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Dairy Sector Page-7

Data on Dairy Sector

15% of the National
GDP

140 Million Tonnes
of Total Milk
Production

India Ranks Second
in World Farm
Output

Growth Rate of
Agriculture and
Allied Sector-4.43%

Total Production of
Agriculture Sector-
\$366.92 Billion
(2014)

53% of Rural
Households Depend
on Agriculture

India has More than
550 Dairy Plants

Role and Importance of Primary Sector

-Vagdevi H. S. & Kiranbabu P.

Theodore Schultz in his Noble (Economics) acceptance speech in 1979 observed, “Most of the people in the world are poor... Most of the world’s poor people earn their living from agriculture, so if we knew the economics of agriculture we would know much of the economics of being poor” (Shultz, 1979). This throws light on the importance of primary sector in economies of the world. Understanding the structure of the economy is critical for both the



economic planners and the government of that country to plan, to govern and consistently take the economy towards a growing path. A steady and reliable economic growth is vital for any country because it helps its citizens to have a better standard of living and create enough surpluses that help in facing the adversities.

To understand the economy better scholars like Colin Clark (1940) and Fisher (1935) have divided the economy into three sectors - primary sector, secondary sector and tertiary sector. The primary sector is an economic description, concerned with the extraction of raw materials. It includes fishing, farming and mining. Amongst the primary sector, agriculture is the predominant occupation and has the largest share in national income. Despite employing 51% of the workforce, agriculture and allied activities produces just 15% of the national GDP, indicating a poor usage of the available workforce and a failure of modernisation of agriculture and other activities allied to it.

Although, India ranks second in worldwide farm output, it falls short in crop yield per unit area of farms. States of India that lie on the Indo-Gangetic plain and the ones near to any river are among the important agricultural regions of the country. India mainly exports agricultural produce like rice, wheat, spices, and cereals. 10% of her trade income comes from the export of these products.

In the long run sustainable growth and development of a national or regional economy depends on the volume of output produced by all sectors – agriculture, industry and the service sectors. Keeping this in mind, it becomes pivotal that the Indian economy, more so Indian primary sector, needs to be modernised. Modernising agriculture will lead to increase in more yield of crop per unit area and increase share of its GDP. This creates a chain of actions where, rural families will have an increased income, increasing their purchasing power, which in turn expands the existing market for manufactured

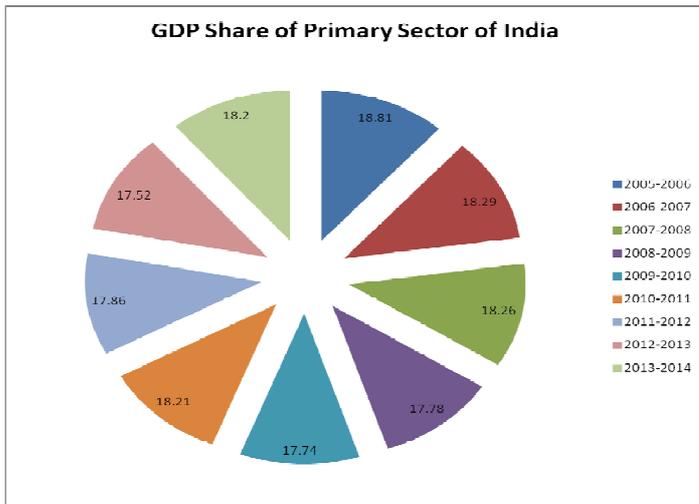
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Primary Sector Contributes 18.20% of GDP

- Shivprasad B. M.

The economic contribution of agriculture to India's Gross Domestic Product is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. Agriculture plays a vital role in the Indian economy. Over 53% of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, accounts for one-third of the nation's Gross Domestic Product and is its single largest contributor.

13.92% and 16.12 % respectively. Though it declined between 2010 -11, it saw a positive growth with 20.34 % . But, after that there is a constant decline in the growth rate in 2013 -14 at 12.28 %.



Source: Data book , Planning Commission of India, GOI.

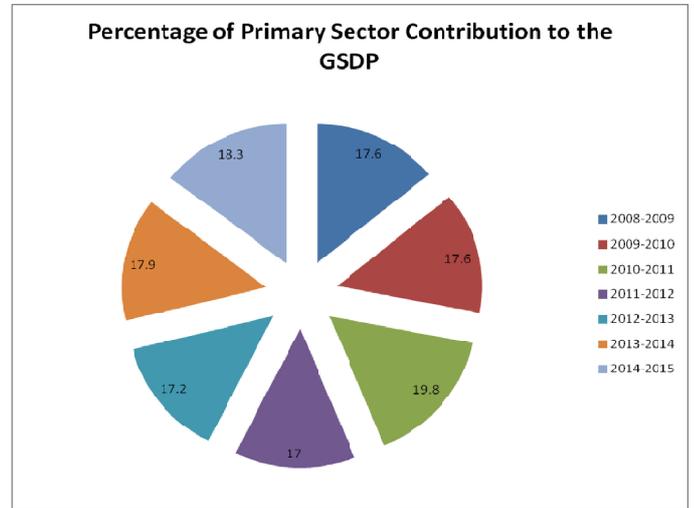
It is seen from the above pie chart that the GDP of India in primary sector has been constantly declining since 2005-2006. In 2005-2006 primary sector accounted for 18.81 % of our GDP and over the span of a decade it has been reduced to 18.20 % in the year 2013 – 14.

GSDP Annual Growth Rate of Primary Sector of Karnataka



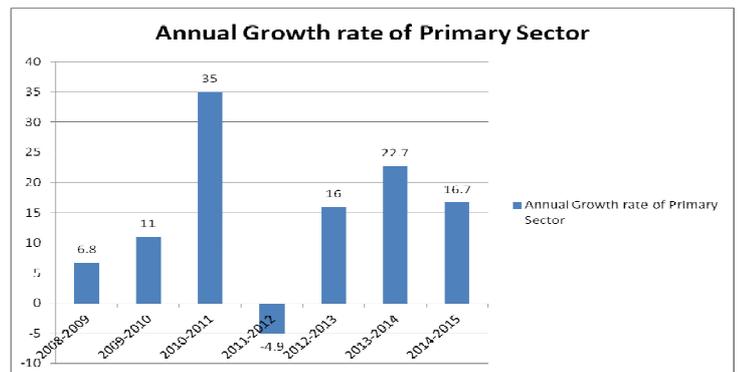
Source: Data book , Planning Commission of India, GOI.

GDP growth rate from 2005-2006 to 2013-2014 is shown in the above graph where, GDP growth rate at current price saw a increase from 2005-2006 upto 2007-2008 with



Source: Data book , Planning Commission of India, GOI.

The contribution of Primary sector to Gross State Domestic Product of Karnataka from 2008-2009 to 2014-2015 is mentioned in the above graph. In 2008-2009 primary sector contribution was 17.6 % and in 2009-2010 it was 17.6%. We can see small variations in 2011-2012, 2012-2013 and 2013 -14 with 17 %, 17.2 % and 17.9 % respectively but in 2014-2015 we can see a optimistic leap to 18.3% .



Source: Data book , Planning Commission of India, GOI.

Annual growth rate of primary sector in Karnataka shows that, in 2008-2009 growth rate was 6.8 % and since then it has steadily grown until 2011 -12 where there was a negative growth due to economic variations. Since 2012-2013 again a positive growth is recorded with 16% in 2012 -13 and 22.7 % in 2013 -14. The year 2014 -15 saw a decline in growth rate with 16.7 % with 6 % lesser growth rate.

Source: Karnataka Economic Survey 2014-2015, Karnataka State Budget 2015-2016, Data book for PC: 22nd December 2014, Planning Commission of India, GOI.

Bills and Schemes in Relation to Primary sector

-Srinivasa .D

From steps to check the rising price of pulses to ensuring smooth supply of urea and other fertilizers the government has approved a slew of measures to boost agriculture and allied activities. Markets have been affected by macro-economic disturbances, disease outbreaks and adverse weather events such as floods and droughts. Risk management in agriculture is now an essential tool for farmers to anticipate, avoid and react to shocks.

Experts feel that in this scenario, the government, both the national and the states, can increase the funds being spent for improvement of irrigation facilities and also provide loans for purchasing high quality fertilisers and seeds. The storage and transport facilities can also be bettered –local banks can also play a critical role in this regard by providing loans at more convenient rates. Indian government has taken some constructive steps to address these problems. A report by the Planning Commission, however, states that employment may recede thanks to better productivity.

Few bills and schemes are;

The Agricultural Bio Security Bill, 2013: provides for establishment of an authority for prevention, control, eradication and management of pests and diseases of plants and animals and unwanted organisms for ensuring agricultural biosecurity. And also to meet international obligations of India for facilitating imports and exports of plants, plant products, animals, animal products, aquatic organisms and regulation of agriculturally important micro organisms and for matters connected therewith or incidental thereto.

The Minimum Support Prices (MSP): This was announced for the first time in the year 1966- 67 by the Government of India. Since then, the MSP regime has been expanded to many crops. As per government report 2013, the MSP covers 25 crops.

Activities Undertaken for Betterment of this sector

• Division wise programmes and schemes
• Agriculture census
• Agricultural marketing
• Cooperation
• Credit
• Crops
• Drought management
• Economic administration
• Extension
• Horticulture
• Information technology
• Integrated nutrient management
• Macro management
• Mechanisation and technology
• Natural resource management
• Oilseeds
• Plan coordination
• Policy
• Plant protection
• Rastriya krishi vikas yojana
• Rainfed farming system
• Seeds
• Technology mission on oilseeds, pulses and maize

National Food Security Mission (NFSM):

is a Central Scheme launched in 2007 to increase production and productivity of wheat, rice and pulses on a sustainable basis so as to ensure food security of the country.

Seed Village Programme: aims at upgrading the quality of farm seeds. The government has covered about 64,000 villages under this component since inception in 2005-06. Under this, a **Seed Bank** will be setup in every village starting from 1999-2000. The core idea is to meet the demand of seeds in the country.

Integrated Dairy Development Project' (IDDP): There were some areas in the country, which remained untouched by the Operation Flood and its effects. This programme was launched in 1993-94 on 100% grant-in-aid basis.

National Project for Cattle

and Buffalo Breeding (NPCBB'): Genetic improvement in bovines is a long-term activity and Government initiated a major programme in October 2000. The Project envisages genetic up-gradation on priority basis. The project also has its focus on the development and conservation of important indigenous breeds. Apart from these there are many other programmes, schemes and bills like National Mission on Sustainable Agriculture, National Dairy Plan, Nutrient Based Subsidy Scheme, Command Area Development Programme, Drought Prone Area Programme, Price stabilisation and Fund Scheme, High Yielding Variety Programme, Agro –Economic Research Scheme, Major, Medium and Minor Irrigation Schemes, Seed Crop Insurance, Central Herd Registration Scheme etc.

Source: <http://business.mapsofindia.com/sectors/#sthash.8CzO7Ii.dpuf> , <https://www.cbd.int/undb/media/factsheets/undb-factsheets-en-web.pdf>

Difference Between Three Sectors in India

-Punithkumar L. M.

Indian economy is classified into three sectors viz, Primary sector, Secondary sector and Tertiary sector. Agriculture, forestry, pasturing, mining, fishing encompasses primary activities as their products are essential or vital for human beings. The following table shows the difference between primary, secondary and tertiary sector in India.

Primary Sector	Secondary Sector	Tertiary Sector/Service Sector
Primary sector includes those activities which lead to the production of goods by utilisation of natural resources	Secondary sector includes those activities, which result in transformation of natural products into other forms by manufacturing	Tertiary sector includes those activities that help in the development of the primary & secondary sectors by supporting the production process
Primary sector includes Agriculture, forestry, pasturing, mining, fisheries	Secondary sector includes Manufacturing industries, trade and commerce, transport and communication	In the Tertiary / Service sector, all types of services are included. These are trade, repair, hotels and restaurants, transport, storage, communication & services related to broadcasting, Financial, real estate etc.
Employment generation in 2009-10 was 52.9, but it was decreased compared to 2004-05 (59.9%).	Employment generation in 2009-10 was 22.7, it increased from 2004-05 (16.4%)	Employment generation in 2009-10 was 24.4...more than 2004-05 (23.7%).
Total production of agriculture sector is \$366.92 billion in 2014.	In Industry sector is \$495.62 billion in 2014.	In Tertiary sector \$1185.79 billion in 2014.
At 2011-12 prices, GDP composition of Agriculture & allied sector was 16.11%*.	At 2011-12 prices, GDP composition of Industry sector was 31.37%*.	At 2011-12 prices, GDP composition of Tertiary Sector was 52.52%*.
Contribution of Agriculture sector in Indian economy is much higher than world's average (6.1%) in 2014.	Contribution of Industry sector is lower than world's average 30.5% for Industry sector in 2014.	Contribution of Services sector is lower than world's average 63.5% for Services sector in 2014.
At 2011-12 prices GVA (Gross Value Added) growth rates of Agriculture & allied sector are 0.23% in 2014.	At 2011-12 prices GVA (Gross Value Added) growth rates of Industry sector 6.12% in 2014.	At 2011-12 prices GVA (Gross Value Added) growth rates of Tertiary sector 10.16% in 2014.
At current prices, growth rate of Agriculture & allied sector was (4.43%),	At current prices, growth rate of Industrial sector was (7.67%)	At current prices, growth rate of Service sector was (13.81%).

*According to CIA Facebook, sector wise Indian GDP composition in 2014

Sources: NSSO 61st and 66th Round Survey (2009-10); Working Group on Twelfth Plan - Employment, Planning & Policy Databook for PC; 22nd December, 2014

Theories Explaining the Shift of Services Between Sectors

-Gayathri .R

Allan Fisher (1935) and Colin Clark (1940) independent of each other proposed the three-sector hypothesis according to which, in the course of economic progress, employment will first shift from agriculture to manufacturing, and then to services sector. In his work 'The Conditions of Economic Progress', Clark opines that consumer demand will shift to services because the demand for manufacturing goods will be saturated and labor will subsequently move to the service sector. While emphasising the importance of demand shifts to services, Clark recognises that differences in productivity growth is the other major force behind employment shifts. His argument is that labor will be reallocated from manufacturing industries, which experience high rates of productivity growth but stagnating demand, to services, which experience lower rates of productivity growth but rising demand. Clark's assumption is based on detailed empirical data from a large number of countries that include not only employment but also

aggregate expenditure figures.

Jean Fourastié also predicted that the low rate of productivity growth in services, combined with a shift in demand to services, would be the great hope for 20th century employment. Like Fisher and Clark, Fourastié argued that, in the process of economic development, employment would first shift from agricultural production to manufacturing and then to services.

According to Baumol's model, the share of service sector employment is larger in high-income countries, and grows with rising income, because of the low productivity level of the service sector (in the cross section), combined with its low productivity growth from a longitudinal perspective. In other words, Baumol explains the expansion of service employment in terms of a productivity differential, a constant share of services in real output, and rising income (higher income in crosscountry studies).

Fuchs analyses causes of the slower productivity growth in services as

compared to manufacturing. He estimates that service sector productivity growth lags behind manufacturing

productivity growth mainly because skill-upgrading has been less pronounced in services, although this cannot fully explain the productivity growth differential between services and manufacturing. Fuchs' study confirms Baumol's claim that the shift to services is largely the result of productivity differentials, and that demand shifts are insufficient to explain the phenomenon of growing employment in service industries.

In short, the analysis of the five classics gives an idea towards the expansion of service industry employment which may be the result of:

- ◆ . A shift in the structure of final demand from goods to services;
- ◆ . Changes in the inter-industry division of labor, favoring specialised service activities rising;
- ◆ . Inter-industry productivity differentials.

Source: The Shift to Services by Ronald Schettkat and Lara Yocarini, December 2003.

Revolutions in Primary Sectors

- Deepa T.M

India has always been an agro-based economy. The primary sector in India contributes to 16.95% of our GDP. India is world leader in production of milk and is the second largest producer of wheat, sugar, freshwater fishes and groundnuts. It is a major producer of tea, cashew, sugar, ginger, turmeric and black pepper. The Indian agricultural sector achieved this remarkable feat because of several simultaneous revolutions that were initiated by the government of India.

Green Revolution : This increased the agriculture yields due to the use of high-yielding varieties of seeds, modifying farm equipment, and substantially increase in use of chemical fertilisers. The revolution in India is traced to 1967/68 with major focus on Wheat, which was later extended to other crops. This took India towards fuelling wheat self-sufficiency.

White Revolution: Operation Flood (1970)

popularly known as white revolution was aimed at increasing milk production. This made India a leader in milk production surpassing USA. National Dairy Development Board (NDDB) realised this by organising dairy development through co-operative societies.

Blue Revolution: Blue Revolution aimed at increase in the production of fish and marine products. The Blue Revolution in India was started in 1970 during the Fifth Five-Year Plan when the Central Government sponsored the Fish Farmers Development Agency (FFDA). Subsequently, the Brakish Water Fish Farms Development Agency was set up to develop aquaculture. The Blue Revolution has brought improvement in aquaculture by adopting new techniques of fish breeding, fish rearing, fish marketing, and fish export.

(continued page-8)

Karnataka 2nd Largest Milk Producer in the Country

- Venugopal Gowda M.K.

Indian milk producers have transformed dairying from stagnation to one of world's leader. Milk Production in India has increased manifold and in the last financial year, the total milk production in the country crossed the mark of 140 Million Tonnes.

Karnataka State is the second largest producer of milk in the cooperative sector after Gujarat, and the daily procurement by the Karnataka Milk Federation is about 46 lakh litres. It is estimated that the total daily milk production, including private dairies', cooperative sector and federation is around 1.2 crore litres a day, and further investments in the sector could boost milk production in Karnataka.

Dairy sector is the largest contributor to the national agriculture Gross Domestic Product (GDP). In terms of output, milk is at present the single largest GDP contributor among primary sector. Around 46 % of the milk is consumed in the form of liquid milk, 47% as traditional dairy products like ghee, butter, yogurt and *paneer* and 7% as Western dairy products cheese, along with a cornucopia of flavoured milks, ice creams, Ultra High Temperature (UHT) processed milk and shredded and liquid cheese is making the sector an attractive sector for growth.

The table reveals that Uttar Pradesh holds first place in the production of buffalo milk and Tamil Nadu has been the biggest contributor in the generation of per capita in production of cow's milk. Gujarat, Andhra Pradesh, Maharashtra and Karnataka are also among the major contributors to the per capita of milk production. However, seven sister states of eastern India, union territories and other states are very poor contributors of both cow and buffalo milk.

The dairy industry in India at present is estimated to be about 130 million tonnes and is expected to grow at 4-5% per annum. The projected value of the industry as per the Open Government Data (OGD) Platform is about Rs. 500,000 crore. The leading dairies in country are Gujarat Cooperative (*Amul*), Karnataka Milk Federation (KMF- *Nandini*), *Mahanand Dairy (Mahanand)*, Tamil Nadu Co-operative Milk Producers' Federation Limited (*Aavin*), Heritage, *Nilgiri Dairy Farm Pvt Ltd*, Hatsun with *Arokya* brand, *Cavinkare Dairy*, GRB Dairy, Cream Line Dairy and *Parag Milk Foods, Tirumala Milk Products, Gokul and Sridevi Milk Products*. There are more than 550 plants in the country with about 175 in the north, about 50 in east about 120 in south and west, accounting for more than 200. *Mulkanoor Women's Mutually Aided Milk Producers*

Per capita availability of milk during 2008-09 to 2012-13

Sl. No.	States/UTs	Cow Milk	Buffalo Milk
1	Andhra Pradesh	3377	8710
2	Arunachal Pradesh	22	NA
3	Assam	658	117
4	Bihar	3661	2805
5	Chhattisgarh	701	368
6	Goa	42	18
7	Gujarat	3848	5727
8	Haryana	998	5596
9	Himachal Pradesh	680	390
10	Jammu and Kashmir	1204	317
11	Jharkhand	1017	648
12	Karnataka	3715	1675
13	Kerala	2582	27
14	Madhya Pradesh	3589	4041
15	Maharashtra	4605	3571
16	Manipur	67	12
17	Meghalaya	78	2
18	Mizoram	14	0.01
19	Nagaland	74	4
20	Odisha	1477	241
21	Punjab	3074	6417
22	Rajasthan	4972	6901
23	Sikkim #	45	0.2
24	Tamil Nadu	6189	779
25	Tripura	106	2
26	Uttar Pradesh	5837	15549
27	Uttarakhand	638	779
28	West Bengal	4303	223
29	Andaman and Nicobar Islands	19	4
30	Chandigarh	14	31
31	D.and N. Haveli	9	2
32	Daman and Diu	1	1
33	Delhi	109	393
34	Lakshadweep	1.7	0
35	Puducherry	44	2
India	All India	57770	65352

Cooperative Union in *Bheemdevarapally mandal* of *Karimnagar district*, Andhra Pradesh is the first women's co-operative in the country.

Source: Open Government Data (OGD) Platform India

Revolutions in ...

Continued from page-5

Silver Revolution: The silver revolution refers to the period in which the production of eggs was tremendously increased; it was done by the help of medical science and more protein rich food for the hens. At present, more than three million people are directly or indirectly employed in poultry farming.

Yellow Revolution: The yellow revolution refers to increased output in oil seeds. The growth, development and adoption of new varieties of oilseeds and complementary technologies nearly doubled oilseeds production from 12.6 mt in 1987-88 to 24.4 mt in 1996-97, catalysed by technology brought about the Yellow Revolution.

Red Revolution: Red Revolution is a term used to denote the technological revolutions in meat and tomato Production.

Pink Revolution: Refers to increased production in onion, prawn and pharmaceuticals. The pink revolution in recent times also refers to the meat and poultry-processing sector of India.

Other important revolutions related to primary sector in India are;

- ◆.Black Revolution - Petroleum Production
- ◆.Brown Revolution - Leather/non-conventional/Cocoa production
- ◆.Golden Fiber Revolution - Jute Production
- ◆.Golden Revolution - Fruits/Overall Horticulture development/Honey Production
- ◆.Grey Revolution - Fertiliser
- ◆.Round Revolution – Potato
- ◆.Silver Fiber Revolution – Cotton

Source: <http://www.viis.in/sites/default/files/files/Hanna%20Nathanson%20The%20GRI.pdf>, <http://www.vajiramandravi.in/blue-revolution-in-india.html>

Role and Importance...

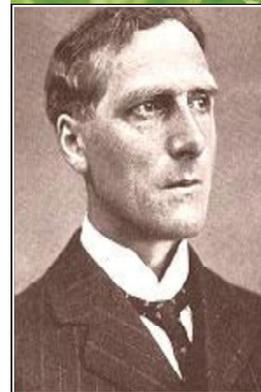
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goods, and total expansion of the economy.

According to India Skills Report 2015, only 34% of the population were employable which decreased from the year 2013 which was at 37.5 %. If India seeks to attain holistic development and come out of vicious circle of poverty then, it must take effective steps to convert unskilled labourers to skilled labourers and train farmers about modern techniques of farming.

Since, it is important for all sectors to function healthy it becomes crucial to enhance the capacity of the primary sector to generate sustainable quality and wherever need be, suitable changes to enhance potential should be introduced.

Source: Kamat, Sameer (2015), *Indian Economy in a nutshell – History, Present and Future* retrieved from <http://www.mbacrystalball.com/>, *India Skill Report, 2015*



The discovery of agriculture was the first big step toward a civilized life.

— Arthur Keith —

University with Potential for Excellence of University Grants Commission was awarded to the University of Mysore in the disciplines of Science and Social Science. In Social Science, the focus area of study is **‘Media and Social Development: A Case Study of Karnataka’**. The **Newsletter ABHYUDAYA** is an initiative to create awareness in the area of media and social development by encouraging Project Fellows to submit contributions in interdisciplinary areas of social sciences.

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