Determinants of Wage Differences between the Inmigrant and Local Labourers in the Construction Sector of Kerala

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The wage determinants of inmigrant and local labourers in the construction sector of Kerala exhibit varied intensity in influencing their wage and wage gap. The predominance of interstate migrants in the labour market of Kerala has resulted in high incidence of wage difference, necessitating a revisit of the labour laws and wage policies of the state.

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The development paradigm of a nation is determined not only by its resource endowments but also by the potential of its people to enjoy quality lives. The level of skill of the population, employment opportunities and wages directly influence the quality of life, and thus the development of the nation. According to Adam Smith (1776: 44), "Labour was the first price, the original purchase money that was paid for all things. It was not by gold or by silver, but by labour, that all the wealth of the world was originally purchased." Karl Marx further emphasised labour as the sole power which can create an additional value over its subsistence, establishing its predominant role as a factor input that increases the economic value of products. In the process, the mental or manual exertion of the labourers invested in the economic activity would display its unique traits as a factor of production and deserve rewards in the form of wage or remuneration. Equal wage for equal work in accordance with skill and dexterity assumes relevance in labour laws and labour contracts. It is constitutionally safeguarded as a fundamental right of every citizen in India.

While considering the employment sector of the labour market, one finds that migration is instrumental for the provision of labourers in every region. The development history of India also acknowledges the role of migration in diversifying the labour market with better wage and employment in accordance with the changing skill requirements. Article 19 of the Constitution safeguards the right of all Indian citizens to move and settle in any part of the country. The regional imbalances in the supply of labour result in the inflow of labourers in areas with shortage, thus increasing wage rate and improving economic benefits for labourers at the destination. Several studies and reports mention the major reason for labour migration as better employment opportunities at the destination states (Census of India 2011; UNESCO and UNICEF 2012). Internal migration is therefore an essential and inevitable part of the social and economic life of the country. As per Census of India 2011, internal migrants accounted for 39.7 million, or 3.31% of the total population of the country.

About 72% of the inmigrants in India are employed in the unorganised sector. Of these, a large proportion works in manufacturing, construction, wholesale and retail trade, transportation and storage (Rukmini S 2014). The National Sample Survey Office (NSSO) 68th Round reveals that 75% of the labourers are working in the non-agriculture sector (NSSO 2014). The

year-wise analysis showed that there has been a greater labour factor substitution in all sectors except construction, which is a prime labour-intensive industry (Behera 2012). At 78% per annum during 1999–2005, construction remains the second most labour absorptive sector (Mitra 2006). The influence of wage and wage-induced factors on the labour market, especially in construction, and the overall economic activity of a labour-abundant economy like India remains an important area of research in the development discourse.

Interstate Migration and Changes in Labour Market

When compared to the other states, the labour market of Kerala seems to be unique in its structure and composition. This is akin to its exceptional development experience. Since the 1970s, the regional economy of Kerala has been witnessing tremendous changes in its structure, wages, nature of work, types of labourers and their skill sets. The Kerala labour market is characterised by a combination of inmigrant and local labourers. The reluctance of the local labourers to work and a high level of emigration over the years has increased the numbers of inmigrant labourers and reduced those of the former in the labour market of Kerala.

As the economy experienced an upsurge in infrastructure development, the aforementioned "peculiarity" of its local labour market further encouraged the inmigrant labourers to choose Kerala as their destination. The visibility and involvement of these labourers is evident in all areas of economic activity, be it making rocking cradles or digging graveyards, and they have formed an institutionalised network in the local labour market. Almost 60% of the inmigrant workers in Kerala are employed in one of the most labour-intensive secondary sectors, namely construction (Kerala State Planning Board 2016: 168). But most of these inmigrant labourers are unskilled workers. The ease of entry, plenty of employment opportunities and the relative unskilled nature of work have played a crucial role in attracting unskilled labourers to the construction sector of the state. The magnitude of the upsurge (25–40 lakh) (Narayana et al 2013; Mathukutti 2016) in migration to Kerala assumes significance: inmigrants are estimated to be 10% (3.34 crore) of the population of Kerala as per the 2011 Census. It is the most sought-after destination for semi-skilled and unskilled labourers who have registered a heavy turnout in districts such as Eranakulam (17%), Wayanad (13.51%), Kannur (11.31%), Kozhikode (8.82%) and Kasargod (8.09%) (Kerala State Planning Board 2016: 167). Higher wage rates and better employment opportunities are the main reasons for the large inflow of workers to Kerala from other states such as West Bengal (45.97%), Odisha (15.70%), Assam (10.40%), Bihar (9.36%), Karnataka (7.48%), Tamil Nadu (3.10%), Jharkhand (2.77%), Uttar Pradesh (2.48%) and others (2.74%) (Kerala State Planning Board 2015: 148). The influx of labourers has radically changed the nature and composition of Kerala's labour force, and hence that of the labour market.

There are a host of factors influencing employment of inmigrant workers in construction, which in turn determine their existing wage rate, employment opportunities, living conditions and social security. There have been reports of wage inequality between inmigrant and local labourers doing the same work in the construction sector. There is, thus, a demand for "equal wage for equal work" under a comprehensive wage policy. This necessitates a detailed study on wage determinants and decomposition of wage pertaining to labourers in construction sector of Kerala.

There was an unprecedented boom in the construction sector consequent to a rise in expatriate remittances and the resultant turnaround in the state's economy. The thrust on infrastructural development and the ongoing boom in the housing sector have had an impact on the nature and composition of Kerala's unorganised labour market, in particular the construction sector (Gopikuttan 1990). The labour-intensive nature of the construction sector and the relative dearth in the local labour supply together have implications for wage, employment and inmigration of labourers.

Emigration-induced Inmigration

Emigration has remained a buzzword in the socio-economic life of Kerala ever since the 1970s. Over the years, both the number of emigrants and their remittances have remained large—14 lakh emigrants with ₹13,000 crore as remittances in 1998 increased to 24 lakh emigrants with ₹71,000 crore in 2014 (D'Cruz and Manuel 2017: 1). This rise was quite predominant during 2011–14. The surge in remittances helped further boost commercial activities such as real estate and construction. According to some studies, the proportion of households possessing "luxurious" or "very good" houses shows a steady increase with the increase in the number of non-resident Keralites in the households (Zachariah and Rajan 2015).

However, lately there has been an unprecedented decline in both the emigrants to the Gulf region (from 2.4 million in 2014 to 2.24 million in 2016) and the remittance to the domestic economy (from ₹71,142 crore in 2014 to ₹63,289 crore in 2016). It is for the first time these figures have declined since the Kerala Migration Survey (KMS) started in 1998 (Rajeev 2017). The decline in the expatriate remittance has had implications for all spheres of the state's economy, including construction. This is also reflected in the significant reduction of subsector-wise contribution of construction to the gross state domestic product (GSDP) of Kerala—from 9.15% in 2013–14 to 6.45% during 2015–16 (Kerala State Planning Board 2016: 7). The situation was further aggravated by the demonetisation of high-value currency notes in November 2016. During the same period, the present researchers observed lay-offs and closures of construction sites resulting in large-scale loss of employment for both inmigrant as well as local labourers, leading to further stress on wage and employment in the domestic labour market.

Even during a lull in construction activities, contractors/employers often prefer inmigrant labourers to local labourers for employment. During an interview, one of the contractors responded, "We employ inmigrant labourers as they are willing to work at relatively low wages, are easily available throughout the week, are flexible with regard to time and are even willing to work overtime." At the same time, inmigrants are not at par

with local labourers as their work lacks quality and perfection. However, the slowdown in construction activities affected the wage and employment of the latter more than the former. A trade union leader in the study area rightly said, "To a smaller extent, the phenomenon of inmigration made the local population unemployed as the employers were no longer willing to pay higher wages to the local labourers." This has also been demonstrated by the unprecedented anti-inmigrant protests by some sections of local labourers in Ernakulam district, demanding the return of their jobs lost to inmigrants. This is a new situation that poses bigger challenges before the state government with regard to wage differences between and employment of local labourers and inmigrant labourers, warranting the need for a comprehensive labour policy.

It is not surprising to note that inmigrant labourers are willing to work at a wage lower than the existing daily wage rate of ₹600–₹800 rather than return to their home towns where they would not have any guarantee of minimum wage and employment. Thus, one can see a puzzle in the wage dynamics and its adjustments between the local and inmigrant labourers in the construction sector, that is, "downward wage sticky local labourers" safeguarded with trade unions versus "downward wage flexible inmigrant labourers" devoid of trade unions and labour laws.

The exhaustive literature on wage and employment in the unorganised sector upholds the view that there are several factors that determine wages and the wage gap that exists among the different categories of labourers (Sharma 2014; Blinder 1973; Mitra 2006; Duraisamy and Duraisamy 2017). These factors differ from one region to another which in turn warrants state-specific studies on the factors determining wages and wage decomposition. In the given context, a detailed discussion on wage and its determinants in labourer-absorptive Kerala is worthwhile. There are a few studies comparing wage and wage gap between inmigrant and local workers in Kerala. But, there is no literature on wage decomposition factors pertaining to inmigrant and local labourers. To bridge this critical gap in scholarship, this article presents a micro-level study to explain the wage decomposition factors related to the wage gap between inmigrant and local labourers in the construction sector of Kerala.

Theoretical Overview of the Study

From the writings of great economists like Adam Smith, William Petty and A C Pigou one can discern the argument that human resources are the wealth of nations. Among the exhaustive theories explaining the wage and wage-related issues of labourers are the subsistence theory (David Ricardo), theory of wage fund (Adam Smith), and the Marxian theory of economic development built upon the "labour theory of value" and "subsistence wage."

Lewis (1954) argues that labourers employed in agriculture are attracted to the higher wage rate in the modern sector at the destination places, resulting in migration from rural to better urban areas. John Davidson (1898) propounded the "bargaining theory of wages" with the argument that wages are determined by the relative "bargaining power of workers" or trade unions and of employers. Schultz (1961) draws out five major forms of investment in human capital. Hicks (1963: 1) goes further to state that wages are the price of labour and like all prices, in the absence of control, they are determined by supply and demand. An advancement over Schultz's five forms of investment in human capital and their influence on wage was developed by Gary Becker (1962) and Jacob Mincer (1974), who treated it as one of the explanatory approaches for determining wage and wage differentials in a labour market. For instance, the stock of knowledge, habits, social and personal attributes, including creativity, embodied in the ability to perform labour, and skill of labourers could help produce better economic values. Interestingly, the "labour search theory" introduced by Stigler (1962) stresses the role of market imperfections and "search costs" in determining the wage rate of a labourer despite its broad agreement with main features of human capital theory.

Wage and wage increases are considered to be the prime movers in improving productivity and commitment of labourers at their workplace. An overview of the existing labour laws and labour legislations would give information about the existing wage, working conditions, labour laws and labour safety. The minimum wage rate for different economic activities varies from one worksite to another, and most often the actual wage differs from the minimum wages insisted upon.

The aforementioned theories and labour legislations give a brief account of the factors influencing wage and wage gap in the labour market.

Methodology of the Study

The present study uses primary and secondary data sources to analyse the factors that influence wages of and wage differentials between the inmigrant and local workers in the construction sector of Kerala. The study focuses on one sector for which NSSO data on short-term migrants to Kerala is not available. The floating nature of inmigrant labourers engaged in construction in Kerala also is not adequately captured in NSSO or census data. Thus, we have used primary data for our discussion and analysis. We adopted the multistage sampling method to identify the survey area with the following stratification: district, rural/urban, major and minor construction sites, and types of labourers. The labourers engaged in construction were further identified and categorised by using the snowball sampling method. Accordingly, the study randomly selected Kannur district as the area under study. Kannur is one of the emerging cities in northern Kerala and is known for its high level of urban infrastructural development and inmigration (Kerala State Planning Board 2016). The sample size of the study was selected randomly, giving due representation to local and inmigrant workers engaged at the same construction sites with regard to the different strata already identified. Since labour composition in the construction sector of Kerala is dominated by inmigrants, the investigators compiled the sample size with a 7:3 proportion of inmigrant and local labourers. Thus, in a total sample of 200 labourers, there were 140 inmigrant and 60 local workers. The

reference period for the study was September to November 2016, one of the peak seasons in construction activity.

Profile of Workers in the Study Area

Kannur district is known for its cultural legacy, trade and commerce, with the ongoing infrastructural development giving a facelift to its socio-economic life. The vital statistics of the inmigrant and local labourers in the construction sector of the district are given in Table 1.

In the demographic composition by age group, one can see that more than 60% of the inmigrant labour force belongs to the most productive age group of 15–35 years, whereas the corresponding figure for the local labourers is only 35%. A striking feature of the gender composition of the given sample is its male predominance—95% local and 79% inmigrant labourers—which is because of the physically hazardous nature of construction work. The varied skill sets required in construction activities too have a bearing on attracting labourers with different levels of educational qualifications, including technical education, which in turn influences wages. Compared to local labourers, 6% of inmigrant labourers have educational qualifications with technical skills other than higher secondary level (Table 1). Studies have reported that difference in caste status also results in wage inequality among the inmigrant and local workers in the labour market of India (Duraisamy and Duraisamy 2017). It is well documented that Scheduled Castes (SCs) and Scheduled Tribes (STs) have been socially and economically disadvantaged, and those who are employed in unskilled rural-based occupations continue to remain very poor. They have been subjected to centuries of systematic caste-based discrimination, both economically and socially (Hnatkovska et al 2012). The decomposition of the sample by social groups in the study area reveals that majority of the inmigrant labourers (86%) engaged in construction belong to the outlier community, that is SCs/STs. An analysis of the composition of inmigrants by state of domicile reveals that almost 64% of them hail from a single state, West Bengal. While considering the nature and type of work the labourers engaged in, it is observed that majority of inmigrant labourers (70%) are employed as helpers, which requires them to possess low level of skills. On the other hand, skill-oriented jobs like those of masons and carpenters are mainly handled by the local workers (96.6%).

The existing daily wage rate in the construction sector exhibits a wide gap between the local and inmigrant workers, where it varies from ₹300 to ₹1,500. Though both the groups earn a wage greater than the minimum, when we compare their daily wage rates, a larger proportion of local labourers (38.3%) get a higher wage rate of ₹700–₹800 against a majority of inmigrants (30%) receiving only ₹400–₹500. The mean wage rates of the inmigrant labourers (₹523.57) and local workers (₹759.17) show a wide gap of 31%. The primary data on wage received by both the local and inmigrant construction labourers shows that there exists a considerable wage difference between them despite both categories doing the same jobs, thereby negating the basic labour law of equal pay for equal work.

The intensity and the level of significance of the wage gap between the local and inmigrant labourers can be further analysed by computing regression coefficients on identified variables using Blinder techniques (Sharma 2014).

Estimates of Wage Equation

The present study adopted the wage equation for estimating and decomposing the existing wage differences. The wage equation could be derived and decomposed using the techniques

Table 1: Basic Characteristics of the Sample Respondents

Characteristics	Local Construction Workers N=60	Inmigrant Construction Workers N=140
Age (years)		
15–25	3 (5%)	2 (1.4%)
25–35	18 (30%)	85 (60.7%)
35–45	26 (43.3%)	41 (29.3%)
45–55	11 (18.3 %)	12 (8.57%)
55–65	2 (3.3%)	
Gender		
Male	57 (95%)	111 (79.3%)
Female	3 (5%)	29 (20.7%)
Marital status		
Married	42 (70%)	98 (70%)
Unmarried	18 (30%)	42 (30%)
Educational qualifications		
Illiterate	1 (1.7%)	14 (10%)
Lower primary	6 (10%)	31 (22.1%)
Upper primary		32 (22.9%)
High school	53 (88.3%)	47 (33.6%)
Higher secondary		8 (5.7%)
Others		8 (5.7%)
Caste status		
OBC	32 (53.3%)	20 (14.3%)
SC	16 (26.7%)	98 (70%)
ST	10 (16.7%)	22 (15.7%)
Others	2 (3.3%)	
State of domicile		
West Bengal		89 (63.6%)
Assam		11 (7.9%)
Bihar		19 (13.6%)
Tamil Nadu		15 (10.7%)
Madhya Pradesh		1 (0.7%)
Odisha		2 (1.4%)
Himachal Pradesh		3 (2.1%)
Nature of work		
Mason	53 (88.3%)	22 (15.7%)
Painter		15 (10.7%)
Plumber		
Carpenter	5 (8.3%)	
Centring workers		5 (3.6%)
Helper	2 (3.3%)	98 (70%)
Others		
Daily wage rate (₹)		
Less than 300		
300–400	1 (1.7%)	14 (10%)
400–500	2 (3.3%)	42 (30%)
500–600	2(3.3%)	29 (20.7%)
600–700	4 (6.7%)	14 (10%)
700–800	23 (38.3%)	41 (29.3%)
800–900	21 (35%)	
900–1000	6 (10%)	
More than 1,000	1 (1.7 %)	
Mean wage rate of labourers	759.17	523.57

OBC = Other Backward Class; SC = Scheduled Caste; ST = Scheduled Tribe.
Source: Primary survey (2016).

introduced by Blinder (1973). The extended version of Blinder wage equation technique has been used by Sharma (2014) in estimating the wage differences between the local and migrant permanent farm servants in Punjab. The present study also used the same estimation method to analyse the wage gap between inmigrant and local labourers in the construction sector of Kerala.

In accordance with the method described, the investigators identified the following variables as the major determinants of wage and the existing wage gap. The decomposition of wage rates of inmigrant and local construction workers in Kerala helps to gauge the relative importance of factors that influence the wage and wage differences. The variables thus identified are: age, state of origin, caste status, gender, educational qualifications, region of employment, training and skill, duration of work, channels of migration, duration of stay, nature of work, work experience, working days in a week, skill to handle a construction device/equipment, supervisory capacity and size of the construction sites.

The wage equation is thus derived as:

$$\ln. W_L = \alpha_L X_L + U_L \quad \ldots (1)$$

$$\ln. W_M = \alpha_M X_M + U_M \quad \ldots (2)$$

where *M* and *L* represent inmigrant and local construction labourers, respectively. The variable *W* represents the wage rate in rupees. The estimated coefficients from such a model approximately measure the proportionate effect on wages of the change in the right side variable *X*, which measures the characteristics of the workers such as age, state of origin, caste status, gender and regional location of construction sites. The vector of regression coefficient α reflects the unit changes in endowments of the identified variables. The error term *U* reflects the measurement error as well as effect of the unmeasured or unobserved factors.

A property of ordinary least square (OLS) regression analysis is that the regression passes through the mean values of the variables so that:

$$\text{In. } \overline{W}_L = \hat{\alpha}_L . \overline{X}_L \quad \ldots (3)$$

$$\text{In. } \overline{W}_M = \hat{\alpha}_M . \overline{X}_M \quad \ldots (4)$$

The hats or caps denote OLS estimated values of coefficients. If construction workers in group *M* receive the same returns as the construction workers in group *L* for their endowments of wage-determining characteristics, that is, the construction workers in group *M* were given the group *L* wage structure, then their average wage would be:

$$\text{In. } \overline{W}_M{}^* = \hat{\alpha}_L . \overline{X}_M \quad \ldots (5)$$

For getting the wage differences, the study subtracted equation (5) from equation (3), and it gave the difference between the average group *L* wages and the average hypothetical group *M* wages that would prevail if members of group *M* were paid according to group *L* wages.

This difference shows the different endowments of the wage-generating characteristics of the workers as follows:

$$\text{In. } \overline{W}_L - \text{In. } \overline{W}_M{}^* = \hat{\alpha}_L . \overline{X}_L - \hat{\alpha}_L . \overline{X}_M = \hat{\alpha}_L (\overline{X}_L - \overline{X}_M) \quad \ldots (6)$$

Here, subtracting equation (4) from equation (5) would yield the difference between the hypothetical "non-discriminating" group *M* wage and theoretical returns to the same wage-generating characteristics as follows:

$$\text{In. } \overline{W}_M{}^* - \text{In } \overline{W}_M = \hat{\alpha}_L . \overline{X}_M - \hat{\alpha}_M . \overline{X}_M = \overline{X}_M (\hat{\alpha}_L . - \hat{\alpha}_M) \quad \ldots (7)$$

Adding equation (6) and equation (7)

$$= \hat{\alpha}_L \varepsilon (\overline{X}_L - \overline{X}_M) + \overline{X}_M \varepsilon (\hat{\alpha}_L . - \hat{\alpha}_M) \quad \ldots (8)$$

This is the overall wage gap in the group of local construction workers (*L*) and inmigrant construction workers (*M*). The wage gap is divided into two components. The first is the differences in the endowments of wage-generating characteristics $(\overline{X}_L - \overline{X}_M)$ evaluating at the group *L* returns $(\hat{\alpha}_L)$. The second portion is attributable to the difference in the returns $(\hat{\alpha}_L - \hat{\alpha}_M)$ that groups *L* and *M* get for the same

Table 2: Wage Determination of Inmigrant and Local Workers—Using Decomposition Analysis

Independent Variables	Dependent Variable = Wage Rate in ₹	
	Inmigrant Construction Workers ($\hat{\alpha}_M$) N=140 (Equation 2)	Local Construction Workers ($\hat{\alpha}_L$) N=60 (Equation 1)
Age (dummy variable) Young=1, Old=0 Young=15–35 years, Old >=35 years	0.535 (0.000)	0.032 (0.808)
Marital status (dummy variable) Married=1, Unmarried=0	0.435 (0.000)	0.0036 (0.97)
Educational status (dummy variable) Literate=1, Illiterate=0	0.181 (0.033)	-0.036 (0.787)
Caste (dummy variable) SC/ST=1, Others (OBC, General, OEC)=0	0.114 (0.181)	0.0008 (0.995)
Nature of work (dummy variable) Skilled (mason, plumbing, painter, etc)=1, Unskilled (helper)=0	0.513 (0.000)	0.39 (0.002)
Gender (dummy variable) Male=1, Female=0	0.27 (0.001)	0.551 (0.000)
Geography (dummy variable) Rural=1, Urban=0	0.52 (0.000)	-0.234 (0.07)
Duration of work in Kerala (dummy variable) Less than 5 years=1, more than 5 years=0	0.43 (0.000)	0.104 (0.431)
Bargaining power (dummy variable) Yes=1, No=0	0.24 (0.004)	-0.057 (0.664)
Working hours in a day (dummy variable) <=8=1, >8=0	0.677 (0.000)	0.645 (0.000)
Channel for recruitment (dummy variable) Channels through agents=1, Not through agents=0	-0.677 (0.000)	-0.084 (0.524)
Work experience (dummy variable) Yes=1, No=0	-0.368 (0.000)	-0.08 (0.524)
Working days in a week (dummy variable) 6 days=1, <=6 days=0	0.304 (0.0002)	-0.23 (0.08)
Skill to handle construction devices (dummy variable) Yes=1, No=0	0.433 (0.000)	0.103 (0.429)
Size of the construction sites (dummy variable) Major construction sites=1, Minor construction sites=0	-0.68 (0.000)	-0.086 (0.52)
Hard-working nature (dummy variable) Yes=1, No=0	0.549 (0.000)	0.153 (0.24)
Intercept	0.00	0.002
R^2 value	0.62	0.822
F Values	3.520	11.435

OBC = Other Backward Class; OEC = other eligible community; SC = Scheduled Caste; ST = Scheduled Tribe.
Figures in parenthesis are P- values at 5% level of significance.
Source: Primary survey (2016).

endowment of wage-generating characteristics ($\overline{X}_M$). This component is often taken as a reflection of discrimination or wage differentials.

Estimation of Wage Model

The wage equation model enables us to trace the extent to which the identified variables influence the wage of and wage gap between inmigrant and local construction labourers in Kerala (Table 2, p 39). The estimated wage equations of inmigrant (0.62) and local labourers (0.822) revealed that there exists a high level of significance in the identified variables in influencing the wage gap between local and inmigrant labourers as shown by high R^2 to the regression coefficients. It is evident that the identified factors are not affecting the wage rate of both the inmigrant and local labourers in a single direction alone as they display contrasting values indicating positive or negative significance.

In the given model, there is an in-built constraint in accommodating all the identified variables influencing wage and wage gap, and hence their assigned values in the given equations are adjusted with statistical feasibility. For instance, in the case of educational qualifications of the selected labourers, the study assumed only literate and illiterate with an assigned regression coefficient "0" and "1," ignoring the intervening qualifications that stood as a limitation of values computed. Similar limitations are confronted with respect to other variables, namely age, caste, channel for recruitment, nature of work, duration of employment in the construction sector, working hours in a day and working days in a week.

An analysis of the regression coefficients of the identified variables in the given equations shows support for the theoretical argument that a higher educational qualification fetches a higher wage rate, as found in the corresponding estimated values in equation 2 (Table 2) pertaining to the inmigrant labourers in the study area. The educational status of inmigrant labourers registered a significant value (0.181) to the wage rate while it was insignificant (-0.036) for local labourers. The profile of the study area (Table 1) indicated that as compared to the local labourers, inmigrant labourers have educational qualifications above the higher secondary level, which might be one of the reasons for the significant relationship of wage rate and educational qualifications in case of inmigrant labourers against local labourers. This would further explain the grassroots reality of the nature and composition of the labour market in the region which is known for its literacy and high incidence of unemployment among the educated. With regard to caste status of the labourers, there is a significant influence on the wage rate of inmigrant labourers (0.114) with an assigned significant value to the variable identified whereas its influence on the wage of the local SC/ST labourers registered a positive but not so significant value (0.0008).

The wage structure of the labourers also varies with the area to which they belong. While considering the geographical segmentisation of labourers, the Haaris Todaro model of migration pointed out that rural labourers are attracted to urban centres for a better wage rate. The regression coefficient of the geographical entity as an influencing variable shows that it is significant in the case of inmigrant labourers (0.52) but insignificant for local labourers (-0.234). A review of literature on the rural–urban wage differences of migrant and local labourers in the labour market reveals that variables such as demography, human capital, occupation, wages and personal networks enable analysis of the decomposition of the determinants of wage difference (Chen and Hoy 2008). From the study area, the investigators inferred that the majority of the major construction works are being undertaken by contractors in urban centres, where most of the labourers are inmigrants than local. In the case of inmigrant labourers, the major and minor construction sites from urban and rural segmentisation affect the wage difference. On the other hand, the local labourers involved in the study area are of rural–urban mix. In that respect, geographical differences determine the wage gap between inmigrant and local labourers in the study area.

As per the labour laws, the minimum wage rate of labourers is mainly calculated on the basis of the nature of work. While studying the unique nature of construction work, one can see that different combinations of skilled and unskilled tasks together help achieve the desired outcome. The majority of the inmigrant labourers employed in the labour market of Kerala are unskilled. The skill sets of both types of labourers (Table 1) and the respective regression coefficients (Table 2) uphold the argument that the wage rate and nature of work of inmigrant workers (0.513) and local labourers (0.39) are significant for their wage gap. Similarly, gender composition too affects the wages of and the wage difference among the labourers. As stated earlier, male participation is predominant in construction activity as it requires a lot of physically hazardous work. The estimated values support the contention that the gender component has significance on the wage rate of local (0.551) and inmigrant labourers (0.27) in the construction sector of Kerala.

In addition to these factors, particular characteristics, such as the higher wage rate at the destination compared to that in their home state, remain the major push and pull factors for inmigration of labourers and their long-term stay in Kerala. This is further supported by the willingness of inmigrant labourers to do any physically hazardous work for a long duration at any time and without any hesitation. These peculiarities positively help increase their numbers in the domestic labour market and make their presence an institutionalised process in the region, especially in the construction sector. This in turn guarantees the availability of inmigrant labourers in the domestic labour market, thus influencing wage and wage rate and claim for higher wages. The domestic labourers, who are well versed with local conditions, including familiarity with regional language, people and local labour market, could have an advantage over the inmigrant labourers in claiming better wage. This argument is substantiated by the positive coefficient values estimated. In short, one can see that the duration of work of both the inmigrant (0.43) and local labourers (0.104) has had significant bearing on wage rate in the construction sector.

Longer durations of stay by inmigrant labourers in the labour market gives them more bargaining power in respect of wages and other social securities. John Davidson's "bargaining theory of wages" argues that the bargaining power of a person makes them more capable to secure higher wages in a labour market. Studies on inmigrant and local workers employed in the labour market of Kerala have reported that, as compared to the latter, the former have relatively low bargaining power (Patrick 2012), and it remains one of the crucial factors influencing wage differences among them. However, the corresponding regression values in our study registered a contradictory conclusion, upholding a significant relationship of bargaining power with the inmigrant labourers (0.24) and an insignificant relationship with the local labourers (-0.057), which remains a question for future research.

Generally, recruitment agents too influence the differences in the wage rate of labourers. Their unhealthy practice of deducting commissions from the daily wages of the labourers as well as forcing them to work overtime and perform hazardous jobs has a negative impact on the wage and wage rates. Moreover, with respect to the wage gap and the recruitment of labourers by agents, the estimated regression value is found insignificant in the cases of both inmigrants (-0.677) and local workers (-0.084).

The hardworking nature of labourers significantly (0.549 for inmigrants and 0.153 for locals) helps the claim for wage differences for the same work. As compared to local labourers, the inmigrant labourers are ready to offer their services up to seven days in a week and for longer working hours in order to secure higher wages (*Hindu Business Line* 2013). The industrious attitude of inmigrant labourers actively engaged in Kerala's construction sector is compensated with large economic gains from the labour market. Moreover, as compared to the inmigrant labourers, the majority of the local labourers are reluctant to work on all days in a week. It, thus, becomes one of the reasons for the number of working days in a week influencing wage differences between the two categories of labourers. The estimated regression values positively uphold this argument with the more working days in a week making significant impact upon the wage rate of the inmigrant labourers (0.304) and insignificant impact on wage of the local labourers (-0.23). Longer working hours in a day and the wage differences together significantly influence the wage rate of inmigrant (0.677) as well as local workers (0.645) in the study area.

The labourers employed in the construction sector of Kerala are mainly semi-skilled and unskilled in nature. Studies on labour market pertaining to the duration of their employment reveal that a longer period of engagement would give them more work experience and result in improvement of their skill set, which in turn would positively help their wage rate. The computed regression values also endorse the significant relationship between the skill to handle construction devices and the wage differences of the inmigrant (0.433) and local labourers (0.103). In the case of wage differences and work experience as an identified variable, the regression results show that there exists an inverse relationship between the wages of the inmigrant and local labourers in the study area.

Table 3: Decomposition of Wage Differentials between Local and Inmigrant Construction Workers in Kerala

Independent Variables	Dependent Variable = Wage Rate in ₹ (Local N=60 & Inmigrant N=140)					
	$(\hat{\alpha}_M)$ (i)	$(\hat{\alpha}_L)$ (ii)	$\bar{X}_L$ (iii)	$\bar{X}_M$ (iv)	$\hat{\alpha}_L(\bar{X}_L-\bar{X}_M)$ (v)	$\bar{X}_M(\hat{\alpha}_L-\hat{\alpha}_M)$ (vi)
Age (years)	0.535 (0.000)	0.0319 (0.808)	39.767	35.457	0.138 (35.75%)	17.852 (92.82)
Marital status (dummy variable) Married=1, Unmarried=0	0.44 (0.000)	0.0036 (0.97)	0.7	0.7	0	-0.30 (-1.57)
Educational status (dummy variable) Literate=1, Illiterate=0	0.180 (0.032)	-0.035 (0.787)	0.983	0.9	0.0029 (0.77%)	0.194 (1.01)
Caste (dummy variable) SC/ST=1, Others (OBC, General, OEC)=0	0.113 (0.180)	0.0008 (0.994)	0.7	0.266	0.0003 (0.09%)	0.079 (0.410)
Nature of work (dummy variable) Skilled (mason, plumbing, painter, etc.)=1, Unskilled (helper)=0	0.512 (0.000)	0.383 (0.002)	0.292	0.966	-0.258 (-67.14%)	-0.037 (0.196)
Gender (dummy variable) Male=1, Female=0	0.270 (0.001)	0.550 (0.000)	0.792	0.95	-0.086 (-22.47%)	-0.222 (-1.155)
Geography (dummy variable) Rural=1, Urban=0	0.529 (0.000)	-0.234 (0.071)	1.6	0.3 (79.07%)	-0.304 (-79.07%)	-0.229 (-1.191)
Duration of stay in construction sector of Kerala (dummy variable) Less than 5 years=1, More than 5 years=0	0.433 (0.000)	0.103 (0.430)	0.366	0.9	-0.055 (-14.35%)	0.296 (1.543)
Bargaining power (dummy variable) Yes=1, No=0	0.23 (0.004)	-0.057 (0.66)	0.7	0.135	-0.032 (-8.37%)	0.040 (0.208)
Working hours in a day (dummy variable) <=8=1, >8=0	0.67 (0.000)	0.64 (0.000)	0.016	0.7	-0.44 (-114.39%)	0.022 (0.115)
Channels as agents (dummy variable) Yes=1, No=0	-0.676 (0.000)	-0.08 (0.52)	0.58	0.3	-0.02 (-6.17%)	-0.177 (-0.92)
Work experience (dummy variable) Yes=1, No=0	-0.367 (0.000)	-0.083 (0.524)	0.816	0.4	0.034 (9.07%)	0.113 (0.59)
Working days in a week (dummy variable) 6 days=1, <= 6 days=0	0.30 (0.0002)	-0.230 (0.076)	0.65	0.9	0.057 (14.94%)	0.480 (2.497)
Skill to handle construction devices (dummy variable) Yes=1, No=0	0.433 (0.000)	0.103 (0.429)	0.366	0.1	0.027 (7.19%)	0.032 (0.171)
Size of construction sites (dummy variable) Major construction sites=1, Minor construction sites=0	-0.676 (0.000)	-0.085 (0.51)	0.416	0.3	-0.009 (2.60%)	0.17 (0.92)
Hard-working nature (dummy variable) Yes=1, No=0	0.549 (0.000)	0.153 (0.241)	0.58	0.9	-0.048 (12.62%)	0.356 (1.85)
Intercept	0.00	0.002				
Decomposition of wage differentials						
Difference due to endowments $\alpha L\ \varepsilon$(XL-XM)					0.385 (100)	
Difference due to coefficients XM ε (αL-XM)						

(1) The subscripts 'L' and 'M' denote local and inmigrant construction labourers, respectively.
(2) Columns (i) and (ii) present regression coefficients, and corresponding 'P' are in parentheses.
(3) Columns (iii) and (iv) illustrate the mean value of the variables.
(4) Columns (v) and (vi) explain equation (8) of the model.
Source: Estimated from primary survey (2016).

The wage gap between the inmigrant and local labourers is also determined by the size of the construction sites, which are classified as major and minor. However, the size of the construction sites as an identified variable assumes an insignificant relationship with the wage rate of both the inmigrant (-0.68) and local labourers (-0.086). It shows that the employees at the major as well as minor construction sites do not have any significant differences in their wage rate (Table 2).

It is interesting to note that there is a significant relationship (0.535) between the age of the inmigrants and their corresponding wage whereas it is quite insignificant (0.032) in the case of local labourers, as shown in the estimated value in Table 2. It was also found that marital status as an identified variable has a significant relationship (0.435) with the wage rate of inmigrant labourers whereas it is insignificant (0.0036) with that of local labourers. This implies that married inmigrant construction labourers get higher wages than unmarried ones. Theories too uphold the view that the bargaining power of labourers to obtain a higher wage rate in the labour market is dependent on their marital status (Loop 1994). In contrast to the local labourers, the majority of the inmigrant labourers are married and they often claim higher wages. This was also acknowledged by the contractors/employers while the investigators collected data.

A fairly large number of identified variables, namely nature of work, gender, duration of stay at the construction sites, working hours in a day, skill to handle construction devices and hardworking nature, together influence the wage rate and wage differences of both inmigrant and local labourers. Besides these, variables like age, marital status, education, caste, geography, working days in a week and bargaining power have significant influence on the wage rate and wage differences with regard to inmigrant labourers.

The relative dominance of each identified variable influencing the wage rate of both the inmigrant and local labourers can be studied with the computed regression coefficient of decomposition analysis using the wage equation model. In the process, the wage equation model explains the differences in the endowments of wage-generating characteristics and the returns (Table 3, p 41) columns (i) and (ii) of Table 3 list the regression coefficients of the wage equations. The mean of different endowment characteristics of the local and inmigrant labourers in the construction sector of Kerala are given in columns (iii) and (iv). The wage differences due to endowments discrepancy and its coefficients are explained in columns (v) and (vi). Column (v) of Table 3 lists the amount of absolute contributions of each individual characteristic towards the overall earnings differentials between the local and inmigrant construction labourers. Column (vi) details the regression values as those identified variables which assume positive and negative values, explaining its significant relationship with wage differences of local and inmigrant labourers in the construction sector respectively. The identified variables influencing wage rates and wage differences of local labourers can be listed in the order of their predominance, namely age (0.138), working days in a week (0.057), work experience (0.034), skill to handle construction devices (0.027), education (0.0029) and caste status (0.0003). The corresponding influence of these variables in case of inmigrant labourers can be identified on the basis of their relative significance listed as working hours in a day (-0.44), geography (-0.304), nature of work (-0.258), gender (-0.086), duration of work at Kerala (-0.055), hard-working nature (-0.048), bargaining power (-0.032), channels as agents (-0.02) and size of the construction sites (-0.009) (Table 3).

Column (vi) of Table 3 shows that the difference in contributions of various factors towards the wage differentials between the two categories of construction labourers is due to differences in coefficients of the explanatory variables of the two wage equations. In the process, the dominant influencing factor for wage and wage rate of the inmigrant and local labourers is explained. The regression results of the identified variables reveal that marital status (-0.30), geography (-0.229), gender (-0.222), channels as agents (-0.177) and nature of work (-0.037) have significantly influenced the wage rate of inmigrant labourers engaged at the construction sites of Kerala. With respect to the estimated values, the most dominant factor influencing the wage rates of inmigrant labourers is "marital status" followed by "geography of the inmigrant labourers." The nature of work remains the least influencing factor for wage differences of the inmigrant labourers in the labour market of the study area. The differences in the estimated coefficients of the explanatory variables also reveal that age (17.852), working days in a week (0.480), hard-working nature (0.356), duration of stay in the construction sector (0.296), education status (0.194), size of construction sites (0.17), work experience (0.113), caste status of labourers (0.079), bargaining power (0.040), skill to handle construction devices (0.032) and working hours (0.022) are the factors significantly influencing the wage rate of local labourers. Of these, age and working days in a week are the most dominant influencing factors for the wage rate of labourers, and working hours in a day appears to be the least influencing factor in respect of local labourers in the construction sector of Kerala.

While considering the regression results of the prominent determining factors to the wage rate of inmigrant and local labourers in the construction sector of Kerala, it is revealed that the factors influencing both the groups of labourers are unique in nature—marital status and geography in the case of inmigrant labourers, whereas age and working days in a week dominate in the case of local labourers. The listed dominant factors influencing the wage rate of the inmigrant and local labourers reveal that the identified variables do have an impact on the wage rate of both the categories of labourers in the study area and these aspects also vary with their rates and degree.

The wage gap between the local and inmigrant workers has been computed using the Blinder model (1973) of wage equation with the two expressions on its right-hand side. Accordingly, the overall wage differentials that exist between the inmigrants and local labourers are due to the differences in the endowments of wage-generating characteristics ($\hat{\alpha}L\varepsilon(X_L-X_M)$). The wage statistics reveal that 69% of the wage differences between the two arise out of the differences in productivity-related endowments of the local and inmigrant labourers. As calculations show, the wage differentials were due to structural differences, that is, the inmigrant construction labourers got 31% less wages in the study area. It gives visible evidence for the prevailing wage gap between the inmigrant and local construction labourers in Kerala.

(1) Wage differentials due to different endowments $\hat{\alpha}_L\varepsilon(\overline{X}_L-\overline{X}_M)$ = 0.385 (100)
(2) Wage differentials due to differences in the coefficients of explanatory variables $\overline{X}_M\ \varepsilon\ (\hat{\alpha}_L.-\hat{\alpha}_M)$ = 0.1923
(3) Intercept differentials = 0.00-0.002 = -0.02
(4) Wage differentials due to structural differences (2) + (3) = 0.1723 (30.92 %) (5/4)
(5) Overall wage differentials = (1) + (4) = 0.5573

In Conclusion

The wage gap and its determinants measured in terms of regression coefficient values reveal that the identified variables influence the wage gap for both the inmigrant and local labourers with varied degrees of dominance. The dominance of each variable in determining the wage difference varies from local to inmigrant labourers. For instance, variables like working hours in a week and age of the labourer dominate in respect of local labourers whereas marital status and geography of workers exert higher influence in the case of inmigrant labourers. The estimated value of the wage differentials due to the structural differences in variables shows that the inmigrant labourers receive 31% less wages than local labourers despite both performing the same nature of work. The paradox involved in the determinants of wage and wage gap between the inmigrant and local labourers in the construction sector of Kerala remains an area for further research and policy interventions.

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