

Food and Nutrition Security- In the context of The National Food Security Bill (ACT)

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Kamala Krishnaswamy, MD.

FASc, FAPASc, FAMS,

FNAAS, FNA, FIUNS, FNAAS, FTWAS;

Former Director, National Institute of Nutrition

&

Former President, Nutrition Society of India

Food & Nutrition Security In India

Definition and components of Food and Nutrition security

Hunger index in India

Inflation and food prices and per capita intake of foods

Trends in Diet & Nutritional Status

The National Food Security Bill

Challenges

Conclusions

Food Security

“Food Security’ is achieved when it is ensured that “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life”

World Food Summit, Rome, 1996

FOOD AND NUTRITION SECURITY

Nutritional status



Food & Nutrition insecurity/security outcomes



Absorbability

Use + Utilization, care/feeding practices,
diversified diet, intra household distribution

Health care facilities, water & sanitation



Accessibility & Affordability

Physical, social, economic, policy environment
Resources, markets, Income, literacy &
Knowledge



Availability

Agriculture, Horticulture, Dairy, Animal husbandry

Food imports, Stocks, Net trade

Food aid

(National, Sub-national & household level)

Stability

Climate, land
water

Economic
Situation,
Food prices,
Employment
Distribution

Coalition for Sustainable Nutrition Security in India

- Nutrition security is broadly defined as Physical, Economic and Social access and Utilisation of, an appropriate balanced diet, safe drinking water, environmental hygiene and primary health care for all
- National Food security alone is not adequate for nutrition security .It is determined by several factors –
- Community & HH level distribution, poverty, literacy, potable water, sanitation & hygiene, cultural beliefs and practices.

Nutrition security is a critical input which fuels economic growth, development and health

Food & Nutrition security in India

A Backdrop

- **India faced the worst Bengal famine 1943**
 - **Acute shortage of food , starvation & hunger**
 - **Agricultural production was low/depended on imports**
 - **Poor distribution and networking**
 - **Very low purchasing power/Inadequate dietary intakes**
 - **Poor quality of drinking water**
 - **Unhygienic environment/sanitation facilities**
 - **Illiteracy and low awareness**
 - **Poor access to health care facilities**
 - **High rates of undernutrition & micro nut. malnutrition**
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FOOD & NUTRITION SECURITY

A Backdrop-2

During 1950 – 2008, production of food grains increased at an average annual rate of 2.5% compared to the growth of population which averaged 2.1% during this period .The green revolution was a step towards prosperity

Post liberalization and privatization period (1990 – 2008), the rate of growth of food grains production decelerated to 1.2%, lower than the annual rate of growth of population at 1.9%

Achievement of food security at the national level has not percolated down to the level of individual household and has not resulted in Nutritional Security

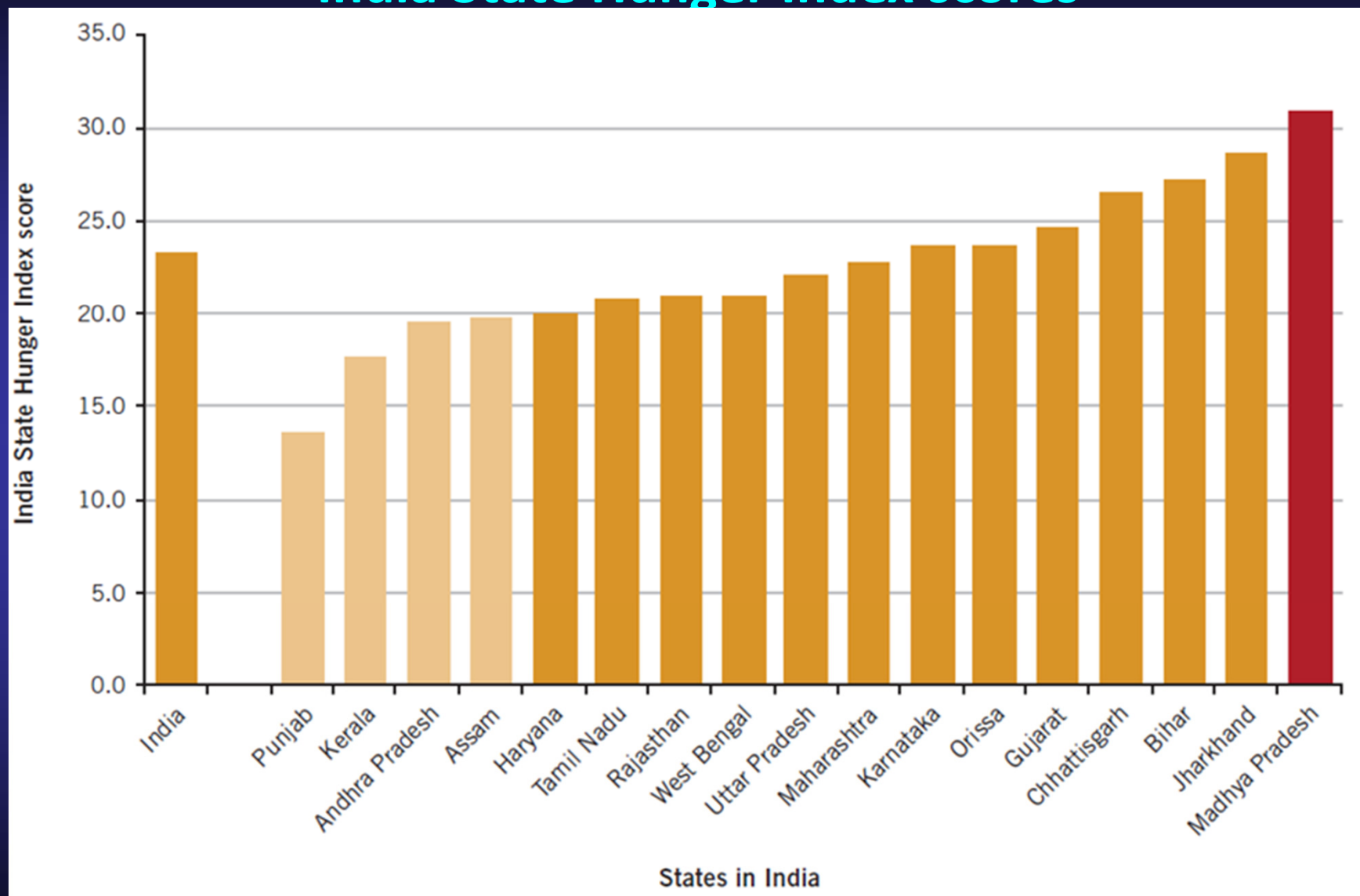
The India State Hunger Index and its underlying components

State	Prevalence of calorie under-nourishment (%)	Proportion of underweight among children <5 years (%)	Under-five mortality rate (deaths per hundred)	India State Hunger Index score	India State Hunger Index rank
Punjab	11.1	24.6	5.2	13.63	1
Kerala	28.6	22.7	1.6	17.63	2
Andhra Pradesh	19.6	32.7	6.3	19.53	3
Assam	14.6	36.4	8.5	19.83	4
Haryana	15.1	39.7	5.2	20.00	5
Tamil Nadu	29.1	30.0	3.5	20.87	6
Rajasthan	14.0	40.4	8.5	20.97	7
West Bengal	18.5	38.5	5.9	20.97	8
Uttar Pradesh	14.5	42.3	9.6	22.13	9
Maharashtra	27.0	36.7	4.7	22.80	10
Karnataka	28.1	37.6	5.5	23.73	11
Orissa	21.4	40.9	9.1	23.80	12
Gujarat	23.3	44.7	6.1	24.70	13
Chhattisgarh	23.3	47.6	9.0	26.63	14
Bihar	17.3	56.1	8.5	27.30	15
Jharkhand	19.6	57.1	9.3	28.67	16
Madhya Pradesh	23.4	59.8	9.4	30.87	17
India	20.0	42.5	7.4	23.30	

Note: The India State Hunger Index represents the index calculated using a calorie undernourishment cutoff of 1,632 kcals per person per day to allow for comparison of the India State Hunger Index with the Global Hunger Index 2008. The ISHI score for India using this cutoff is 23.3 and corresponds more closely with the GHI 2008 score for India of 23.7 than any other calorie cutoff.

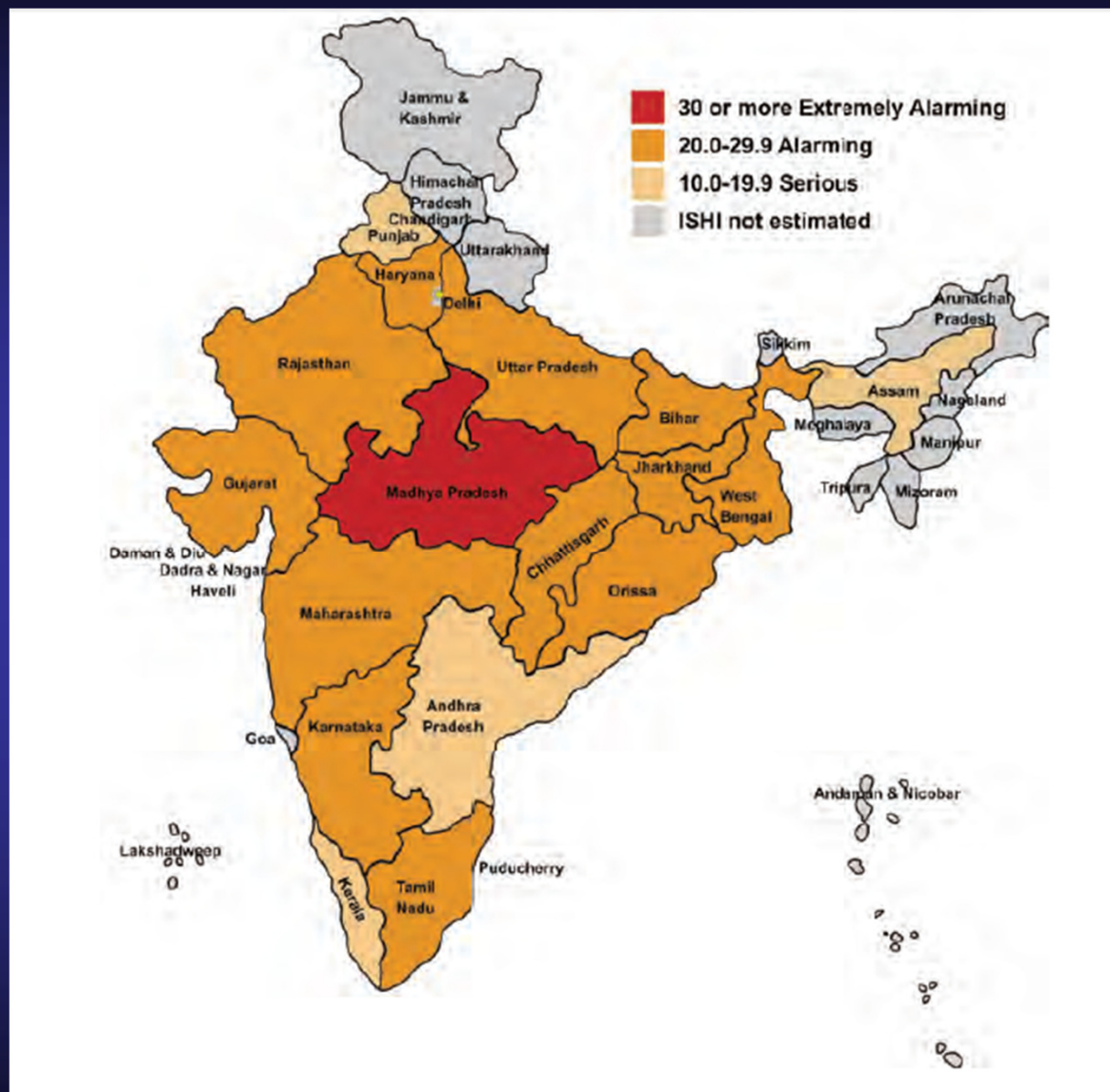
Sources: Calorie undernourishment: IIPS 2007; child underweight: IIPS 2007 and authors' calculations; under-five mortality rate: NSSO 2007 and authors' calculations.

Ranking of states within India from lowest to highest India State Hunger Index scores



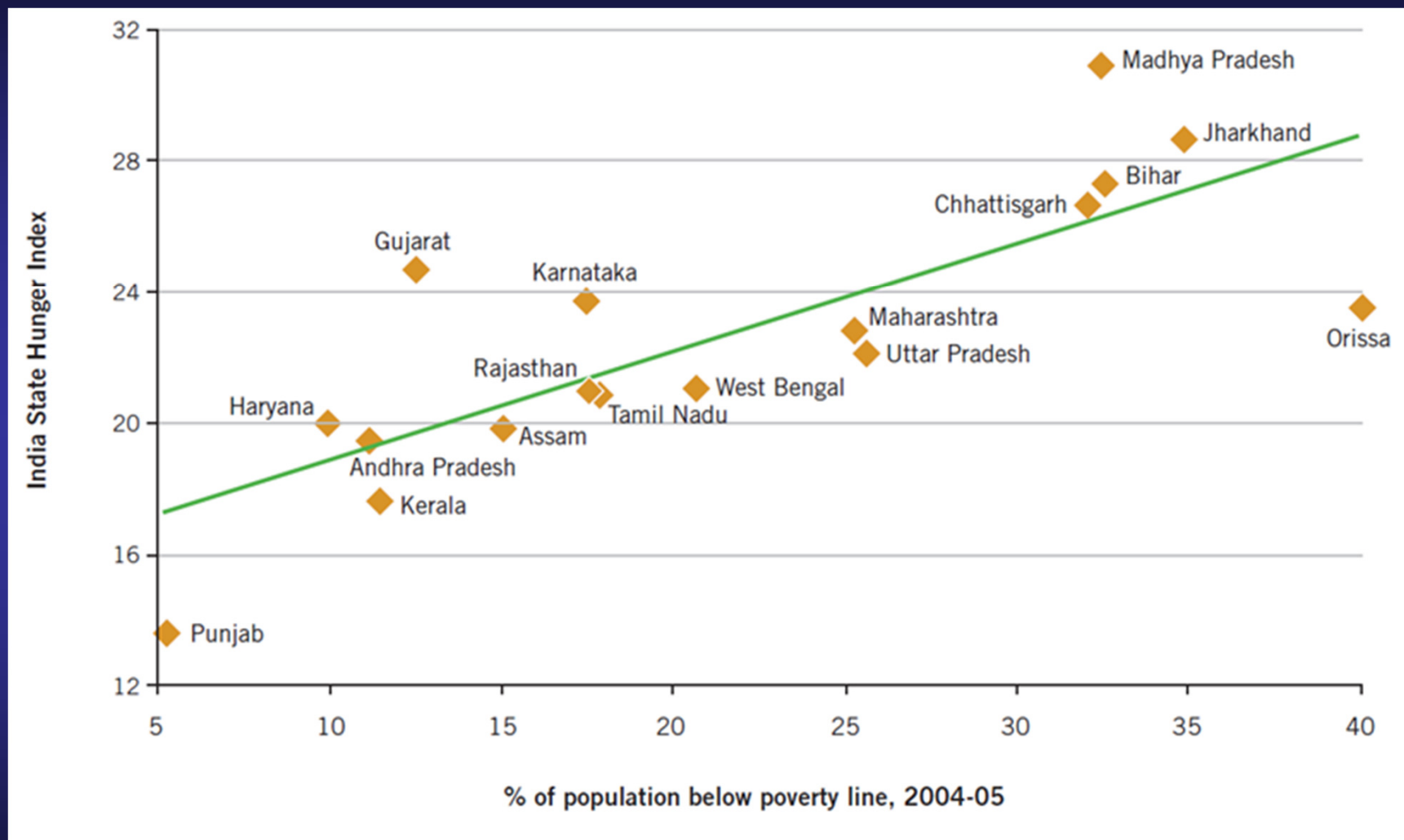
Purnima Menon, Anil Deolalikar, Bhaskar A. INDIA STATE HUNGER INDEX Comparisons of Hunger Across States. Washington, D.C., Bonn, and Riverside • February 2009 KK -2014

Map of the India State Hunger Index, by severity



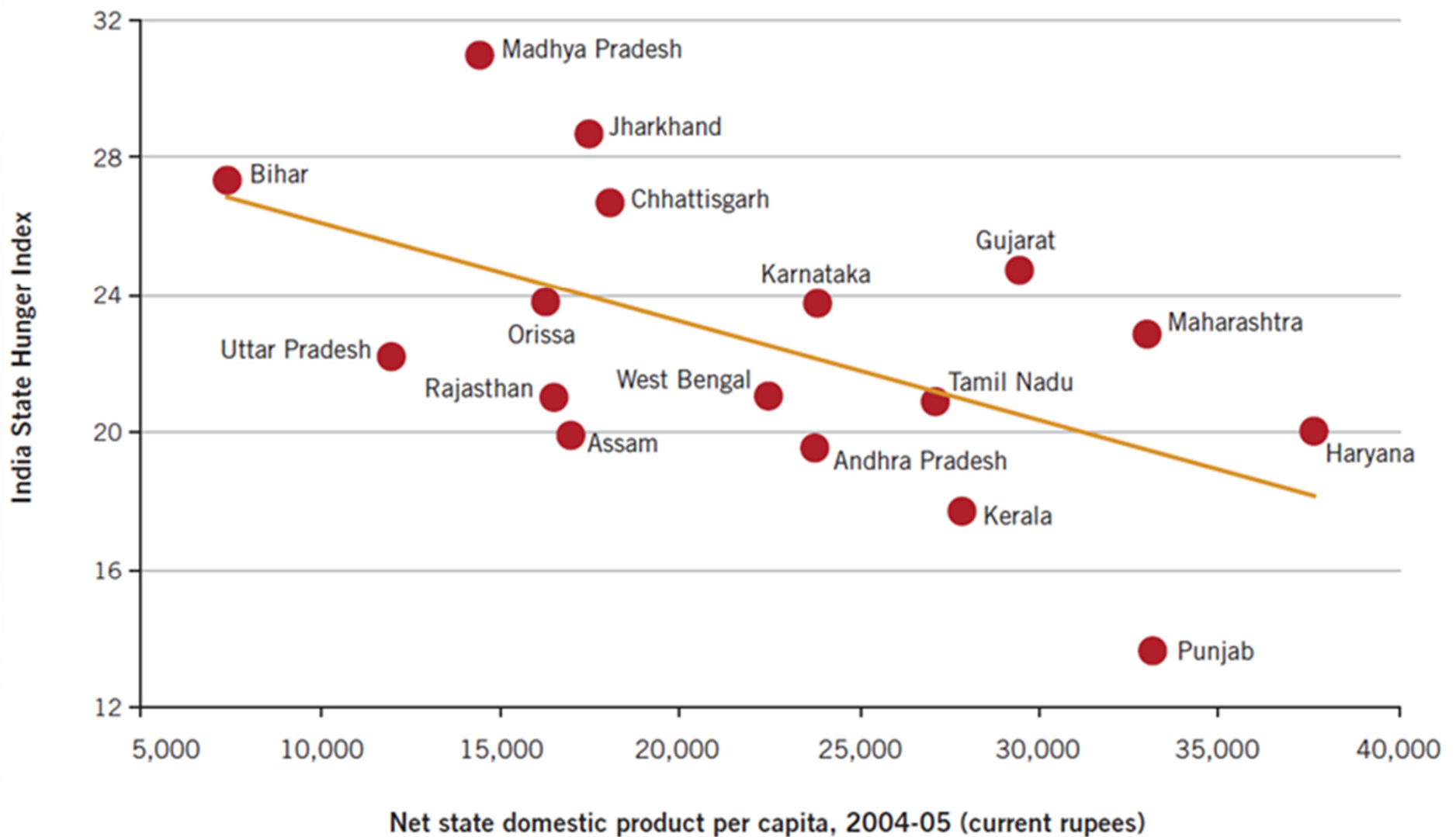
Purnima Menon, Anil Deolalikar, Anjor Bhaskar. INDIA STATE HUNGER INDEX Comparisons of Hunger Across States. Washington, D.C., Bonn, and Riverside • February 2009 KK -2014

India State Hunger Index in relation to poverty



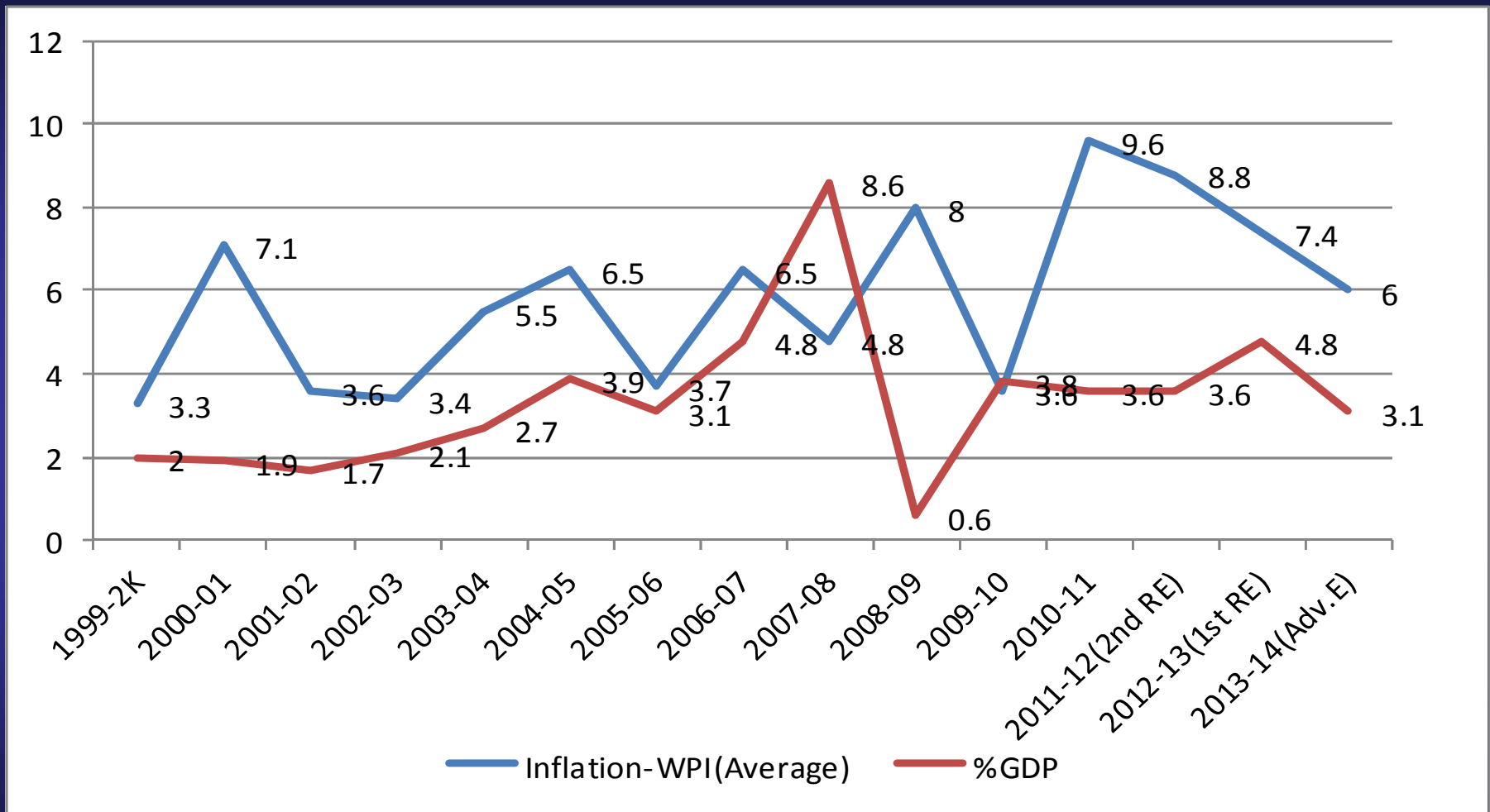
Purnima Menon, Anil Deolalikar, Anjor Bhaskar. INDIA STATE HUNGER INDEX Comparisons of Hunger Across States. Washington, D.C., Bonn, and Riverside • February 2009 KK -2014

India State Hunger Index in relation to per capita income



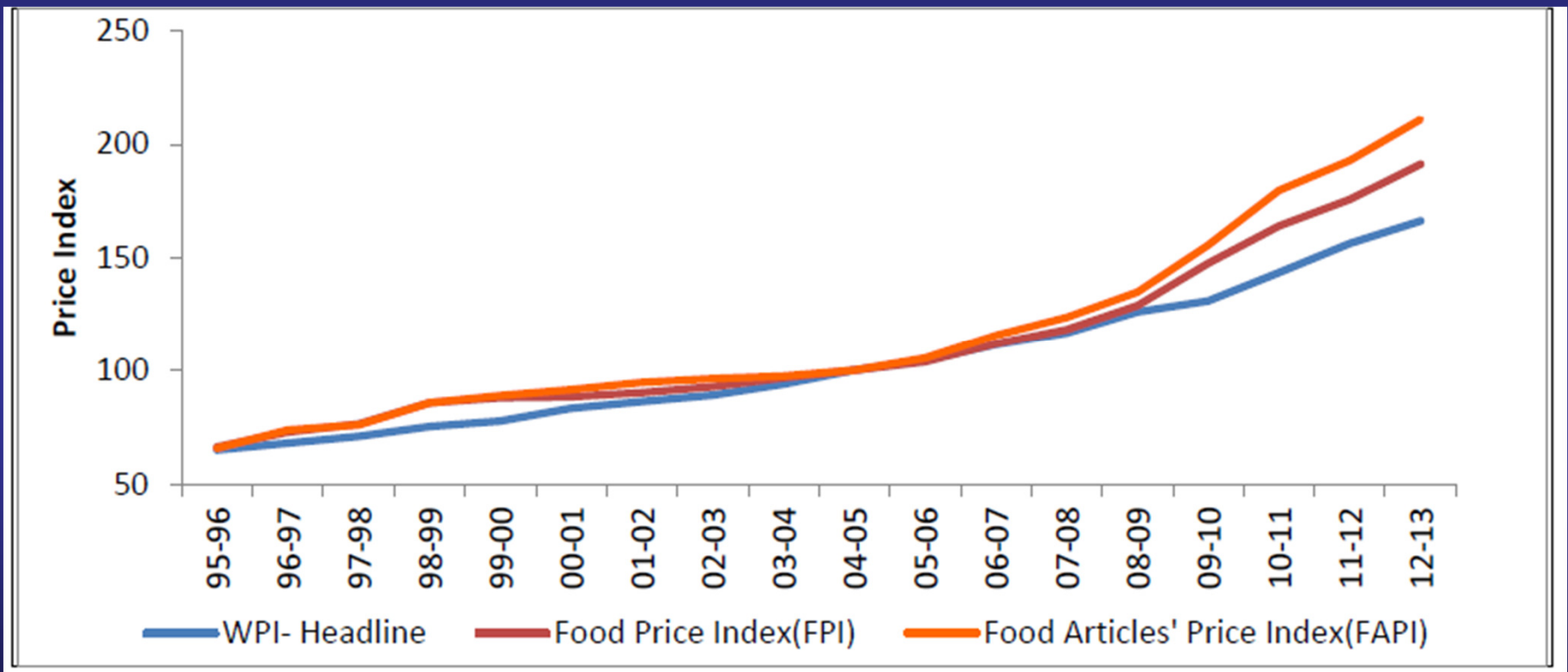
Purnima Menon, Anil Deolalikar, Anjor Bhaskar. INDIA STATE HUNGER INDEX Comparisons of Hunger Across States. Washington, D.C., Bonn, and Riverside • February 2009 KK -2014

India - Macro-economic Summary : 1999-00 to 2013-14 (on 10th March, 2014)



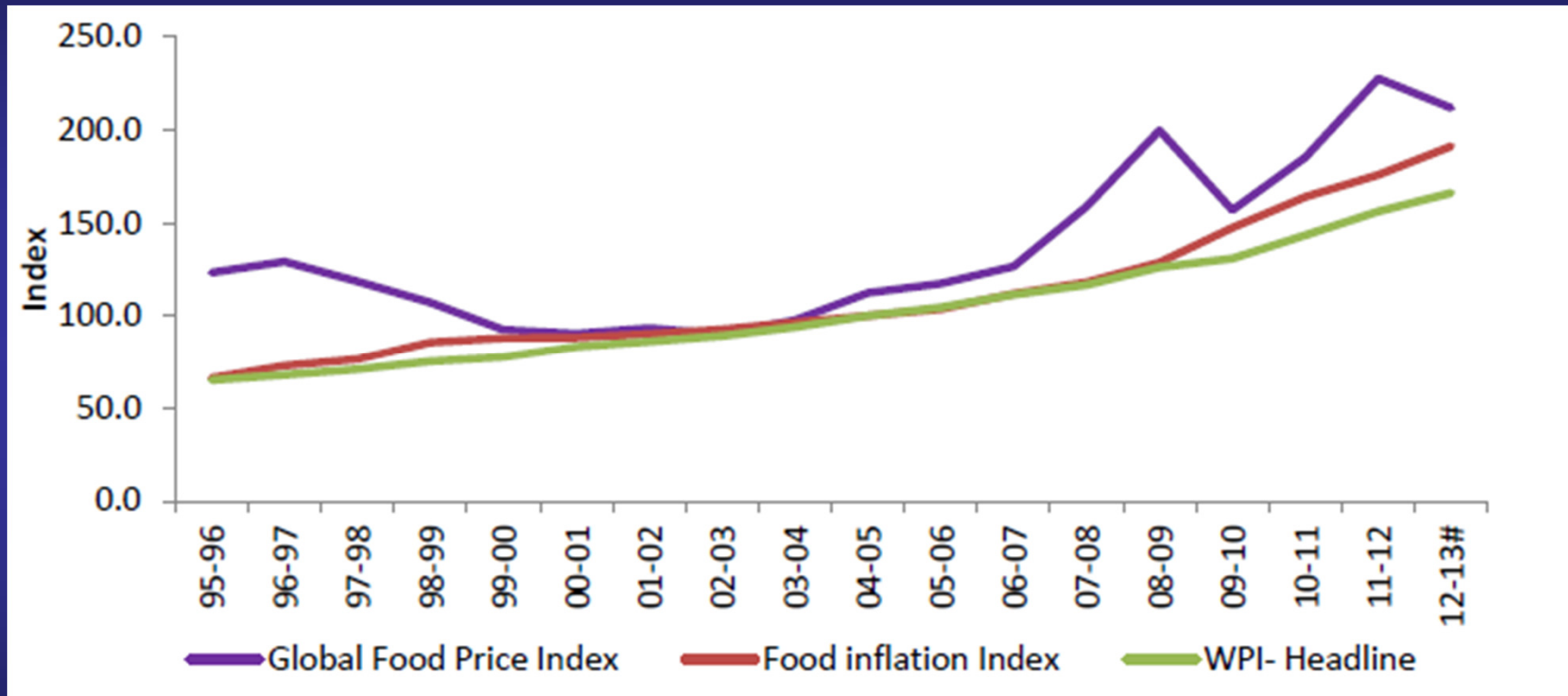
Source: CSO, RBI, EAC to PM, Ministry of Finance; 10th March, 2014
Databook for DCH; 10th March, 2014

Indian Inflation: Wholesale Price Indices, 1995-96 to December 2012 (with base 2004-05:100)



Source: CSO, MOSPI

Transmission of Global food inflation into India

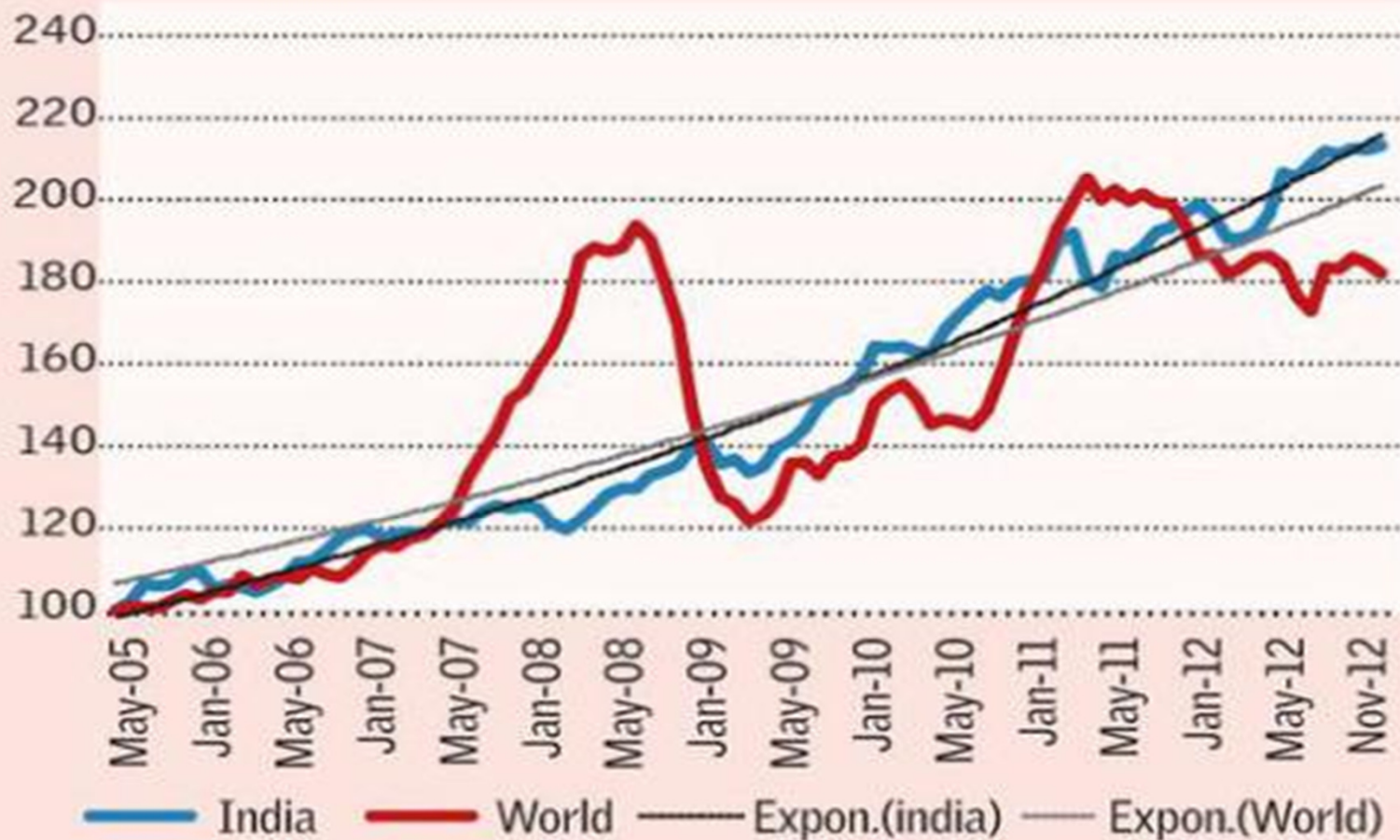


Source: MOSPI

The data for 2012-13 is for the period between April and December, 2012

India's food prices have been rising with global prices

Food price indices, India and World (FAO)

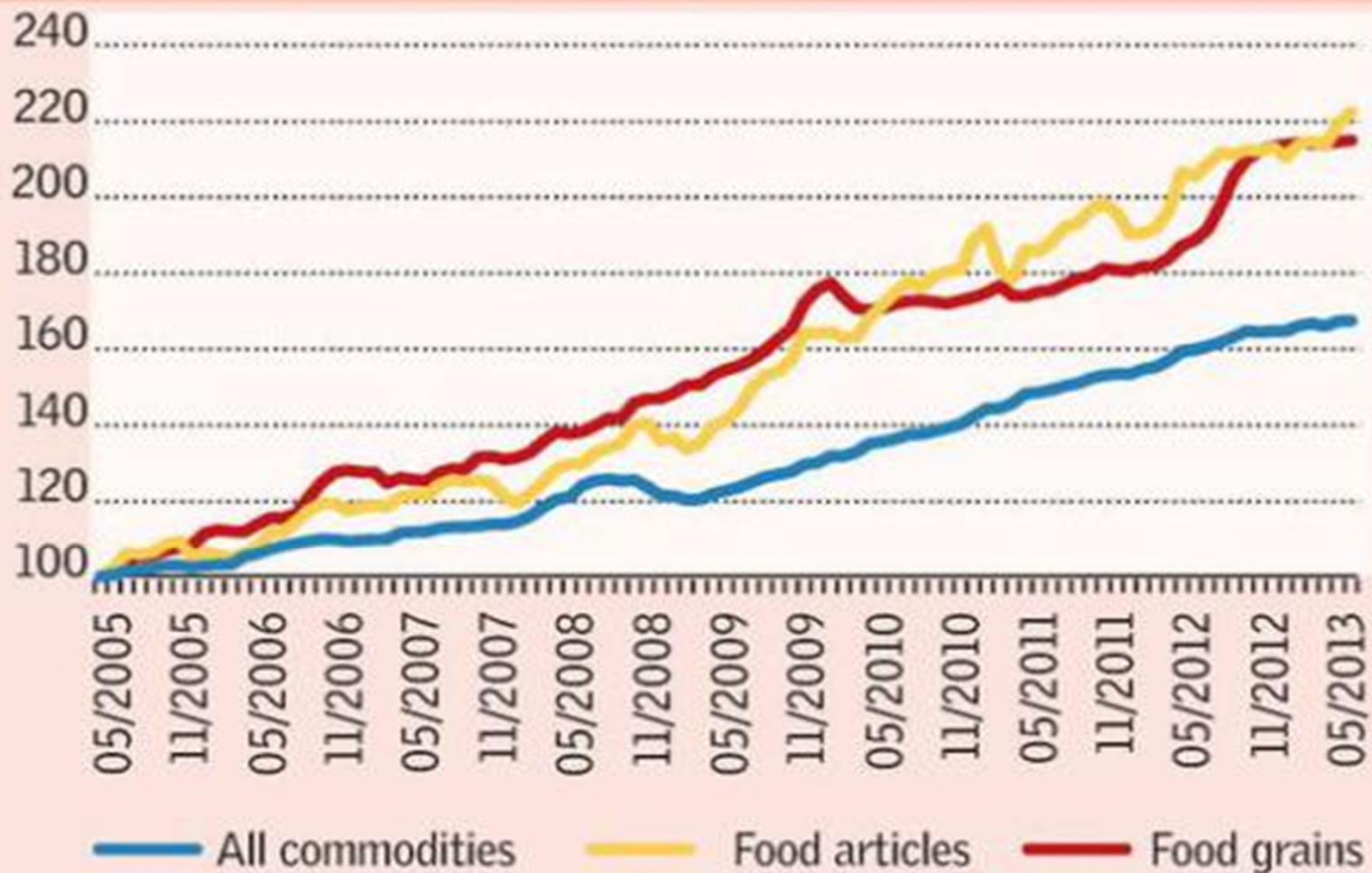


Source : Changing pattern of food inflation

C. P. CHANDRASEKHAR & JAYATI GHOSH , Hindu business line; 24th June 2013

Food prices have risen much faster than general prices

Wholesale Price Indices since May 2005



Source : Changing pattern of food inflation

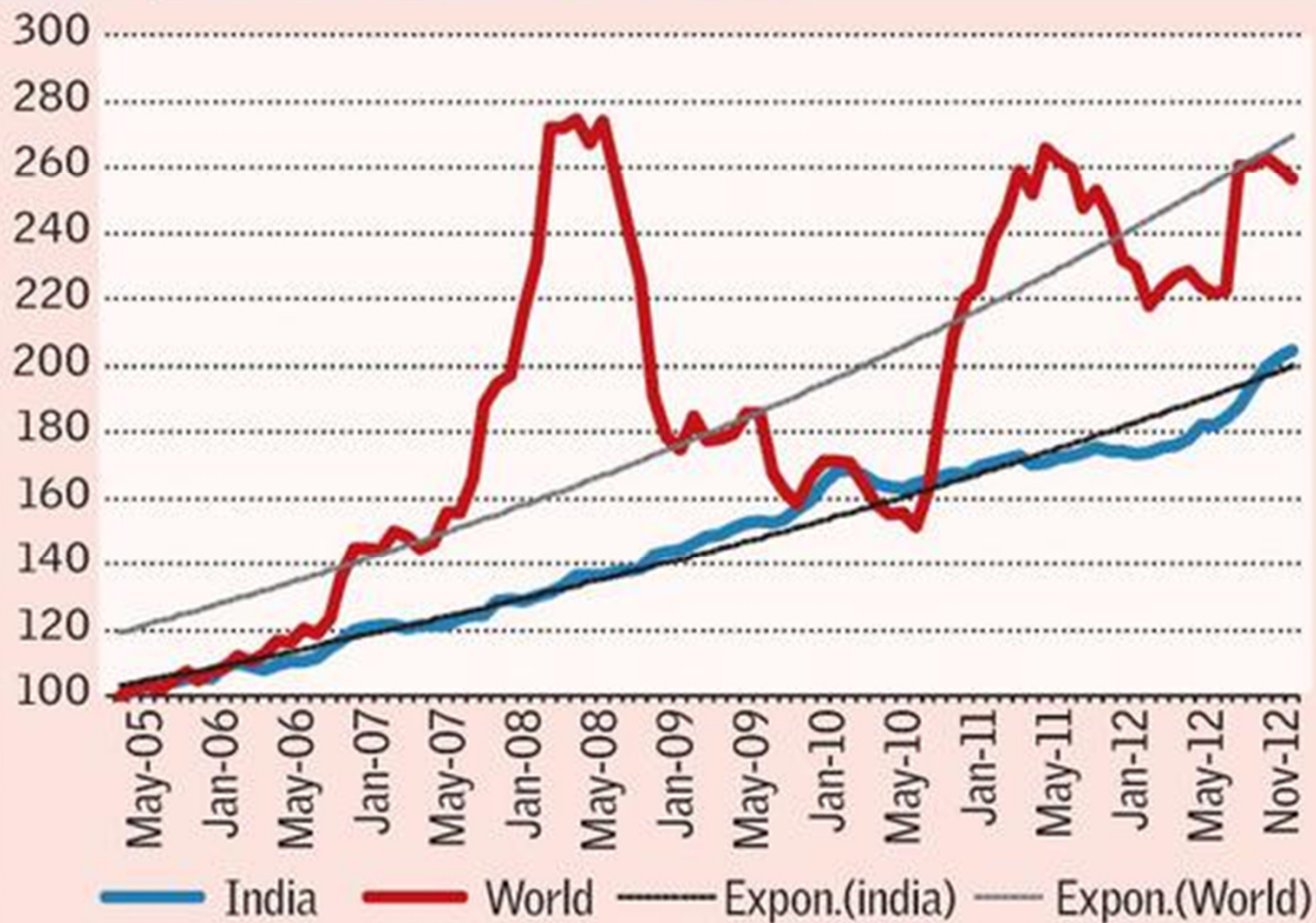
C. P. CHANDRASEKHAR & JAYATI GHOSH , Hindu business line; 24th June 2013

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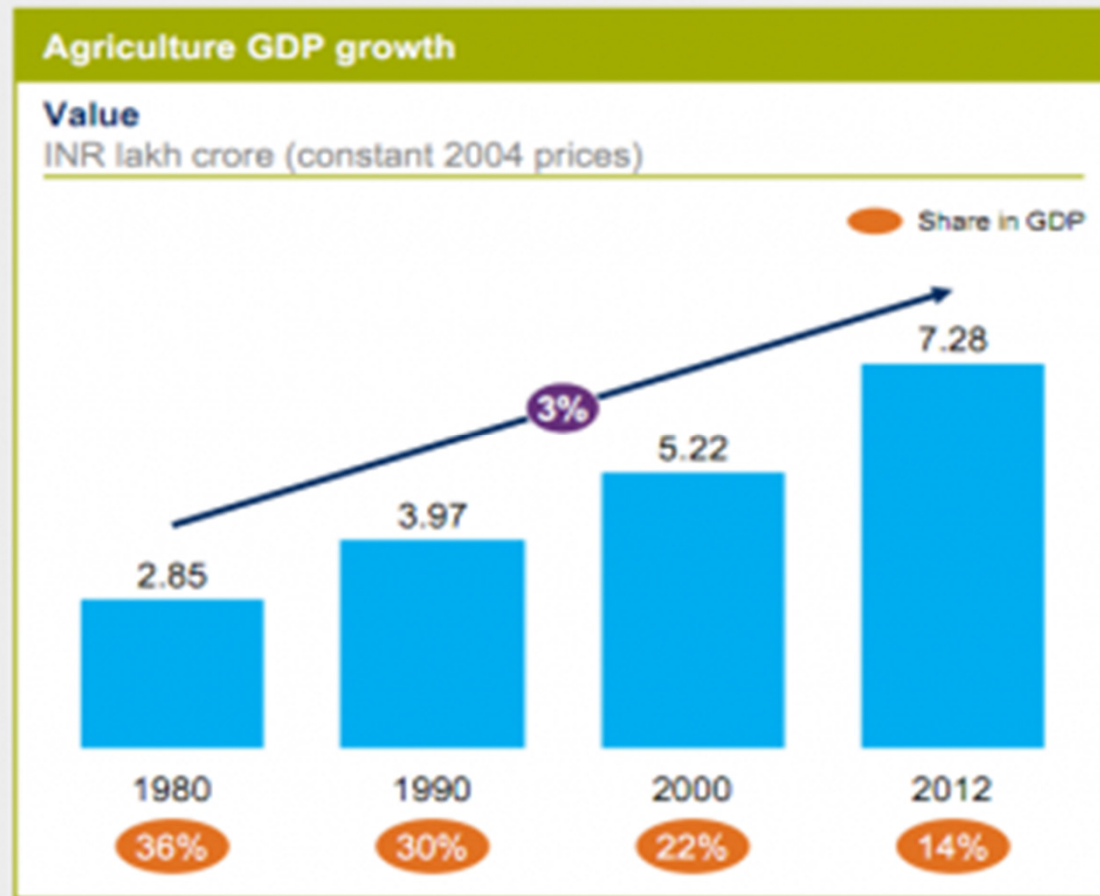
Chart 3

India has avoided price spikes of global cereal markets

Cereal price indices, India and World (FAO)



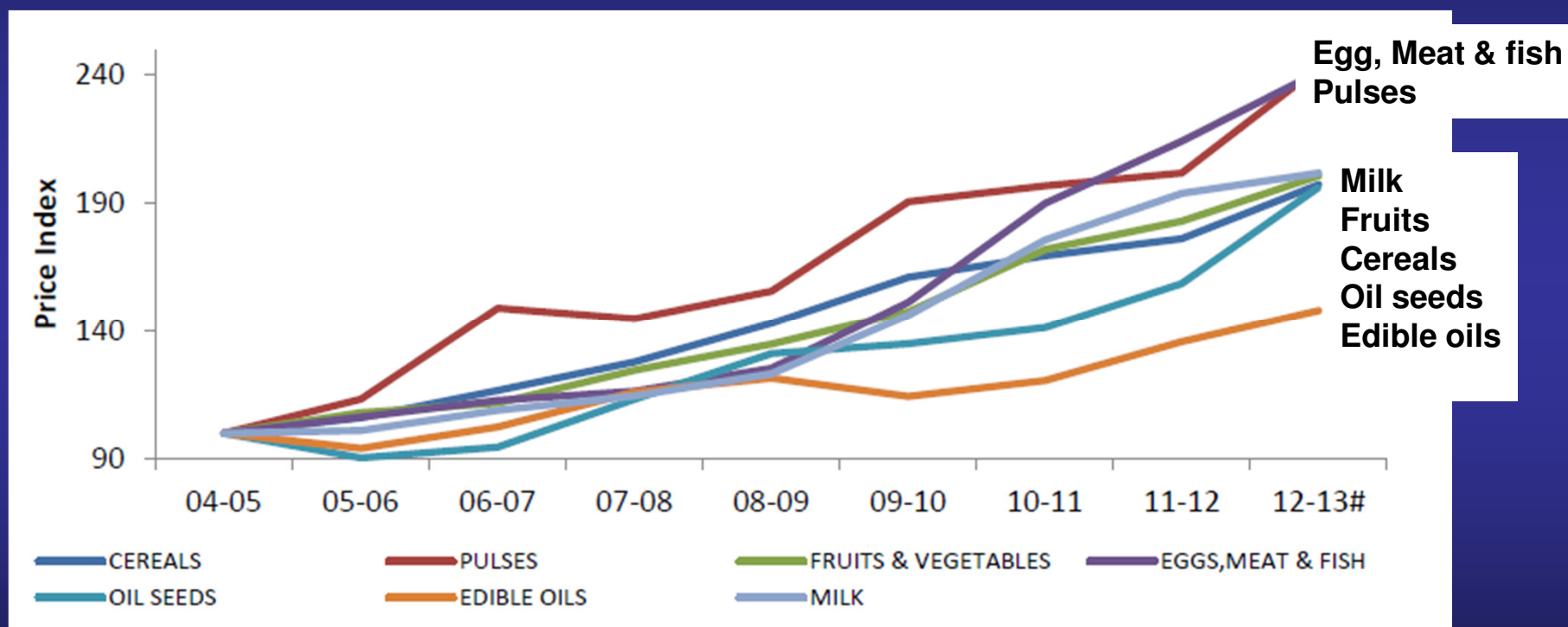
Agricultural GDP has grown at 3% annually over the last three decades



SOURCE: Central Statistics Office Data

Source: Indian agriculture: a big bet Apr 16, 2013 9:22am by Avantika Chilkoti
<http://blogs.ft.com/beyond-brics/2013/04/16/indian-agriculture-a-big-bet/#axzz2x8wQ8mG>
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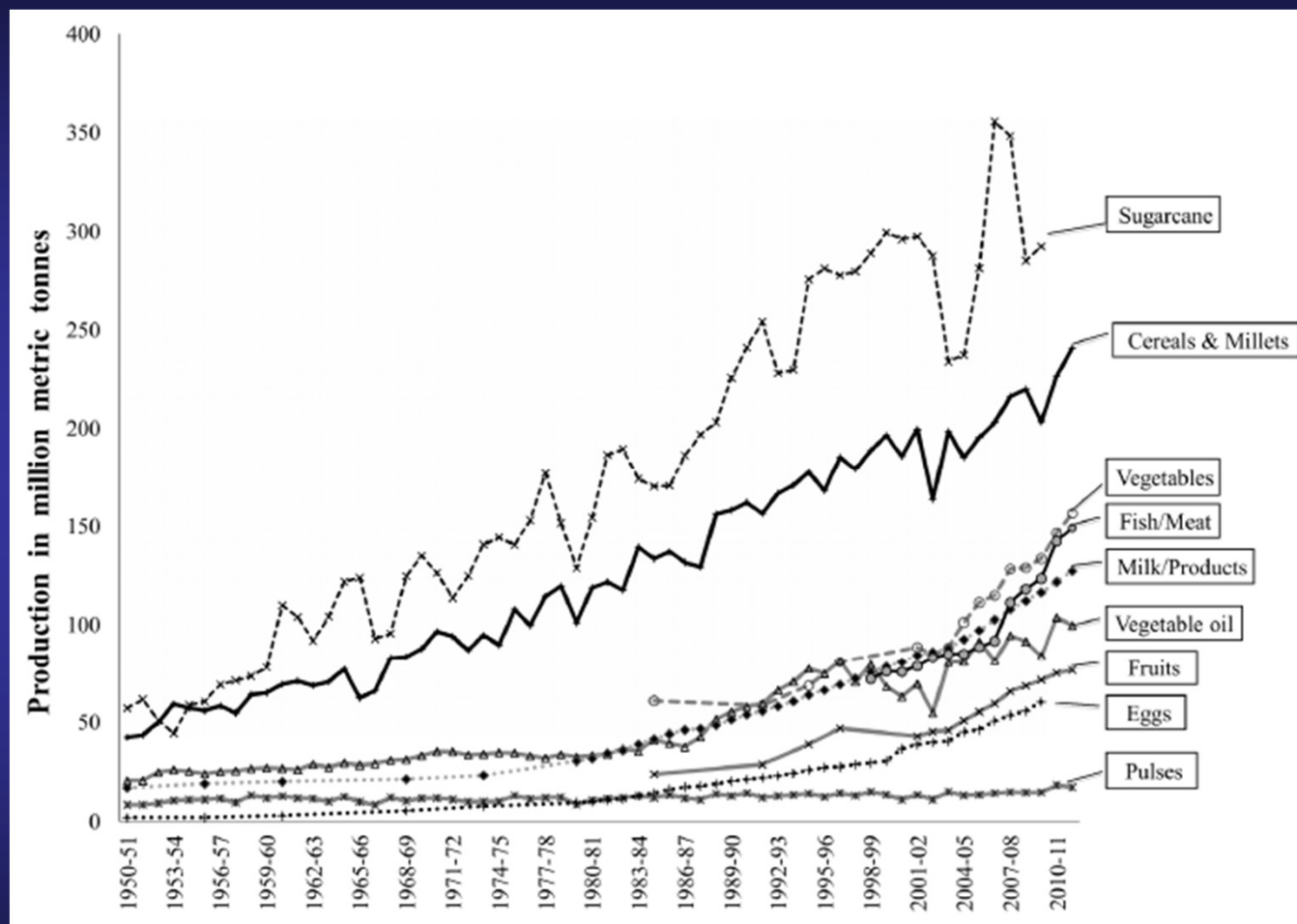
Temporal behavior of Price Indices of various Food Components (2004-05 to 2012-13)



Source: MOSPI

The calculations for FY 2012-13 are done for the period between April and December, 2012.

Trends in production of food groups, India, 1951 to 2012

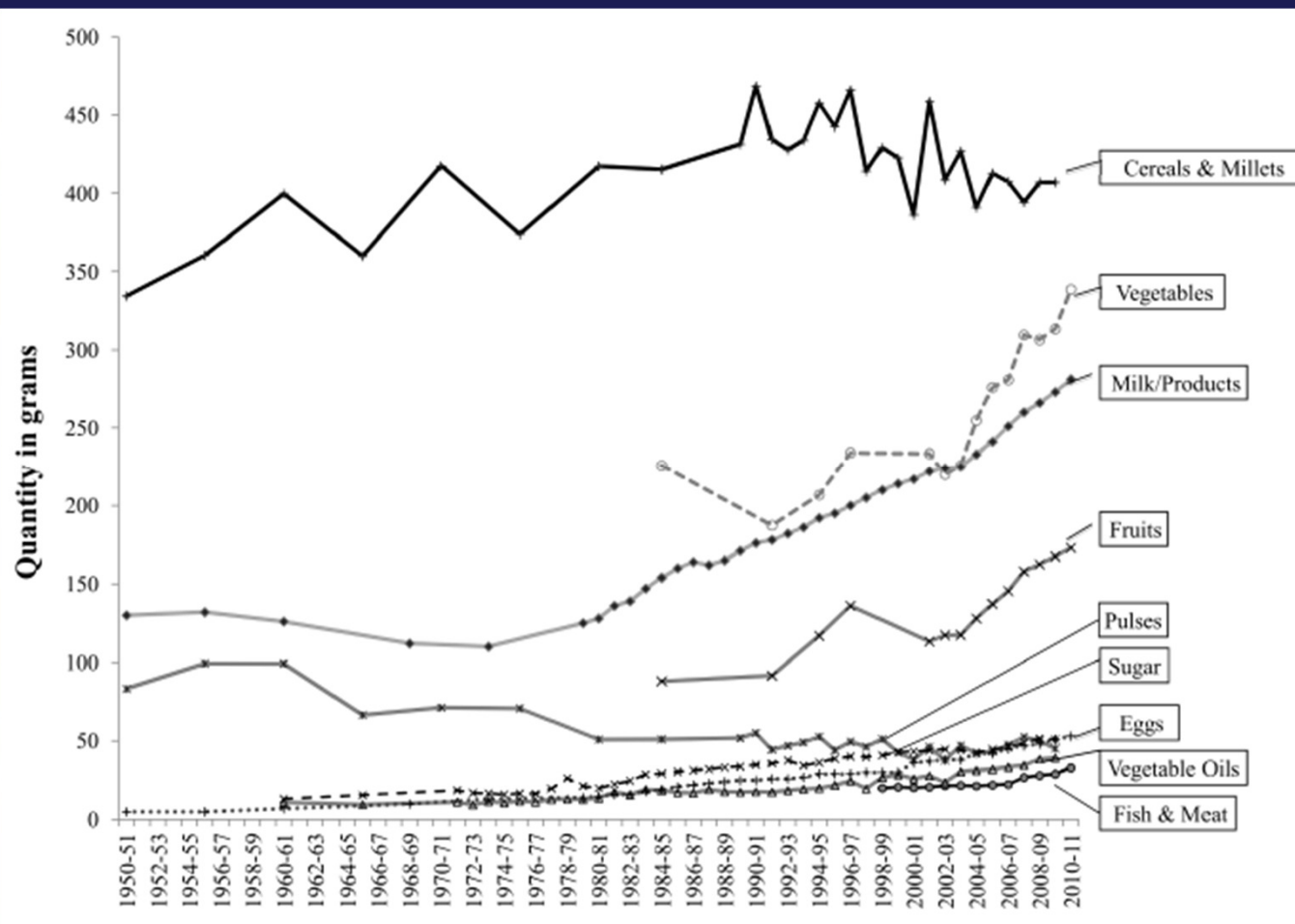


50 to 250 million tons
Growth rate 3.5%

- i) Vegetable Oils (x 10,000 metric tonnes);
- ii) Eggs ('million numbers); and
- iii) Fish and Meat (x 10,000 metric tonnes)

Source :Ministry of Agriculture, Government of India; 2013 & DAHDF. Basic Animal Husbandry statistics, 2012. AHS series 13. New Delhi: Ministry of Agriculture, Government of India; 2012
Varadharajan KS, Thomas T, Kurpad AV, 2013

Per capita daily availability of food groups, India, 1950-51 to 2010-11



Net availability (after accounting for industrial uses and trade) is plotted for cereals & millets, pulses, sugar and vegetable oils; estimates for other food groups are based on production alone. Quantity in gram for all food groups, except Eggs (in numbers)

Source :Ministry of Agriculture, Government of India; 2013 & DAHDF. Basic Animal Husbandry statistics, 2012. AHS series 13. New Delhi: Ministry of Agriculture, Government of India; 2012
Varadharaian KS, Thomas T, Kurpad AV. 2013

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Poverty Ratio [%]

Estimated by Tendulkar method

45.3



1993-94

37.2



2004-05



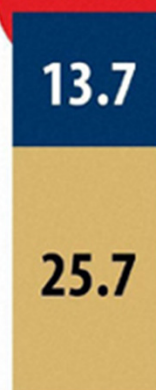
Urban



Rural



21.9



2011-12

Number of Poor

(in million)	Rural	Urban	Total
1993-94	328.6	74.5	328.6
2004-05	326.3	80.8	326.3
2011-12	216.5	52.8	216.5

Source: Planning Commission

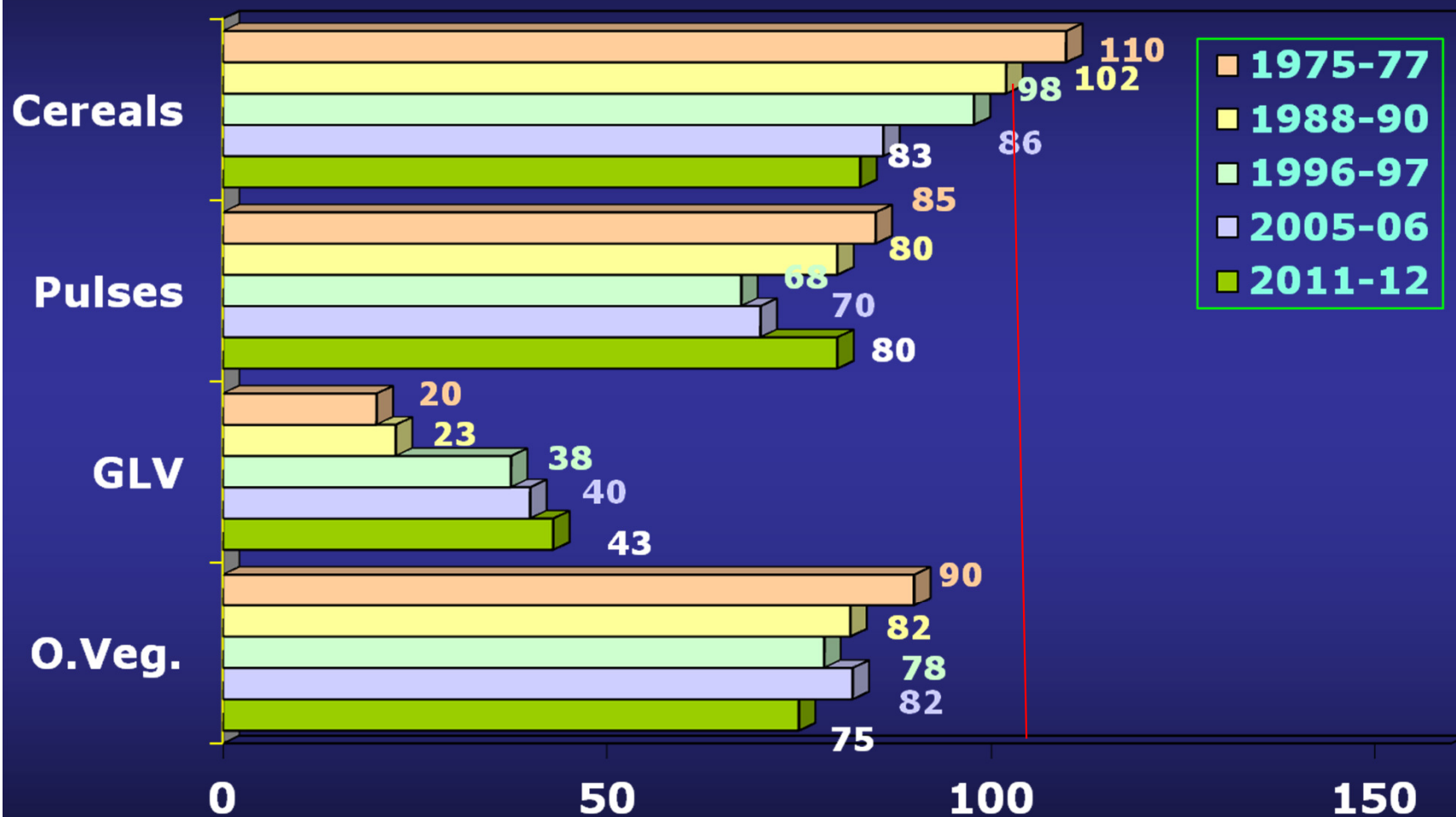
Firstbiz.com

Source : Economy Jul 24, 2013

<http://www.firstbiz.com/economy/graphic-poverty-declines-nearly-three-times-under-upa-43734.html>

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Average Intake of Foodstuffs (per CU/day) as % of RDI by Period of Survey

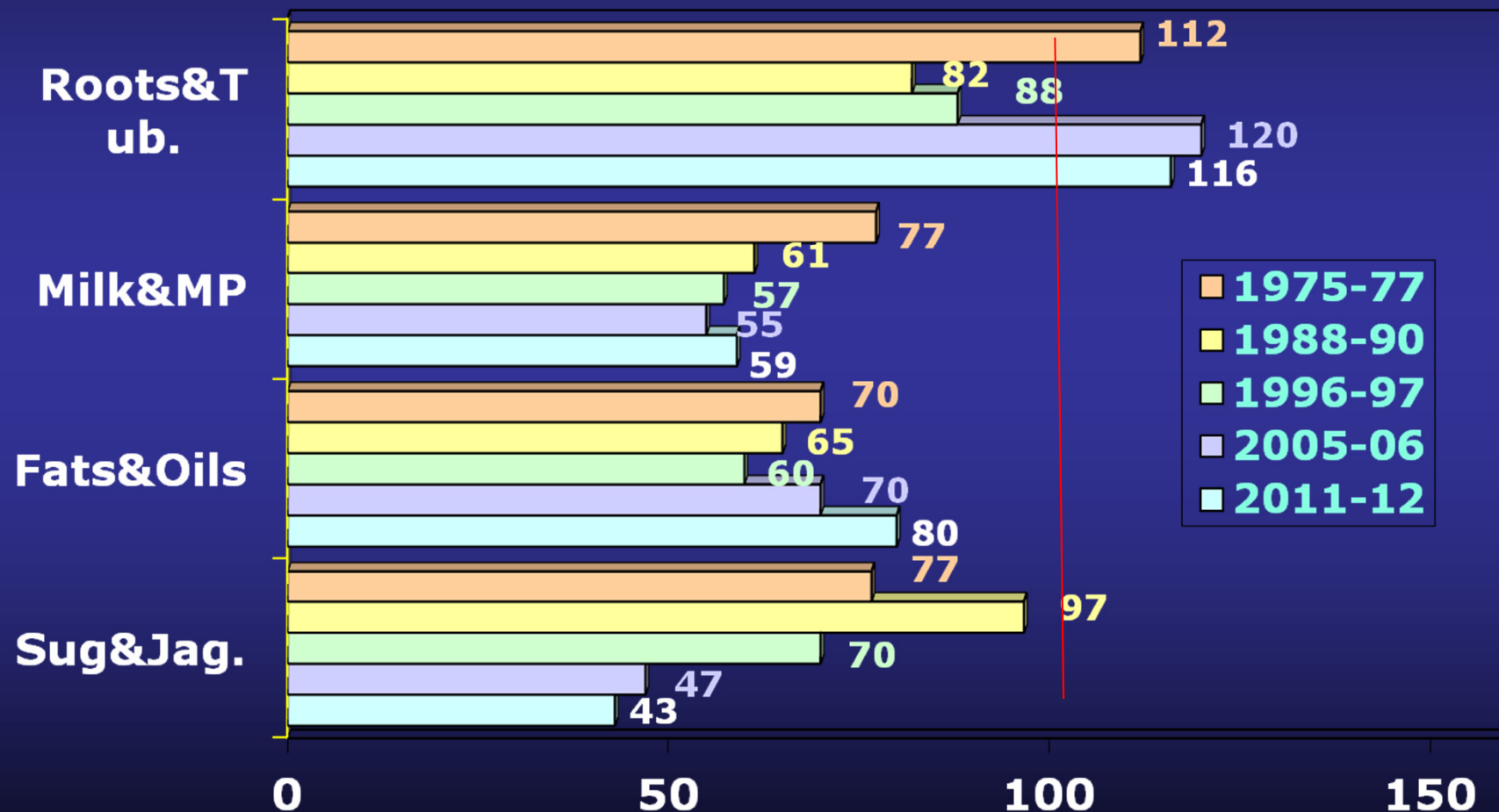


Source :NNMB 2012

Percent

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Average Intake of Foodstuffs (per CU/day) as % of RDI by Period of Survey (contd.)

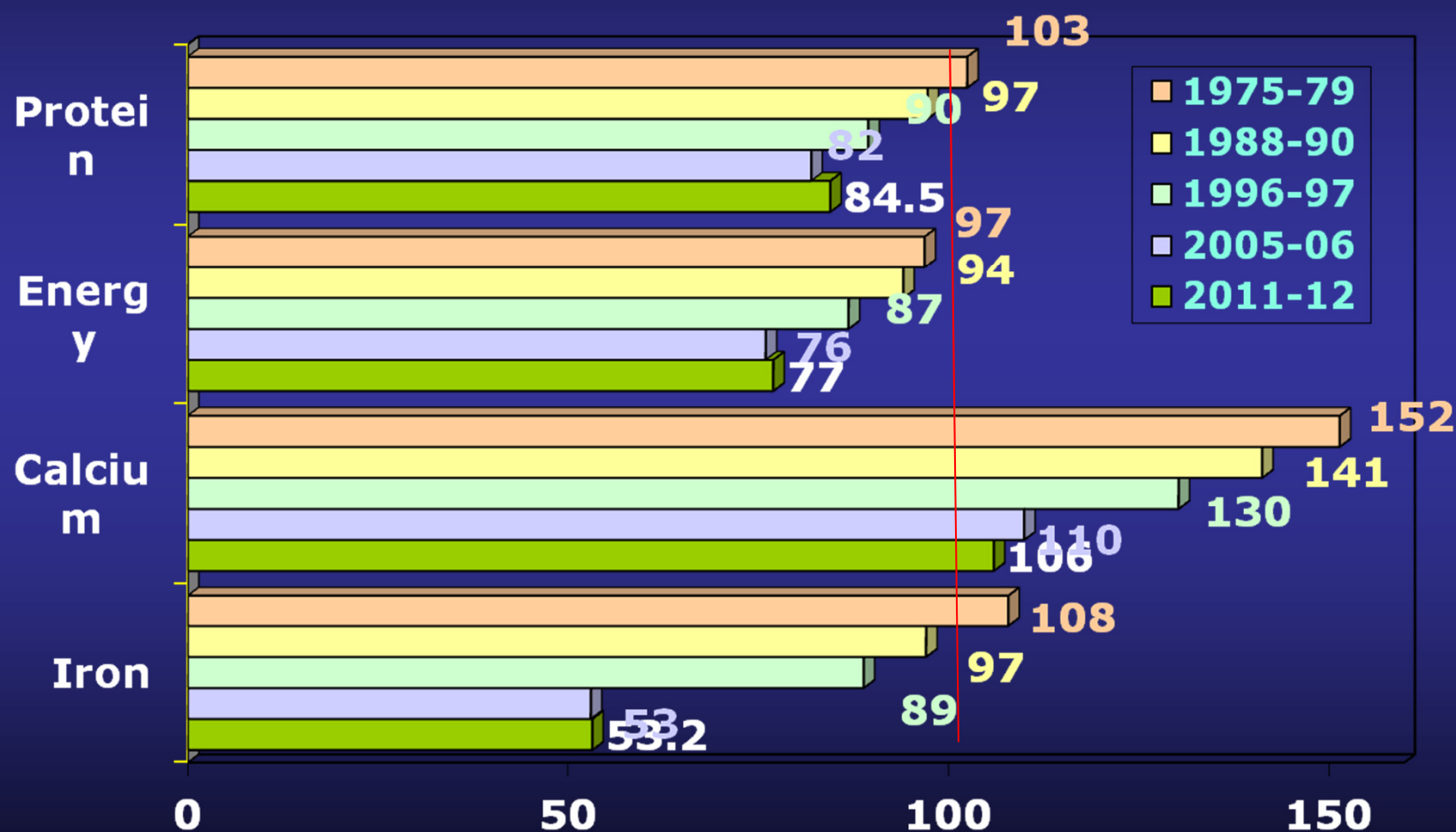


Source :NNMB 2012

Percent

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Average Intake of Nutrients (per CU/day) as % of RDI by Period of Survey

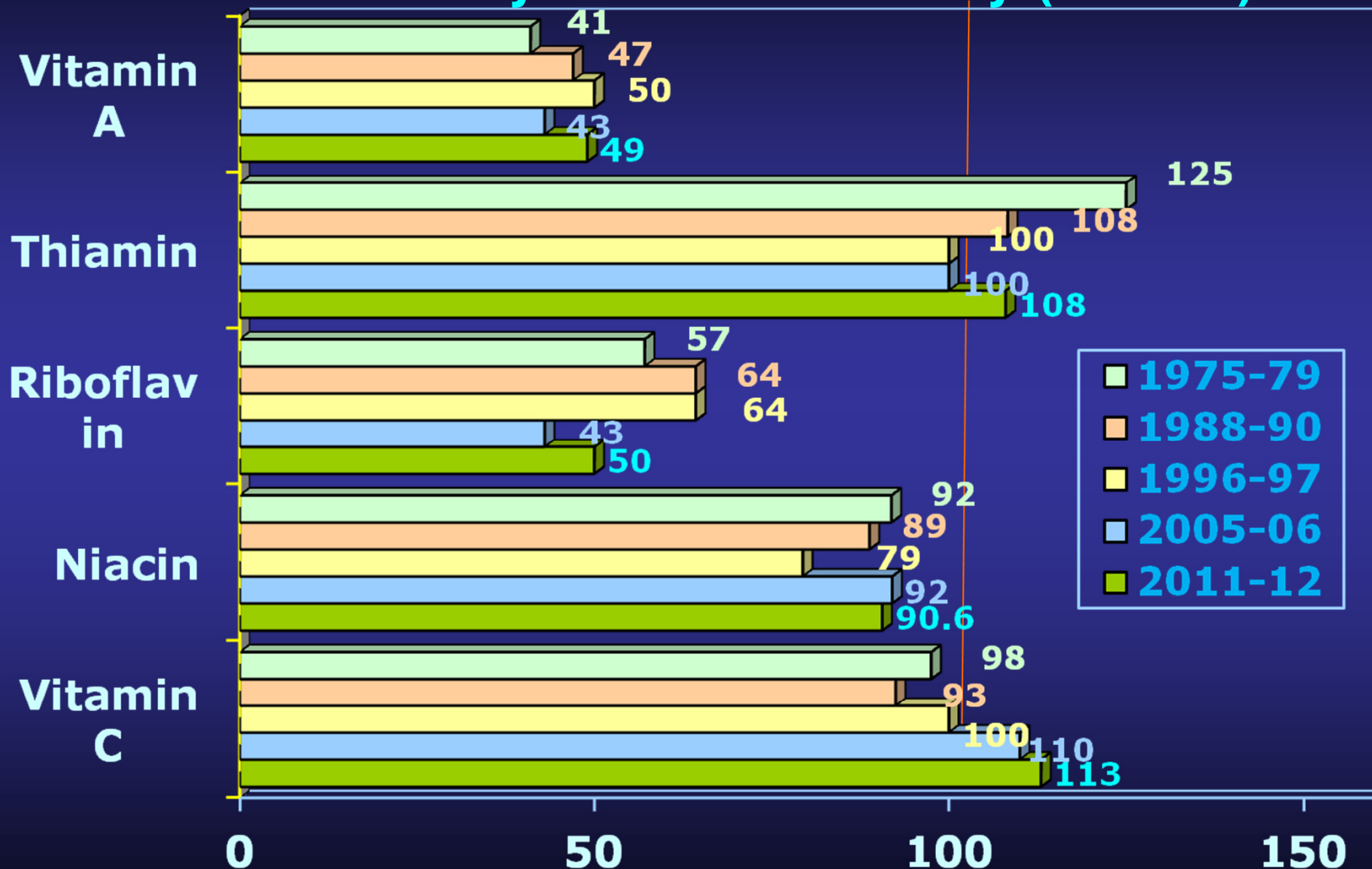


Source :NNMB 2012

Percent

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Average Intake of Nutrients (per CU/day) as % of RDI by Period of Survey (Contd.)

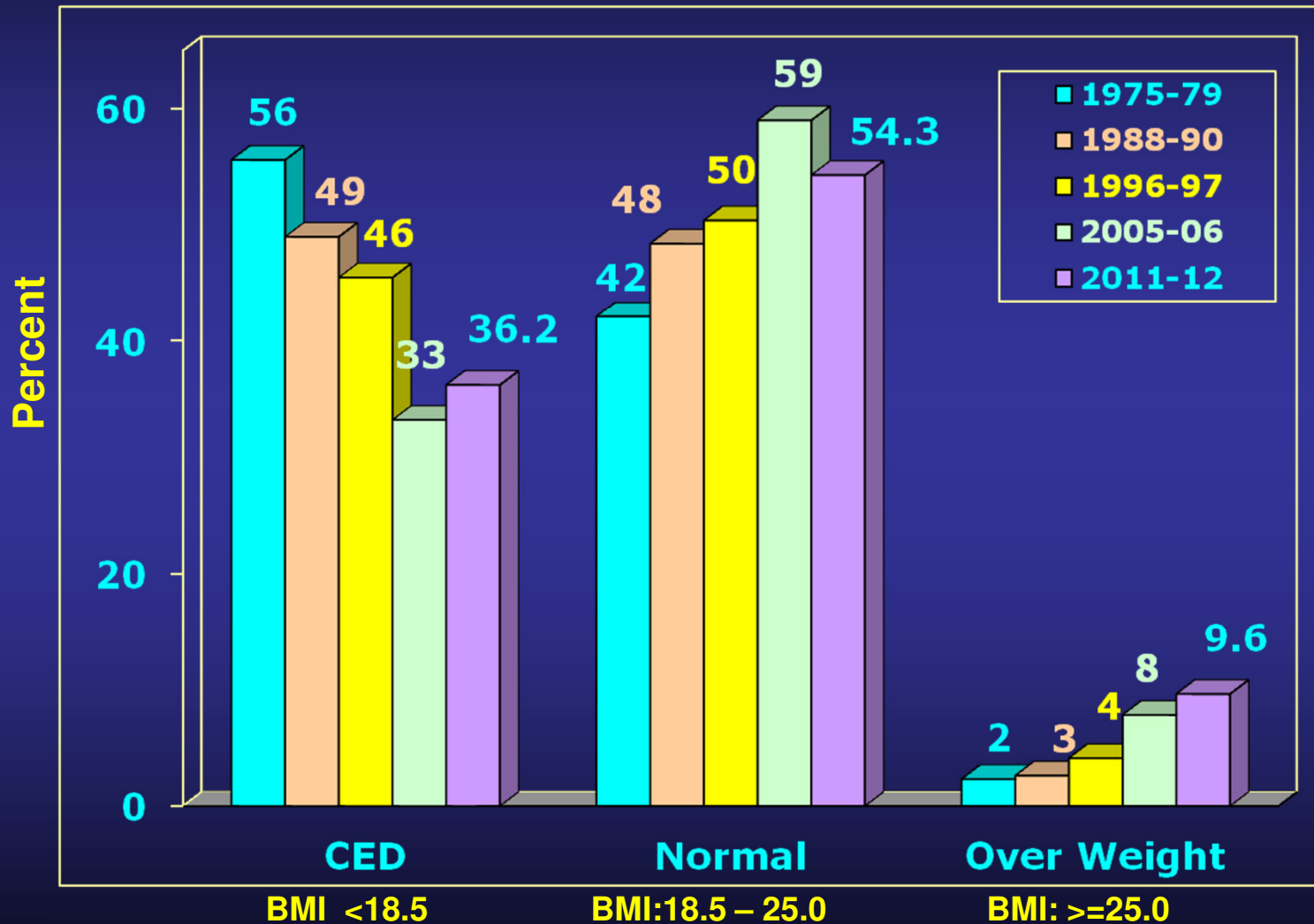


Source :NNMB 2012

Percent

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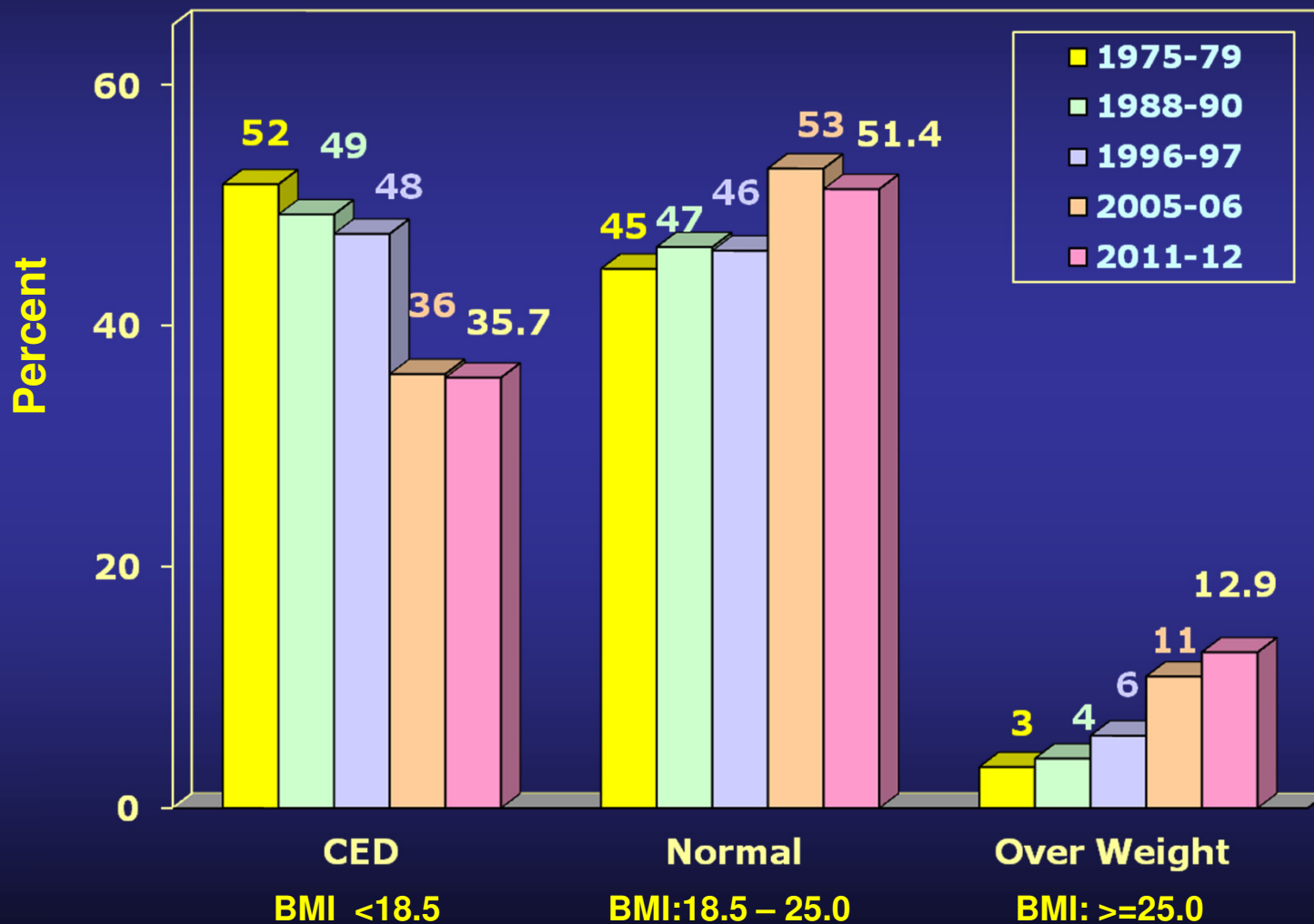
Distribution (%) of Adult Men according to BMI Grades by Period of Survey



Source :NNMB 2012

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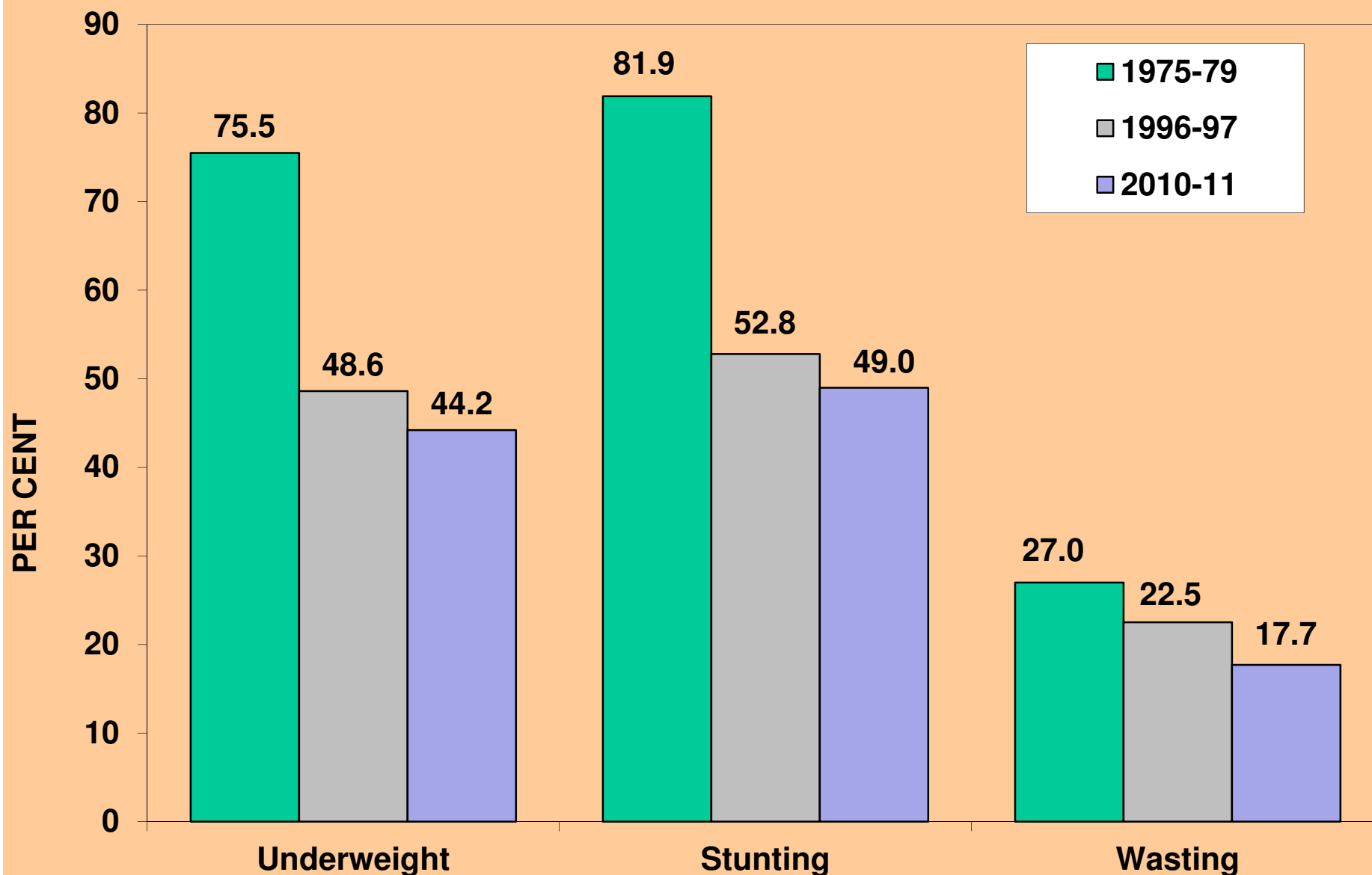
Distribution (%) of Adult Women according to BMI Grades by Period of Survey



Source :NNMB 2012

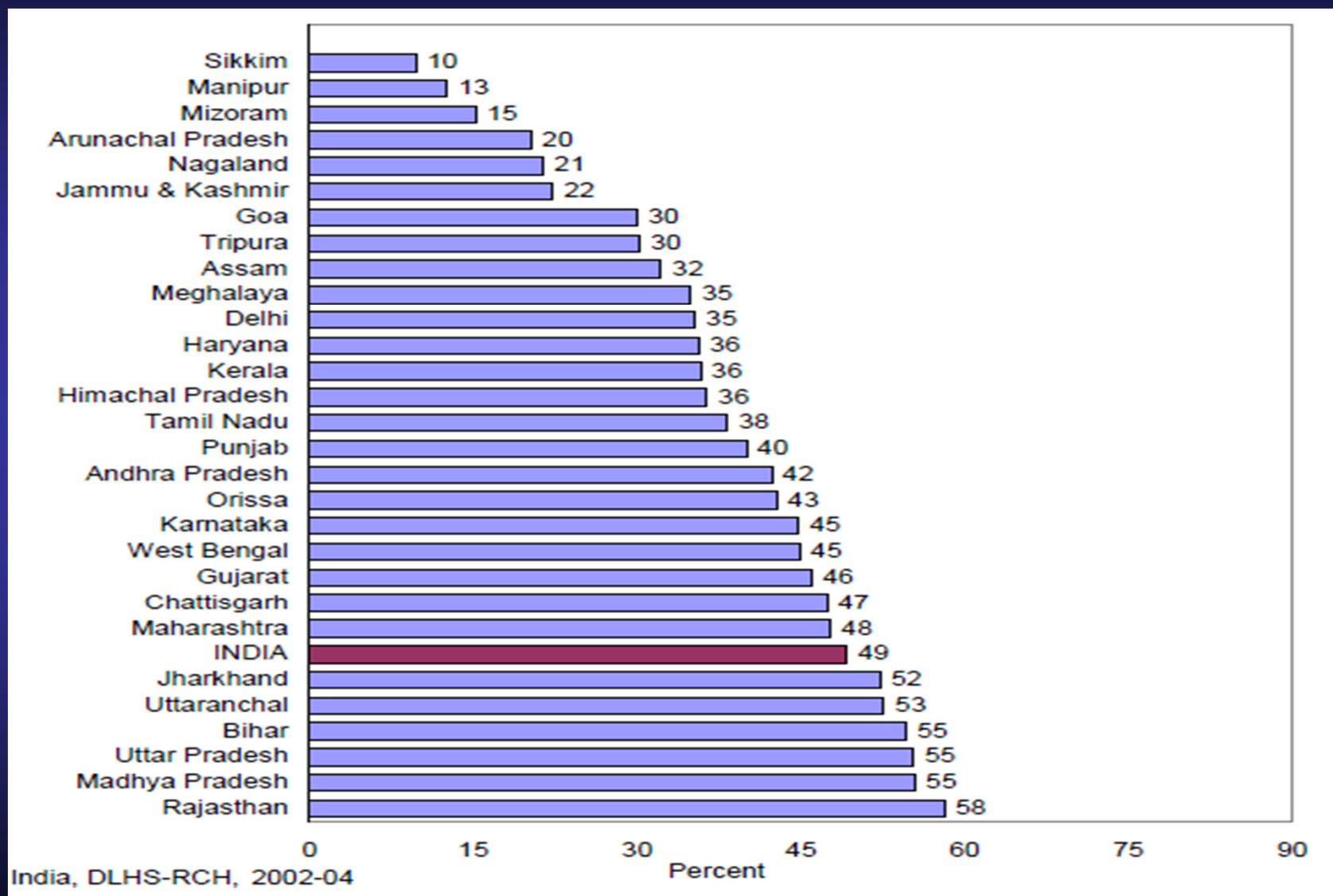
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Prevalence (%) undernutrition among rural Preschool children in 10 NNMB States in India (2011-12)

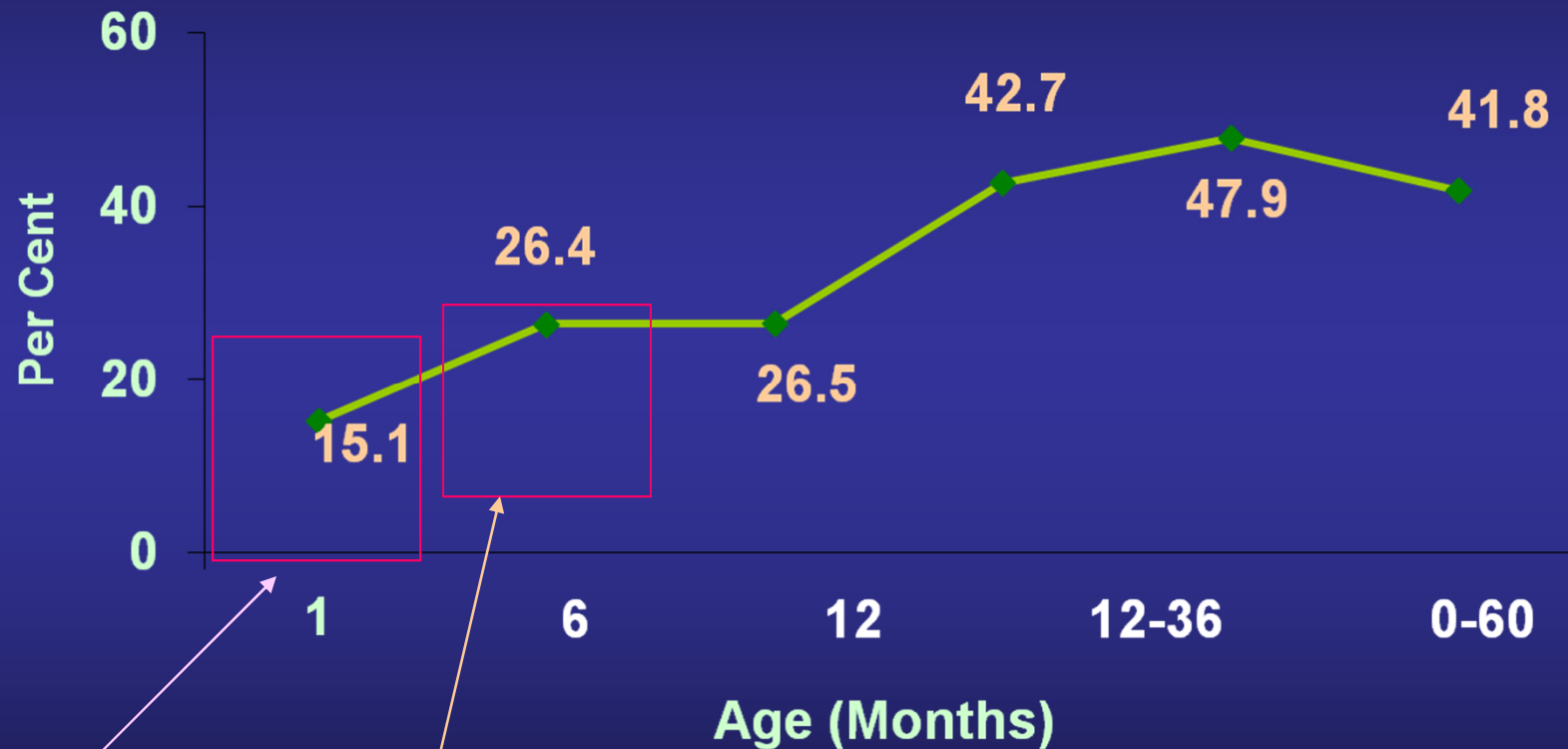


Source :NNMB 2012

Percentage of Under weight Children by State (<6 years)



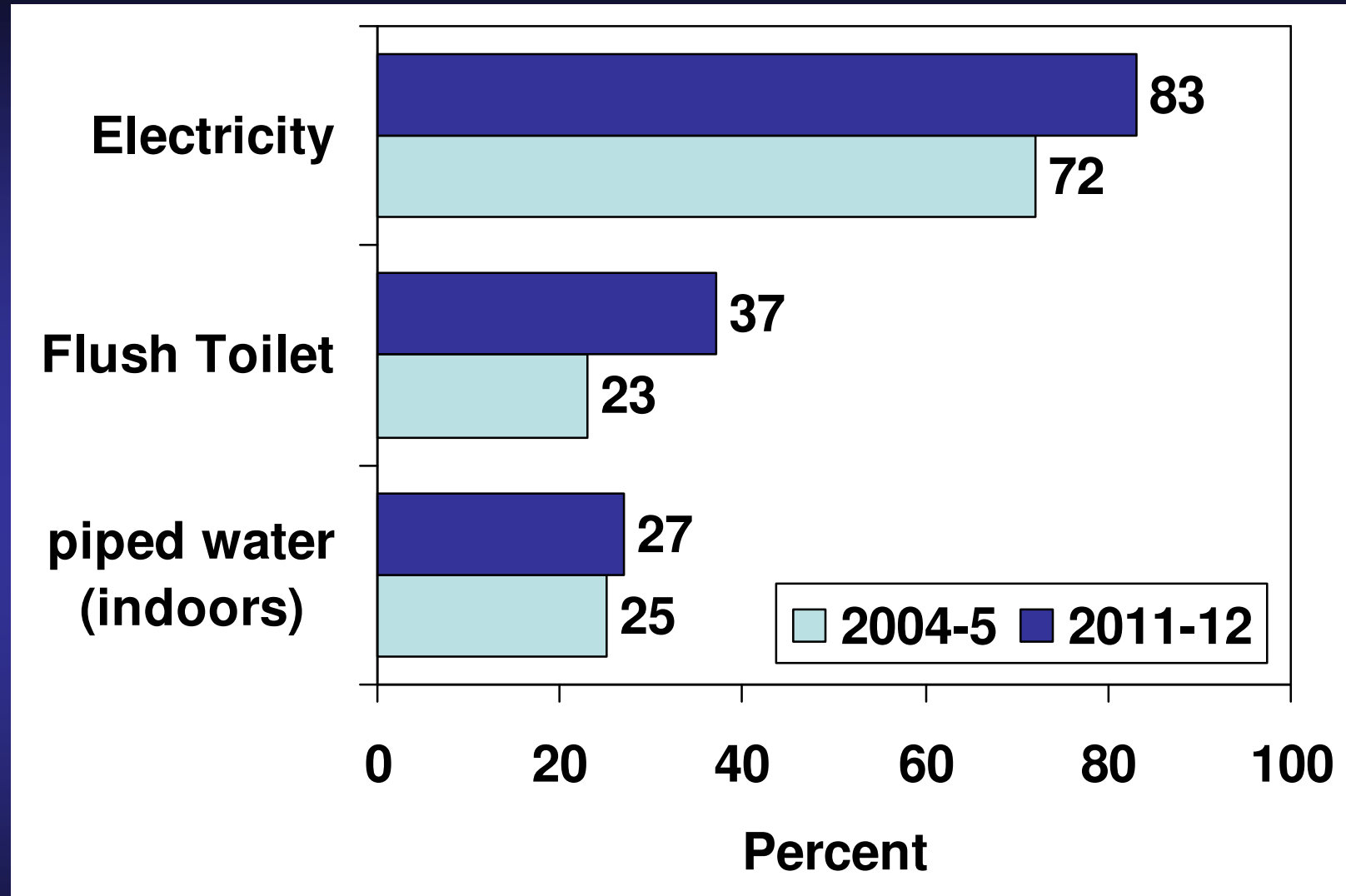
Prevalence of Undernutrition among <5 years children according to Weight for Age



Faulty BF

Faulty
Complementary
feeding

Access to services



NCAER Data (Hindu 3 April 2014)

**Even though incomes have more than doubled in the last 7 years,
the access to public service is severely lacking**

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THE NATIONAL FOOD SECURITY ACT-2013

- An Act to provide for food and nutritional security in human life cycle approach,
 - By ensuring access to adequate quantity of quality food at affordable prices
 - For people to live a life with dignity and for matters connected therewith or incidental thereto.
-

Enacted by Parliament in the Sixty-fourth Year of the Republic of India
Extends to the whole of India.(A comprehensive legislation that entitles every citizen to the right to food security)

THE NATIONAL FOOD SECURITY ACT, 2013

- Every person belonging to priority households, shall be entitled to receive **5 Kgs** of food grains per person per month at subsidized prices
 - The poorest of the poor (Antyodaya) households are entitled to **35kgs/HH/M**
 - Coverage of Priority and Antyodaya households (“eligible households”) is up to **75% of the rural population** and up to **50% of the urban population**.
 - Peoples representatives in the local self government will monitor the implementation at local level
-

Modus operandi

- The central government to procure food grains, create and maintain adequate modern food storage facilities to prevent wastage, allocate and transport food grains to states
- The state governments will take delivery of the food grains and ensure its transport and distribution up through the targeted public distribution system.
- At each district there will be a District Grievance Redressal Officers appointed by state governments
- Essentially a targeted PDS

Modus operandi

(3) Others: Access to—

(a) Safe and adequate drinking water and sanitation;

(b) Health care;

(c) Nutritional, health and education support to adolescent girls;

(d) Adequate pensions for senior citizens, persons with disability and single women.

Entitlement for special groups

Serial number	Category	Type of meal ²	Calories (Kcal)	Protein (g)
1	2	3	4	5
1.	Children (6 months to 3 years)	Take Home Ration	500	12-15
2.	Children (3 to 6 years)	Morning Snack and Hot Cooked Meal	500	12-15
3.	Children (6 months to 6 years) who are malnourished	Take Home Ration	800	20-25
4.	Lower primary classes	Hot Cooked Meal	450	12
5.	Upper primary classes	Hot Cooked Meal	700	20
6.	Pregnant women and Lactating mothers	Take Home Ration	600	18-20

THE NATIONAL FOOD SECURITY ACT, 2013

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PROVISIONS FOR ADVANCING FOOD SECURITY

Revitalization of Agriculture

- **Agrarian reforms** through measures for securing interests of small and marginal farmers;
Investments in agriculture, including research and development, extension services, micro and minor irrigation and power to increase productivity and production;
- **Ensuring livelihood security** to farmers by way of **remunerative prices**, access to inputs, credit, irrigation, power, crop insurance, etc.;
- **Prohibiting unwarranted diversion of land and water from food production.**

Procurement, Storage and Movement related interventions—

Incentivising **decentralised procurement** including procurement of coarse grains;

Geographical diversification of procurement operations;

Augmentation of adequate decentralised modern and scientific storage;

Giving top priority to **movement of foodgrains** by expanding the line capacity of railways to facilitate foodgrain movement from surplus to consuming regions

ENSURING FOOD & NUTRITION SECURITY

- Ensuring food and nutrition security is a challenge for India, given its huge population and high levels of poverty and malnutrition(Slow decreasing trends).
- Food availability is threatened by the effects of climate change and declining water resources.
- Economic access to food by about 1/3 -1/4of the population living below the poverty line is problematic
- Despite impressive economic growth in the recent years, the level of food distribution & absorption are low.
- About 44% of children under the age of 5 are underweight, 50% are stunted, around half of pregnant women and children are anemic.
- The majority of women do not have access to toilet facilities and safe drinking water.

CHALLENGES

- **Implementation/Social auditing/monitoring**
- **Identifying beneficiaries is a problem**
- **Storage and transport are difficult**
- **Quality of food grains**
- **Diversion of food grains**
- **Pulses, oils, vegetables and fruits are needed for a balanced diet.**
- **Simultaneous efforts to promote the above**
- **At community & HH levels , ICDS/MDM, community kitchens are needed**
- **Nutrition education/awareness/exclusive breast feeding/ complimentary foods**
- **Intra family distribution**
- **Immunization**

Is the “right” to eat correct? Or is it right to work to eat. Should be productive members of society & not be living on the street standing in line at the fare price shops.

Conclusions

- We need legislation to provide food for the needy. Water/ sanitation –equally essential
- Skill development / livelihoods are essential.
- Food and nutrition security cannot be equated to food grains distribution.
- Holistic diets have other components as well.
- A lifecycle approach, education empowerment, awareness generation are essential to tackle malnutrition.
- Develop nutrition sensitive agriculture

VISION – NUTRITION FOR ALL

Policy

Assessment

Integration

Intersectoral

Economy

Education

Environment

Food
Nutrition
security

Empowerment

Analysis

Interdisciplinary

Action

Public health

Available

Accessible

Programmes

Personnel

Affordable

Absorbable

“Food Security” is achieved when it is ensured that “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences ,safe drinking water, sanitation, environmental hygiene, primary health care and education so as to lead a healthy and productive life.

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If you want one year of prosperity, grow grain.
If you want ten years of prosperity, grow trees.
If you want one hundred years of prosperity, grow people.



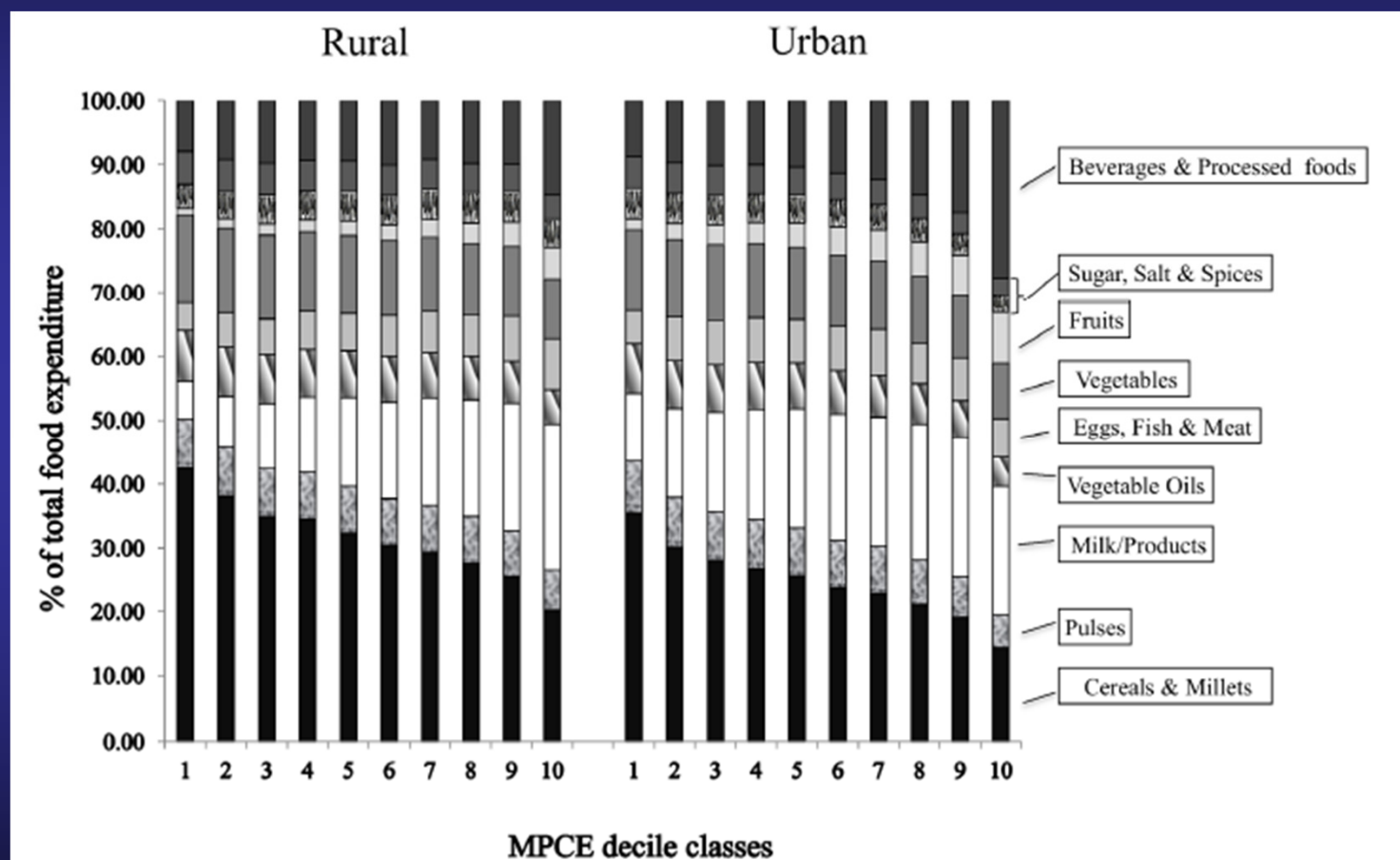
Chinese Proverb



Thank you



Variation in share of food groups to total per capita food expenditure across different MPCE decline classes, India 2009-10



NSSO. Level and Pattern of Consumer Expenditure: NSS 66th Round, 2009-10. Kolkata: National Sample Survey Organization office. Ministry of Statistics and Programme Implementation, Government of India; 2011.

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INDIA - FACTS

- **World's second-most populous country (1.24×10^8)**
 - **% of world Population – 17.5% (2014)**
 - **GDP (nominal) Per capita \$1,389 (2014 esti.)**
 - **Life expectancy 68.89 years (2009 est.)**
 - **Population growth - 1.76% per annum (2001–2011) down from 2.13% per annum (1991–2001).**
 - **IMR - 30.15 deaths/1,000 live births (2009 est.)**
 - **The human sex ratio (2011 census) 940 females per 1,000 males**
 - **HDI (2012) - 134 among 187**
-

INDIA – FACTS II

- **Literacy rate (2011) - 74.04%: 65.46% among females and 82.14% among males.**
- **Kerala is the most literate (95.5%), while Bihar the least (67.8%)**
- **The median age was 24.9 in the 2001 census**
- **Area - Total 3,287,590 km²**
- **Water (%) - 9.6**
- **Medical advances & agricultural productivity (green revolution) have caused India's population growth**
- **WHO, states that 900,000 Indians die each year from drinking contaminated water or breathing polluted air**
- **There are around 50 physicians per 100,000 Indians**

Changes at a glance

The share of cereals in total calorie intake has declined since 1993-94 by nearly 7 percentage points in rural India and about 3.5 percentage points in urban India. The share of oil and fat has risen by 3 percentage points in both

The proportion of household with calorie intake below 2700 Kcal has risen steadily since 1993-94; from under 52% in rural India to nearly 62%, and from 57% in urban India to about 63%

Protein intake has fallen from 60.2g to 55.0g per person per day in rural India and from 57.2g to 53.5g in urban India over the period 1993-94 to 2009-10

Source : <https://makanaka.wordpress.com/tag/food-inflation/>

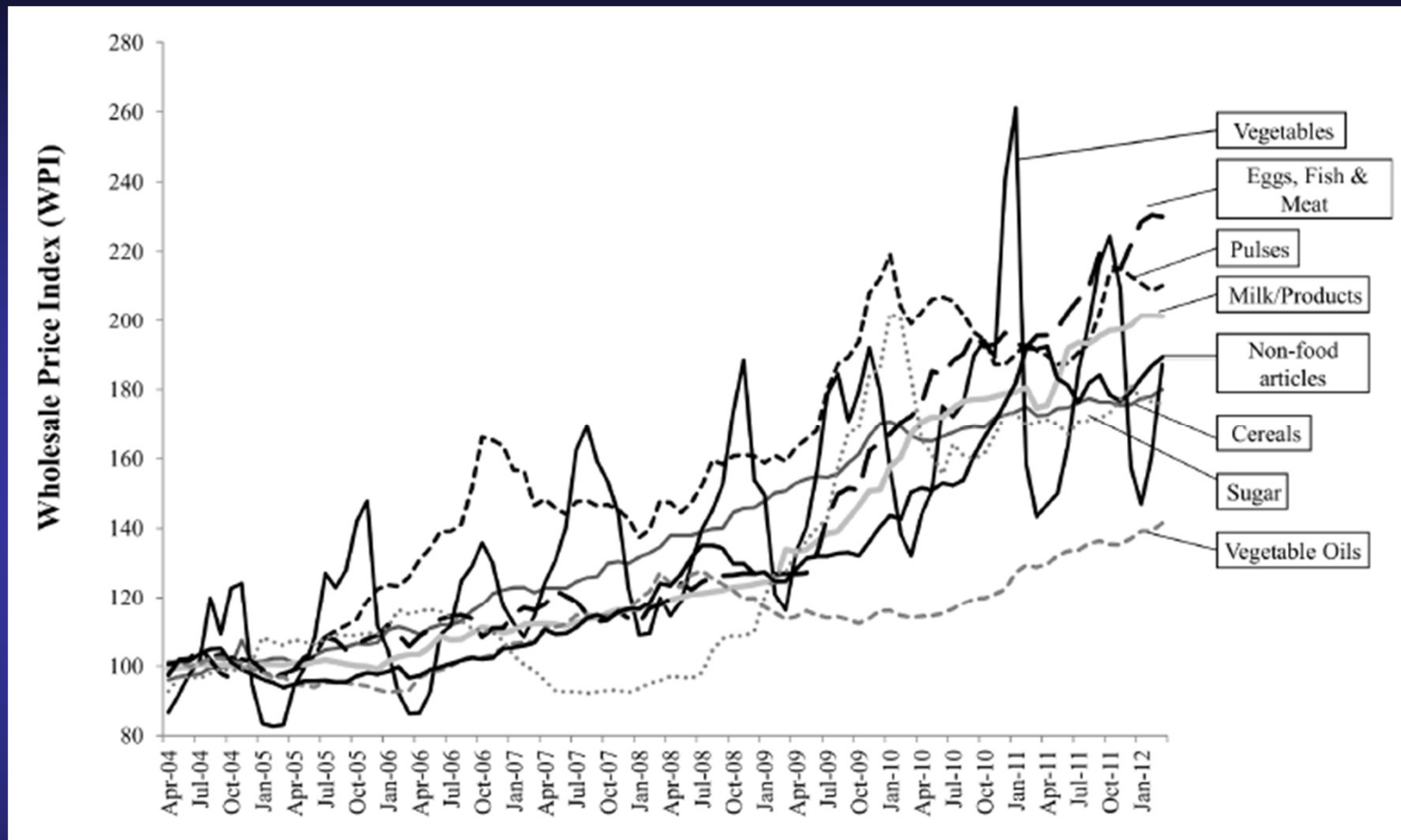
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SANITATION

In 1980 rural sanitation coverage was estimated at 1% and reached 21% in 2008. Also, the share of Indians with access to improved sources of water has increased significantly from 72% in 1990 to 88% in 2008

in 2008	Urban	Rural	Total
Improved water source	96%	84%	88%
Improved sanitation	54%	21%	31%

Trends in food price Inflation, India 2004-12



The corresponding value of WPI is 100 for all items

Source : Wholesale Price Index Data, Office of the Economic Adviser to the Government of India, [cited 10 March, 2013]; Available from: <http://eaindustry.nic.in/>