

Special Foundation Course
Indian Statistical Service &
Indian Economic Service Officers

Employment Challenges to Growth

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India's Growth Mystery

Year	GDP growth	Employment (CPHS)	
	% change	Million	% change
2017-18	6.80	411.40	-0.32
2018-19	6.45	406.11	-1.29
2019-20	3.87	408.89	0.69
2020-21	-5.83	387.21	-5.30
2021-22	9.05	401.86	3.78
2022-23	7.00	405.78	0.98
2017-23	4.44	-5.62	-0.27

How can GDP grow at 4.4% pa when employment falls at 0.3% pa over a 6-year period?

Confusion on India's Growth Mystery

Year	GDP growth	Employment (CPHS)		Employment rate	
	% change	Million	% change	CPHS (%)	PLFS (%)
2017-18	6.80	411.40	-0.32	41.66	44.1
2018-19	6.45	406.11	-1.29	40.17	44.3
2019-20	3.87	408.89	0.69	39.50	46.7
2020-21	-5.83	387.21	-5.30	36.53	47.9
2021-22	9.05	401.86	3.78	37.02	48.3
2022-23	7.00	405.78	0.98	36.50	
2017-23/22	4.44	-5.62	-0.27	-4.64	4.2

Juxtaposing CMIE's CPHS data with the government's PLFS data only causes confusion. CPHS says the ER declined but PLFS says the ER increased.

India's Growth Mystery Confounded

Year	GDP	Employment (CPHS)		Employment rate		Distribution (%) of employment (PLFS)			
	% change	Million	% change	CPHS (%)	PLFS (%)	OwnAcc.	UnpaidFly	RegSalary	CasualLab
2017-18	6.80	411.40	-0.32	41.66	44.1	38.6	13.6	22.8	24.9
2018-19	6.45	406.11	-1.29	40.17	44.3	38.8	13.3	23.8	24.1
2019-20	3.87	408.89	0.69	39.50	46.7	37.6	15.9	22.9	23.6
2020-21	-5.83	387.21	-5.30	36.53	47.9	38.2	17.3	21.1	23.3
2021-22	9.05	401.86	3.78	37.02	48.3	38.3	17.5	21.5	22.7
2022-23	7.00	405.78	0.98	36.50					
2017-23/22	4.44	-5.62	-0.27	-4.64	4.2	-0.3	3.9	-1.3	-2.2

But, the PLFS shows that the composition of employment has deteriorated in favour of unpaid family workers and against all other forms of employment.

India's Growth Mystery Solved?

Year	GDP % change	Employment (CPHS)		Employment (PLFS)		Distribution of employment (Mln) PLFS				
		Million	% change	Million	% change	OwnAcc.	UnpaidFly	RegSalary	CasualLab	Less UPFly
2017-18	6.80	411.40	-0.32	435.47		168.09	59.22	99.29	108.43	375.81
2018-19	6.45	406.11	-1.29	447.88	2.85	173.78	59.57	106.60	107.94	388.31
2019-20	3.87	408.89	0.69	483.47	7.95	181.79	76.87	110.71	114.10	406.60
2020-21	-5.83	387.21	-5.30	507.78	5.03	193.97	87.85	107.14	118.31	419.43
2021-22	9.05	401.86	3.78	524.33	3.26	200.82	91.76	112.73	119.02	432.57
2022-23	7.00	405.78	0.98							
2017-23/22	4.44	-5.62	-0.27	88.86	4.75	4.55	11.57	3.23	2.36	3.58
						32.73	32.53	13.44	10.59	56.76

Using CMIE population estimates it seems that PLFS ratios imply that employment grew by 4.8% pa between 2017-18 and 2021-22 when GDP grew by 4.4 % pa. Official data is consistent but it differs from CMIE's CPHS data.

India's Growth: Some Questions

1. Can India's growth be fuelled largely by unpaid family workers?
2. Why was there a large influx of unpaid family workers when growth had slowed down?
3. Most of this increase in unpaid family workers was in rural India.
4. Why was there a large influx of unpaid family workers in rural India when there was a large scale influx of labour from urban India following the Covid-19 induced lockdowns?
5. How can the difference between CPHS and PLFS be explained?

Consumer Pyramids Household Survey

Consumer Pyramids Household Survey (CPHS) is

- a pan-India household survey
- of a panel of sample households,
- to capture fast-frequency measures of household wellbeing such as income, expenses, ownership of assets, amenities and member characteristics such as identities, education, occupation, employment, financial inclusion and health.

CPHS is conducted over 3 Waves every year. Since 2014.

A fixed survey execution schedule every year:

1. January 1 through April 30
2. May 1 through August 31
3. September 1 through December 31

CPHS is Different

No clone of NSSO. Yet, text-book approach / methodology.

- Eschew concept of normal year surveys. Do all years.
- Eschew annual surveys. Administer a continuous survey.
 - Seasonality is important.
 - Events are important (demonetisation, Covid, lockdowns)
- Reject notion that income cannot be measured.
- Reject second-level purposive stratification of PSUs like
 - MPCE based stratification for CES
 - Education based stratification for PLFS
 - Our strategy is Simple Random Sampling from PSUs with a larger sample per PSU to offset the loss of efficiency. We land up doing Systematic Random Sampling because of security reasons.
- Reject Probability-Proportionate-Sampling.
 - Sample size should be determined by variance of indicators.
 - Variance is greater in urban India, ergo a bigger sample.
 - Effect of disproportionate sample offset by appropriate weights
- Definitions differ – employment, literacy...

Survey Design

Selection of Towns & Villages

- Multi-stage stratified survey design deployed to draw sample.
- The broadest level of strata for sampling purpose was ~100 Homogeneous Regions (HRs), which are sets of neighbouring districts that have similar agro-climatic conditions, urbanisation levels and female literacy.
- Within each HR, two sub-strata were formed - a rural stratum comprising all villages in the HR; and an urban stratum comprising all towns in the HR.
- Since there is much variance in the size of towns, towns within a HR were stratified further on the basis of their size as per 2011 Census.
 1. Very large towns that had more than 200,000 households.
 2. Large towns that had between 60,000 and 200,000 households.
 3. Medium sized households that had between 20,000 and 60,000 households
 4. Those with less than 20,000 households were the small towns.
- One or more towns were randomly selected from each of these size-bins. About 320 towns were selected.
- Villages were selected from the rural HR sub-strata through simple random sampling.

Survey Design

Selection of CEBs & Households

- From each sample town, 21 Census Enumeration Blocks (CEB) were selected using Simple Random Sampling.
- Urban households were selected through Systematic Random Sampling from each of the selected CEBs.
- 119,029 households were selected from 7,706 CEBs of 318 towns for first Wave of January-April 2014
- Rural households were selected through Systematic Random Sampling from each selected village.
- Rural sample comprised 47,715 households from 2,975 villages in first Wave of January-April 2014
- Sample has undergone changes over time
- Sample in Wave 27 of September-December 2022 was
 - Urban: 115,247 households from 8,181 CEBs of 328 towns
 - Rural: 63,430 households from 3,965 villages

CPHS Sample Size & Its Distribution

State	Urban Sample			Rural Sample		Total Sample
	Towns	CEBs	Households	Villages	Households	Households
Andhra Pradesh	15	428	6,208	191	3,056	9,264
Assam	4	92	1,179	36	576	1,755
Bihar	16	369	5,078	269	4,304	9,382
Chandigarh	1	37	456	0	0	456
Chhattisgarh	9	202	2,864	121	1,935	4,799
Delhi	1	81	880	31	495	1,375
Goa	2	41	648	26	416	1,064
Gujarat	18	430	5,658	213	3,408	9,066
Haryana	12	294	4,210	104	1,664	5,874
Himachal Pradesh	2	45	640	40	640	1,280
Jammu & Kashmir	4	81	1,228	85	1,360	2,588
Jharkhand	8	187	2,534	136	2,176	4,710
Karnataka	17	495	7,173	211	3,376	10,549
Kerala	10	228	3,362	89	1,424	4,786
Madhya Pradesh	17	382	5,232	248	3,968	9,200
Maharashtra	37	929	13,626	388	6,208	19,834
Meghalaya	1	21	336	44	704	1,040
Odisha	12	258	3,737	189	3,024	6,761
Puducherry	3	65	980	31	496	1,476
Punjab	12	314	4,472	143	2,288	6,760
Rajasthan	21	495	7,270	247	3,952	11,222
Sikkim	1	21	336	30	480	816
Tamil Nadu	21	546	7,674	204	3,264	10,938
Telangana	10	336	4,598	113	1,808	6,406
Tripura	2	49	728	29	464	1,192
Uttar Pradesh	45	1,118	15,909	477	7,631	23,540
Uttarakhand	4	85	1,242	50	800	2,042
West Bengal	23	552	6,989	220	3,513	10,502
India	328	8,181	115,247	3,965	63,430	178,677

Sample is all-India representative. Covers 99% of the population. Excludes islands & some north eastern states.

Sample is larger than that of NSO (R:55,291; U:45,189)

Ref: [Survey Design & Sample](#)

Uniform Execution of CPHS over Time

Month Slot	Week Slot	Rural Sample		Urban Sample		Total Sample	
		Nos	(%)	Nos	(%)	Nos	(%)
1	1	3,920	25.28	6,856	24.01	10,776	24.46
	2	3,904	25.18	7,162	25.08	11,066	25.12
	3	3,856	24.87	7,357	25.77	11,213	25.45
	4	3,824	24.66	7,178	25.14	11,002	24.97
Month 1	Weeks 1-4	15,504	24.44	28,553	24.78	44,057	24.66
2	5	3,840	24.93	7,012	24.52	10,852	24.66
	6	4,080	26.48	7,197	25.17	11,277	25.63
	7	3,695	23.98	7,323	25.61	11,018	25.04
	8	3,791	24.61	7,062	24.7	10,853	24.67
Month 2	Weeks 5-8	15,406	24.29	28,594	24.81	44,000	24.63
3	9	3,776	23.19	7,098	24.64	10,874	24.12
	10	4,141	25.44	7,342	25.49	11,483	25.47
	11	3,999	24.56	7,348	25.51	11,347	25.17
	12	4,364	26.81	7,015	24.36	11,379	25.24
Month 3	Weeks 9-12	16,280	25.67	28,803	24.99	45,083	25.23
4	13	4,144	25.52	7,243	24.72	11,387	25.01
	14	3,952	24.33	7,666	26.17	11,618	25.51
	15	4,048	24.93	7,496	25.59	11,544	25.35
	16	4,096	25.22	6,892	23.53	10,988	24.13
Month 4	Weeks 13-16	16,240	25.6	29,297	25.42	45,537	25.49
4 Months	16 Weeks	63,430	100	115,247	100	178,677	100

Survey execution spread over fixed 16 weeks (Wave). Sample spread equally over time & space.

Facilitates fast frequency estimates:

Every	Sample
4 months	178,677
1 month	~ 44,500
1 week	~ 11,000

CPHS is a continuous survey. It never stops. Different from NSO.

Ref: [Survey Execution](#)

1 Week = 7 days or 8 days depending upon the month

CPHS data – Observations per Wave

For each member of sample household

- **Identity** – age, gender, state-of-origin, religion, caste, education,...
- **Employment** – status, employment type, arrangement, duration...
- **Time-use** – detailed break-up of time spent on work and on leisure...
- **Health & financial inclusion** – health status; access to financial instruments

For each sample household

- **Assets** – ownership, desire to own of a dozen household assets
- **Investments & debt** – choices of savings instruments, sources of borrowing
- **Amenities** – availability of water, toilets, electricity, quality of house
- **Consumer sentiments** – perceptions of current and future well being

CPHS data – Observations per Month

For each sample household, monthly

- **Member income** – wages, pensions, dividends, interest
- **Household income** – rent, profit, self-produced agro prods, transfers...
- **Household expenses** – expense on food & non-food goods & services
- **Household weekly* expenses** – for 33 fast frequency expense items
- **Adjusted monthly expenses** – monthly expenses adjusted for better recall

Notes

- * Household weekly expenses observations taken once every Wave.

CPHS is Different

Quick Turnarounds

- Quality Control: 100% records checked in real-time.
 - 100% GPS-enabled App-based data collection.
 - In-built validations including GPS coordinates of interviews.
 - 100% records checked by supervisors on day of data collection.
 - Time series checks in real time.
- Raw data is released without “post-hoc checks”.
- *New QC: Deployment of para-data*

Raw Data Releases

- CPdx service provides the raw data.
- Instantaneous data releases
 - Monthly data every 1st.
 - Waves data every 1st or 2nd of January, May and September.

Research Papers

- 32 papers on Labour
- 25 papers on Household finances / financial inclusion
- 18 papers on Health
- 16 papers on Poverty / Inequality / Welfare
- 16 papers on Miscellaneous subjects

- 107 papers known so far

- 27 Webinars

Private Placement of Questions

- 10 Lok Surveys on Social Attitudes & Political Choices
- Stock of skills in India for NSDC
- Experiences in using Aadhaar for Dalberg
- 7 Waves of Covid Survey Modules for World Bank
- Coping with Covid for Dvara Research
- Health services behavior for National Health Authority
- Verbal Autopsies for Anup Malani & Prabhat Jha
- Belief about Beliefs Project for Marianne Bertrand
- SEHAT with Manoj & Asia

Labour Statistics in CPHS

Inclusion of employment status was an after-thought

- Added employment status indicator in January 2016.

Inclusion of other labour statistics came even later

- Employment status since – September 2016
- Type of employment, Employment arrangement, Place of work, Time to start working – May 2017
- Occupation as per NCO – January 2018
- Time-use – September 2019

Difference between PLFS & CPHS

Data capture is different

- PLFS captures activity status to derive employment status
- CPHS captures employment status directly
- PLFS combines nature of occupation such as own account, unpaid help, regular salaried, casual labour with activity status.
- CPHS separates nature of occupation from employment.

Reference period is different

- PLFS captures status as of 365 days and 7 days
- CPHS captures data as of day of interview

Difference between PLFS & CPHS

Measures of employment

- PLFS makes three measures
 - employed
 - unemployed and
 - out of labour force
- CPHS makes four measures
 - Employed
 - unemployed, willing to & actively looking for work
 - unemployed, willing but not actively looking for work
 - out of labour force

Difference between PLFS & CPHS

Definition of employment

- PLFS considers a person to be employed if the person is engaged in an economic activity and the activity status within the reference period is working as self-employed, regular salaried worker or casual worker where for CWS the reference period is at least one hour in the last 7 days.
- CPHS considers a person to be employed if the person states that she was engaged in an economic activity for a better part of the day of the interview.

The definition of economic activity in both cases is similar – engaged in work for pay or profit or for production of primary goods for self-consumption. PLFS has a little more but that will not make a material difference.

Difference between PLFS & CPHS

Ask the right questions on employment

- Ask the question on employment directly
- Reduce the time reference & avoid prioritisation of status

Answer more relevant questions

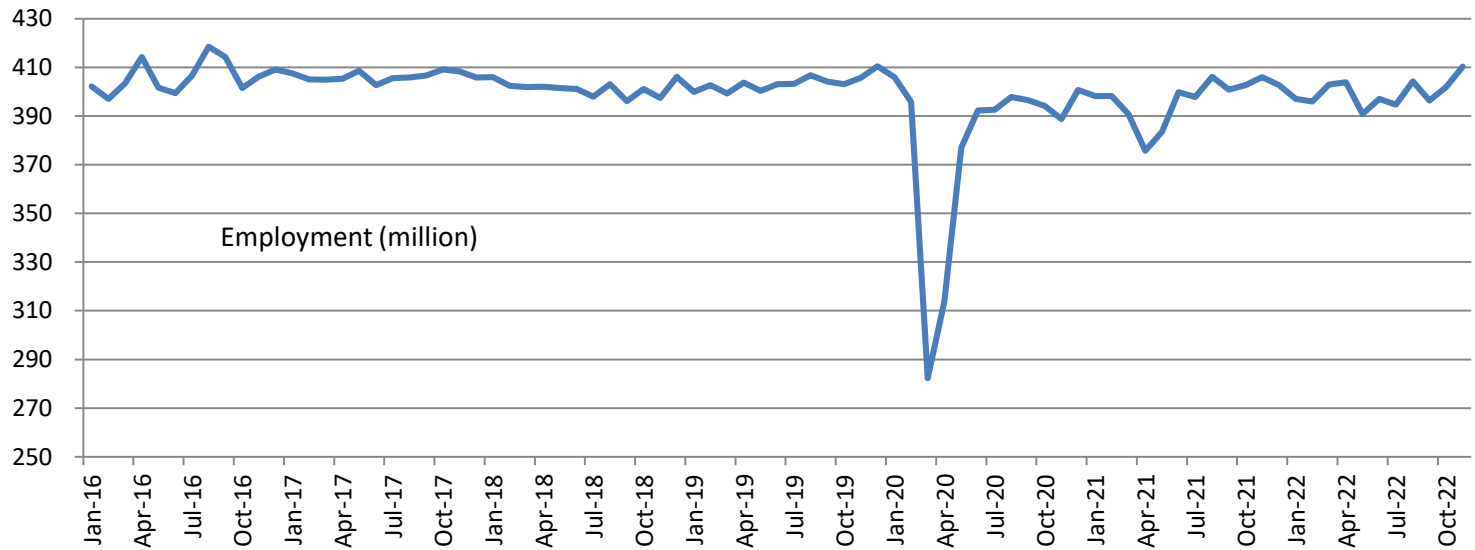
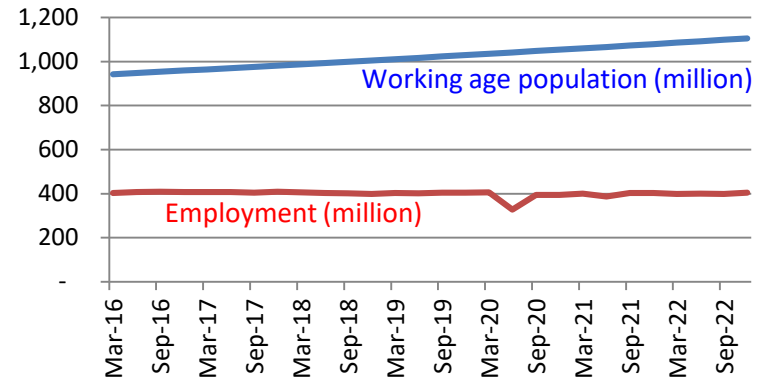
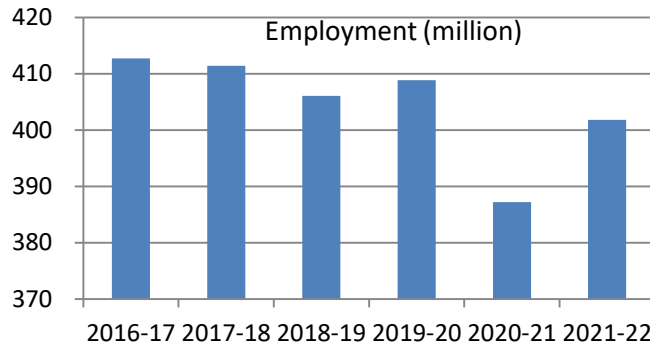
- Employment as an aspiration
- Mobility of labour
- Seasonality of employment
- Fast frequency measurement

Key Labour Force Statistics from CPHS

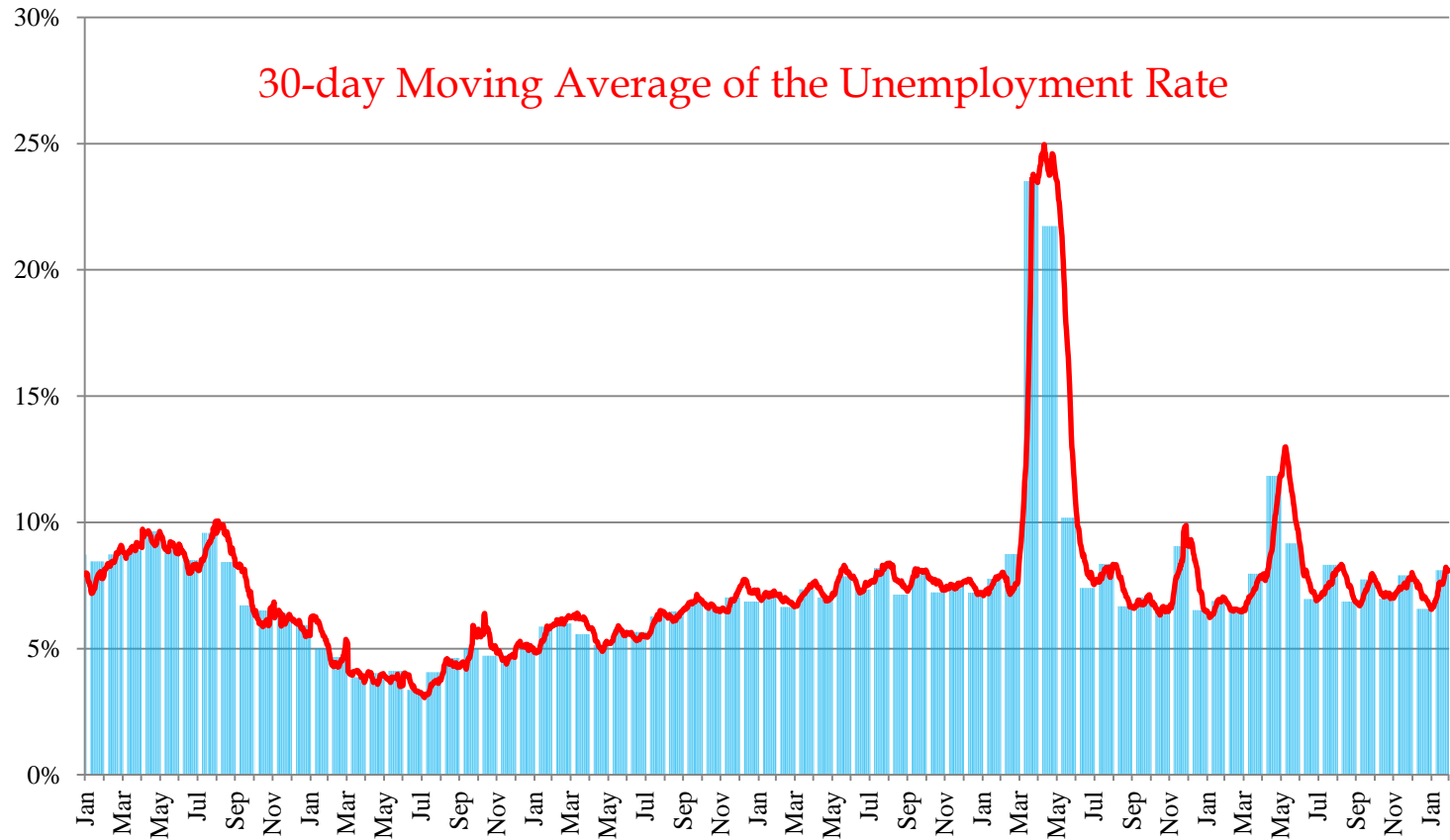
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Million							
Employed	412.7	411.4	406.1	408.9	387.2	401.9	405.8
Unemployed							
& willing to work							
& looking for job	33.1	20.2	27.1	32.9	37.1	33.3	33.1
& not looking for job	28.6	10.6	11.1	11.4	24.4	16.7	18.3
& not willing to work	490.1	545.3	566.7	582.1	611.4	633.7	654.5
Labour force	445.8	431.6	433.2	441.8	424.3	435.1	438.9
Percent							
Labour force participation rate	46.2	43.7	42.9	42.7	40.0	40.1	39.5
Employment rate	42.8	41.7	40.2	39.5	36.5	37.0	36.5
Unemployment rate	7.4	4.7	6.3	7.5	8.8	7.7	7.5
Greater LFP rate	49.2	44.8	43.9	43.8	42.3	41.6	41.1
Greater Unemployment rate	13.0	7.0	8.6	9.8	13.7	11.1	11.2

Source: Economic Outlook, CMIE

Employment is Stagnant



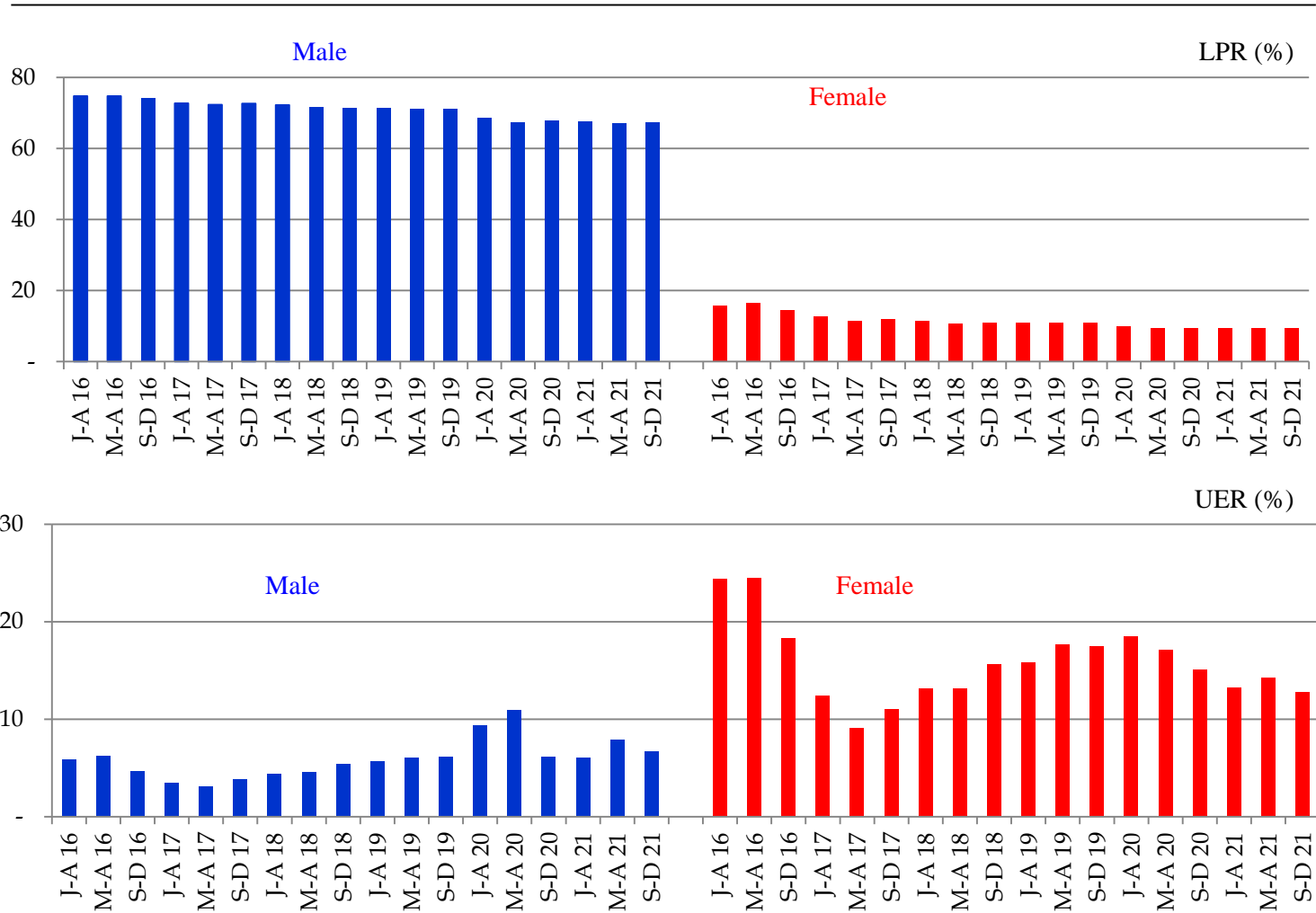
Fast-frequency estimates from CPHS



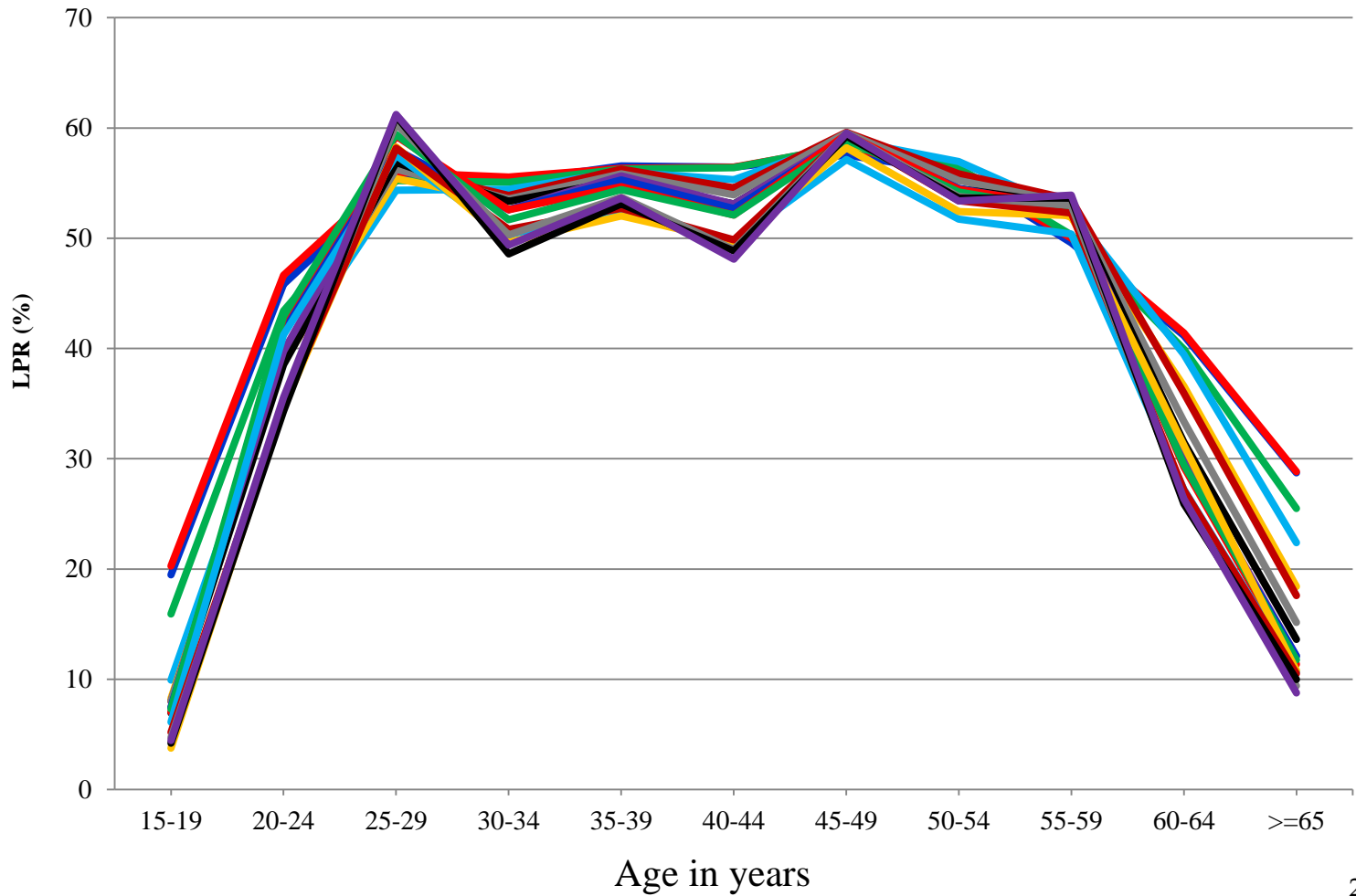
Source: Economic Outlook, CMIE



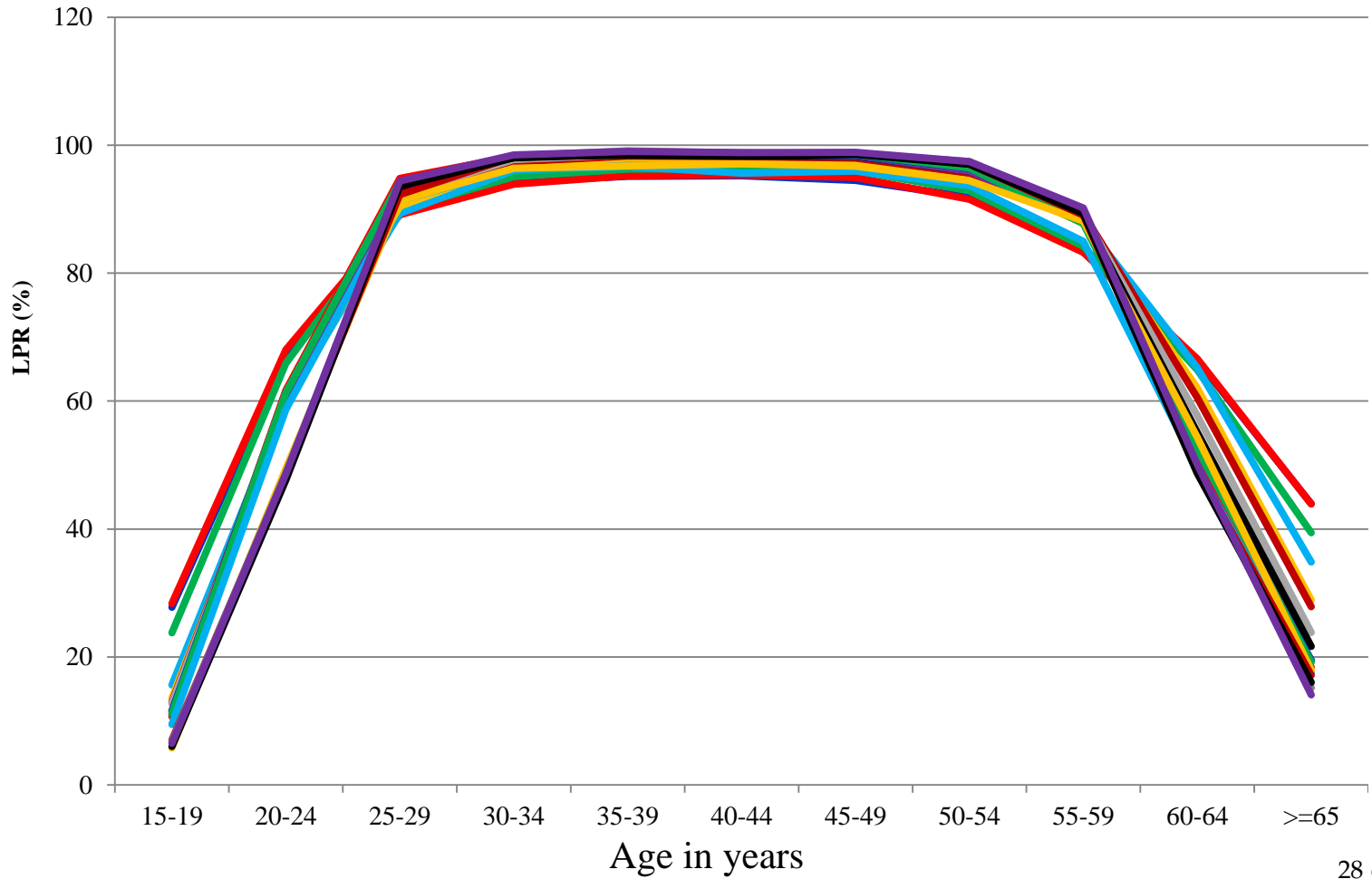
The Gender Challenge



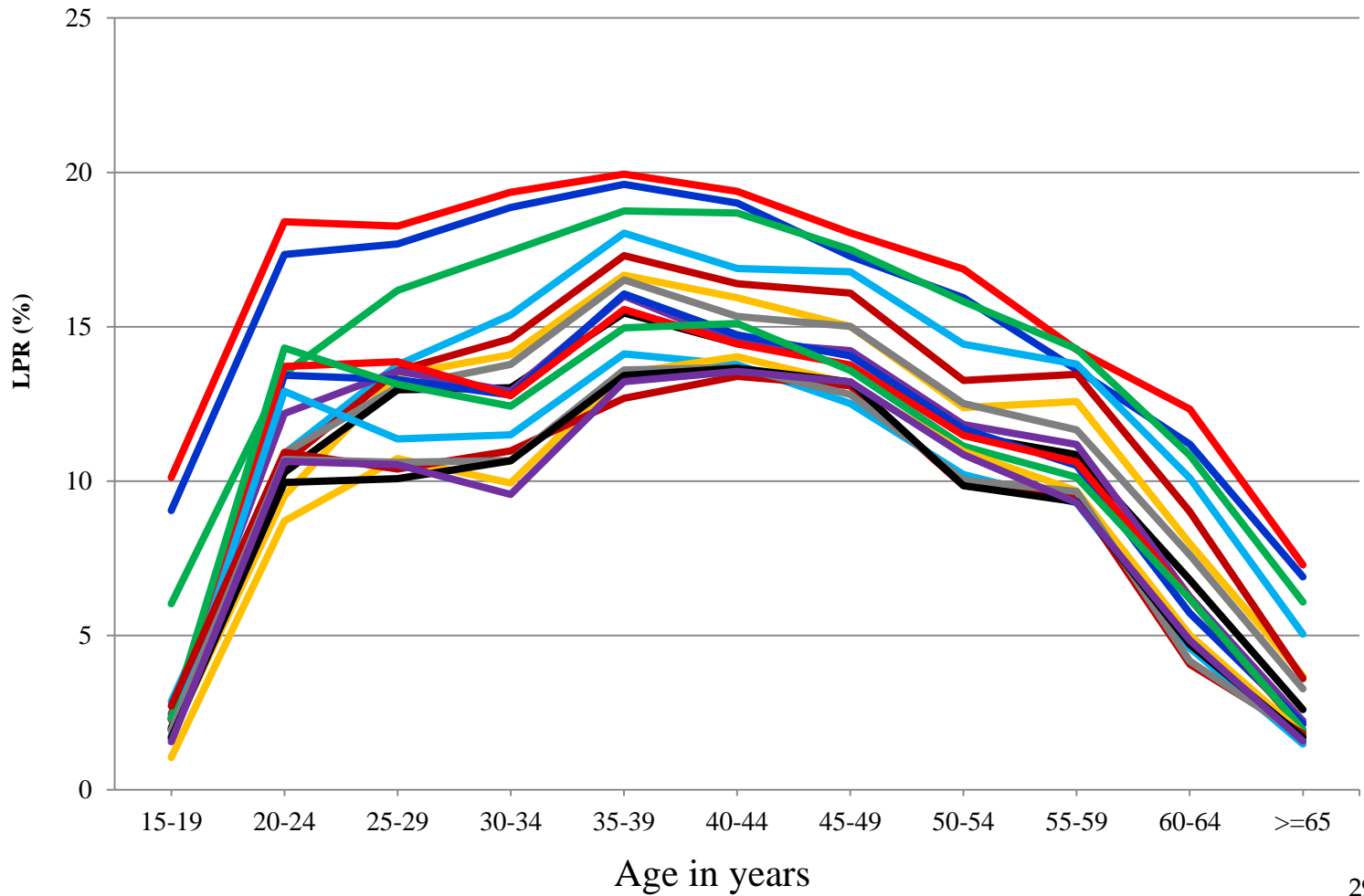
Senior Citizens Dropping Out



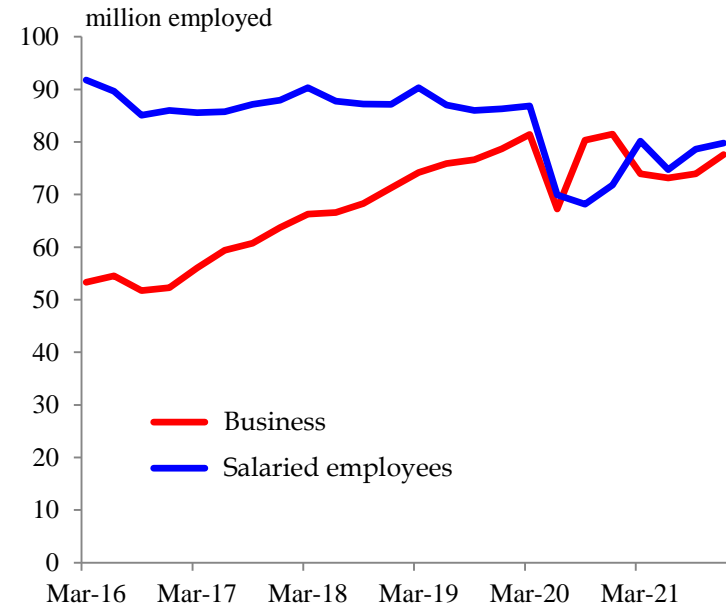
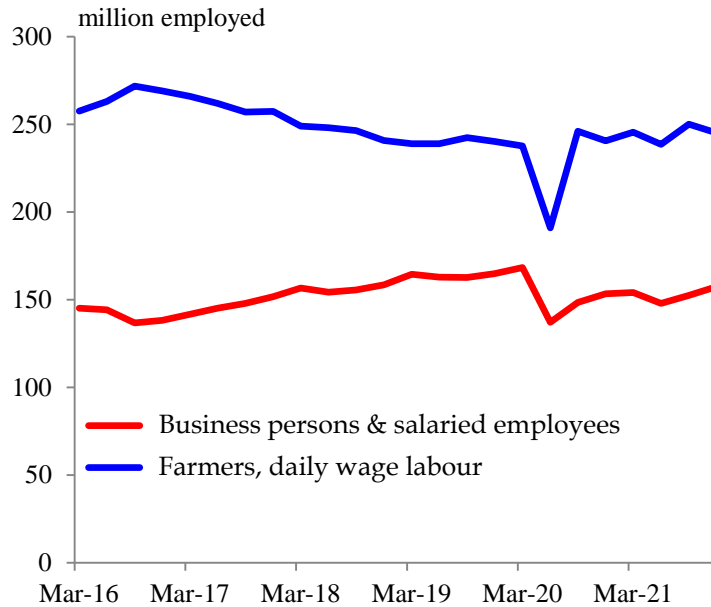
Stable Male Labour Force



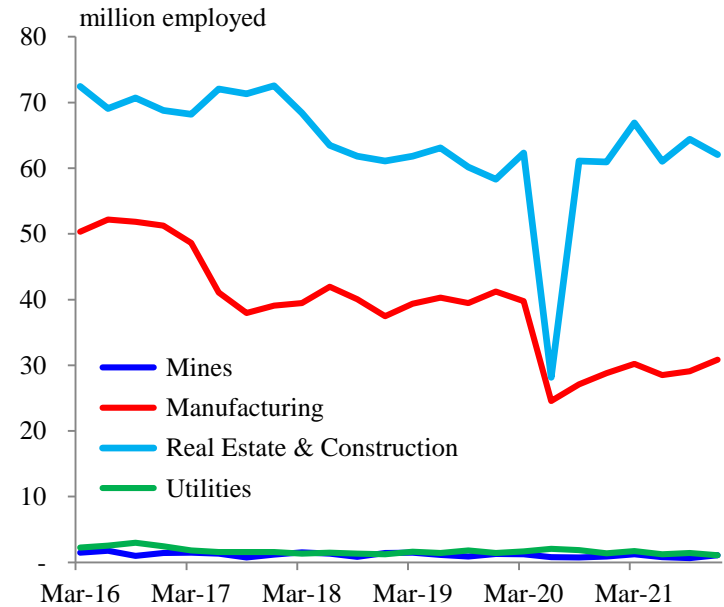
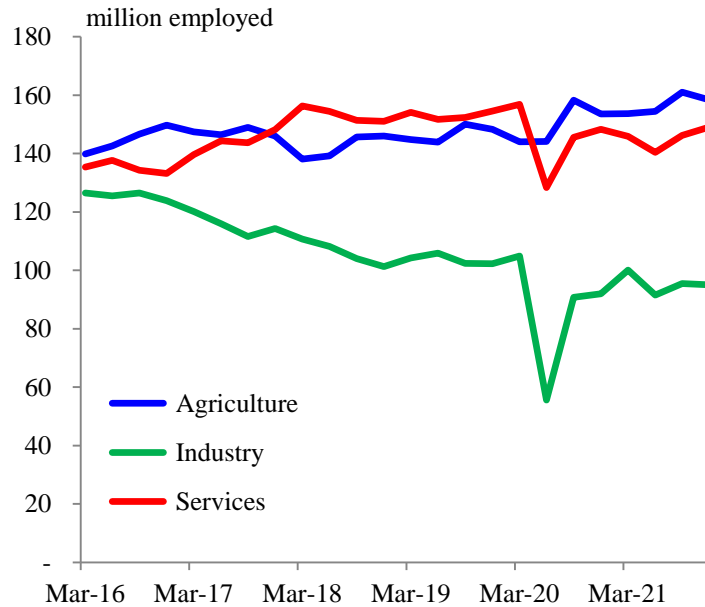
Women Vulnerable to Shocks



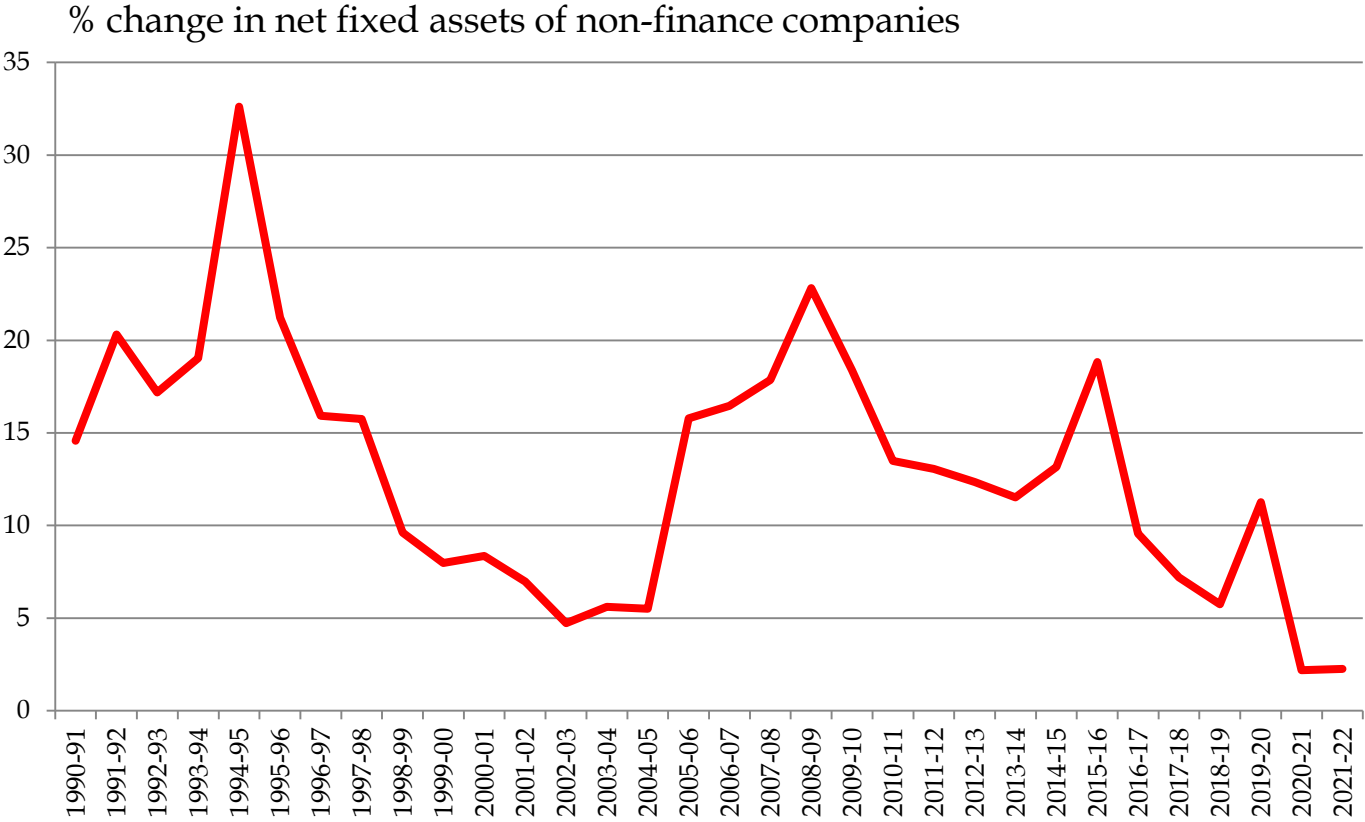
Composition of employment



Composition of employment



Lack of Investments by Large Companies



CPHS is 1/3 to Tell Us a Story

CPHS

- Employment is almost stagnant
- Quality of employment is deteriorating

Prowess

- Investments into fixed assets are negative in real terms
- Finance is not the problem

CapEx

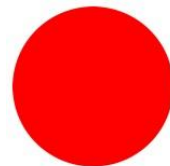
- New investments are not broad-based
- Project implementation is very slow

Thank You

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Vision | Be the most effective source of economic information & knowledge solutions

Values | Independence | Integrity | Reliability



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