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**IMPACT OF EXPORT BARRIERS ON PALMYRAH JAGGERY EXPORT PERFORMANCE IN TAMILNADU****K. SHAJITHA****Ph.D. RESEARCH SCHOLAR****RESEARCH CENTRE OF COMMERCE****FATIMA COLLEGE (AUTONOMOUS)****MADURAI****T. JEYANTHI VIJAYARANI****ASSOCIATE PROFESSOR****RESEARCH CENTRE OF COMMERCE****FATIMA COLLEGE (AUTONOMOUS)****MADURAI****ABSTRACT**

*India is the largest consumer and producer of palm jaggery in the universe. Palmyrah jaggery extracted from Palmyrah palm has high sucrose and more minerals that cure numerous problems of a general human being. Exporters are exporting Palmyrah Jaggery to enjoy the same benefits in international countries. While exporting the products, the exporters face stringent regulations, competition, and more. So, the study finds out how export barriers influence export performance in Tamilnadu. These barriers measures in quantitative research methods and the outcome reveal that the exporter's challenges are insufficient production capacity, absence of government assistance and limited information about the products in the market. Such problems affect the exporters to export products to the international market. Finally, the effect of barriers strongly associates and affect export performance in Tamilnadu.*

**KEYWORDS**

palmyrah jaggery, export barriers.

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**1. INTRODUCTION**

India is the pioneer for the development of Palm Jaggery products in India. However, for palm, the botanical name as 'PALMA' or 'PALMAE' is described as the princess of 'Vegetable Kingdom' - As per the British Encyclopedia. There are numerous varieties of palm available in which nine yield sweet juice known as "Neera" find only in India. There are various palms available in India like Coconut palm, Date palm, Palmyrahpalm and sago palm. Indian Sugar Manual (1956) stated in the study that Palmyrah palm has high sucrose and more minerals in it. It comprises nutrients like sucrose, fats, protein, minerals, etc. There were numerous sakes for all parts of Palmyrah palm (Rao & Kiran, 2011). It activates digestive enzymes that accelerate the digestion process and decrease the intestine and digestive tract strain. It can clean respiratory tracts, lungs, food pipes, stomach and intestine. It removes unwanted particles from the body, which relief constipation pain.

At last, it increases the warmth and energy for a long time without harming internal organs. From the above stated medicinal benefits extended to consumers and hence, it has created a huge demand in international markets, and India lies major exporters of Palmyrah Jaggery. According to the Ministry of Commerce and industry statistics, still, the oscillation was noticed, especially for the growth of palm Jaggery in India. However, the Indian government included palm Jaggery in KVIC to boost the exports of Palm Jaggery from India.

Even though the government is acting to increase Palm Jaggery exports, the lack of synergy between central and state governments is leading the exporters to face challenges in exporting the products. Some exporting challenges are stiff competition, stringent regulations and inefficient and longevity issues. Consequently, the study measures the exporters' barriers and how the barriers affect Palmyrah Jaggery export performance.

**2. REVIEW OF LITERATURE**

Ramachandran et al. (2004) stated how important the Palmyrah palm is for village people in India. He explained in detail regarding traditional water system which prevailed in Kerala with the help of Palmyrah palm. Palmyrah palm played a significant role in Indian culture that was inseparable from human beings since ancient times. Ancient day's pipeline system of generating water to plants can be executed with the help of palm. However, modern science and technology influence the mind of human beings, ultimately forgetting the benefits that nature gave to us and hence unwanted substances affected our land in India.

Kannathal has analyzed how the Palmyrah industry influenced the income and employment of people who resided in Ramnad, Tamilnadu. The study investigates how Palmyrah producers enhance their lives by producing jaggery, leaf, naar, eark, etc. This further inquired how much cost involved in producing a cost and income take over from the product. Kapilan (2015) has stated in the study that the utilization of commercial lime has been inhibited the fermentation of the sweet palmyrah saps and Kithul that has been primarily insisted to avail these for rural industrial application. Various kinds of commercial lime have been started from 0 grams/litre to 8 grams/litre that was put to practical use for each sterling pan bending forward around the tapped inflorescence. To execute the research, palm tree sap was subsequently collected from the pans for 60 hours.

Further, it has been investigated that the lime concentration affects lowering sugars and then total sugars followed by PH level, alcohol content, number of yeast present in it, bacterial cells and protein content. The statistical tools depicted that an upsurge in lime concentration lowered the microbial count plus accumulation of alcohol in the saps of both Palmyrah and Kithul. Finally, it concluded that three grams of lime concentration on sap keep the natural fermentation process without influencing the saps' natural taste and products.

Davis & Johnson (1987) has stated in their study that Palmyrah palm has been utilized for more than one use or purpose. Hence, it has the capacity for being useful for many purposes to take place to a large extent in Tamilnadu. Hence, their purpose has been stated in history, and even in some literature regarding exciting facts about food from the fruit and tuberous seedlings, sap produced beverages and sugars. In contrast, the leaves have fiber for making brushes, cordage, weaving and plaiting, trunk wood for construction and fuel purposes, and various minor products produced. Considering the benefits, the author has tried to investigate the present status of Palmyrah Palm in Tamilnadu. Picking out Tamilnadu was that 40 million palmyrah had been seen in the state. Consequently, the study proved that the upsurge in the exploitation of palmyrah trees had become a danger to rural populations. Hence it will be difficult for them to get off the future supply of raw materials needed for Palm trees.

**3. OBJECTIVE OF THE STUDY**

The objective of the study is to find out the impact of Exporters challenges on Palmyrah Jaggery export performance in India.

#### 4. SCOPE OF THE STUDY

The scope of the study represents the jaggery exporters in Tamilnadu. It focuses on measuring the effect of barriers on exporters and their performance. The instrument used for the study is a questionnaire. The study collects the exporter's opinion through a web survey. The study finds that the pandemic restricts contacting limited Jaggery exporters in Tamilnadu. Due to limited time constraints, the study could not contact a higher number of samples. So, it is applicable for Tamilnadu because generalization of results may occur.

#### 5. HYPOTHESIS

1. Exporters challenges positively associate with Palmyrah Jaggery export performance.
2. Exporters challenges affect the Palmyrah Jaggery export performance.

#### 6. RESEARCH METHODOLOGY

Sekaran (2006) indicates the recognized variables, which is the main indicator of the research problem, construct the theoretical framework, decide upon the look and functioning of data which brings out the matter of course for the research issues. Hence, the research design was a basic structure underlining a concept or a design plan to carry out the research work. Hence, the researcher carries out the research issues very carefully and typically decides that the study has an inclusion of descriptive study which investigate the present state of affairs as it exists at present. The data for the present study were gathered from primary sources. Therefore, the required data were collected through a self-managed and structured questionnaire. The questions identified in the questionnaire are all research-based and closely answered. The questionnaire was pilot-tested, and the expected improvement based on feedback was implemented.

#### 7. DATA ANALYSIS & FINDINGS

The purpose of the section is to present the profile of exporters in a tabular format. It will give a precise explanation with different categories. The categories presenting the exporter profile is age and their education qualification.

##### 7.1. DEMOGRAPHIC PROFILE OF RESPONDENTS

TABLE 1: AGE OF RESPONDENTS

Particulars	Frequency	Percent
20 to 25 years	37	31.9
25 to 30 years	31	26.7
30 to 35 years	24	20.7
Above 35 years	24	20.7
Total	116	100.0

The age of respondents is classified into one of four categories: 20-25 years; 25-30 years; 30-35 years and above 35 years. The frequency distribution result reveals that most of the respondents are 20-25 years (31.9%), followed by 26.7% between 25 to 30 years, and the least respondents are 30-35 years and more. So, it concludes that most exporters are between 20-25 years of age.

TABLE 2: EDUCATION QUALIFICATION OF RESPONDENTS

Particulars	Frequency	Percent
Higher secondary school	40	34.5
Diploma	28	24.1
Bachelor degree	24	20.7
Master degree	24	20.7
Total	116	100.0

Exporter's education qualification classifies into higher secondary school, diploma, and bachelor and master's degrees. Assessing education qualification through frequency distribution indicates that 34.5% of higher secondary school level of education followed by 24.1% of diploma holders and an identical 20.7% of respondents hold bachelor's and master's degrees. As a result, the highest number of exporters have a basic higher secondary school.

TABLE 3: EXPORTERS PREFERENCE OF JAGGERY

Particulars	Frequency	Percent
Black jaggery	37	31.9
Liquid jaggery	37	31.9
Palmyrah Jaggery	42	36.2
Total	116	100.0

From the table, it makes crystal clear that the exporter prefers Palmyrah jaggery, sugarcane jaggery and others. Most of the exporters choose Palmyrah jaggery over other categories of jaggery.

TABLE 4: CHALLENGES TO EXPORT PALMYRAH JAGGERY

Particulars	Frequency	Percent
Lack of government assistance	37	31.9
Limited information about markets	37	31.9
Insufficient production capacity	42	36.2
Total	116	100.0

The table shows that 36.2% of exporters face insufficient production capacity and an identical 31.9% face a lack of government assistance and limited information about markets. So, it concludes that the highest number of exporters stuck with insufficient production capacity.

##### 7.2. CORRELATION

The bivariate correlation will be used to determine the association between two variables. Exporter's challenges are independent variables, and Palmyrah Jaggery export performance is the dependent variable for the study. This variable determination leads to knowing the strength of association between the variables. A detailed description of the analysis presents below

H<sub>1</sub>: Exporters challenges positively associate with Palmyrah Jaggery export performance.

TABLE 5: RELATIONSHIP BETWEEN EXPORTERS CHALLENGES AND PALMYRAH JAGGERY EXPORT PERFORMANCE

Particulars	Exporters challenges	Palmyrah Jaggery export performance
Exporters challenges	1	.796** (.000)
Palmyrah jaggery export performance		1

The table clarifies that Exporters challenges have a strong positive correlation with export marketing performance. Also, it finds that Exporters challenges are statistically significant with export performance. As a result, it concludes that Exporters challenges are positively associated with Palmyrah Jaggery export performance.

Later determining the association, the study will measure the effect of Exporters challenges on Palmyrah Jaggery export performance in simple linear regression analysis

### 7.3. REGRESSION

Simple regression analysis measures the linear relationship and effect between the exporter barrier and Palmyrah Jaggery export performance. The outcome of regression presents in the following table.

H<sub>1</sub>: Exporters challenges affect the Palmyrah Jaggery export performance.

**TABLE 6: EFFECT BETWEEN THE EXPORTER BARRIER AND PALMYRAH JAGGERY EXPORT PERFORMANCE**

Particulars	r	r <sup>2</sup>	f	sig	B	t	sig
C	.796	.634	197.620	.000	.593	4.222	.000
Exporters challenges					.796	14.058	.000

The table shows the regression analysis results that support that the Exporters challenges are statistically significant with Palmyrah Jaggery export performance. Exporter's challenges are strongly associated with the Palmyrah jaggery export performance, and the value is 0.795. Next, the R-square value is 0.634, indicating Exporters challenges impact Palmyrah Jaggery export performance to 63.4%. Thence, the F value of regression analysis is 197.620 (p<5%), representing that the present value is sufficient to forecast Exporters challenges and Palmyrah Jaggery export performance. Finally, the coefficient value of the exporter barrier is 0.796, the t value is 14.058, and it is significant at 5%. So, the results indicate that one unit of changes in Palmyrah jaggery export performance will change Exporters challenges to 0.796. As a result, it concludes that Exporters challenges affect the Palmyrah Jaggery export performance. The equation for regression analysis is as per following:

Palmyrah Jaggery export performance = 0.593+0.796(Exporters challenges).

## 8. RESULTS

The analysis found that exporters were between the age's categories of 20-25 and higher secondary school level of education. The exporters have chosen Palmyrah jaggery for the exports in Tamilnadu. But the exporters are facing problems owing to insufficient production capacity. Correlation analysis reveals that exporter's challenges are positively associated with Palmyrah Jaggery export performance. Further, challenges have a positive effect on palmyrah jaggery export performance.

## 9. CONCLUSION

The study investigates the impact of Exporters challenges on Palmyrah Jaggery export performance in Tamilnadu. First, the study finds that the exporters are more important to Palmyrah jaggery products. Second, though exporters choose palmyrah jaggery, they face insufficient production capacity, absence of government assistance, and limited information about the products in the market. Such problems affect the exporters to export products to the international market. The correlation analysis proved that exporter barriers positively associate and affect the Palmyrah Jaggery export performance. So, it suggests that conducting training to the exporters and supporting through financial assistance may help upgrade the sound performance in the export market.

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## LABOUR SUBSTITUTION BETWEEN MIGRANT AND LOCAL RESIDENTIAL WORKERS IN URBAN HOUSING SECTOR OF ASSAM

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### ABSTRACT

*A large number of migrant workers from other states of India and the neighbouring countries inflows incessantly into the thriving economy of Assam since the pre-independence. A sizeable portion of such migrants having low education attainment, low skill and experience have participated in the construction works in the housing sector of the state and hence, led to an increase in the total supply of labourers in the local labour market of the state. However, most of such migrant workers by virtue of their ability to work hard and diligent nature lure the interest of the employers and hence, are replacing a large number of the local residential workers from their jobs. Thus, migrant workers produce strong substitution effect, which have created chronic unemployment problem among the local residential workers in building construction sector of the state.*

### KEYWORDS

migrant workers, local residential workers, building construction sector, substitution effect.

### JEL CODES

J61, J644.

### INTRODUCTION

globally, construction sector is the second largest employment area of migrants (Passel, 2007, pp.36). This sector heavily relies on migrant workers<sup>1</sup> to fill up the gap between demand for and the supply of both skilled and unskilled workforce in the local labour market of a region. Again, this sector is an attractive destination for the migrants having low education attainment, skill and experience (Golden, Sabrina Kay; Mirosław J. Skibniewski, 2009, pp.874-880). In Spain, previously the construction sector in urban areas was the first entry point for the migrants from the countryside, and latter it has become one of the vital entry points for the migrants (both legal and illegal) from other countries (Byrne & Van Der Meer, 2000).

In India, next to retailing sector, the construction sector is the second largest employment area for the inter-state migrants (Shamindra Nath Roy & et al, 2017, pp.1-17). As the largest proportion of works in the construction sector require unskilled labour, so this is the major employment areas for migrant workers not having any special skill, and for landless rural migrants from the less developed states (Jill Wells, 2001, p.14). In India, this sector has absorbed 9.8% of the inter-state migrants of the agriculture sector in 2000<sup>2</sup>.

In the housing sector of Assam too, the state is observed to be much dependent on the migrant workers<sup>1</sup> for construction works. In fact, the workforce needed for major or large projects in the state are seldom filled by the labourers of local labour market. A large number of construction workers (CWs) migrate to urban areas of the state from other parts of the country (India), mainly from Bihar and West Bengal, and the neighbouring country- Bangladesh. The labour suppliers (promoters) in the housing construction sector are found to bridge the gap between the demand for and the supply of labourers in the local labour market of the state through the addition of the migrant workers.

However, such incessant supply of migrant workers from other states and countries has created the problem of chronic unemployment among the local residential workers of the state. The migrant workers are replacing a large number of the local residential workers from their jobs by virtue of their ability to work hard and diligent nature. Most of the contractors and builders are in favour of employing the migrant workers owing to their attractive characteristics. In fact, the employers are substituting the migrant workers for the local residential workers.

### REVIEW OF LITERATURE

In the study of various issues of the construction workers in India, the existing literature have focused mainly on the living and working status (Kumar M. D., 2013, pp.43-52)& (Society, Plight of construction labourers in North-East India, 2002, p.42); socio-economic conditions (Yadav, 2015); (Narayan, 2017, pp.155), (G Tiwary & et.al, 2013, pp.66-71)& (K Ponnaian & T lyappan, 2016, p.1106), occupational health problems (Mir, Mohammad Sarwar; Hamid, Ruksana; Azhar, Mohammad; Mustafa malik, Ghulam, 2018, p.308); (Jayakrishnan, Thomas, Rao, & George, 2013, pp.227-229); wage and employments (Thakurta S. N., 1971, pp.2211-2215) and wage discrimination (Kumar B. R., 2013, pp.42-53)& (Solanki, A; Zankharia, Kirit., 2014, pp.21-30). Some authors have analyzed various issues of the female construction workers such as the working environments and conditions & (Sultana, Nahid; Ferdousi, J; Shaidullah, Mdl, 2014, pp.658-661); the family, occupational and personal problems (Chitra, 2016, pp.46-52); gender discrimination (Devi, K; Kiran, U V., 2013, pp.27-30)& (Poongodi, 2012, pp.9-11)& (SEWA, 2000, pp.3-6). Some other authors have analyzed various aspects of the migrant construction workers such as their socio-economic status (Silvia, M; Moronha, M, 1998, pp.766-772)& the plight of the migrant women workers (Achrya & Sunita, 2016, pp.1-20).

A number of researches works done in the developed countries have tried to examine the impact of immigration on the wages, employment and livelihoods of the native workers in the domestic economy as a whole. Applying skill- education and experience cell approach and the nested CES production function, a number of authors (Christian Dustmann & et al, 2008, pp.477-494); (Borjas, 2005, pp.4 - 46); (R M Friedberg & J Hunt, 1995, pp.23-44); (Bonin, 2005, pp.2-33), (Herbert Brucker & Elke J Jahn, 2011, pp.286-317), and (Ottaviano, 2012, pp.152-197) & (Peri, 2014, pp.1-10) have found that there is a little discernible impact of immigrants on the wages and employment of native-born workers in the short run. Further, it does not have any harmful effect on the wages and employment of the native workers in the long run too. Contrary to this, a number of researchers (Berking & Mutti, 1980, pp.71-85) (Laura E. Hill & Hans P. Johnson, 2011, pp. 1-32), (Edo, The impact of Immigration on native wages and employment, 2015, pp.1151-1196) have opined that immigration has a strong negative impact on the wage rates of unskilled local workers, though may be a positive effect on the wages of high-skilled native workers. In a state regulated economy, the government fixing the minimum wage rates at a higher level can protect the local residential workers from the competition of the migrant workers with comparable skills (Edo Anthony & Hillel Rapoport, 2018, pp.1-66) But, the immigrants by virtue of their diligent nature and easy acceptance of the worse employment conditions as compared to the native workers lure the interest of the employers. Hence, the employers prefer to substitute more migrant workers for the local residential workers causing an adverse employment effect on the latter.

<sup>1</sup>In the study, migrant workers refer to those building construction workers, who have in-migrated into Assam from other states of India and other countries i.e. it includes only the inter-state and international in-migrants and hence, excludes the inter-district migrant workers.

<sup>2</sup> Census of India, 2001.

In the cases of native workers in urban housing construction sector, the impacts of immigrant workers have been analysed to be negative. Das and Talukdar have opined that it leads to threatening of identity of Assamese people and to the national security (J & Talukdar, 2016, p.1-5). In another study, it has been noted that immigration has put tremendous pressure on land, creating socio-political and environmental problems with adverse impact on the economy (Nath & Nath, 2011, p.24). Another Scholar has observed that through rapid increase of Bangladeshi Muslims in the state, occupying land belonging to the native population have been diluting the polity and its economy, but its impact on the Assam economy is trivial (Borooah, 2013, pp.43-55). However, the uncontrolled migration to the state and their settlements in the foothills, riverbanks and Char areas has degraded the broad base of the state's biodiversity (Sarma M. , A Study of Migration from Bangladesh to Assam, India and Its Impact, Ph.D Thesis, 2015, pp.69-71). The immigrants are boon only for labour scarce region and a relieve for their poor home economy, but an unnecessary burden for the host economy, such as Assam causing peril to reserved forests and land scarcity for the natives (Govt., 1998)<sup>3</sup>.

## RESEARCH GAP

These earlier studies have avoided the inquiry into the effect of migrant workers on wage rates and employment of the local residential workers in a particular sector of the economy such as the building construction sector. Secondly, as regards the effect of migrant workers in the construction sector of the state, such study has not so far been done in the state. So, this study is an addition to the existing literature that outlines the effect of migrants in the unorganized sector of a state. The findings of this empirical study would help to suggest policy measures in lessening adverse effects of migrant workers in urban housing sector of the state and for proper urban development.

## OBJECTIVE & RESEARCH QUESTION

In this given context, the single objective of the study is to examine the labour substitution between the migrant workers and local residential workers in the urban building construction sector of the state. The research question designed for this study to deduce logistic conclusion is as follows:

Is the supply of migrant labourers from outside of the state reducing the employment opportunity of the local residential workers in the urban housing sector?

## RESEARCH METHODOLOGY

The geographical area of the study covers the urban areas in the Brahmaputra valley of the state, which covers 81 per cent of the total towns in the state (174 nos out of the total of 214 nos in 2011). Out of 174 nos. urban areas in Brahmaputra valley, 5.0 per cent of each category of town totaling 10 sample towns has been selected for the study. These are shown in the table-1.

TABLE 1: SAMPLE TOWNS IN THE BRAHMAPUTRA VALLEY (total of 10 no's)

Category of Town	Total Towns in B. Valley	No of towns selected	Selected sample towns (10 no's)
Class-I	03	3x 5% =0.15 =01	Guwahati Municipality Corporation (GMC)
Class-II	11	11x5% =0.55 =01	Jorhat MB
Class-III	25	25x5% =1.25 =01	Golaghat MB
Class-IV	36	36x5% =1.8 =02	Bokakhat TC & Titabor T C
Class-V	77	77x5% =3.85 =04	AmguriTC, Chabua TC, Dokmoka TC (Karbi Anlong) & Teok TC
Class-VI	22	22x5% =1.1 =01	Kamalabari (Majuli)
Total	174 no's	10 no's	

Giving relatively more weight on the higher category of towns where large number of construction works has been undertaken, a total of 90 construction sites of different categories of town/ urban areas have been selected as shown in table-2.

Again, from the midst of the workers currently found working in 90 housing construction sites, in total(90X5)=450 Building Construction Workers(BCWs)<sup>4</sup> have been randomly selected for interview in a specially designed questionnaire taking at least 5 BCWs from each sample site.

In addition to this, from each 3 (three) construction sites, one contractor/ builder has been randomly selected and hence, in total 90\*1/3= 30 sample contractor/ builders has been interviewed for this study as shown in table-2.

TABLE 2: NUMBER OF SAMPLE SITES, BCWs AND CONTRACTORS/BUILDERS SELECTED FOR THE STUDY

Category of towns	Sample Towns selected for field visit	Construction Sites Surveyed	BCWs interviewed	Contractors/Builders
Class-I	Guwahati MC	18	18x5=90	18x1/3=06
Class-II	Jorhat MB	15	15x5=75	15x1/3=05
Class-III	Golaghat MB	12	12x5= 60	12x1/3=04
Class-IV	Bokakhat TC	09	09x5= 45	09x1/3=03
	Titabor TC	09	09x5=45	09x1/3=03
Class-V	Amguri TC	06	06x5=30	06x1/3=02
	Chabua TC	06	06x5=30	06x1/3=02
	Dokmoka TC	06	06x5=30	06x1/3=02
	Teok TC	06	06x5=30	06x1/3=02
Class-VI	Kamalabari CT	03	03x5=15	03x1/3=01
Total	10 nos	90 nos	450 nos	30 nos

## DISCUSSION

### TREND OF IN-MIGRANTS TO ASSAM

Assam's economy has absorbed a large inflow of migrants from other Indian states and the neighbouring countries. Such migration after the independent of the country has been changing the population structure of the state and it has imposed a sizeable impact on the local residential workers in the construction sector of the state (Goswami U. , 2011, pp.3-36) & (Nandy, 2005). The size of the in-migrant population to the state (inter-state and international migrants) is estimated to be 8.76 lakh in 1991, which has declined to 6.76 lakh in 2011 and it has further declined to 5.97 lakh in 2019. Again, the percentage share of in-migrants to the total population in the state in 1991 was 3.91%, which has gradually declined to 2.14% in 2011 and further to 1.70% in 2019(table-3). Thus, the size of in-migrants and its share to the total population of the state are in a decreasing trend during 1991-2011. But, in absolute figure, the number of the in-migrants to the state is sufficiently large.

<sup>3</sup>The report stated that during 1971-1991, while Hindu population growth was 41.89, Muslim population growth was 77.42 which is reducing the Assamese people to a minority in their own state as happened in Tripura and Sikkim. Source: Government of Assam (1998), Report on Illegal Migration into Assam, Chapter-I

<sup>4</sup>Building Construction workers (BCWs) refer those are employed either on casual or contract basis under contractor/builder for construction or repair of building works. It does not include any person employed in managerial or administrative works of the establishments. Thus, the BCWs comprise mainly the workers engaged in construction works of building such as excavators, stone crushers, brick masons and their helpers, tiles fitter, carpenter, wall painter and electrician. Self-employed building construction workers are not covered in the study.

TABLE 3: TREND OF IN-MIGRANTS TO ASSAM DURING 1991-2019

Year	Size of migrants (,00000)	Size of population (,00000)	% share to total population
1991	8.76	224.14	3.91
1995	8.77	245.38	3.57
2001	7.06	266.55	2.65
2005	7.69	282.73	2.72
2011	6.76	311.96	2.14
2015	6.35	320.69	1.98
2019	5.97	350.81	1.70

Sources

- a) Population data from Ministry of Statistics and Programme Implementation, Government of India,2016
- b) Population data in 2011, 2016 and 2021 have been collected from office of the Registrar General& Census commissioner of India from the report of the technical group on population projections for India and states for 2001-2026
- c) Directorate of Economics and Statistics, Government of Assam based on NitiAayog
- d) Census of India, Assam, migration table, 1991, vol-I (table D-2).(v) Census of India, Assam, migration table, 2001, D- series (table D-2).

The share of inter-state migrants to total population of Assam has been estimated to be 2.22% (497,204 nos out of 22,414,322nos) in 1991, which has declined to 1.94 % (51,5924nos out of 266,555,528 nos.) in 2001 and further to 1.79% (558,313 nos out of 31,196,272 nos) in 2011. Amongst the inter-state migrants, people from Bihar and Jharkhand constituted the highest of 34.23% in 1991, which has increased to 36.96% in 2001 and again decreased to 33.29% in 2011(table- 4).People from other north eastern states contributes 18.77% in 1991, which has declined to 16.05% in 2001 and again increased to 19.76% in 2011.West-Bengal contributes 18.27% in 1991, which has increased to19.20% in 2001 and further increased to 19.70% in 2011. Uttar Pradesh and Uttaranchal constitute 9.22% in 1991, which has increased to 11.12% in 2001 and has fallen down to 7.64% in 2011 (table-4).

As regards the international migrants, migrants from Bangladesh constitutes the largest share (84.85% in 1991, 86.14% in 2001 and 75.17% in 2011), followed by Nepal (6.61% in 1991, 9.39% in 2001 and 9.80% in 2011) and Pakistan (4.45% in 1991, 3.72% in 2001 and 4.34% in 2011) (table-4). The share of the international migrants to the total population of Assam is estimated to be 1.51% (339,555nos out of 22,414,322nos) in 1991, which has declined to 0.71% (190,558 nos. out of 26,655,528 nos) in 2001 and further to 0.38% (117,329 nos. out of 311,96,272 nos.) in 2011(table-4). Findings show during 1991-2011, most of the in-migrants are from Bangladesh, and amongst the Indian states, Bihar tops the rank.

TABLE 4: STATE AND COUNTRY-WISE DISTRIBUTION OF IN-MIGRANTS IN ASSAM BY BIRTH IN 1991, 2001 & 2011

Sl. No.	Birth states or countries	1991		2001		2011	
		Size of in-migrant	% to total immigrant	Size of in-migrant	% to total in-migrant	Size of in-migrant	% to total in-migrant
<b>From other Indian states</b>							
i.	Bihar & Jharkhand	170213	34.23	190708	36.96	185883	33.29
ii.	West Bengal	90864	18.27	99034	19.20	109980	19.70
iii.	Uttar Pradesh & Uttaranchal	45847	9.22	52188	11.12	42629	7.64
iv.	Rajasthan	27269	5.48	30478	5.91	32389	5.80
v.	Orissa	9180	1.85	8106	1.57	6290	1.13
vi.	North-East India	93342	18.77	82798	16.05	110300	19.76
vii.	Others	60489	12.17	52612	10.2	70842	12.69
<b>Total</b>		<b>497204</b>	<b>100</b>	<b>515924</b>	<b>100</b>	<b>558313</b>	<b>100</b>
<b>From other countries</b>							
i.	Bangladesh	288109	84.85	164144	86.14	88192	<b>75.17</b>
ii.	Nepal	22433	6.61	17896	9.39	11501	9.80
iii.	Pakistan	15110	4.45	7097	3.72	5097	4.34
iv.	Others	13903	4.09	1421	0.75	12539	10.69
<b>Total</b>		<b>339555</b>	<b>100</b>	<b>190558</b>	<b>100</b>	<b>117329</b>	<b>100</b>

Sources

- a) Census of India, Assam, Migration Table, 1991, Vol-1(Table D-2).
- b) Census of India, 2001 & 2011, Assam D<sub>1</sub> and D<sub>2</sub> series.

Importantly, a sizeable number of such in-migrants have been found to participate in the construction works in the housing sector of the state for making their livelihood. The inflow of such in-migrant workers has led to an increase in the total labour supply in the housing construction sector of the state. They, however, contribute to the growth of the housing construction sector of the state in many ways such as rendering regular services for whole week, doing night work, and working for a long period per day. In the capital city of the state i.e Guwahati, the major portion of the building construction works has been observed to be accomplished by dint of the migrant workers from other states and neighbouring countries. Gradually, such migrant workers are entering into almost all parts of the state through the promoters supplying labourers to the contractors and builders.

**IN-MIGRANT WORKERS IN HOUSING CONSTRUCTION IN BRAHMAPUTRA VALLEY**

The Brahmaputra valley of the state, where most of the urban sites and cities have grown up with easy transportation links, are the main targets of in-migrant construction workers supported by their employment network. In the capital city of the state i.e Guwahati, the major portions of the building constructions have been accomplished with such in-migrant workers from other Indian states and neighbouring countries. Gradually, such migrant workers are entering into almost all parts of the state through the promoters supplying labours to the contractors and builders.

For estimating the size of in-migrant workers<sup>5</sup> working in the sample housing construction sites in urban areas of Brahmaputra valley, the building construction workers (BCWs) in the sample areas have been categorized as per their reported place of birth as shown in table-5.

Out of 450 workers quarried in 90 sample construction sites of the state, 74% of the workers has been found to be native workers of the state, 8% are hailing from other states and 18% from the neighbouring countries, mainly from Bangladesh (table-5). Most of the contractors in bigger construction projects have been found preferring to employ the migrant workers for variety of reasons, including absence of social obligation, lower wage rate and availability of their labour supply.

Out of 74% native workers of the state, 19% has been found to be native-district workers and 55%are inter-district migrant workers. In the state, native workers prefer to work other than the native district for various reasons, such as shyness to work in the home district, concealing the facts about the skill level and capability to work they could command higher wage rate in distant place, may visit the unseen areas, and enjoy freedom from family members.

<sup>5</sup> The information and data on migrants have been collected through the field survey in 90 construction sites with the response from the workers to the several questions relating to migration phenomena- such as (i) places of birth, (ii)duration of Residing in the last place, (iii) place of last residence,(iv) birth place of the father,(v)mother’s language, (vi)religion and (vii) dialogue spoken. Thus, a migrant worker refers to one who enters into the housing sector of the state (Assam) from the other states and neighbouring countries. In the analysis of the supply impact of immigration, the inter-district migrants have been excluded from the definition of migrants.

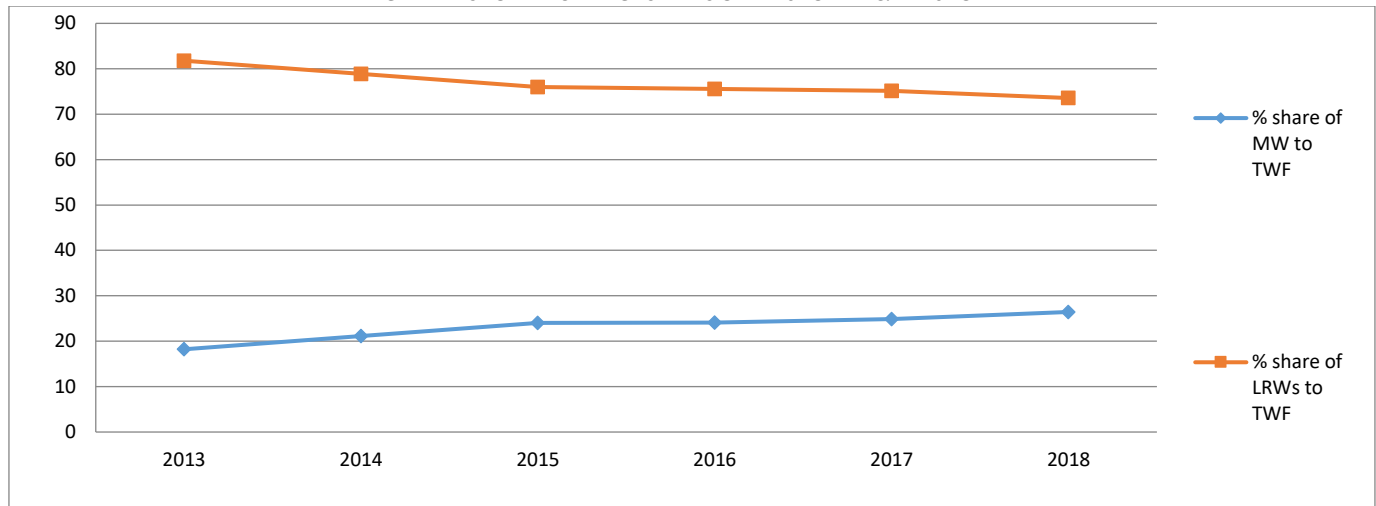
TABLE 5: DISTRIBUTION OF WORKERS IN THE SAMPLE CONSTRUCTION SITES AS PER PLACE OF BIRTH

Workers	LRWs			MWs							
	Native District	Other Districts	Total	Other States/ inter-states				Other countries			Total
				Bihar	West Bengal	Others	Total	Bangladesh	Others	Total	
Mason	29	96	125	08	07	02	17	11	01	15	29
Helper	56	150	206	14	03	03	20	65	05	67	90
Total	85	246	331	22	10	05	37	76	06	82	119
% to total of 450	19%	55%	74%	5%	2%	1%	8%	17%	1%	18%	26%

Source: Field survey data of 90 sample construction sites in urban areas in the Brahmaputra valley.

Hence, in-migrant workers constitute the remaining 26%, out of which 8% is comprised of the inter-state migrant, and 18% is in-migrants from other countries (table-5). Findings of B. P. Tyagi support this view that the most of the CWs in the urban areas are migratory in nature, either of inter-district, inter-state, or migrant workers from the neighbouring countries (Tyagi, Labour Economics and Social Welfare, 2014, pp.10).

FIG. 1: LINES FOR PERCENTAGE SHARES OF MWs TO TWF & LRWs TO TWF



Source: Drawn from the data on share of MW to TWF and LRW to TWF as given in table-6

Concomitant to increasing trend of in-migrants in the state, the share of in-migrant workers in construction workforce in 90 sample construction sites has also been increasing during the study period, 2013-2019. The share of migrants to construction workforce has increased from 18.22% in 2013 to 24% in 2015 and further to 26.44% in 2018. Contrary to it, share of local residential workers (LRWs) to the construction workforce has decreased from 81.78% in 2013 to 76% and further to 73.56% in 2018 (table-6).

TABLE 6: %age SHARES OF LRW AND MW TO TWF IN THE SAMPLE SURVEY AREAS DURING 2013-2018

Year	Size of MW	% share of MW to TWF	Size of LRW	% share of LRWs to TWF
2013	82	82/450= 18.22	368	368/450=81.78
2014	95	95/450= 21.11	355	355/450=78.89
2015	108	108/450=24	342	342/450=76
2016	110	110/450=24.11	340	340/450=75.56
2017	112	112/450=24.89	338	338/450= 75.11
2018	119	119/450=26.44	331	331/450=73.56

Source: Field survey data in 90 sample construction sites in 10 sample urban areas, 2013-2018

**Abbreviations**

LRW: Local Residential Worker

MW: Migrant workers

TWF: Total Construction Workforce

Most of the contractors and builders have been found in favour of substituting the migrant workers for the LRWs owing to the attractive characteristics of the migrant labourers. The decreasing share of LRWs to the total workforce in the sample of 90 construction sites in Brahmaputra valley during 2013-2018, as shown in figure-4.5, is substantiating this fact.

**REASONS OF PREFERRING TO EMPLOY THE MIGRANT WORKERS**

Reason of migration of people differs. Generally, people migrate from one region to another for various reasons such as employment, and study; transfer of service/contract, due to movement of parents/earning members and/or marriage. However, the reasons for migration (both in-migration and out-migration) are age specific. For the people in the age groups '0-14' being dependent, the dominant reasons for migration are migration of parents and/or the earning members of the family and study. Being economically active, people in the age groups '15 years & above' migrate mainly for employment or in search of better employment<sup>6</sup>. In spite of increasing supply of local residential construction workers in the state, the Builders/ Contactors of Building construction sector in the sample urban areas have always been found preferring to employ some migrant workers. The logics submitted for preferring to employ the migrant workers are-

- i. First, compared to local residential workers who commute to work place from own residence and they are always late comers. Contrary to it the migrant workers stay in the workplace and render regular services without break.
- ii. Secondly, the employers and clients (owners of the establishments) prefer quality work and their perception of quality outputs from the migrant workers is biased with deep faith on their expertise. Such belief is based on their work experience at varied places that they have toured. Again, such migrant workers take the risk and responsibility of completing the construction task at earliest possible time.
- iii. Thirdly, a migrant worker fill ups the skill gap, shares knowledge and positively contributes to work performance and enhances the productivity. Unemployment and growing poverty have prompted many workers in underdeveloped regions to migrate and seek employment in building construction sector, bilateral agreements and ILO labour mobility standards make it is easy to enter (ILO, 2017, p.1).

As such, in 90 number of sample housing construction sites in urban areas of Brahmaputra valley, the ratio of local residential workers (LRWs) and migrant workers (MWs) has been found to be 74: 26 in the year of 2018 (table-6).

<sup>6</sup> NSSO (October,1998), Migration in India (January –June, 1993), NSS 49<sup>th</sup> round, Government of India, Report No-430, p.34.

**FUTURE EMPLOYMENT OPTIONS AND CONCERNS OF LRWs TOWARDS THE EFFECTS OF MIGRANT WORKERS**

For examining the effects of migrant labour force on LRWs<sup>7</sup> in the urban housing sector, at first, a quarry has been made among the LRWs (331 number) about whether they are willing to continue in building construction works in future, or have they planned to leave this sector and/or are in search of alternative employments in future, other than this. The response of the LRWs towards some alternative employment options for making their livelihood in future has been examined. During field observation, out of 331 LRWs serving in 90 nos. of sample construction sites, majority of them (57.40%) have opted for continuing works in building construction sector in future too. For, this is the main source of their livelihood in the competitive labour market of the state. Some skilled workers (19.03%), specialized in such works have referred their existing occupations in the building construction sector as their lifetime job. Again, out of 331 nos. of LRWs as much as 38.37 per cent unskilled workers have been found desirous of continuing such works in future due to their lesser mobility constrained by factors such as, limited work prospect in other areas, limited skill and poor education (table-7).

Amongst the LRWs, taking up of business activity is the second option in future for 16.31 per cent, agro-farming is preferred option for 14.2 per cent, and 12.09 per cent LRWs have indicated some other activities to be taken up at the event of losing occupation in housing sector. Hence, more than half of the LRWs (57.40%) have expressed their willingness to continue the construction works in future (table-7). The findings of B. Poonusamy support it who has found that the largest majority of CWs (94.3%) are interested in continuing their existing occupations in the construction sector (Poonuswamy, 2004, pp.161-163).

**TABLE 7: FUTURE EMPLOYMENT OPTIONS OF THE LRWs IN SAMPLE URBAN AREAS**

Future Employment options	LRWs	No. of workers reported		
		Helper	Mason	Total
i. Agro-Farming	40 (12.08)	07 (2.11)	47 (14.2)	
ii. Business	43 (12.99)	11 (3.32)	54 (16.31)	
iii. Construction works	127 (38.37)	63 (19.03)	190 (57.40)	
iv. Others	36 (10.88)	04 (1.21)	40 (12.09)	
Total	246 (74.32)	85 (25.68)	331 (100)	

Source: Field Survey Data. •Figures in brackets are the percentages to total of 331 LRWs.

In an inquiry whether the immigrant labour force has been affecting the livelihood of the LRWs, it has been found that out of 331 nos. LRWs, 30.21 per cent have replied that due to presence of immigrant workers, their number of working days is gradually declining (table-8). Another 21.15 per cent LRWs have alleged that the immigrant workers have depressed their wage rates (table-8).

In most cases, the migrant workers have been found to work for longer hours, ranging from 9 to 12 hours per day, which is not a practice for LRWs. Under such circumstances, the LRWs are obliged to work competitively for longer hours per day at the existing wage rates. As such, in spite of receiving the state’s fixed daily wage rate or more in several cases, the hourly wage rate reduces. It is significant to note that a few LRWs (9.06%) have unveiled that the contractors and builders are substituting the in-migrant workers for the LRWs in many cases, which is detrimental to natives’ interest.

Thus, the majority of the LRWs (60.43%) in the housing sector of the state have expressed their reactionary views toward in-migrant workers hailing from other Indian states and neighbouring countries. Amongst 331nos. 39.57 per cent LRWs have remained indifferent about negative effects of migrant workers, including the substitution effect (table-8).

In the cases of this state, similar to the findings of Card, immigrants’ arrival has been found affecting the relative wages of native workers, rents and housing prices, public expenses and the composition of population (Card, 2007, pp.4-6). Thus, immigration of labour has led to multiple adverse effect upon the natives of this state such as, earning displacement of natives, employment displacement, burden of public expenditure and use up of land and other resources available (Kerr & Kerr, 2011, pp.10-19). Negative impact of in-migration on wage and employment of the native workers has been found to be significant (table-8).

**TABLE 8: CONCERNS OF LOCAL RESIDENTIAL WORKERS TOWARDS THE EFFECTS OF IMMIGRANT WORKERS**

Concerns	LRWs	No. of workers reported		
		Helpers	Masons	Total
i. Depressing the wage rates	53 (16.01)	17 (5.14)	70 (21.15)	
ii. Reducing the number of working days	72 (21.75)	28 (8.46)	100 (30.21)	
iii. Substitute LRWs	25 (7.55)	05 (1.51)	30 (9.06)	
iv. Indifferent	96 (29)	35 (10.57)	131 (39.57)	
Total		85 (25.68%)	331 (100.00%)	

Source: Field survey data in 90 sample construction sites in urban areas of the Brahmaputra Valley.

Figures in brackets are the percentages to total of 331.

**MEASUREMENT OF LABOUR SUBSTITUTION BETWEEN MIGRANTS AND LOCAL RESIDENTIAL WORKERS**

A migrant worker comes in a group with required dexterity, uses to stay in the working site, keeps vigil on the stock of materials, works for longer hours and renders extra services, if required. Further, the employer has no obligation towards such a flying squad of workers and could use ‘hire and fire policy’ in employing them. Hence, the migrant workers are ready to serve accepting worse employment condition with a little or without the social security benefits. Such characteristics of a migrant worker attract the interests of an employer. However, the estimation of migrant substitution effect has been done based on the following facts of field findings:

First, largest majority of the migrant workers (83.19%) have been found to render services for more than 8 hours in a day ranging from 9 hours to 12 hours in a day, while a small number of LRWs (40.18%) have worked similarly (table-9). This is one of the important and attractive features of the migrant workers, which lure the interest of an employer for them.

Secondly, most of the migrant workers (74.9%) do night work without any objection to complete the construction task in due time. For, most of them (90.76%) reside in hutment, or camp at the construction sites. Contrary to it, a small number of the LRWs (21.15%), mostly the inter-state migrant workers, do the same (21.15%) (table-9).

Thirdly, largest majority of the migrant workers (64.71%) renders service for 22-28 days in a month and hence, work continuously for a whole week (table-9), which helps the employers in accomplishing the construction works in due time. In contrast, a small number of LRWs (18.43%), those who reside in the workplaces,

<sup>7</sup> Local residential workers are those workers who reside in the state (Assam) by birth.



are found to work for similar days from 22 to 28 days in a month. Largest majority of LRWs (46.83%) has been found to work for 15-21 days in a month (table-9). Though more than half of the LRWs (57.1%) reside in the construction camps; most of them are not willing to render services for the whole week. Some of them are observed to visit frequently to their home at villages indicating rural nexus of such workers and some others are more interested in leisure and entertainment. Fourthly, Employers enjoy the opportunity of getting rid of social security obligations by substituting migrant workers for the LRWs. Hence, the migrants have negative effect on the host economy as they impose a depressive impact on the employment of LRWs through substitution effect<sup>8</sup>. In the most of the sample survey areas, the employers are found to remain abstain from their due medical or financial aids to the workers at the event of any major injury at the workplaces, mainly for the migrant workers. Findings of the field survey confirm this. In most of the construction sites surveyed, the migrant workers (93.28%) have reported not receiving any financial or medical assistance from their employers in the event of accident at workplace causing either disability or even death (table-9). Contrary to it, as much as 46.53% of LRWs have received medical or financial aids at the event of major injury at the workplace leading to hospitalization. Fifthly, the employers in many cases are found to have a prejudice in favour of quality of the migrant workers and output produced by them, against the cheating of works by the LRWs.

TABLE 9: WORSE EMPLOYMENT CONDITIONS AND LITTLE SOCIAL SECURITY BENEFITS FOR THE MIGRANT WORKERS OVER THE LRWs

Particulars	Workers		MWs	
	Total	% to total	Total	% to total
<b>a. Working hours in a day</b>				
i. 8 hours	198	59.82	20	16.81
ii. More than 8hours	133	40.18	99	83.19
<b>b. Working days in a month</b>				
i. 1 -7 days	00	00	00	00
ii. 8-14 days	115	34.74	09	7.56
iii. 15-21 days	155	46.83	33	27.73
iv. 22-28 days	61	18.43	77	64.71
<b>c. Night work</b>				
	70	21.15	89	74.79
<b>d. Communication to the workplace</b>				
i. Camper	189	57.1	108	90.76
ii. Commuter	142	42.9	11	9.24
<b>e. Payments of actual wage</b>				
i. Less than state fixed wage	84	25.38	27	22.69
ii. Greater than state fixed wage	122	36.86	72	60.50
iii. Equal to state fixed wage	125	37.76	20	16.81
<b>f. Medical/ financial aids</b>				
i. Complete treatment	07	2.11	00	00
ii. Partial treatment	154	46.53	18	15.13
iii. No provision	170	51.4	101	84.87

Source: Field survey data in 90 sample construction sites in Brahmaputra valley, Assam.

Under such circumstances, the labour substitution between MWs and LRWs has been estimated using the formula adopted by (Edo, The impact of Immigration on native wages and employment, 2015,pp.1151-1196) & (Nazier, 2019, pp.550):

$$Es = \frac{\frac{\delta(LRW/TWF)}{LRW/TWF} * 100}{\frac{\delta(MW/TWF)}{MW/TWF} * 100} \text{ (Equation-1)}$$

Where, Es = elasticity of Substitution between LRWs and MWs (in a particular skill group),  $\delta(LRW)/TWF$ = change in the share of LRWs in the total workforce (TCWF) in a particular skilled group,  $\delta(MW)/TWF$ = change in the share of MWs in the total workforce in a particular skilled group.

TABLE 10: SHARE OF LRWs AND MWs IN TWF IN THE SAMPLE FOR THE PERIOD OF 2013-18

Year	Skill	Unskilled Group		Skilled Group	
		LRWs / TWF	MWs/TWF	LRWs /TWF	MWs/TWF
2013		260/322=0.81	62/322=0.19	108/130=0.84	20/130=0.15
2014		245/315=0.78	70/315=0.22	113/135=0.84	22/135=0.16
2015		236/310=0.76	74/310=0.24	116/140=0.83	24/140=0.17
2016		220/300=0.61	80/300=0.27	123/150=0.82	27/150=0.18
2017		204/287=0.72	83/287=0.29	135/163=0.83	28/163=0.17
2018		190/280=0.68	90/280=0.32	141/170=0.83	29/170=0.17

Source: Field survey data of 90 nos. of sample construction sites in the Brahmaputra valley, Assam

Elasticity of Substitution between LRWs & MWs in the unskilled group:

$$Es = \frac{(0.68-0.81)/0.81 * 100}{(0.32-0.19)/0.19 * 100} = \frac{-16.05}{68.42} = -0.235 \text{ (table-10)}$$

Thus, the estimated elasticity of substitution between LRWs and MWs has been found to be 0.235 for the workers in the unskilled group. Hence, a 10 per cent rise in the share of migrants in the unskilled workforce has led substitution of unskilled LRWs by 2.35 per cent during the study period.

Elasticity of Substitution between LRWs & MWs in the skilled group:

$$Es = \frac{(0.83-0.84)/0.84 * 100}{(0.17-0.15)/0.15 * 100} = \frac{-1.2}{13.33} = -0.09 \text{ (table-10)}$$

Hence, Es between LRWs and MWs in the skilled group has been estimated to be 0.09. This indicates that a 10 per cent rise in the share of migrants in the skilled workforce tends to substitute the skilled LRWs by 0.9 per cent during the study period, 2013-2018.

Hence, Es between LRWs and MWs is found to be stronger in unskilled group (0.235) than that in the skilled group (0.09). Amidst of the massive unemployment problem in the state (Assam), the displacement of a number of LRWs from their current jobs in the building construction sector unveils one of the negative effects of migrants in the state of economy. The employers of in-migrant labourers substituting for local natives in the housing construction sector cannot always be blamed as the employers need to consider both unit cost of labour and product outcome, and time taken per construction task. Substitution of in-migrant labourers

<sup>8</sup> For determining the migration substitution effect in the 90 nos. of sample construction sites, the most influential factor leading to decline the employment of the LRWs, either temporarily or seasonally -the seasonal mobility of the LRWs from the rural areas has been tried to control out by conducting the field survey in the off-season of the agricultural activities. Field survey has been conducted in three different seasons in a year; the statistics on the LRWs and migrant workers has been collected both in normal and full-swing seasons of the building construction works, which is consistent with the off-season of the agriculture.

for local natives, from employers view may be cost-effective as long as labour wage cost of the substitutes remain constant (G Richardson, Alan Maynard, Nicky Cullum & David Kindig, 1998, pp.119-132).

Much of the planning theory is constrained by complex nature of the economy and the state and policy decision of the government. Planning theory in the context of substitution of in-migrant labourers for the local natives in the construction sectors, including housing construction of the state requires identification of the in-migrants in the state and the government views.

As regards to the research question, the findings indicate that supply of migrant labourers from outside of the state has been reducing the employment opportunity of the local residential workers (LRWs) in the urban housing sector of the state. This has happened as most of the employers are in favour of employing migrant workers on alleged ground of work-cheat by the LRWs.

## CONCLUSION AND POLICY SUGGESTIONS

A sizeable portion of migrants entering into the state of Assam from other states of India and the neighbouring countries have participated in the construction works in the housing sector of the state. In the sample survey areas, the share of the migrant workers to the total construction workforce is found to be in an increasing trend, against the decreasing trend of the share of the local residential workers to the total construction workforce during the study period. Though majority of the LRWs are desirous to continue the construction works in future as a life time jobs, they have been adversely affected by the migrant workers in various ways.

Most of the migrant workers rendering regular service, doing night works, long hours of work per day contribute to the growth of the building construction sector of the state. However, these worse employment conditions accepted by the migrant workers are the main reasons of the employers' attraction to them in this private sector and hence, employers prefer to substitute them for the local residential workers that produce a strong substitution effect. As such, the substitution of migrant workers for the local residential workers in the state has been resulting in unemployment problem among the local youths. Interestingly, the inflow of incessant migration of workers into the housing construction sector of the state has not affected the wage structure fixed by the government of the state. Instead, the revision of wage rates over time has been luring a sizeable number of immigrant workers into the housing sector. However, such inflow of migrant workers into the housing sector has been affecting the working hours that leads to increase in the wage differential in hourly terms between the local residential and migrant workers.

Under such circumstances, the following has been suggested:

- i) For preventing illegal migrant workers, the government should enforce the employers to employ only those workers who have registration cards in local employment exchange or Building and Other Construction Workers' Welfare Board of the state.
- ii) Minimum wage rate policy of the state government requires to be implemented strictly in the case of the building construction workers. Failing to pay by the contractors, the registration of the contractors needs to be withheld.
- iii) The government should pressurize the employers to implement the social security schemes to the migrant workers too.
- iv) For lessening the migrant substitution effect, the residential workers should work sincerely at a devotion, without any unnecessary break and work-cheating to accomplish the construction task in due time.

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