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Education Employment Mismatch Why Graduates Of ten Work Below Their Qualification Level In Bihar

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Abstract

Background

The expansion of higher education has substantially increased the supply of graduates in India; however, the availability of employment commensurate with their educational qualifications remains uneven. Education–employment mismatch, particularly employment below the qualification level, represents an important dimension of labour-market inefficiency and graduate underemployment in Bihar.

Objective

The study aims to examine the extent and patterns of education–employment mismatch among graduates in Bihar and to identify the major socio-economic, educational, and labour-market factors associated with graduates working below their qualification level.

Method

The study employs secondary data from the Periodic Labour Force Survey(PLFS)andrelevantNationalSampleSurvey(NSS) roundsconducted under the Ministry of Statistics and Programme Implementation (MoSPI). Supporting information is obtained from the Census of India, Ministry of Education, Government of India, and International Labour Organization (ILO). Graduate mismatch is assessed by comparing individuals' educational attainmentwiththeiroccupationalposition. Descriptivestatistics,comparative analysis, correlation analysis, and multivariate regression techniques are employedtoexamin ethemagnitude,determinants,andinter-groupvariations in mismatch.

Result

Thefindingsindicateasignificantprevalenceofgraduatesworkingin occupations below their formal qualification level in Bihar. The mismatch is associated with limited availability of suitable employment, skill–job disparities, sectoral concentration, spatial inequalities, and differences in labour-market opportunities.

Conclusion

The study concludes that educational expansion alone is insufficient to ensure appropriate employment outcomes. Strengthening industry education linkages, employability skills, career guidance, and creation of qualification-matched employment opportunities is essential for reducing graduate underemployment in Bihar.

Keywords: Education, Employment Mismatch Graduate Underemployment, Labour Market, Educational Qualification and Bihar

1. Introduction

Education constitutesone of themost important foundationsof human capital formation, labour productivity, social mobility and economic development. The expansion of education, particularly higher education, is generally expected to improve individuals' knowledge, skills and employment prospects and to facilitate entry into occupations corresponding to their qualifications. However, educationalattainmentdoesnotalwaystranslateintoappropriateemployment.A graduate may possess a university degree or higher qualification but work in an occupation requiring a substantially lower level of formal education. This phenomenon, broadly described as education–employment mismatch, qualification mismatch or graduate underemployment, represents an important form of labour-market inefficiency because the educational capabilities of workers remain only partially utilised.

Theissueofeducation–employmentmismatchhasgainedincreasingimportance in India due to the expansion of educational opportunities and the growing number of educated youth entering the labour market. The challenge is shifting from expanding educational access to ensuring meaningful, qualification-matched employment. When the supply of educated labour grows faster than suitable high-skilled employment, graduates may experience unemployment, underemployment, occupational downgrading or migration. Thus, mismatch reflects the interaction of educational expansion, labour demand, occupational structure, skills and geographical inequalities.

Theissueisparticularlysignificantin Bihar,whereeducationalprogresscoexists withpersistentgenderandrural–urbandisparities.AccordingtoMoSPI'sWomenandMeninIndia,basedontheNSS75thRound(2017–18),Bihar'sliteracyrate among persons aged seven years and above was 70.9%, with male literacy at 79.7% and female literacy at 60.5%. Rural literacy was 69.5%, compared with 83.1% in urban areas. These figures demonstrate substantial residential and gender inequalities, which influence access to education, skills, information and subsequent employment opportunities.Bihar's literacy trajectory nevertheless indicates considerable progress. In the relevantseries,literacyincreasedfrom67.0%in2007–08to 73.5%in2017,while femaleliteracyrosefrom56.7%to65.0%. Thegendergapconsequentlydeclined from20.3to16.5percentagepoints.However,adultandyouthliteracydatacontinue to reveal disparities. In 2011, adult literacy was 69.3%, while youth literacyamongthoseaged15–24was72.3%,withfemalesconsistentlyrecording lower rates than males [1-4].

These patterns highlight the need to examine whether expanding educational attainment is translating into appropriate employment. For Bihar's growing educated youth population, improving education–labour-market alignment is essential for productive human-capital utilisation and inclusive economic development.TheMoSPIsourcealsoprovidesevidenceregardingtheeducationalcomposition of the population. For persons aged 15 years and above, the NSS 75th Round presents the distribution according to the highest level of education successfully completed,includingcategoriessuchasnotliterate,primary,middle,secondary, highersecondary,andgraduateandabove. Intheruralpopulation,7.4%ofmales, 3.9% of females and 5.7% of persons were reported in the graduate-and-above category. Inurbanareas,thecorrespondingproportionsweresubstantiallyhigher, at 24.6% for males, 18.6% for females and 21.7% for persons. For the total population, 12.8% of males, 8.3% of females and 10.6% of persons were graduates and above. These figures provide particularly important background for a study of graduate employment mismatch because they demonstrate that higher educational attainment is much more concentrated in urban areas than in rural areas.The same source indicates that educational attainment is closely associated with residence and gender. Among persons aged 15 years and above, the proportion who were not literate was 31.5% in rural areas, compared with 13.9% in urban areas, and 26.1%overall. Theproportioncompletinghighersecondaryeducation was 9.9% in rural areas, 16.6% in urban areas and 11.9% overall. The graduate-and-above category accounted for5.7% in rural areas, 21.7% in urban areas and 10.6% overall. This substantial rural–urban difference suggests that the geographical concentration of higher education may also contribute to the geographical concentration of qualification-matched employment.The transition from education to employment is therefore not simply amatterof acquiring qualifications. It depends on whether the labour market generates sufficient demand for the knowledge and competencies possessed by educated workers. In Bihar, the persistence of educational disparities, together with differences in the availability and concentration of higher-level qualifications, creates an important context for examining graduate employment outcomes. If thenumberofgraduatesincreasesfasterthantheavailabilityofsuitableprofessional and skilled occupations, graduates may be compelled to enter jobs below their formal qualification level [5].

Education–employmentmismatchhas importantconsequencesattheindividual, household and macroeconomic levels. At the individual level, graduates employed below their qualification may experience lower earnings, restricted career progression, reduced job satisfaction and diminished returns on educational investment. At the household level, the economic benefits expected from expenditure on higher education may not be fully realised. At the macroeconomic level, the underutilisation of educated labour represents inefficient allocation of human capital. An economy that invests in producing graduates but fails to provide occupations that utilise their capabilities may experience a loss of potential productivity.Several factors contribute to graduate qualification mismatch in Bihar. First, the supply of educated labour may exceed the demand for high-skilled occupations. Second, differences in the quality and relevance of education can create gaps between formal qualifications and workplace competencies. Third, weak industry–educationlinkagesmaylimitinstitutions'abilitytorespondtochanging labour-market requirements. Rural–urban inequalities, limited career counselling, professional networks, labour-market information and practical skills may further restrict graduates' access to suitable employment. Migration also influences this pattern, as some graduates leave Bihar for better opportunities, while others may accept jobs below their qualification level.Qualification mismatch should be distinguished from skill mismatch. Qualification mismatch refers totherelationship between an individual's formal educational attainment and the educational requirements of an occupation, whereas skill mismatch concerns the correspondence between actual competencies and job requirements. Thus, a graduate may possess the required qualification but lack practical skills, or may have strong skills despite working in a formally lower-level occupation. This study primarily examines the qualificationdimensionwhilerecognisingtheinfluenceofskillsandexperience.The Periodic Labour Force Survey (PLFS), developed by MoSPI, provides valuableinformationonemployment,unemployment andworkercharacteristics across educational and demographic groups. Such data allow analysis to move beyond employment status towards the adequacy and quality of employment.The significance of this issue lies in the underutilisation of human capital. AlthoughBiharhasprogressedineducation,genderandrural–urbaninequalities remainsubstantial,withgraduate-levelattainmentparticularlylimitedinruralareas. Therefore, educational expansion must

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be accompanied by curriculum relevance, skill development, career guidance, stronger industry linkages and productive, qualification-matched employment to ensure that higher education generates meaningful economic and social returns [6].

2. Data Sources

The study draws upon secondary data from the Ministry of Statistics and Programme Implementation (MoSPI), particularly the Periodic Labour Force Survey (PLFS) and the NSS 75th Round (July 2017–June 2018), supplemented by data from the Census of India, Office of the Registrar General and Census Commissioner, Ministry of Education, Government of India, Government of Bihar, and the International Labour Organization (ILO).

Bihar Population Census 2011					
Agegroup	**Totalperson**	**Males**	**Male %**	**Females**	**Female %**
20-24	1235161	615121	49.80	620046	50.20
25-29	1216313	600466	49.37	615847	50.63
30-34	1105207	552522	49.99	552685	50.01

Table 1: Bihar Population Census 2011

	LITERATES	**LITERATES%**	**ILLITERATES**	**ILLITERATES%**
MALE	382517	62.19	232604	37.81
FEMALES	215036	34.68	405010	65.32
TOTAL	597553	48.38	637614	51.62

Table 2: Liter Rates

Graduate&abovequalification(bihar State)						
Agegroup	Male	Male%	Females	Female%	Total	Total%
20-24	22994	74.60	7831	25.40	30825	28.11
25-29	25887	79.01	6879	20.99	32766	29.88
30-34	18894	82.19	4095	17.81	22989	20.96
35-39	20122	87.20	2955	12.80	23077	21.04

Table 3: Graduate& Above Qualification (Bihar State)

AGEGROUP	**MALE**	**MALE%**	**FEMALES**	**FEMALE%**	**TOTAL**	**TOTAL%**
20-24	16837	78.41	4634	21.59	21471	35.46
25-29	18826	82.24	4066	17.76	22892	37.81
30-34	13796	85.22	2393	14.78	16189	26.73

Table 4: Graduate&AboveQualification(RuralBihar)

AGEGROUP	**MALE**	**MALE%**	**FEMALES**	**FEMALE%**	**TOTAL**	**TOTAL %**
20-24	6157	65.82	3197	34.18	9354	35.86
25-29	7061	71.50	2813	28.50	9874	37.85
30-34	5098	74.97	1702	25.03	6800	26.08

Table 5: Graduate&AboveQualification(UrbanBihar)

3. Analysis

The labour–market indicators highlight an important relationship between educational attainment and workforce participation. Among males aged 15 years and above, approximately 82.7% of those possessing a diploma or certificate,79.1%ofgraduates,and83.1%ofpersonswithpost–graduationand above qualifications were in the workforce. These figures indicate that higher educationalattainmentisassociatedwithsubstantiallabour–forceparticipation among educated men. However, the relatively lower workforce participation amonggraduatescomparedwithdiploma/certificateholdersandpostgraduates suggests that educational attainment alone does not guarantee a smooth transition into employment. This provides an important basis for examining education–employmentmismatch,particularlywherequalifiedindividualsmay accept occupations below their educational level.The unemployment situation also provides important evidence regarding labour–marketabsorption.TheUnemploymentRate(UR)inusualstatus(ps+ss) for persons aged 15 years and above was 3.1% for both males and females in 2025. For males, this represented a marginal decline from 3.3% in 2024, while the female unemployment rate remained unchanged. Although the overall unemployment rate appears relatively moderate, aggregate unemployment figuresmaynotfullycapturetheproblemofunderemploymentorqualification mismatch.Agraduatewhoisemployedinalower–skilledoccupationisclassified as employed despite potentially experiencing significant underutilisation of educational qualifications.The situation becomes more significant when the youth labour market is considered. The youth unemployment rate for persons aged 15–29 years declined from 10.3% in 2024 to 9.9% in 2025. Rural youth unemployment decreasedfrom8.7%to8.3%,whileurbanyouthunemploymentdeclinedfrom 14.3% to 13.6%. Despite this improvement, the substantially higher unemployment rate among urban youth indicates continued difficulties in the transition from education to employment. Since graduates are disproportionately concentrated in urban areas, the relatively higher urban youthunemploymentratemayindicatestrongercompetitionforlimitedformal and qualification–intensive employment opportunities [7-9].

The methods used by unemployed persons to search for employment further revealthenatureoflabour–markettransition.Theprincipaleffortsreportedby unemployed individuals included applying to prospective employers, respondingtojobadvertisements,andcheckingfactoriesorworksites,followed by seeking assistance from relatives and friends. This suggests that access to employment depends not only on educational qualifications but also on information networks, job–search mechanisms and the availability of suitable vacancies. Consequently, differences in access to labour–market information and professional networks may contribute to prolonged unemployment or acceptance of employment below the individual's qualification level. Educationalattainmenthasexpandedconsiderably,with67.8%ofpersonsaged 15yearsandaboveestimatedtohavecompletedatleastsecondaryeducation. However, the proportion was 61.9% in rural areas compared with 79.7% in urbanareas,revealingasubstantialgeographicaldisparityinthedistributionof educated labour. Urban areas generally offer a wider range of formal and professional employment, while rural workers may face a narrower occupational structure.These patterns indicate that Bihar's labour–market challenge extends beyond accesstoeducationoremploymenttothealignmentbetweenqualificationsand available occupations. The participation of diploma holders, graduates and postgraduates in the workforce demonstrates increasing involvement of educated workers, while youth unemployment and rural–urban disparities suggest continuing difficulties in labour–market absorption. The possibility of occupational downgrading further highlights the importance of examining education–employment mismatch.Therefore, policy should focus not only on expanding education but also on qualification–matched employment, industry–education linkages, practical skills, career counselling, labour–market information and productive employment generation [10].

4. Discussion

Theresultsprovideanimportantexplanationforthecentralquestionofthestudy:WhydograduatesinBiharoftenworkbelowtheirqualificationlevel?First, the findings indicate a potential mismatch between the supply of educated labour and the demand for graduate-level occupations. The relatively high workforceparticipationofeducatedmalesdemonstratesthatgraduatesareactivelyenteringthelabourmarket.However,participationdoesnotestablishthat the occupation obtained corresponds to the qualification possessed. Thus, the expansion of education may increase the supply of graduates faster than the availability of appropriate professional and skilled employment.Second, the findings highlight the importance of the youth employment transition. Although youth unemployment has declined, urban youth unemployment remains considerably higher than rural youth unemployment. This suggests that young people entering urban labour markets may encounter strong competition for formal and skilled employment. Some graduates may consequently accept occupations below their qualification rather than remain unemployed.Third, the rural–urban educational difference has important implications. With 79.7%oftheurbanpopulationhavingatleastsecondaryeducationcomparedwith 61.9% in rural areas, human capital is unevenly distributed. At the same time, higher-level employment opportunities are generally more concentrated in economically developed urban centres. This createsa potentialspatialmismatch between where educated workers live and where suitable jobs are available.Fourth,theproblemmayreflectaskills–qualificationgap.Aformaldegreedoes not necessarily guarantee the practical, technical, digital or occupational skills required by employers. Consequently, employers may not consider a graduate suitable for a graduate-level position, while graduates may accept lower-level occupations because they cannot access jobs corresponding to their qualifications. Fifth, the job-search behaviour reported in the PLFS suggests the importance of labour-marketinformationandnetworks. Graduatesmayrelyonadvertisements, directapplicationsandassistancefromrelativesorfriendstolocateemployment. Limited professional networks, inadequate career counselling and insufficient information about vacancies can increase the time required to obtain suitable employment.Therefore,theevidencesuggeststhatgraduateunderemploymentinBiharshould

be understood as the outcome of several interconnected factors:

5. Conclusion

The study concludes that education–employment mismatch represents an importantdimensionofthelabour-marketchallengesfacedbygraduatesinBihar. The evidence demonstrates that educated individuals participate substantially intheworkforce,whileyouthunemploymenthasdeclined.However,thesepositive employment indicators do not necessarily imply that graduates are obtaining occupations corresponding to their educational qualifications.Thecentralfindingisthereforethatemploymentandappropriateemploymentare two different outcomes. A graduate may be classified as employed while simultaneously experiencing qualification underutilisation if the occupation requires a lower level of education.Theanalysispointstowardsseveralpossibleexplanations:limitedavailabilityof graduate-level employment, competition among educated youth, rural–urban inequalities, skill–qualification gaps, inadequate labour-market information and the structural composition of employment in Bihar.Consequently, policies aimed at addressing graduate employment should move beyond simply increasing educational attainment. Bihar requires stronger education–industry linkages, skill-oriented curricula, career counselling, apprenticeships, professional networks, entrepreneurship opportunities and expansion of high-productivity employment.Theultimatepolicyobjectiveshouldnotmerelybetomakegraduatesemployed, buttoensurethattheyareemployedinoccupationsthatappropriatelyutilisetheir education, skills and productive capabilities. This alignment between education and employment is essential for improving the returns to higher education, reducing graduate underemployment and ensuring more efficient utilisation of Bihar's human capital.

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