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Trend, Pattern And Determinants Of Employmentgrowth In Rural Non-Farm Sector (Rnfs)Of India- An Empirical Analysis (1970-2018).

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Abstract: ***The agricultural sector in rural India is passing through a deceleration process with a gradual decline in output growth and its relative contribution to GDP. Probing through existing literature reveals that the acceleration in rural non-farm sector (RNFS) employment growth is probably a response to the ongoing crisis that is gripping the agricultural sector. In this paper, an attempt is made to analyse the comparative contribution of agricultural sector and rural-non-farm sector to India's NDP and employment. Also, this paper tries to understand the processes of employment growth in the RNFS of India. The major objective of the study is to study the trend and pattern in employment (and unemployment) growth in the RNFS of India and to investigate into the determinants or factor responsible for the employment trend in the RNFS.A time series analysis is made for the time period 1970 to 2018. The time series analysis in this study is based on data compiled from various rounds of NSSO Reports and periodic labour force reports.***

Keywords: RNFS, agriculture, employment growth, trends, regional variations.

I. INTRODUCTION

India is predominantly a rural economy. As per the 2011 Census, 68.8 per cent of country's population and 72.4 per cent of workforce resided in rural areas. However, steady transition to urbanization over the years is leading to the decline in the rural share in population, workforce and GDP of the country. Between 2001 and 2011, India's urban population increased by 31.8 per cent as compared to 12.18 per cent increase in the rural population. Population projections indicate that India will continue to be predominantly rural till the year 2050 after which urban population is estimated to overtake rural population (United Nations, 2012).

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i. The onset of a structural transformation in India-

Traditionally, agriculture has been the prime occupation of rural economy and the driver of rural employment. But, figures indicate that the rate of growth of output in the agricultural sector has been declining gradually over the years leading to a probable crisis situation in the agricultural sector. It is argued that the root cause of the crisis was that agriculture is no more a profitable economic activity when compared to other enterprises. It means that the income derived from these activities is not sufficient enough to meet the expenditure of the cultivators. (Dhas, Albert Christopher, 2009) As a result, the relative contribution of agriculture to the GDP has been declining over time steadily which is posing a threat to India's self-reliant and food surplus position. There has been a gradual transition in composition of output and employment from the traditional agriculture to the more productive nonfarm sectors in the rural areas. Several scholars have observed that such transition is taking place in Indian economy (Aggarwal and Kumar 2012; Maurya and Vaishampayan 2012; Papola 2012).This transition however is considered as an important source of economic growth and transformation of the rural economy as well as in the country's economy as a whole.

ii. Composition of the Rural Non-Farm Sector or the unorganised sector

The rural non-farm sector (RNFS), also loosely referred to as the unorganized sector, encompasses all the non-agricultural activities- mining and quarrying, manufacturing (household and non-household), processing, repair, construction, trade and commerce, transport and other services in rural areas (villages and rural towns) undertaken by enterprises (from household to own-account enterprises). The RNFS thus, comprises diverse activities while sustained growth in the RNFS depends on a varied set of factors

Studies have generally confirmed that non-farm activities on an average contribute between 25 to 35 percent of the total household income in rural India. The Ninth Five-Year Plan figures says that more than 90 per cent of employment growth during the 1990s was from the unorganized sector in rural India.

II. A BRIEF REVIEW OF THE EMPIRICAL LITERATURE

In India, since the early 1970s attention has been paid to the significance of the

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non-farm sector in the rural economy. A lot of empirical studies have been carried out in this regard. A brief review of a few studies are as follows-

John Mellor in the early 1970swas the first person to launch the linkages literature between RNFS and agriculture sector with reference to the rural Indian economy. He has focused mainly on the relationship between the agricultural and non-agricultural sectors in rural India in the phase of emerging green revolution technologies, Mellor in his study found a virtuous cycle emerging whereby increases in agricultural productivity and thereby the incomes of farmers would be magnified by multiple linkages with the RNFS.

Hazell and Haggblade(1990)carried out a state-specific study in India to enquire into the relationship between rural non-farm income and total agricultural income. The analysed the probable set of factors thought to influence the magnitude of the income multiplier process. The factors that they found in their study were- infrastructure, rural population density, per capita income in agriculture and irrigation which impacts income of the rural households.

Vaidyanathan(1983) He used several state-level data sets for India to analyse the importance of non-agricultural employment in total employment of India. He applied a regression analysis to estimate the importance of non-agricultural employment in total employment, on farming income, on unemployment rate. The result of the study showed strongly significant, positive relationship between unemployment and the non-farm employment in all cases.

,**Ravallion and Datt (1996, 1999**) carried out their study at the broader national level. They tried to show the effectiveness of non-farm growth in reducing poverty. The results of their study indicated that the growth in non-farm employment has varied widely across all the Indian states. They found that initial literacy rates play an important role.

Arcot, Hazell and Ramasamy (1991)studied changes in real wage rate pattern in the agriculture sector as a result of displacement of agricultural labourers by the use of machinery. Results of their study indicate that although new agricultural machinery was displacing hired labour in paddy cultivation, real wage rates in agriculture actually rose as a result of increased employment in the RNFS., They also found that the agricultural employment earnings doubled between 1974/75 and 1983/8 reason being

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the withdrawal of agricultural labour by large farmers.

Shylendra and Thomas (1995) studied the determinants of the growth in different RNF activities in a micro study of a semi-arid village in Gujarat. They found two factors responsible for the growth in different RNF activities - developmental pull factors, and distress-induced push factors(sometimes also work in mutually reinforcing ways. 90 per cent of households were found to be engaged in non-farm activity. The main reasons behind this are, firstly, growth was largely attributed to pull factors, which particularly consisted of increased local demand for goods and services and expansion of government activities. Secondly, other positive factors included agricultural modernisation and commercialisation, increased demand for non-crop goods and services, urbanisation, and growing literacy and welfare-oriented policy interventions leading to increased job opportunities.

III. OBJECTIVES:

1. To study the trend and pattern of employment and unemployment in the RNFS of India.
2. To analyse the determinants of employment in RNFS of India.

IV. DATA AND METHODOLOGY

The study is based on time series secondary data (1990-2018) compiled from various rounds of NSSO Reports, periodic labour force survey reports, census reports and various other government and non-government publications. In the first section, an effort has been made to understand the pattern of rural non-farm employment and unemployment, the sectoral contributions of agricultural and RNFS, employment and unemployment status, at aggregate and disaggregate levels using the National Sample Survey (NSS) quinquennial data on employment. The study also utilizes Economic Census data from the Central Statistical Organization (CSO). To study the trend and pattern, statistical tools like simple ratios, percentages, averages, growth rates etc. are calculated along with tabular and graphical presentation of data. For examining the determinants, descriptive analysis based on in-depth review of empirical studies have been done.

V. TREND AND PATTERN IN OUTPUT AND EMPLOYMENT GROWTH IN THE RNFS-

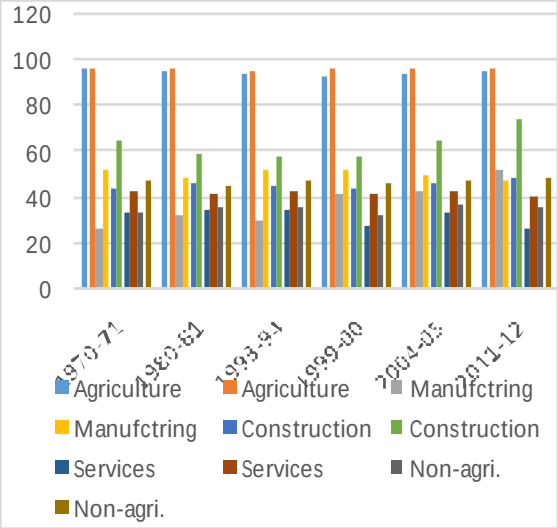
i. Contribution of the Rural Non-Farm Sector in Indian Economy

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The contribution of the rural areas in economy of India is seen from its share in national output and employment.

FIGURE 1.SHARE OF RURAL AREAS IN TOTAL NDP AND WORKFORCE ACROSS DIFFERENT SECTORS

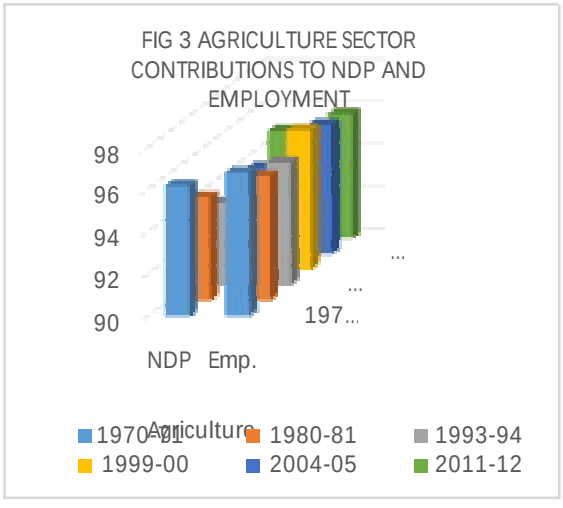


Source: National Accounts Statistics of CSO.

Figure 1 shows the share of rural areas in total NDP and workforce across different sectors. As seen in the figure, the rural areas engaged 84.1 per cent of the total workforce and produced 62.4 per cent of the total net domestic product (NDP) in 1970-71. Gradually, the rural sharing the national income declined sharply till 1999-00. The declining contribution of rural areas in national output without a commensurate reduction in its share in employment implies that a major portion of the overall economic growth in the country came from the capital-intensive sectors in urban areas. There was no generation of significant employment during the period under consideration.

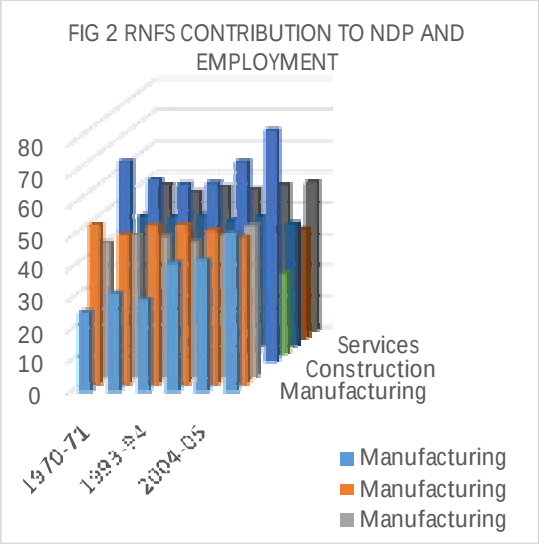
ii. A Comparative pictureof Farm and Non-Farm sector contributions

The sector-wise disaggregation is shown with the help of the two figures-figure 2 and figure 3.



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Source: National Accounts Statistics of CSO

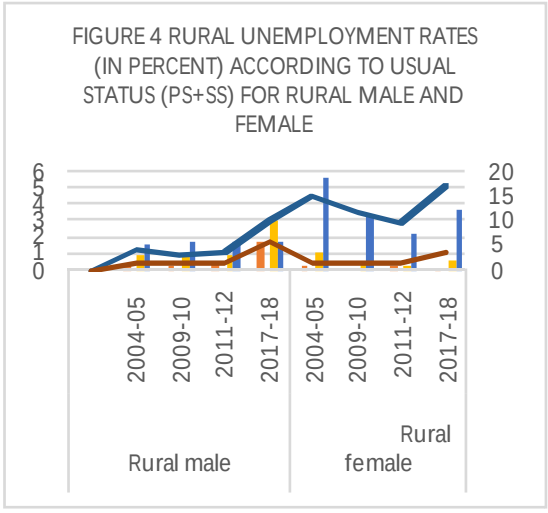
Source: National Accounts Statistics of CSO

As seen in the figure 2, the rural shares in NDP increased gradually since 1970s but dropped slightly during 2004-05 but regained its pace again from 2011-12. Due to faster reduction in the rural share in total employment than in national NDP, the difference between the rural share in output and employment narrowed down to 24 per cent by the year 2011-12. In case of agriculture sector's contribution to NDP and employment, which is shown in figure 3, its contribution to NDP has been ever declining since 1970 onwards. However, the share in employment has shown increasing trend with slight variations throughout the period in consideration. These evidences show that urban economy overtook rural economy in terms of output

But, interestingly, in terms of relative contribution to employment, the urban employment is less than half of the rural employment. This has serious implications in the form of wide disparity in worker productivity between rural and urban areas.

Overall, the comparative analysis between RNFS contribution to NDP and employment and agriculture sector contributions to NDP and employment shows significant changes in the contribution of rural areas in the national economy. The agriculture sector in India is undergoing a structural change leading to a crisis situation gradually as the rate of growth of agricultural output is gradually declining in the recent years.

iii. Rural Employment Trends in India

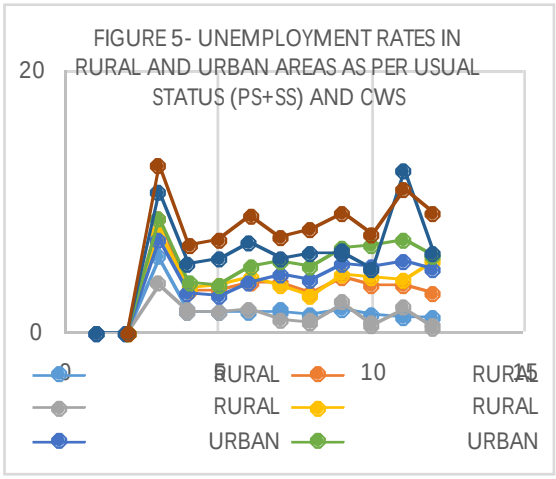


Source: Unit level data from various quinquennial rounds of NSS on Employment and Unemployment situations in India.

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Figure 4 and figure 5 shows the rural unemployment rates are obtained from the nine quinquennial surveys of NSSO (27th round to 68th round) and PLFS (2017-18shows unemployment rates in rural and urban areas as per usual status (ps+ss) and cws. It shows that unemployment rates respectively. In figure 4, for rural male, the unemployment rates has been increasing under both PS and SS since 2004-2005, and then increasing steadily upto 2011-2012. Since 2011-2012, the unemployment rate for rural male has increased abruptly to a higher rate. The right half of the figure shows the unemployment rate for rural females. The unemployment rate for rural female also showed similar trend that compared to the previous quinquennial rounds, in 2017-18 the unemployment rates were increasing at an alarming rate. In both usual status (ps+ss) and CWS, unemployment were higher for both males and females. Unemployment rate in usual status was around 1.2 to 1.8 per cent among rural males and 0.5 to 2.4 per cent among rural females while it was around 2.8 per cent to 5.4 per cent among urban males and 4.9 per cent to 12.4 per cent among urban females. Unemployment rates in CWS was around 3 to 4.2 per cent among rural males and 2.9 to 5.5 per cent among rural females.



Source: Annual Report: PLFS, 2017-18.

Similarly, figure 5 also shows a similar trend. Based on these evidences it is inferred that the decline in labour-force was primarily because of the withdrawal of females from workforce during the period under consideration. During that period, female withdrawal from labour-force happened across all types of households in the rural areas. The share of non-farm sector in providing employment has been growing across all the states. But, the pace and pattern of rural non-farm employment did exhibit stark regional variations (Anjani Kumar et.al. 2011)

VI. RURAL DIVERSIFICATION AND ITS DETERMINANTS

This section of the paper discusses rural diversification in terms of transition from agriculture to RNFS, its determinants and implications.

1. *Rural diversification-pros and cons*

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Economic diversification in rural India, involves the emergence and development of non-agricultural activities. It is considered an important means of increasing employment and per capita incomes, and improving standards of living especially in a period when agricultural sector in India is passing through a complex crisis. At the micro-level this refers to a livelihood which has multiple, part-time components as non-agricultural activities themselves are of various kinds differing in terms of productivity and the returns they yield. The available literature explains a range of positive and negative outcomes of rural diversification with pull and push factors:-

i. Pull Factors:

Mellor (1978) for instance, argues that technology-led growth in agriculture gives rise to several linkages, which lead to an expansion of employment in the non-agriculture sector. (Visaria et.al.1994) argue that development of urban centres give impetus to non-farm employment in the adjoining rural areas because of low factor (land, labour) prices in the rural areas. Where new agricultural technologies and modern farm inputs become available, they lead to agricultural surpluses in some commodities and increased opportunities for trade. In these settings, a growing agriculture stimulates growth of the RNFE through a number of key linkages, (Stevenhaggblade, et.al.2010).

ii. Push Factors:

The pull factor led arguments explains the phenomenon of employment diversification in rural India with reference to distress-related indictors. Where population growth continues unabated for many generations, land availability diminishes and, ultimately, in the absence of careful land management, so does soil fertility. Without technological advance in agriculture, labour productivity and per capita farm production fall. In such settings, growing landlessness pushes labour force increments into nonfarm activity by default. (Stevenhaggblade, et.al.2010). (Vaidyanathan (1986) found a positive association between the unemployment rate and the incidence level of rural non-agricultural employment in states. He argues that in a situation where the labour absorptive capacity of agriculture becomes limited and the urban industrial sector is not able to accommodate the ever-growing labour force, the RNFS tend to act as a ‘sponge’ for the surplus labour. These shows as both pull as well as push factors are responsible for diversification in the rural economy.

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2. *Determinants of RNFS output and employment growth:*

In most other previous researches carried out by a number of scholars, it is evident that the share of rural non-farm workers in total rural workers is increasing year by year (Abraham 2009; Bhalla 2002; Bhaumik 2002; Chadha 2002; Chadha and Sahu 2002; Jatav 2010; Kashyap and Mehta 2007; Srivastav and Dubey 2002). In order to investigate the possible determinants of rural non-farm employment (RNFE) an indepth study of the empirical literature is made and the following factors have been found to play an important role in determining the output and employment growth in RNFS of India-

i. Urbanization and migration-

With the transition of the economy from agricultural to non-agricultural sector, the dependence on the agriculture sector gradually declines. Growth and prosperity then depends upon non-agricultural activities in the RNFS. The rapid urbanization and globalization trend opens up new market opportunities for rural non-farm producers of tradable goods and services. Also, rural workers tend to migrate with the opening up of the labour market. Evidence from India, for example, suggests that rapid rural non-farm growth is occurring along transport corridors linked to major urban centres, largely independent of their agricultural base (Bhalla, 1997).

ii. Total factor productivity (TFP) –

It is important to understand the importance of investments activities which plays an important in determining productivity (TFP) growth. Increases in total factor productivity (TFP) can be induced by investments in human capital, research and development, extension services, and infrastructure facilities. Substantial productivity gains, as measured by total factor productivity indexes, have been realized in India's agriculture. These gains have varied somewhat by period (being highest in the green-revolution period) but in each period examined, India has realized gains. The rate of change in TFP has been relatively high.(Mark W. Rosegrant, et.al., 1995)

iii. Commercialization of economy –

By commercialisation of agriculture we mean production of agricultural crops for sale in the market, rather than for family consumption. This was one important aspect of British economic policy. Commercialisation of agriculture is a means of diversification and shifting from subsistence agriculture to more diverse economic activities involving the market.

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iv. Rural wages –

On average 68 per cent of the income of agricultural households comes from cultivation and allied agricultural activities, and 4.7 per cent and 22 per cent respectively from non-agricultural employment. But, the widespread stagnation in the Indian agriculture sector since late 1990s has adversely affected the earnings of the farm households, demand for labour and rural wage rates. The slowdown in the growth of wage rates and farm incomes has, in turn, pushed a large number of these households already living at subsistence levels to even worse levels of poverty.

v. Rural literacy-

Literacy helps the people in many ways. Better education and skill up-gradation enable the individuals to take advantage of labour market opportunities and income generating prospects. (Anjani Kumar et.al. 2011).Many other studies found a significant negative association between poverty and literacy. These results suggests that education plays an instrumental role in rural poverty reduction, implying for the need of greater investment in education human resource development activities in the rural areas.

vi. Population density-

Population density adversely affects agricultural output. It reduces farm size, increases demand for agricultural inputs (such as inorganic fertilizer), lowers rural farm wages, decreases revenue from crop sales, , lowering crop yield etc.All these in turn creates increasing dependency on off-farm income from RNFS. In India, the land-man ratio is decreasing, employment elasticity in agriculture has not only declined but has reached almost zero. In this situation, the rural non-farm sector is generally perceived as the answer for tackling the twin problems of employment and poverty in rural India (Brajesh Jha).

VII. CONCLUSION AND SUGGESTIONS

This study attempted to analyse the trend and pattern in rural non-farm sector output and employment growth. By comparing the contribution of both agricultural and non-agricultural sectoral contribution to NDP and employment, this study found the increasing importance of non-farm sector in offering employment to rural workforce in India. A declining rural share in national output without a commensurate decline in its share in total employment is seen during the period under consideration. This implies that these has been a much higher growth in the

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capital intensive non-agricultural sector in the urban areas. While going through the employment and unemployment statistics, this study reveals that, these has been an increase in rural unemployment in both male and females. The underlying implication is the withdrawal of female workforce. Withdrawal of workforce from agriculture witnessed between 2004-05 and 2011-12 has reduced dependence on agriculture and brought convergence in the contribution of agriculture in rural output and employment to some extent (Ramesh Chand, S. K Srivastava and Jaspal Singh). However, the share of non-farm sector as a whole, in providing employment has been growing across all the states. Different push and pull factors that influence rural diversification have been discussed in this paper. Review of existing empirical works have been done and it thereby found that both push as well as pull factors pay equal role in explaining agricultural diversification in rural India. A number of factors have been observed affecting rural output and employment significantly. These factors are -Urbanization and migration, Total factor productivity (TFP), Commercialization of economy, rural wages, and rural literacy and Population density. It has been found in many studies that Urbanization and migration leads to the opening up of markets and induces the transition from agricultural to non-farm sector employment generation. Investments in Total factor productivity (TFP) augmenting activities are found to affect productivity positively. Commercialization of economy opens up more opportunities for income generation for the rural workers. The declining rural wages in the phase on ongoing agricultural crisis negatively affects standard of living. Public expenditure in improving rural literacy and education is beneficial of regaining prosperity in agriculture sector as well in the non-farm sector. Population density adversely affects agricultural output. It reduces farm size, increases demand for agricultural inputs, lowers wages, decreases revenue, lowering crop yield etc.

The state plays an important role in encouraging positive rural diversification. Government policies in India, in most of the cases are industry specific. This orientation should be changed in order to encourage rural diversification in India. Investments must be made in technical programme that can help in strengthening the skills of rural workers which would benefit and provide better possibility of getting employment in non-farm sector. In a labour surplus country like India, the government also has a role to play in

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regulating and mediating in the rural labour market.

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IX. APPENDIX

General e	Unemplo	Unemplo	Unemplo	Unemplo	Unemplo	Unemplo	Unemplo	Unemplo
Not litera	2.2	0	3.8	2.6	2.3	0.8	2.5	1.6
Literate&	2.9	1.4	4.1	2	3.2	0.6	4.8	4.3
Middle sc	4	3.9	5.4	8.1	4.2	4.6	5.1	5.8
Secondary	5	6.8	5.9	20.5	4.6	8.6	5.5	15.1
Higher Se	7.8	22.2	10.9	19.1	6.5	13.8	12	14.6
Diploma /	21.4	46.6	12.8	17.9	15.9	30	12.5	17.3
Graduate	16.6	30.4	13.8	24.7	19.1	29.6	16.3	23.4
Secondary	8.3	17.8	10.3	22.5	8.1	15.5	11.7	19.8
All	4.7	4.6	7.5	14.3	5	4.8	8.1	13.1

TABLE Unemployment rates in rural and urban areas as per Usual status(ps+ss) and CWS

Round (year)	RURAL				URBAN			
	MALE		FEMALE		MALE		FEMALE	
	usual status (ps+ss)	CWS	usual status	CWS	usual status	CWS	usual status	CWS

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			(ps+ss)		(ps+ss)		(ps+ss)	
PLFS (2017-18)	5.8	8.8	3.8	7.7	7.1	8.8	10.8	12.8
68th (2011-12)	1.7	3.3	1.7	3.5	3.0	3.8	5.2	6.7
66th (2009-10	1.6	3.2	1.6	3.7	2.8	3.6	5.7	7.2
61st (2004-05)	1.6	3.8	1.8	4.2	3.8	5.2	6.9	9.0

Source: Annual Report: PLFS, 2017-18

X. AUTHOR PROFILE



Chumki Handique is currently pursuing her research in the field of International Economics in the Department of Economics, Dibrugarh University. She received her Masters in Economics from Department of Economics, Dibrugarh University and her Bachelor's degree in Economics from Manohari Devi Kanoi's Girls College, Assam, India. Her other areas of interest includes gender inequality, investment in infrastructure sector, impact of climate change on agriculture, public expenditure in health and education etc. She has published several research papers in different areas of development economics, agricultural economics and gender economics.

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