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# SKILL DEVELOPMENT AND EMPLOYMENT OUTCOMES: AN EVALUATION OF PMKVY IN KARNATAKA

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## ABSTRACT

This study investigates the effectiveness of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in enhancing youth employment opportunities in Karnataka. Using both primary survey data from 740 beneficiaries and secondary sources such as NSDC, PLFS, KSDC, and district-level evaluations, the paper analyses disparities in regional participation, gender-based outcomes, and the efficiency of training-to-placement pathways across Phases 1.0, 2.0, and 3.0. Although more than 9.8 lakh individuals have undergone training under PMKVY in Karnataka, employment results have been inconsistent, with placement success varying considerably across districts. The findings highlight critical bottlenecks, including uneven training infrastructure, mismatched sectoral focus, and persistent challenges in aligning skills supply with labour market demand.

Keywords: Skill Development, employment opportunities etc.

## INTRODUCTION

India is home to the largest youth population in the world, with nearly two-thirds of its citizens below the age of 35 and about half under 25 years of age (UNFPA, 2024). This demographic composition offers a potential "demographic dividend," wherein a substantial proportion of working-age individuals could drive economic growth, provided that effective skilling and employment mechanisms are in place. Karnataka, a leading southern state with an estimated population of 6.5 crores (Census projection, 2021), mirrors this demographic structure. Over half of its people are under 30, and a growing segment of school and college dropouts are in search of vocational opportunities, particularly in non-agricultural sectors.

Despite Karnataka's expanding economy, the challenge of youth unemployment persists. As per the Periodic Labour Force Survey (PLFS, 2023), India's youth unemployment rate was approximately 17.3% among individuals aged 15–29, while Karnataka recorded a similar figure at 16.2%. This gap between educational attainment and employment readiness—especially among rural and socially disadvantaged groups—necessitated structured policy interventions in skill development.

In response, the Government of India launched the **Skill India Mission** in 2015, with PMKVY as its flagship programme. PMKVY aims to deliver industry-relevant, short-term training and certification to unemployed youth and school/college dropouts. The scheme also includes Recognition of Prior Learning (RPL) for informal sector workers, entrepreneurship awareness modules, and Rozgar Melas (job fairs) to link trainees with potential employers.

Karnataka implemented PMKVY through the **Karnataka Skill Development Corporation (KSDC)** and the **Kaushalya Karnataka Mission (KKM)**. While adopting central guidelines, the state also localized training priorities by promoting tourism, agro-processing, and emerging technologies such as artificial intelligence and drone operations. By 2023, more than 9.8 lakh youth had been trained across three PMKVY phases. However, high enrolment figures have not consistently translated into stable employment outcomes.

ISSN: 2349-2015
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Regional imbalances are evident. Urban districts like Bengaluru and Mysuru benefit from robust infrastructure, industry linkages, and digital access, thereby reporting higher training and placement achievements. Conversely, underdeveloped regions such as Raichur, Yadgir, and Koppal face persistent difficulties owing to weak institutional capacity, limited employer networks, and inadequate infrastructure. Moreover, while female participation has improved over time, women still face employment barriers arising from cultural norms, mobility constraints, and occupational segregation.

Against this backdrop, the present study critically examines the extent to which PMKVY has succeeded in converting skilling efforts into sustainable employment opportunities in Karnataka. Drawing on both primary and secondary datasets, it evaluates quantitative measures such as certification rates, placements, and income differentials, while also addressing qualitative dimensions such as regional disparities, gender gaps, post-training support, and sectoral mismatches. By doing so, the paper contributes to policy discussions on enhancing the employability of India's youth through more inclusive and outcome-oriented skill development strategies.

## OBJECTIVES

The study is guided by the following objectives:

1. To evaluate the effectiveness of PMKVY in generating employment opportunities for youth in Karnataka.
2. To analyse placement outcomes and variations in income among trained beneficiaries.
3. To examine disparities in employment outcomes across gender, regions, and sectors.
4. To propose policy recommendations for strengthening skill development initiatives with a focus on employment generation.

## METHODOLOGY

The methodological design of this study integrates both empirical rigor and contextual relevance, acknowledging the multidimensional nature of skill development outcomes. Since the research seeks to capture employability trends, gender differences, regional variations, and post-training employment experiences, a **mixed-methods approach** was employed, combining quantitative and qualitative techniques.

### 3.1 Sample Size and Selection

The study draws on a primary sample of **380 beneficiaries trained under PMKVY** across **25 districts in Karnataka**. The sample was calculated using standard statistical procedures, ensuring a **95% confidence level** with a margin of error of ±5%. This balance maintained statistical representativeness while ensuring field feasibility.

The 380 respondents were drawn from a training pool of more than **9.8 lakh candidates** trained across PMKVY Phases 1.0, 2.0, and 3.0 between 2015 and 2023. The districts were carefully chosen to represent Karnataka's four revenue divisions—Bengaluru, Mysuru, Belagavi, and Kalaburagi—and included both urban hubs (e.g., Bengaluru Urban, Mysuru) and economically weaker regions (e.g., Raichur, Koppal, Chamarajanagar).

### 3.2 Sampling Technique

To reduce selection bias and ensure inclusivity, a **stratified random sampling** method was adopted. The population was stratified on the basis of:

- **Geography**: Urban versus rural districts

ISSN: 2349-2015
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Journal Website: www.nrjbe.in

- **Gender**: Male and female participants
- **Sector**: Different Sector Skill Councils such as retail, healthcare, IT, and construction
- **Training Type**: Short-Term Training (STT), Recognition of Prior Learning (RPL), and Special Projects

From each stratum, respondents were randomly selected in proportion to their representation. This ensured coverage of Karnataka's diverse socio-economic and occupational profiles.

### 3.3 Data Sources

Both **primary and secondary data** were used, allowing triangulation and validation of findings.

- **Primary Data**: Collected through structured questionnaires (in-person and telephonic surveys), covering areas such as training quality, employment type, income changes, skill enhancement, and job search challenges. Additionally, key informant interviews were held with training centre managers, trainers, district coordinators, and employers to capture systemic issues.
- **Secondary Data**: Sourced from the PMKVY dashboard, NSDC publications, PLFS (2023), KSDC annual reports, and government evaluation documents related to the Skill India Mission.

### 3.4 Statistical Tools and Techniques

A combination of descriptive and inferential techniques was applied:

- **Descriptive Statistics**: Used to summarise demographic details, training participation, placement rates, and income levels.
- **T-tests**: Applied to compare placement and income differences between male and female trainees, and between rural and urban beneficiaries.
- **One-Way ANOVA**: Used to examine variations based on age, education, and training sector.
- **Partial Least Squares Structural Equation Modelling (PLS-SEM)**: Conducted using SmartPLS software to test the conceptual model developed for this study. Independent variables such as awareness, training quality, and institutional facilities were analysed against dependent outcomes like skill acquisition and employment efficiency. Key indicators such as outer loadings, path coefficients, R-square values, and effect sizes were evaluated to validate structural relationships.

This integrated methodology allowed for both exploratory and confirmatory analysis, thereby enhancing the reliability and validity of the study's findings.

## FINDINGS

The assessment of PMKVY in Karnataka between 2015 and 2023 highlights both measurable progress and notable constraints in its capacity to create sustainable employment. The results below are based on primary survey data from 380 respondents and supported by secondary datasets from NSDC, PLFS, and PMKVY dashboards.

ISSN: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

### 4.1 PMKVY Overall Performance in Karnataka (2015–2023)

| Phase | Enrolled | Certified | Placed | Placement % |
|---|---|---|---|---|
| PMKVY 1.0 | 1,12,445 | 11,363 | 4,328 | 38% |
| PMKVY 2.0 | 4,32,411 | 3,37,641 | 58,960 | 17% |
| PMKVY 3.0 | 37,139 | 22,855 | 1,388 | 6% |

**Interpretation:**

The initial phase of PMKVY in Karnataka achieved a placement rate of **38%**, significantly higher than the national average of 18% during the same period. However, subsequent phases show a declining trend. In PMKVY 2.0, despite large-scale enrolment and certification, the placement rate fell to **17%**. The situation worsened in PMKVY 3.0, where only **6%** of trained candidates secured jobs. These figures reflect growing challenges in employer engagement, demand-driven course alignment, and the post-pandemic slowdown in labour markets.

### 4.2 District-Wise Placement Trends (PMKVY 2.0)

**High-performing districts:**

- Kodagu – 60% , Chamarajanagar – 44%, Bijapur (Vijayapura) – 42% and Uttara Kannada – 37%

**Low-performing districts:**

- Bengaluru Urban – 1% (PMKVY 3.0), Kalaburagi – 14% (PMKVY 2.0) and Raichur – 1% (PMKVY 1.0)

**Analysis:**

Districts such as Kodagu and Chamarajanagar achieved relatively higher placement rates because training modules were closely aligned with local economic activities—hospitality in Kodagu, tailoring in Bijapur, and agriculture-related skills in Chamarajanagar. Conversely, Bengaluru Urban reported poor outcomes due to oversaturation of training providers and a mismatch with the city's highly competitive job market. Backward districts such as Raichur and Kalaburagi continue to face structural barriers, including limited industrial presence, weak digital access, and inadequate local employer networks.

### 4.3 Gender Disparity in PMKVY

| Metric | Karnataka | National Average |
|---|---|---|
| Female enrolment | 36% | 42% |
| Female placement rate gap | -18% vs men | – |

**Sectoral preferences among female candidates:**

- Tailoring

ISSN: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

- Healthcare (nursing, home aid)
- Beauty & Wellness

**Constraints faced by women:**

- Limited mobility, particularly in rural areas
- Cultural restrictions on sectoral choice (e.g., logistics, construction)
- Lack of supportive infrastructure (hostels, transport, sanitation)

**Policy implication:**
Unless targeted gender-sensitive strategies are introduced, PMKVY risks reinforcing existing inequalities in employability, especially in backward districts where female participation is already lower.

### 4.4 Income Gains After Training

| Income Category | Before Training | After Placement | Change |
|---|---|---|---|
| Average Monthly Income (₹) | 4,500 | 7,800 | +73% |

**Interpretation:**

PMKVY has contributed to a **73% rise in average monthly income** for placed candidates, indicating that skilling interventions enhanced employability and productivity. Gains were most pronounced in IT/ITES, BFSI, and Beauty & Wellness sectors. However, the lack of longitudinal data raises concerns about the sustainability of these income improvements, particularly regarding job retention and career progression.

### 4.5 Regional Disparities in Training Infrastructure

**Concentration of Centres (34% in five districts):**

- Bengaluru Urban
- Mysuru
- Belagavi
- Dakshina Kannada
- Tumakuru

**Under-served districts:**

- Raichur
- Yadgir
- Koppal
- Chamarajanagar

**Analysis:**

The skewed distribution of training centres has led to **regional inequalities in skilling access**. While advanced districts benefit from abundant training facilities and employer linkages, backward districts—where interventions are most needed—remain underserved. This imbalance perpetuates urban-centric employment opportunities and accelerates rural-to-urban migration pressures.

ISSN: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

### 4.6 Self-Employment Outcomes

| Indicator | Value |
|---|---|
| Share of candidates opting for self-employment | 18% |

**Barriers identified:**

- Limited mentorship
- Lack of access to micro-credit
- Insufficient digital marketing knowledge

**Context:**

PMKVY 3.0 included basic entrepreneurship orientation, but uptake remains low. While some trainees successfully established micro-enterprises (tailoring shops, mobile repair centres, beauty parlours), sustainability is constrained by inadequate financial support and weak institutional linkages.

**Key Insight:** Insufficient integration of PMKVY with schemes such as **Startup India, Stand-Up India, and MUDRA Yojana** has limited the entrepreneurial potential of trainees.

## 5. ISSUES AND CHALLENGES IN PMKVY IMPLEMENTATION IN KARNATAKA

Although PMKVY has significantly expanded training outreach in Karnataka, the programme has not yet translated this scale into proportionate employment outcomes. Several structural and operational constraints continue to limit its effectiveness, particularly in rural and underdeveloped regions.

**1. Skill–Job Mismatch:** Only about **12% of PMKVY courses** offered in agriculture-dominated districts were related to agriculture or allied activities such as agri-tech and food processing.
Training modules largely follow standardised national curricula with minimal tailoring to local economic conditions. For example, in agricultural districts like Raichur and Chamarajanagar, the majority of training options were concentrated in retail and beauty services rather than agriculture-linked skills. This disconnect leads to underemployment or non-utilisation of skills, reducing the economic value of certifications.

**2. Low Female Participation:** Female enrolment under PMKVY 3.0 in Karnataka stood at **34%**, compared with the national average of 42%. Placement rates for women were also about **18% lower** than those for men.

A combination of cultural restrictions, mobility constraints, and inadequate women-friendly infrastructure (such as hostels, sanitation facilities, and safe transport) hinders female participation. Furthermore, women's access to high-growth sectors such as logistics, construction, and automotive remains limited due to gendered stereotypes. This creates a dual challenge: fewer women entering the programme and lower placement outcomes for those who do.

**3. Rural Access Gap:** Only **36% of training centres** were located in rural Karnataka, despite rural youth comprising more than 60% of the target demographic.

Most centres are concentrated in urban hubs like Bengaluru, Mysuru, and Tumakuru, leaving aspirational and backward districts with inadequate access. The rural–urban divide is further

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Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

exacerbated by limited digital connectivity, weak industrial presence, and lack of transport facilities in rural areas. As a result, large sections of rural youth remain excluded from skilling opportunities.

**4. Weak Post-Training Support:** Follow-up mechanisms tracked only **48% of certified candidates** for placement and employment services.

A lack of structured placement cells and mentorship within training centres has weakened the transition from training to employment. Many beneficiaries reported receiving certificates without any meaningful job counselling, employer connections, or entrepreneurship guidance. The absence of a comprehensive tracking system has reduced accountability and diluted the intended impact of the scheme.

**5. Limited Industry Engagement:** Less than **22% of training providers** had formal partnerships (MoUs) with employers, and fewer than **10% of trainees** were provided with internships or apprenticeships.

The insufficient involvement of industry stakeholders has resulted in outdated curricula, weak alignment with market requirements, and limited on-the-job training exposure. Without active employer participation, trainees often lack practical skills, making it difficult to secure and sustain employment.

**6. Infrastructure and Monitoring Gaps :** Around **21% of surveyed centres** lacked adequate infrastructure such as internet labs, modern equipment, and qualified trainers. Many centres operated in rented premises without meeting the quality standards prescribed under PMKVY. Monitoring mechanisms in earlier phases were sporadic, with limited real-time MIS integration and infrequent inspections. As a result, quality control and compliance remained inconsistent across districts.

**6. Policy Recommendations :** For PMKVY to deliver meaningful and sustainable employment outcomes in Karnataka, reforms must shift the focus from enrolment and certification towards long-term employability and livelihood creation. The following recommendations address structural gaps identified in the study:

**1. District-Specific Skill Mapping**

**Objective:** Ensure better alignment between training supply and local labour market demand.
**Action:** Conduct detailed skill gap studies at the district level and design training modules around region-specific industries—for example, agriculture and food processing in Raichur, tourism and hospitality in Kodagu, and textiles in Ballari.

**Expected Outcome:** Enhanced course relevance, stronger local job matching, and improved placement success.

**2. Gender-Responsive Skilling Strategies: Objective:** Increase women's participation and reduce the placement gap between male and female trainees.
**Action:**

- Establish women-friendly infrastructure at centres (safe hostels, sanitation facilities, transport allowances).
- Launch campaigns to encourage women's participation in non-traditional, high-growth sectors such as IT, electronics, renewable energy, and logistics.
- Collaborate with NGOs and community groups to break cultural barriers restricting women's mobility and employment.

ISSN: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

**Expected Outcome:** Narrowing of gender disparities in skill training and improved employability for women.

**3. Expansion of Rural Training Infrastructure:**

**Objective:** Reduce rural–urban disparities in skilling access.
**Action:**

- Prioritise the establishment of training centres in aspirational and backward districts.
- Use existing infrastructure such as schools (under NEP 2020) and community halls for vocational training delivery.
- Introduce mobile training vans and blended (online + offline) courses to reach remote areas.
  **Expected Outcome:** Broader access to training opportunities for rural youth, reducing migration pressures on urban centres.

**4. Stronger Industry Partnerships**

**Objective:** Increase curriculum relevance and job linkages.
**Action:**

- Mandate MoUs with industries for all training partners.
- Promote dual training models combining classroom instruction with apprenticeships.
- Engage MSMEs and local industry clusters for region-specific job absorption. **Expected Outcome:** Improved job readiness of trainees and higher placement rates through demand-driven training.

**5. Integrated Monitoring and Tracking System**

**Objective:** Enhance transparency and accountability.
**Action:**

- Develop a unified MIS by linking PMKVY, Kaushalya Karnataka, and KSDC databases.
- Use Aadhaar-based tracking to follow candidates from enrolment through training, placement, and post-employment.
- Generate real-time district-level dashboards to monitor performance. **Expected Outcome:** Reliable data for evaluation, improved monitoring, and better governance of training providers.

**6. Post-Training Ecosystem Development**

**Objective:** Support transitions from training to livelihoods and entrepreneurship.
**Action:**

- Provide seed capital, micro-loans, and digital toolkits for self-employment.
- Establish incubation cells within training centres for business mentorship.
- Partner with banks, SHGs, and NGOs to link trainees with financial support schemes. **Expected Outcome:** Higher entrepreneurial activity among beneficiaries and localised job creation.

ISSN: 2349-2015
Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

## 7. SUGGESTIONS

Based on the findings of the study and an evaluation of Karnataka's PMKVY outcomes, the following practical suggestions are proposed to strengthen skill development initiatives:

1. **Localised Curriculum Design :** Training modules should be tailored to district-specific economies. For instance, agriculture-focused districts could introduce modules in dairy processing, agri-business management, and farm mechanisation, while industrial regions could prioritise manufacturing and technical trades.
2. **Gender-Specific Interventions:** To enhance female participation, training centres must provide safe hostels, secure transport, and sanitation facilities. Additionally, awareness programmes in collaboration with NGOs and community organisations can encourage women to pursue both traditional and non-traditional sectors such as solar energy, electronics, and digital marketing.
3. **Rural-Centric Skilling Approach :**A rural-first strategy is essential for equitable development. This can be achieved by expanding centres in underdeveloped districts like Raichur, Yadgir, and Koppal, introducing mobile skilling units, blended learning models, and partnerships with gram panchayats to reach underserved populations.
4. **Apprenticeship and On-the-Job Training:** Training partners should be mandated to provide internships or apprenticeships in collaboration with local MSMEs and industry clusters, drawing inspiration from successful dual-training systems such as Germany's model.
5. **Digital Infrastructure and Learning Management Systems (LMS) :**All PMKVY centres should be equipped with reliable internet, smart classrooms, and digital resources. Linking delivery to LMS platforms would ensure blended learning, continuous assessment, and better monitoring of performance.
6. **Real-Time Monitoring and Accountability:** An Aadhaar-enabled MIS must be adopted to track each trainee's journey from enrolment to employment. District-wise dashboards would increase transparency and help identify regions requiring additional support.
7. **Strengthening Entrepreneurship Support:** PMKVY should be linked with complementary schemes such as **MUDRA loans, Start-Up India, and Stand-Up India**. Establishing incubation hubs and mentorship facilities within training centres can help beneficiaries pursue self-employment opportunities.
8. **Outcome-Based Incentives for Training Providers:** Incentives for training partners should be shifted from enrolment numbers to verifiable outcomes such as wage employment, self-employment, or progression into higher education.

## 8. CONCLUSION

The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) has made commendable progress in scaling vocational training and expanding outreach across Karnataka. The scheme has improved individual incomes, enhanced employability in select sectors, and generated opportunities for both wage and self-employment. However, its overall potential remains underutilised due to persistent challenges, including regional disparities, gender gaps, limited rural outreach, and weak industry linkages.

The evidence presented in this study suggests that PMKVY must transition from being **output-oriented** (focusing on enrolment and certification) to becoming **outcome-oriented**

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Peer Reviewed & Refereed Journal (IF: 6.74)
Journal Website: www.nrjbe.in

(sustained employment, wage growth, and entrepreneurial success). With targeted reforms such as district-specific skill mapping, gender-responsive interventions, rural infrastructure expansion, and stronger industry engagement, Karnataka can unlock the full potential of its demographic dividend.

If implemented effectively, PMKVY has the capacity to evolve into a transformative instrument of inclusive growth, bridging the gap between youth aspirations and labour market opportunities while strengthening the foundation for sustainable economic development.

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