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Excluding rural females, India's LFPR has declined only marginally from 80.8% in 2011-12 to 79% in 2017-18.

The share of organized workers has actually declined from 23.3% in 2011-12 to 23.1% in 2017-18.

Quality of India's employment improves...

...albeit at a much slower pace

The government published its first Periodic Labor Force Survey (PLFS) annual report 2017-18 (Jul'17-Jun'18) in end-May'19. The headline numbers suggest that the labor force participation ratio (LFPR) and worker-population ratio (WPR) has declined further; however, the unemployment rate has seen a sharp rise. Nevertheless, considering the massive underemployment in the country, the quantitative analysis of India's labor market is not enough, and thus, a qualitative analysis is necessary. Our analysis confirms that while the quality of India's employment has continued to improve in the past few years, the pace of improvements has slowed markedly v/s the previous period between 2004-05 and 2011-12. Key findings of our analysis are:

India's LFPR not as low as the headline numbers suggest: India's labor force participation ratio (LFPR) for all ages has declined consistently and was as low as 36.9% in 2017-18, primarily because of the youth and low participation of women. The youth (15-24 years) LFPR has declined from 50% in 2004-05 to 29.6% in 2017-18, while that of the working age population (25-59 years) has declined from 74.3% in 2004-05 to 68% in 2011-12 and further to 62.9% in 2017-18 (implying annual decline of about 1pp since 2004-05). More notably, while LFPR among men (rural and urban) for working-age population remains ~97%, it has declined consistently from ~51% in 2004-05 to ~30% in 2017-18 for females. Within female population, the urban female LFPR has been low and broadly stable at 24%; the rural female LFPR has led to the fall in total female LFPR. Excluding rural females, India's LFPR has declined only marginally from 80.8% in 2011-12 to 79% in 2017-18.

WPR among youth and working-age population replicated past trend...: The worker-population ratio (WPR) among the youth (aged 15-24 years) declined from 33.3% in 2011-12 to 21.9% in 2017-18, implying an annual decrease of 1.9pp, same as that between 2004-05 (when it was 46.7%) and 2011-12. WPR among the working-age population (25-59 years) also witnessed similar trends – from 73.4% in 2004-05 to 67.3% in 2011-12 and further to 61.4% in 2017-18.

Informality, however, reduced at slower pace...: The share of informal workers (constituting partnerships, proprietorships, employer households and others) has declined by 0.45pp per annum between 2011-12 and 2017-18 (from 79.5% to 76.7%), slower than the annual decline of 0.65pp between 2004-05 and 2011-12.

...and the share of organized workers actually declined: The share of organized workers (defined as workers engaged in enterprises with 10 or more workers) has declined marginally from 23.3% in 2011-12 to 23.1% in 2017-18. In contrast, it had risen sharply in the previous period – from 17% in 2004-05.

Formalization has risen faster in the unorganized than the organized sector: Since our definitions of formal/informal and organized/unorganized workers are very broad, the cross-analysis suggests that while the share of formality has increased, it is primarily because of the rising formality in the unorganized sector. Formal workers in the organized sector have increased only marginally – at 0.1pp per annum between 2011-12 and 2017-18 v/s an annual rise of 0.6pp in the previous period. Overall, while the structure of employment has improved – measured by Employment Situation Index (ESI), it has happened at a very slow pace in recent years compared to the previous periods.

Education profile of workers: The share of illiterate workers has declined slowly in recent years compared to the previous period, while the share of high-educated (secondary education and above) workers has risen at a slower pace. From ~40% in 2004-05, the share of illiterate workers declined to 30.7% in 2011-12 (implying annual fall of 1.3pp) and declined further to 26% in 2017-18 (implying annual decline of 0.8pp). The share of highly-educated workers rose from 20.4% in 2004-05 to 28.8% in 2011-12 and further to 33.4% in 2017-18.

Between 2011-12 and 2017-18, the share of regular wage/salaried workers increased 0.87pp every year, almost double the pace of improvement of 0.48pp in the previous period.

Distribution of workers by status in employment: Between 2011-12 and 2017-18, the share of regular wage/salaried workers in total employment increased by 0.87pp every year, almost double the pace of improvement of 0.48pp in the previous period between 2004-05 and 2011-12. The entire shift, however, can be attributed to casual workers, as the share of self-employed workers remained unchanged at 52.2% between 2011-12 and 2017-18 (it was ~57% in 2004-05).

Industrial distribution of workers: According to industry-wise classification, the share of workers in agriculture, etc. continued to decline (albeit at slower pace) and the share of services sector rose further (at faster pace). Worryingly though, the share of industrial workers rose at slowest pace since 1999-00 and the share of manufacturing employment declined from 12.6% in 2011-12 to 12.1% in 2017-18, in contrast to the rising trend in the previous periods.

Condition of employment: The share of regular wages/salaried employees, who had no written job contract in the non-agricultural sector rose further to 71.1% (from 59.1% in 2004-05 and 64.7% in 2011-12), while those who are not eligible for paid leave increased to 54.2% (from 46.2% in 2004-05 and 50% in 2011-12). The share of regular workers eligible for any social security benefit (provident fund/pension, gratuity, health care and maternity benefits), however, increased to above-50% in 2017-18, higher than 44.6% in 2011-12 (and 45.5% in 2004-05).

The unemployment rate among the youth (15-24 years) increased from 8.2% in 2011-12 to 26.1% in 2017-18, while it rose from 1.0% to 2.5% for the working-age population (25-59 years).

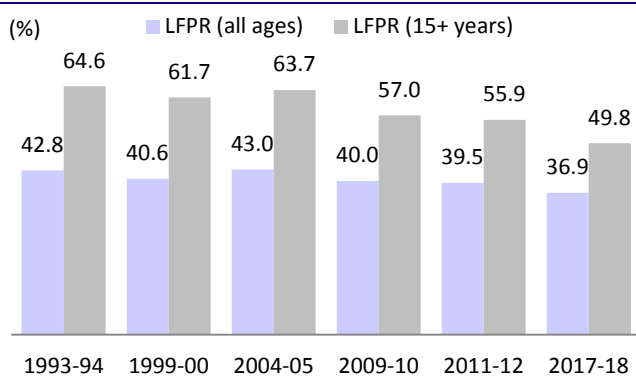
Unemployment rate highest among youth and highest-educated people: In our opinion, the headline unemployment rate of 6.1% does not deserve much attention because it is primarily led by the youth and the highly-educated. The unemployment rate among the youth (15-24 years) increased from 8.2% in 2011-12 to 26.1% in 2017-18, while it rose from 1.0% for the working-age population (25-59 years) in 2011-12 to 2.5% in 2017-18. Similarly, while the unemployment rate among the illiterate rose from 0.4% to 1.1%, it surged from 7.6% to 16.5% for the highest-educated (graduate and above) people.

Quantitative analysis of India's labor market

Not only has India's LFPR declined consistently over the past few decades, but it is also amongst the lowest compared to other major EMEs.

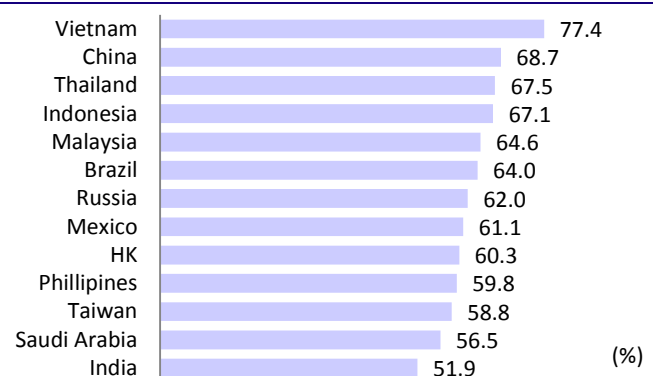
India's LFPR is not as low as the headline numbers suggest: India's headline LFPR stood at only 36.9% for all ages and at 49.8% for population aged above 15 years (15+ years) in 2017-18. Not only has India's headline LFPR declined consistently over the decades from ~64% in 2004-05 to sub-50% in 2017-18, but it is also amongst the lowest compared to other major emerging market economies (EMEs) in the world (*Exhibit 1-2*). These facts are perplexing considering that India is one of the youngest (median age of sub-30 years) and the fastest growing nations in the world.

Exhibit 1: India's LFPR has declined consistently over the past few decades...



Source: National Sample Survey office (NSSO), MOFSL

Exhibit 2: ...and among the lowest compared to world's major economies



For people aged above 15 years
Source: International Labor Organization (ILO), MOFSL

Excluding rural females, India's LFPR was 79% in 2017-18, only slightly lower than 83% in 2004-05.

To understand why India's LFPR is so low and falling consistently, we need to delve deeper into the details of LFPR by age-groups, location (rural/urban) and sex (male/female) of the population. India's LFPR (for 15+ years) is sub-50% because of low LFPR among the youth (15-24 years) and old people (60+ years). LFPR for the youth population has declined sharply during the past few years - from 50% in 2004-05 to sub-30% in 2017-18. India's LFPR for the working-age (25-59 years) population was 62.9% in 2017-18, down from 68% in 2011-12 and 74.3% in 2004-05 (*Exhibit 3*). However, the fall in LFPR in the working-age population is almost entirely attributable to the rural female population. Excluding rural females, India's LFPR was 79% in 2017-18, only slightly lower than 83% in 2004-05 (*Exhibit 4*).

Exhibit 3: LFPR has declined consistently since 1990s...

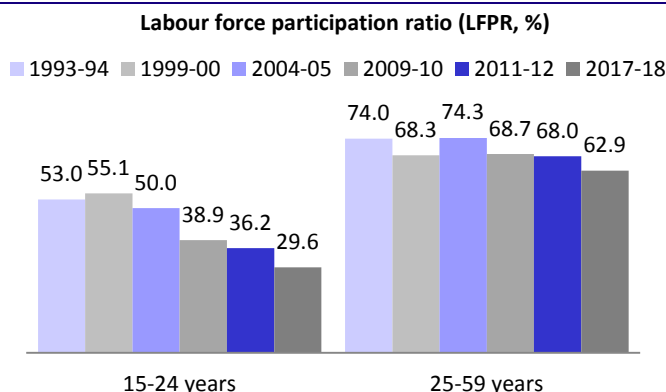
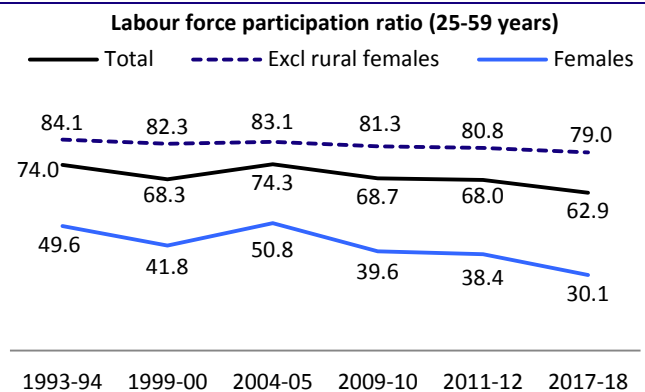


Exhibit 4: ...primarily due to rural females (%)

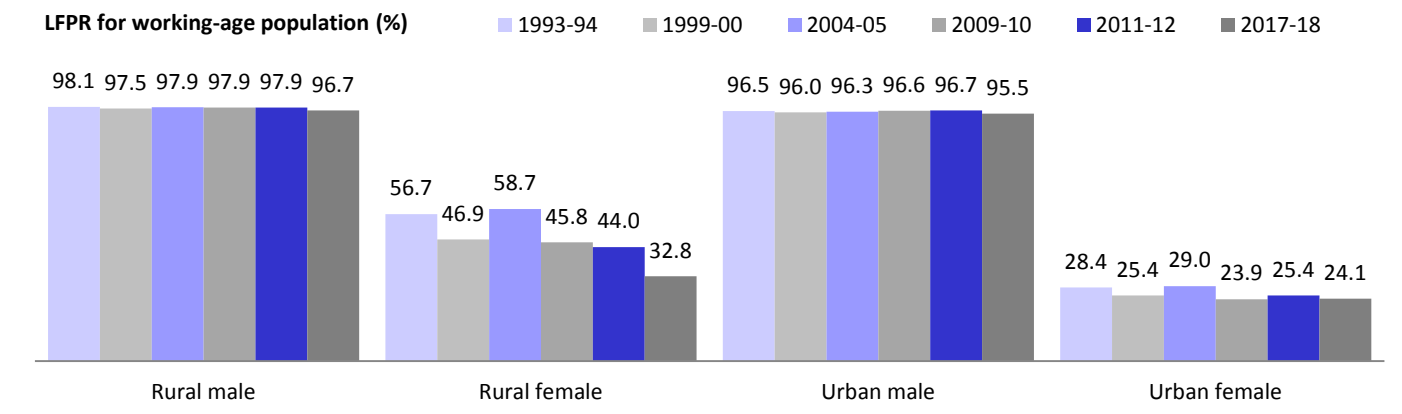


Source: NSSO, CEIC, MOFSL

While almost every Indian male aged between 25-59 years is a part of the labor force, only about 3 out of 10 females in India are looking for work.

Almost every Indian male aged 25-59 years is a part of the labour force: Notably, while female LFPR has declined consistently from 50.8% in 2004-05 to sub-40% in 2009-10 and further to 30% in 2017-18 (*Exhibit 4 above*), male LFPR in India (for the working-age population) has barely declined since the 1990s and has remained close to 97% in 2017-18 (*Exhibit 5*). This implies that almost every male aged between 25-59 years is a part of the labor force in India. On the other hand, only about 3 out of 10 females in India and less than 1 out of 4 females in urban areas are looking for work (*Exhibit 5*).

Exhibit 5: Almost every male in the working-age group is a part of labor force in India



Source: NSSO, MOFSL

Worker-population ratio (WPR) has declined in line with past trends: Although the youth LFPR (15-24 years) has declined from 50% in 2004-05 to sub-30% in 2017-18 (*Exhibit 3 above*), WPR among the youth population has declined even faster during the period. Youth WPR has declined from 46.7% in 2004-05 to ~22% in 2017-18 (*Exhibit 6*), implying that the unemployment rate has risen among the youth population (as we will discuss later in the report).

Exhibit 6: WPR has fallen between 2011-12 and 2017-18...

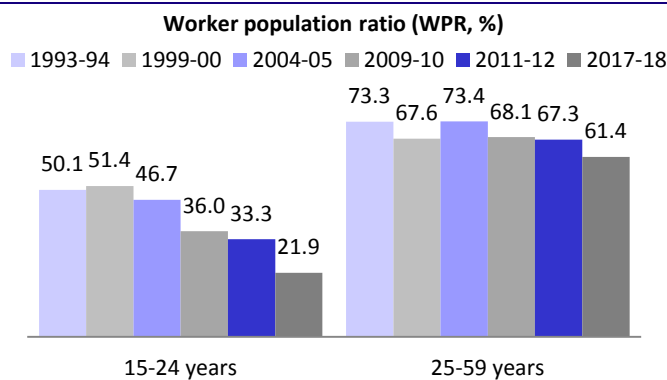
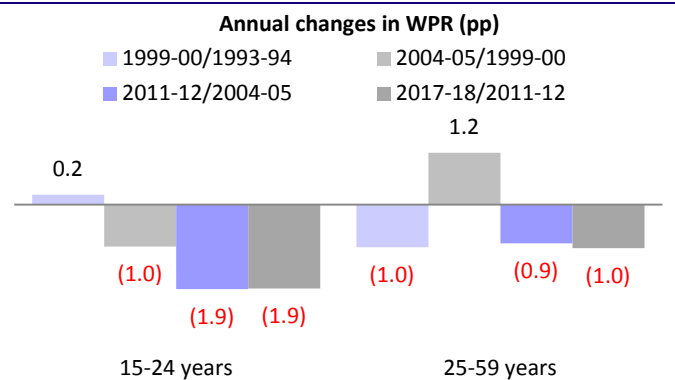


Exhibit 7: ...but has declined at the same pace as earlier



Source: NSSO, CEIC, MOFSL

Although the WPR for the working-age population has declined consistently between 2004-05 and 2017-18, the pace of fall in WPR during the recent six years (between 2011-12 and 2017-18) has been similar to the decline during the previous 7-year period (between 2004-05 and 2011-12). WPR has declined at an annual rate of about 1pp during both the intervals (*Exhibit 7*).

Qualitative analysis of employed population

In a dual-structure labor market such as India’s, an analysis of headline numbers could be highly misleading and inconclusive. “...Employment elasticity of output in India has declined over the last decade of 2000s (it declined from 0.44 to 0.01), on account of which we can argue that the phenomenal growth India has achieved during the last five years or so was jobless growth...”, concluded Prof. Santosh Mehrotra et al. in a Planning Commission [paper](#) in Dec’12. Therefore, we firmly believe that the qualitative analysis of employment is absolutely necessary to get a firm grip on India’s labor market.

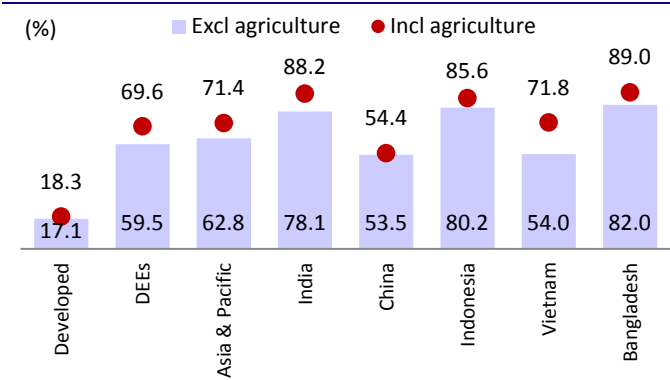
In this section, we analyze India’s workforce from six different qualitative perspectives: (1) formal and informality of workers; (2) share of organized v/s unorganized workers; (3) education profile of workers; (4) distribution of workers by status in employment; (5) industrial distribution of workers; and (6) condition of employment. Our analysis suggests that while the quality of India’s employment has improved in the past few years, it has improved at a much slower pace than before.

The proportion of informal employment in the non-agricultural sector in DEEs was ~60%, while it was only 17% in the developed world.

1.) Informality of workers has reduced, albeit at slower pace...

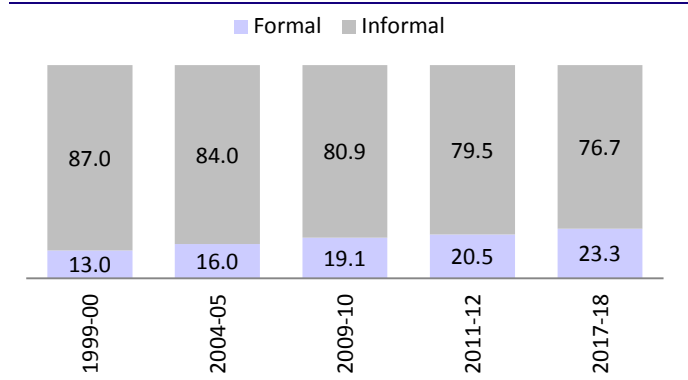
Informal employment is present in all economies of the world; however, it is more pervasive in developing and emerging economies (DEEs) compared to the developed countries. According to a recently released [paper](#) by ILO, “Two billion of the world’s employed population aged 15 years and above work informally, representing 61.2% of global employment.” The proportion of informal employment in the non-agricultural sector in developing & emerging economies (DEEs) was ~60% (and ~70% including agriculture), while it stood at only ~17% (~18% including agriculture) in the developed world. The share of informal workers in Asia and the Pacific was 62.8% in the non-agricultural sector with high ratios in Cambodia, Bangladesh, Indonesia, India and others (*Exhibit 8*).

Exhibit 8: The proportion of informal workers is very high in the developing economies



Source: ILO, MOFSL

Exhibit 9: Although it has been falling consistently for India, it still remains very high



Source: NSSO, MOFSL

The share of informal workers has declined consistently from 87% in 1999-00 to ~77% in 2017-18

Indian surveys, however, suggest that the proportion of informal workers in total non-agricultural employment has declined consistently during the past two decades — from 87% in 1999-00 to ~77% in 2017-18 (*Exhibit 9*). Notably, the pace of improvement has slowed – it declined at an annual rate of 0.64pp between 2004-05 and 2011-12, faster than the annual decline of 0.47pp in the recent period.

As against a decline of almost 1pp each year between 2004-05 and 2011-12, the share of the unorganized sector rose slightly to 76.6% in 2017-18.

2.) ...but the proportion of organized workers has actually declined in recent years

Although the share of informality has declined at a slower pace in recent years, the share of unorganized workers has actually increased between 2011-12 and 2017-18 (*Exhibit 10*). As against a decline of almost 1pp each year, between 2004-05 and 2011-12, share of the unorganized sector was 76.6% in 2017-18, marginally higher than 76.3% in 2011-12.

Exhibit 10: Share of organized workers, however, has reduced slightly...

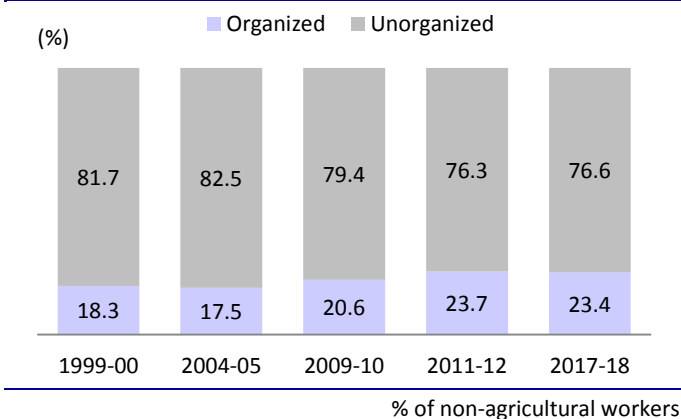
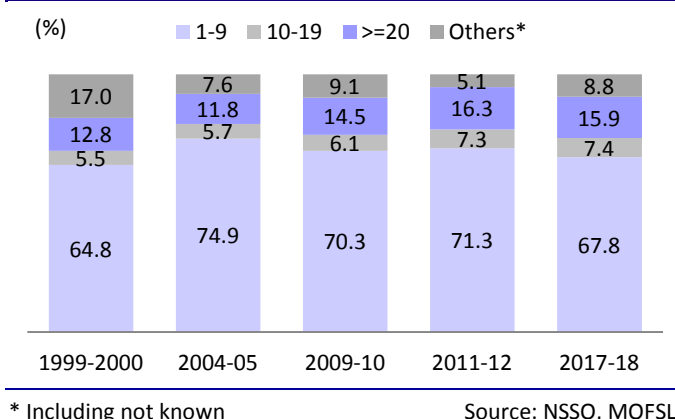


Exhibit 11: ...due to lower proportion of workers engaged in the largest (>=20 workers) enterprises



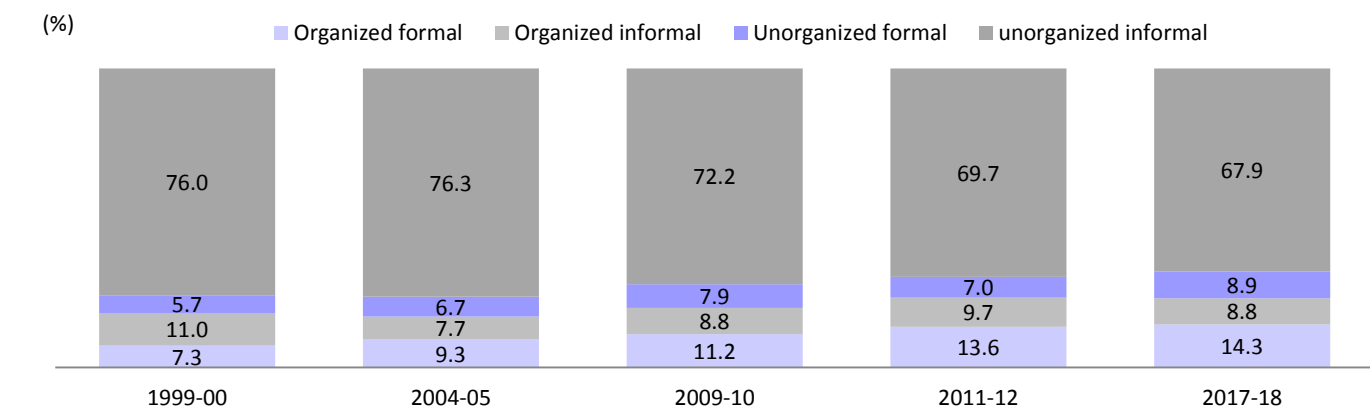
The decline in organized workers is primarily due to the lower proportion of workers engaged in the largest enterprises employing 20 or more workers (*Exhibit 11*). The share of workers engaged with the largest enterprises declined from 16.3% in 2011-12 to 15.9% in 2017-18, while the share of workers engaged in enterprises with 10-19 workers rose slightly from 7.3% to 7.4% during the corresponding period.

While the share of formality has risen at a slower pace, it has increased faster in the unorganized than in the organized sector.

Formality has risen faster in the unorganized than the organized sector

A cross-sectional analysis of the organized/unorganized and formal/informal workers indicates that while the share of formality has risen at a slower pace, it has increased faster in the unorganized than in the organized sector (*Exhibit 12*). Further, the share of informal workers has risen in the organized sector, while it has declined at a slower pace in the unorganized sector. A comprehensive analysis suggests that while the situation has improved, it has happened at a slower pace.

Exhibit 12: Formality has increased faster in the unorganized than in the organized sector



Source: NSSO, MOFSL

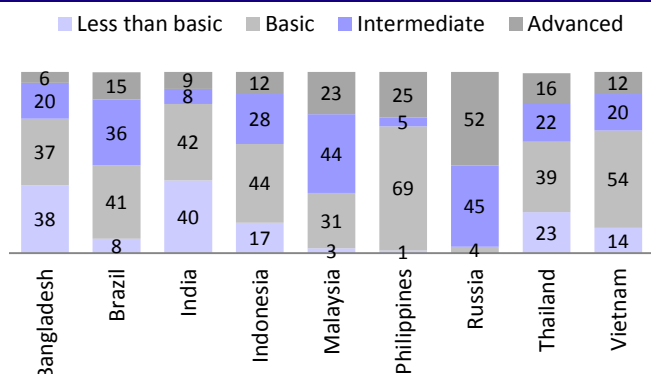
3.) Education profile of workers has also improved at a slower pace

The education profile of India’s workforce and the labor force in general, has been much criticized over the decades. A comparison of the education profile of India’s workforce with that of other EMEs confirms that Indian workers are far more inferior in terms of education than their counterparts in other EMEs. According to ILO, as much as 80% of India’s workforce has basic or less education (below lower secondary education), with only 9% having advanced (tertiary or above) education. Bangladesh and Philippines are the only two other major EMEs with 70% or above workforce with up to basic education (*Exhibit 13*).

The share of illiterate workers in total employment has continued declining, while the share of the highest-educated has increased, albeit at a slower pace.

Indian surveys confirm (with different classification in terms of schooling/education) that the share of illiterate workers in total employment has continued to fall, while share of the highly-educated has increased (*Exhibit 14*). Nonetheless, the pace of decline in the share of illiterate workers and increase in the share of the highly-educated has slowed compared to the previous period. While the share of workers with education above secondary level rose by 1.2pp every year between 2004-05 and 2011-12, it increased at two-third the pace (of 0.8pp) between 2011-12 and 2017-18.

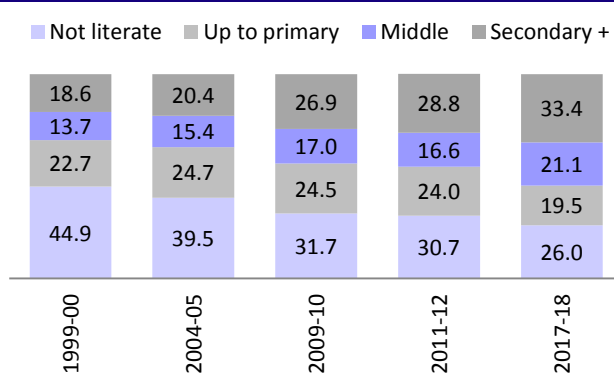
Exhibit 13: Education profile comparison of the workforce in few major EMEs



For workers above 15 years

Source: ILO, MOFSL

Exhibit 14: Education profile of India’s workforce has improved, albeit at slower pace



Source: NSSO, MOFSL

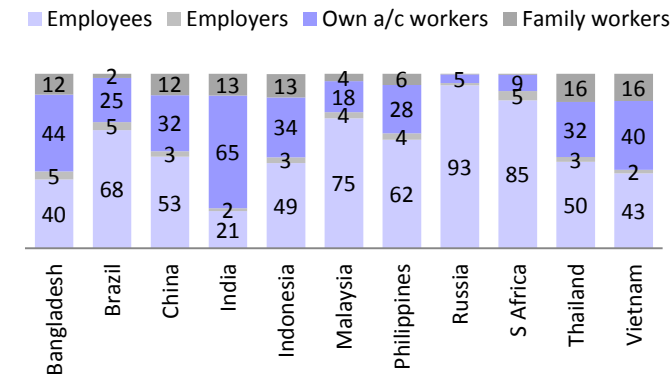
4.) Distribution of workers by status in employment

Further, the ILO also measures vulnerability of the workforce by classifying it into four different categories — regular employees, employers, own-account workers and contributing (unpaid) family workers. As a thumb rule, lower the share of employees in total employment, higher the vulnerability of the workforce. A comparison of employment status across few major EMEs reveals that the share of employees is the lowest at 21% in India, followed by 40% in Bangladesh and 43% in Vietnam (*Exhibit 15*). Further, the share of self-employed workers (proprietary or partnership on continuous or sporadic basis) is the highest for India at almost two-third of the workforce. Bangladesh again is the second highest at 49% share of the self-employed workers.

The share of self-employed in total employment has remained very sticky at above 50% since 1993-94; however, regular workers have seen a rise.

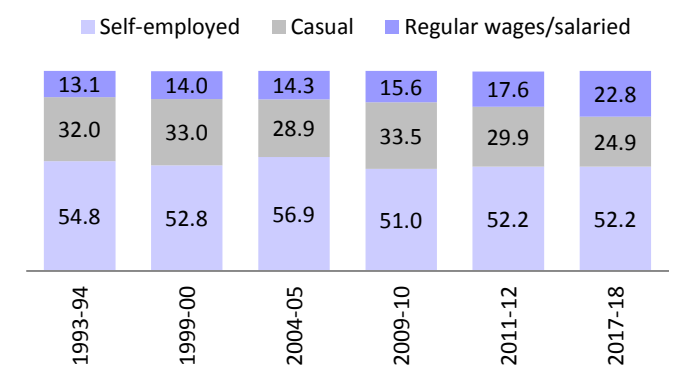
Over the past quarter of a century, the share of self-employed (or vulnerable) in total employment has remained very sticky in India at above 50%, with no change between 2011-12 and 2017-18 (*Exhibit 16*). However, the share of regular wages/salaried employees has increased consistently at the cost of casual workers. The rise in regular employees in 2017-18 was the steepest since 1993-94.

Exhibit 15: Share of regular employees in India is the least compared to other EMs...



Source: ILO, MOFSL

Exhibit 16: ...but the share of regular employees has risen at the cost of casual workers



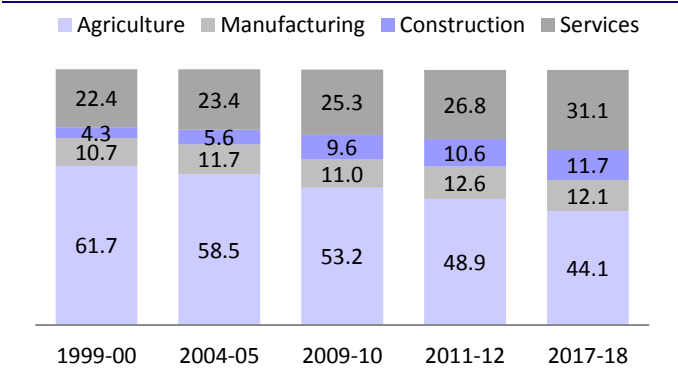
Source: NSSO, MOFSL

The marginal increase in the industrial employment was entirely due to the construction activity, as the share of the manufacturing employment actually declined from 12.6% to 12.1% during the past six-year period.

5.) Industrial distribution of workers

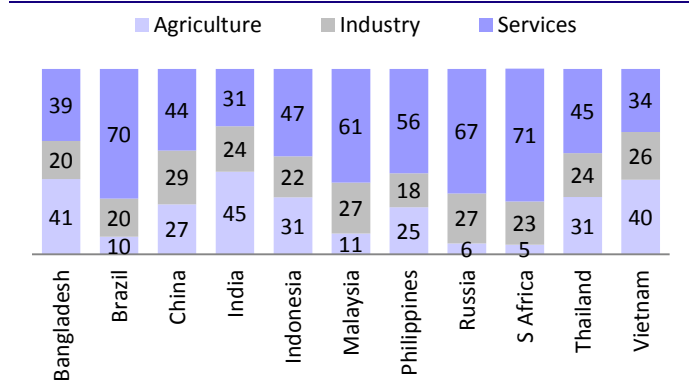
A look at the industrial distribution of India’s workers suggests that the share of the agricultural sector has declined consistently from above-60% at the turn of the century to ~44% in 2017-18 (*Exhibit 17*). The share of services, on the contrary, has risen gradually from 22.4% in 1999-00 to above-31% in 2017-18, while the share of industrial activities (including construction) has risen from ~16% to ~25% during the corresponding period. There are, however, two disturbing trends: (a) the share of the industrial sector in total employment rose at the slowest pace since the beginning of the century – from 24.3% in 2011-12 to 24.8% in 2017-18, and (b) the marginal increase in industrial employment was entirely due to construction activity as share of the manufacturing employment actually declined from 12.6% to 12.1% during the past six-year period.

Exhibit 17: Share of agricultural workers has declined consistently during the past two decades...



Industry includes construction activities

Exhibit 18: ...but the farm sector continues to be the largest employer in India



Source: NSSO, ILO, MOFSL

The share of the industrial employment in India is comparable to other EMs.

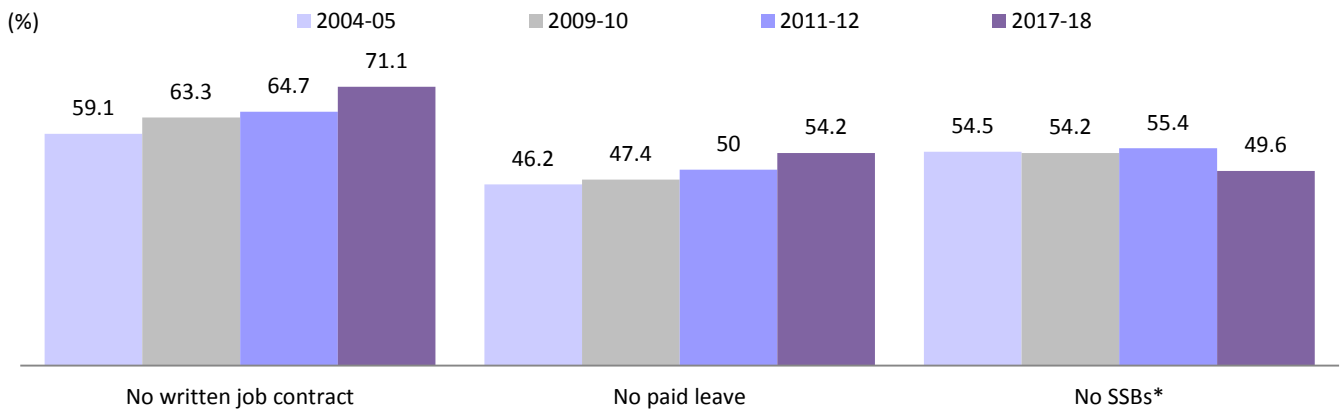
Although the share of agricultural workers has declined consistently during the past two decades (and more), the farm sector remains the largest employer in the country. A comparison with other major EMs suggests that the agriculture sector employs ~45% of workers in India, compared to ~40% in Bangladesh and Vietnam and ~30% in China, Indonesia and Thailand (*Exhibit 18*). Interestingly, the share of industrial employment in India is comparable to other EMs; however, the details suggest that unlike other EMs, construction has a bigger role than the manufacturing sector in India.

The share of ‘workers with no SSBs’ has declined from a very stable 54-55% up to 2011-12 to below-50% in 2017-18.

6.) Condition of employment

Finally, the condition of employment has not improved significantly in India. There are three ways to measure condition of employment – workers with no written job contract, workers with no paid leave and workers with no social security benefits (SSBs). Among all the regular wage/salaried workers in the non-agricultural sector in the country, the share of ‘workers with no job contract’ has risen to above-71% in 2017-18, while that of ‘workers with no paid leave’ has risen to 54.2% (*Exhibit 19*). Nevertheless, the share of ‘workers with no SSBs’ has declined from a very stable 54-55% between 2004-05 and 2011-12 to below-50% in 2017-18. Thanks to the government initiatives that encourage more PPF (public provident fund) enrolments, more workers enjoy some kind of SSBs now.

Exhibit 19: Condition of employment has not necessarily improved in recent years



Only for regular wage/salaried workers in the non-agricultural sector

* Social security benefits (SSBs) include PF/ pension, gratuity, health care and maternity benefit

Source: NSSO, MOFSL

As discussed above, however, higher share of workers with SSBs doesn't imply much higher share of formal workers or a much higher share of organized workers. The rising share of workers with no written job contract or paid leave continues to reflect the true condition of employment in the country. In fact, the PLFS tells us that 38% workers had none of the above benefits (neither written job contracts nor paid leaves nor SSBs) attached to their jobs in 2017-18.

Unemployment rate remains high among youth and educated

It is a well-established economic theory that the unemployment rate is very low in poor economies, which tends to rise with higher income and then starts declining as incomes rise above a threshold. An inverted U-shaped (or plateau), thus characterizes the relationship between income level and the unemployment rate. A rise in the unemployment rate (for all ages) from 2.2% in 2011-12 to 6.1% in 2017-18, thus, demands serious analysis.

Unemployment rate for the prime working age group (30-59 years) remained extremely low at 1.3% in 2017-18.

A break-up of the unemployment rate by various age groups reveals that while the headline unemployment rate (for all ages) increased sharply in recent years, the unemployment rate for the prime working-age group (30-59 years) remained extremely low at 1.3% in 2017-18 (*Exhibit 20*). Although it was only 0.5% in 2011-12, such meager unemployment rate is not a concern. The higher headline unemployment rate, thus, is entirely led by the steep rise in youth (15-29 years) unemployment, which rose sharply from 6.1% in 2011-12 to 17.8% in 2017-18.

Exhibit 20: Unemployment rate across age groups (%)...

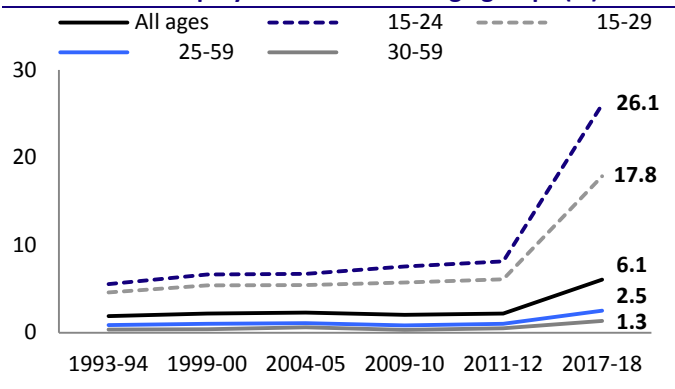
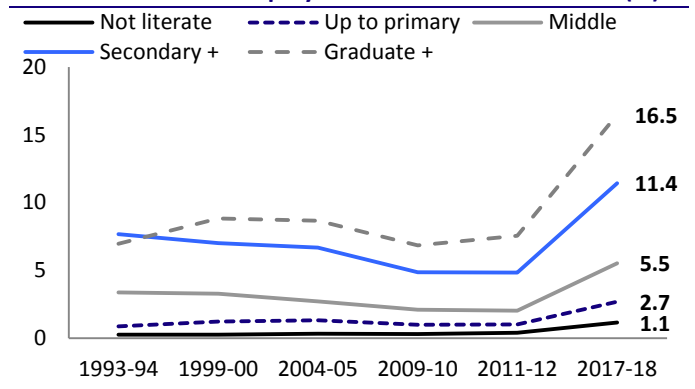


Exhibit 21: ...and unemployment rate across education (%)



Source: NSSO, MOFSL

The unemployment rate among the most educated group (with at least graduate-level education) was as high as 16.5% in 2017-18, up from 7.6% in 2011-12.

Moreover, an analysis of the unemployment rate by education profile confirms that the educated workers constitute most of the unemployed pool. The unemployment rate among the most educated group (with at least graduate-level education) was as high as 16.5% in 2017-18, up from 7.6% in 2011-12 (*Exhibit 21*). On the contrary, the unemployment rate among illiterate people was as low as 1.1% in 2017-18 as against 0.4% in 2011-12. As the exhibit shows, while the unemployment rate among the highly educated was always on the higher side, it has shot up steeply in recent years. From the official document publicly available, the cause of such high unemployment level among educated people is not clear. However, it is very likely that most of the unemployment is because of insufficient salary/earning or bad working conditions. If so, it would confirm our theory that the quality of employment is a concern, not the quantity of employment.

Conclusion: Employment situation has improved in recent years, albeit at a much slower pace v/s previous years

Considering the massive underemployment in the country, the quantitative analysis regarding India's labor market is rarely fruitful, and thus, a qualitative analysis is necessary

The Government of India (GoI) published its first Periodic Labor Force Survey (PLFS) annual report 2017-18 (Jul'17-Jun'18) in end-May'19. The headline numbers suggest that the labor force participation ratio (LFPR) and worker-population ratio (WPR) has declined further and the unemployment rate has seen a sharp rise. Nevertheless, considering the massive underemployment in the country, the quantitative analysis regarding India's labor market is rarely fruitful, and thus, a qualitative analysis is necessary.

We have analyzed the quality of India's employment situation using six different parameters: 1.) share of formal workers, 2.) share of organized workers, 3.) education profile of workers, 4.) industrial distribution of workers, 5.) distribution of workers by status in employment, and 6.) condition of employment. Almost all of them suggest that while the quality of India's employment has continued to improve in recent years, the pace of improvements has slowed markedly as compared to the previous period between 2004-05 and 2011-12.

1. Although the share of informal workers (defined as the sum of partnerships, proprietorships, employer households and others) has declined from 79.5% in 2011-12 to 76.7% in 2017-18, the improvement amounts to an annual decline of 0.45pp, lower than 0.65pp between 2011-12 and 2004-05 (and 0.6pp between 1999-00 and 2004-05).
2. The share of workers in the unorganized sector (defined as workers engaged in enterprises with less than 10 workers with or without electricity) increased slightly from 76.3% in 2011-12 to 76.6% in 2017-18, as against a gradual decline in every period between 1999-2000 and 2011-12.
3. The share of illiterate workers has declined slowly in recent years compared to the previous period, while the share of highly-educated (secondary education and above) workers has risen at a slower pace.
4. Although the share of workers in the agricultural sector has declined and the share of workers in services has increased, share of the industrial sector in total employment rose at the slowest pace since the beginning of the century – from 24.3% in 2011-12 to 24.8% in 2017-18. Further, almost the entire marginal increase in industrial employment was entirely due to construction activity, as share of the manufacturing employment actually declined from 12.6% to 12.1% during the past six-year period.
5. Although the share of self-employed workers was unchanged at 52.2% between 2011-12 and 2017-18, the share of regular/salaried workers increased at the fastest pace in recent years.
6. Finally, while the proportion of workers getting social security benefits (SSBs) has increased in recent years, the share of workers with no written job contract or paid leave has continued to increase, as in the previous periods.

Share of the manufacturing employment actually declined from 12.6% to 12.1% during the past six-year period.

In order to summarize the employment situation in India, we have created an Employment Situation Index (ESI)* based on the cross-sectional analysis of the share of formal/informal and organized/unorganized workers in the country. The formal workers are better off than informal workers, while workers in the organized sector are better off than workers in the unorganized sector. Accordingly, we assign numbers to indicate the quality of India's employment as follows: organized formal (4), unorganized formal (3), organized informal (2) and unorganized informal (1). Here, the larger number indicates improvements in employment quality.

ESI for the economy = (Share of formal workers in the organized sector*4) + (Share of formal workers in the unorganized sector*3) + (Share of informal workers in the organized sector*2) + (Share of informal workers in the unorganized sector*1)

Exhibit 22: India's employment situation has improved...

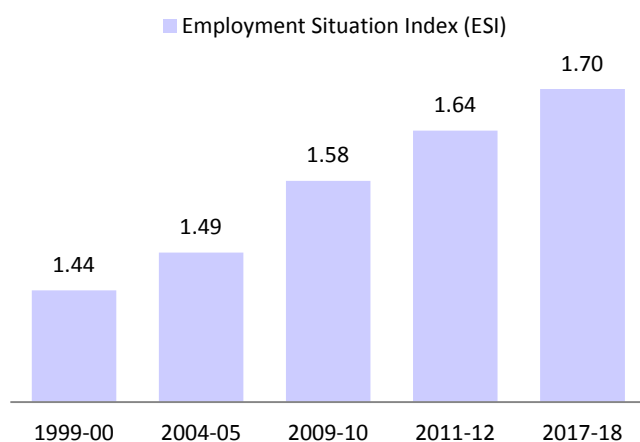
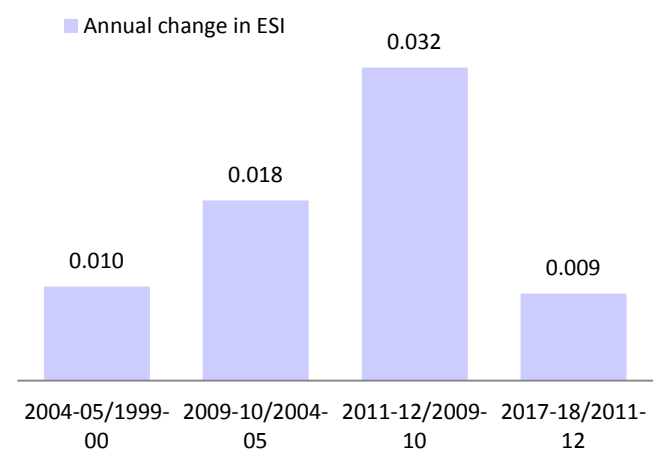


Exhibit 23: ...albeit at much slower pace than before



Source: NSSO, MOFSL

Although India's ESI has increased to 1.70 in 2017-18, the annual increase of 0.009 is almost half of that witnessed in the previous periods

India's ESI has increased persistently from 1.44 in 1999-00 to 1.64 in 2011-12, implying an annual rise of 0.017 during the 12-year period (*Exhibit 22*). Although it has increased further to 1.70 in 2017-18, the annual increase of 0.009 is almost half of that witnessed in the previous periods (*Exhibit 23*).

Finally, while the headline unemployment rate has risen rather steeply from 2.2% in 2011-12 to 6.1% in 2017-18, it is primarily led by higher youth unemployment. The unemployment rate for the prime working-age (30-59 years) group has also risen from 0.5% to 1.3% during the corresponding period; however, it still remains very low.

*Idea of this index was received from Dr. Ajit K. Ghose, who has used it in his book titled 'India Employment Report 2016'.

Appendix: Glossary

Labor force = Employed + Unemployed persons

$$\text{Labor force participation ratio (LFPR)} = \frac{\text{Labor force}}{\text{Population}}$$

$$\text{Worker population ratio (WPR)} = \frac{\text{Employed persons}}{\text{Population}}$$

$$\text{Unemployment rate} = \frac{\text{Unemployed persons}}{\text{Labor force}}$$

The entire analysis presented in this report is based on usual status (principal and subsidiary), called *upss*.

Information on employment used in this report is based on seven different parameters:

1. By broad age groups:
 - All ages
 - 15-24 years (Youth)
 - 25-59 years (Working age)
 - 30-59 years (Prime working age)
 - 60+ years
 - 15-59 years
 - 15+ years
2. By education level:
 - Illiterate
 - Up to primary
 - Primary to middle
 - Secondary +
 - Up to graduate
 - Graduate
 - Postgraduate+
3. By status of employment:
 - Regular wage/ salary workers
 - Casual workers
 - Self-employed
4. By industry of work:
 - Agriculture
 - Industry
 - Manufacturing
 - Construction
 - Services

5. By condition of employment:
 - With or without written job contract
 - With or without paid leave
 - With or without social security benefits (SSBs)

6. By enterprise type (formal/informal):
 - Proprietary and partnership (Informal)
 - Employer's households (Informal)
 - Govt./local body/PSEs (Formal)
 - Autonomous bodies (Formal)
 - Public/private limited company (Formal)
 - Cooperative societies (Formal)
 - Trusts/other non-profit institutions (Formal)
 - Others (Informal)

7. By enterprise size (organized/unorganized):
 - Number of workers in the enterprise with 1-5 employees (Unorganized)
 - Number of workers in the enterprise with 6-9 employees (Unorganized)
 - Number of workers in the enterprise with 10-19 employees (Organized)
 - Number of workers in the enterprise with ≥ 20 employees (Organized)
 - Not known (Unorganized)

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst becomes inconsistent with the investment rating legend, the Research Analyst shall within 28 days of the inconsistency, take appropriate measures to make the recommendation consistent with the investment rating legend.

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