



Labour Learning Curves and Productivity Convergence: The Role of Migrant Labourers in Kerala's Labour Market

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Abstract:

The demographic shift, labour scarcity and economic development in Kerala has made it one of the preferred destinations for interstate migrant workers in India. Migrant workers are now essential in various industries, including construction, manufacturing, agriculture, hospitality and services. Although they are playing an important role, there are questions about their skills, productivity and incorporation into the local job market. The present study analyses the contribution of migrant labourers in the process of labour learning curves and productivity outcome in Kerala. The primary data were obtained from 150 migrant labourers and 100 local labourers working in construction and manufacturing sector. The study compares skill acquisition, learning rates and productivity growth of migrant workers and local workers, based on comparative analysis and learning curve models. The findings indicate that migrant labourers tend to have lower levels of education and skills as compared to local labourers in the beginning. But, they have a much higher learning curve because they are working longer hours, are more motivated, and are getting much more on-the-job learning. As a result, productivity gaps become smaller with the passage of time and convergence between migrant and local workers is achieved. The study finds that migrant labourers are not just a substitute for local labour but are dynamic members of the Kerala economy. Steps to enhance participation in the labour market, vocational training and skills development are suggested to make a maximum impact.

Keywords: Migrant labour, Learning curve, Productivity, Skill acquisition, Kerala labour market

1. Introduction

Migration has been one of the most salient features of today's global labour markets. Labour mobility allows an economy to respond to labour shortages, enhance productivity and maintain economic growth. However, in developing countries like India, the differences in employment opportunities, wages, and living standards across different regions have driven a surge in migration between different states. Kerala is an interesting situation as migration is now crucial for the economic growth of the State due to the demographic and socio-economic changes. There has been a significant outflow of the local population from Kerala, especially to the Gulf countries and other foreign countries. The high literacy rate and rising education level and expectations of White Collar jobs has led to a shortage of local labour for unskilled and semi-skilled jobs (Sharma, 2019).

At the same time, declining levels of fertility and population ageing have left a shortage of workers in critical industries like construction, manufacturing, agriculture, and service. This has led to Kerala attracting a significant number of migrant workers from other states like Bihar, Uttar Pradesh, West Bengal, Odisha, Assam and Jharkhand. What migrant labourers do is not just about filling the labour shortage. They contribute crucially to sustaining production, strengthening infrastructure and improving the economic efficiency. But, Kerala's process of absorption of migrant workers in the labour market also opens up a range of other questions on skill acquisition, productivity and workforce development. Many migrants' occupational skills and productivity gains are not a direct legacy of their formal

education or vocational training, making it important to understand how they develop these skills and increase productivity.

Labour learning curves are a good background to consider worker productivity. Learning curves refer to the link between experience and performance, indicating that productivity increases with the worker's knowledge, skills and experience in the tasks they perform (ILO, 2020). Those workers who learn the skills faster tend to have higher learning curves and are able to attain higher levels of efficiency sooner. In labour-intensive industries, the speed of learning has a significant effect on the performance and competitiveness of the organizations. Language, work environment and culture are all factors that can cause problems for migrant labourers. However, they might have a more flexible attitude and be more open to learning because of economic pressures and job insecurity. They have the potential to learn skills quickly from the intensive work schedules and practical training, which can lead to significant productivity gains down the road. Hence, the study of labour learning curves of migrant workers can give insights into their contribution to the economy and their future integration into the Kerala workforce. In this background, the present study aims at studying the skill acquisition pattern and productivity trajectory of migrant labourers in Kerala. In particular, it examines the learning curves of migrant workers and local workers and the implications for labour productivity and workforce development.

Objectives of the study

The general objectives of the study were as follows:

- To study the acquisition of skills of migrant workers in Kerala.
- To compare the learning curves of the migrant workers and local workers.
- To measure the contribution of migrant workers to the total labour productivity in Kerala.

2. Review of Literature

The learning curve concept was introduced by Wright (1936) who found that labour productivity is enhanced with increased worker experience. It assumes that workers will make fewer errors, work more efficiently and produce more as they repeat a work task. Since then, learning curve theory has proven to be an important analytical tool in labour economics, industrial engineering and human resource management. Organisational learning is a process of turning experience into improved performance (Argote and Epple, 1990). Their study has shown that the more experience they have and the more knowledge they share, the more productive their workers can become. The learning curve is also important in labour-intensive industries where skill acquisition is largely on-the-job, as opposed to classroom-based training. The relevance of learning curves in the field of migration is further emphasized by the fact that migrant labourers often have differing levels of education, skills and work experience. The International Labour Organization (ILO, 2020) emphasized that the migrant workers are often found to be very productive because they have to quickly adapt to a new workplace environment. The real-world learning and on-going employment experience plays a key role in the acquisition of skills for migrants. Another significant approach to the study of labour productivity is the human capital theory by Becker (1964). The theory holds that worker productivity and income improves with investment in education, training and experience. When migration workers have a lower level of education, they may make up for this with experience in the workplace and on-the-job training. As a result, the productivity differentials between migrants and natives might shrink over time.

Studies on Indian migration and labour markets have consistently focused on the economic importance of migrants. Deshingkar and Akter (2009) detected that migration is an alternative livelihood option for the people from less economically developed area. Migrants are very much involved in and make significant contributions to those sectors of the economy that are labour-intensive, and acquire new skills in the process that enhance their employment potential. The overall labour market conditions in Kerala are very different, with a high reliance on migrant labour. Research conducted by Zachariah and Rajan (2012) showed that migrant workers are essential in the construction, manufacturing and hospitality industries, as well as the retail trade. Labour shortages due to international migration and demographic ageing are cited as the main reason for the growing dependence on migrant labour.

The Government of Kerala (2018) reported that migrant workers have lower skills than the local workers in the beginning. They quickly develop occupation-specific skills, however, from workplace interactions and through experience. Migrant workers also tend to have higher labour force participation rates and be more willing to take up physically demanding jobs, the report noted. In the study, Sharma (2019) looked into migrant labour and economic growth in Kerala and concluded that migrant workers have a positive association with the productivity and the

expansion of output. Their involvement helps industries to continue production because local labour is scarce. The study also indicated that skill development campaigns focused on their specific abilities could be an effective way to further boost their productivity contribution.

While there are some previous studies that have documented the economic significance of migrant labourers, there is a lack of attention to migrant versus learning curves of local workers. The evolution of the acquisition of skills and of productivity over time can be informative for understanding the process of labour market integration as well as of workforce development. The present study aims to address this issue by examining the labour learning curve and the convergence of productivity of migrant and local labourers in Kerala.

3. Research Methodology

The study is descriptive and analytical in nature that attempts to explore the learning curve and productivity pattern of migrant and local labourer in Kerala. Primary as well as secondary data sources were used. Structured questionnaires and interviews with the workers of construction and manufacturing sectors were used to gather primary data. The study involved 250 respondents which included 150 migrant labourers and 100 local labourers. The respondents chosen were a cross section of age group, educational attainment, and work experience.

In order to get satisfactory representation of skilled, semi-skilled and unskilled workers, purposive sampling was used. The selection of the construction and manufacturing sectors was made due to the high number of migrant workers in these sectors in Kerala. Secondary data was collected from sources of government reports, labour department publications, migration studies and academic journals. These sources were sources for contextual information about migration trends and labour market dynamics.

Data analysis consisted of descriptive statistics, comparative analysis and learning curve modelling. Variables such as age, education, skill level, productivity growth, and learning rates were analysed. The regression techniques were used to analyse the relations between experience and productivity. Comparative learning curve analysis has been done to assess the difference between migrant and local labourers.

The results were discussed within the framework of labour economics and human capital theories to gain insights into the implications of migrant labour for the productivity of labour and economic development in Kerala.

4. Results and Discussion

The present study focused on the learning pattern, skill acquisition and productivity of migrant and local labourers engaged in construction and manufacturing industry in Kerala. 250 respondents were surveyed; 150 migrant labourers and 100 local labourers. The findings are of immense significance in understanding the dynamics of labour productivity and labour integration in Kerala's labour market that has become a highly mobile one.

4.1 Demographic Profile of Respondents

The age and gender profile of the respondents shows some significant differences between migrant workers and local workers. Migrant labourers were on average younger than local labourers, with the average being 28.5 years compared to 35.2 years for local labourers. This may enable younger employees to learn new skills and to grow in productivity at a faster rate for these reasons. There were also significant differences between educational levels of the two groups. Migrant labourers averaged 8 years of formal education and local labourers averaged 12 years. This is attributed to the overall educational infrastructure and literacy of the state of Kerala, as the higher level of education among the local workers is indicative of it. Nevertheless, migrant labourers' adaptability and learning ability were impressive, being acquired on the job.

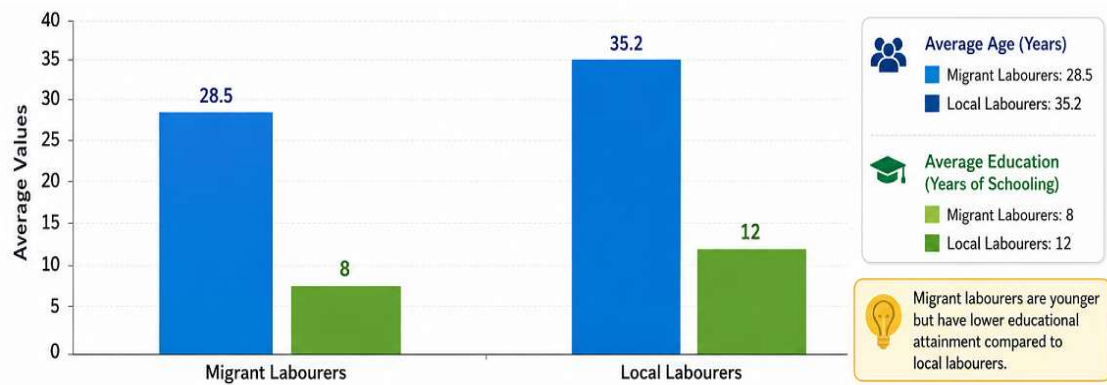


Figure 1: Age and Education Distribution of Migrant and Local Labourers

The figure 1 shows that the education level of the migrants to Kerala's labour market is low and the migrants are relatively younger in age (which may give them more learning and skill development potential). The convergence in productivity that can be seen later in the study can be attributed, in part, to the higher learning rates among older students and those who were more adaptable.

4.2 Skill Level Comparison

The skill level is an important factor in determining labour productivity. The respondents were divided into three groups of workers, unskilled workers, semi-skilled workers and skilled workers.

Table 1. Skill Levels of Migrant and Local Labourers

Skill Category	Migrant Labourers (%)	Local Labourers (%)
Unskilled	60	20
Semi-skilled	30	50
Skilled	10	30
Total	100	100

The results suggest that migrant labourers had significantly lower levels of skills when they first came into the workforce than the local labourers. About 60% of migrant workers were deemed to be less skilled than 20% of local workers. Likewise, 10 percent of migrant labourers were classified as skilled while 30 percent of local labourers had the same classification. The results reflect a trend that has been observed in previous studies, which indicate that migrants come from areas with lower economic status, and relatively little access to formal vocational training (Deshingkar & Akter, 2009). As such, migrants tend to have less human capital when they enter the labour market. But the fact that many migrant workers are unskilled does not necessarily mean that their long-term productivity is low. Rather, it emphasizes the significance of on-the-job learning and skill acquisition.

The interviews that were held during the study indicated that most of the migrant workers trained themselves in specialised skills like masonry, welding, carpentry, machine operation and fabrication in Kerala upon reaching their work place. Results confirm the human capital theory that productivity is not solely dependent upon formal schooling but also on experience and training gained on the job (Becker, 1964).

4.3 Productivity Growth among Labours

Respondents were asked to assess changes in their productivity over the first year in their job to understand productivity dynamics. Productivity measures included the time to complete tasks, volume of products created, quality of work done and supervisor ratings.

Table 2. Productivity Growth during the First Year of Employment

Category	Initial Index	Productivity after One Year	Percentage Increase
Migrant Labourers	100	120	20%
Local Labourers	100	110	10%

The findings show that migrant workers had a much higher rate of productivity growth than local labourers. Migrant workers improved by 20 percent more productive, while local workers improved by only 10 percent more productive over the year. The difference is due to a number of factors. First, the migrant workers have to work more hours and do more work; this means that they have more learning opportunities. Secondly, there is a need to learn fast when migration-induced, so that one can perform better and get stable jobs. Third, employers often offer training programs to migrant workers in the workplace to fill in gaps in skills. The results for migrant workers suggest that the productivity gap can be overcome with on-the-job skills that can be acquired after migration. The findings call into question the common notion that migrant workers are always less productive than local workers. In addition, employers interviewed in the study indicated that skilled migrant employees frequently serve as team leaders and trainers of new employee migrant workers, which helps to promote knowledge sharing between migrant workers and organizations.

4.4 Learning Curve Analysis

The study's first goal was to look at the differences in learning curves between migrant and local labourers. Learning curves are a measure of how workers get better at work after gaining experience.

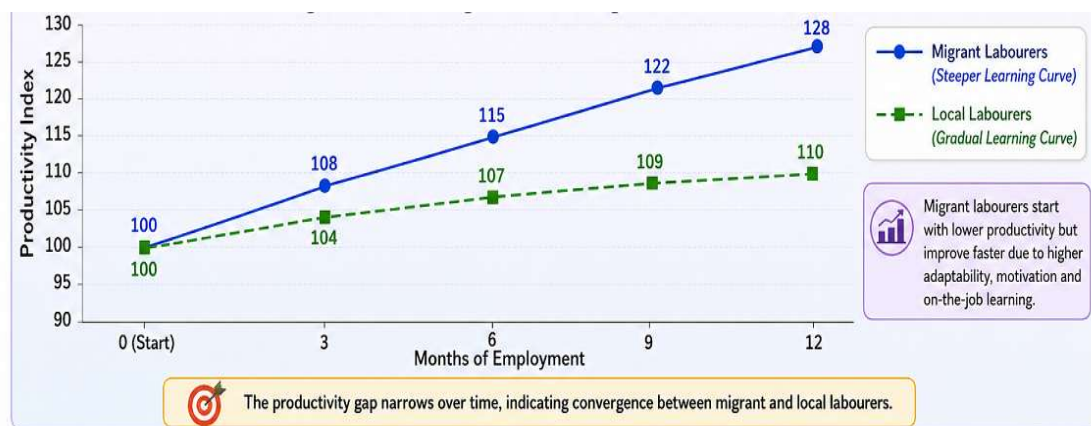


Figure 2: Learning Curves of Migrant and Local Labourers

The Learning Curves of Migrant and Local Labourers are compared in Figure 2. The learning curve analysis shows that the productivity of migrant labourers was lower initially but their learning curve is steeper. The local labourers, on the other hand, had a relatively high level of productivity at the outset, but growth was slower than that of the other categories. The steeper learning curve among migrant workers can be attributed to several factors:

Adaptability and Motivation: Economic necessity can often be a factor in migration. Often labour migrants have a high level of motivation to acquire new skills and new income. This will lead to better receptivity to training and to taking on difficult assignments.

On-the-Job Learning: Workplace learning is on-going and involves observing, repeating and interacting with others who have more experience. This is the most relied-upon form of learning for the migrant labourers, where they learn skills very rapidly.

Greater Exposure to Diverse Tasks: Most of the migrant workers perform multiple roles within the construction and manufacturing projects. This type of exposure broadens their skill sets and accelerates learning.

Work Intensity: Employers have reported that migrant workers will take overtime work orders and additional work assignments. This leads to faster productivity improvements due to the increase in work experience. The results are consistent with the studies of International Labour Organization (2020) which suggested that migrant workers often exhibit fast learning because of the adaptations they have to make in foreign contexts.

4.5 Regression Analysis of Experience and Productivity

A simple regression analysis was performed to quantitatively determine the relationship between work experience and productivity.

Table 3. Regression Results: Effect of Experience on Productivity

Variable	Coefficient (β)	t-value	Significance
Constant	78.24	9.84	0.000
Experience (Years)	4.32	7.15	0.000
R ²	0.61	-	-

The regression results show that there is a high positive correlation between work experience and productivity. The 4.32 factor indicates that experience plays a significant role in enhancing productivity. The model accounts for around 61 per cent of the variation in productivity ($R^2 = 0.61$), which is significant. The p value is highly significant (0.000), which means that the experience is a significant determinant of labour productivity. The results are compatible with the learning curve theory, which suggests that productivity increases with experience. Importantly, the results indicate that inequality in skills at the outset is not as important over time as people acquire the skills and learn more from their work.

4.6 Discussion

The results indicate that migrant workers have a significant contribution in boosting the productivity of Kerala labour market. While migrants in the labour market have fewer qualifications and skills, they have higher capabilities for learning and higher productivity growth than local workers. The convergence of productivity of migrant and local labourers points toward the effectiveness of the experiential learning in the labour-intensive industry. It also highlights importance of training in the workplace as a tool for human capital development. An economic view of migrant workers is that they help to reduce the labour shortage that could otherwise limit industrial development. They have been especially important in industries like construction and manufacturing where labour force participation has fallen as people have improved their educational and skills levels, and chosen to move overseas. The study also highlights challenges to workforce integration, though. Productivity potential of migrant workers may be limited due to language barriers, lack of access to traditional education, poor living conditions, and social exclusion. Relevant policy interventions may help to address these challenges to create further gains in productivity. Based on the evidence presented, it is not enough to consider migrant labourers simply as short-term replacements for local labour; they are also valuable assets to Kerala's long term economic growth. They have demonstrated their ability to learn quickly and benefit from productivity gains, which is a valuable resource for sectors that are experiencing a shortage of workers.

5. Conclusion

The study focussed on the role of migrant labourers in influencing the labour learning curve and productivity outcomes in the Kerala labour market. The results found that on average, migrant workers tend to be less educated and less skilled than local labourers when they join the workforce. However, their learning curves are much more rapid and

productivity gains higher. The productivity gain among migrant labourers over the course of one year of work is about 20 percent, while the gain among locals is 10 percent. Learning curve analysis revealed that migrants quickly gain job-specific skills in the workplace by learning through the job, by doing the job and by interacting with others on the job. This causes the productivity gap between migrants and natives to decline over time. The study shows that while initial education is important, it is not the only factor that influences labour productivity, but rather experience and learning opportunities also play a significant role. Migrant labourers hence are a significant source of human capital training in the economy of Kerala. With the changing demographics and the shortage of labour, migrant labour is still a necessity in Kerala, and hence policies for better integration of labour are necessary. Vocational training, skill certification and social inclusion investments can provide further improvement of the productivity and economic contribution of migrant workers.

Implications of the study

The study is significant for policy makers, employers and labour market planners. First of all, there is a need to create skill development programmes with a government framework, targeted at migrant workers. Second, employers need to increase their efforts on developing training systems that help employees acquire skills quickly and to improve productivity. Thirdly, the welfare measures of the labour market should be directed towards the improvement of living conditions, health services and social integration of migrant workers. Last but not least, labour market policies should treat migrant workers as long-term contributors to economic growth instead of as labour on a loan basis. These interventions can help to achieve the maximum productivity gains and inclusive and sustainable labour market development in Kerala.

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