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Practicalities of Labour Migration in Iron Foundries of Howrah Cluster till the Post-Covid 19 Pandemic Period

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Abstract : *The oldest and largest iron foundry cluster of India is at Howrah in West Bengal. It has always experienced migratory labourers from various states since inception till date. The demography, styles, causes and rate of migration varied during the times. It is here, the study has been taken up to identify the cause-and-effect relationship of the migrant workers in Howrah Foundry Cluster (HFC) is a necessity. The research is to measure and identify the causes, and dynamic nature of both immigration and emigration of labourers in the Howrah iron foundry cluster with special reference to the Covid19 pandemic and post- pandemic periods. Both the statistical and cartographic analysis is executed of the data derived from primary survey as well as secondary information. Lee's Migration model has been applied and findings of the push and pull factors of migration were studied with respect to the foundries. Ravenstein's model stands more justified in few indicators in examining the behavioural characteristics of the Howrah Foundry Cluster migratory labourers. The entire situation of the just pre-pandemic, during pandemic and immediate post-pandemic period of the HFC and its enterprises are described exclusively by diagrammatic representation. The prospect of iron foundries of Howrah can be affected by migration of more skilled and semi-skilled labourers from the foundries of other states, which was found from the impact of immigration caused by the pandemic.*

Key words: *: Iron and steel industry, Migrant labourers, Labour migration models*

Introduction

The iron foundries of Howrah, a district of West Bengal, India, is considered as a natural cluster as it is the outcome of backward linkages of large industries, spin-off and inter-firm linkages during the British colonial period.

The indigenous entrepreneurs of Howrah led the emergence of small-scale Iron foundries in Howrah. The local unskilled mob were gradually trained for the casting,

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moulding and metallurgical skill. The Howrah foundry cluster is one of the oldest and largest foundry clusters in India. There are about 300 foundries operating in the cluster that mainly produce low-value-added castings such as manhole covers and pipes. Many of the foundry units still use poorly designed melting systems and sub-optimal operating practices. Gradual improvement in the income level and standard of living amongst the next generation of the foundry workers made their children engage in education and were mobilized to other jobs than the unhygienic and risky jobs of foundries. This caused a gap and dearth of foundry labourers. As the Howrah cluster is in vicinity to Howrah railway station, it became easy for the poor villagers of the state of Bihar and Jharkhand and few from Odisha to migrate and grab the opportunity to get employed in these iron foundries. Since this industry required unskilled persons, most of the migrants who arrived to work as porters on the streets of Kolkata, got themselves employed as permanent employees or under the labour contractor.

Due to poor pay for the labourers most of the migrant workers shifted to agricultural work or started migrating to north, west and southern states of India. Due to increase of export orders, skilled labour from Odisha migrated to Howrah Foundry cluster. Thus, we can say iron foundries have very few migrated labourers other than the skilled persons from Odisha, unskilled labourers from Jharkhand and from within West Bengal, especially from Jhargram and Medinipur.

Rationale for Research

The iron foundries are the backbone of India's economy. Every industry and agricultural sector get its machinery parts and equipment made of cast iron. A major part of the export includes cast iron products. Thus, post lockdown the emigration and immigration of labourers and the role of this industry is of utmost importance for the entire country, its population and economy. This survey and expression of suggestions to iron foundries with respect to migrating labourers were of urgent need and are very new than the prior researches as the crisis is new.

Objectives of the Study

The first objective is to examine the nature of migrant labourers in Iron foundries of Howrah. The second objective is to identify the push and pull factors of the labour migrants in the iron foundry industry and an appraisal of migration during and post pandemic. Thirdly, it is to identify the applicability of migration model for the migrant labourers.

Research Methodology

The methodology adopted for this research can be divided into two parts:

a. Statistical

b. Cartographic.

In order to carry out the research, the following research procedures are as followed:

Collection of Data and information: Collection of information and data pertaining to the topic is the very first step in preparing this paper. *Secondary Data*: Secondary data signifies those data that are collected from secondary sources. For this particular aspect, the data has been collected from Department of Labour, West Bengal, Bureau of Applied Economics and Statistics, Labour Department, West Bengal, Institute of Indian Foundry Men, Howrah Foundry Association and various other relevant authorities. Various books, reports, monographs and journals are also being studied for acquisition of secondary data.

Primary Data: The present research is mainly based on primary data, which is collected from an intensive field survey. Various samples have been taken into account which has been discussed Selection of respondents: In this case two broad groups of respondents are chosen viz., (a) Migrant workers of different ages working in iron foundry, (b) Foundry entrepreneurs. Other than these two-broad groups of respondents, mention could be made of different subcategories. They are the male workers (in iron foundry industry) as employees. It is here, thus through an extensive field survey, through questionnaire and rigorous interview method, the data and information are being derived.

Processing of Data: It is here the derived data and information is then processed through a. Statistical Technique and b. Non-Statistical Technique-Statistical Technique. The simple random sampling method is used in processing of different kinds of data.

Sample Design: Howrah district, being a highly concentrated district, has a preponderance of Hindu and Muslim population. Thus, by 'Stratified sampling' the blocks for survey have been selected and the number of households has been selected on the basis of random sampling. For this research work a sample size of 200 male respondents has been approximated since it covers at least 0.0001% of the total population of the 5 Blocks of Howrah.

Discussion and Findings

From 2018 there were hardly any project or orders appropriate for the renowned manufacturing units. Foundries faced irregularity in payments from clients. Labour hours were underutilised and they sat idle. This led many foundry units to partially retrench labourers out of compulsion which could be in the range of 10-15 %. The rest of labourers were continued with the expectation of future increase in demand. This redundancy in labour is exceptionally due to lack of demand and liquidity crunch in the market. There was a sudden slump in the demand due to general downturn in economy. Even the public sector organizations like the railways reduced the volume of purchase order to tighten their cash flow.

Box-1

Definition of Unskilled, Semi-skilled, Skilled & Highly Skilled Workers

(i) Unskilled: *An unskilled employee is one who does operations that involve the performance of simple duties, which require the experience of little or no independent judgment or previous experience although familiarity with the occupational environment is necessary. His work may thus require in addition to physical exertion familiarity with variety of articles or goods.*

(ii) Semi-skilled: *A semiskilled worker is one who does work generally of defined routine nature wherein the major requirement is not so much of the judgement, skill and but for proper discharge of duties assigned to him or relatively narrow job and where important decisions made by others. His work is thus limited to the performance of routine operations of limited scope.*

(iii) Skilled: *A skilled employee is one who is capable of working efficiently of exercising considerable independent judgement and of discharging his duties with responsibility. He must possess a thorough and comprehensive knowledge of the trade, craft or industry in which he is employed.*

(iv) Highly Skilled: *A highly skilled worker is one who is capable of working efficiently and supervises efficiently the work of skilled employees.*

Wages per month are calculated as 4.33 times if a weekly wage is defined. It is calculated as 4.33 times the standard hours per week if an hourly wage is given.

Source: *Kolkata High Court in W.P. No.731 of 2012 & GA 221 of 2013 has passed an interim order of restraint on giving effect to Notification No.106-MW/2W-21/2010 dt. 04.04.2012 revising Minimum Wages in Iron Foundry*

Major portion of unskilled labourers are called contract labourers (near about 80% of the total labourers), who are brought by the contractor from the villages of South Bengal, Odisha and Jharkhand. The nature of such contract labourers is quite distinct from local indigenous labourers. They work too hard for a basic income, to get the wage as per minimum wage rate and has a reduced life span working in the unhygienic shop floor whereas the local labourers who are permanent employees of the foundries, work less, rest more and are ready to earn less, have a larger life span.

The pandemic brought a new scenario and effect on this iron foundry cluster and its labour force as shown by the Figure 1 and described below:

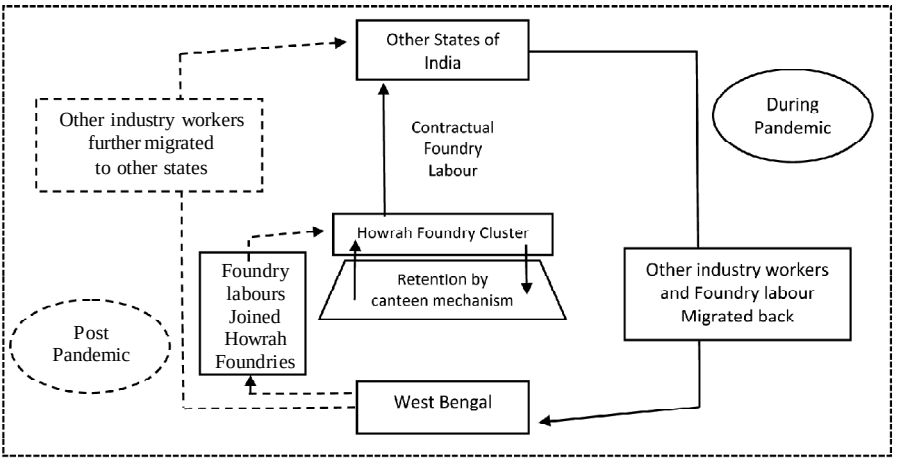

Fig.1: Pandemic Model of Labour Migration

Source: *Analysed and designed by the researchers, based on primary survey 2020-2021*

On the outbreak of Pandemic and declaration of lockdown all iron foundries of India including Howrah cluster have to compulsorily shutdown in an emergence. The foundries, the related suppliers and all associated industries came to a halt like never before. Neither the labourers, nor the owners of the organizations were prepared for it. The customers and suppliers were also in trouble. Everybody had to obey the lockdown.

When the train for the migrated labourers were arranged, a huge number of migrant labourers returned to their native villages of West Bengal. Out of them few were from Iron foundries of Southern states of India.

Very few from amongst the Howrah cluster fled to their native states. This was made possible due to the arrangement of canteen mechanism adopted by most of the large and medium scale foundries. They made all arrangements for the 24 hours stay of the labourers either within the factory premises of in nearby flats of owners or hired residences. Even the labourers who travelled by train from a distance of 100 or more kilometres could not arrange for daily conveyance, also opted to stay back for the entire week.

Very soon from 2nd May, 2020 the MSMEs were allowed to commence production and functioning with 25% of its employees and in a hygienic environment with proper sanitisation. Most of the micro and small-scale foundries took further permission of District Magistrate and started its limited operation. Old orders yet prevailing were given most importance. The market was expecting a huge demand.

But unfortunately, the large corporate houses who were the major buyers from these small foundries could not place orders or were themselves financially unfit to pay these MSME foundries. The reason for their downtrend was their extravagant fixed overhead expenses which they could not curtail during the lockdown, with no revenue inflow. They became sick companies within a short span.

The large buyers, especially the public sector had greater demand for the casting products and also labour assistance for their maintenance. Large buyers were introduced to these small foundries by the companies (suppliers) to inspect quality of casting produced. This became fatal for the supplier companies and boon to the MSME foundries. Large buyers got the small foundries registered as suppliers and started purchasing from them directly *(as depicted in Fig.2*).

Demand for the cast iron products increased soon. Simultaneously demand for skilled, semi-skilled and unskilled labourers also increased. All the dislocated labourers were called upon. Not only the labourers from West Bengal were engaged, rather the return migrants from other states, especially who were working in foundries of other states were interested to join Howrah Foundry Cluster, improving skills matching. They were of the opinion to stay in native state as they were not taken care neither by their employers nor the state government where they migrated. They were left to suffer with hunger on the streets and railway platforms, the landlords did not allow them to stay with or without paying rent and were thrown out of their rented dwelling places. The slums were evacuated. The emotional bonding to their native state and demand of the Howrah Cluster made them join even at lower wage rate.

The Net Migration Rate of the Iron foundry workers in the year 2020 (*calculated per 1000 workers*) has been estimated with the following formulae:

$$N = 1000 (I – E) / P$$

Where I = Number of people immigrating into iron foundries as workers. = 1250

E= Number of people emigrating out of iron foundries as workers. = 200

P = Estimated mid-year population = 5500

Population of workers at the beginning of the year = 5000

Add: $^1/_2$(Population immigrated during the year - Population emigrated during the year)

$$^1/_2(1250 – 200) = 525$$

$$5525$$

$N = 1000 (I – E) / P$

$= 1000 (1250 – 200) / 5525$

$= (1000 \times 1050) / 5525$

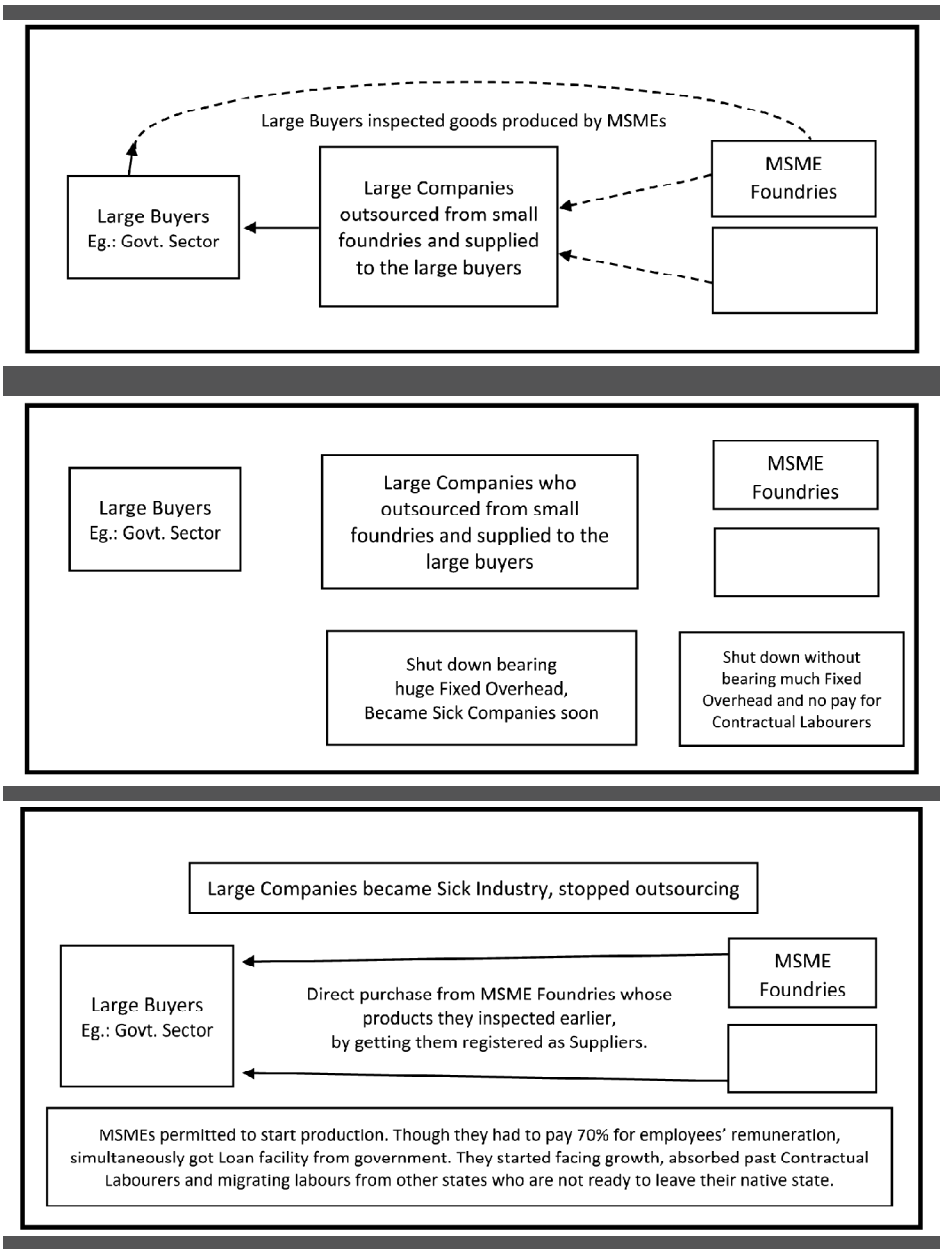

Fig. 2

Source: *Analysed and designed by the researchers, based on primary survey 2020-2021*

= 1050000 / 5525 = 190.045249 approximately 190

i.e. that for every 1000 workers in this country at the beginning of the year 190 more workers will have moved in by the end of the year.

But this rate is observed only due to the abnormality faced during the pandemic year. It was only 23 instead of 190 in the year 2019.

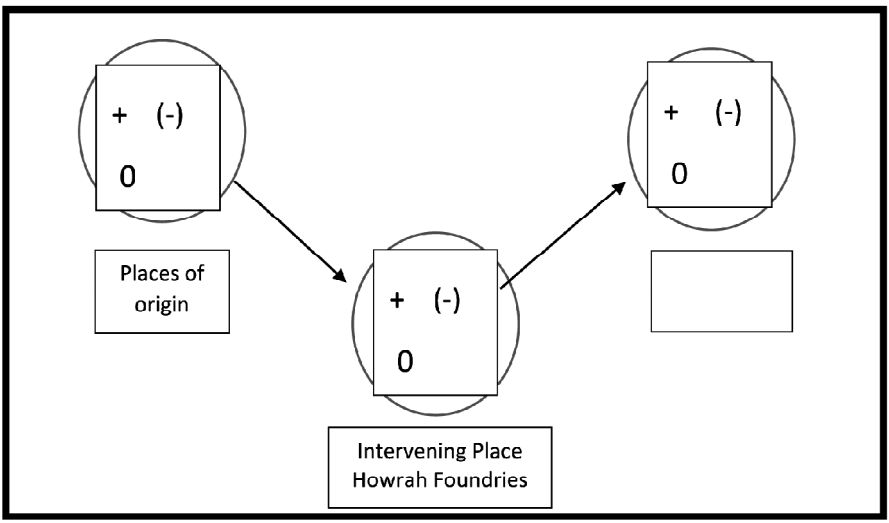

Fig. 3: Applicability of Lee's Migration Model

It is here, if we analyse the Lee's migration model, we will find a significant resemblance with iron foundry industry. Most of the rural migrants from within the state and outside the state always desire to come to Kolkata to reclaim their future. It is here, after reaching Howrah, most of the labourers settles themselves within the foundry industry, as they found the same environment of Kolkata, but in a considerably low cost of living. Moreover, the scenario is truly different on the opposite banks of the Hooghly river. The industrial glory of Howrah and its industrial surroundings, with cosmopolitan inhabitants, often make the migrant workers to work at their ease creating a homely environment. Thus, it is true, that every place has some positive and negative push and pull factors which will invariably be present in every area (either in origin or destination). Similarly, few migratory residents always become attracted in the intervening place. (Fig. 3)

One must understand that the labour flow, in Howrah Foundry cluster is definitely affected by various factors (basically the push factors) which strengthen the process of out migration from the source area. Similarly, there are also certain pull factors, which also tends to attract workers in this particular foundry cluster of Howrah. It is here, thus a combination of both push and pull factors is responsible for the migrating labourers in the foundries.

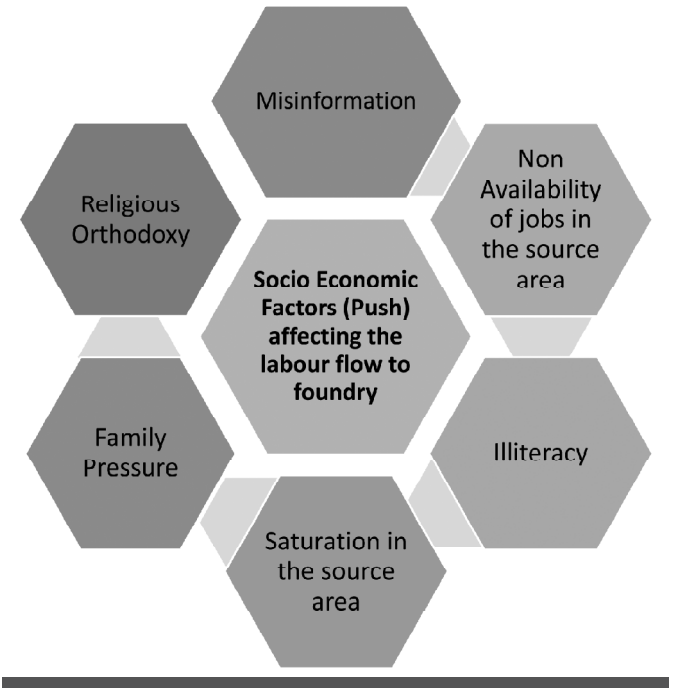

Fig. 4: Socio-economic Push factors effecting labour migration in the HFC

Fig. 5: Socio-economic (Pull factors) effecting labour migration in Iron foundries of the HFC

One must truly understand that at least 20 % of the foundries in Howrah, have shifted to green foundries, where workers are less prone to hazards and harmful gases. With the compulsory introduction of EIA, i.e. Environmental Impact Assessment, most of the foundries have engaged themselves, in adapting most newly emitted pollution free technology which also acted as a boon for the workers.

Validity of Ravenstein's model in examining the behavioural characteristics of migrant labourers in Howrah Foundry Cluster

In the present context it can be analysed and validated that most of the assumptions of Ravenstein's Migration model can be justified in foundries of Howrah.

- Most migration is short distance and mainly step migration. It is very much true that 85 percent of the labourers in Howrah Foundry Cluster from within Bengal, Odisha and Jharkhand.
- City bound migrants usually travel for long distances but not in case of rural migrants. This assumption stands good as most of the migrant labourers of Howrah Foundry Cluster are from vicinity rural areas and nearby districts and neighbouring states.
- Their always occurs a little volume of counter migration. This is also true as foundry is a hazardous industry and migrants with weak physical strength often fail to accommodate in it.
- Male workers migrate more as the foundry job requires more physical strength and that's often in unhygienic & risky environment.

Conclusion

Migration of labour has always been a burning topic, as it has always interested demographers, population geographers and policy makers. Migration often accelerates development. If we analyse Perroux Growth Pole Model, we find that the migrant workers are the most important stimulus in the success and development of industry. The combination of both pushes and pull factors play a significant role in case of immigration and emigration. Labour migration has always resulted in the prosperity of an industry. Though iron foundries in Howrah, is a natural cluster, since 1800's, it was always a place of attraction for young men. Though female migrants are lesser in number, often with the guarantee of better jobs of their husband or spouse, some of them even have migrated to Howrah. Moreover, with the emergence of various labour protection laws, the scenario has also changed in the recent time. The pandemic has also depicted a peculiar psychological attachment of the labourers with their work place as most of them stayed back. One must understand that labourers give birth to an industry whereas industry gives birth to labourers.

References

Beshers, J. M., & Nishiura, R.N. (1961). A Theory of Internal Migration Differentials, *Social Forces*, 39, 400-418

Bean, F. D., and S. Bell-Rose, (eds. 1999). *Immigration and opportunity: Race, ethnicity, and employment in the United States*. New York: Russell Sage Foundation

Case studies of the Foundries in Howrah from reports of HFA, 2017, 2018, 2019

Datta G. L., (2014). Reinventing Investment Casting Process for Sustainable Development, *Indian Foundry Journal*, 60(6), p. 21-26

Donato, K. M., J. Durand, and D. S. Massey. (1992). Changing conditions in the U.S. labor market: Effects of the Immigration Reform and Control Act of 1986. *Population Research and Policy Review* 11:93–115.

Reports of 68th Iron Foundry Congress held in February, 2020

Sassen, S. (1988). *The Mobility of Labor And Capital: A Study in International Investment and Labor Flow*. New York: Cambridge University Press.