

## PREFACE TO THE EDITION

The present issue of the **International Journal of Commerce and Management Research Studies (IJCMRS)** brings together a diverse collection of research contributions examining important dimensions of commerce, management, labour, investment, digital transformation, and sectoral development in the Indian context.

A notable feature of this issue is its focus on the changing structure of India's economy and the evolving relationships between business, employment, technology, investment, and human capability. The contributions collectively highlight how contemporary commercial and managerial challenges are increasingly interconnected and require perspectives that extend beyond individual sectors or disciplines.

The issue opens with an examination of migrant labour and the unorganised sector in Kerala, exploring the relationship between migration, labour supply, informality and regional development. The study highlights the structural role of migrant workers in addressing labour shortages within Kerala's changing economic landscape and considers the balance between economic opportunity and worker welfare.

The second contribution focuses on workplace learning, employee well-being and organisational performance. It brings together perspectives on learning, work-life balance, supervisory support and employee engagement, emphasising the importance of developing workforce capabilities while simultaneously addressing employee well-being in a rapidly changing work environment.

The issue also considers the growing influence of digital transformation on Indian commerce and the world of work. The article examines digitalisation, changing employment patterns, workforce capabilities and leadership, while drawing attention to the need for more inclusive participation in the benefits of the digital economy, particularly among workers and sectors that remain outside the mainstream digital transition.

Another important contribution examines foreign direct investment, globalisation and Indian commerce over the period 2000–2025. By considering the scale, composition and distribution of FDI, the study provides a broader perspective on India's integration with the global economy and the conditions under which investment can contribute to wider economic growth and development.

The issue concludes with a conceptual examination of housing, construction and allied industries as an engine of Indian commerce. The study views construction as a demand-linked cluster encompassing housing, finance, materials and allied industries, while also recognising its importance as a major source of non-farm employment and its continuing association with informality and labour vulnerability.

Taken together, the articles in this issue demonstrate the breadth of contemporary commerce and management research. They draw attention to the interaction between economic transformation, labour markets, human resources, technology, global investment and sectoral linkages, while also highlighting the importance of inclusive and sustainable development.

The editorial team of IJCMRS hopes that this issue will provide useful insights for researchers, academicians, students, business professionals, institutions and policymakers, and will stimulate further empirical and conceptual research in the fields of commerce and management.

We sincerely thank the authors for their valuable contributions and the reviewers and editorial team for their efforts in bringing this issue to publication.

Dr Steevan D Souza N  
Chief editor

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# Migrant Labour and the Unorganised Sector in a Remittance Economy: Labour Supply, Informality and Regional Development in Kerala

Bharathi

Assistant Professor, Institute of Management and Commerce, Srinivas University, Mangaluru, India

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## Abstract

This study examines the role of inter-state migrant labour in the unorganised sector of Kerala, a state whose economy is shaped simultaneously by large-scale emigration to the Gulf and large-scale in-migration from other Indian states. It combines an integrative review of 28 scholarly and institutional sources with a descriptive analysis of secondary data drawn from the Kerala Migration Surveys, the Gulati Institute survey of domestic migrant labour, the Reserve Bank of India's state-level wage statistics, the Periodic Labour Force Survey and the Kerala Economic Review. The data show that emigration has stabilised at about 2.2 million persons while remittances have risen to Rs 2.17 lakh crore, or 23.2% of net state domestic product, in 2023; that rural daily wages in Kerala exceed the all-India average by 109 to 125% across agricultural, non-agricultural and construction work; that agriculture has fallen to about 8% of gross state value added while services approach two-thirds; and that a domestic migrant workforce estimated at 2.5 million in 2013, drawn chiefly from West Bengal, Bihar, Assam, Uttar Pradesh and Odisha and concentrated in construction, fills the manual-labour gap that these conditions create. Four themes are developed: the Kerala labour market paradox, the structural shift of employment out of agriculture, the position of migrant workers as the flexible labour force of the unorganised sector, and the welfare balance between income gains at origin and precarity at destination. The findings are organised into a Supply–Absorption–Welfare framework and five research propositions. The paper argues that migrant labour has become a structural rather than a transitional feature of Kerala's economy, that the unorganised sector is the channel through which it is absorbed, and that the state's development model now depends on the inclusion of workers it does not formally count. Implications are offered for employers, industry bodies and policymakers.

**Keywords:** - Migrant Labour, Unorganised Sector, Kerala Economy, Remittances, Informality, Wage Differentials, Labour Supply, Regional Development

## I. INTRODUCTION

### 1.1. Background and Context

Kerala presents an unusual configuration for a developing regional economy. For half a century it has exported labour on a large scale, chiefly to the Gulf states, and the remittances that return have transformed household consumption, housing and services (Zachariah et al., 2001). Kannan (2005) attributes the state's turnaround in growth from the late 1980s to the combined effect of social development, remittances and economic reform. The most recent Kerala Migration Survey counts 2.2 million emigrants and 1.8 million return emigrants in 2023, and estimates remittances at Rs 2,16,893 crore, equivalent to 23.2% of net state domestic product (International Institute of Migration and Development [IIMAD] & Gulati Institute of Finance and Taxation [GIFT], 2024).

At the same time, the state's high wages, high levels of education and demographic transition have left its farms, construction sites, hotels and workshops short of manual labour. That shortage is now met by workers from West Bengal, Assam, Bihar, Uttar Pradesh, Odisha and other states. A survey for the Gulati Institute of Finance and Taxation estimated the number of domestic migrant workers in Kerala at about 2.5 million in 2013, with an annual inflow of about 2.35 lakh, and

projected that the number would reach four million by the end of the decade (Narayana et al., 2013). Later studies confirm the continued growth and increasing diversity of this workforce (Peter & Narendran, 2017).

The commerce literature on Kerala has begun to examine this second migration. Aswani and Bhat (2022b) analyse the role of migrant labour in the state economy and find that the influx of migrant workers has relieved the shortage of manual labour by providing a cheaper and more flexible workforce, while the rural labour market shifts away from agriculture towards secondary and tertiary activities. Aswani and Bhat (2022a) extend this to the rationalisation of the economy through migrant workers in the unorganised sector, and Aswani and Varghese (2023) evaluate the structural change of the agrarian sector that underlies the shift in labour demand. The present study builds on this work by bringing the two migrations together and by placing the argument on a quantitative footing.

## 1.2. Problem Statement

Migration to Kerala is usually studied as a demographic or social phenomenon, and the unorganised sector as a labour-market category. The commercial significance of their combination is less often examined. Migrant workers are not simply additional labour; they are the labour on which entire segments of Kerala's commerce now depend, and they are absorbed almost entirely through informal employment relations that the state's statistical and welfare systems capture poorly. The consequence is a development model in which prosperity financed by the state's own emigrants is sustained by the work of in-migrants who remain largely invisible to policy. The scale of the phenomenon is itself uncertain: the last systematic estimate of the domestic migrant workforce dates from 2013, whereas the emigrant population has been surveyed every five years since 1998. An integrated, data-based account of labour supply, absorption through the unorganised sector and the resulting welfare balance is lacking, and this study addresses that gap.

## 1.3. Research Objectives

This study pursues the following specific objectives:

- To synthesise theoretical and empirical literature on labour migration and its role in regional economic development.
- To document, from secondary data, the scale and trend of emigration from Kerala, the remittances it generates and the wage differential it sustains.
- To examine the structural changes in Kerala's economy and labour market that have generated demand for migrant labour.
- To profile the domestic migrant workforce by origin and sector and assess the role of the unorganised sector as the channel through which it is absorbed.
- To evaluate the welfare consequences of migration for workers, sending households and the receiving economy, and to develop an integrative conceptual framework and research propositions.

## 1.4. Research Questions

- Why does a high-wage, high-literacy regional economy depend on in-migrant manual labour?
- How large are the wage differentials between Kerala and the rest of India, and how do they relate to the remittance economy?
- How has structural change in Kerala's economy reshaped the demand for labour?
- What functions does migrant labour perform in the unorganised sector, and on what terms?
- What is the balance of welfare gains and costs from this migration, and what determines it?

## 1.5. Significance of Study

The study contributes in three ways. First, it connects migration theory, the literature on Kerala's remittance economy and the literature on informality, which are usually read apart. Second, it assembles in one place the secondary data on both migrations, on wages and on sectoral structure, and reads them against one another; the individual series are well known, but their joint interpretation as a single commercial system is new. Third, it offers a framework and propositions that researchers can test with survey or administrative data, together with practical guidance for employers, industry bodies and policymakers in a state whose commerce now depends on a workforce it does not formally count.

## 1.6. Scope and Limitations

The study is conceptual and descriptive. It relies on published literature and official or institutional secondary data and reports no primary survey or econometric estimation. The secondary data come from sources with different reference years, sampling frames and definitions: the Kerala Migration Surveys are household surveys of the resident population, the GIFT estimate of domestic migrant workers is based on a transport-flow method, and the wage series are compiled by the Labour Bureau and published by the Reserve Bank of India. Comparisons across these sources are therefore indicative rather than exact, and the analysis is confined to descriptive statistics. The focus is on inter-state migration into Kerala and its unorganised sector; international emigration from Kerala is treated as context and as a driver of labour demand. The propositions advanced are hypotheses for future testing and not established findings.

# II. LITERATURE REVIEW

## 2.1. Theoretical Foundations

Migration theory offers several lenses. Ravenstein (1885) first proposed that migrants move predominantly short distances, in steps, and towards centres of commerce and industry, with economic motives dominant. Lewis (1954) modelled

development as the transfer of surplus labour from a low-productivity traditional sector to a modern sector at a roughly constant wage, and Harris and Todaro (1970) explained continued rural–urban migration in the presence of urban unemployment by the expected, rather than actual, urban wage. Stark and Bloom (1985) reframed migration as a household strategy for diversifying income and insuring against risk, in which remittances are central. Piore (1979) argued from the demand side that advanced economies generate a structural need for migrant workers to fill low-status jobs that native workers refuse, a segmentation that persists regardless of wage levels. Massey et al. (1993) show that these theories are complementary rather than competing, each explaining a different part of the migration process.

Applied to Kerala, these lenses fit together unusually well. The state is a sending region in the Stark and Bloom (1985) sense, with households diversifying income through Gulf emigration and remittances. It is at the same time a receiving region in the Piore (1979) sense, with a native workforce whose education and expectations exclude manual work, and a labour market that therefore requires in-migrants. The Lewis (1954) model describes the origin states from which those in-migrants come, and the Harris–Todaro (1970) wage differential describes the incentive that moves them. Each theory thus explains one link in a chain that runs from Kerala's emigrants to the workers who replace them.

## **2.2. Kerala's Remittance Economy and the Labour Market Paradox**

Zachariah et al. (2001) document the scale of emigration from Kerala and its effects on the state's economy and society, including the rise in household consumption, housing investment and the reservation wage of native workers. Zachariah and Rajan (2012) update this picture through 2011 and show that remittances have become a permanent feature of the state's income. Kannan (2005) argues that remittances, together with social development and reform, explain Kerala's turnaround in growth. The consequence for the labour market is a paradox: unemployment among the educated coexists with acute shortage of manual labour, because the wage that native workers will accept for such work exceeds what employers in agriculture, construction and small enterprise can pay. Aswani and Bhat (2022b) identify this shortage as a key problem and show that the arrival of migrant workers, who accept lower wages and more flexible terms, relieved it and enabled economic activities that would otherwise have been unsustainable.

## **2.3. Structural Change and the Demand for Labour**

The demand for migrant labour is shaped by the structure of Kerala's economy. Aswani and Varghese (2023) evaluate the structural change of the agrarian sector, whose share of output and employment has declined as land has moved out of food crops and as the native workforce has left farming. The Kerala State Planning Board (2024) records an economy in which the tertiary sector produces close to two-thirds of gross state value added and the primary sector well under one-tenth. Nationally, the Periodic Labour Force Survey confirms a continuing shift of employment from agriculture into construction, trade and services (Ministry of Statistics and Programme Implementation [MoSPI], 2024), and Mehrotra (2019) shows that this shift has not reduced informality. Aswani and Bhat (2022b) observe the same pattern in Kerala: overall employment in agriculture is declining each year while the industrial and service sectors gradually absorb more workers. The sectors that grow, construction, hospitality, small manufacturing, retail and domestic services, are precisely those in which migrant labour is concentrated.

## **2.4. Migrant Labour in the Unorganised Sector**

Breman (1996) describes India's informal workforce as footloose labour, moving between sites and sectors without contracts, security or organisation, and the International Labour Organization (ILO, 2018) estimates that close to nine in ten Indian workers are informally employed. Migrant workers in Kerala fit this description. Peter and Narendran (2017) trace the origins, sectors and living conditions of the migrant workforce and find it concentrated in construction, hospitality, manufacturing and trade, housed in crowded accommodation and largely outside the state's welfare schemes. Sreedevi and Gopinath (2024) compare inter-state migrant and native workers in Kerala's construction sector and document differences in wages, work standards and bargaining position between the two groups doing comparable work. Aswani and Bhat (2022a) analyse how the unorganised sector rationalises the economy through migrant workers: employers gain a flexible, lower-cost labour supply that can be hired and released with demand, and the sector as a whole becomes the mechanism through which Kerala's commerce adjusts to its native labour shortage. Deshingkar and Akter (2009) document the circular character of such migration, in which workers retain a rural base and move seasonally or for spells of years.

## **2.5. Welfare, Remittances and Inclusion**

The welfare balance of migration has two sides. At origin, the new economics of labour migration predicts income gains and risk diversification for sending households (Stark & Bloom, 1985), and Srivastava and Sutradhar (2016) confirm that migration into construction reduces rural poverty for the households that send workers. Reja and Das (2021) trace the remittance arrangements of Kerala's construction workers from West Bengal and show how the COVID-19 lockdown interrupted both their earnings and the transfers on which their households depended. At destination, the same workers face insecure contracts, poor housing, exclusion from public services and vulnerability to shocks. The Harris and Todaro (1970) framework helps explain why migration continues despite these conditions: the expected earnings in Kerala remain well above those at origin. What determines the net outcome is the degree of inclusion offered at destination, in the form of registration, access to health care and housing, portability of entitlements and enforcement of labour standards.

## **2.6. Research Gaps**

Three gaps follow. First, the two migrations that shape Kerala, emigration abroad and in-migration from other states, are studied separately, although the second is a consequence of the first, and the data on the two are rarely placed side by side. Second, the unorganised sector is treated as a residual category rather than as the active mechanism through which the state's commerce absorbs migrant labour. Third, the welfare literature documents conditions at destination but rarely connects them

to the commercial structure that produces them. The framework and the descriptive analysis developed below respond to these gaps.

### III. RESEARCH METHODOLOGY

#### 3.1. Research Design

The study combines two components. The first is an integrative literature review. Snyder (2019) identifies the integrative review as appropriate where the aim is to combine perspectives from different fields and to generate a new conceptual framework, and Torracco (2005) describes it as a form of research that produces new frameworks through critique and synthesis of representative literature. The second is a descriptive analysis of secondary data, used to establish the scale and direction of the phenomena that the review identifies. The design is therefore that of a descriptive study based on secondary sources, which suits a topic that spans migration studies, development economics, labour studies and regional commerce, and for which primary data collection at the scale required is beyond the scope of a single study.

#### 3.2. Research Propositions

Because the study is conceptual and descriptive, it advances propositions for future testing in place of statistical hypotheses:

- P1: Kerala's dependence on in-migrant manual labour is a structural consequence of its remittance economy, in which the reservation wage of native workers exceeds the wage that labour-intensive sectors can pay.
- P2: The shift of Kerala's employment out of agriculture into construction, trade and services has increased, not reduced, the demand for migrant labour.
- P3: The unorganised sector is the principal channel through which migrant labour is absorbed, and its flexibility is the mechanism by which Kerala's commerce adjusts to labour scarcity.
- P4: Migration to Kerala raises income and reduces poverty in sending households, while exposing the workers themselves to precarity at destination.
- P5: The net welfare outcome of migration is determined by the degree of inclusion offered at destination, including registration, access to services and enforcement of labour standards.

#### 3.3. Data Sources

The review corpus comprises the 28 sources listed in the references. They fall into three groups:

- Foundational works of migration and development theory
- Studies of Kerala's remittance economy, domestic migrant workforce and agrarian change
- National and international statistics and working papers on informality and internal migration in India.

Sources were selected purposively on three criteria: direct relevance to at least one research question, publication in a peer-reviewed or institutional outlet, and availability of bibliographic details.

The secondary data analysed in Section IV are drawn from five sources. The Kerala Migration Surveys, conducted by the Centre for Development Studies and latterly by the International Institute of Migration and Development with the Gulati Institute of Finance and Taxation, provide the series on emigrants, return emigrants and remittances from 1998 to 2023 (Zachariah & Rajan, 2012; IIMAD & GIFT, 2024). The GIFT survey of domestic migrant labour provides the 2013 estimate of the in-migrant workforce, its annual inflow, its distribution by state of origin and its remittances to origin states (Narayana et al., 2013). The Reserve Bank of India's Handbook of Statistics on Indian States provides Labour Bureau data on average daily wage rates of rural workers by state for 2021-22 (Reserve Bank of India, 2022). The Periodic Labour Force Survey provides national employment structure (MoSPI, 2024), and the Kerala Economic Review provides the sectoral composition of gross state value added (Kerala State Planning Board, 2024). No primary data were collected.

#### 3.4. Analytical Strategy

The literature was analysed thematically following the phases described by Braun and Clarke (2006): familiarisation, generation of initial codes, search for themes, review of themes, definition and naming of themes, and reporting. Codes were first derived deductively from the research questions and then refined inductively as recurring ideas emerged. The secondary data were then organised under the resulting themes and analysed descriptively: time series are presented as levels and percentage changes, distributions as percentage shares, and the Kerala–India wage comparison as a percentage premium computed as  $(\text{Kerala wage} - \text{all-India wage}) \div \text{all-India wage} \times 100$ . No inferential statistics are applied, because the sources differ in reference year and method and the purpose is to establish orders of magnitude rather than to test hypotheses. The themes and the data together were used to construct the conceptual framework, and each proposition was derived from the convergence of theory and evidence within a theme.

### IV. RESULTS

#### 4.1. Overview of the Literature Reviewed

The 28 sources span the period 1885 to 2024. The theoretical works are drawn from economics and migration studies; the Kerala studies include journal articles, institutional surveys and working papers; and the statistical sources are national and international. Four themes were identified, and they are summarised in Table 1. Sections 4.2 to 4.5 present the secondary data under each theme, and Section 4.6 integrates the findings into the conceptual framework.

Table 1. Thematic Synthesis of the Literature and Derived Propositions

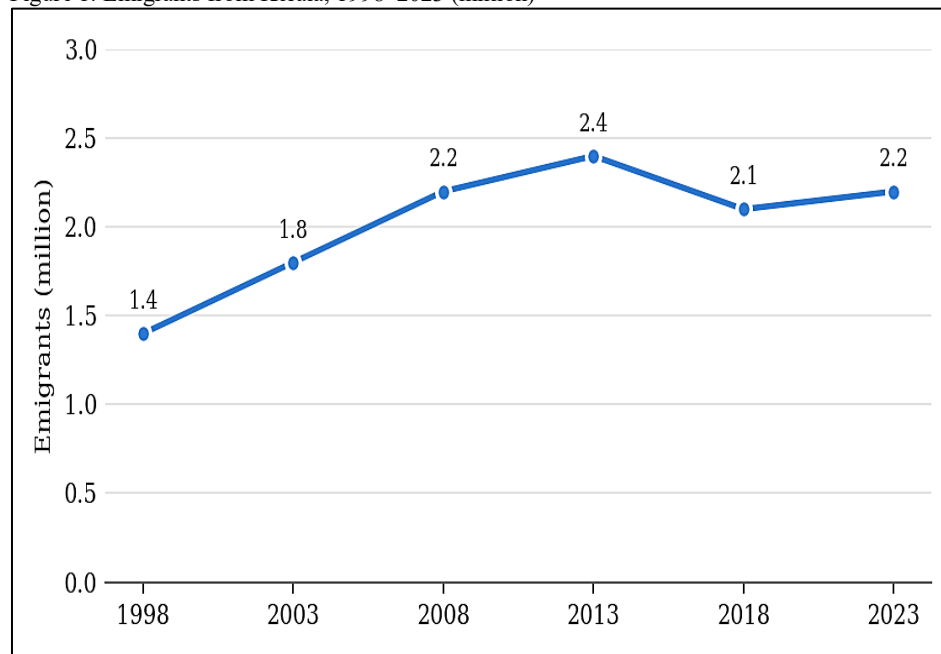
| Theme                                    | Core insight from the synthesis                                                                                                                                   | Representative sources                                                                                                    | Proposition |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------|
| The Kerala labour market paradox         | Out-migration, high wages and educated native labour created a shortage of manual workers that in-migration from other states now fills.                          | Zachariah et al. (2001); Kannan (2005); Zachariah & Rajan (2012); Narayana et al. (2013); Aswani & Bhat (2022b)           | P1          |
| Structural change and labour supply      | Employment is shifting out of agriculture into construction, trade and services; the agrarian sector's decline reshapes the demand for manual labour.             | Lewis (1954); Aswani & Varghese (2023); MoSPI (2024); Mehrotra (2019); Kerala State Planning Board (2024)                 | P2          |
| Migrant labour in the unorganised sector | Migrant workers supply flexible, lower-cost labour that sustains construction, hospitality, small manufacturing and trade; employment is overwhelmingly informal. | Piore (1979); Breman (1996); ILO (2018); Peter & Narendran (2017); Sreedevi & Gopinath (2024); Aswani & Bhat (2022a)      | P3          |
| Welfare, remittances and inclusion       | Migration raises household income at origin but exposes workers to precarity at destination; inclusion measures determine the net welfare outcome.                | Stark & Bloom (1985); Srivastava & Sutradhar (2016); Deshingkar & Akter (2009); Reja & Das (2021); Harris & Todaro (1970) | P4, P5      |

Note. MoSPI = Ministry of Statistics and Programme Implementation; ILO = International Labour Organization. Propositions P1 to P5 are stated in Section 3.2.

#### 4.2. The Kerala Labour Market Paradox: Emigration, Remittances and Wages

The first theme establishes the origin of demand for migrant labour. Figure 1 traces the stock of emigrants from Kerala across the six rounds of the Kerala Migration Survey. The number rose steadily from 1.4 million in 1998 to a peak of 2.4 million in 2013, fell to 2.1 million in 2018 as Gulf labour markets tightened and return migration increased, and recovered marginally to 2.2 million in 2023. The stock of return emigrants rose from 1.2 million in 2018 to 1.8 million in 2023, a rise attributed largely to the COVID-19 pandemic (IIMAD & GIFT, 2024). Emigration has therefore stabilised rather than continued to grow, and the share of emigrants in the Gulf Cooperation Council countries has fallen from 89.2% in 2018 to 80.5% in 2023 as destinations diversify.

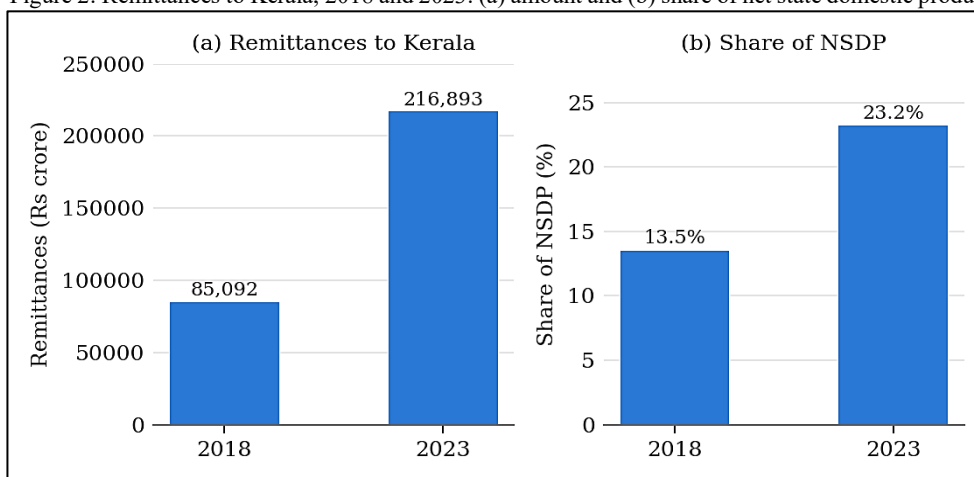
Figure 1: Emigrants from Kerala, 1998–2023 (million)



Source. Kerala Migration Surveys, 1998–2023 (Zachariah & Rajan, 2012; IIMAD & GIFT, 2024).

Remittances, however, have grown far faster than the number of emigrants. Figure 2 shows that total remittances to Kerala rose from Rs 85,092 crore in 2018 to Rs 2,16,893 crore in 2023, an increase of 154.9% over five years, and that their share of net state domestic product rose from 13.5% to 23.2% (IIMAD & GIFT, 2024). Nearly a quarter of the state's income now arrives from outside it. The rise reflects the changing composition of emigration towards more skilled and better-paid occupations as well as exchange-rate movements, and it means that the purchasing power injected into Kerala's households has more than doubled while the number of households sending migrants has not.

Figure 2: Remittances to Kerala, 2018 and 2023: (a) amount and (b) share of net state domestic product



Source. Kerala Migration Survey 2023 (IIMAD & GIFT, 2024).

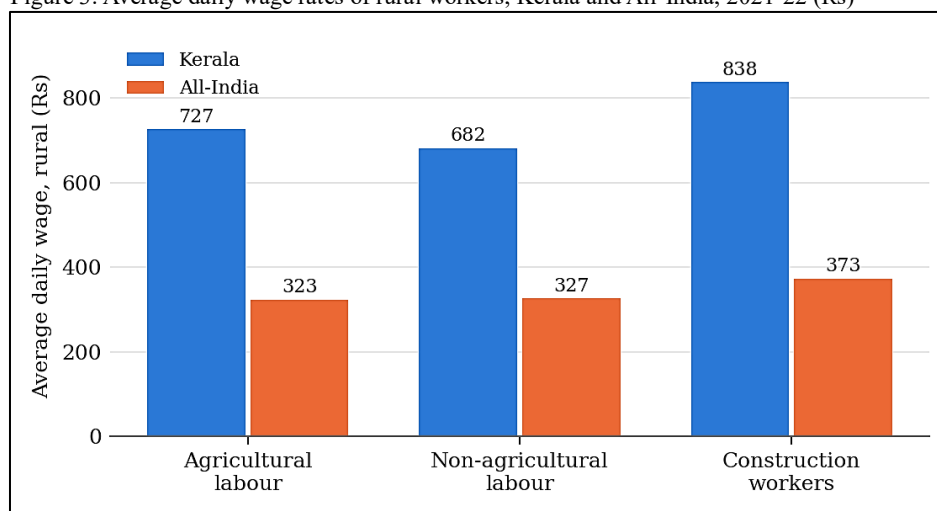
The labour-market consequence of this inflow is visible in the wage data. Table 2 and Figure 3 compare average daily wage rates of rural workers in Kerala with the all-India average for 2021-22. Kerala's wages are the highest in the country in every category, and the premium over the national average is 124.8% for agricultural labour, 108.8% for non-agricultural labour and 124.4% for construction workers (Reserve Bank of India, 2022). A construction worker in rural Kerala earns Rs 837.7 a day against Rs 373.3 nationally, more than twice as much; in West Bengal, the largest source of migrants to Kerala, the corresponding figure was about Rs 300 in 2020-21, below the national average. The gap between destination and origin wages is therefore of the order of Rs 500 a day, which is the incentive that the Harris-Todaro (1970) model requires and that sustains the flow described by Aswani and Bhat (2022b).

Table 2. Average Daily Wage Rates of Rural Workers, Kerala and All-India, 2021-22

| Category of rural labour | Kerala (Rs/day) | All-India (Rs/day) | Kerala premium (%) |
|--------------------------|-----------------|--------------------|--------------------|
| Agricultural labour      | 726.8           | 323.3              | 124.8              |
| Non-agricultural labour  | 681.8           | 326.6              | 108.8              |
| Construction workers     | 837.7           | 373.3              | 124.4              |

Source. Labour Bureau data reproduced in the Reserve Bank of India (2022), Handbook of Statistics on Indian States 2021-22. Kerala premium computed by the author as  $(\text{Kerala} - \text{All-India}) \div \text{All-India} \times 100$ .

Figure 3: Average daily wage rates of rural workers, Kerala and All-India, 2021-22 (Rs)



Source. Reserve Bank of India (2022).

These three series together resolve the paradox. Remittances equal to nearly a quarter of state income raise household reservation wages; wages for manual work in Kerala are consequently more than double the national level; and yet the native workforce, educated and supported by remittance income, does not supply manual labour at those wages in the quantities the economy requires. The shortage that Aswani and Bhat (2022b) identify as a key problem for the state is the predictable result, and it is filled from states where the same work pays less than half as much. This grounds P1.

### 4.3. Structural Change and Labour Supply

The second theme concerns the direction of structural change. Table 3 summarises the sectoral composition of Kerala's

gross state value added as reported by the State Planning Board. The primary sector, which produced the bulk of state income at the time of the state's formation, now contributes about 8%; the secondary sector about 28%; and the tertiary sector about 63%, up from roughly one-third in 1960-61 (Kerala State Planning Board, 2024). Aswani and Varghese (2023) document the mechanics of this change in agriculture: the movement of land from food crops to plantation and cash crops, the withdrawal of the native workforce from cultivation and the ageing of those who remain.

Table 3. Sectoral Composition of Kerala's Gross State Value Added, Late 2010s

| Sector                                                              | Share of GSVA (%) | Direction of change since the 1960s                                                   |
|---------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------|
| Primary (agriculture, forestry, fishing, mining)                    | about 8           | Sharp decline; agriculture alone now contributes well under one-tenth of state income |
| Secondary (manufacturing, construction, utilities)                  | about 28          | Broadly stable, with construction the largest and most labour-intensive component     |
| Tertiary (trade, hotels, transport, finance, real estate, services) | about 63          | Rise from about one-third of state income in 1960-61 to nearly two-thirds             |

Source. Kerala State Planning Board (2024); historical comparison from Zachariah et al. (2001) and Kannan (2005). Shares are rounded.

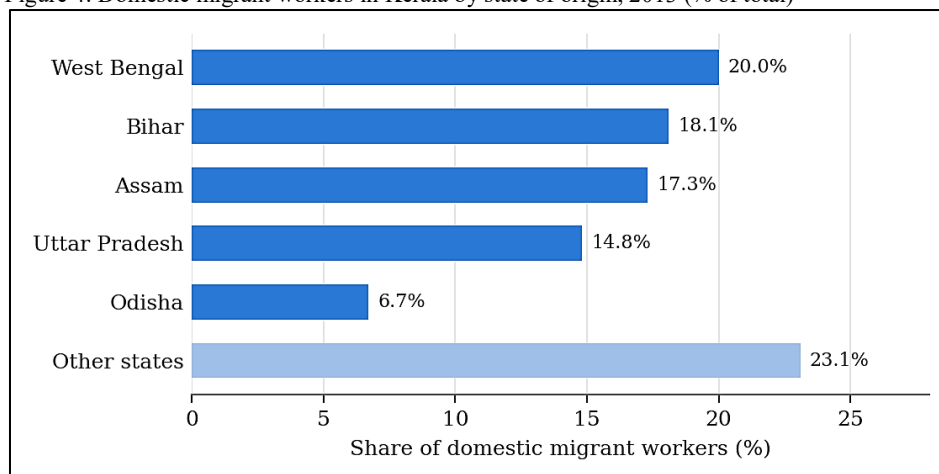
The national picture points in the same direction. The Periodic Labour Force Survey for 2023-24 shows agriculture still employing about 46% of the Indian workforce, but with construction, at roughly 12%, the largest non-farm employer and the sector into which workers leaving agriculture have moved most readily (MoSPI, 2024); Mehrotra (2019) shows that this movement has not reduced informality. In Kerala, where agriculture's share of employment has fallen further than in most states, the sectors that have grown are construction, hospitality, trade and services, which are labour-intensive at the point of delivery and cannot be relocated. Aswani and Bhat (2022b) confirm that Kerala's rural labour market is moving in this direction, with employment in agriculture declining each year while the industrial and service sectors gradually absorb more workers. Structural change thus concentrates labour demand in exactly the occupations that native workers are least willing, and migrants most willing, to fill. It increases rather than reduces the reliance on migrants, which grounds P2.

#### 4.4. Migrant Labour in the Unorganised Sector: Scale, Origin and Sector

The third theme identifies the mechanism of absorption. The GIFT survey remains the only systematic estimate of the domestic migrant workforce in Kerala. Using a transport-flow method based on long-distance train arrivals, Narayana et al. (2013) estimated a stock of about 2.5 million domestic migrant workers in 2013, an annual net inflow of about 2.35 lakh, and remittances from Kerala to origin states of about Rs 17,500 crore a year. On the basis of the observed inflow they projected a workforce of four million by the end of the decade, and Peter and Narendran (2017) describe a workforce that has since grown and diversified in origin and occupation. If the projection has been realised, migrant workers now number roughly one for every nine residents of the state and a considerably larger fraction of its workforce.

Figure 4 shows the distribution of the 2013 workforce by state of origin. Five states account for about 77% of migrants: West Bengal 20.0%, Bihar 18.1%, Assam 17.3%, Uttar Pradesh 14.8% and Odisha 6.7%, with the remaining 23.1% drawn from Tamil Nadu, Karnataka and other states (Narayana et al., 2013). These are, with the exception of Tamil Nadu, among the states with the lowest rural wages in India, which is consistent with the wage differential presented in Section 4.2. About 60% of the migrant workforce was employed in construction, with the remainder distributed across hospitality, manufacturing, trade and agriculture.

Figure 4: Domestic migrant workers in Kerala by state of origin, 2013 (% of total)



Source. Narayana et al. (2013), Gulati Institute of Finance and Taxation.

Nearly all of this employment is informal. The ILO (2018) estimate that about 88% of Indian employment is informal applies with particular force to a workforce that is mobile, recruited through contractors and concentrated in construction; Peter and Narendran (2017) find migrants in Kerala working without written contracts, housed in crowded rented rooms or on-site accommodation and largely outside the state's welfare schemes, and Sreedevi and Gopinath (2024) document lower

wages and weaker work standards for migrant than for native construction workers doing comparable tasks. Aswani and Bhat (2022a) show that this informality is functional for the receiving economy: the unorganised sector rationalises Kerala's commerce by supplying labour that can be scaled with demand at a cost the state's enterprises can bear. The circular pattern described by Deshingkar and Akter (2009) reinforces this flexibility, since workers absorb the cost of adjustment by returning home when work is scarce, as many did in 2020 (Reja & Das, 2021). This grounds P3.

#### 4.5. Welfare, Remittances and Inclusion: The Two Migrations Compared

The fourth theme weighs the outcomes, and it is best approached by placing the two migrations side by side. Table 4 compares emigration from Kerala and in-migration to Kerala on the same indicators. The two stocks are of a similar order of magnitude, roughly 2.2 million emigrants and at least 2.5 million domestic migrant workers, and both are concentrated in construction and services. The money flows, however, are strikingly asymmetric: remittances into Kerala of Rs 2,16,893 crore in 2023 compare with an estimated outflow to origin states of about Rs 17,500 crore in 2013. Even allowing for growth in the migrant workforce and in wages since 2013, the inward flow exceeds the outward flow many times over, because emigrants earn in Gulf currencies at Gulf wages while in-migrants earn at the lower end of Kerala's wage distribution and remit a part of it.

Table 4. The Two Migrations Compared: Emigration from Kerala and In-Migration to Kerala

| Indicator                   | Emigration from Kerala                                                                | In-migration to Kerala                                                                         |
|-----------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Stock of migrants           | 2.2 million emigrants (2023); 1.8 million return emigrants                            | About 2.5 million domestic migrant workers (2013 estimate)                                     |
| Trend                       | 1.4 million (1998) rising to 2.4 million (2013), then 2.1–2.2 million (2018–2023)     | Annual inflow of about 2.35 lakh (2013); projected to exceed 4 million by the end of the 2010s |
| Main destinations / origins | Gulf Cooperation Council countries: 80.5% of emigrants (2023), down from 89.2% (2018) | West Bengal 20.0%, Bihar 18.1%, Assam 17.3%, Uttar Pradesh 14.8%, Odisha 6.7% (2013)           |
| Principal sectors           | Construction, services, trade and skilled occupations in the Gulf                     | Construction about 60%; also hospitality, manufacturing, trade and agriculture                 |
| Money flows                 | Remittances Rs 2,16,893 crore (2023), 23.2% of NSDP                                   | Outward remittances to origin states about Rs 17,500 crore per year (2013 estimate)            |

Sources. Emigration and remittances: Kerala Migration Surveys (Zachariah & Rajan, 2012; IIMAD & GIFT, 2024). In-migration: Narayana et al. (2013); Peter & Narendran (2017). Reference years differ and comparisons are indicative.

For sending households in West Bengal, Bihar, Assam, Uttar Pradesh and Odisha, the gains are real. Migration into construction reduces rural poverty for the households that send workers (Srivastava & Sutradhar, 2016), and the remittance arrangements documented by Reja and Das (2021) show that these households depend on regular transfers from Kerala. The new economics of labour migration (Stark & Bloom, 1985) predicts exactly this diversification of household income. For Kerala's enterprises the gains are equally real: a labour supply at roughly half the cost that native labour would command, if it could be found at all. For the workers themselves the balance is less favourable. They earn more than at home but less than native workers beside them; they bear the risks of insecure and often unhealthy conditions; and when the cycle turns, as it did in 2020, they bear the cost of adjustment by losing work and returning home. The Harris and Todaro (1970) logic explains the persistence of the flow despite those risks, since expected earnings in Kerala remain far above those at origin. Whether the outcome is developmentally positive depends on inclusion at destination: where workers are registered, housed and covered by health and social security, the welfare balance improves without eliminating the flexibility on which employers depend. These observations ground P4 and P5.

#### 4.6. The Supply–Absorption–Welfare Framework

Taken together, the themes and the data yield an integrative framework with three components. Labour supply is generated jointly by Kerala's remittance-driven labour shortage, evidenced by remittances of 23.2% of net state domestic product and rural wages more than double the national average, and by surplus labour in origin states where the same work pays less than half as much. Absorption occurs through the unorganised sector, evidenced by a migrant workforce of 2.5 million or more, three-fifths of it in construction, employed almost entirely informally; its flexibility is the mechanism by which the state's commerce adjusts. Welfare outcomes are distributed across sending households, receiving enterprises and the workers themselves, with the balance determined by the degree of inclusion at destination. The five propositions correspond to these relationships. The framework implies that migrant labour has become a structural component of Kerala's development model rather than a temporary expedient, and that the model's two halves, emigration and in-migration, are linked by the wage differential that the first creates and the second responds to.

## V. DISCUSSION

The data support a reading of Kerala's economy as one sustained by two migrations that mirror each other. The emigration that finances the state's consumption and housing, and that now delivers nearly a quarter of its income, raises the price of native labour to more than twice the national level; the in-migration that fills the resulting gap is absorbed through informal employment in construction and services. Neither is temporary. The emigrant stock has been stable at 2.1 to 2.4 million for a decade while remittances have more than doubled (IIMAD & GIFT, 2024), and the demand for manual labour in construction, hospitality and services grows with the economy (Aswani & Bhat, 2022b; Aswani & Varghese, 2023). The theoretical implication is that Piore's (1979) segmentation, developed for advanced industrial economies, applies to a high-

remittance regional economy within a developing country, and that the segmentation is produced not by industrial structure alone but by the interaction of remittance income, education and wage expectations.

The wage data deserve emphasis because they quantify the mechanism. A premium of 109 to 125% over the national average, and of roughly 180% over the largest source state, is large by any standard. It is large enough to attract workers across two thousand kilometres, to sustain circular migration in which the worker's family remains at origin, and to make Kerala's enterprises dependent on that flow: Sreedevi and Gopinath (2024) show that even at the lower wages migrants receive relative to natives, the work remains far better paid than at home. The premium is also a measure of vulnerability. It exists because native labour is scarce, and it would narrow if remittances fell or if origin states developed; Kerala's commerce is thus exposed to conditions in the Gulf and in eastern India that it does not control.

For employers and industry bodies, the central implication is that flexibility and precarity are currently two sides of the same arrangement. The rationalisation that Aswani and Bhat (2022a) describe delivers a labour supply that scales with demand, but it does so by shifting risk to workers who have no contractual protection, as the 2020 return migration demonstrated (Reja & Das, 2021). Employers who invest in registration, decent accommodation and skill development are likely to gain in retention and productivity, and industry bodies can raise standards collectively where individual firms fear a cost disadvantage.

For policy, the concern is that the state does not formally count the workers on whom its commerce depends. The emigrant population has been surveyed six times since 1998, whereas the in-migrant workforce has been estimated systematically once, in 2013, and its present size is a projection. Kerala's social development, which Kannan (2005) identifies as a foundation of its growth, has been built for a resident population; extending health, housing and social security to a mobile, inter-state workforce requires portable entitlements and cooperation between sending and receiving states. The new economics of labour migration (Stark & Bloom, 1985) suggests that the gains to sending households are real, but the evidence reviewed indicates that these gains are extracted at a cost to the workers that better inclusion would reduce, and that the asymmetry between the two remittance flows, of the order of ten to one, leaves ample room for the receiving economy to bear a larger share of that cost.

## **VI. RECOMMENDATIONS**

### **6.1. For Employers and Industry Bodies**

- Register migrant workers, issue written terms of engagement and provide accommodation that meets basic standards, treating these as investments in retention and productivity rather than as compliance costs.
- Develop sector-level skill certification for migrant workers in construction, hospitality and manufacturing, so that flexibility does not preclude skill development and so that the wage gap between migrant and native workers doing comparable work narrows on the basis of skill.
- Establish contingency arrangements, including wage advances and transport support, so that a future shock does not again transfer the whole cost of adjustment to the workforce.

### **6.2. For the State Government**

- Commission a periodic survey of domestic migrant workers on the model of the Kerala Migration Survey, so that the in-migrant workforce is measured with the same regularity as the emigrant population.
- Maintain a continuous register of inter-state migrant workers and extend health insurance, housing and social security to them on the same basis as resident workers.
- Include migrant labour in labour-market statistics and planning, so that the workforce that sustains the unorganised sector is visible to policy.

### **6.3. For Inter-State and National Policy**

- Make social security entitlements portable across states, so that circular migrants do not lose coverage when they move.
- Encourage cooperation between sending and receiving states on registration, grievance redress and safe recruitment, with West Bengal, Bihar, Assam, Uttar Pradesh and Odisha as priority partners for Kerala.

## **VII. CONCLUSION**

This study has argued, on the basis of an integrative review and a descriptive analysis of secondary data, that inter-state migrant labour has become a structural component of Kerala's economy, absorbed through the unorganised sector and made necessary by the state's own remittance-driven prosperity. Emigration has stabilised at about 2.2 million persons while remittances have risen to 23.2% of net state domestic product; rural wages in Kerala exceed the national average by 109 to 125%; agriculture has fallen to about 8% of state value added while services approach two-thirds; and a domestic migrant workforce of 2.5 million or more, drawn from the lowest-wage states of eastern and northern India and concentrated in construction, fills the manual-labour gap that these conditions create. The four themes identified were integrated into a Supply–Absorption–Welfare framework with five propositions. The labour shortage that migrants fill is a consequence of emigration; structural change increases rather than reduces the demand for them; the unorganised sector is the mechanism of their absorption; and the welfare outcome depends on inclusion at destination.

The study is limited by its reliance on secondary data of differing vintage and method, by the absence of a recent systematic estimate of the migrant workforce and by its descriptive rather than inferential treatment of the evidence. Future research should test the propositions with survey data on migrant workers and their employers in Kerala, estimate the current size and sectoral distribution of the workforce, compare sectors within the unorganised economy, and evaluate the effects of registration and welfare schemes on both worker outcomes and enterprise performance.

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## **Building a Future-Ready Workforce: Workplace Learning, Employee Well-Being and Performance in Indian Organisations – A Conceptual Review**

Steevan D Souza N

Assistant Professor, Department of MBA, St Aloysius (Deemed to be University) Institute of Management and Information Technology (AIMIT), Mangaluru, Karnataka, India

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### **Abstract**

This conceptual review examines how workplace learning and employee well-being jointly shape performance in Indian organisations. Adopting an integrative literature review design, the study synthesises 22 scholarly and institutional sources, comprising human capital and social exchange theory, the science of training and memory, research on work–family conflict and well-being, and recent India-focused studies on work-life balance policies, microlearning and adaptive learning technologies, through thematic analysis. Four themes emerge: the learning imperative created by rapid change in skill demand; the design of learning in short, spaced and adaptive formats that fit around work; the contribution of work-life balance policies and supervisor support to well-being; and the pathway from well-being and satisfaction to job performance. The synthesis indicates that learning and well-being are not competing claims on the human resource budget but mutually reinforcing investments: well-designed learning reduces the strain of change, and employees who are supported reciprocate with engagement in both work and learning. The paper integrates these insights into a Learning–Well-Being–Performance framework and advances five research propositions for empirical testing. Implications are offered for human resource managers, line managers and policymakers concerned with workforce readiness.

**Keywords:** - Workplace Learning, Microlearning, Adaptive Learning, Employee Well-Being, Work-Life Balance, Job Performance, Human Resource Management, Conceptual Review

## **I. INTRODUCTION**

### **1.1. Background and Context**

Two pressures now act on the human resource function of every organisation. The first is the pace at which the skills required for work are changing. The World Economic Forum (2023) estimates that employers expect a large share of workers' skills to be disrupted within five years and that six in ten workers will need training before 2027, while reporting that only about half of workers have access to adequate training opportunities. The second pressure is the strain that change itself places on employees. Digital tools, hybrid arrangements and continuous learning demands blur the boundary between work and personal life, and organisations that neglect well-being find that the capacity they are trying to build erodes through stress, dissatisfaction and attrition.

The Indian management literature has begun to respond to both pressures. Studies have examined the influence of work-life balance policies on employee well-being and job satisfaction (Aswani, 2025a), the science of knowledge retention in microlearning (Aswani, 2025b) and the potential of adaptive learning technologies in e-learning initiatives (Aswani & Kalluraya, 2023). Internationally, Noe et al. (2014) describe a shift in workplace learning towards technology-delivered, self-directed and informal formats, and Salas et al. (2012) summarise what the science of training says about making such investments pay.

## 1.2. Problem Statement

Learning and well-being are usually managed and studied as separate concerns. Learning and development functions focus on content, delivery and completion; well-being initiatives focus on policies, leave and support. Yet the two interact. Learning demands add to workload and can become a job demand in their own right, while well-being conditions the attention, motivation and persistence on which learning depends. An account that treats workplace learning and employee well-being as joint determinants of performance, and that is grounded in the Indian organisational context, is lacking. This study addresses that gap.

## 1.3. Research Objectives

This study pursues the following specific objectives:

- To synthesise theoretical and empirical literature on workplace learning and its contribution to organisational performance.
- To examine the design principles, including microlearning and adaptive learning, that make learning effective for working adults.
- To assess the contribution of work-life balance policies and organisational support to employee well-being.
- To trace the pathway from well-being and job satisfaction to job performance.
- To develop an integrative conceptual framework and research propositions for future empirical work in Indian organisations.

## 1.4. Research Questions

- Why has continuous workplace learning become a condition of organisational performance?
- Which learning designs are most effective for employees who must learn while working?
- How do work-life balance policies and organisational support influence employee well-being?
- Through what mechanisms do learning and well-being translate into performance?

## 1.5. Significance of Study

The study contributes in three ways. First, it brings together the literatures on training, cognitive science and occupational well-being, which are seldom read together in commerce and management. Second, it grounds the synthesis in recent Indian studies, which gives the propositions local relevance. Third, it offers a framework and propositions that researchers can test with organisational data, together with practical guidance for human resource and line managers.

## 1.6. Scope and Limitations

The study is conceptual. It relies on published literature and institutional reports and reports no primary survey or econometric results. The literature was selected purposively and not through an exhaustive systematic search, so the synthesis is illustrative of the field rather than a census of it. The focus is on employees in organised, largely white-collar and service settings, where technology-enabled learning and formal work-life balance policies are feasible; the informal workforce raises different questions that are outside the present scope. The propositions advanced are hypotheses for future testing and not established findings.

# II. LITERATURE REVIEW

## 2.1. Theoretical Foundations

Four theoretical traditions inform the study. The first is human capital theory. Becker (1964) treats training as an investment that raises the productivity of workers and yields returns to both the worker and the firm, which supplies the economic rationale for workplace learning. The second is the cognitive science of learning and memory. Sweller (1988) shows that learning suffers when the demands placed on working memory exceed its capacity, and Cepeda et al. (2006) demonstrate in a quantitative synthesis that practice distributed over time produces markedly better retention than the same practice concentrated in one session. These findings underpin the case for short, spaced learning units.

The third tradition is the job demands–resources model. Bakker and Demerouti (2007) propose that every job has demands that consume energy and resources that support motivation, and that strain arises when demands are high and resources low. Work-life balance policies, supervisor support and development opportunities are resources in this sense. The fourth tradition is social exchange. Blau (1964) argues that favourable treatment creates an obligation to reciprocate, and Eisenberger et al. (1986) show that employees form a general perception of how much the organisation values them, which predicts their commitment and effort. Investments in learning and well-being are read by employees as signals of support and are reciprocated accordingly.

## 2.2. The Learning Imperative

The case for continuous workplace learning rests on the pace of change in skill demand. The World Economic Forum (2023) reports that employers expect analytical thinking, creative thinking and technological literacy to be the fastest-growing skill requirements, and that a majority of the workforce will require reskilling or upskilling within a few years. Salas et al. (2012), reviewing the science of training, conclude that training works when it is preceded by needs analysis, designed around clear learning objectives, delivered with opportunities for practice and feedback, and followed by transfer support from supervisors. Noe et al. (2014) add that learning is increasingly self-directed, informal and technology-delivered, which shifts responsibility towards the learner and makes the organisational learning climate decisive.

### 2.3. Learning Design: Microlearning and Adaptive Learning

Two design approaches respond to the constraints of learning while working. Microlearning delivers content in short, focused units that can be consumed in minutes. Hug (2005) provided an early framework for such micro units, and the spacing research of Cepeda et al. (2006) explains why brief, distributed exposures aid retention. Aswani (2025b) examines the science of knowledge retention in bite-sized educational experiences, drawing out the conditions under which microlearning supports durable learning rather than superficial exposure. Adaptive learning technologies take a complementary approach: they adjust the content, sequence and pace of instruction to the learner's demonstrated performance, so that each employee spends time where it is needed. Aswani and Kalluraya (2023) explore the potential of adaptive learning technologies in e-learning initiatives and the pedagogical innovations they enable. Both approaches are consistent with Sweller's (1988) principle of managing cognitive load, and both suit the self-directed pattern of learning that Noe et al. (2014) describe.

### 2.4. Well-Being and Work-Life Balance

Greenhaus and Beutell (1985) define work–family conflict as a form of inter-role conflict in which the pressures of work and family roles are mutually incompatible, and identify time, strain and behaviour as its sources. Kossek et al. (2011) show in a meta-analysis that supervisor and organisational support reduce work–family conflict, and that support specific to work–family matters is more effective than general support. Allen et al. (2015) find that flexible arrangements such as telecommuting have modest but positive effects on satisfaction and conflict, provided they are managed well. In the Indian context, Aswani (2025a) examines the influence of work-life balance policies on employee well-being and job satisfaction, and finds that such policies contribute to both. Grant et al. (2007) caution that well-being has psychological, physical and social dimensions and that managerial practices which improve one may compromise another, so that policies should be evaluated on more than one dimension.

### 2.5. From Well-Being to Performance

The link from well-being to performance is well established. Wright and Cropanzano (2000) show that psychological well-being predicts supervisory ratings of performance, and that it does so over and above job satisfaction. Judge et al. (2001), in a review of more than three hundred samples, estimate a moderate positive correlation between job satisfaction and job performance. The social exchange mechanism identified by Blau (1964) and Eisenberger et al. (1986) explains part of this relationship: employees who perceive that the organisation cares for their well-being reciprocate with effort and commitment. The job demands–resources model (Bakker & Demerouti, 2007) supplies the rest: resources such as support and development opportunities foster engagement, which drives performance.

### 2.6. Research Gaps

Three gaps follow. First, learning design and well-being are studied by different communities and are rarely examined together, even though learning is itself a demand on employees. Second, microlearning and adaptive learning have been studied mainly in educational settings, and their transfer to organisational learning in India is under-researched. Third, the pathway from well-being to performance is well documented internationally but has been examined less often in Indian organisations. The framework developed below responds to these gaps.

## III. RESEARCH METHODOLOGY

### 3.1. Research Design

The study adopts an integrative literature review design. Snyder (2019) identifies the integrative review as appropriate where the aim is to combine perspectives from different fields and to generate a new conceptual framework, and Torracco (2005) describes it as a form of research that produces new frameworks through critique and synthesis of representative literature. The design suits a topic that spans economics, cognitive science, occupational psychology and human resource management.

### 3.2. Research Propositions

Because the study is conceptual, it advances propositions for future testing in place of statistical hypotheses:

- P1: Investment in continuous workplace learning is positively associated with organisational performance, and the association is stronger where training is needs-based and supported by supervisors at the point of transfer.
- P2: Microlearning and adaptive learning formats produce higher knowledge retention and completion among working adults than conventional single-session training of equivalent content.
- P3: Work-life balance policies improve employee well-being and job satisfaction, and their effect is amplified by work–family-specific supervisor support.
- P4: Employee well-being and job satisfaction are positively associated with job performance, and perceived organisational support mediates this relationship.
- P5: Learning and well-being interact: well-designed learning reduces the strain associated with change, and employees with higher well-being engage more in learning, so that the two investments reinforce each other.

### 3.3. Data Sources and Selection

The review corpus comprises the 22 sources listed in the references. They fall into three groups:

- Foundational theoretical works on human capital, cognitive load, job demands and resources, and social exchange

- International reviews and meta-analyses on training, spacing, work–family conflict and the well-being–performance relationship
- India-focused studies and an institutional report on skill demand, work-life balance, microlearning and adaptive learning.

Sources were selected purposively on three criteria: direct relevance to at least one research question, publication in a peer-reviewed or institutional outlet, and availability of bibliographic details. No primary data were collected.

### 3.4. Analytical Strategy

The sources were analysed thematically following the phases described by Braun and Clarke (2006): familiarisation, generation of initial codes, search for themes, review of themes, definition and naming of themes, and reporting. Codes were first derived deductively from the research questions and then refined inductively as recurring ideas emerged. The resulting themes were related to one another to construct the conceptual framework, and each proposition was derived from the convergence of theory and evidence within a theme.

## IV. RESULTS

### 4.1. Overview of the Literature Reviewed

The 22 sources span the period 1964 to 2025. The theoretical works are drawn from economics, cognitive science, occupational psychology and organisational behaviour; the reviews and meta-analyses are international; and the contextual sources concern India and include recent journal studies and a conference contribution. Four themes were identified, and they are summarised in Table 1.

Table 1. Thematic Synthesis of the Literature and Derived Propositions

| Theme                                       | Core insight from the synthesis                                                                                                                                 | Representative sources                                                                                           | Proposition |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------|
| Skill demand and the learning imperative    | Rapid change in job content makes continuous reskilling a condition of organisational performance; training pays only when it is designed and transferred well. | Becker (1964); WEF (2023); Salas et al. (2012); Noe et al. (2014)                                                | P1          |
| Learning design: micro and adaptive formats | Short, spaced units and adaptive sequencing improve retention and fit around work; effectiveness depends on cognitive load, spacing and learner engagement.     | Cepeda et al. (2006); Sweller (1988); Hug (2005); Aswani (2025b); Aswani & Kalluraya (2023)                      | P2          |
| Well-being and work-life balance            | Work-life balance policies and supervisor support reduce work–family conflict and raise well-being and satisfaction.                                            | Greenhaus & Beutell (1985); Kossek et al. (2011); Bakker & Demerouti (2007); Allen et al. (2015); Aswani (2025a) | P3          |
| . From well-being to performance            | Well-being and satisfaction predict performance; perceived organisational support creates reciprocal obligation; learning and well-being reinforce each other.  | Wright & Cropanzano (2000); Judge et al. (2001); Eisenberger et al. (1986); Blau (1964); Grant et al. (2007)     | P4, P5      |

Note. WEF = World Economic Forum. Propositions P1 to P5 are stated in Section 3.2.

### 4.2. The Learning Imperative

The first theme establishes that continuous learning has become a condition of performance. Human capital theory (Becker, 1964) supplies the rationale, the World Economic Forum (2023) documents the scale of skill disruption, and the training science of Salas et al. (2012) shows that returns depend on design and transfer rather than on expenditure alone. Noe et al. (2014) locate responsibility increasingly with the learner and the learning climate. This grounds P1.

### 4.3. Learning Design

The second theme identifies the designs that suit learning while working. The spacing effect (Cepeda et al., 2006) and cognitive load theory (Sweller, 1988) explain why short, distributed units outperform concentrated sessions; Hug (2005) and Aswani (2025b) translate these principles into microlearning; and Aswani and Kalluraya (2023) describe how adaptive technologies personalise the sequence and pace of learning. Together they suggest that the format of learning is as important as its content. This grounds P2.

### 4.4. Well-Being and Work-Life Balance

The third theme concerns well-being. Work–family conflict (Greenhaus & Beutell, 1985) is reduced by work-life balance policies and, above all, by supervisor support specific to work–family matters (Kossek et al., 2011). Flexible arrangements help when well managed (Allen et al., 2015). The Indian evidence of Aswani (2025a) indicates that work-life balance policies contribute to well-being and job satisfaction in this context as well. The job demands–resources model (Bakker & Demerouti, 2007) frames these policies as resources that offset demands, while Grant et al. (2007) remind that well-being has several dimensions that may trade off. This grounds P3.

#### 4.5. From Well-Being to Performance

The fourth theme traces the pathway to performance. Well-being (Wright & Cropanzano, 2000) and satisfaction (Judge et al., 2001) predict performance, and perceived organisational support (Eisenberger et al., 1986), grounded in social exchange (Blau, 1964), explains why: supported employees reciprocate. The same mechanism links the themes together. Learning opportunities are read as support and are reciprocated; well-being sustains the attention and persistence that learning requires; and well-designed learning reduces the strain that change would otherwise impose. These observations ground P4 and P5.

#### 4.6. The Learning–Well-Being–Performance Framework

Taken together, the themes yield an integrative framework with two antecedents and one outcome. Workplace learning, designed in micro and adaptive formats and supported at the point of transfer, and employee well-being, supported by work-life balance policies and supervisor support, are the antecedents. Perceived organisational support mediates the path from each antecedent to job performance, and the two antecedents interact so that each raises the return on the other. The five propositions correspond to these relationships. The framework implies that learning and development and well-being should be planned together rather than as separate budget lines.

### V. DISCUSSION

The synthesis supports a simple but often neglected position: organisations build a future-ready workforce by investing in the capacity to learn and in the conditions under which people can learn. The training science reviewed shows that expenditure without design and transfer support is largely wasted (Salas et al., 2012), and the cognitive evidence shows that format matters: spaced, focused and adaptive learning retains more (Cepeda et al., 2006; Aswani, 2025b; Aswani & Kalluraya, 2023). For Indian organisations, where employees frequently combine long working hours with family obligations, these formats have the further advantage of fitting into the working day rather than competing with it.

The well-being evidence carries a parallel message. Policies on paper reduce work–family conflict less than supervisors who apply them with understanding (Kossek et al., 2011), and the Indian findings of Aswani (2025a) confirm that work-life balance policies are associated with well-being and satisfaction. Since well-being and satisfaction predict performance (Wright & Cropanzano, 2000; Judge et al., 2001), the case for such policies is a business case and not only a welfare case. Grant et al. (2007) add a necessary caution: a policy that improves one dimension of well-being, such as flexibility, may strain another, such as social connection, and evaluation should look at all three.

The most important implication is the interaction between the two. Learning demands, if piled on top of an already demanding job, become a source of strain rather than a resource (Bakker & Demerouti, 2007). Conversely, employees who feel supported reciprocate with engagement in learning as well as in work (Eisenberger et al., 1986). Organisations that treat learning and well-being as one agenda are therefore likely to obtain more from both.

### VI. RECOMMENDATIONS

#### 6.1. For Human Resource Managers

- Design learning in short, spaced and adaptive formats that fit into working time, and measure retention and application rather than completion alone.
- Precede training with needs analysis and follow it with transfer support from supervisors, as the training science recommends.
- Plan learning and well-being together, so that learning demands are matched by time, support and recognition.

#### 6.2. For Line Managers

- Apply work-life balance policies with understanding of individual circumstances; supervisor support specific to work–family matters has the largest effect on conflict.
- Protect time for learning within the working week rather than expecting it to be added to personal time.

#### 6.3. For Policymakers and Educational Institutions

- Encourage the adoption of microlearning and adaptive platforms in national skilling initiatives, where working adults are the target population.
- Recognise well-being and work-life balance in workplace standards and in management education, since they condition the return on skilling investments.

### VII. CONCLUSION

This conceptual review has argued that workplace learning and employee well-being are joint determinants of performance and should be managed as such. Drawing on foundational theory, international reviews and meta-analyses, and recent Indian studies, it identified four themes and integrated them into a Learning–Well-Being–Performance framework with five propositions. Continuous learning has become a condition of performance; micro and adaptive formats make learning feasible for working adults; work-life balance policies and supervisor support raise well-being; and well-being, through perceived organisational support, raises performance while sustaining the capacity to learn. The study is limited by its conceptual nature and its purposive selection of literature. Future research should test the propositions with employee-level data from Indian organisations, compare learning formats experimentally, and examine the interaction between learning demands and well-being over time.

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## Digital Transformation of Indian Commerce and the Changing World of Work: A Conceptual Review of Business, Employment and Workforce Capability

V. B Hans

Research Professor, Srinivas University, Mangaluru, Karnataka, India

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### Abstract

This conceptual review examines how digital transformation is reshaping Indian commerce and the world of work that sustains it. Adopting an integrative literature review design, the study synthesises 30 scholarly and institutional sources, comprising foundational theory on technology and organisations, recent evidence on automation and artificial intelligence, and India-focused research and official reports on digitalisation, employment, informality and leadership, through thematic analysis. Four themes emerge: the digitalisation of commercial activity, the recomposition of employment, the centrality of workforce capability and leadership, and the risk of a widening divide between the organised economy and traditional and unorganised sectors. Official estimates place India's digital economy at 11.74% of national income in 2022-23, with a projected share of nearly one-fifth by 2029-30, which underlines the scale of the shift. The synthesis indicates that the employment effects of digitalisation are compositional and not uniformly negative, that returns to digital investment depend on complementary human and organisational capabilities, and that the informal workforce, including handloom producers, construction labour and migrant workers, remains largely outside the digital dividend. The paper integrates these insights into a Digital Commerce–Work–Capability framework and advances five research propositions for empirical testing. It offers practical guidance for business managers, educational institutions and policymakers seeking inclusive digital growth.

**Keywords:** - Digital Transformation, Indian Commerce, Employment, Artificial Intelligence, Workforce Capability, Unorganised Sector, Conceptual Review

## I. INTRODUCTION

### 1.1. Background and Context

Commerce has always been shaped by the technologies through which goods, money and information move. Over the past decade, the diffusion of mobile internet, digital payments, e-commerce platforms, cloud computing and, most recently, generative artificial intelligence (AI) has altered how Indian enterprises source, sell, finance and manage. Digital transformation, understood as a process in which digital technologies trigger significant changes in an organisation's value creation and structure (Vial, 2019), is no longer confined to the information technology sector; it now extends into trade, banking, education and other traditional industries (Verhoef et al., 2021). Brynjolfsson and McAfee (2014) describe this as a second machine age, in which digital technologies do for cognitive work what earlier machines did for physical work.

The scale of the change in India is considerable. The Ministry of Electronics and Information Technology (MeitY, 2025) estimates that the digital economy accounted for 11.74% of national income in 2022-23 and employed 14.67 million workers, about 2.55% of the workforce, and projects that its share will approach one-fifth of national income by 2029-30. The gap between the digital economy's share of income and its share of employment is itself instructive: digital value creation is highly productive but does not absorb labour on the same scale. Bharadwaj et al. (2013) argue that, in such conditions, digital strategy can no longer be treated as a functional subset of business strategy; it has become business strategy itself.

## 1.2. Problem Statement

Commerce scholarship in India has tended to treat digitalisation as a question of technology adoption, covering payment systems, online marketplaces and enterprise software, while labour economics has treated it as a question of jobs. The two conversations rarely meet. Yet the commercial gains from digital technologies depend on the people who deploy them, and the employment consequences depend on how firms reorganise commerce around them. Research on India has examined how digitalisation affects employment (Aswani & Kalluraya, 2023), and cross-country evidence on AI indicates falling employment in routine cognitive occupations alongside rising demand for complex problem-solving and interpersonal skills (Aswani, 2026). Meanwhile, a substantial part of Indian commerce continues to rest on informal activity: close to nine in ten Indian workers are informally employed (International Labour Organization, 2018; Mehrotra, 2019), in occupations ranging from handloom weaving to construction and circular migrant labour. The place of these sectors in a digitalising economy remains under-examined. An integrated account that links digital commerce, employment, workforce capability and inclusion is lacking, and this study addresses that gap.

## 1.3. Research Objectives

This study pursues the following specific objectives:

- To synthesise theoretical and empirical literature on the digital transformation of commerce, with particular reference to India.
- To examine how digitalisation and artificial intelligence recompose employment and skill demand.
- To identify the workforce capability, learning and leadership conditions under which digital investment yields commercial returns.
- To assess the position of traditional and unorganised sectors in a digitalising economy.
- To develop an integrative conceptual framework and research propositions for future empirical work.

## 1.4. Research Questions

- How is digital transformation altering the conduct of commerce in India?
- What are the consequences of digitalisation and AI for the volume and composition of employment?
- Which human and organisational capabilities condition the returns to digital transformation?
- How can traditional and unorganised sectors be included in the digital dividend?

## 1.5. Significance of Study

The study contributes in three ways. First, it brings together the commerce, management and labour economics literatures, which are usually read apart. Second, it grounds the discussion in Indian evidence on digitalisation, employment and informality, which gives the propositions local relevance. Third, it offers a set of testable propositions that researchers can take to primary data, together with practical guidance for managers, educational institutions and policymakers.

## 1.6. Scope and Limitations

The study is conceptual. It relies on published literature and official secondary data and reports no primary survey or econometric results. The literature was selected purposively and not through an exhaustive systematic search, so the synthesis is illustrative of the field and not a census of it. The propositions advanced are therefore to be read as hypotheses for future testing and not as established findings.

# II. LITERATURE REVIEW

## 2.1. Theoretical Foundations

Four theoretical traditions inform the study. The first concerns technology and economic change. Schumpeter (1942) characterised capitalism as a process of creative destruction in which new combinations displace old ones; digital platforms that displace traditional intermediaries are a contemporary instance. The second is the task-based view of technology and labour. Autor (2015) argues that automation substitutes for routine tasks while complementing non-routine ones, which explains why employment has polarised and not disappeared. Acemoglu and Restrepo (2019) formalise this as a balance between a displacement effect and a reinstatement effect that arises when technology creates new tasks for labour. Goldin and Katz (2008) add that the distributional outcome depends on whether the supply of skills keeps pace with technology.

The third tradition is the resource-based and dynamic capabilities view of the firm. Barney (1991) holds that sustained advantage derives from resources that are valuable, rare and difficult to imitate. Digital tools that any competitor can purchase do not meet this test, whereas the human and organisational capabilities that put them to use may. Teece (2007) describes the capacities to sense opportunities, seize them and reconfigure assets, all of which digital transformation demands. Human capital theory (Becker, 1964) supplies the corresponding logic for investment in training. The fourth tradition concerns adoption. The technology acceptance model explains individual adoption through perceived usefulness and perceived ease of use (Davis, 1989), while the technology–organisation–environment framework locates firm-level adoption in technological, organisational and environmental contexts (Tornatzky & Fleischer, 1990).

## 2.2. Digital Transformation of Commerce

Vial (2019) synthesises the information systems literature into a model in which digital technologies create disruptions, prompt strategic responses and alter value creation paths, subject to structural changes and organisational barriers. Verhoef et al. (2021) distinguish three stages, namely digitisation, digitalisation and digital transformation, and argue that the last requires

new digital resources, an agile organisational structure and appropriate performance metrics. For India, the official measurement exercise is notable for including the digital share of three traditional industries: banking, financial services and insurance; trade; and education. Together these contribute about 2% of national gross value added, comparable to the contribution of the new digital platforms and intermediaries (MeitY, 2025). Trade, the core subject matter of commerce, is thus already a material part of the digital economy. Bharadwaj et al. (2013) add that digital business strategy is distinguished by its scope, scale, speed and the sources of value creation it opens up, all of which apply to trading enterprises.

### **2.3. Digitalisation, Artificial Intelligence and Employment**

Frey and Osborne (2017) estimated that about 47% of total United States employment was at high risk of computerisation, a figure that shaped a decade of debate. Later task-based work has tempered this conclusion by showing that occupations are bundles of tasks, only some of which can be automated (Autor, 2015), and that new tasks continually reinstate labour (Acemoglu & Restrepo, 2019). For generative AI, Gmyrek et al. (2023) conclude that the technology is more likely to augment jobs than to destroy them, by automating some tasks within occupations, with clerical work the most exposed category. Within the Indian literature, Aswani and Kalluraya (2023) examine the effect of digitalisation on employment. Aswani (2026), using data for 38 OECD countries from 2019 to 2025 and instrumental variable estimation, reports that a one standard deviation increase in AI adoption is associated with a 2.3% reduction in employment in routine cognitive occupations and a 1.8% increase in employment requiring complex problem-solving and interpersonal skills. The weight of this evidence is that the employment effect of digital technology is principally one of composition.

### **2.4. Workforce Capability, Learning and Leadership**

If the binding constraint is skill, the mechanisms of skill formation matter. Noe et al. (2014) review how workplace learning has shifted towards technology-delivered, self-directed and informal formats, including adaptive systems that tailor content and pace to the learner and short, focused learning units that fit around working hours. Such formats suit working adults who must reskill without leaving employment, and their effectiveness depends on organisational support and on the learner's own engagement.

Digital change is also organisational change, and leadership conditions its success. Bass (1985) distinguishes transformational leaders, who raise followers' motivation beyond immediate self-interest, from transactional ones, and Goleman (1995) popularised emotional intelligence as a set of competencies for managing one's own emotions and those of others. In a mixed-methods study of 218 executives and 42 interviewed leaders, Aswani (2025) finds that specific emotional intelligence competencies predict transformational leadership behaviours, that the relationship is moderated by organisational culture, industry context and leadership experience, and that emotionally intelligent transformational leaders are better able to navigate organisational change and cultivate psychological safety. Work–family conflict, which arises when the demands of the two roles are mutually incompatible (Greenhaus & Beutell, 1985), is relevant as well, because digital work blurs the boundary between working and non-working time.

### **2.5. Traditional and Unorganised Sectors**

A large part of Indian commerce lies outside the organised, digitally enabled economy. The International Labour Organization (2018) estimates that about 88% of employment in India is informal, and Mehrotra (2019) shows that informality has persisted even as the workforce has moved out of agriculture into construction, trade and services. Internal migration is a central feature of this labour market: Deshingkar and Akter (2009) document large flows of circular migrants who move between rural homes and urban work in construction, manufacturing and services, typically without social protection. Traditional craft-based enterprise is another case. The Fourth All India Handloom Census records more than 3.5 million handloom workers, most of them women and most working from household units with limited access to markets and credit (Ministry of Textiles, 2019). Notably, the official estimate of the digital economy acknowledges that it could not capture the digitalisation of the informal sector for want of data (MeitY, 2025).

### **2.6. Research Gaps**

Three gaps follow. First, the literature on digital commerce and the literature on digital-era employment are seldom integrated, although each conditions the other. Second, capability formation, including learning formats, leadership and well-being, is usually studied apart from digital strategy, even though theory treats it as the source of durable advantage. Third, traditional and unorganised sectors are documented largely in descriptive terms, with little attention to how they might participate in digital commerce. The framework developed below responds to these gaps.

## **III. RESEARCH METHODOLOGY**

### **3.1. Research Design**

The study adopts an integrative literature review design. Snyder (2019) identifies the integrative review as appropriate where the aim is to combine perspectives from different fields and to generate a new conceptual framework, in contrast to systematic reviews that aggregate evidence on a narrow question. Torraco (2005) similarly describes the integrative review as a form of research that produces new frameworks through critique and synthesis of representative literature. The design suits a topic that spans commerce, management, labour economics and education.

### **3.2. Research Propositions**

Because the study is conceptual, it advances propositions for future testing in place of statistical hypotheses:

- P1: Digitalisation expands market reach and lowers transaction costs for commercial enterprises, but the resulting performance gains are conditional on complementary organisational capabilities.
- P2: The employment effects of digitalisation and AI are compositional and not merely aggregate: routine tasks contract while analytical, problem-solving and interpersonal tasks expand.
- P3: Continuous, technology-enabled learning, including adaptive learning and microlearning, mediates the relationship between digital adoption and workforce productivity.
- P4: Emotionally intelligent transformational leadership and well-being-oriented human resource policies positively moderate the success of digital change initiatives.
- P5: In the absence of targeted inclusion measures, digitalisation widens the gap between organised enterprises and traditional and unorganised sectors.

### 3.3. Data Sources and Selection

The review corpus comprises the 30 sources listed in the references. They fall into three groups: (a) foundational theoretical works on technology, labour, firm capability and adoption; (b) recent international evidence on automation and AI, including an institutional working paper; and (c) India-focused studies and official or institutional reports on digitalisation, employment, informality and leadership. Sources were selected purposively on three criteria: direct relevance to at least one research question, publication in a peer-reviewed or institutional outlet, and availability of bibliographic details. No primary data were collected.

### 3.4. Analytical Strategy

The sources were analysed thematically following the phases described by Braun and Clarke (2006): familiarisation, generation of initial codes, search for themes, review of themes, definition and naming of themes, and reporting. Codes were first derived deductively from the research questions and then refined inductively as recurring ideas emerged. The resulting themes were related to one another to construct the conceptual framework, and each proposition was derived from the convergence of theory and evidence within a theme.

## IV. RESULTS

### 4.1. Overview of the Literature Reviewed

The 30 sources span the period 1942 to 2026. The theoretical works are drawn predominantly from economics, strategic management and information systems; the evidence on automation and AI is international; and the contextual studies and reports concern India. The India-focused sources include official statistics, institutional working papers, a mixed-methods study and a cross-country econometric study. Four themes were identified, and they are summarised in Table 1.

Table 1. Thematic Synthesis of the Literature and Derived Propositions

| Theme                               | Core insight from the synthesis                                                                                                                                                                              | Representative sources                                                                                                                                | Proposition |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Digitalisation of commerce          | Digital technologies alter how value is created and delivered; trade, financial services and education already contribute materially to India's digital economy; returns depend on complementary capability. | Vial (2019); Verhoef et al. (2021); Bharadwaj et al. (2013); MeitY (2025)                                                                             | P1          |
| Recomposition of employment         | Routine tasks contract while non-routine analytical and interpersonal tasks expand; the net effect depends on the creation of new tasks and the supply of skills.                                            | Autor (2015); Acemoglu & Restrepo (2019); Frey & Osborne (2017); Goldin & Katz (2008); Gmyrek et al. (2023); Aswani & Kalluraya (2023); Aswani (2026) | P2          |
| Capability, learning and leadership | Durable advantage rests on human and organisational capability; flexible learning formats, emotionally intelligent leadership and well-being policies enable digital change.                                 | Barney (1991); Teece (2007); Becker (1964); Bass (1985); Goleman (1995); Noe et al. (2014); Greenhaus & Beutell (1985); Aswani (2025)                 | P3, P4      |
| Traditional and unorganised sectors | Large labour-intensive segments remain weakly connected to digital commerce and are poorly captured in measurement of the digital economy.                                                                   | ILO (2018); Mehrotra (2019); Deshingkar & Akter (2009); Ministry of Textiles (2019); MeitY (2025)                                                     | P5          |

Note. MeitY = Ministry of Electronics and Information Technology; ILO = International Labour Organization. Propositions P1 to P5 are stated in Section 3.2.

### 4.2. Digitalisation of Commerce and the Recomposition of Employment

The first two themes are closely linked. On the commercial side, the literature converges on the view that digital technology changes how value is created and not merely how efficiently existing processes run (Vial, 2019; Verhoef et al., 2021). The inclusion of trade, financial services and education in the official estimate of the digital economy (MeitY, 2025) confirms that mainstream commerce is already digital in a measurable sense. On the employment side, the sources agree that the principal effect is a change in the task content of work (Autor, 2015; Acemoglu & Restrepo, 2019; Gmyrek et al., 2023). The finding that AI adoption reduces routine cognitive employment while raising employment that demands complex problem-solving and interpersonal skills (Aswani, 2026) is directly relevant to commerce, since book-keeping, data entry, order processing and routine customer service are routine cognitive work. These observations ground P1 and P2

### 4.3. Capability, Learning and Leadership

The third theme identifies the conditions under which digital investment pays. Resource-based reasoning implies that purchased technology cannot by itself sustain advantage (Barney, 1991) and that the capabilities to sense, seize and reconfigure do so (Teece, 2007). The literature reviewed points to three such capabilities. The first is continuous learning, for which technology-delivered and self-directed formats are well suited (Noe et al., 2014). The second is leadership: emotionally intelligent transformational leaders are better able to steer change and maintain psychological safety (Aswani, 2025), which matters when employees fear displacement. The third is attention to well-being, since digital work intensifies the conflict between work and family roles (Greenhaus & Beutell, 1985). These observations ground P3 and P4.

#### **4.4. Traditional and Unorganised Sectors**

The fourth theme concerns those at the margin of the digital economy. The sources describe an economy in structural transition in which handloom units, construction sites and migrant labour markets continue to operate through informal arrangements (International Labour Organization, 2018; Mehrotra, 2019; Deshingkar & Akter, 2009; Ministry of Textiles, 2019). Goldin and Katz (2008) show that when skill supply lags behind technology, inequality widens. Applied to the Indian setting, the implication is that the benefits of digital commerce will accrue disproportionately to organised enterprises unless deliberate measures extend digital market access, payment systems and skills to traditional producers and informal workers. This grounds P5.

#### **4.5. The Digital Commerce–Work–Capability Framework**

Taken together, the themes yield an integrative framework with four elements. Digital adoption by commercial enterprises is the antecedent. It produces two sets of outcomes: commercial outcomes, such as market reach, transaction cost and customer responsiveness, and employment outcomes, namely the volume and task composition of jobs. Workforce learning mediates the path from adoption to outcomes, because technology yields returns only when employees can use it. Leadership quality and well-being-oriented human resource policies moderate the same path, because they govern whether employees accept or resist change. Sectoral inclusion operates as a boundary condition: the framework holds most strongly for organised enterprises and weakens for traditional and unorganised sectors unless inclusion measures are present. The five propositions correspond to these relationships.

### **V. DISCUSSION**

The synthesis supports a position between technological optimism and pessimism. Predictions of large-scale job loss (Frey & Osborne, 2017) have not been borne out in the form originally feared, but neither is the transition costless. The evidence that routine cognitive work contracts as AI adoption rises (Aswani, 2026) bears directly on the occupations that commerce education has traditionally supplied, including accounting assistance, clerical banking work and sales administration. The reinstatement effect described by Acemoglu and Restrepo (2019) will benefit commerce graduates only if curricula shift towards analytics, advisory work, digital marketing and relationship management.

For firms, the central implication is that digital transformation is a human resource strategy as much as a technology strategy. This is consistent with the dynamic capabilities view (Teece, 2007) and with the stage model of Verhoef et al. (2021), in which organisational structure and metrics must change along with technology. The Indian studies reviewed add texture to this argument: learning formats that fit around work (Noe et al., 2014), leaders who manage the emotional side of change (Aswani, 2025) and policies that limit work–family conflict (Greenhaus & Beutell, 1985) are the practical levers through which capability is built.

For the wider economy, the concern is inclusion. The digital economy generates a share of income several times larger than its share of employment (MeitY, 2025), while much of the workforce remains in sectors such as construction and traditional crafts, and depends heavily on informal and migrant labour (Mehrotra, 2019; Deshingkar & Akter, 2009). Schumpeter's (1942) creative destruction is socially sustainable only where those displaced or bypassed have a route into the new economy. The handloom sector is a case in point: digital marketplaces could in principle connect weavers directly with distant customers, but realising that potential requires digital skills, logistics and working capital that household-based producers often lack (Ministry of Textiles, 2019).

### **VI. RECOMMENDATIONS**

#### **6.1. For Business Managers**

- Treat workforce capability as part of every digital investment decision, and budget for training alongside technology.
- Adopt short, modular and adaptive learning formats so that employees can reskill without leaving work.
- Develop emotional intelligence and transformational leadership among managers who lead digital change, and protect employee well-being through clear work-life balance policies.
- Redesign routine cognitive roles towards analytical, advisory and customer-relationship tasks instead of simply eliminating them.

#### **6.2. For Educational Institutions**

- Revise commerce curricula to include data analytics, digital marketing, financial technology and AI literacy alongside core accounting and finance.
- Strengthen institution–industry relationships through internships, joint projects and practitioner-led teaching.

#### **6.3. For Policymakers**

- Extend digital market access, digital payment adoption and basic digital skills to handloom clusters, small traders and

other traditional producers.

- Include migrant and construction workers in skilling and social security schemes that are portable across states and employers.
- Improve the measurement of digitalisation in the informal sector so that policy is based on evidence.

## VII. CONCLUSION

This conceptual review has argued that the digital transformation of Indian commerce cannot be understood apart from the world of work. Drawing on foundational theory, international evidence and India-focused studies and reports, it identified four themes and integrated them into a Digital Commerce–Work–Capability framework with five propositions. Digitalisation changes how commercial value is created; it recomposes employment away from routine cognitive tasks; its returns depend on learning, leadership and well-being; and its benefits will bypass traditional and unorganised sectors unless inclusion is pursued deliberately. The study is limited by its conceptual nature and its purposive selection of literature. Future research should test the propositions with primary data from commercial enterprises, compare organised and unorganised sectors, and examine over time how AI adoption alters the skills demanded of commerce graduates.

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# Foreign Direct Investment, Globalisation and Indian Commerce: Trends, Composition and Growth Linkages, 2000–2025

Ashwini V

Assistant Professor and Coordinator of the PG Department of Commerce, P.E.S. Institute of Advanced Management Studies, Shimoga, Karnataka, India

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## Abstract

This study examines the trends, composition and growth linkages of foreign direct investment (FDI) in India over the quarter century from 2000-01 to 2024-25, and places them in the context of economic globalisation and digitalisation. It combines an integrative review of 19 scholarly and institutional sources, drawing on the theory of the multinational enterprise, the empirical literature on FDI and growth, and India-focused studies of liberalisation, FDI policy and sectoral change, with a descriptive analysis of official data published by the Department for Promotion of Industry and Internal Trade. The data show that annual FDI equity inflows rose from US\$2.5 billion in 2000-01 to a peak of US\$59.6 billion in 2020-21 before settling at US\$44 to 46 billion; that total FDI inflows, including reinvested earnings and other capital, reached a record US\$81.04 billion in 2024-25, more than double the 2013-14 level; that cumulative inflows over the eleven years to 2024-25 were 143% higher than in the preceding eleven years and account for about 70% of the US\$1.07 trillion received since 2000; and that inflows remain concentrated by sector (services, software and trading together 43%), by source (Singapore, Mauritius and the United States together 58%) and by destination (Maharashtra, Karnataka and Delhi together 64%). Four themes are developed: the liberalisation of the FDI regime, the scale and step-wise trend of inflows, the concentration of their composition, and the conditions under which FDI translates into growth. The findings are organised into a Regime–Inflow–Absorption framework and five research propositions. The paper argues that India's FDI performance is a policy achievement whose developmental return depends on broadening sectoral and regional absorption, and that digitalisation is changing both what is invested in and how.

**Keywords:** - Foreign Direct Investment, Economic Globalisation, Liberalisation, FDI Policy, Sectoral Composition, Economic Growth, Digitalisation, Indian Economy

## I. INTRODUCTION

### 1.1. Background and Context

Foreign direct investment has been at the centre of India's engagement with the world economy since the reforms of 1991. Before that year, foreign ownership was restricted, approvals were discretionary and inflows were negligible; after it, successive governments raised sectoral caps, moved most activities to an automatic route and simplified procedures, so that India became one of the largest recipients of FDI among developing economies (Ahluwalia, 2002; Kumar, 2005). The Department for Promotion of Industry and Internal Trade (DPIIT, 2025) reports cumulative inflows of US\$1,072 billion between April 2000 and March 2025, and a record US\$81.04 billion in 2024-25 alone (Press Information Bureau [PIB], 2025).

This opening has unfolded within a wider process of economic globalisation, in which trade, capital, technology and, increasingly, data move across borders with diminishing friction. Aswani and Kalluraya (2023b) examine the relationship between economic globalisation and digitisation and argue that digital technologies have become both an object of cross-border investment and the infrastructure through which it flows. Aswani and Kalluraya (2024) explore the evolution of India's FDI policies and the trends in inflows that have followed, and draw insights on the direction of the regime. The present study

extends that work by assembling the official data on inflows over twenty-five years, by analysing their composition, and by reading them against the theoretical and empirical literature on what FDI does for a host economy.

## 1.2. Problem Statement

Public discussion of FDI in India tends to focus on headline totals, and the totals are impressive. Yet the developmental value of FDI depends less on its volume than on its composition and absorption: which sectors it enters, which regions it reaches, whether it brings technology and export capacity, and whether the host economy has the human capital and financial depth to benefit. The empirical literature is clear that these conditions matter (Borensztein et al., 1998; Alfaro et al., 2004), and sector-level work on India finds that the growth effects of FDI differ sharply by sector (Chakraborty & Nunnenkamp, 2008). An account that combines the trend in inflows with their composition and with the conditions for their absorption, and that reflects the changing nature of investment in a digitalising economy, is lacking. This study addresses that gap.

## 1.3. Research Objectives

This study pursues the following specific objectives:

- To review the theoretical and empirical literature on foreign direct investment, its determinants and its effects on host-country growth.
- To document, from official data, the trend of FDI inflows to India from 2000-01 to 2024-25.
- To analyse the composition of inflows by sector, source country and recipient state.
- To assess the conditions under which FDI translates into growth in the Indian context, including the role of economic globalisation and digitalisation.
- To develop an integrative conceptual framework and research propositions for future empirical work.

## 1.4. Research Questions

- How has India's FDI regime evolved, and how has the trend of inflows responded?
- What is the scale of inflows over the past quarter century, and how has it changed between policy phases?
- How concentrated are inflows by sector, source and destination, and what does this imply for the distribution of benefits?
- Under what conditions does FDI contribute to growth, and how is digitalisation changing the picture?

## 1.5. Significance of Study

The study contributes in three ways. First, it brings together the theory of the multinational enterprise, the cross-country evidence on FDI and growth, and the India-specific policy literature, which are usually read apart. Second, it assembles the official DPIIT series on inflows, sectors, sources and states into a single descriptive analysis covering twenty-five years, and computes the comparisons across policy phases that the raw tables do not provide. Third, it offers a framework and propositions that researchers can test with sector- or state-level data, together with practical guidance for policymakers, investment promotion agencies and domestic firms that compete or partner with foreign investors.

## 1.6. Scope and Limitations

The study is conceptual and descriptive. It relies on published literature and official secondary data and reports no primary survey or econometric estimation. The DPIIT data distinguish between FDI equity inflows and total FDI inflows, which add reinvested earnings and other capital; the two series are not interchangeable and are presented separately. The sector and source-country classifications are those of DPIIT, and the country of origin recorded is the immediate investing jurisdiction, which for Singapore and Mauritius often differs from the ultimate owner. Comparisons are indicative, and the analysis is confined to descriptive statistics. The propositions advanced are hypotheses for future testing and not established findings.

# II. LITERATURE REVIEW

## 2.1. Theoretical Foundations

The theory of foreign direct investment explains why firms produce abroad rather than export or license. Hymer (1976) argued that a firm invests abroad when it possesses an advantage, such as technology, brand or organisation, that outweighs the disadvantage of operating in a foreign environment. Vernon (1966) added a dynamic dimension in the product cycle, in which production migrates from the innovating country to lower-cost locations as a product matures. Dunning (1988) synthesised these insights in the eclectic paradigm: a firm undertakes FDI when it has ownership advantages, when the host country offers location advantages, and when internalising the transaction within the firm is superior to the market. Location advantages, which include market size, factor costs, infrastructure and policy, are the variable that host-country policy can influence, and the Indian reforms since 1991 can be read as a sustained effort to improve them.

The growth effects of FDI are a separate question. Borensztein et al. (1998) find in cross-country data that FDI raises growth more than domestic investment does, but only where the host country has a threshold level of human capital. Alfaro et al. (2004) show that the effect depends on the depth of local financial markets. Balasubramanyam et al. (1996) find that FDI is more growth-enhancing in countries pursuing export promotion than in those pursuing import substitution. The common thread is absorptive capacity: FDI transfers technology, management and market access, but the host economy must be able to receive them.

## 2.2. Liberalisation and India's FDI Regime

Ahluwalia (2002) describes the gradualist path of Indian reform, in which FDI liberalisation proceeded sector by sector rather than at a stroke. Kumar (2005) reviews the flows of the 1990s and argues that liberalisation raised the volume of FDI but that its developmental quality, in terms of technology, exports and linkages, depended on the sectors it entered. Since then the regime has been opened further: sectoral caps have been raised in insurance, defence, retail and telecommunications, most sectors have been placed under the automatic route, and procedures have been digitised. Aswani and Kalluraya (2024) trace these policy developments and the trends in inflows that accompanied them, and identify the continuing sensitivity of inflows to policy signals and global conditions. The Chakraborty and Nunnenkamp (2008) finding that reforms raised FDI most in services, and that the growth effects of FDI are strongest in manufacturing but weak in the primary sector, is directly relevant to the composition of inflows analysed below.

## 2.3. Composition and Concentration of Inflows

The composition of FDI shapes its effects. The eclectic paradigm implies that inflows will concentrate where location advantages are greatest, and in India these have been in services, information technology and trading, which draw on the country's skilled workforce and large domestic market, and in the states that host its commercial centres. The source-country pattern reflects a different logic: a large share of inflows is routed through Singapore and Mauritius, jurisdictions whose tax treaties with India make them efficient conduits for investors domiciled elsewhere. Sectoral studies illustrate the manufacturing side of the picture. Aswani and Kalluraya (2023a) analyse the cement industry in India, one of the country's largest manufacturing sectors and one in which international producers have long held significant positions, and document its structure, capacity and growth. Such industries receive a smaller share of FDI than services but are those in which the growth effects identified by Chakraborty and Nunnenkamp (2008) are strongest.

## 2.4. Globalisation, Digitalisation and the Changing Nature of FDI

Economic globalisation, understood as the integration of national markets for goods, services, capital and knowledge, has been the context of India's FDI performance, and digitalisation is now changing its content. Aswani and Kalluraya (2023b) examine the relationship between economic globalisation and digitisation and show how digital technologies both attract cross-border investment, in software, platforms and data infrastructure, and lower the cost of the coordination on which international production depends. The United Nations Conference on Trade and Development (UNCTAD, 2024) reports that digital-economy sectors have become among the most dynamic destinations of global FDI and that digital government, including online single windows for investors, has become a determinant of location. In India, the prominence of computer software and hardware among the leading recipient sectors is the visible result. The growth literature reviewed above applies with particular force here: the absorptive capacity that turns digital FDI into productivity is human capital, and the financial depth that turns it into enterprise is a functioning market for risk capital.

## 2.5. Empirical Evidence for India

Chakraborty and Basu (2002), using cointegration analysis for the period after liberalisation, find that FDI in India is determined more by domestic conditions, including output and the trade regime, than the reverse, and that the causal link from FDI to growth is weaker than often assumed. Chakraborty and Nunnenkamp (2008) refine this at sector level: FDI in manufacturing has positive growth effects, FDI in services is associated with growth but with feedback from growth to FDI, and FDI in the primary sector shows no significant effect. Kumar (2005) reaches a similar conclusion about the importance of sectoral quality. Together these studies caution against reading headline totals as a measure of developmental benefit and point to composition and absorption as the decisive variables.

## 2.6. Research Gaps

Three gaps follow. First, the trend of inflows is usually reported for a few recent years, whereas the policy question requires comparison across the phases of the regime. Second, sector, source and state composition are reported separately, and their joint implication for the distribution of benefits is rarely drawn. Third, the digital transformation of FDI is discussed in the international literature but has not been connected to the Indian data. The framework and the descriptive analysis developed below respond to these gaps.

# III. RESEARCH METHODOLOGY

## 3.1. Research Design

The study combines two components. The first is an integrative literature review, which Snyder (2019) identifies as appropriate for combining perspectives from different fields to generate a conceptual framework and which Torraco (2005) describes as producing new frameworks through critique and synthesis of representative literature. The second is a descriptive analysis of official secondary data, used to establish the scale, trend and composition of FDI inflows. The design is therefore that of a descriptive study based on secondary sources, which suits a topic in which the relevant data are collected comprehensively by a single official agency.

## 3.2. Research Propositions

Because the study is conceptual and descriptive, it advances propositions for future testing in place of statistical hypotheses:

- P1: Successive liberalisation of India's FDI regime has been followed by step increases in inflows, so that the level of inflows in each policy phase exceeds that of the preceding phase.

- P2: Growth in inflows is step-wise rather than continuous, with plateaus following global shocks and domestic policy uncertainty.
- P3: FDI inflows to India are concentrated by sector, source jurisdiction and recipient state, and this concentration limits the regional and sectoral spread of the benefits of FDI.
- P4: The growth effect of FDI in India is stronger in manufacturing and digital services than in trading and the primary sector, and depends on the human capital and financial depth of the receiving region.
- P5: Digitalisation is increasing the share of FDI directed to digital-economy sectors and lowering the cost of locating in India, so that digital infrastructure has become a location advantage in its own right.

### 3.3. Data Sources

The review corpus comprises the 19 sources listed in the references: (a) foundational works on the theory of the multinational enterprise; (b) cross-country and India-specific empirical studies of FDI and growth; and (c) policy and institutional sources. Sources were selected purposively on three criteria: direct relevance to at least one research question, publication in a peer-reviewed or institutional outlet, and availability of bibliographic details.

The secondary data analysed in Section IV are drawn from the fact sheet on FDI published by the Department for Promotion of Industry and Internal Trade (DPIIT, 2025), which compiles data reported by the Reserve Bank of India, and from the official release accompanying the 2024-25 figures (PIB, 2025). Two series are used. FDI equity inflows are available financial-year-wise from 2000-01 to 2023-24 and are used for the long-run trend. Total FDI inflows, which add reinvested earnings and other capital to equity, are used for the comparison of 2013-14, 2023-24 and 2024-25 and for the cumulative comparison of the two eleven-year periods 2003-14 and 2014-25. Sector, source-country and state shares refer to 2024-25. All figures are in US dollars as reported. No primary data were collected.

### 3.4. Analytical Strategy

The literature was analysed thematically following the phases described by Braun and Clarke (2006): familiarisation, generation of initial codes, search for themes, review of themes, definition and naming of themes, and reporting. The secondary data were then organised under the resulting themes and analysed descriptively: the equity series is presented as levels and as multiples of the base year; total inflows are compared across years and periods as percentage changes; and composition is presented as percentage shares and as three-category concentration ratios. No inferential statistics are applied. The themes and the data together were used to construct the conceptual framework, and each proposition was derived from the convergence of theory and evidence within a theme.

## IV. RESULTS

### 4.1. Overview of the Literature Reviewed

The 19 sources span the period 1966 to 2025. The theoretical works are drawn from international business and international economics; the empirical studies are cross-country and India-specific; and the institutional sources are official Indian and United Nations publications. Four themes were identified, and they are summarised in Table 1. Sections 4.2 to 4.5 present the secondary data under each theme, and Section 4.6 integrates the findings into the conceptual framework.

Table 1. Thematic Synthesis of the Literature and Derived Propositions

| Theme                                            | Core insight from the synthesis                                                                                                                                       | Representative sources                                                                                                                | Proposition |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Liberalisation and the FDI regime                | Progressive opening since 1991, with most sectors now under the automatic route, transformed India from a marginal to a leading FDI destination.                      | Ahluwalia (2002); Kumar (2005); Aswani & Kalluraya (2024); DPIIT (2025)                                                               | P1          |
| Scale and trend of inflows                       | Equity inflows rose twenty-fold in two decades; total inflows have doubled since 2013-14; growth has been step-wise, with plateaus after 2008 and 2021.               | DPIIT (2025); PIB (2025); UNCTAD (2024)                                                                                               | P2          |
| Composition: sectors, sources and states         | Inflows are concentrated in services, software and trading; in three source jurisdictions; and in three states, which shapes the distribution of benefits.            | Dunning (1988); Chakraborty & Nunnenkamp (2008); DPIIT (2025); Aswani & Kalluraya (2023a)                                             | P3          |
| Globalisation, digitalisation and growth effects | FDI raises growth where absorptive capacity, human capital and financial depth exist; digitalisation is reshaping both the vehicle and the destination of investment. | Borensztein et al. (1998); Alfaro et al. (2004); Balasubramanyam et al. (1996); Chakraborty & Basu (2002); Aswani & Kalluraya (2023b) | P4, P5      |

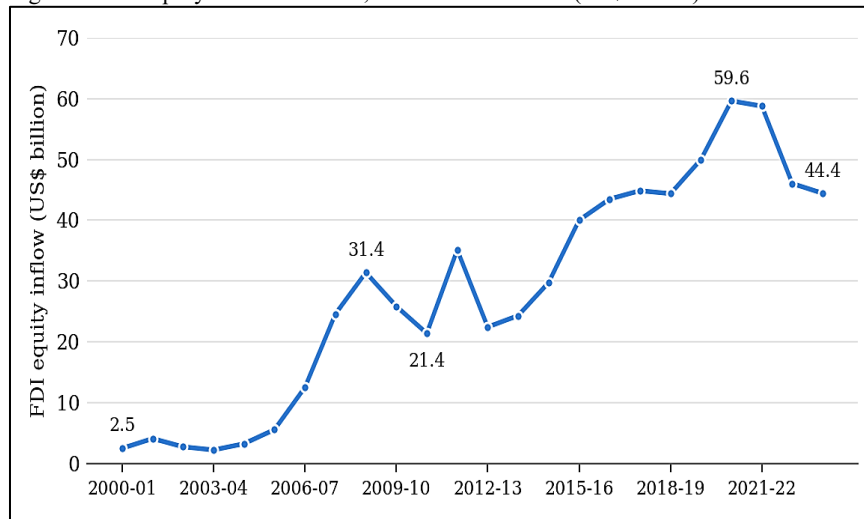
Note. DPIIT = Department for Promotion of Industry and Internal Trade; PIB = Press Information Bureau; UNCTAD = United Nations Conference on Trade and Development. Propositions P1 to P5 are stated in Section 3.2.

### 4.2. Liberalisation and the Long-Run Trend of Equity Inflows

Figure 1 traces FDI equity inflows from 2000-01 to 2023-24. Three phases are visible. In the first, from 2000-01 to 2005-06, inflows were small and flat, between US\$2.2 and 5.5 billion a year. In the second, from 2006-07 to 2008-09, they rose almost six-fold in three years to US\$31.4 billion, following the opening of sectors such as telecommunications, real estate and single-brand retail and the general buoyancy of global capital before the financial crisis. The crisis produced the first plateau: inflows fell to US\$21.4 billion in 2010-11 and oscillated between US\$22 and 35 billion until 2013-14. The third phase

began in 2014-15 with a further round of liberalisation and promotion, and inflows climbed from US\$29.7 billion to a peak of US\$59.6 billion in 2020-21, twenty-four times the level of 2000-01. A second plateau followed: inflows settled at US\$46.0 billion in 2022-23 and US\$44.4 billion in 2023-24 as global monetary tightening reduced cross-border investment (DPIIT, 2025).

Figure 1. FDI equity inflows to India, 2000-01 to 2023-24 (US\$ billion)



Source. DPIIT (2025), fact sheet on FDI, financial-year-wise equity inflow.

The pattern corresponds closely to the policy phases that Aswani and Kalluraya (2024) describe, and it supports both P1 and P2. Each liberalising phase was followed by a step increase in the level of inflows, and each step was followed by a plateau set off by an external shock. The trend is therefore one of rising steps rather than continuous growth, which is what the eclectic paradigm would predict when location advantages improve discretely through policy while the supply of investable capital fluctuates with global conditions.

### 4.3. Scale of Total Inflows Across Policy Phases

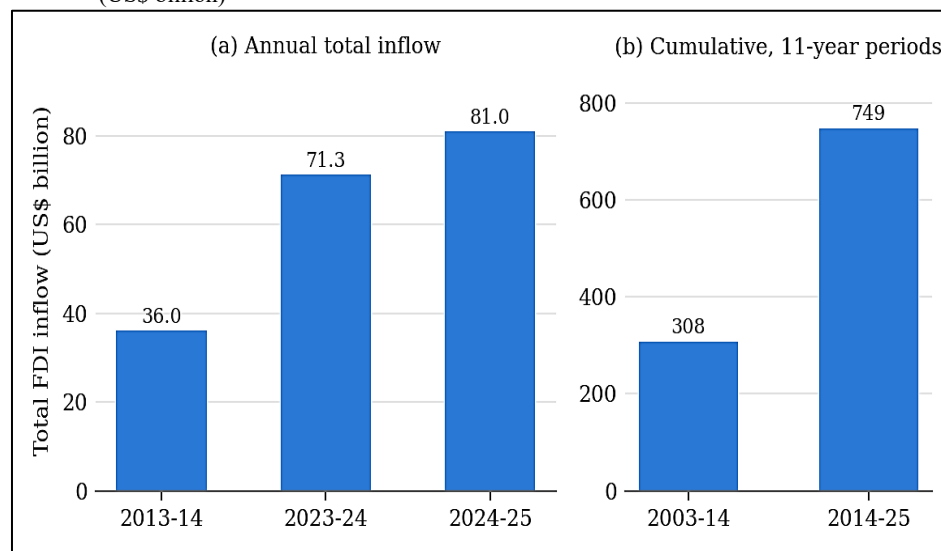
Total FDI inflows, which include reinvested earnings and other capital, give a fuller measure of the resources committed by foreign investors. Table 2 and Figure 2 present the official comparisons. Total inflows were US\$36.05 billion in 2013-14, US\$71.28 billion in 2023-24 and a provisional US\$81.04 billion in 2024-25, the highest on record and 14% above the previous year (PIB, 2025). Over the eleven years from 2014-15 to 2024-25, cumulative inflows were US\$748.78 billion, 143% higher than the US\$308.38 billion of the preceding eleven years from 2003-04 to 2013-14. Of the US\$1,072.36 billion received over the twenty-five years since 2000-01, about 70% arrived in the most recent eleven. The number of source countries rose from 89 in 2013-14 to 112 in 2024-25, and manufacturing inflows grew 18% in 2024-25 to US\$19.04 billion (PIB, 2025).

Table 2. Total FDI Inflows to India, Selected Years and Periods (US\$ billion)

| Period / year                 | Total FDI inflow (US\$ billion) | Remark                                                |
|-------------------------------|---------------------------------|-------------------------------------------------------|
| 2013-14                       | 36.05                           | Base year before the current policy phase             |
| 2023-24                       | 71.28                           | Nearly double the 2013-14 level                       |
| 2024-25 (provisional)         | 81.04                           | 14% growth over 2023-24; highest on record            |
| 2003-04 to 2013-14 (11 years) | 308.38                          | Cumulative                                            |
| 2014-15 to 2024-25 (11 years) | 748.78                          | Cumulative; 143% higher than the preceding 11 years   |
| 2000-01 to 2024-25 (25 years) | 1,072.36                        | Cumulative; the 2014-25 period accounts for about 70% |

Source. PIB (2025); DPIIT (2025). Total FDI inflow = equity inflow + reinvested earnings + other capital. 2024-25 figure is provisional.

Figure 2. Total FDI inflows to India: (a) selected years and (b) cumulative eleven-year periods (US\$ billion)



Source. PIB (2025); DPIIT (2025).

The difference between the equity series in Figure 1 and the total series in Figure 2 is itself informative. Equity inflows in 2023-24 were US\$44.4 billion while total inflows were US\$71.3 billion, so that reinvested earnings and other capital accounted for roughly US\$27 billion, or 38% of the total. A growing share of FDI in India is thus the reinvestment of profits by foreign firms already present, which indicates that the stock of foreign enterprise has matured to the point of self-financing expansion. This is consistent with the Chakraborty and Basu (2002) finding that FDI responds to domestic conditions: firms reinvest where the market is growing.

#### 4.4. Composition: Sectors, Sources and States

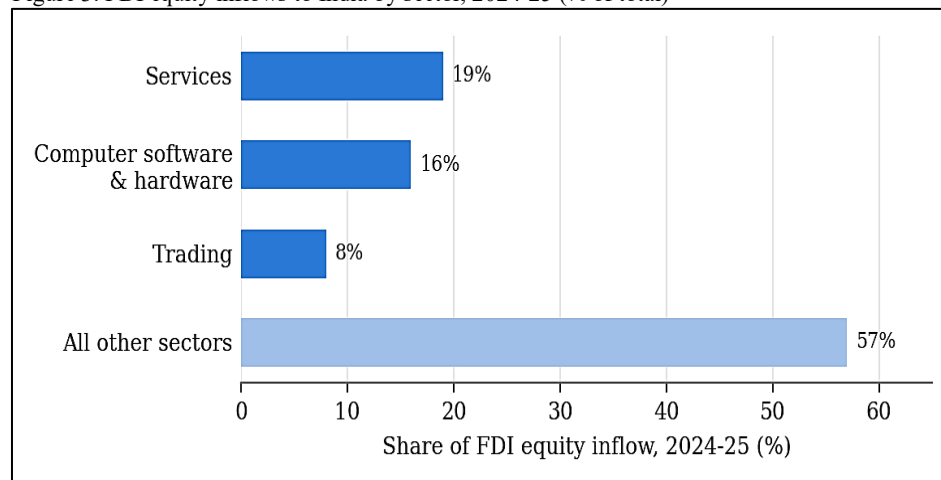
Table 3 and Figures 3 and 4 present the composition of inflows in 2024-25. By sector, services received 19% of equity inflows (US\$9.35 billion, up 40.8% on the year), computer software and hardware 16% (US\$7.81 billion) and trading 8% (US\$4.18 billion), so that the three leading sectors together took 43% (PIB, 2025). The cumulative shares since 2000 are similar, at 16%, 15% and 7% respectively, which shows that the sectoral pattern is long-standing rather than recent. By source, Singapore accounted for 30% of inflows, Mauritius for 17% and the United States for 11%, together 58%. By recipient state, Maharashtra took 39%, Karnataka 13% and Delhi 12%, together 64%.

Table 3. Concentration of FDI Inflows to India by Sector, Source Country and Recipient State, 2024-25

| Dimension              | Leading category | Share (%) | Second                       | Share (%) | Third         | Share (%) |
|------------------------|------------------|-----------|------------------------------|-----------|---------------|-----------|
| Sector (equity inflow) | Services         | 19        | Computer software & hardware | 16        | Trading       | 8         |
| Source country         | Singapore        | 30        | Mauritius                    | 17        | United States | 11        |
| Recipient state        | Maharashtra      | 39        | Karnataka                    | 13        | Delhi         | 12        |

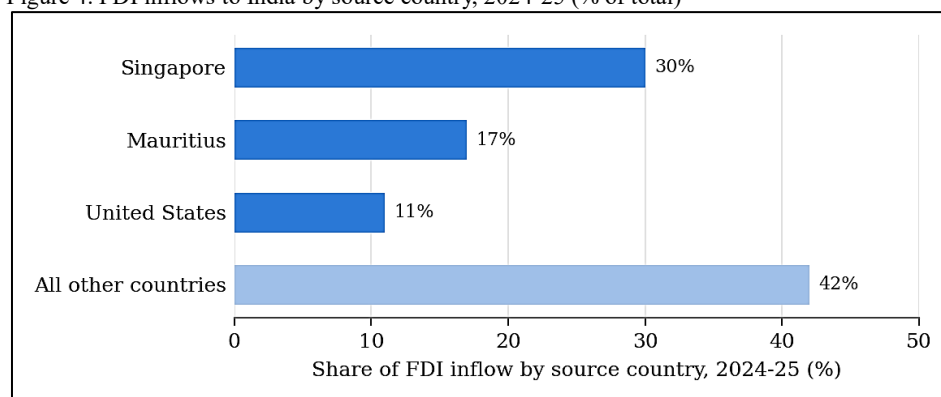
Source. PIB (2025); DPIIT (2025). Sector shares refer to equity inflows; source and state shares to total inflows as reported. Source country is the immediate investing jurisdiction.

Figure 3. FDI equity inflows to India by sector, 2024-25 (% of total)



Source. PIB (2025); DPIIT (2025).

Figure 4. FDI inflows to India by source country, 2024-25 (% of total)



Source. PIB (2025); DPIIT (2025).

Three observations follow. First, the sectoral pattern matches the location advantages the eclectic paradigm would predict for India, namely a large, English-speaking, technically skilled workforce and a large domestic market; the prominence of computer software and hardware is the direct expression of the digital dimension of globalisation that Aswani and Kalluraya (2023b) describe. Second, the source pattern is a treaty pattern as much as an investor pattern: Singapore and Mauritius are conduits, and the ultimate origin of nearly half of India's FDI is not visible in the official classification. Third, the state pattern reproduces India's existing commercial geography, with the three leading recipients being the states that host Mumbai, Bengaluru and the national capital region. The manufacturing sectors in which the growth literature finds the strongest effects, of which the cement industry analysed by Aswani and Kalluraya (2023a) is an example, receive a smaller share, although manufacturing inflows are growing. These observations ground P3.

#### 4.5. Growth Linkages and Absorptive Capacity

The fourth theme concerns what the inflows achieve. The cross-country evidence indicates that FDI raises growth where human capital exceeds a threshold (Borensztein et al., 1998) and where financial markets are deep enough to channel its spillovers (Alfaro et al., 2004), and that export-oriented regimes benefit more than import-substituting ones (Balasubramanyam et al., 1996). The India-specific evidence indicates that the growth effect is strongest in manufacturing, present but bidirectional in services and absent in the primary sector (Chakraborty & Nunnenkamp, 2008), and that FDI is as much a consequence of growth as a cause of it (Chakraborty & Basu, 2002). Read against the composition in Section 4.4, this evidence implies that India's inflows are concentrated in the sectors and states where absorptive capacity is highest, which maximises their immediate productivity but limits their reach. The 18% growth of manufacturing inflows in 2024-25 (PIB, 2025) is therefore a development of some importance, as is the rising share of reinvested earnings noted in Section 4.3. Digitalisation cuts across these findings: the UNCTAD (2024) evidence that digital-economy sectors and digital government have become determinants of location, and the Aswani and Kalluraya (2023b) argument that digital technology is both the object and the infrastructure of globalisation, imply that India's software and data sectors will remain leading destinations and that digital public infrastructure has become a location advantage. These observations ground P4 and P5.

#### 4.6. The Regime–Inflow–Absorption Framework

Taken together, the themes and the data yield an integrative framework with three components. The policy regime, liberalised in successive phases since 1991, determines India's location advantages and is the antecedent. Inflows respond to the regime in steps, moderated by global conditions, and are measured here by an equity series that has risen twenty-four-fold since 2000-01 and a total series that reached US\$81 billion in 2024-25. Absorption determines what the inflows achieve, and is governed by their sectoral, source and regional composition and by the human capital and financial depth of the receiving sectors and states. Digitalisation enters at two points: it shapes the regime through digital government and it shapes absorption through the prominence of software and data sectors. The five propositions correspond to these relationships. The framework implies that the next gains from FDI in India lie less in raising the total than in broadening its composition.

### V. DISCUSSION

The data support a reading of India's FDI performance as a policy achievement with an uneven developmental return. On the achievement, the evidence is unambiguous: equity inflows rose from US\$2.5 billion to a peak of US\$59.6 billion, total inflows doubled between 2013-14 and 2024-25, and the most recent eleven years delivered 143% more investment than the eleven before them (DPIIT, 2025; PIB, 2025). The step pattern of Figure 1 corresponds to the phases of liberalisation that Ahluwalia (2002), Kumar (2005) and Aswani and Kalluraya (2024) describe, which suggests that policy has been the principal driver and that the eclectic paradigm's emphasis on location advantages is well founded for India.

On the return, the composition data qualify the headline. Three sectors, three source jurisdictions and three states account for 43%, 58% and 64% of inflows respectively. The concentration in services and software is consistent with India's comparative advantage and with the digital character of contemporary globalisation (Aswani & Kalluraya, 2023b; UNCTAD, 2024), but the sector-level evidence of Chakraborty and Nunnenkamp (2008) implies that the strongest growth effects lie in manufacturing, which receives a smaller share. The regional concentration means that the states with the least absorptive capacity, and the greatest need for investment, receive the least of it, which is the pattern Borensztein et al. (1998) and Alfaro et al. (2004) would predict but not the one policy intends. The conduit role of Singapore and Mauritius means that the official

data understate the diversity of ultimate investors and complicate the assessment of what technology and market access the investment brings.

Two developments in the most recent data point in a more encouraging direction. Reinvested earnings and other capital now account for close to two-fifths of total inflows, which indicates a mature and self-financing stock of foreign enterprise, and manufacturing inflows grew 18% in 2024-25. Whether these continue depends on the conditions the growth literature identifies: human capital, financial depth and an export-oriented regime. The digitalisation of the investment process itself, through online approvals and digital public infrastructure, is a further location advantage that India has built and that UNCTAD (2024) identifies as increasingly decisive.

## VI. RECOMMENDATIONS

### 6.1. For Policymakers and Investment Promotion Agencies

- Shift the objective of FDI promotion from the annual total to the composition of inflows, with explicit targets for manufacturing, for states outside the three leading recipients and for sectors with strong domestic linkages.
- Invest in the absorptive capacity of lagging states, including technical education, industrial infrastructure and access to finance, so that location advantages are not confined to the existing commercial centres.
- Publish data on the ultimate beneficial owner of inflows alongside the immediate investing jurisdiction, so that the origin and character of investment routed through Singapore and Mauritius can be assessed.

### 6.2. For Domestic Firms and Industry Bodies

- Treat foreign investors as partners in technology and market access, and structure joint ventures and supply relationships to capture the spillovers the growth literature identifies.
- In manufacturing industries such as cement, steel and chemicals, use the presence of international producers to raise domestic standards of efficiency, quality and environmental performance.

### 6.3. For Researchers

- Test the propositions with state- and sector-level panel data, distinguishing equity from reinvested earnings and manufacturing from services.
- Examine the digital-economy component of FDI separately, since its growth effects and absorptive requirements differ from those of traditional investment.

## VII. CONCLUSION

This study has examined the trends, composition and growth linkages of foreign direct investment in India over the quarter century since 2000-01, on the basis of an integrative review and a descriptive analysis of official data. Equity inflows rose twenty-four-fold to a peak of US\$59.6 billion in 2020-21 before settling in the mid-forties; total inflows reached a record US\$81.04 billion in 2024-25, more than double the 2013-14 level; cumulative inflows over the past eleven years were 143% higher than in the preceding eleven; and inflows remain concentrated by sector, source and state. The four themes identified, the liberalisation of the regime, the step-wise scale of inflows, the concentration of their composition and the conditions of their absorption, were integrated into a Regime–Inflow–Absorption framework with five propositions. India's FDI performance is a policy achievement; its developmental return depends on broadening sectoral and regional absorption; and digitalisation is changing both what is invested in and how.

The study is limited by its reliance on official aggregates that record the immediate rather than the ultimate investor, by the difference between the equity and total series, and by its descriptive treatment of the evidence. Future research should test the propositions with disaggregated panel data, trace the ultimate origin and sectoral destination of conduit inflows, and evaluate the growth effects of digital-economy FDI separately from those of traditional manufacturing and services investment.

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## Housing, Construction and Allied Industries as an Engine of Indian Commerce: A Conceptual Review of Demand Linkages, Investment and Labour

Sivasankar Bhatt

Research Supervisor, Srinivas University, Mangaluru, Karnataka, India

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### Abstract

This conceptual review examines the role of housing, construction and their allied industries in Indian commerce, treating the sector as a demand-linked cluster rather than a single industry. Adopting an integrative literature review design, the study synthesises 24 scholarly and institutional sources, comprising foundational theory on multipliers, inter-industry linkages and surplus labour, international evidence on construction and economic development, and India-focused studies and official reports on housing, macroeconomic trends and construction labour, through thematic analysis. Four themes emerge: construction as a component of aggregate demand with strong backward linkages; housing as the demand anchor of the cluster, sustained by a large and persistent urban shortage; the allied industries of cement, steel, paints, fittings and housing finance whose fortunes move with construction activity; and the sector's dual role as the largest non-farm absorber of labour and a site of informality and precarity. The synthesis is organised into a Demand–Linkage–Labour framework and five research propositions. The paper argues that the commercial significance of the sector lies as much in the industries it pulls along and the workers it absorbs as in its own output, and that policy and business strategy should treat it accordingly. Implications are offered for firms in the cluster, financial institutions and policymakers.

**Keywords:** - Construction Industry, Housing Sector, Backward Linkages, Allied Industries, Construction Labour, Indian Economy, Conceptual Review

## I. INTRODUCTION

### 1.1. Background and Context

Few sectors touch as many parts of an economy as construction. Every dwelling, factory, road or office that is built draws on cement, steel, bricks, timber, glass, paints, sanitary fittings, electrical goods, machinery, transport and finance, and it employs, directly and indirectly, a workforce drawn from every state of the country. Economists have long recognised this reach. Turin (1973) documented the relationship between construction output and national income across countries at different stages of development, and Wells (1986) and Ofori (1990) developed the case that construction is a strategic sector for developing economies because of the demand it transmits to other industries. Giang and Pheng (2011), reviewing four decades of this literature, conclude that the sector's contribution to development is best understood through its linkages rather than its own value added alone.

In India the sector has grown alongside the broader economy. Aswani and Kalluraya (2024) trace the country's macroeconomic trend, in which sustained growth in output has been accompanied by rising investment in physical assets. According to the Periodic Labour Force Survey, construction employs roughly one in eight Indian workers and is the largest non-agricultural employer of men in rural areas (Ministry of Statistics and Programme Implementation [MoSPI], 2024). Housing is the largest single segment of construction demand, and the sector's growth and sustainability have attracted specific attention in the Indian commerce literature (Aswani, 2024).

### 1.2. Problem Statement

Commerce scholarship in India tends to study the constituent parts of this system separately: housing finance in one literature, cement and building materials in another, real estate marketing in a third and construction labour in a fourth. This fragmentation obscures what is most distinctive about the sector, namely that its parts move together because they are linked by demand. When housing starts rise, cement despatches, paint sales, steel offtake, mortgage lending and migrant employment rise with them; when construction stalls, as it did during the COVID-19 lockdowns, the effects are felt across the cluster and most acutely by its workers (Aswani & Kalluraya, 2023). An integrated account of housing, construction and allied industries as a single commercial system, with the labour that sustains it, is lacking. This study addresses that gap.

### 1.3. Research Objectives

This study pursues the following specific objectives:

- To synthesise theoretical and empirical literature on the contribution of construction to economic activity, with particular reference to India.
- To examine the role of housing as the principal source of demand in the construction cluster.
- To map the allied industries linked to construction and the mechanisms through which demand is transmitted to them.
- To assess the labour dimension of the sector, including absorption, migration, informality and working conditions.
- To develop an integrative conceptual framework and research propositions for future empirical work.

### 1.4. Research Questions

- Through what mechanisms does construction activity contribute to aggregate demand and output in India?
- How does housing demand shape the performance of the construction cluster?
- Which industries are linked to construction, and how strongly?
- What are the employment and welfare consequences of the sector's reliance on informal and migrant labour?

### 1.5. Significance of Study

The study contributes in three ways. First, it brings together literatures on macroeconomics, industrial organisation and labour that are usually read apart, and shows how they bear on a single sector. Second, it grounds the analysis in Indian evidence on housing, macroeconomic trends and construction labour, which gives the propositions local relevance. Third, it offers a framework and propositions that researchers can take to primary or secondary data, together with practical guidance for firms in the cluster, financial institutions and policymakers.

### 1.6. Scope and Limitations

The study is conceptual. It relies on published literature and official secondary data and reports no primary survey or econometric results. The literature was selected purposively and not through an exhaustive systematic search, so the synthesis is illustrative of the field rather than a census of it. The focus is on residential and general building construction and its immediate supplier industries; large infrastructure such as ports, power and railways is referred to only where the literature treats it together with building construction. The propositions advanced are hypotheses for future testing and not established findings.

## II. LITERATURE REVIEW

### 2.1. Theoretical Foundations

Three theoretical traditions inform the study. The first is the theory of aggregate demand. Keynes (1936) identified investment as the volatile component of demand whose changes are amplified through the multiplier, and construction, as the largest form of fixed investment in most economies, is the principal channel through which this operates. Green (1997) shows empirically that residential investment leads changes in gross domestic product, which supports the treatment of housing construction as a leading indicator. The second tradition is the theory of inter-industry linkages. Leontief (1936) provided the input–output framework for tracing how demand in one industry generates demand in its suppliers, and Hirschman (1958) argued that development strategy should favour sectors with strong backward linkages, since these pull other industries into existence. Porter (1990) later described such demand-linked groups of industries as clusters whose competitiveness is jointly determined.

The third tradition is the theory of surplus labour and migration. Lewis (1954) modelled development as the transfer of labour from a low-productivity traditional sector to a modern sector at a roughly constant wage, and Harris and Todaro (1970) explained rural–urban migration as a response to expected, rather than actual, urban earnings. Construction is the archetypal receiving sector in both models: it requires little formal skill at entry, it is urban and it pays more than agriculture. These theories together suggest that construction matters for commerce through three channels: demand, linkages and labour.

### 2.2. Construction and Economic Development

The international literature has examined the construction–development relationship for half a century. Turin (1973) found that construction's share of output rises with income up to a middle-income threshold and then declines, a pattern later refined by others. Wells (1986) and Ofori (1990) drew out the policy implications for developing countries, arguing for domestic capacity in materials and contracting so that the demand generated by construction is retained within the economy. Wong et al. (2008) tested the direction of causality for Hong Kong and found that construction activity follows rather than leads the wider economy at a mature stage, which underlines that the relationship differs by stage of development. Giang and

Pheng (2011) conclude their review by calling for research that treats construction's linkages and labour effects, not only its value added. For India, Aswani and Kalluraya (2024) place the sector within the country's macroeconomic trend, in which investment-led growth has been a recurring feature.

### 2.3. Housing as the Demand Anchor

Housing is the largest component of construction demand and the one most directly connected to household commerce. The Technical Group on Urban Housing Shortage estimated a shortage of 18.78 million dwelling units in urban India for the period 2012–17, concentrated overwhelmingly among economically weaker sections and low-income groups (Ministry of Housing and Urban Poverty Alleviation [MoHUPA], 2012). This shortfall represents latent demand that public programmes, mortgage finance and rising incomes progressively convert into effective demand. Aswani (2024) provides a comprehensive analysis of the Indian housing sector's dynamic and sustainable growth, examining the drivers of expansion and the conditions under which that growth can be sustained. Green's (1997) finding that residential investment leads output implies that housing is not merely a beneficiary of growth but a contributor to it.

### 2.4. Allied Industries

The backward linkages of construction run to a wide set of industries. Cement and steel are the most visible, but paints and coatings, ceramics and sanitaryware, glass, timber and wood products, electrical fittings, plumbing hardware, construction equipment and logistics all depend on building activity for a large share of their demand. Housing finance, property insurance and real estate brokerage constitute the service side of the cluster. Hirschman (1958) would classify construction as a sector with unusually strong backward linkages and relatively weak forward linkages, since its output is a final good. Porter's (1990) cluster concept adds that the competitiveness of these industries is shaped jointly by demand conditions, supplier quality and rivalry. Ofori (1990) and Wells (1986) stress that where materials must be imported, much of the multiplier leaks abroad, so domestic materials capacity is a precondition for construction-led growth.

### 2.5. Construction Labour

Construction is the largest employer of non-farm labour in India. The Periodic Labour Force Survey reports that the sector accounts for about 12 to 13% of total employment, and that the overwhelming majority of construction workers are casual or self-employed (MoSPI, 2024). Mehrotra (2019) shows that the movement of workers out of agriculture has gone disproportionately into construction, and that this shift has not reduced informality. Much of the workforce is migrant: Srivastava and Sutradhar (2016) find that migration into construction reduces rural poverty for the households that send workers, while exposing the workers themselves to insecure contracts, poor housing at the worksite and limited access to entitlements, and Deshingkar and Akter (2009) document the circular character of such migration. The International Labour Organization (2001) identified the same pattern internationally, noting the industry's poor image, casualisation and weak skill development. Aswani and Kalluraya (2023) examine labour conditions in the Indian construction sector before and after COVID-19, a period in which the abrupt halt of construction and the return migration of workers exposed the vulnerability of this workforce.

### 2.6. Research Gaps

Three gaps follow. First, the demand and linkage effects of construction are usually estimated in aggregate, with little attention to the specific industries of the Indian cluster. Second, housing is treated as a real estate or finance topic rather than as the anchor of a wider industrial system. Third, the labour literature documents precarity but rarely connects it to the sector's commercial cycle, even though the two are linked. The framework developed below responds to these gaps.

## III. RESEARCH METHODOLOGY

### 3.1. Research Design

The study adopts an integrative literature review design. Snyder (2019) identifies the integrative review as appropriate where the aim is to combine perspectives from different fields and to generate a new conceptual framework, and Torraco (2005) describes it as a form of research that produces new frameworks through critique and synthesis of representative literature. The design suits a topic that spans macroeconomics, industrial organisation, real estate and labour studies.

### 3.2. Research Propositions

Because the study is conceptual, it advances propositions for future testing in place of statistical hypotheses:

- P1: Construction investment leads aggregate output in India, and its multiplier effect is larger than its direct share of value added.
- P2: Housing demand, sustained by the urban housing shortage and by mortgage finance, is the principal driver of activity in the construction cluster.
- P3: The output and profitability of allied industries, including cement, steel, paints and building fittings, co-move with construction activity, so that the cluster behaves as a single commercial system.
- P4: Construction absorbs surplus and migrant labour on a scale larger than any other non-farm sector, but predominantly through informal employment.
- P5: Fluctuations in the construction cycle are transmitted disproportionately to informal and migrant workers, so that the welfare cost of downturns is concentrated at the base of the cluster.

### 3.3. Data Sources and Selection

The review corpus comprises the 24 sources listed in the references. They fall into three groups: (a) foundational theoretical works on aggregate demand, inter-industry linkages, clusters and surplus labour; (b) international studies of construction and economic development; and (c) India-focused studies and official reports on housing, macroeconomic trends, employment and construction labour. Sources were selected purposively on three criteria: direct relevance to at least one research question, publication in a peer-reviewed or institutional outlet, and availability of bibliographic details. No primary data were collected.

### 3.4. Analytical Strategy

The sources were analysed thematically following the phases described by Braun and Clarke (2006): familiarisation, generation of initial codes, search for themes, review of themes, definition and naming of themes, and reporting. Codes were first derived deductively from the research questions and then refined inductively as recurring ideas emerged. The resulting themes were related to one another to construct the conceptual framework, and each proposition was derived from the convergence of theory and evidence within a theme.

## IV. RESULTS

### 4.1. Overview of the Literature Reviewed

The 24 sources span the period 1936 to 2024. The theoretical works are drawn from macroeconomics, development economics and strategy; the construction–development studies are international; and the contextual sources concern India and include official statistics, an institutional working paper and journal studies of housing, macroeconomic trends and construction labour. Four themes were identified, and they are summarised in Table 1.

Table 1. Thematic Synthesis of the Literature and Derived Propositions

| Theme                            | Core insight from the synthesis                                                                                                                                   | Representative sources                                                                                                   | Proposition |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------|
| Construction as a growth engine  | Construction investment is a leading component of aggregate demand whose multiplier and linkage effects run through a wide range of supplier industries.          | Keynes (1936); Hirschman (1958); Leontief (1936); Turin (1973); Green (1997); Aswani & Kalluraya (2024)                  | P1          |
| Housing as demand anchor         | Housing is the largest single construction segment; a persistent urban shortage sustains demand, and policy programmes convert latent need into effective demand. | MoHUPA (2012); Aswani (2024); Green (1997); Giang & Pheng (2011)                                                         | P2          |
| Allied industries and clusters   | Cement, steel, paints, fittings and finance form a demand-linked cluster whose fortunes move with construction activity.                                          | Hirschman (1958); Porter (1990); Ofori (1990); Wells (1986); Wong et al. (2008)                                          | P3          |
| Labour: absorption and precarity | Construction absorbs surplus and migrant labour on a large scale, but mostly informally and with limited protection and skill development.                        | Lewis (1954); Harris & Todaro (1970); ILO (2001); Srivastava & Sutradhar (2016); MoSPI (2024); Aswani & Kalluraya (2023) | P4, P5      |

Note. MoHUPA = Ministry of Housing and Urban Poverty Alleviation; MoSPI = Ministry of Statistics and Programme Implementation; ILO = International Labour Organization. Propositions P1 to P5 are stated in Section 3.2.

### 4.2. Construction as a Growth Engine

The first theme confirms that construction's economic weight exceeds its direct share of output. The multiplier logic of Keynes (1936), the linkage logic of Hirschman (1958) and the input–output accounting of Leontief (1936) all point to the same conclusion, and the empirical work of Turin (1973) and Green (1997) supports it for economies at India's stage of development. The Indian macroeconomic record described by Aswani and Kalluraya (2024) is consistent with an investment-led pattern in which construction has been a persistent contributor. Wong et al. (2008) caution that the causal direction may reverse at maturity, which suggests the relationship should be tested rather than assumed. This grounds P1.

### 4.3. Housing as Demand Anchor

The second theme identifies housing as the anchor of the cluster. The urban shortage of 18.78 million units (MoHUPA, 2012) is a stock of unmet need that policy, finance and income growth turn into orders for builders and their suppliers. Aswani's (2024) analysis of the sector's dynamic and sustainable growth suggests that this conversion has been under way and that sustaining it depends on affordability, finance and regulatory conditions. Combined with Green's (1997) evidence on the leading role of residential investment, the theme grounds P2.

### 4.4. Allied Industries and Clusters

The third theme maps the industries that construction pulls along. The literature is consistent that cement, steel, paints, ceramics, fittings, equipment, logistics and housing finance form a demand-linked group (Hirschman, 1958; Ofori, 1990; Wells, 1986), and Porter's (1990) cluster concept provides a way of thinking about their joint competitiveness. Two implications follow for Indian commerce. First, the performance of firms in these industries cannot be forecast without reference to construction activity. Second, domestic capacity in materials is a precondition for retaining the multiplier within the economy. This grounds P3.

#### 4.5. Labour: Absorption and Precarity

The fourth theme concerns the workforce. Construction is the largest non-farm absorber of labour (MoSPI, 2024; Mehrotra, 2019), consistent with the Lewis (1954) and Harris–Todaro (1970) models of labour transfer. Yet absorption has been almost entirely informal, and the workforce is heavily migrant (Srivastava & Sutradhar, 2016; Deshingkar & Akter, 2009). The pre- and post-COVID comparison by Aswani and Kalluraya (2023) shows what this means when the cycle turns: the halt in construction transmitted immediately to workers with no contractual or social protection. The ILO (2001) had earlier identified casualisation and weak skill development as structural features of the industry. These observations ground P4 and P5.

#### 4.6. The Demand–Linkage–Labour Framework

Taken together, the themes yield an integrative framework with three layers. Demand, anchored in housing and supplemented by commercial and public building, is the antecedent. Linkages transmit that demand to the allied industries, so that the cluster's commercial performance is jointly determined. Labour is the base of the system: it supplies the capacity to build, and it bears the cost when demand falls. The five propositions correspond to these relationships. The framework implies that any analysis of one part of the cluster, whether a cement company's sales, a housing finance portfolio or migrant workers' earnings, is incomplete without reference to the others.

### V. DISCUSSION

The synthesis supports treating housing, construction and allied industries as a single commercial system. This has consequences for how the sector is studied and managed. For research, it means that sectoral studies of cement, paints or housing finance should incorporate construction activity as an explanatory variable, and that housing policy should be evaluated for its effects on the wider cluster and not on dwellings alone. The leading role of residential investment (Green, 1997) also suggests that housing indicators deserve a place among the early-warning measures used by firms and financial institutions in India.

For firms in the cluster, the central implication is that demand is shared. Building-materials producers, equipment suppliers and lenders face a common cycle, and their planning, inventory and credit decisions should be informed by leading indicators of construction and housing demand. The cluster concept of Porter (1990) further suggests that competitiveness is collective: quality standards, logistics and skills developed in one part of the cluster raise the performance of the rest.

For the workforce, the concern is that the sector's social value as an absorber of labour is undermined by the conditions under which it absorbs. The evidence reviewed shows that construction workers gain relative to agriculture (Srivastava & Sutradhar, 2016) but remain informal, mobile and exposed (Mehrotra, 2019; Aswani & Kalluraya, 2023). Lewis (1954) assumed that labour transfer would eventually raise wages and formalise employment as the surplus was exhausted; the Indian experience suggests that this transition is not automatic and requires institutional support in the form of registration, portable social security and skill certification.

### VI. RECOMMENDATIONS

#### 6.1. For Firms in the Construction Cluster

- Incorporate housing starts, approvals and mortgage disbursements into demand forecasting for building materials, fittings and equipment.
- Develop cluster-level cooperation on quality standards, logistics and skills, since the competitiveness of allied industries is jointly determined.
- Invest in the formal engagement, training and site welfare of workers as a matter of productivity and resilience, not only compliance.

#### 6.2. For Financial Institutions

- Treat housing finance and lending to allied industries as exposures to a common cycle, and manage concentration accordingly.
- Expand affordable housing finance for lower-income groups, where the shortage and the latent demand are greatest.

#### 6.3. For Policymakers

- Evaluate housing programmes for their multiplier and linkage effects on allied industries and employment, not only for units completed.
- Strengthen registration, portable social security and skill certification for construction workers, especially inter-state migrants.
- Support domestic capacity in building materials so that the demand generated by construction is retained within the economy.

### VII. CONCLUSION

This conceptual review has argued that housing, construction and their allied industries should be understood as a single demand-linked system at the centre of Indian commerce. Drawing on foundational theory, international evidence and India-focused studies and reports, it identified four themes and integrated them into a Demand–Linkage–Labour framework with five propositions. Construction investment leads and multiplies output; housing anchors the cluster's demand; allied industries move with construction activity; and the sector absorbs labour on a large scale but informally, so that downturns fall hardest

on its workers. The study is limited by its conceptual nature and its purposive selection of literature. Future research should test the propositions with input–output data for India, with firm-level data from allied industries and with longitudinal data on construction workers across the cycle.

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