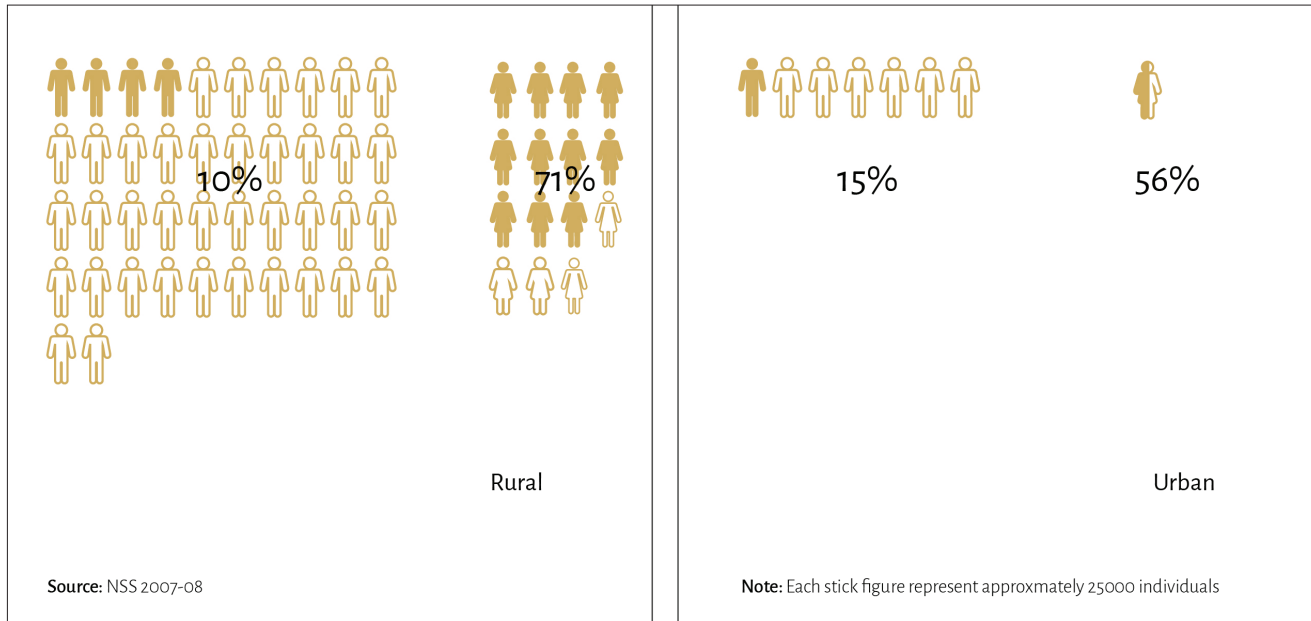
In this section, we use NSS 64th round (2007-08) employment-unemployment and migration survey to look at the characteristics of the brick-kiln workforce across the country and to understand their migration pathways. The NSS generally defines a migrant as a household member whose place of enumeration differs from the place where he/she has at least lived continuously for six months (defined as usual place of residence). Migration is further classified as temporary and permanent migration, depending on the intention to move out or stay at the place of enumeration.<sup>10</sup> The 64th round also captured information about short-term migrants, referring to individuals, who in the last one year, had moved out of the village/town (of enumeration) for a month or longer but less than six months for employment or in search of employment. For migrants other than short-term migrants, of which temporary and permanent migrants are a part, reasons to migrate can be varied, such as employment, social/political problems, development induced displacement, marriage, migration of family members, etc.

We have used NSS data to understand the nature of movement of migrants—both short-term and other than short-term, and to comment on their socio-economic profile. Essentially, considering that brick-kilns are known to significantly rely on family labour, we have attempted to understand the association between the family structure of the migrants and their participation in the brick-kilns.

### Migrants in the brick-kiln workforce

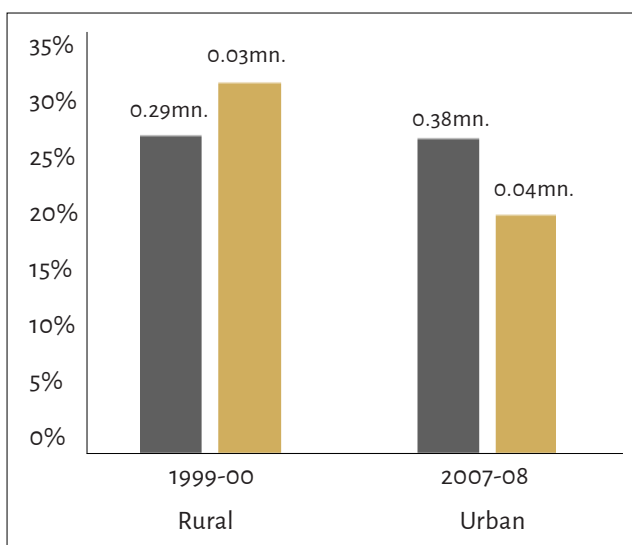
More than a quarter of workers employed in brick-kilns are migrants, and this share remained nearly constant over the period between 1999-00 and 2007-08, as we can see from the two latest surveys by NSSO on migration. The share of migrants in the total workforce in brick-kilns was 27% in 1999-00 (0.3 million), falling marginally to 26% in 2007-08 (0.4 million). During this period, the share of migrants in the total workforce in brick-kilns has declined in urban areas, and risen in rural areas (Figure 3). It is further important to note that the proportion of migrants among the female workforce in brick-kilns is far greater than that among the male workforce—a trend that has remained constant over time. This is not surprising though, as brick-kilns are a labour intensive industry like construction, where women's workforce participation is generally high. Several of these are migrants on account of moving for marriage, who have got incorporated into the labour market subsequently. In the case of brick-kilns, as per NSS 2007-08, 77.6% of all women migrants working in the sector moved due to marriage.

Figure 7: Percentage of migrant workers to total brick-kiln workers by gender



The significant proportion of women, particularly migrant women, in the brick-kiln workforce reinforces the observations of the Working Group on Migration (GoI, 2017) which held that even as women move due to marriage, they constitute a significant share of the workforce. It is therefore, critical to reinterpret women's migration from the perspective of their workforce participation rather than the usual focus on the reason for their migration.

Figure 8: Share of Migrant Workers to Total Workers in Brick-kiln by Sector



Source: NSSO, various rounds.

#### Brick-kiln migrants: Predominantly rural?

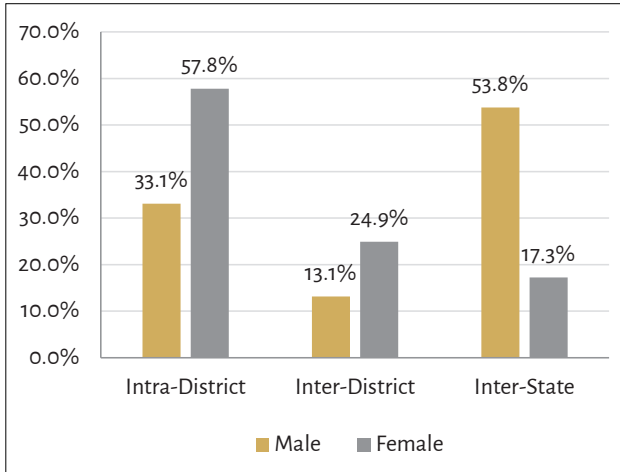
Brick-kiln migrants largely move from rural to rural areas, and within short-distances. As many as 83% of the brick-kiln migrants are rural to rural migrants. Only 9% of the brick-kiln migrants move from rural to urban areas. While most brick-kiln migrants move within their district of enumeration, about 31% of the rural to rural migrants in brick-kilns are inter-state migrants. Disaggregating further, it can be seen that most male migrants move from rural to urban areas and are inter-state migrants, while female migrants largely move from rural to rural areas and within the state or district of enumeration (Figures 9 and 10). The latter phenomenon can be attributed to women moving for marriage.

#### Brick-kiln migrants are casual wage labourers and economically vulnerable

An overwhelming share of the brick-kiln migrant workers are economically vulnerable, and a majority of them belong to the lowest stratum of the consumption quintiles (Figure 11).<sup>11</sup> The situation of non-migrants is somewhat better than the migrants in this regard. As can be seen from Figure 11, the average size of a migrant household drops from five to two as one moves from Q4 to Q5, which suggests that for migrants, the households in the top two quintiles are substantially smaller than the lower economic categories. On the other hand, for the non-migrants, the average size of households are much larger in the higher economic categories (four in Q5).

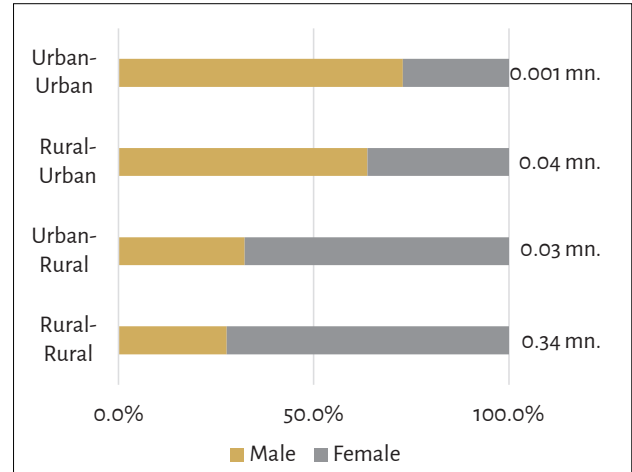
Most of the brick-kiln workers are casual wage labourers (72%), and this pattern is similar for both migrants and

Figure 9: Brick-kiln Migrant Workers by Distance and Gender



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

Figure 10: Brick-kiln Migrant Workers by Streams and Gender



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

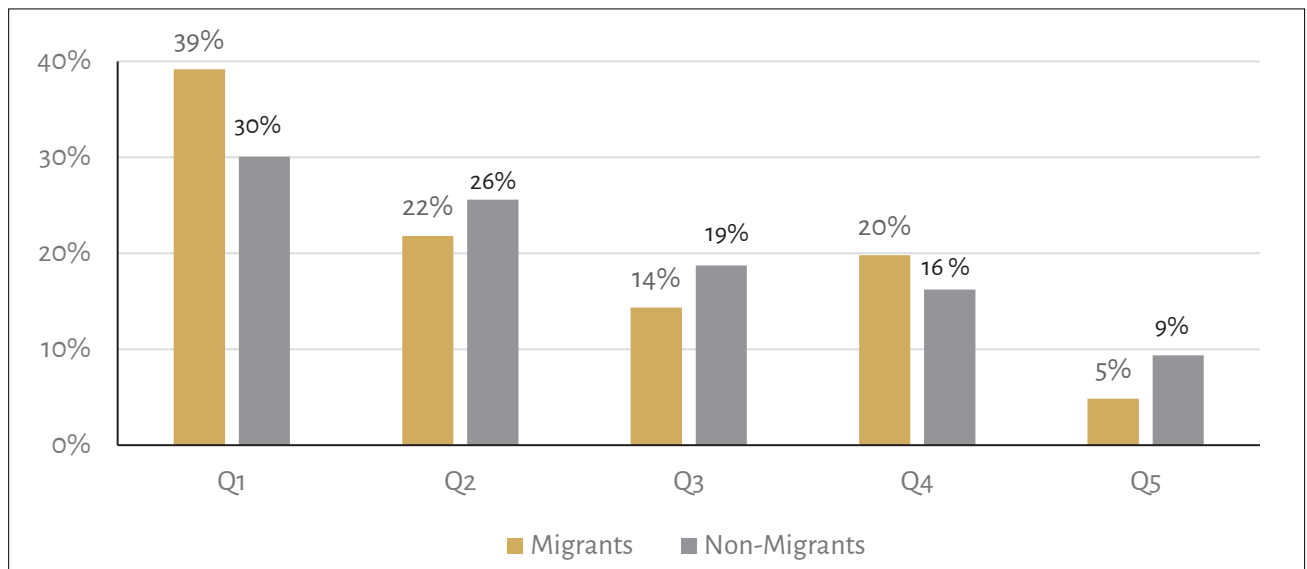
non-migrants. Out of all migrant workers who are currently working at brick-kilns, 37% were casual wage labourers before they migrated, mostly in agriculture or in the same sector. NSS data depicts that out of all current migrant workers in brick-kilns, who were also working before they moved, 70% were employed in agriculture, followed by 27% who were employed in brick-kiln and allied sectors.<sup>12</sup> It may also be seen that most of these migrants have been subject to an informal and insecure economic profile throughout their life, as nearly half of the current migrant workers (48%) were either seeking for job or out of the labour force before their movement.

**Brick-kiln migrants hail from socially disadvantaged backgrounds**

In addition to economic vulnerability, brick-kiln workers are also from socially disadvantaged backgrounds. Close to half of the total migrants (47%) in brick-kilns are scheduled castes (SCs), while nearly 16% are STs and close to 32% are OBCs. In contrast, 18.8% of the total migrant workforce (all-India, all sectors) is SC, while the corresponding figure for STs is 7.7%.

There is a fairly large proportion of inter-state migrants, over 40% among the SCs, while only 9% of STs move across state

Figure 11: Share of Migrants and Non-migrants across Consumption Quintiles



Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2



Table 1: Brick-kiln Migrants by Social Groups and Distance

Social Groups	Intra-District	Inter-District	Inter-State	Total
ST	78.3%	13.1%	8.6%	15.7%
SC	34.9%	24.4%	40.7%	47.3%
OBC	61.8%	16.0%	22.1%	31.9%
Others	29.3%	49.8%	21.0%	5.0%
All	50.0%	21.2%	28.85	100.0% (0.4 mn.)

Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

boundaries (Table 1). The predominant pattern of migration for STs is within the same district (78.3%). It may, therefore, be surmised that ST migrants are far less mobile in comparison to SC workers. Once again, these figures are markedly high in relation to the all-India estimates of migrant workers in all sectors: 9.7% of all SC migrants are inter-state, and 5.2% of all ST migrants are inter-state.

#### Brick-kiln migrants typically work in jodis (pairs)

A large scale all-India survey on gender and migration observed that migration to sectors like brick-kilns and sugarcane cutting typically is jodi-based, wherein workers move about in pairs, which is usually that of a married couple (CWDS, 2012). In other cases, entire families migrate to the brick-kilns for seasonal work (CWDS, 2012; Joshi & Khandelwal, 2009; Guérin et. al., 2015). In a 2014 survey of 280 households in Dalit settlements in Tamil Nadu, Guérin, Venkatasubramanian and Kumar (2015) find that nearly all the surveyed households migrated with families to work in brick-kilns and sugarcane cutting. Building on this literature, this section attempts to develop a deeper understanding of jodis from available NSS data.

The derivation of 'jodi' workers from the NSS data throws up some difficulties due to the way information on relations among the household members is collected.<sup>13</sup> Due to such

limitations, we define households with 'jodi' workers in two different ways in the present context. The first one is a stricter definition wherein a household is termed as a 'jodi' household if both the head of the household and his/her spouse are found to be currently working in brick-kilns, while the second one is an expanded definition wherein not only the head and his/her spouse but also the married child of the head and his/her spouse (daughter/son in-law of the head) are found to be working in the same sector.<sup>14</sup>

The data reveals that within the households that contain at least one brick-kiln worker, the person typically engaged in work is the head or his/her spouse, as shown in Table 2. This is more of the case in the households which have fully migrated to the place of enumeration.<sup>16</sup> In the households which have at least one migrant (part-migrant households), the main people who are engaged in brick-kiln are either the head or his/her spouse or the married child and his/her spouse (or both categories of married couples).

Table 3 represents the estimates of 'jodi' households and workers in those households as a share of total households and workers across different household categories. Overall, if one goes by the stricter definition, about 27.2% (0.27 million) of the households are 'jodi' households and 33.9% (0.54 million) of the brick-kiln workers can be termed as

#### Short-term migrants in brick-kilns are second to those in construction

There are an estimated 0.66 million short-term migrants in brick-kilns and allied sectors. Short-term migrants in brick-kilns constitute the second largest segment of the non-farm workforce after those in the construction sector. Out of the 9.5 million short-term migrant workers in the non-farm sector, those in construction comprise 52.4%. This is followed by short-term migrants in brick-kilns who comprise 6.9% of the total non-farm workforce. If agriculture is taken into account, the share of short-term migrants in brick-kilns stands at 5.3%, constituting the third largest segment where short-term migrants work after agriculture and construction.

About 24% of the migrant workers who are currently working in brick-kilns have undertaken short-term migration before, and this particular trend is more evident in case of male migrant workers (30%) than females (21%).<sup>15</sup> Most of these people (over 90%) have worked in brick-kiln and allied sectors when they moved short-term, and this is the case for both men and women.

jodi workers. These figures rise up to 29 % (0.29 million) for households and 38.4 % (0.6 million) for workers respectively, if we consider the expanded definition of jodi household. This also suggests that in most of the households, the married child and his/her spouse works in a brick-kiln if the head and his/her spouse also works in a brick-kiln, as the difference in share of jodi households is not much between the stricter and the wider definitions. Fully migrant and part-migrant households, as expected, have a large share of jodi households, but there is also a considerable share of jodi households and workers among the non-migrant households as well. This lends empirical support to understanding jodi as a unit of labour in brick-kilns, a point explicated in field studies (CWDS, 2012; Guérin et al., 2007; Joshi & Khandelwal, 2009). The data also throws light on jodi as an industry-wide phenomenon and not only a migrant worker phenomenon. As many as 95 % of the jodis are rural.

The prevalence of jodi workers is also evident in case of short-term migrants. There are 0.4 million households which have at least one short-term migrant who worked in brick-kilns during his/her longest spell of movement. Out of these, about 26.5 percent (0.11 million) households are such where the head and his/her spouse both have undertaken short-term migration to work in brick-kilns and allied sectors. Hence, about 32.9 percent of 0.66 million short-term migrant workers in brick-kilns are jodi workers.<sup>17</sup>

What does this preponderance of jodi and/ or family based migratory labour in brick-kilns imply for the structuring of the production and labour process in the kilns? Field evidence suggests either possibilities—that jodis undertake similar kinds of work in the kilns (Guérin et al., 2007) or that tasks are segregated by gender (Joshi & Khandelwal, 2009). In the kilns of Chennai, for instance, Guérin, Augendra, Parthasarthy and Venkatasubramaniam (2007) document that the work of moulding is performed by male-female pairs of workers, often assisted by children. The description of jodi labour in

CWDS (2012) represents it as a specific pattern of recruitment in itself and a 'requirement', with implications on social structures like marriage.<sup>18</sup> "Green [raw] brick makers, function almost universally across the country as family labour units with the core team usually comprising of a husband and wife (Jodi)", the researchers write (CWDS, 2012, pp. 37-38).

On the other hand, in the kilns of North Gujarat, Joshi and Khandelwal (2009) find that the male-female ratio is about 5: 1. Typically, groups of families migrate together out of a single hamlet or village.<sup>19</sup> At the kilns, women are involved in carrying of bricks on their heads within the site as well as breaking coal into smaller pieces. As might also be commonly expected, women cook for the labourers on site. Men prepare and arrange the bricks, set up the kilns and transport the finished bricks on their heads. Accompanying children help out in work on site, such as carrying bricks (ibid.).

#### Children in Brick-kilns: Ambiguous Presence

Among the 0.4 million migrant workers in brick-kilns, 87 % belong to households that have at least one brick-kiln worker, working adults of both gender (20-59 years) and a child (less than 18 years). This implies that a large majority of brick-kiln migrants move to the kilns along with their families and children, as also seen in field studies.

About 1.6 % (934) of brick-kiln workers are below 14 years of age. Out of all children (below 14 years) residing in households with at least one brick-kiln worker, 1.4 % are working in brick-kilns. Between the ages of 14 and 18 years, the number of workers in brick kilns increases manifold: from 25,317 to 1,78,712. This shift is further pronounced in the case of migrants, where the total number of children in the age bracket of 14 to 18 years shows a jump of eleven times, while the corresponding shift is six times in case of non-migrants.

A cursory look at these figures might suggest that the incidence of child labour in brick-kilns is not very high. However, it is essential to be cautious and reconcile these figures with

Table 2: Distribution of Brick-kiln Workers by Relations to the Head of the Households

Relation	Fully Migrant HH	Part Migrant HH	Non-Migrant HH
Self (Head)	47.3%	50.2%	50.9%
Spouse of the Head	32.4%	16.3%	24.0%
Married Child	1.0%	12.6%	4.1%
Spouse of the Married Child	0.1%	2.6%	0.8%
Unmarried Child	14.6%	15.9%	17.3%
Grandchild	0.2%	0.5%	0.0%
In-laws	0.0%	0.7%	0.0%
Siblings/Others	4.3%	1.2%	2.9%

Source: NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2



Table 3: Incidence of Jodi Households and Workers in Brick-kilns

Type of Households	Stricter Definition		Wider Definition	
	Percentage Households	Percentage Workers	Percentage Households	Percentage Workers
Fully Migrant Households	66.5%	64.9%	66.5%	65.0%
Partly Migrant Households	23.3%	29.5%	25.4%	34.9%
Non Migrant Households	34.5%	44.2%	35.9%	45.8%
All	27.2%	33.9%	29.0%	38.4%

**Source:** NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

**Note:** Calculated as percentage of all households and all workers in brick-kilns in each category respectively

evidence emanating from the field. Studies have documented the prevalence of child labour in brick-kilns, who work in difficult and often hazardous conditions along with their parents (CWDS, 2012; Guérin et al., 2007). Considering further the practice of wage payment by piece rates (see below), families can earn more by engaging children in work (Guérin et al., 2007). In Chennai, for instance, it was found that children can start working in the kilns around five-six years of age, and workers opined that at 15 years, the productivity of children is equal to that of an adult (ibid.). The lack of childcare and education facilities for children onsite is another major area of concern (CWDS, 2012; Joshi & Khandelwal, 2009). The field observations point to the possibility of under-reporting of figures in the official NSS surveys. Given the sensitivity of the subject of child labour, it is highly likely that a 14 year old's identity can be masked to be that of a 15 or a 16 year old. Lack of documentation or cross-verification in the surveys which rely on self-reporting can further this possibility.

#### WAGES, WORKING CONDITIONS AND LIVING ARRANGEMENTS

Any understanding of migration to brick-kilns is incomplete without considering wage arrangements, working conditions and living arrangement at the worksites. A granular understanding of these aspects is captured by various field studies. Two points particularly stand out from a review of existing literature on brick-kilns: a) wage arrangements characterised by paying piece-rates to groups of family labour and b) conditions of bondage created by the payment of advances to workers and their families.

#### Wages and working conditions in brick-kilns

NSS 2011-12 data shows that close to half of brick-kiln workers are either paid by piece-rates on or a daily payment basis, while

only about 7 % of the workers receive regular monthly salary. The incidence of piece-rates and daily wage payments is higher among males in comparison to females. Field studies too show that payment of wages to the workers is generally on a piece-rate basis or on the basis of number of days worked. Table 5 summarises some field evidences. It can be seen that the typical mode of remuneration is piece-rated, or by a 'set of workers' as Guérin, Augendra, Parthasarthy and Venkatasubramaniam (2007) document in brick-kilns of Chennai. Wage rates also do not seem to have changed much in a span of ten years, as can be seen in a follow up study in 2014 (Guérin et al., 2015). Interestingly, among the body of field evidences, UP has the highest wage rates—above the minimum wages for the state.

Employment in a brick kiln lasts for about seven months, usually beginning in October/November (Majumder, 2015; Joshi & Khandelwal, 2009). Working hours are arduous and long, and can stretch as long as 16 hours a day (Joshi and Khandelwal, 2009; Guérin et al., 2007). Injuries are commonly reported for those who carry bricks and fire the kilns. Piece-rated workers, in an attempt to earn as much as possible, end up increasing their chances of being injured. In case of an injury, it is reported that medical expenses are deducted from the workers' wage by the contractor or mate, who initially pay for it (Joshi and Khandelwal, 2009).

#### Brick-kiln migrants and neo-bondage

Brick-kilns across the board are notorious for practices of tying workers through wage advances which may range from anywhere between 3,000 rupees (Joshi & Khandelwal, 2009) to 50,000 rupees (Guérin et al., 2015). These advances are handed out to workers through labour contractors or intermediaries, who often hail from the same village as the workers. The advance payment is generally adjusted against wages and living costs at the brick-kiln.

Such practices have been theorised as forms of 'neo-bondage'. It has also been emphasised that bonded labourers hail from the lowest stratum of Indian society—the SCs and STs—who are also among the landless, poor and under-employed population (Breman, 2008). Neo-bondage is distinguished from older forms of bondage in that it is purely economic in nature, unlike patron-client relationships that were characteristic of the latter. As Guérin, Venkatasubramanian and Kumar (2015) write, "bondage arises in communities where the vertical ties of subordination, historically and socially rooted in the consciousness of both employers and workers, are still strong enough to make it acceptable" (p. 15).

While such bondage has generally been characterised as a form of primitive accumulation under contemporary capitalism (CWDS, 2012), Guérin (2013) understands this as a "continuum" ranging from mild to severe forms of harassment. In brick-kilns in Chennai, for instance, it was seen that workers could be allowed to leave the brick-kilns temporarily during a production season (subject to negotiations with their employer), rendering the nature of bondage as relatively "mild", when seen in comparison to more severe forms of closed workspace-level confinement such as in rice mills (Guérin, 2013). In many cases, debt-based recruitment ties workers and their families to the same brick-kiln perpetually for years, as previous advance amounts are sought to be adjusted year after year (Majumder, 2015; John, 2014).

#### **Brick-kilns migrants live onsite in makeshift housing**

The difficult conditions of work and employment are compounded by the low levels of living arrangements. Though accommodation on work sites is provided by the contractor, it usually comprises basic structures made up of bricks and plastic sheets (Joshi & Khandelwal, 2009). The shanty, makeshift structures lack basic facilities like water and sanitation (Menon, 2014). Together with harsh working conditions, the living arrangements expose workers to various illnesses like "dysentery, allergies, skin diseases, fever, and muscular pain" (Guérin et al., 2015, p. 12).

Further, owing to lack of PDS benefits at destination on account of being migrants, workers are often forced to buy grain from grocery shops at the kiln sites which charge higher than market prices (Joshi & Khandelwal, 2009).

### **LEGAL AND REGULATORY FRAMEWORKS**

Brick-kiln workers are principally covered by two major legislations: the Building and Other Construction Workers (Regulation of Employment, And Conditions of Service) Act, 1996; and the Building and Other Construction Workers Welfare Cess Act, 1996 (see Roy, Manish & Naik, 2017). We discuss these below. We also shed light on the Bonded Labour System (Abolition) Act, 1976, an understanding of which is relevant to practices of bondage that are prevalent in the industry.

#### **Building and Other Construction Workers (BOCW) Act, 1996, and Building and Other Construction Workers Welfare (BOCW) Cess Act, 1996**

Under this, building and other construction workers (that include brick kiln workers) are required to be registered with state-level Construction Workers' Welfare Boards. Minimum safety standards and conditions of employment for construction workers have also been prescribed. A mandatory cess is levied on all employers which is pooled into a fund, managed at the state level by the Construction Workers' Welfare Boards, to be used for the provisioning of social security and related services for construction workers. The range of services include provisions for healthcare, housing and shelter, pension, life insurance, assistance for education of children, and support for purchase of tools and assets (see Gol, 2017, p. 24).

The functioning of the Acts has been subject to criticism, including by the Parliamentary Standing Committee on Labour in its 44th Report (March 2014), which observed that there were several lacunae in their implementation. These pertained to delay in setting up functional Construction Workers' Welfare Boards in all the states, non-registration of brick-kiln workers and migrant labourers, and lack of clarity on the manner in which the cess funds, which had accumulated to the tune of several hundreds of crores of rupees, were to be spent. The Report of the Working Group on Migration further observed that on an average only 15 % of the cess funds were utilised by states, with some significant inter-state variations (Gol, 2017).

#### **The Bonded Labour System (Abolition) Act, 1976**

Bonded labour was outlawed with the promulgation of the Bonded Labour System (Abolition) Act, 1976. The Act understands bondage as a form of 'forced labour' or 'partly forced labour' wherein a debtor renders his labour or services or that of his family members in order to repay an advance or a loan. The Act recognises that bounded labourers are forced to work "either without wages or for nominal wages", and may have to "forfeit the right to move freely across the territory of India". The burden of proving that the debt taken is not bonded is upon the creditor. Bonded labour is an offence that is punishable by upto three years of imprisonment, and a fine upto 2,000 rupees. As per the provisions of the Act, "every obligation of a bonded labourer to repay any bonded debt have been extinguished no suit or other proceeding shall lie for the recovery of any such debt."

The enforcement of the Act is the responsibility of district-level Vigilance Committees headed by the District Magistrate. The rehabilitation of bonded labourers is also the onus of the vigilance committees. Subsequent to the promulgation of the Act, a Scheme was notified by the Central Government in 1978 for the rescue and rehabilitation of bonded labourers, in association with the State Government. The Scheme initially provided for rehabilitation assistance up to a ceiling limit of 4,000 rupees per bonded labourer (to be equally shared by Central Government

and State Governments), which was progressively increased to 20,000 rupees in 1999. As of March 31, 2015, a total of 3,00,175 labourers were identified and released under the scheme across eighteen states, and a total of 2,80,213 were rehabilitated.

In 2016, the Ministry of Labour and Employment notified a new scheme which substantially increased the amount of compensation to 1.25 lakh rupees for able bodied adult men, 2 lakh rupees for able-bodied women and children, and 3 lakh rupees for persons with disabilities. This was in response to criticisms of the former scheme with regard to the rehabilitation assistance offered and the need to address specific needs of children, women and persons with disabilities.

## CONCLUSIONS AND RECOMMENDATIONS

The case of brick-kilns raises specific challenges that call for consideration, such as payment to family labour units by piece-rates. At the same time, the spatial concentrations of the kilns, if identified, could provide an opportunity to conduct necessary outreach and intervention efforts. We discuss some of these in this section alongside identifying the data gaps that need plugging in.

### Identify local clusters to expand CWWB outreach and benefits

It emerges from a reading of the NSS data and field-based literature that brick-kiln work is highly localised. It is therefore,

Table 4: Brick-Kiln workers and method of wage payment

Method of Payment	Male	Female	Total
Regular Monthly Salary	7.73%	2.25%	6.83%
Regular Weekly Payment	41.46%	58.24%	44.22%
Daily Payment	25.34%	23.28%	25.00%
Piece rate Payment	23.54%	15.74%	22.26%
Others	1.94%	0.49%	1.70%

Source: NSS Employment and Unemployment Survey 2011-12

Table 5: Wages in Brick Kilns across various states: Field evidences

Source	Year of study	Location	Mode of payment	Earnings (range/mean)
Joshi & Khandelwal, 2009	2007	North Gujarat	Piece rate and/or daily wage	₹180-200 per 1000 bricks (patla workers); ₹100-120 per 1000 bricks (khadkan workers); ₹900-1800 per cycle of 16-30 days
Majumder, 2015	2013	Uttar Pradesh (Siddharthnagar and Shrawasti)	Piece-rate	₹12,926 mean wage per month; range varies between ₹6,677 and ₹18281 per month (above minimum above minimum wages for the state of Uttar Pradesh in 2014).
Guérin et. al., 2015	2004 and 2014	Tamil Nadu (residential settlements in Villupuram and Cuddalore; brick-kilns in Tiruvallur and Kanchipuram)	Piece rate; per set of workers (between 2-6 workers)	In 2004: ₹340.5 per 1000 bricks In 2014: ₹450 per 1000 bricks (At constant prices 2014)

Source: Authors' compilation from various studies.

**Note:** *Patla* is the first step in the brick-making process, which involves moulding of raw bricks and arranging them in a systematic pattern for drying. The work is usually undertaken in pairs (PCLRA, 2012; Joshi & Khandelwal, 2009). *Khadkan* refers to the arrangement of raw bricks in a kiln (with coal, fuelwood, etc.) before they are fired to make finished bricks (PCLRA, 2012; Joshi & Khandelwal, 2009).

important for states to systematically work towards identifying local concentrations of brick-kiln work, and conduct outreach programmes and on-spot registration programmes to increase worker registrations with the respective state-level Construction Workers' Welfare Board. The benefits of registration are several and present an important, albeit underutilised, opportunity for the welfare of workers and migrants (Gol, 2017; Roy, Manish & Naik, 2017). Concomitantly, there is a need to direct and streamline cess funds towards better provision of migrant housing in and around brick-kiln sites. This would be critical to address the extant conditions of housing and basic service provision at worksites, which is usually at the behest of the contractors. The design of such housing should be localised and cater to both individuals and families.

#### **Inter-state coordination of social justice schemes**

As the data shows, among inter-state brick-kiln migrants, there is high proportion of SCs and a small, yet significant share of STs. Since the administrative classifications for SCs, STs and OBCs are state-specific, migrants enumerated in one state may lose the benefits of SC/ST/OBC classification in another. It is, therefore important, for inter-state coordination in respect of social justice schemes for migrants belonging to these social groups (Gol, 2017).

#### **Portability of welfare services**

It is also important for states to work towards portability of welfare services such as the Public Distribution System (PDS). Portability of PDS would also be critical to curb workers' dependence on owner/ contractor-linked grocery shops that reportedly overcharge.

#### **Need to reconsider wage contracts**

In the case of brick-kilns, the dual combination of piece-rates and family units of labour creates an inherently unequal system, wherein it is difficult to ascertain the wage contributions of individual workers. This creates specific challenges as regards fair and equal remuneration. This a complex issue that calls for consideration from employers, trade unions and worker organisations. Fundamentally, the question that needs asking is: is there a need to structure wage contracts differently in cases where payment is not to individual workers but to pairs/ groups of workers? In that case, how is responsibility for fair remuneration to be fixed and ensured?

#### **More nuanced understanding of bondage needed**

Fifth, although the practice of bonded labour is condemnable, it is important to have a more nuanced view of the phenomenon as scholars remind us (Breman, 2008; Guérin et. al., 2015). Lack of access to formal credit is a critical factor that gives rise to situations of bondage, and must be addressed. Further, even

as rights-based organisations have been painstakingly working towards the identification, rescue and release of bonded labourers (see IJM, 2015), the perspectives of workers in this respect is equally significant; rescue and rehabilitation efforts need to be sustainable, and engage with deeper question of wages, employment and wage/ employment contracts.

#### **Provisions for care and education of accompanying children**

It is important to consider the case of children of migrating workers. Provisions for childcare and education of the accompanying children need to be ensured at brick-kiln sites. Ensuring the outreach of the Integrated Child Development Services (ICDS) to brick-kiln sites may be one intervention, or state governments could partner with local NGOs for on-site creches or mobile creches in a cluster of brick-kilns. Regarding education, it is critical to expand the outreach of the Education Guarantee Scheme (EGS) and the Alternative and Innovative Education (AIE) framework under the Sarva Shiksha Abhiyan (SSA). Wherever possible, transportation facilities to the nearby schools must be ensured at brick-kiln sites. In other cases, mobile schools could be a viable option. Clusters of closeby brick-kilns could be identified and served together by mobile schools. Particularly in case of short-term migrants, it is further important to address barriers of language faced by migrant children. An MoU signed in 2012 between the then state of Andhra Pradesh (AP) and Odisha is an example in this regard. As per this MoU, migrant children from Odisha were enrolled in local schools in AP nearby the places of work of their parents. Volunteers trained in Odiya were deployed to address the language barrier (Gol, 2017, p. 31).

#### **Need for better data collection**

Lastly, the analysis presented herein points towards underlying shortcomings of NSS data in capturing the varied patterns of migration that characterise brick-kiln workers, particularly migration as jodis, short-term and seasonal migration. In this regard, it is critical for researchers and policymakers to read the existing macro-data in consonance with micro-level studies that offer rich insights on these varied migration patterns and local conditions of work and residence—some of which this document has sought to engage with. At the same time, in line with the recommendations of the Working Group on Migration (Gol, 2017), it is important for the NSSO to consider expanding the scope of their surveys to worksites such as brick-kilns. These should be oriented to capture in detail various patterns of migration including circular and seasonal migration which are left out of the scope of the current design of the surveys. It is further important for worksite surveys to capture data in relation with wages, modes of recruitment, modalities of wage payments, working conditions and living arrangements onsite (wherever applicable).

APPENDICES

**Appendix I: Districts Accounting Major Part of Brick-kiln Workforce**

Top 25% of Brick-kiln Workers			Next 25% of Brick-kiln Workers		
<i>District</i>	<i>State</i>		<i>District</i>	<i>State</i>	
1 Thane (6.77%)	Maharashtra	10	Viluppuram	Tamil Nadu	
2 Balangir	Odisha	11	North 24-Parganas	West Bengal	
3 Muzaffarnagar	Uttar Pradesh	12	Kolar	Karnataka	
4 Jaunpur	Uttar Pradesh	13	Kaithal	Haryana	
5 Ludhiana	Punjab	14	Shrawasti	Uttar Pradesh	
6 Basti	Uttar Pradesh	15	Nalgonda	Telangana	
7 Cuddalore	Tamil Nadu	16	Pune	Maharashtra	
8 Rampur	Uttar Pradesh	17	Rajgarh	Madhya Pradesh	
9 Baghpat	Uttar Pradesh	18	Bid	Maharashtra	
		19	Nalanda	Bihar	
		20	Bhiwani	Haryana	
		21	Nagpur	Maharashtra	
		22	Jalgaon	Maharashtra	
		23	Birbhum	West Bengal	
		24	Palamu	Jharkhand	
		25	Kolhapur	Maharashtra	
		26	Rajkot	Gujarat	
		27	Anand	Gujarat	
		28	Coimbatore	Tamil Nadu	

**Appendix II: Districts Accounting Major Part of Migrant Workforce in Brick-kilns**

Top 25%			Next 25%		
<i>District</i>	<i>State</i>		<i>District</i>	<i>State</i>	
1 Basti (8.31%)	Uttar Pradesh	4	Thane	Maharashtra	
2 Ludhiana	Punjab	5	Muzaffarnagar	Uttar Pradesh	
3 Kolar	Karnataka	6	Balangir	Odisha	
		7	Rajkot	Gujarat	
		8	Sikar	Rajasthan	
		9	Viluppuram	Tamil Nadu	
		10	Jalgaon	Maharashtra	

**Source:** NSS Employment, Unemployment and Migration Survey 2007-08, Sch. 10.2

## NOTES

1. By employment in brick-kilns, we refer to estimates of employment from the NSS unit level data at the five-digit classification of the National Industrial Classification (NIC) 2004 and the NIC 2008 for the 64th and 68th round respectively. These pertain to the description, 'manufacture of bricks', whose codes for NIC 2004 and NIC 2008 are 26931 and 23921 respectively.
2. This is as per the 5 digit classification of NIC 2008, and as per the Usual Principal Activity (UPS). This figure would increase to 2.5 million if usual subsidiary activity (USS) is added.
3. The Census, unlike NSSO, provides a 4 digit NIC description of workforce, which is not sufficient to estimate the number of people engaged only in brick-kilns. The figures reported here from the Census, therefore, refer to 'manufacturing of ceramic products (brick blocks/ tiles/ other construction goods)', which implies that the actual number of workers in brick-kilns might be lower.
4. The district-wise estimates of brick-kiln and related workforce, as per census 2001, portrays a slightly different spatial distribution than NSS, where the concentration of workforce is much higher in eastern and central Uttar Pradesh, Gangetic West Bengal and almost null in Andhra Pradesh, Karnataka and Tamil Nadu.
5. We use the term 'intensity of the workforce' to refer to the share of brick-kiln workers in a district to those in all districts of the country. For migrant workers, this refers to the share of brick-kiln migrant workers in a district to those in all districts of the country.
6. It is important to note here that the share of migrants in the total brick-kiln workforce of a district (Figure 5) is not very tightly linked with the intensity of migrants in that district in relation to all India. Districts with a large share of the migrant workforce may not necessarily be migrant-intensive, as share of the migrant workforce in those districts may not be significant in relation to the all-India migrant workforce in brick-kilns.
7. Million-plus city refers to the cities with more than a million population as per Census 2011. The numbers do not change much even if cities of Census 2001 are taken into account.
8. By peripheral districts, we refer to such districts which share a common boundary with districts containing one or more million plus cities.
9. Since the districts with brick-kiln workers tend to cluster spatially, the figures for the peripheral districts change if the definition of the 'periphery' is extended from immediate neighbours to second-order neighbours of the districts containing million-plus cities.
10. According to the NSS 64th round, "The migration was treated as temporary, if the migrant intended to move again to the last usual place of residence or to any other place. If the migrant, in the normal course, was likely to stay at the place of enumeration and did not plan to move out of the place of enumeration, it was treated as a permanent migration" (NSSO, 2010, p.27).
11. Refers to national consumption quintiles.
12. This is as per 2-digit classification of NIC 2004.
13. Though the NSS data provides information about the marital status of each individual in a household, it is not possible to ascertain all marital relationships within the household using this data. This is due to the fact that the relationship between various household members are not explicitly defined in the survey, rather collected in relation to the head of the household. Hence, it is possible to check if the head of the household and his/her spouse is working in the same industry, which can be a strict definition of a 'jodi' worker. However, one cannot perfectly ascertain whether there are multiple 'jodi' workers in the same household. For example, even if both the married child and the spouse of the married child are living in the household and are reported to be working in the same industry, they may not necessarily be jodi workers. The spouse may not be married to the married son/daughter of the head who is living at home, but possibly to some another child of the head who is an out-migrant or living elsewhere. This problem is further complicated if there are multiple married children of the head, whose spouses are living in the household. Yet, this expanded definition of 'jodi' can help us estimate this migratory pattern, and lend further empirical support to the findings emanating from field studies across the country.
14. It may be noted that in defining the second kind of jodis, a household is only counted as a 'jodi' household if further to head and spouse of the head working in brick-kilns, atleast one married child and spouse of the married child are also found to be working in brick-kilns. However, this definition is bound by certain limitations as discussed; the two people may not necessarily be married to each other, as the data does not capture relationships between the household members. The first kind of jodi households are a subset of the latter. Those households where head and his/her spouse are not working in brick-kilns are counted in the second type of 'jodis'.
15. This means that out of all male migrants who are currently working in the brick-kiln sector, about 30% have undertaken short-term migration before. Overall, about



19% of all workers in brick-kiln have undertaken short-term migration before.

16. Out of one million households which have at least one brick-kiln worker, 5% are fully migrant households, 80% are households which have at least one migrant, and 15% households do not have any migrants.
17. Other than these jodi households, there are 0.19 million households where only the head is a short-term migrant in the brick-kilns, while households where only the spouse moved to the brick-kilns are negligible.
18. In Baoli village in Bhagpat district in Western UP, it was documented by researchers at CWDS that young male bhatta (brick-kiln) workers were unable to find brides locally owing to “reluctance on the part of local families to marry their daughters into a lifetime of the hard manual labour and migratory conditions and related disruption of settled family life” (CWDS 2012: 37). Male bhatta workers, particularly from Dalit and Muslim communities looked for brides from elsewhere (reportedly Bihar, Jharkhand and Bengal) to fulfil the ‘requirement’ for jodi workers in the kilns (ibid.)
19. The out-migration stream documented in the study is from Kotda block in Udaipur district of Rajasthan.

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### STRENGTHEN AND HARMONIZE RESEARCH AND ACTION ON MIGRATION IN THE INDIAN CONTEXT

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SHRAMIC (Strengthen and Harmonize Research and Action on Migration in the Indian Context) is a multi-stakeholder project, supported by the Tata Trusts, that brings together academia and NGOs to study migration related issues. Besides CPR, other research partners of SHRAMIC include the Indira Gandhi Institute for Development Research (IGIDR), National Institute of Urban Affairs (NIUA), and IRIS Knowledge Foundation (IRIS-KF).