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Status and Prospects of Employment Generation and Wage Enhancement in Chhattisgarh 2024-2029

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1 Context of employment problem in Chhattisgarh

The state of Chhattisgarh was formed in 2000 and is the 26th state in India. The total geographical area of the state is 1,92,000 square kilometres. The state has 28 zilla parishads, 146 Janpad Panchayat and 11,664 Gam Panchayats. The urban local bodies in the state include 14 Municipal corporation, 43 Municipalities and 113 Nagar Panchayat.

The population of the state is 2.55 crores with a sex ratio of 964. The Scheduled Castes and Scheduled Tribes comprise about 12.8% and 30.6% respectively of the state population. Chhattisgarh has a literacy rate of 70.30% with male and female literacy at 80.27% and 60.24% respectively. The rural population of the state is 76.8% and urban population 23.2%.

The GDP of the state at constant prices 2022-23 stood at ₹ 4,38,478 crore. Agriculture sector registered a growth of 3.88%, manufacturing 15.44% and services sector 8.54%. In 2021-22, the manufacturing sector was the largest contributor to GSDP at 50.61 %, followed by services (32.66%), agriculture and allied activities (16.73%). Per capita income in the State at current prices is ₹ 1,18,401 in the year 2021-22 which is less in comparison to all India figure of ₹ 1,44,319. The northern and southern part of Chhattisgarh is tribal inhabited and among the poorer states in India as per Multi Poverty index parameters.

Unemployment among youth was found to be high at 7.1% in 15-29 age category with male and female unemployment at 7.7% and 6.1% respectively as per PLFS 2022-23. Within youth, rural unemployment stood at 4.7% and urban unemployment at 21.1%. Within the working age population 15-59, the unemployment rate was 2.7% with male and female employment at 3.0% and 2.1% respectively.



Source: Image

Educated youth unemployment is an emerging problem. While different sectors of the economy are growing, particularly the primary and tertiary sectors, it has not been adequately creating employment opportunities. Recruitments in public employment are limited by vacancies available and possibilities for recruitment, though it continues to be the preferred choice.

Private sector employment at higher positions as per industry is mostly captured by those outside the state. It is only providing employment to those at the higher levels of the pyramid with higher level technical skills. Many government vacancies are said to be unfilled. The social and psychological stress created by unemployment also results in mental health issues. Many of the distressed are from ST, SC and OBC.

The economic opportunities being created are less inclusive of marginal groups. Given this scenario, there is a need to assess the unemployment situation in Chhattisgarh and identify potential solutions. A study was conducted in Chhattisgarh to assess the scenario of various socio-economic segments and occupational groups related to their employment and unemployment status and wage income status.

The scope of the study was four-fold. The first was to conduct a macro-analysis of developmental challenges including in livelihood and unemployment status among the socio-economic segments and occupational groups. Secondly, to conduct micro-analysis of developmental challenges including in aspects of employment and livelihoods as witnessed in rural and urban settings by the socio-economic segments and occupational groups.

Thirdly, to understand the gaps in the current programs and policies which does not necessarily address the current deficits. Fourthly, to recommend suggestions which address development deficits among socio-economic segments and occupational groups including in livelihoods and employment and improve their overall development status. The study was conducted in Bastar, Dantewada, Raipur and Surguja.

1.1 Aspirations of various socio-economic segments

The current endowments and livelihood aspirations of the socio-economic and occupational segments are as follows:

Social and Occupational Segment	Current Endowments	Aspiration for development and livelihoods in Chhattisgarh
Scheduled Caste	 Constitutional provisions for SC protection Affirmative Action in public services Welfare and Empowerment schemes Traditional livelihood Skills Growing educational levels SC Sub-Plan, Finance corporation 	 Access and continuity of education Eradication of Caste discrimination Land ownership. Safe, secure, and sustainable livelihoods Effective implementation of affirmative action policies
Scheduled Tribes	 FRA guarantees land ownership. Tribal sub-plans with provisions for dedicated funds Scope for participation in local governance through PESA Assets – Land Livelihood skills Growing access to education 	 Protection of traditional lands and resources Allotment of land pattas Quality healthcare and educational facilities in tribal areas. Sustainable livelihood options. Increased participation in decision making process. Assured benefits under PESA for tribal areas
Particularly vulnerable tribal groups	 Special programs for welfare of PVTGs Indigenous ecological knowledge Resilient community and nature protecting community spirit. Traditional farming skills 	 Land and Resource rights. Allotment of land pattas Quality healthcare and educational facilities in tribal areas. Sustainable livelihood options Cultural sensitivity among non-tribals

Social and Occupational Segment Current Endowments		Aspiration for development and livelihoods in Chhattisgarh
Minority	 Minority institutions – Minority finance corporation, Waqf Boards, Minority commission and welfare departments Growing levels of education Livelihood skills in non-farm sector 	 Equal access to opportunities Nondiscrimination Representation in government and public institutions Access to education Access to quality employment opportunities
Youth	 Growth of SHG movement contributing to widening access to finance, social capital and livelihood skills Growing educational levels of women and families more open to girl child education Increased opportunities for accessing skill programs and finance. Increased representation in local governance Availability of institutions such as R-SETI for entrepreneurship training 	 Access to quality education and skill development Access to employment opportunities Support for enterprise – financial, legal, business guidance and mentoring. Meaningful participation in public life and decision making. Increased voice and representation on public issues
Women	 Growth of SHG movement contributing to widening access to finance, social capital and livelihood skills Growing educational levels of women and families more open to girl child education Increased opportunities for accessing skill programs and finance. Increased representation in local governance Availability of institutions such as R-SETI for entrepreneurship training 	 Gender equality and freedom from discrimination Access to quality education and healthcare Economic empowerment and secure livelihoods Safe and secure employment Higher voice and representation
Small and Marginal farmers	 Programs such as Sinchai yojana, credit access such as KCC, procurement programs through MSP Availability of institutions to support farmers in extension – KVKs, ATMA Traditional farming skills of the farmers Emergence of collectives – FPOs 	Improved productivity from land Improved irrigation infrastructure and access to water Financial assistance and access to credit Adoption of modern farming techniques and crop diversification Assured price for produce
Agricultural workers	 Programs of livelihood security – MGNREGA contributing to increased wage income Scope for taking up cultivation through land leasing and land ownership. Availability of alternative livelihood options 	 Improved wage incomes Opportunities for land ownership Diversification of livelihood opportunities Protection for agricultural workers
Informal sector workers (manufacturing and service)	 Legal provisions for worker welfare – minimum wages, inter-state migrant workers act, social security welfare boards Availability of institutions to assist in labor rights – Trade Unions, India labor line, occupation specific worker collectives 	 Improved livelihood and social security Access to rights of workers Access to skill development programs Access to financial services for setting enterprise Community ownership of enterprises

1.2 Development challenges and livelihoods situation of socio-economic segments and vulnerable groups

The development and livelihood challenges of socio-economic segments and occupational groups are as follows: -

Social Segment	Development Challenges	Livelihood challenges
Scheduled Caste	 Poverty and Inequality Low literacy educational levels Poor access to healthcare services Social Discrimination 	 Low social mobility beyond traditional occupations Landlessness Low access to skills training Lack of access to private sector employment
Scheduled Tribes	 Land alienation and displacement due to development and conflict. Lack of access to forest resources Poverty and Inequality Low literacy educational levels Poor access to healthcare services 	 Confinement to manual labour, menial jobs and informal work Exploitation by non-tribals and middlemen Low access to skills training Lack of access to private sector employment
Particularly Vulnerable Tribal Groups (PVTGs)	 Poorest and among the most vulnerable Displacement due to development projects and conflict Low literacy and educational levels Lack of access to proper infrastructure like roads, transportation Poor health and high mortality rates Social exclusion and lack of political participation 	 High reliance on unskilled and manual work Subject to poor wages and exploitative conditions Lack of access to resource institutions to improve livelihoods. Low access to skills training
Minority	 Extreme poverty rates Landlessness and resource deprivation Low literacy and educational levels Low access to healthcare Low political participation and representation 	 Reliance on traditional crafts and trade Challenges of market access and skill development Low access to skill development services
Youth	 Lack of access to quality education Mismatch between industry needs and skillsets. Limited access to vocational training in rural areas Limited social mobility 	 Low job creation leads to youth unemployment. Absorption in low paying informal jobs with limited scope for wage enhancement. Low access to high end skill training Lack of access to finance to start an enterprise
Women	 Low literacy and educational levels Limited access to good healthcare Gender barriers Violence against women Low political representation 	 Low female labor force participation Low job creation in female centric sectors leading to unemployment. Absorption in informal employment with limited benefits Landlessness and limited access to resources

Small and Marginal farmers	 Small size of farms making it difficult to undertake farm improvements. Limited access to irrigation Low returns from farm activity Limited membership in farmer collectives such as FPOs 	 Low productivity High input costs Low income Exploitation by middlemen Limited access to formal credit Limited access to alternative livelihood opportunities
Agricultural workers	 Low wages and informal work Seasonality of work Limited opportunities for livelihood diversification Landlessness 	 Limited opportunities for land ownership Lack of livelihood enhancement schemes targeting agricultural workers Seasonality of work leads to inter-state migration
Informal sector workers (manufacturing and service)	 Lack of livelihood and social security Unstable and unpredictable income Limited access to opportunities for education, skilling, and training Vulnerability to shocks and crises 	 Informal employment relations No work contract, paid leave, social security Low wages Poor working conditions Limited opportunities for wage enhancement



Source: Image

2 Highlights of Labour and Employment Status in Chhattisgarh

2.1 Labour Force Participation Rate (LFPR) and Worker Population Ratio (WPR)



Source: Image

At the national level LFPR for Scheduled Tribes was 49.2%, followed by Scheduled Castes 41.2%, Other backward castes 40.7% and others 39.4%. Similar thing is found with WPR, where it was Scheduled Tribes 48.0%, Scheduled Caste 39.4%, Other backward castes 39.1% and other 37.5%.

While higher LFPR and WPR among disadvantaged groups indicates a positive trend, it is also a result of lower returns on labour work undertaken. The lower returns from labour activities forces a greater number of household members to engage in labour work.

Similarly, in socially advantaged households, as there are economic advancement members from households particularly females are made to withdraw from labour engagement.

LFPR and WPR among the upper decile groups was higher than the overall state LFPR and WPR rates and the unemployment rates.

In Chhattisgarh, while LFPR was 43.6% for the last decile category LFPR was 44.1% overall. WPR for overall and last decile category for Chhattisgarh were 40.5% and 39.8%.

Similar pattern is found in relation to unemployment rate where among the top two decile groups it was more than the state average. Hence with increased economic status, while there is higher LFPR and WPR, there is also greater unemployment rate as more labour is available for work to take up higher paying employment.

2.1.1 Gender factors lead to low female labour participation rates

Gender patterns reveal that LFPR in India was low among females with LFPR at 24.8% and male LFPR at 57.3%. A similar pattern can be seen across Chhattisgarh.

Comparative LFPR between male and female in Chhattisgarh were 59.7% and 35.7%. High differentials in male and female LFPR despite the increasing female education access only indicates the lower absorption of women into the economy.

LFPR of Youth (15-29) age group was much below that of whole working age group (15-59) indicating lower youth absorption in labour force for youth in Chhattisgarh at 51.4%. This was much below that for whole working age group, which for Chhattisgarh was 70.3%.

This trend indicates that there is a growing joblessness of youth with not enough jobs getting created for youth in proportion to availability of work.



Source: Image

2.1.2 Work participation rates (WPR) of youth below the state average across all age groups

WPR of youth at both national and state level was below the national and state average. At national level, while the WPR for population 15 and above was 39.6%, for the 15-29 age group it was 36.8%. Similarly, the WPR for youth in Chhattisgarh was 47.9%. This was below the overall WPR of 64.9% for population 15 and above. This indicates lower absorption of youth taking place in employment.

2.1.3 WPRs are slightly higher for graduates and above than the state WPR

Educational progress brought slight improvements in WPRs. In Chhattisgarh, while overall WPR was 66.5%, it was 66.3% and 70.6% respectively for graduates and post-graduates respectively. This indicates that higher education unlike anything below higher educational level has potential to absorb youth into better paying employment.

2.2 Employment by Sectors

2.2.1 Primary sector in rural areas and tertiary sector in urban areas were the dominant broader sectors of employment

In rural areas, the primary sector is the dominant sector of employment in Chhattisgarh with 67.3% dependent on it. In urban areas, the dominant sector of employment was tertiary sector in Chhattisgarh with 57.2% dependent on it. Hence income enhancement efforts should be focused on primary sector for rural areas and largely tertiary services in urban areas. Partial intersectoral shifts should be attempted from primary sector in rural areas and service sector in urban areas.

2.2.2 Agriculture in rural area and Trade and Manufacturing in urban area were the dominant sub-sectors of employment

While 74.17% were engaged in agriculture in rural areas, in urban areas the share of Wholesale and Retail Trade, Repair of Motorcycles and Motor vehicles was 18.48%, 13.97% in manufacturing and 12.11% in construction. Economic diversification beyond agriculture in rural areas was limited.



Source: Image

2.3 Status of Employment

2.3.1 Self-employment in rural areas and wage and salaried employment in urban areas was the dominant labour force participation pattern in Chhattisgarh

Both at the national level and in the state, self-employment in rural areas and wage and salary employment in urban areas was the dominant form of employment pattern. While about 54% were absorbed in self-employment in rural areas, about 43.2% were absorbed in wage / salary employment in urban areas.

Self-employment in rural areas of Chhattisgarh was 67.1%. In urban areas, wage and salary employment was in 48.7%. Higher self-employment in rural and urban areas is more forced and not opportunity self-employment emerging from desire for pursuing entrepreneurship. The lower share of salaried employment only indicates the level of informality.

2.3.2 In self-employment, a greater proportion of female are unpaid helpers

In self-employment, both in rural and urban areas, there is a greater proportion of female engaged as helpers in own account enterprise. For Chhattisgarh it was 64.0%. This indicates that while most of the enterprise ownership is with male, the engagement of females has been more in form of helpers. This also means that female tend to be mostly unpaid workers assisting the family self-employment without adequate ownership over the same.



Source: Image

2.3.3 Informality pre-dominant in employment relations

At the national level, 62% wage / salaried employed did not have written contracts; 49.2% were not eligible for paid leave and 53.0% did not have any social security. Those without written contracts for Chhattisgarh were 62.5%, those without paid leave similarly 54.1%, those without social security 58.3% and with those none of these 43.4% for Chhattisgarh. The penetration of informal employment only indicates the quality of employment and thus suggests lacking aspects of decent work.

2.4 Wages

2.4.1 Wages are less than the stipulated minimum wages

The average wages received by the workers were lesser than the minimum wages. In Chhattisgarh, while the minimum wages suggested is Rs. 403 per day and Rs. 10,480 per month, the average wage was Rs. 225 and Rs. 7,693. Only in case of urban male, the actual wages were comparatively higher than the minimum at Rs. 276 per day.

In case of urban male, monthly income were more than the suggested minimum wages which was Rs. 17,243. Hence a need arises to ensure compliance with minimum wage standards in the informal sector both in rural and urban areas.

2.4.2 Gender differentials exist in wages and income

There tends to be differences in wages across males and females in both rural and urban areas. Sometimes it tends to be 1.5 times higher in rural areas and twice high in urban areas. There is a need to reduce this gender differential of wages.

2.5 Unemployment



Source: Image

2.5.1 Unemployment rate increases with increases in educational levels

Among those educated secondary and above, female unemployment was 12.6% and male unemployment 8.1% which was higher than other educational levels. This indicates that with additional acquisition of education, unemployment too grows as the educated prefer to find jobs relevant to the aspirations.

In Chhattisgarh, 13.8% and 11.8% of postgraduates and graduates are unemployed. Hence the challenge of educated unemployment is a crisis that may need to be addressed.

2.5.2 Youth unemployment higher than the average across all age groups

At the national level, unemployment rate for youth was 15% in comparison to overall unemployment across all categories at 8.8%. Similarly, while the figures for overall unemployment in Chhattisgarh were 2.0%, in the case of youth it was 6.7%. This indicates the intensity of youth joblessness.

2.5.3 Vocational educational levels are very low

Penetration of vocational education indicates that its penetration was more among younger age group 15-29 which was 4.1% in comparison to 3.4% for 15-59 age group. Hence it indicates that there has been slight improvement in accessing vocational education by youth though not adequate.

2.5.4 Unemployment higher for rural females and urban males

Unemployment pattern showed that more females in rural areas and more males in urban areas were unemployed. Overall, while female unemployment is 9.9%, male unemployment is 7.8%. Unemployment is prevalent across both the gender and needs to be addressed.

2.5.5 Unemployment rate increases with more advantageous social position

Unemployment rate increases with more advantageous social position. Unemployment rates for different social categories were Scheduled Caste 2.4%, Scheduled Tribe 4.4%, Other backward castes 3.9% and others 4.9%. Higher unemployment among others seems to be due to higher preference for blue colour jobs among them but due to its lower availability.

Unemployment rate as per religion shows that for Hindus, Islam, Christians and Sikhs, they were 3.9%, 4.4%, 5.8% and 6.2% respectively. This shows that with increased minority status, unemployment rate increases



3 State, Private sector and voluntary initiatives for employment promotion

3.1 Initiatives by the state

The initiatives being taken by the state to promote employment can be broadly categorised into Skill development and training initiatives, Promotion of Entrepreneurship and Startups, expanding infrastructure development, encouraging formalization of the workforce and supporting rural development and agriculture. These have been taken up at both the central and state level.

Some of the national level initiatives include Pradhan Mantri Kaushal Vikas Yojana (PMKVY), National Apprenticeship promotion scheme (NAPS), Skill India Mission. Similarly at the state level, there have been initiatives such as Chief Minister Kaushal Vikas Yojana (CMKVY) and Livelihood Colleges under which market oriented and demand driven skill trainings are being offered.



Source: Image

To strengthen startup, initiatives that have been started at national level include startup India, Atal India Mission (AIM), Make in India, Prime Minister's Employment Guarantee Program (PMEGP), Scheme of Fund for Regeneration of Traditional Industries (SFURTI).

Government of Chhattisgarh has Innovation and Entrepreneurship Development Policy, Startup Policy and Start up festival that brings together entrepreneurs, investors, and mentors to promote entrepreneurship in the state.

Promotion of roads, highways, road and rail networks, power generation are other means. At state level Chhattisgarh Road Development Corporation Limited (CGRDL), Chhattisgarh railway corporation limited (CRCL) and Chhattisgarh Water Resources Department are involved in developing road, rail and irrigation infrastructure.

Efforts in the direction of formalisation of workers for greater social security is through the role played by Employees Provident Fund Organization (EPFO), General Insurance Corporation (GIC), National Social Security Schemes. The state has Chhattisgarh labour welfare board, construction workers welfare board, unorganized workers social security board.

Efforts in the direction of agriculture and rural development are through schemes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Krishi Sinchai Yojana (PMKSY).

In Chhattisgarh, there are schemes such as Rural Infrastructure Development Fund (RIDF), Chhattisgarh Rajiv Gandhi Grameen Bhumiheen Krishak Nyay Yojana (RGGBKNY) and Chhattisgarh Godhan Nyaya Yojana.

National Rural Livelihood Mission (NRLM) at national level and State rural livelihood mission (SRLM) at state level have been into promoting self-help groups, building rural development institutions, financial inclusion and micro-enterprise development for addressing the challenge of livelihoods.

3.2 Private sector initiatives towards employment promotion

Private sector has adopted direct and indirect approach towards employment promotion. The direct efforts are through hiring individuals in the company. Start of production and service units creates employment opportunities. There are large units in Iron and steel ore, cement, power, coal and other notable industries.

Other initiatives are through providing skill trainings under industry networks such as that of Confederation of Indian Industry (CII) or through CSR foundations of Industries. Incubation and small business enterprise programs have also been offered.

3.3 Voluntary sector initiatives towards employment promotion

Some of the voluntary sector initiatives for employment promotion have been through Development of Agri and Agri allied sectors through CSOs such as Indian Grameen Services (IGS), PRADAN, BAIF, DHAN etc. Many of the organizations such as Basix academy for building lifelong employability (B-ABLE), PRATHAM, Don Bosco Tech, ILFS, Tech Mahindra are offering skill training in a number of sectors.

Organizations such as BASIX, Ujjivan, Bandhan, Grameen Koota, Cashpor, SHARE, Spandana and SKS either in the past or currently provided microfinance services for enhancing self-employment of women. Some of the voluntary sector initiatives for creating producer owned enterprises include AMUL, Lijjat Papad, Kesla poultry nationally.

3.4 Limitations of employment promotion programs

Despite the efforts made in employment promotion by state, private and voluntary sector, the challenge of unemployment continues. The limitations of the efforts are summarised below:

Type of efforts	Limitations from employment generation perspective
Skill development programs	Misalignment between Skills and Market needs; Skill programs not sufficient to meet industry standards; Lack of industry involvement in developing skill programs; more focus on supply driven and not demand driven skilling; Weak Industry-Academia collaboration; Inadequate infrastructure of Skill training institutes; Shortage of qualified trainers; Access and awareness barriers among marginal groups – women, rural youth, person with disabilities; Ineffective marketing and outreach; High turnover in placed employment; Employment placement in informal employment with low pay and low social security
Entrepreneurship and start up programs	High failure rates of startup; Limited access to capital for aspiring entrepreneur; Lack of business skills and experience; Inadequate supportive ecosystem for mentoring, incubating and accelerating; Focus on niche markets; Regulatory and compliance challenges; Limited market access;
Infrastructure development programs	Misalignment of infrastructure projects with employment needs; Lack of skill matching and training; Limited employment of local communities in infrastructure development projects; Ineffective employment linkages; short term nature of employment generated;
Formalisation of workforce	High level of informal employment; high challenges in formalising workforce despite potential benefits; social protection gaps; Low awareness on social security; Complex and burdensome regulatory framework; Inadequate functioning of social security / labour welfare boards; Low incentive to formalize among informal enterprises as it may lead to tax burden; Absence of institutions to link workforce with social security
Rural development and Agricultural programs	Misalignment of programs with employment needs; Limited focus on skill development; Inadequate consideration of market dynamics; Limited focus on pro poor value chain development; Infrastructure and Resource constraints; Limited access to technology such as value-added processing; weak infrastructure and logistics; fragmented and overlapping programs and challenges in achieving convergence; weak monitoring and evaluation of programs; exclusion of vulnerable groups such as Adivasis, landless labourers, women;
NRLM / SRLM	Limited scaling up and sustainability of the micro-enterprises; higher focus on financial services and limited focus on building production-marketing-livelihood skills of women; Weak market linkages; Limited capacities at local level; Limited cases of evolution into strongly established SHG federations; Limited cases of CBOs negotiating with government, private agencies and NGOs;
Initiatives by CSOs	Challenges in replicating successful models in different spatial-segmental-sectoral situations; Challenges in attracting state support for long term end to end support for creating, scaling and replicating successful models; CSR focus more towards immediately visible rather than long term beneficial for the community
Initiatives by Private sector	Focus on achieving profitability leading to investment in automation and hiring contractual labour works against employment generation goal; Employment generation for high-end technical and managerial jobs are formal whereas for unskilled and low skilled are informal;
Investments by SLBC and Industrial investments	Focus more on four major cities in central Chhattisgarh; Focus limited in employment potential sectors such as agriculture and manufacturing; Diversification of investment opportunities limited

While the above efforts are aimed at building the economy, which would also lead to employment creation, economic growth has not tended to translate automatically into job creation. As a result, there is a large segment of unemployed youth in Chhattisgarh.

Given the above scenario, there is need for identification of unemployed youth, identify potential sectors with scope for job creation and plan investments for employment promotion in the times to come.

4 Policy Recommendations

4.1 Addressing employment challenges – an alternative strategy

The broader approach adopted for employment promotion is through ensuring intersectoral shifts in the economy. This means that those who were traditionally dependent on primary sector i.e., agri and agri allied sectors gradually shift to manufacturing and service sectors.

However, unlike the western and southeast Asian economies, India is witnessing a trend whereby the movement to manufacturing and service sector has been slow, though there has been a drastic change in the relative share of the sectors to GSDP in the economy.

While in economy, the share of manufacturing and service sector to GSDP has increased and that of primary sector reduced, this has not been the case when it comes to employment. As seen from the following table, close to two-third of the population is dependent on primary sector though it contributes only one-sixth to the share of GSDP in the economy.



Source: Image

Table 1 - Employment Share % by Sector as per PLFS 2021-22 in Chhattisgarh

Sector	Employment Share % as per PLFS 2021-22 in Chhattisgarh
Agriculture, forestry and fishing	65.01%
Mining and Quarrying	0.53%
Manufacturing	5.05%
Electricity, gas steam, air condition supply	0.49%
Water supply, sewerage, waste management and remediation activities	0.08%
Construction	10.30%
Wholesale and Retail Trade, Repair of Motorcycles and Motor vehicles	6.01%
Transport and Storage;	1.79%
Accommodation and food service activities	1.01%
Information and Communication	0.29%
Financial and Insurance activities	0.33%
Real estate activities	0.09%
Professional scientific and technical activities	0.40%
Administrative and support service activities	0.63%
Public administration and defence, compulsory social security	1.33%
Education	2.92%
Human health and social work activities	1.56%
Arts, entertainment and recreation	0.14%
Other service activities	1.16%
Activities of households as employers, undifferentiated goods and services, produce activities for own use	0.88%
Activities of extra territorial organizations and bodies	

Efforts in the direction of radical shift from one to the other sectors comes with its challenges related to skill upgradation to new sector, technological adaptations towards newer sectors of the economy, quicker economic diversification which is beyond the current sectors employed in, need for large scale shifts from rural to urban, need to adopt to new lifestyles of work, breaking away from the current patterns of living, current state of marginalisation of Women, SC, ST, OBCs, Minorities which may take time to address.

Moreover, in the current sectors in the economy where people are already employed, they only draw low incomes. Ensuring wage enhancements within current economic activities and sectors already employed may trigger changes towards sectoral shifts in the long run.

Intra-sectoral proficiency enhancement rather inter-sectoral shifting seems to provide with solutions in the shorter to medium run. Based on the momentum that is built, intersectoral shifts can be ensured in the long run. The intersectoral shifts happen as there are changes in demand patterns in the economy.

4.2 Changing approach from Inter-sectoral shifting to intra-sectoral proficiency enhancement

When we speak of employment, we generally focus on two objectives:

- (1) increasing the number of workers employed including self-employed to take care of
 - (a) net addition to the labour force, particularly the youth,
 - (b) those currently in labour force but unemployed and
 - (c) those who may want to move from not being in the labour force to joining it, particularly women. and
- (2) improving wages or income in case of the self-employed, along with social security benefits like PF, ESI and pensions, and improved working conditions.



Source: Image

For objective (1) the generally suggested strategy is to increase economic growth, on the assumption that it will also generate more jobs. However, the experience of the last decade has been " jobless growth". We have seen moderate GDP growth between 5 to 7% per annum but low (1-2% per annum) employment growth, that also mostly in the over-crowded agricultural sector and the lower end of jobs in the construction, manufacturing and services sectors. A lot of these jobs are in self-employment as a last resort. If we exclude workers in household enterprises who are unpaid, the growth is almost nil.

As a result there is very little growth in wages and self-employed incomes if one adjusts for inflation. One strategy to counter this has been to try to move people out of the farm work to non-farm sector jobs.

But as seen earlier, inter-sectoral shift is difficult due to the need for workers to move from rural to urban areas. They also must acquire new skills of working in new activities and living in strange places. Thus, a vast majority of workers who shift out of agriculture, remain in low paid, unskilled manual work on a casual employment basis, with no social security and poor working and living conditions.

We suggest an alternate strategy for both objectives (1) and (2) above. Instead of inter-sectoral shifting, policy should encourage intra-sectoral proficiency enhancement. This means, for example, those in agriculture staying in it, but shifting from cereal crop cultivation to, for example, growing vegetables in the first step, and then growing vegetables off-peak season, using polyhouses, in the next step. This twostep climbing could double the farmers' income using the same amount of land and own labour.

Some tentative movements that could be seen in intra-sectoral proficiency enhancement could be as below:

- -low end cultivation to higher value agriculture/horticulture
- crop cultivation to dairy, poultry, fishery, etc.
- agricultural services from soil testing to sorting and packaging of raw produce like vegetables and fruits
- low end manufacturing to higher value items whether made in household enterprises or factories e.g. wooden and metal furniture)
- centralised or non-existent utilities (telecom, power, gas, water, sewage, solid waste, etc) to decentralized, service based enterprises (e.g. solar home systems).
- low-end proximate services to higher value proximate services (e.g. from roadside barbers to salons, or food bandis to sit down eateries)
- low end distant services to higher value distant services (e.g. data entry to application software design)

Some examples across sub-sectors are discussed below.

4.3 Intra-sectoral proficiency enhancement in various sub-sectors

4.3.1 Intra-sectoral proficiency enhancement in Agriculture

Let us see what these two steps do for an agricultural worker in the same village. She would get more days of work in vegetable cultivation and higher wages, due to the need for timely and more careful operations - sowing, planting, watering, weeding, spraying, and harvesting often in multiple lots.

Unlike in cereal cultivation, where operations have got mechanised, vegetables require manual workers. Polyhouse vegetable cultivation is even more skill and labour intensive.

Now let us see what happens in the third step of this intra-sectoral climb. Let's say there are many farmers in the village who started growing vegetables and they come together to form an FPO.

To get a better price for their produce, they decide to set up a facility in the village for washing, drying, sorting, grading and packing the vegetables. This not only improves the net income of farmers but generates more wage employment for agricultural workers in the village, within reach of their skill level and their place of stay.



Source: Image

Bastar has been identified as a ODOP district for tamarind. Intra-sectoral proficiency enhancement can be achieved through diversifying into processing such as tamarind processing.

Some of the value-added products that can be developed from tamarind fruit and pulp include dried fruit block, candies, paste, sauce, jams, pulp balls, toffee, pulp powder, pickle, chutney and fruit juice concentrate.

The products could be branded, and linkages established with fair trade organizations. Farmers can join cooperatives – access wider markets, negotiate better prices. Value added products of tamarind fetch more income than raw tamarind.

4.3.2 Intra-sectoral proficiency enhancement in Handlooms / Handicrafts

Handloom weavers who produce items such as sarees, kurta churidar, with the artwork for festive occasions can also take up alternatives such as towels, curtains, bedsheets, blankets, tablecloths, dishcloths, cleaning cloths, handkerchiefs, wall hangings, cushion covers, handwoven bags, phonecases, scarves and shawls. While the traditional produce can continue, the suggested produce are items of daily use with a large consumer base. The handloom weavers may only need to adopt their skills to produce items of daily use and not necessarily shift to a different sector.

This may help in expanding the market of produce by handloom weavers, reduce risk associated with market demand or market saturation, help in adopting to market trends and expand revenue streams, diversify produce range, utilize existing skills, ensure long term sustainability due to product diversification, explore new design and innovations.

Handloom sector may also alternatively adopt design softwares for creating innovative handloom designs, 3D and 4D technology in creating innovative designs that can be achieved with lesser time, use ecommerce platforms (amazon, meesho, craftsvilla) for marketing and reaching out to consumers. Adoption of newer technologies may necessitate skill upgradation which can be taken up by the younger generation who are more exposed to digital technology. Such change agents can be created in the younger generation through exposing them to newer technologies that can be used in the handloom sector.

Handloom collectives (cooperatives or producer companies) may facilitate the adoption of newer technologies for creating new designs, newer production methods with upgraded machinery, branding, packaging, and digital marketing through online platforms.

Bastar is prominent for Dhokra, Bell metal, Tribal Jewellery and Terracotta. Intra sectoral climbing can happen through focus on brand value through emphasizing its unique cultural heritage, resorting to and then highlighting fair trade and ethical practices such as fair wages, responsible sourcing, aesthetics. Online platforms and trade fairs can be accessed. The artisans could also get into production of various varieties of decorative items such as wall hangings, wood carvings, metalwork, decorative frames, wood shelves, decorative wall clocks, decorative tabletop items – metal bowls, hand painted ceramics etc. Innovative designs can be introduced.



Source: Image

4.3.3 Intra-sectoral proficiency enhancement in Food services

In case of traditional food services, the traditional offering of food such as samosa, Jilebi, chat, idly, dosa can be diversified to include a product range that can also cater to global taste (e.g., Korean, Italian, Lebanese cuisine), fusion taste (Hyderabadi pizza, Mexican dosa), healthier options (such as multi millet upma, multi millet idly, salads).

This will help in creating a demand and liking for new taste among consumers, attract new consumers, expand the customer base, help stay ahead of the demand curve and boost revenue.

Good practices related to food hygiene can be introduced. This could be related to handwashing, handling food, cleaning utensils, using disinfectants for sanitization, storing food at appropriate temperatures, protecting from dust insect and contaminants, bins for proper waste disposal, well maintained hand washing station can improve the overall ambience thus attracting the customers.

For packaged foods, eco-friendly practices such as biodegradable packaging can be introduced. Food waste can be handled through composting the waste food, donating the surplus food.

Technological upgradation may involve linking with online food delivery services such as Swiggy and Zomato and delivering at doorstep. Digital payments such as through google pay, phone pe may be allowed.

Collectives of roadside food collectives can be explored, whereby the collectives are able to buy food raw material from vegetable or other markets at scale at a bargained price. This may bring down the cost of raw materials in their food outlets.

Restaurants owned by food service owners' collectives can be set up at places with high traffic flow, highways, transportation hubs (such as bus stand, railway station, airport), tourist sightseeing locations, commercial locations (such as shopping locations).

These upgradations may help them remain within the sector, adopt skills and new practices according to customer requirements and achieve intra-sectoral proficiency enhancement.

Raipur has been identified as an ODOP district for bakery. For intra-sectoral proficiency enhancement, there could be diversification beyond traditional bakery items to introduce alternative nutrition rich high fibre bread, gourmet pastries, offer niche products which are gluten free, vegan, sugar free; cater to schools, corporates etc.

Dantewada has been identified as an ODOP district for mango. Farmers could adopt drip irrigation, organic practices, pruning to improve yield. High yielding varieties can be taken up. Post harvest losses can be reduced through proper harvesting and cold storage practices.

Value added products such as dried mango slices, pickles, chutneys, juice could be produced. The value-added products could be branded and sold through online forums. Organic certification and fair-trade practices can yield further price and enhance income.

4.3.4 Intra-sectoral proficiency enhancement in construction sector



Source: Image

Construction workers come under the category of unskilled workers. However, with little skill diversification there is scope for enhancement of incomes. Specialized skills required at construction sites can be picked up going beyond their regular roles. The skills training could be acquired for roles such as that of General works supervisor, Highway works supervisor, land surveyor, storekeeper, electrical house wiring, plumbing and sanitation, formwork carpentry, building carpentry, masonry, bar bending, painting and decoration, welding, and architectural assistantship.

There could also be skill enhancement through training related to compactor operator, Backhoe loader operator, Transit and self-loading mixer operator, Junior mechanic hydraulic. There could also be specialized skills as that of construction safety health and safety technician.

Exposure to LEED (Leadership in energy and design) sustainable energy practices can benefit construction workers professionally as growing environmental consciousness may give rise to green building concept. Exposure to building information modelling (BIM) can help construction workers through visualizing their tasks enabled through digital simulation. It may help in understanding the potential hazards that may occur.

Skilled construction workers either individually or collectively can take up small businesses such as home renovation, modular kitchen works, bathroom remodelling, minor electrical or plumbing work, painting works, roofing and tiling. Services related to assembling furniture, building shelves, gardening, landscaping may also be taken up through a network of skilled personal relevant for homes.

Thus, as can been seen, intra-sectoral proficiency enhancement offers opportunities where the workers are able to upgrade their skills within the sector, adopt to technologies within the sector, enhance income within existing sector, reduce stress that is associated with sectoral shift, reduces chances of moving from rural to urban, offer greater livelihood security etc. This gradually prepares them for sectoral shift in the long run.

5 New approaches for employment promotion

5.1 One district, One Product (ODOP) products strategy



Source: Image

ODOP program of the Government could be utilised for strengthening demand for products, infrastructure and input strengthening, skill building and capital enhancement. ODOP involves identification and formation of production clusters, focused efforts towards infrastructure development, capacity building and skill development, branding and marketing and financial support. It helps in boosting local economies, preserving traditional skills and crafts, promoting brand recognition and improving export potential.

Under ODOP, the following products are identified and could be promoted in the state.

Table 2 - Products identified district-wise under the One District One Product Scheme

ODOP	Districts
Ginger Based products	Balod
Rice Based Products	Baloda Bazar- Bhatapara, Balrampur, Jangir-Champa, Dhamtari, Jashpur, Rajnandgaon
Black rice based products	Bilaspur
Papaya based products	Bemetara
Mango based Products	Dantewada (South Bastar)
Tomato based products	Durg, Korea (Koriya), Mungeli, Raigarh

Custard Apple based Products	Gurela-Pendra-Marwahi
Sugarcane based products	Kabirdham (Kawardha)
Bakery Products	Raipur
Turmeric based products	Surajpur
Milk based products	Mahasamund
Minor Forest Produce (Mahua etc.)	Bijapur, Korba
Minor Forest Produce (Chiraunjee etc.)	Gariyaband
Minor Forest Produce (Tamarind)	Jagdalpur (Bastar)
Minor Forest Produce	Kanker (North Bastar), Kondagaon, Sukma
Minor Forest Produce (Harra etc.)	Narayanpur
Minor Forest Produce (Mahua, Jackfruit etc.)	Surguja

(Source: Ministry of Food Processing)



Source: Image

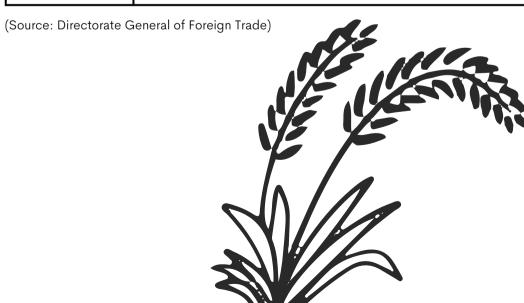
5.2 District Export hubs as centers for reaching external markets

District export hubs could be sources from where exports could be facilitated. These hubs provide services such as market research and information, training and skill development, facilitating and networking. These hubs aim to provide opportunities for benefiting from export markets, attract investment in the district, handholding and support to exports, generating employment and enable in marketing through physical and digital means. Employment opportunities in following export zones could be considered.

Table 3 - Products identified district-wise for exports

Table 6 Troudete facilitate Wise for experte	
District	Products
Balod	Rice, Jowar, Maize, Millets, Mango, Cauliflower, Pigeonpea
Baloda Bazar	Rice, Maize, Pigeon Peas, Lathylus.
Balrampur	Rice, Jowar, Maize, Potato.
Bastar	Bastar Iron Craft, Rice, Jowar, Maize, Potato.
Bemetara	Rice, Jowar, Maize, Pigeon Peas, Soyabean, Mango.
Bijapur	Rice, Jowar, Maize, Pigeon Peas, Soyabean, Mango.
Bilaspur	Maize, Pulses, Rice, Wheat, Sesame.
Dantewada (South Bastar)	Rice, Maize, Finger Millet, Niger.
Dhamtari	Mungbean, Blackgram, Ground nut, Sesame.
Durg	Rice, Jowar, Pigeon Peas, Blackgram, Soyabean.
Gariyaband	Rice, Pigeon Peas, Mustard- Rcopeseed, Ground nut.
Gaurella Pendra Marwahi	Rice, Pigeon Peas, Mustard- Rcopeseed, Ground nut.
Janjgir-champa	Rice, Pigeon Peas, Mango, Cauliflower.
Jashpur	Potato, Wheat, Barley, Oil Crop.

District	Products
Kabirdham	Rice, Mango, Banana, Cauliflower, Cabbage.
Kanker	Rice, Wheat, Pigeon Peas, Green Gram.
Kondagaon	Rice, Mango, Cauliflower, Cabbage, Brinjal.
Korba	Maize, Pulses (All Types) , Rice, Soyabean.
Korea	Maize, Pulses (All Types) , Rice, Soyabean.
Mahasamund	Mungbean, Ulid, Ground nut, Sesamum, Maize.
Mungeli	Rice, Pigeon Pease, Green Gram, Black Gram, Maize.
Narayanpur	Rice, Pigeon Peas, Black gram, Mango.
Raigarh	Rice, Pegion Peas, Gram, Horse Gram, Ground nut.
Raipur	Rice, Maize, Soyabean, Mango.
Rajnandgaon	Rice, Maize, Soyabean, Mango.
Sukma	Rice, Pegion Peas, Jowar, Maize, Millets.
Surajpur	Rice, Jowar, Maize, Potato.
Surguja	Rice, Jowar, Maize, Potato.



5.3 DISC approach for Employment Promotion

DISC approach is needed for making capital investment planning for employment promotion. The components are described below: -

D for Demand - for the new product (vegetables) or service (sorting of vegetables). Fortunately, due to rising per capita incomes in the upper quartile of the country, there is rising demand for such products/services.

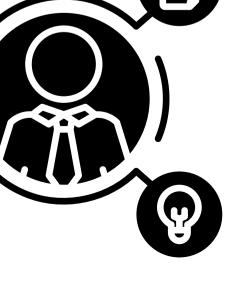
Demand needs to assess across categories of socio-economic segments, customer types, geographies and future trends in demand.

I for inputs and infrastructure- In the current example, farmers cannot shift to vegetable cultivation unless right quality seeds and agro chemicals are available. Later polyhouses, and still later vegetable packaging crates are needed. Irrigation and road infrastructure is needed.

Similarly, in handloom / handicrafts to produce new products for the market the existing machinery may not work, and hence new handloom machineries may also need to be integrated.

S for skills - a cereal growing farmer does not automatically know how to grow vegetables, even less so in a polyhouse. Similarly, women who know paddy transplanting or weeding don't automatically know the steps in vegetable cultivation. These skills must be imparted and learned. Similarly, the handloom / handicraft workers who produced goods such as sarees, kurta churidars need to learn to produce goods such as towels, blankets etc.

C for Capital - Intra-sectoral climb needs capital - for new equipment, machinery, processing facilities and more working capital. In the example we are discussing, vegetable cultivation needs more money to buy seeds and agrochemicals. The next step needs capital to install a polyhouse. The third step needs investment in vegetable sorting and grading facility. All stages need capital for investing in skill upgradation.



Measures for demand enhancement

Some of the measures that can be adopted for demand creation are conducting market initiatives such as trade fairs, Innovation grants to promote innovations in products, providing GI tags for specific commodities for quality assurance, promoting e-commerce platforms and mobile apps for market products, setting up export facilitation centres and where needed, imposing tariffs on artificially cheap imports.

Measures for Inputs and infrastructure

Some of the inputs and infrastructure that can be created for strengthening inputs and infrastructure in Agriculture in the state include setting up high quality seed banks, soil testing vans, polyhouse subsidies, irrigation infrastructure; in horticulture there could be setting up of storages and cold chain facilities, in handlooms it could be design innovation centres, machinery modernization programs, expanding raw material access and skill development centres, e-commerce and mobile based platforms for reaching consumers.

Measures for Skill development

Skill development needs to be strengthened in identified sectors in Chhattisgarh. Currently skill development is being done through Chhattisgarh skill development authority (CSSDA), sector specific skill councils and Industrial training Institutes (ITI s). In agriculture, there could be trainings related to precision farming, organic farming, use of advanced technology for agriculture, food processing.

ATMA could offer skill trainings in post-harvest technologies, seed development, processing and value-added technologies. In Handicrafts, there could be trainings on new handicraft technologies, production of new products, courses on design development and innovation etc., In food processing, there could be skill trainings which can be offered by NGOs.



छोटे-छोटे कदम आसमान छूने का दम...

Source: Image

5.3.1 Micro-Franchise Model for DISC strategy execution

In private sector, micro-franchisees could be promoted with support of small corporates. Micro-franchise model can be adopted for established chain of brands. For example, in tea brands, it could be MBA Chaiwala, Tea world, Tea trance, Chaiduniya etc. Similarly, there could be franchises for Biryani such as Paradise Biryani, Bawarchi etc.

Similarly there could be chaat franchisees such as Chaatkachaska, Agrawala, Gokul etc. In Bakery, there could be franchisees like Ovenfresh, Cakezone, Swiss Bakery. In Mobile repairing, it could be Phone Doctor or Gadget guard.

In laundry, UClean or Wassup laundry. In Beauty saloons, Looks salon, Naturals or Javid Habib. Under franchise, an individual or group of youth can run an enterprise. Some of the benefits of microfranchisees are that it requires a smaller investment than traditional franchisees.

The chances of getting consumers are faster as the brand is already established. There is operational simplicity as it is standardized, flexibility and assures quicker returns on investment. Micro-franchisees get DISC support from small corporates.



Source: Image

5.3.2 Attention on marginal social segments, rural/small town locations and unskilled or semiskilled workers

In a socially and economically unequal society, the benefits of DISC approach may not penetrate equally across all socio-economic segments. Skill and capital access becomes much more challenging for social segments such as scheduled castes (SC), scheduled tribes, (ST), de-notified tribes (DNTs), other backward classes (OBCs), Minorities, Women, Youth and Disabled.

There may be a need for more specialised approaches to reach out to these segments. Similarly, attention to skill and capital access need to be based on locations with focus on rural areas and small towns upto district headquarters. Similarly, focus must be on skilling the unskilled and semi-skilled and capital access to the skilled who are willing to set up their own enterprises.

Through careful policy interventions spanning DISC for various subsectors, we can ensure a lot more employment and wages/income in existing subsectors. This will then reduce pressure to shift workers across sectors, which can then happen at its natural pace.

5.3.3 Targeted investment towards employment promotion and wage enhancement

There is a need for targeted investments towards employment promotion and wage enhancement. As can be seen from analysis of unemployment numbers and investments for wage enhancement, about Rs. 1,59,696 crores need to be invested each year.

Financial resources could be mobilized from Banking sector which could be 50% of the SLBC funds allocated for farm and non-farm sector under priority sector lending, 15% of the capital expenditure of the state budget, 25% of the overall capital required from private sector and 10% from household contribution of the beneficiaries.



6 Sectoral challenges in Chhattisgarh and suggestions for addressing these

Given the above recommendation of intra-sectoral proficiency enhancement and DISC approach, it needs to be adapted to different sub-sectors of the economy in Chhattisgarh. The following section discusses the subsectors in Chhattisgarh.

6.1 Agriculture

The main crops of Chhattisgarh are paddy, maize, wheat, groundnut, pulses and oilseeds.-



Source: Image

Table 4 - Crop Production in Lakh MT

Crop	201-20	2020-21
Paddy	89.46	91.03
Wheat	2.07	3.68
Pulses	4.11	6.88
Oilseeds	2.59	3.08
Maize	8.88	11.18
Other crops	7.09	9.20
Total	114.20	125.05

(Source: CG Agri Annual Report 2021-22)

Nearly 3.90-million-hectare area, which is about 83% of net sown area in kharif is under paddy cultivation. The area under double crop is low accounting for 23.59% of the net sown area. Irrigation in the State is mainly carried through canals and tube wells. State government has launched various schemes to increase irrigation facilities and thereby tried to increase area under double crop.

Some of the challenges related to agricultural sector in Chhattisgarh are erratic rainfall and dependence on rains, low irrigation infrastructure, groundwater depletion, monocropping practices, deforestation leading to soil water erosion, poor access to markets and exploitation by middlemen, inadequate storage facilities, limited adoption of technology and limited access to credit and insurance.

Intra-sectoral proficiency enhancement is possible through crop diversification to pulses, oilseeds, fruits and vegetables. Currently the state is dependent on outside states to address demand gaps for this produce. There could be adoption of polyhouses for higher production and quicker harvest and micro-irrigation.

Currently Gariyaband, Bijapur, Sukhma, Dantewada and Narayanpur has been made fully organic districts. This can gradually be extended to all the districts. Under 'Mission Millet', there could be interventions to increase millet yields. They could be taken to city markets for processing.

Towards intra-sectoral proficiency enhancement, one could take benefit from ODOP and District cluster export initiative. Accordingly there could be focus on tamarind in Bastar, Mahua and Jackfruit in Surguja, Mango in Dantewada.

Minor millets and Kodo kutdki can also be taken up in Dantewada. Initiatives for productivity enhancement, processing and value addition and marketing linkages could be taken to improve income from their produce.

On infrastructure front, rural godowns can be created for storage of grains and avoiding losses from bad weather. Storage facility will also lead to high value sale as per market demand situation. Post harvest processing and marketing infrastructure aligned to requirements of small farmers need to be strengthened. Input, output business and processing facilities may be increased through farmer producer organizations. Organic farming can be promoted.

6.2 Horticulture

Agro-climatic conditions in the state encourage cultivation of horticulture crops. The horticulture produce has grown in the past two decades. In terms of acreage Mango, banana, papaya, guava, lime, cashewnuts, custard apple, litchi are the major fruits grown in the state. The Horticulture crops cover 8.34 lakh hectares with production of about 106 lakh metric tonnes.

Some of the challenges related to horticulture sector in Chhattisgarh are limited irrigation infrastructure, limited adoption of technology such as protected cultivation and precision agriculture, soil degradation, pest and disease management, poor market access leading to exploitation by middlemen, limited cold storage and processing facilities, inadequate transportation infrastructure from remote areas, limited access to credit and insurance, limited awareness and adoption of value added practices.

Table 5: Area and production of Horticulture Crops in Chhattisgarh – 2021-22 3rd Advance Estimates

Sr. No.	Particulars	Area (in 000′ ha)	Production (in '000 MT)	Productivity (in MT per ha.)	
1	Fruits	222.57	2,473.63	11.11	
2	Vegetables	490.05	6,855.95	13.99	
3	Spices	10.38	15.78	1.52	
4	Flowers	12.66	248.9	19.66	
5	Aromatic and Medicinal Plant	5.28	33.25	6.30	
6	Plantation Crops	34.04	30.89	0.91	
Total		774.98	9,658.40	12.46	

Intra-sectoral proficiency enhancement is possible through getting into processing for value added produce such as juices, jams, sauce and pickles. Development of micro-irrigation facilities, greenhouses and poly houses can help in increasing horticultural production.

There is a need to shift from a predominantly cereals-oriented cropping pattern to remunerative horticulture crops. There can be establishment of collection centres, sorting, grading, cleaning and washing along with cold storage and processing facilities. Infrastructure development for strengthening value chain and processing can be taken up.

WADI program can be strengthened in tribal locations. Extension machinery may extend support to farmers in enhancing productivity. Processing facilities may be created for processing of horticultural produce to create value added products. Fruit growers' association can be created among farmers. Nurseries can be set up for supply of quality saplings for the farmers. SHGs/FPOs can be encouraged to take up high value horticulture including medicinal and aromatic plants.



6.3 Animal Husbandry



Source: Image

4.4 million people are said to be dependent on livestock rearing and related activities in Chhattisgarh accounting for 14% of the workforce in the state. It provides income through sale of milk, meat, eggs and wool and to an extent meets food and nutritional security needs.

According to the 20th Livestock Census, the total livestock population in the state is 158.72 lakh comprising of 99.84 lakh cattle, 11.75 lakh buffaloes, 40.05 lakh goats, 5.27 lakh pigs and 1.8 lakh sheep.

The population of the poultry bird in the State is 187.12 lakh. Livestock economy of Chhattisgarh is dominated by small livestock holder and commercial poultry sector largely concentrated in a few districts in central plains. More than 600 Dairy Cooperatives are registered under Chhattisgarh State Cooperative Dairy Federation. The state is ranked 12th in milk production annually.

Some of the challenges in milk sector is related to low milk productivity due to factors like poor quality of fodder, inadequate healthcare and traditional breeding practices, limited adoption of technology for milk processing and value addition.

There is lack of awareness about proper animal management and hygiene practices and lack of organized marketing channels and fair price for goats.

Adoption of broiler and layer poultry farming hardly exist among poor households. Outbreaks such as avian influenza impacts bird health and productivity. There are fluctuations in input costs of large poultry companies. There is low awareness on proper poultry management practices.

Intra-sectoral proficiency enhancement within the sector is possible through households adopting high milk yielding varieties of cattle, taking up processing activities and producing value added milk products such as cheese, butter, yogurt, ghee, paneer. In poultry, there could be diversification from country chicken to broiler chicken which can enable in enhanced incomes.

For improving feeding practice, urea treatment of paddy straw, azolla culture, distribution of seeds and saplings for green fodder production can be popularized. Artificial insemination centres can be strengthened. Milk producers societies can be organized.

Training in rearing, feeding and animal health management practices can be imparted. In poultry, Backyard poultry needs to be strengthened through extension support, diversification of sector and low cost technology interventions. Poultry hatching and feed mixing plants can be established. Good quality breeds can be supplied for goats, sheeps and pigs. Meat processing units can be set up. Agriclinics can be set up to improve veterinary extension system.

6.4 Fisheries

Annual fish production in the State was 5.77 lakh metric tonnes in the year 2020-21. 96% of the aggregate fish production in the state comes from rural ponds and tanks. Existing 78 circular hatcheries, 59 fish farms and 1126 of individual rearing space with available water area of 639.29 hectare are involved in fish seed production in government and private sector.

Annual fish production in the state which was 1.39 lakh metric tonnes during 2007 - 08 has gone up to 5.91 lakh metric tonnes in the year 2021-22. 95.99 % of the aggregate fish production in the state comes from rural ponds and tanks, 3.22 % from Irrigations tanks and rest 0.79 % through capture fisheries from rivers.



Source: Image

A comparative production of fish and fish seed production over period of last three years are given below:

Table 6: Fish and Fish seed Production

Product	2018-19	2019-20	2020-21
Fish Seed Production (lakh std fry)	25,100	27,386	28,805
Fish production (MT)	4,69,000	5,38,000	5,77,364

(Source: Chhattisgarh Fisheries Dept. website)

Some of the challenges of fisheries in Chhattisgarh are lack of access to cold storage facilities, processing units and transportation facilities which hampers efficient handling and marketing of fish. Fisher community find it difficult to access loans.

Hence investment for improving fishing practices becomes difficult. Limited access to organized markets leads to exploitation by middlemen. Intra-sectoral proficiency enhancement can take place through adopting aquaculture, cage culture or ornamental fish farming.

There is good scope for increasing Freshwater prawn culture which comparatively fetch more price than fish. Fisher community can be encouraged to opt for prawn farming.

Fishery extension services may be expanded to incorporate productivity enhancing technology in water use, breeding, hatchery practices, feedstuff innovation, quality and fish hygiene. Skill and capacity building of fishermen need to be undertaken in value chain activities.

Fingerling/Yearling culture should be taken up at GP level for strengthening fish production. Banks can finance fish seed farms for expansion in pisciculture in new tanks. Integrated fish farming models can be set up. Ornamental fish farming may be promoted among SHGs and unemployed youth.

6.5 Forestry

The different types of NTFPs found in forested areas of Chhattisgarh include Mahua, Chironji, Harra, Amchur, Vaybidang, Karanji, Shikakai, Ghot pal, Mango Kernal, Tamarind, Cashew, Kosa Cocoons, Peng Seeds, Karkatiya Seeds, Nirmali Seeds, Ambadi, Amla, Charota Seeds, Chirayta, Bamboo, Tora, Dhavai Phool, Bhilwan Seeds etc., A large number of medicinal plants are also cultivated.

Chhattisgarh occupies the fourth position in India with respect to the area under forest. With 5,9816 sq km area under forest, it accounts for 44.25% of the State's geographical area. Contribution of forestry sector to the Gross State Domestic Product is 1.12% as per the revenue receipt in State Budget 2022–23. Collection and sale of Specified Minor Forest Produce is done by C.G.M.F.P. Federation.

The Federation sells the collected produce by inviting National level e-Tenders and conducting e-Auctions. The state monopoly has been created to ensure payment of fair price to the rural gatherers of forest produce. Tendu leaves (Diospyros melanoxylon roxp) is one of the major Specified MFPs in the state. About 65 types of MFPs have been included under minimum support price (MSP).

NTFP collectors are largely dependent on middlemen and are forced to dispose of produce at very low prices and exposed to exploitation, in the absence of organized markets. They are cheated while weighing and fixing a price for purchasing forest produce and selling them back the same. Limited market information leads to poor bargaining capacities.

Poor access to markets, lack of storage facilities and limited transportation options further disadvantage NTFP collectors. There are also unsustainable harvesting practices which restricts benefits in the long run. Though state support exists for value addition such as processing, marketing and branding, still a large part of NTFP collectors find it difficult to gain benefits of the same.

Strengthening Cooperative networks, Promoting Collective Institutions of NTFP gatherers and sellers, Capacity building to increasing their bargaining abilities and Market Intelligence could address the gaps. Processing based enterprises do offer potential for income generation. Training around processing through value added products around Mahua, Tamarind, Medicinal plants can generate scope for self-employment.

Intra-sectoral proficiency enhancement can take place through developing storage facilities which will help in selling NTFPs at higher price during non-harvest seasons, taking up processing such as herbal medicines and marketing with state cooperatives. Bringing large number of NTFP collectors under CGMFP federation, which is into processing of lac, honey, cashew, tamarind, medicinal plant processing, chironjee processing can help.

Bastar Food Firm and Consultancy services is developing food technologies around certain NTFPs such as Mahua Ladoo, Mahua cookies. These are simple technologies which can be transferred to SHG women. Possibilities of marketing linkages also need to be built. Maa Danteswari Herbals based in Kondagaon has developed value chain around different medicinal plants. Building such linkages would help.



Source: Image

6.6 Mining



Source: Image

27% revenue of Chhattisgarh State comes from production of minerals. The state is endowed with sizeable mineral resources which include coal, iron ore, limestone, bauxite, dolomite, tin ore diamond etc. During 2020-21(April 2020 to February 2021), the State accounted for about 21.09 % of Coal, 17.61 % of Iron ores, 11.70% of Limestone, 3.57% of Bauxite and 100% of the tin produced in the country. In value terms, Chhattisgarh contributes around 17.69% of value of minerals produced in India.

6.7 Industry

Industrial sector is the biggest contributor to Chhattisgarh's GDP with a share of 40% during 2021-22. The state earned a revenue of 5,517.01 crore from, mining minerals. Further, it is among the top states in terms of value of mineral production (excluding atomic, fuel and minor minerals) in India, with a 17.69% share in 2020-21. Chhattisgarh is the only state in India that produces tin concentrates.

Natural resources, policy incentives and infrastructure in the state support investment in iron and steel, cement, and power sectors. Korba district in Chhattisgarh is known as the power capital of India. Moreover, considerable reserves of bauxite, limestone and quartzite are available in the state, making it the ideal location for low-cost production of end products such as cement and aluminium.

The new industrial policy for 2019-24 aims to invite investments in the field of robotics, Artificial Intelligence (AI), aerospace engineering and aircraft repair. It talks of increasing the scope of employment on a large scale through various processing line of business in areas of horticulture, minor forest produces, herbal and food. Other non-core sectors include production and maintenance of electric vehicles, battery and related industry.

About 18,876 households are engaged in direct and indirect employment in the handloom industry. Janjgir-Champa, Raigarh and Bilaspur district's Kosa Textiles have not only made their identities in the country but in the world market. Tasar rearing and cloth manufacturing is being practiced as cottage industry on traditional basis.

Sericulture provides gainful employment to the socially and economically weaker section of the society, living below the poverty line, especially the women folk of rural areas. Kosa handloom is of significance in the state.

The challenges related to manufacturing / industry in Chhattisgarh are related to gap between skill expectations by industry and the skills currently available. There is limited access to quality vocational training which restricts employability.

Manufacturing based employment in Chhattisgarh has not seen an upward trend in recent times. For intra-sectoral proficiency enhancement, there is need to focus on upgrading the skills through skilling, reskilling and upskilling in specialised roles in industry. In handloom sector, there is a need to produce items with new demand by modern consumers.

Some areas where skilling of youth can be done in manufacturing / industries sector are welding, CNC machining, fabrication, quality control, mine operations, mineral processing, safety procedures, maintenance of power plants, food processing techniques, painting, assembly line work, production processes, waste management etc.

6.8 Services

The service sector during 2021-22 contributed 33% of the State GDP. The sector has recorded growth in the year 2021-22 with 8.54% against the national level of 8.20%. Transport, communication, Tourism, real estate, banking and insurance continue to be the major contributors under service sector. Some of the challenges related to service sector in Chhattisgarh are related to skill development gap, infrastructure deficiencies.

The nature of the jobs is largely informal with low wages, lacking social security benefits and job security. Upgradation of skills through skilling, reskilling and upskilling can result in intra-sectoral proficiency enhancement. Some areas where skills can be promoted in services sector are in hospitality skills, culinary skills, event management, travel and tour operations, nurses, healthcare assistants, therapists, geriatric care, sales assistant, customer service, makeup artists, spa and massage therapists, baking and food services.

7 Investments to address unemployment and wage enhancement

Estimated unemployed population in Chhattisgarh is 4,33,891. There would be an addition of 3,38,082 each year to the labour force at the current population growth and workforce addition rates. Considering the current unemployed and the average workers getting added each year, about 4,24,861 need to be provided with employment each year. To create employment and make person fully employable, it requires an investment of Rs 14,62,397. About Rs. 3,10,657 crores investment needs to be made, which is about Rs. 62,131 crores each year. The various sources of investment per year could be Bank finance Rs. 31,066 crores; State government Rs. 9,320 crores; Household investment Rs. 6,213 crores and Private sector investment Rs. 15,533 crores.

7.1 Investment needed

Table 7: Investments needed for new employment generation 2024-29

Income generation of Unemployed	Number / Percentage	Investments (in Rs.)
Chhattisgarh population @ 2011	2,55,45,198	
Population – 2023	3,21,99,722	
Growth rate per annum between 2011-2023	1.95%	
Population (all ages) LFPR as per PLFS 2022-23	53.9%	
Labour force in 2022-23	1,73,55,650	
WPR as per PLFS 2022-23 for all age groups	52.6%	
Working population in numbers in 2022-23	1,69,37,054	
Unemployment rate	2.5%	
Unemployment @ 2.5% across all age categories	4,33,891	
Increase in labour force per annum	3,38,082	
Number to be employed per year if increase in labour force plus unemployment	4,24,861	
Average investment needed for five years (in Rs.)		14,62,397
Investment required in Rs. Crores (for five years)		3,10,657
Investment in Rs. Crores (required for one year)		62,131
Credit to be mobilised from Banks for farm and non-farm sector (in Rs. Crores)		31,066
Capital expenditure available with State Government (in Rs. Crores) @ 15%		9,320
Household Investment @ 10% total investment (in Rs. Crores)		6,213
Private sector investment @ 25% of total investment (in Rs. Crores)		15,533
Average investment (in Rs. Crores)		62,131

Similarly, there would also be need for investments towards wage and income enhancement. About 80% of the workforce in Chhattisgarh are estimated to be in unorganized who receive low incomes for their services. An investment of Rs 97,565 crore would be required per annum.

About Rs. 3,27,356 is required would enhancement of incomes with varied patterns for casual workers 6,38,627, self-employed 5,55,321 and wage / salaried employed 1,04,191. Households could contribute 10%, Government 15%, Private sector 25% and Banks 50%. About 1,49,01,973 workers could be targeted who constitute nearly 80% of the workforce in the unorganized sector.

Table 8: Investments needed for wage enhancement 2024-29

Wage enhancement of Low-income earners	Number / Percentage	Investments (in Rs.)
Chhattisgarh population @ 2011	2,55,45,198	
Population – 2023	3,21,99,722	
Growth rate per annum between 2011-2023	1.95%	
Population (all ages) LFPR as per PLFS 2022-23	53.9%	
Labour force in 2022-23	1,73,55,650	
WPR as per PLFS 2022-23 for all age groups	52.6%	
Working population in numbers in 2022-23	1,69,37,054	
Increase in labour force per annum	3,38,082	
Number to be enhanced with wages @ 80% of the workforce plus additions to workforce each year	1,49,01,973	
Average investment needed for five years at ICOR 1.5 with varied patterns for casual labour, self-employed and wage / salaried employed		4,12,537
Investment required in Rs. Crores (for five years)		4,87,824
Investment in Rs. Crores (required for one year)		97,565
Credit to be mobilised from Banks for farm and non-farm sector		48,782
Capital expenditure available with State Government (in Rs. Crores) @ 15%		14,365
Household Investment @ 10% total investment		9,756
Private sector investment @ 25% of total investment		24,391
Average investment (in Rs. Crores)		97,565



7.2 Sources of Investment

Hence the annual investments that would be required for job creation and wage enhancement across sectors would be Rs. 1,59,696 crores. This level of investment is more than the range of 30% of the GSDP at 36.4%, which necessitates need for external capital either national or foreign. This is computed in the table below:

Table 9 - Total investments needed 2024-29

Investments towards Employment Promotion		Investments toward Wage enhancement		Total Investments
Employment to be generated per annum	21,24,203	Number of workers to be enhanced with wages @ 80% of the workforce	1,49,01,973	
Employment to be generated per annum	4,24,861	plus additions to workforce each year		
Average investment needed for five years (per unemployed)	14,62,397	Average investment needed per year for low wage earner with varied patterns for casual workers, self employed and wage / salaried employed	3,27,356	
Investment in Rs. Crores (for five years)	3,10,657	Investment in Rs. Crores (for five years)	4,87,524	7,98,091
Investments Rs. Crores (for one year)	62,131	Investment Rs. Crores (for one year)	97,565	1,59,696
Total Credit by Bank for farm and non-farm activities	31,066	Total Credit by Bank for farm and non-farm activities	48,782	79,848
Capital expenditure by Government for unemployed	9,320	Capital expenditure by Government for low wage employed	14,365	23,685
Household investment @ 10% of total investment	6,213	Household investment @ 10% of total investment	9,756	15,969
Private sector investment @ 25% of total investment	15,533	Private sector investment @ 25% of total investment	24,391	39,924
Average investment (in Rs. Crores)	62,131	Average investment (in Rs. Crores)	97,565	1,59,696

8 Conclusion

It can be said that challenges of unemployment among rural and urban youth including young women in Chhattisgarh need an integrated approach. From the classical approach that focuses on inter-sectoral shifting, there is a need to try an alternative strategy of intra-sectoral proficiency enhancement. Initially demand estimations need to be undertaken based on market availability for produce and services. Infrastructure needs to be strengthened as per requirements for each sector. Skills need to be enhanced to develop market-oriented skills. Capital needs to be mobilised and invested for employment creation.

About Rs one lakh fifty-nine thousand six hundred and ninety-six crore of investment is required each year over the next five years to absorb the unemployed population and enhance the wage income of people many times that number. This level of investment is highly feasible as it is in the range of 30% of the GSDP. With targeted investments unemployment gap and wage enhancement gaps can be reduced in the coming years. With targeted investments unemployment gap and wage enhancement gaps can be reduced in the coming years.



