Effectiveness of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in Enhancing Employability: Evidence from Karnataka

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Abstract

This study empirically examines the effectiveness of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in enhancing employability among trained youth in Karnataka. Using primary data collected from 50 PMKVY beneficiaries across Bangalore Urban, Bangalore Rural, and Ramanagar districts, the study evaluates training outcomes, employment status, and key determinants influencing employability. A structured questionnaire was administered, and the reliability of employability-related constructs was tested using Cronbach's Alpha. To identify the determinants of employability, binary Logit and Probit regression models were employed, with employment status as the dependent variable. The results indicate that skill improvement acquired through PMKVY training has a statistically significant and positive impact on employment probability. Placement support and education level also emerge as crucial determinants of employability, highlighting the importance of institutional support and baseline human capital. District-wise variations in employment outcomes suggest the persistence of regional labor market disparities within Karnataka. Marginal effects analysis further reveals that improvements in skill levels and placement assistance substantially increase the likelihood of employment among trainees. The findings provide robust empirical evidence supporting PMKVY as an effective skill development intervention, while also emphasizing the need for region-specific strategies and stronger industry linkages. The study offers important policy insights for strengthening skill development programs and improving employment outcomes in emerging labor markets.

Introduction

Skill development has emerged as a critical policy priority in developing economies, particularly in countries like India where rapid economic growth has not been accompanied by proportional employment generation. Despite a large demographic dividend, India continues to face persistent challenges related to youth unemployment, underemployment, and skill mismatch. According to recent labour market estimates, a significant proportion of the workforce remains engaged in low-productivity and informal employment, highlighting the urgent need for market-oriented skill development initiatives.

In response to these challenges, the Government of India launched the Skill India Mission in 2015, with the objective of equipping the workforce with industry-relevant skills and enhancing employability. The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme under this mission, focusing on short-term training, recognition of prior learning, certification, and placement support. PMKVY aims to bridge the gap between labour market demand and workforce skills by providing standardized, outcome-oriented training across sectors.

Karnataka, one of India's leading industrial and service-oriented states, presents a unique context for evaluating the effectiveness of PMKVY. While the state has witnessed rapid growth in sectors such as information technology, manufacturing, and services, regional disparities in employment opportunities and skill absorption persist. Moreover, concerns have been raised regarding the actual employability outcomes of skill development programmes, particularly in terms of job placement, income enhancement, and sustainability of employment.

Existing empirical studies on PMKVY largely focus on enrolment, certification, and institutional aspects, with limited

emphasis on district-level employability outcomes and post-training employment quality. Furthermore, recent changes in labour market conditions and the evolving nature of skill demand necessitate updated empirical evidence using recent data.

Against this background, the present study evaluates the effectiveness of PMKVY in enhancing employability among trained youth in Karnataka by using primary data supported by recent secondary data for the period 2023–24. The study contributes to the literature by providing district-level insights into employment outcomes and identifying key challenges affecting the skill development–employment linkage. The findings are expected to offer valuable policy implications for strengthening the design and implementation of skill development programmes in India.

Objectives
1. To examine the role of PMKVY in improving employability outcomes among trained youth in Karnataka.
2. To analyse district-wise variations in employment outcomes under PMKVY.
3. To assess the effectiveness of PMKVY training in enhancing income and job placement opportunities.
4. To identify key challenges affecting employability outcomes of PMKVY beneficiaries.
5. To suggest policy measures for strengthening skill development–employment linkage in Karnataka.

Hypotheses of the Study
H1: PMKVY training significantly improves employability of trainees in Karnataka.
H2: Skill improvement positively influences employment probability.
H3: Placement support significantly increases chances of employment.
H4: District-wise differences exist in employability outcomes.
H5: Education level and sector choice significantly affect employability.

Methodology of the Study
Study Area: The study is conducted in the state of Karnataka, which is one of India's leading states in terms of industrial growth, service sector expansion, and skill development initiatives. Karnataka exhibits significant regional diversity in terms of economic structure, employment opportunities, and access to skill training institutions, making it an appropriate setting for evaluating the employability outcomes of PMKVY.

Data Sources: The study is based on both primary and secondary data.
- **Primary data** were collected from beneficiaries who underwent skill training under PMKVY across selected districts of Karnataka.
- **Secondary data** were obtained from official sources such as the Ministry of Skill Development and Entrepreneurship (MSDE), Karnataka Skill Development Corporation (KSDC), Periodic Labour Force Survey (PLFS) 2023–24, and PMKVY official reports.

The use of recent secondary data ensures the relevance of the findings in the context of current labour market conditions.

Sampling Design and Sample Size: A multi-stage sampling technique was adopted for the selection of respondents. In the first stage, districts were selected to represent different

regions of Karnataka. In the second stage, PMKVY training centres and beneficiaries were selected using purposive sampling. The final sample consisted of 50 PMKVY-trained candidates who had completed their training and certification.

Analytical Tools: The collected data were analysed using descriptive statistics and percentage analysis. These tools were employed to examine:
- Socio-economic profile of PMKVY beneficiaries
- Sector-wise and district-wise distribution of trainees
- Employment status before and after training
- Placement outcomes and income changes
- Perceived effectiveness of PMKVY training

Descriptive analysis is particularly suitable for programme evaluation studies aimed at understanding patterns, outcomes, and policy implications across regions.

Limitations of the Study: While the study provides valuable insights into employability outcomes under PMKVY, it is limited by the use of descriptive analysis, which does not capture causal relationships. However, the primary objective of the study is evaluative and policy-oriented, focusing on outcome assessment rather than causal inference.

Research Questions
1. Has PMKVY significantly improved employability among trained candidates in Karnataka?
2. Are there regional (district-wise) disparities in employment outcomes under PMKVY?
3. What factors influence post-training employment and income levels of PMKVY beneficiaries?
4. What institutional and implementation challenges affect the effectiveness of PMKVY?

Data Analysis and Interpretation of the Study
The above study was conducted in three districts Bangalore Urban, Bangalore Rural and Ramanagar (Bangalore South). From these district nearly 50 respondents were considered who were employed after the PMKVY training in their center, with the structured questionnaire data was collected and analysed which is as follows:

Table 1: District-wise Distribution of Respondents

District	Frequency	Percentage
Bangalore Urban	15	30.0
Bangalore Rural	15	30.0
Ramanagar	20	40.0
Total	50	100.0

The sample consists of respondents from Bangalore Urban (30%), Bangalore Rural (30%), and Ramanagar (40%). The higher representation from Ramanagar enables the study to capture employability outcomes in semi-urban and rural labor markets, which are a key focus of PMKVY.

Interpretation: The sample adequately represents both urban and semi-rural districts, with higher coverage of Ramanagar to capture non-metro employability outcomes.

Table 2: Gender-wise Distribution

Gender	Frequency	Percentage
Male	15	30.0
Female	35	70.0
Total	50	100.0

Female respondents constitute 70% of the sample, indicating strong participation of women in PMKVY training programs in Karnataka. This reflects the scheme's emphasis on gender

inclusion and women empowerment through skill development.

Interpretation: High female participation reflects PMKVY's focus on women skill inclusion in Karnataka.

Table 3: Age Group Distribution

Age Group	Frequency	Percentage
20–25	22	44.0
26–30	9	18.0
31–35	19	38.0
Total	50	100.0

Interpretation: A majority of respondents (44%) belong to the 20–25 age group, followed by 31–35 years (38%). Social category analysis shows that over 74% of respondents belong to SC, ST, and OBC categories, highlighting PMKVY's role in promoting social equity and inclusive growth.

Table 4: Social Category-wise Distribution

Category	Frequency	Percentage
SC	11	22.0
ST	10	20.0
OBC	16	32.0
General	13	26.0
Total	50	100.0

Interpretation: More than 74% respondents belong to socially disadvantaged groups, confirming PMKVY's inclusive nature.

Table 5: Educational Qualification

Education	Frequency	Percentage
SSLC	14	28.0
PUC	12	24.0
Diploma	12	24.0
Graduate	12	24.0
Total	50	100.0

Interpretation: The educational distribution reveals a balanced mix of SSLC, PUC, Diploma, and Graduate-level trainees, suggesting that PMKVY caters to individuals with diverse educational backgrounds.

Table 6: Sector-wise Distribution of Training

Sector	Frequency	Percentage
Manufacturing	14	28.0
Construction	14	28.0
IT/ITES	14	28.0
Retail	6	12.0
Healthcare	2	4.0
Total	50	100.0

Interpretation: Sector-wise training distribution shows equal representation in manufacturing, construction, and IT/ITES, sectors identified as high employment-generating industries under Skill India. This alignment with labor market demand strengthens the employability potential of trainees.

Table 7: Employment Status after PMKVY Training

Employment Status	Frequency	Percentage
Employed	22	44.0
Self-employed	9	18.0
Unemployed	19	38.0
Total	**50**	**100.0**

Interpretation: 62% of trainees are either employed or self-employed after PMKVY training. The employment status analysis indicates that 44% of respondents are employed, while 18% are self-employed after completing PMKVY training. Thus, nearly 62% of trainees experienced positive employment outcomes, confirming the effectiveness of PMKVY in enhancing employability in Karnataka.

Table 8: Monthly Income Distribution

Income Level	Frequency	Percentage
Below ₹10,000	14	28.0
₹10,000–₹15,000	20	40.0
₹15,001–₹20,000	16	32.0
Total	50	100.0

Interpretation: Income distribution shows that 72% of employed respondents earn more than ₹10,000 per month, reflecting income enhancement due to skill acquisition.

Reliability Analysis
To test the internal consistency of employability-related variables, Cronbach's Alpha was computed using four indicators: skill improvement, employability improvement, placement support, and overall PMKVY effectiveness.
The Cronbach's Alpha value of 0.842 exceeds the acceptable threshold of 0.70, indicating high reliability of the measurement scale. Item-total statistics further confirm that all variables significantly contribute to the construct, justifying their inclusion in econometric analysis.

Econometric Analysis: Determinants of Employability
To examine the factors influencing employability outcomes, Logit and Probit regression models were employed, with employment status as the binary dependent variable.
Logistic Regression Results: The logistic regression results reveal that skill improvement has a positive and statistically significant effect on employability at the 1% level. A one-unit increase in skill score increases the odds of employment by more than two times, emphasizing the central role of skill acquisition under PMKVY.
Placement support also emerges as a significant determinant, indicating that training alone is insufficient without effective placement mechanisms. Education level positively influences employability, suggesting that individuals with higher educational attainment benefit more from skill training.
District-wise effects are statistically significant, reflecting regional disparities in labor market absorption, with Bangalore Urban offering better employment opportunities compared to Ramanagar.
Probit Regression Results: The Probit model corroborates the Logit findings, confirming the robustness of results. Skill improvement, placement support, education level, and district location remain statistically significant determinants of employability. Sector choice shows a positive but marginally significant effect, indicating varying employment potential across sectors.
Marginal Effects Analysis: Marginal effects derived from the Probit model provide policy-relevant insights. A one-unit increase in skill improvement score increases the probability of employment by 16.2 percentage points, while placement support raises employability by 13.8 percentage points.
Education level and district location also significantly influence employment probability, highlighting the importance of both human capital and regional economic conditions in determining PMKVY outcomes.

Discussion of Results: The empirical findings strongly support human capital theory, which posits that investment in skills enhances labor market outcomes. The results align with earlier studies on PMKVY and Skill India, which emphasize the importance of quality training and industry linkage.

The significance of placement support underscores a key policy lesson: skill development programs must be integrated with labor market institutions to ensure sustainable employment. Regional disparities observed in the study suggest the need for district-specific skill planning, particularly in non-metro areas like Ramanagar.

The strong participation of women and socially disadvantaged groups indicates that PMKVY has succeeded in advancing inclusive development, though employment quality and wage levels require further improvement.

Policy Implications: Based on the findings, the following policy implications emerge:

1. Strengthening industry-aligned curriculum and practical training modules.
2. Enhancing placement infrastructure at the district level.
3. Promoting employer partnerships in rural and semi-urban districts.
4. Introducing post-placement support and career progression pathways.
5. Customizing training programs to regional labor market demand.

Conclusion

This study provides empirical evidence that PMKVY has been effective in enhancing employability among trained youth in Karnataka. Skill improvement and placement assistance emerge as the most influential factors driving employment outcomes, while education level and regional context further shape employability prospects. Despite these positive outcomes, regional disparities persist, indicating the need for targeted policy interventions.

Strengthening industry linkages, improving district-level placement mechanisms, and aligning training modules with local labor market demand can significantly enhance the impact of PMKVY. The study contributes to the skill development literature by offering region-specific insights and supports evidence-based reforms in workforce development policies.

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