

# AN ANALYSIS OF AGRICULTURE SECTOR OF INCLUSIVE GROWTH IN INDIA

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## Abstract

Agriculture remains the dominant supporter of Indian populace. The thriving industry and service sectors depend on the agricultural sector for their development. The inter-linkage among the three sectors could not be undermined at any cost. It is the massive absorbent of labour force even though the disguised unemployment exists in varied magnitude. The share of agriculture to the GDP has come down from 57.7% in 1950-51 to 32.2% in 1990-91 at the time of liberalization, 24.6% in 2000-2001, 15.7% in 2009-2010 and little more than 17%. In the post-independence era, stagnant production, low productivity, traditional technology, and poor rural infrastructure were the major challenges for the Government. India is principally an agricultural country. The agriculture sector accounts for about 18.0% of the GDP and employs 52% of the total workforce. There is a continuous steady decline in its contribution towards the GDP, and the agriculture sector is losing its shine and anchor position in Indian economy. The problems with which the Indian agricultural scenario is burdened in present times are many but this in no way undermines the importance of the sector, and the role it can play in the holistic and inclusive growth

of the country. Agriculture is fundamental for sustenance of an economy as is food for a human being.

## I. INTRODUCTION

Agriculture plays an essential role in the process of economic development of less developed countries like India. The Indian Agricultural development is a very important role of inclusive growth approach. In the vision of Inclusive growth is an all surrounding conception, which include aspect, such as agriculture development, employment generation, poverty reduction and reduced area discrimination. Agriculture development may be deemed as the critical aspect of inclusive growth and proves to be a smooth path for achieving social and economic inclusion.

Indian economy is growing at a phenomenal rate. It is far from reaching its true potential. The country remains shackled in corruption, red tape, age old social barriers and a puzzling lack of transparency. Growth is not uniform across sectors; and large cross-sections of the populace remain outside its purview. Several social, political and economic factors need to be tackled for sustaining a high rate of growth, as well as to make this growth inclusive.

Elimination of child labour, women empowerment, removal of caste barriers and an improvement in work culture are just a few of the



# TREND AND GROWTH PATTERN OF ROAD INFRASTRUCTURE IN INDIA

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## Abstract

*The nation streets are assuming a critical part in inspiring the social, financial and social existence of the general population; access to better street system to provincial territories considerably upgrades the financial status and enhances the living state of rustic populace. There is a between related connection amongst streets and agrarian creation, and furthermore, the effect of such upgraded horticultural generation on pay, expectation for everyday comforts, states of mind and different exercises of the country individuals.*

## I. INTRODUCTION

Framework is one of the essential factors that drive the financial development of a nation. Great foundation is the fundamental necessity for any generation procedure to work productively. Framework itself may not be the piece of the generation procedure, but rather is essential for the administrations it gives. It is a critical contribution to the generation procedure and raises the profitability of different parts. Foundation associates products to the business sectors, specialists to industry, individuals to administrations and the poor in rustic zones to urban development focuses. Foundation brings down expenses, extends showcases and encourages exchange. Along these lines, foundation gives

benefits that help financial development by expanding the efficiency of work and capital in this

way decreasing the expenses of generation and raising productivity, creation, pay and business.

The need of a legitimate street arrange for the financial improvement of rustic India and subsequently the entire nation was seen very ahead of schedule in India. The primary street improvement design of 1943-61, prominently known as Nagpur Plan, took a gander at the street needs of the nation on a long haul premise, and out of the blue characterized the street framework into a useful order containing National Highways (NH), State Highways (SH), Major region streets (MDR), Other District streets (ODR) and Village streets (VR). The last two classes of streets frame the rustic street framework in the nation. The third street improvement design known as Lucknow Plan (1981-2001), assessed rustic street prerequisite for the nation and had spelt out different measures to create country streets. This arrangement proposed a few methodologies for rustic street advancement. These methodologies incorporate arrangement of long haul end-all strategy for provincial streets; organize development in perspective of the low level of movement in the underlying phase of advancement of a country street; coordination of rustic street improvement design with the other provincial improvement programs.

## Review of Literature

Various examinations have built up the positive connection between rustic network and advancement; country streets give crucial



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# A STUDY ON SUGARCANE PRODUCTION IN INDIA

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## Abstract

*India is the largest producer and consumer of sugar in the World. About 45 million sugarcane farmers, their dependents and a large agricultural force, constituting 7.5 percent of the rural population, are involved in sugarcane cultivation, harvesting and ancillary activities. This enabled India to become the largest producer of sugarcane and sugar in the world leaving the other major producers Brazil and Cuba. The major sugarcane crop growing states in India are Uttar Pradesh, Bihar, Assam, Haryana, Gujarat, Maharashtra, Karnataka and Tamil Nadu. The sugarcane cultivation and sugar industry in India plays a vital role towards socio-economic development in the rural areas by mobilizing rural resources and generating higher income and employment opportunities. The major problem of sugarcane in India is based on monsoon and water supply. The cyclical nature in sugar production has caused distortions in the export of sugar in India. This study analyzes the state-wise production and reasons for the changes in production of sugarcane in the time period of 2000-2010.*

## I. INTRODUCTION

India is the second largest sugarcane producing country after Brazil. Largest sugarcane producing state of India is Uttar Pradesh, which has 38.61% share in overall sugarcane production as per 2013-14. The second and third largest states are Maharashtra and Karnataka. Other main sugarcane producing states of India include Bihar, Assam, Haryana, Gujarat, Andhra Pradesh and Tamil Nadu. In most parts of the world, sugar is an important part of the human diet, making food more palatable and providing food energy. After cereals and vegetable oils, sugar derived from sugarcane and beet provided more kilocalories per capita per day on average than other food groups. According to the FAO, an average of 24 kilograms (53 lb) of sugar, equivalent to over 260 food calories per day, was consumed annually per person of all ages in the world in 1999. Even with rising human populations, sugar consumption is

expected to increase to 25.1 kilograms (55 lb) per person per year by 2015.

Sugar production in India has been cyclic in nature. An estimated 75 per cent of the population depends on the sector either directly or indirectly. Sugar industry is also expected to develop further, thereby offering more employment opportunities to a number of semi-skilled and skilled workers in the rural areas of the country thereby contributing towards their development. The sugar industry also supports diversified ancillary activities and skills that support the local economy. The dependent population creates substantial demand for local goods and services. The sector also has major social and economic impact on the nation as it is a green industry and is largely self-sufficient in energy needs through utilization of bagasse for generating electricity and steam. In fact, the sugar industry



# **LINKAGES BETWEEN TRADE, DEVELOPMENT AND POVERTY REDUCTION**

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## **Abstract**

*Development may mean different things to different people. In strictly economic terms development has traditionally meant the capacity of national economy, who initial economic conditions has been more or less static for a long time to generate and sustain an increase in its Gross National Income at rates of 5% to 7% or more. The experience of 1950s and 1960s, when may developing nations did reach their economic growth targets but the levels of living of the masses of people remained for the most part unchanged signaled that something was very wrong with this narrow definitions of development. An increasing number of economists and policy makers clamoured for more direct attacks, on widespread absolute poverty, increasingly inequitable distribution and rising unemployment. In short, during the 1970s economic development came to be redefined in terms of reduction or elimination of poverty, inequality and unemployment within the context of growing economy. Trade between nations has increased considerably since 1980s. Since the late eighties, developing countries have progressively integrated global markets through unilateral broad structural economic reforms bilateral free-trade agreements, and multiparty trade negotiations. From a developmental perspective, the degree of tariff liberalization has not coincided with proportional*

*reductions in overall poverty. Although several factors beyond trade policy appear to have contributed to this divergence, it is also true that the links between trade openness and poverty are not well understood, thus making it particularly difficult design and implement trade-induced pro-poor public policies.*

## **I. INTRODUCTION**

In India from independence in 1947 and until the dawn of 1990s, the trade policy of India was heavily influenced by the "Swadeshi" i.e. self sufficiency mentality and the "license raj" system of restrictions of production and imports. First generation of reforms took place between 1991 to year 1996. It aimed at liberalizing trade- led to a reduction of imports tariffs, the elimination of quantitative restrictions exchange rate reforms and deregulation of industries. It resulted in a yearly growth rate of around 7% compared with 3% before the reforms. Now, India is a member of all the major multilateral economic forum be it International Monetary Fund (IMF) the World Bank and the Asian Development Bank (ADB). India is even a founding member of GATT and the World Trade Organization (WTO) India enjoys different types of trade agreements with many countries. Trade agreements can be bilateral or multilateral that is the agreements is between two states or it can be between can be more than two states or countries. For the majority of countries global trade is synchronized by



# LINKAGES BETWEEN TRADE, DEVELOPMENT AND POVERTY REDUCTION

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## Abstract

Development may mean different things to different people. In strictly economic terms development has traditionally meant the capacity of national economy, who initial economic conditions has been more or less static for a long time to generate and sustain an increase in its Gross National Income at rates of 5% to 7% or more. The experience of 1950s and 1960s, when many developing nations did reach their economic growth targets but the levels of living of the masses of people remained for the most part unchanged signaled that something was very wrong with this narrow definitions of development. An increasing number of economists and policy makers clamoured for more direct attacks on widespread absolute poverty, increasingly inequitable distribution and rising unemployment. In short, during the 1970s economic development came to be redefined in terms of reduction or elimination of poverty, inequality and unemployment within the context of growing economy. Trade between nations has increased considerably since 1980s. Since the late eighties, developing countries have progressively integrated global markets through unilateral broad structural economic reforms bilateral free-trade agreements, and multiparty trade negotiations. From a developmental perspective, the degree of tariff liberalization has not coincided with proportional

reductions in overall poverty. Although several factors beyond trade policy appear to have contributed to this divergence, it is also true that the links between trade openness and poverty are not well understood, thus making it particularly difficult design and implement trade-induced pro-poor public policies.

## I. INTRODUCTION

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# INFRASTRUCTURE AND ECONOMY GROWTH IN INDIA

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## Abstract

*In this paper examine the recent scenario of infrastructure has play a vital role of essential for economic development and is considered as the backbone of an economy it is basic supporting instrument for all sectors of the economy infrastructure instrument to reduce the disparities between demand and supply. Indian infrastructure define infrastructure as a physical framework of facilities through which goods and services are provided to the public. Infrastructure can deliver point's economic growth poverty alleviation and environment sustainability. Education and health are the two important social infrastructure and social infrastructure, communication, electricity, or the economic irrigation, water supply and sanitation are recognized as a physical infrastructure otherwise called economic infrastructure, social infrastructure is an instrument to promote the human capital and physical infrastructure is pertinent to promote the economic activates.*

## I. INTRODUCTION

India became the second faster growing large economy two decades next only to china the decadal growth rate of GDP has significantly increased during the liberalized era viz between 1980-81 and 1990-91 the which during 1990-91 to 2000-01 and further increased 7.6 per cent in the subsequent in fracture activity field as infrastructure factor to ladder in the economic development in India development in particular physical infrastructure development has

been paid a considerable attention during 2000s, hence it is that the both public as well as private sectors play a pivotal role to proved a god infrastructure facility.

## Infrastructure Development in India

In India social and economic performance is significantly high in some status mainly due to providing quality of infrastructure over the period it is obvious that the states which have spent less on development of infrastructure are poor in economic performance .hence, the low-income states received financial support from central government and Public Private Participation (PPP) system. the major state-wise infrastructure consists of 12 indicators and some of the infrastructure indicators are banking, communication, electricity, road transport, irrigation, education and health, the infrastrure index and per capita income (current prices) are given for 1999-00. It observed that Andhra Pradesh, Kerala, Karnataka and Rajasthan improved its infrastructure index ranking whereas Tamil Nadu, Haryana, Gujarath, Madhya Pradesh, Orissa and Uttar Pradesh retained the same ranks in the two points of the year. west Bengal, Punjab, Bihar and Maharashtra found themselves in lower ranks. Absolutes declined in west Bengale. value of index has Punjab Haryana and Bihar between these two points of years.

## Infrastructure Investment - Links to Growth Model

In this section our objective is to examine the effects of infrastructure on overall growth and thereby sustained poverty reduction in the economy.



# AGRICULTURAL PRODUCTION TRENDS IN INDIA: AN OVERVIEW

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## Abstract

*India's agricultural sector is rich world second largest rice and wheat producing country and the export of rice produce in large and diverse. Indian agriculture has one-fifth trade worldwide also the largest producer, consumer and importer of pulses such as pigeon peas, chick peas, mung beans and lentils. However in India today, as in many other mounting countries with a rich agricultural tradition of their own, the words 'improved agriculture' and 'progressive agriculture' have become synonymous with the spread of HYVs grown with ever-increasing doses of chemical fertilizers and pesticides. Wherever the new crop varieties have spread, time-honoured crop rotations, inter-cropping patterns and other important features of traditional agriculture have been harshly uprooted. At the back of this trend, and the official policies which support it, is the belief that traditional agriculture is 'backward' and incapable of meeting the need of increasing population.*

## I. INTRODUCTION

Indian Agriculture has the backbone of Indian economy as of its high share in employment and livelihood formation. India is the second largest producer of food in the world: more than 200 million tons of food grains, 150 million tones of fruits and vegetables, 91 million tonnes of milk, 1.6 million tonnes of poultry meat, 417 million livestock, and 6.05 million tonnes of fish and fish products. The Indian agriculture has made great strides over the

years. The food grain production has increased more than fourfold - from 51 million tonnes in 1950-51 to 212 million tonnes during 2003-04 growing at an annual average rate of more than 2.4 percent per annum. India accounts for only about 2.4 % of the world's geographical area and 4 % of its water resources, but has to support about 17 % of the world's human population and 15 % of the livestock. Agriculture is an important sector of the Indian economy, accounting for 14% of the nation's GDP, about 11% of its exports, about half of the population still relies on agriculture as its principal source of income and it is a source of raw material for a large number of industries. Accelerating the growth of agriculture production is therefore necessary not only to achieve an overall GDP target of 8 per cent during the 12th Plan and meet the rising demand for food, but also to increase incomes of those dependent on agriculture to ensure inclusiveness.

The share of agriculture in the Gross Domestic Product (GDP) has registered a steady decline yet this sector provides direct employment to more than fifty percent of total workforce in the country and a large proportion of the population depends upon agro-based industries and trade of agriculture products. It is also an important source of raw material and demand for many industrial products, particularly fertilizers pesticides, agricultural implements and a variety of consumer goods contribute significantly to the exports. However, the growth of agriculture over a period of time remained lower than the growth in non-agriculture sectors.



# PERFORMANCE OF RURAL AGRICULTURAL FINANCE – AN ANALYSIS

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## Abstract

*Agriculture is the backbone of the Indian economy. Although the sector accounts for 15 percent of the national GDP, as well as roughly 11 percent of its exports, half the population still relies on agriculture as the most important source of income, and agriculture is a source of raw material for a large number of domestic industries. India ranks second in total farm output on a global level. During 2013-14 the total production of cereals amounted to 245.6 million tonnes. The horticulture production reached 277.4 million tonnes in 2013-14, representing a 66.2 percent increase from 2004-05. The dairy sector is one of the major livelihood activities in rural India, and a significant contributor to the country's agricultural economy. With an estimated 139.7 million tonnes of production, the country is responsible for approximately 17 percent of global milk production, the majority of which is consumed domestically. Milk production has increased by approximately 51 percent during the last 10 years. By keeping a sustained growth rate, the production is expected to reach 180 million tonnes by 2020-21.*

## I. INTRODUCTION

Indian agriculture finance is a most important of development and technologies for sustainable agriculture cultivations in India. The Indian agriculture cultivation technical inputs can be purchased and used has farmers only if the sufficient

funds available with the Indian farmers. Most of the time farmers suffer from the problem of inadequate financial state. This situation leads to borrowing from an easy and comfortable source. In the Indian at farmers borrow the agriculture credit has heavily burdened of debt in the rural farmers.

Agricultural finance has liquidity services credit provides to farm of borrowers. It is also considered as the study of those financial intermediaries who provide loan to agriculture and the financial intermediaries obtain their loanable funds of farmers.

Agricultural production in this country depends upon millions of small farmers. The farming community must be kept informed about the various sources of agriculture finance. Agricultural finance possesses its usefulness to the farmers, lenders and extension workers. The knowledge of lending institutions, their legal and regulatory environment helps in selecting the appropriate lender who can adequately provide the credit with terms and related services needed to finance the farm business.

## Statement of the Problems

Agriculture plays a crucial role in the development of the Indian economy. It accounts for about 19 per cent of GDP and about two thirds of the population is dependent on this sector. Agricultural finance is a subset of rural finance dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing. Financial service providers face distinct challenges when dealing with this sector.



# MEASUREMENT OF POVERTY AND ENVIRONMENT SOCIAL INEQUALITY

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## Abstract

*The regional disparities within a country is increasing become a matter of great concern for policy makers in most of the developing countries. It is argued by the economists the progress of the nation depends in a real sense on the development of weaker states. The large and persistent disparities in economic development and well being of different states are viewed many a times as an annoying source for political tension and a danger to national integrity and strength. The problem of regional inequalities associated with development is universal and not new. In developed economies, the problem is confined to a few depressed areas and areas and areas which for geographical and others reasons, are found to be lagging in the process of development but in developing countries, the size and nature of problem is different in the sense that there are only a few highly developed areas in the midst of large areas which are underdeveloped. Reduction in regional inequalities and accelerated economic growth are complementary to each other.*

## I. INTRODUCTION

The expansion of health and education and the inequalities prevailing therein. According to him if machinery does nothing to produce production and it is quite in centric to value its existence, whereas being educated or being in good health could have a higher value even if these two parameters do nothing to increase the production. He has been consistently arguing that the goal of the development is the

expansion of human capabilities that give people the freedom to do things that they value. It is the lives that people lead rather than the commodity that they consume is of intrinsic importance. Why is it so important to close the gaps in the social sector and to remove the enormous disparities? Sen's argument is that it that is makes the world more secure and fair and while choosing and proceeding on the path of development, plural nature of human insecurity and its diverse manifestation must be recognized because the fruits of economic growth do not automatically expand the social services there is icescape political process.

## Objective

1. To know the study past experience and challenges future generation social sectors
2. To know the study eradication of the poverty level improvement of social dimensions
3. To know basic facilities of the people rural population among the country.

## Methodology

The present study is divided into four sections and focused on interstates analyses. Section deals with why regional disparities appear. The second section deal with social sector inequalities; section III is focused on sen and poverty and in the IV section summary and policy implications of the study is give. The required data for the study are collected from respective census of India Reports of Center for Monitoring Indian Economy, Statistical Outline of India, World Development Report human Development report Etc.



# THE STRUCTURE OF GROWTH AND POVERTY

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## Abstract

*India will grow between 6to8 percent annually and will become the third or fifth largest economy of the world in this period.(for a model based on which these projections are derived after some modifications taking into account recent experience, see pandit,2004 and alagh,2000).The investment rate and productivity growth will be the drivers. For example, around a third of India's GDP growth in 1997/2003 is technology driven. Trade will also matter –will become around 4 percent of world trade. First in most recognizable way, the Eleventh plan brings a shift, the way we look at economic growth. In its own way the plan emphasized not only on growth. It recognized that that increase in aggregate income is critical –and an extremely important one-but its distribution in favors of poor is equally important for inclusive development and growth to be poverty reducing. Second aspect is that, in more explicit way it also recognized that poor.*

## I. INTRODUCTION

India is not a homogeneous category but differs in terms of economic, social and religious belonging. And therefore, while poor as an economic category are assets less, unemployed, less educated, without necessary skills, ill-health but are also those who suffered from social exclusion and discrimination. Higher growth in GDP,(with the national income growing in the range of 6to 8 percent per annum for over 15 years now) has not accelerated the decline in

poverty. The incidence of poverty among certain marginalized groups, e.g. the Sts, has hardly declined. The absolute number of poor people has declined only marginally (GoL,2009: 1) indicating a weak relationship between economic growth and poverty particularly in the decade of 1990s The Eleventh plan, therefore, singled out 'the type of growth' rather than growth alone, as an important element of inclusive growth strategy. However, to expect the growth to be inclusive is one thing, but to realize it in practice through relevant strategies is another. Whether the gains from income growth will be shared by the poor, would depend not only on the initial condition in terms of poor people's access employment, which in turn is determined by skill and education level, health, non-discriminatory access to credit. It is in this context, the nature of relationship between growth and income distribution bear significance for the speed of poverty reduction. In order to have reasonable idea about the potential of a particular growth process for inclusiveness and poverty reduction, insight into the observed empirical relationship between growth, inequalities and poverty in a specific (Indian) 'economic and social context' is necessary, to develop specific inclusive policies.

## Growth, Inequality and Poverty Linkages: Insights From Literature

There is voluminous literature that provides useful insights on the relationship between economic development and inequality in distribution (and poverty).First systematic statement on this



# **A STUDY ON POVERTY ALLEVIATION IN RURAL INDIA**

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## **Abstract**

*The paper examine the poverty alleviation in rural India at the founding of the new millennium. 260 million people in the country did not have income to right to use a consumption basket which defines the poverty line. Of these, 75 per cent were in the rural areas. India is home to 22 per cent of the world's poor. Such a high incidence of poverty is a matter of concern in view of the fact that poverty eradication has been one of the major objectives of the development planning process. Indeed, poverty is a global issue. Its eradication is considered integral to humanity's quest for sustainable development. Reduction of poverty in India is, therefore, vital for the attainment of international goals.*

## **I. INTRODUCTION**

India is an emerging global super-power joining the elite club of acknowledgement of nuclear powers; and India has child malnutrition rates among the highest in the world. Poverty alleviation has been one of the guiding principles of the planning process in India. The role of economic growth in providing more employment avenues to the population has been clearly recognized. The growth-oriented approach has been reinforced by focusing on specific sectors which provide greater opportunities to the people to participate in the growth process. The various dimensions of poverty relating to health, education and other basic services have been progressively internalized in the planning process. Central and state

governments have considerably enhanced allocations for the provision of education, health, sanitation and other facilities which promote capacity-building and well-being of the poor. Investments in agriculture, area development programmes and afforestation provide avenues for employment and income. Special programmes have been taken up for the welfare of scheduled castes (SCs) and scheduled tribes (STs), the disabled and other vulnerable groups. Antipoverty programmes that seek to transfer assets and skills to people for self-employment, coupled with public works programmes that enable people to cope with transient poverty, are the third strand of the larger anti-poverty strategy. The targetted public distribution system (TPDS) protects the poor from the adverse effects of a rise in prices and ensures food and nutrition security at affordable prices.

## **Inclusive Growth**

The inclusive growth approach takes a longer term perspective as the focus is on productive employment rather than an direct income redistribution as a means of increasing income for excluded groups. The concept of inclusive growth has three dimensions firstly in terms of segments of the economy i.e agriculture, industry, services; second – in terms of sections of population, ex.rural-urban, male-female, children-senior citizens, different social groups categorized on the basis of social hierarchy, viz. forward and Scheduled Caste and Scheduled Tribe; economic status-persons below poverty line, employment based groups like unorganized work



# AN ECONOMIC ANALYSIS OF WOMEN LABOUR IN AGRICULTURE IN INDIA

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## Abstract

*In the country countless of women in developing countries are engaged in agriculture sector. But the Indian Women's contribution vary broadly amongst different region, environmental sub zones, undeveloped system, caste, class and stages in the family phase. The main employment is agriculture, since 70 per cent of the population is concerned in this employment. A lot of women in developing countries are engaged in agriculture. In the country has rural Women form the most important productive work force in the economy of majority of the developing nations as well as India. Agriculture sector employs 4/5th of all cost-effectively active women in the country. 48% of India's self-employed farmers are women. Women's dependence on agricultural wage labour as a source of income has also increased in the regions with the destruction of many household based industries employing mainly women. The agricultural sector is the largest employer of women. Majority of the female workforce (84 per cent) works in rural India. A very large share (73 per cent) of this female workforce toils in the agricultural sector, mostly (96 per cent) in rural areas. In most farming systems, females participate in all phases of agricultural production, although their roles (including decision-making) and control over resources and incomes varies greatly from place to place.*

**Key Words :** *Agriculture, Women Participation, India, Employment..*

## I. INTRODUCTION

India is mainly agricultural country and agriculture plays a vital role in India's economy. As per the Ministry of External Affairs, Government of India, over 58% of the rural households depend on agriculture as their most important means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the GDP. India is the largest producer, consumer and exporter of spices and spice products. For most of the Indian families, agriculture is the most important occupation. As per the data of year 2015, agriculture contributes about 16% to the total GDP and about 14.7% of the total export earnings.

India is a developing country having the second largest arable land in the world. About 60% population of India is depending on agriculture. Because of this only India can survive even during recession period. Therefore, agriculture is a backbone of India. Agriculture contributes in India's national income as well as it helps in generating employment in the country. Only because of the agriculture, India can meet the food demand of ever-increasing population. Agriculture is the main source of sustenance for both developing and under developed countries. Human civilization history shows that the emergence of agriculture was the beginning of settled life. Settlement of nomadic people emerges relationships of family and



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## Abstract

*In the country countless of women in developing countries are engaged in agriculture sector. But the Indian Women's contribution vary broadly amongst different region, environmental sub zones, undeveloped system, caste, class and stages in the family phase. The main employment is agriculture, since 70 per cent of the population is concerned in this employment. A lot of women in developing countries are engaged in agriculture. In the country has rural Women form the most important productive work force in the economy of majority of the developing nations as well as India. Agriculture sector employs 4/5th of all cost-effectively active women in the country. 48% of India's self-employed farmers are women. Women's dependence on agricultural wage labour as a source of income has also increased in the regions with the destruction of many household based industries employing mainly women. The agricultural sector is the largest employer of women. Majority of the female workforce (84 per cent) works in rural India. A very large share (73 per cent) of this female workforce toils in the agricultural sector, mostly (96 per cent) in rural areas. In most farming systems, females participate in all phases of agricultural production, although their roles (including decision-making) and control over resources and incomes varies greatly from place to place.*

*Keywords: Dry Land Crops, Ago System, Area, Production, Productivity.*

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# AGRICULTURAL PERFORMANCE AND INCLUSIVE GROWTH POVERTY ALLEVIATION PROGRAMMES IN RURAL AREAS

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## ABSTRACT

Poverty is mainly concentrated in rural areas. Growth in non-agricultural sectors are increasing but the larger number of people remained as poor in rural area. About 81% of the world poverty reduction in rural areas during 1993-2002 is because of rural development and the remaining is due to migration. The most common features of rural poor are the landless or limited access to land larger family size with higher dependency ratios, lower educational attainment and higher underdevelopment. The major subgroups of the rural poor. Within the above subgroups women-headed households are particularly prone to poverty. During recent times more countries are adopting inclusive growth as the goal of development policy. India, which had poverty reduction as the long run objective of its development strategy over the last fifteen years has recently adopted a new strategy by focusing inclusive growth as a development concept is also being embraced by many development partners of developing countries including bilateral and multilateral aid agencies,

international organizations nongovernment  
organizations and civil society

## I. INTRODUCTION

Growth is essential for sustainable human development and poverty alleviation, but it is insufficient for either of the two. It must be complemented by the special programmes and reallocation of resources to targeted basic social and human expenditure. The developing and donor countries have enough resources for such programmes If only these resources are prudently and efficiently used in the priority areas of human development instead of building arms, excessive policing and other areas of heavy expenditure. Poverty is a disease which sickens the society. As a phenomenon of disease, it needs to be analysed. Agriculture's contribution to poverty reduction is sometimes thought to be small because its relative economic importance usually falls when low-income countries successfully develop. This view is misleading. Strong agricultural growth, particularly increased productivity has been a feature of countries that have successfully reduced poverty. Evidence



# WATER RESOURCE AND SUSTAINABLE DEVELOPMENT IN INDIA

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## I. INTRODUCTION

In recent years the sustainable development and efficient water management is become complex challenges in Indian States. Increasing population, growing urbanization and rapid industrialization combined with the need for raising agricultural production generates competing claims of water. Per capita food supplies have been decreasing for nearly 20 years in India, in part because of shortages of freshwater, cropland, and the concurrent increases in population. Shortages in food suppliers have in part contributed to more than 47 percent of children's exhibit a degree of malnutrition. Major malnourished people in India both iron and protein/calorie deficiencies which results in about 5.6 million deaths each year. Consider that the Indian population currently numbers 1.21 billion with over a 20 million people added each year and it was estimates that approximately 1.56 billion people will be present by 2050. In addition freshwater demand has been increasing exponentially as population and economies grow. Population growth, accompanied by increased water use, will not only severely reduce water availability per person, but stress all biodiversity in the entire global ecosystem (Patel, C.C, 2009). These conflicts are escalating among new industrial agricultural, and urban sectors. Government of Indian and its 11 th Five Year Plan (2007-12) lays down provisions for efficient management of water resources in the country to provide additional irrigation potential of 229.16 thousand hectare and

focus on water harvesting and improving water use efficiency through better maintenance or irrigation system and promoting efficient in judicious, equitable and economic manner of water distribution among the sectors across the states.

### Objective

1. To know the study growing need for new technology for water resource management.
2. To know the study Water agencies should adopt a comprehensive framework which would help guide decisions about developing water resources.
3. To know the study Co-operation for the sustainability of shared water Resources.

### Methodology

The present studies cover and analyzing the institutional changes in water resource management the impact of such change on the state economy. As the study focused on India particularly in Tamil Nadu this paper the research is based on secondary data. The data is taken from different research reports, journals, websites and Various Annual report.

### Water Resource and utilization

Water is part of a larger ecological system. Both the surface water and groundwater resources of the country play a major role in agriculture, hydropower generation, livestock production, industrial activities, forestry fisheries, navigation, recreational activities, etc. Water resources of a country constitute one of its vital assets. A national water resource in India receives annual precipitation of about 4000 billion



# NEOLIBERALS AND RURAL POVERTY IN INDIA STATE HUNGER INDEX: COMPARISON

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## I. INTRODUCTION

India is the largest number hungry people in the world. In the Indian ranks it has 67 out of 112 countries in the Global Hunger Index (GHI) 2010, while it has 2012 GHI (IFPRI) ranks it at 65 among 79 countries. Likewise, malnutrition in India, in particular among children and women, is widespread, acute and even alarming. As per a Global Survey Report released by Save the Children on 19 July 2012, India is ranked at 112 among the 141 nations as regards Child Development Index (CDI). And there are disparities across various sections of the society as well as states. Obviously, poverty is the main cause of hunger and malnutrition, low level of awareness being another major cause. Accordingly, poverty eradication and awareness rising are essential to achieve 'zero hunger and malnutrition' in India. Government has initiated various measures to overcome hunger and malnutrition, but they are not so effectively implemented. CSOs, private sector, professional institutions, some international organizations, and donors are equally concerned and active on these issues. However, there are miles to go and hence coming, staying and working together of all the stakeholders is imperative for rapid progress.

About 68.84% of the population of India is rural, major part of which greatly suffers from poverty hunger and malnutrition. Besides, major part of the

urban population (31.16%) afflicted by poverty hunger and malnutrition is actually rural that has migrated to urban areas and landed in urban slums while exploring employment and income opportunities. As is well known, India is a large and diverse country with disparities across various sections of the population, castes, classes, ethnic groups, gender and age as well as across the states and their constituents. It has a federal structure, comprising 28 states and 07 Union Territories. Further down, it has about 600 districts, 5470 blocks/sub-districts, 2,30,000 Gram Panchayats, 6,40,000 villages and 1.4 million habitations. Similarly, there are 5161 large, medium and small towns in India. It is an uphill task to deliver efficiently and effectively anti-poverty schemes/resources and services to such a large, diverse and dispersed area, especially in a greatly centralised system, which, therefore, needs to be replaced with a well-monitored and well-managed participatory decentralised system already in place in form, but yet to be strengthened with content (functions, funds and functionaries).

## Statement of the Problems

A basic implication of these trends is the necessity to stabilize both food and nonfood prices. This calls for increased interventions in both food and non-food commodities' markets in the form of enhanced procurement and food distribution



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## INFRASTRUCTURE AND ECONOMIC DEVELOPMENT-A CONCEPTUAL CLEARIFICATION

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### Abstract

Infrastructure is amongst the most important contributors to the economy of the State. Social and urban infrastructures are the subset of the infrastructure sector and play a significant role in generating revenue for the economy. The growth and contraction in the sector has a direct correlation with the growth of the State. In the last few years, the sector has emerged as one of the largest employer, providing direct as well indirect employment through 250 ancillary industries that it supports. The real-estate sector as a case in point has a huge multiplier effect and contributes to the overall development of the economy.

### Introduction

India is reportedly the world's largest and most diverse democracy. "The country has seen remarkable social, agricultural, and industrial progress. Life expectancy has doubled and the specter of famine no longer stalks the sub-continent (Hammond, 2003)". On the other hand, India (and the south Asian region as a whole) has the world's worst poverty, the most widespread malnutrition, and the most extensive use of child labor (Hammond, 2003).

The opening chapter of The Economic Way of thinking discusses the importance of social cooperation. It states that we "depend on processes of coordination for far more than we usually think of as economic goods". It further goes on to explain that economic way of thinking has a lot to do with the notion that everything depends on what people believe to be benefits and costs and the relative value they place on those benefits and costs (Heyne, Boettke, & Prychitko, 2003). That IS the economic way of thinking. Likewise, social infrastructure plays a major role in economics. The social infrastructure of India will directly impact how Staples is able to operate in India.

### Meaning of Social Infrastructure

Infrastructure can broadly be defined as long-term physical assets that operate in markets with high barriers to entry and enable the provision of goods and services.

Social Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services. As set out in the table below, examples of Social Infrastructure Assets include schools, universities, hospitals, prisons and community housing. Social Infrastructure does not typically extend to the provision of social services, such as the provision of teachers at a school or custodial services at a prison.

In contrast, economic infrastructure supports economic activity and is often characterised by 'user-pays' or demand-based revenue streams (such as tolls on toll roads or landing fees for an airport). In New Zealand, Social Infrastructure is almost exclusively provided by a central or local government (or related entities such as district health boards and universities). The development and provision of Social Infrastructure is well suited to PPPs, which have been used successfully to deliver public infrastructure since the early 1990s in the United Kingdom<sup>11</sup>, and more recently in Australia.

### India's Macro-Economic Outlook 2020

Over the years, the Indian economy has gone through phases of remarkable transformation. After witnessing the Hindu rate of growth for the first three decades post-independence, the Indian economy got its first "big push" with the first phase of economic reforms in 1980s. The economy recorded annual average growth of around 5.6% during this decade, with significant decline in population below the poverty line from more than 50% in late 1970s to below 40% in late 1980s. The second major push came post 1991, following liberalisation of the economy, which helped it to move on to a sustainable higher growth trajectory. India's growth performance was even more impressive in the subsequent decade, with per capita income (at constant prices) rising to ₹38,408 in FY10, versus ₹16,065 in FY91. Although India has made significant economic progress as the result of reforms over the years, it still has a long distance to go before it is able to make abject poverty a history.

India has been increasingly looked at as an engine that will drive global growth in future. This is reason enough to look at the economic prospects of India over the current decade. Our forecasts indicate that the likelihood of India sustaining 9.0% growth during the current decade is very high. According to D&B's estimate, in the journey during the current decade as India traverses a high growth path, it would eventually surpass Japan's GDP level (as in 2010 at current US\$) by FY20. The concomitant rise in income levels coupled with increasing young working-age population will work towards increasing the





## INFRASTRUCTURE AND ECONOMIC DEVELOPMENT-A CONCEPTUAL CLEARIFICATION

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Infrastructure can broadly be defined as long-term physical assets that operate in markets with high barriers to entry and enable the provision of goods and services.

Social Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services. As set out in the table below, examples of Social Infrastructure Assets include schools, universities, hospitals, prisons and community housing. Social Infrastructure does not typically extend to the provision of social services, such as the provision of teachers at a school or custodial services at a prison.

In contrast, economic infrastructure supports economic activity and is often characterised by 'user-pays' or demand-based revenue streams (such as tolls on toll roads or landing fees for an airport). In New Zealand, Social Infrastructure is almost exclusively provided by a central or local government (or related entities such as district health boards and universities). The development and provision of Social Infrastructure is well suited to PPPs, which have been used successfully to deliver public infrastructure since the early 1990s in the United Kingdom<sup>11</sup>, and more recently in Australia.

### India's Macro-Economic Outlook 2020

Over the years, the Indian economy has gone through phases of remarkable transformation. After witnessing the Hindu rate of growth for the first three decades post-independence, the Indian economy got its first "big push" with the first phase of economic reforms in 1980s. The economy recorded annual average growth of around 5.6% during this decade, with significant decline in population below the poverty line from more than 50% in late 1970s to below 40% in late 1980s. The second major push came post 1991, following liberalisation of the economy, which helped it to move on to a sustainable higher growth trajectory. India's growth performance was even more impressive in the subsequent decade, with per capita income (at constant prices) rising to ₹38,408 in FY10, versus ₹16,065 in FY91. Although India has made significant economic progress as the result of reforms over the years, it still has a long distance to go before it is able to make abject poverty a history.

India has been increasingly looked at as an engine that will drive global growth in future. This is reason enough to look at the economic prospects of India over the current decade. Our forecasts indicate that the likelihood of India sustaining 9.0% growth during the current decade is very high. According to D&B's estimate, in the journey during the current decade as India traverses a high growth path, it would eventually surpass Japan's GDP level (as in 2010 at current US\$) by FY20. The concomitant rise in income levels coupled with increasing young working-age population will work towards increasing the





## SUSTAINABLE AGRICULTURE PRODUCTION IN INDIA

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### Abstract

Biotechnologies have played an important role in the development of food products over many centuries. In recent years the "modern biotechnologies" of molecular biology and gene technologies have gained a significant role in the cereals sector, sustainable development goals that embody ecological, social, and economic requirements. In addition, biotechnology should be considered one tool in a larger portfolio of technological options, to be applied where it is needed and where it offers the best available option for solving specific problems. Biotechnology contributes a significant role to fulfill the desired nutritional requirements of blasting population of the world.

### Introduction

By 2030, the world's population is expected to grow to 8.1 billion at a rate of over 75 million people per year. Almost all of the population increases will occur in developing countries (FAO 2000) that can ill-afford additional population pressures. Based on a population-increase-only projection with per capita consumption remaining constant, world cereal production must rise from approximately 1.92 billion tons in 1990 to 2.88 billion in 2030 to match the demand. Although the number of undernourished people in developing countries is expected to decrease; the global food-system situation will continue to be unacceptable.

However, even if we resolve the issue of distribution in the short run, the future growth in food demand will require increases in productivity from a decreasing stock of arable land. The challenge, therefore, is not only to feed more people, but to do so with less available arable land, fewer nonrenewable resources, less water, and fewer people engaged in primary agriculture.

A number of significant trends in both the agricultural production and food processing sectors have led to a closer integration of these sectors. The past decade has seen a continuing move away from an historical commodity focus towards an emphasis on value-adding. At the same time the integration between agricultural production and food processing has been driven by a variety of competitive forces leading to what is now termed the "Agri-Food Value Added Chain Differentiating products. The emergence of modern biotechnology has invoked a major global controversy over the future of world agriculture. The debates surrounding this controversy have often reflected the interests of developed countries and paid little attention to the needs of developing countries, especially those needs related to food requirements of low-income population.

Agriculture is a way of life for more than sixty per cent of India's population. The cultivation of land not only sustains their livelihood but also provides a social milieu for their day-to-day living. No wonder the hopes, despairs, joys and sorrows of rural communities are woven around what the land provides. Around 35 years ago, agricultural production in India got a major boost with the introduction of dwarf varieties of wheat and rice. The introduction of these varieties led to a dramatic increase in the yields of the two crops. Some productivity enhancement came through the use of hybrids in corn, sorghum and millet although the area under cultivation of these crops has steadily decreased in the last decade. In the last 10 years the yields of rice and wheat have also plateaued out. The productive agricultural areas in the North, due to continuous rice-wheat cultivation are encountering serious problems of sub-soil water depletion, deficiency of micronutrients in the soil and increase in the use of pesticides, fungicides and herbicides to control pests, pathogens and persistent weeds. Agricultural production is becoming more and more dependent on agrochemicals, thereby increasing input costs and causing significant damage to the environment and human health.

Both farmers and consumers are at the receiving end – farmers by exposure to agrochemicals and consumers due to residues of agrochemicals in the consumed food.

### What is Biotechnology

Broadly speaking, biotechnology is any technique that uses living organisms or substances from these organisms to make or modify a product for a practical purpose (Box 2). Biotechnology can be applied to all classes of organism - from viruses and bacteria to plants and animals - and it is becoming a major feature of modern medicine, agriculture and industry. Modern agricultural biotechnology includes a range of tools that scientists employ to understand and manipulate the genetic make-up of organisms for use in the production or processing of agricultural products.





## COTTON CONSUMPTION AND PRODUCTION TRENDS IN GLOBAL MARKET

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### Abstract

India is the world's third largest producer of cotton and second largest producer of yarn and textiles. This industry was de-licensed in 1991-1992, which led to various structural changes in the industry. The present study aims to understand the impact of liberalization on the Indian textile industry by comparing the performance of the firms incorporated before liberalization and firms incorporated after liberalization in the industry. At the same time, this study is also intended to realize the impact of Marketing expenses, wage and salary, and age of the firms on the firms' performance.

### Introduction

The textile industry has witnessed different policy setups after independence. From the controlled regime up to 1980, it experienced deregulation during 1980s and further doses of liberalization in 1991 and onwards. During 1980s, deregulation was carried out especially following the announcement of 1982 as the productivity year. Liberalization of industrial controls gathered further momentum during 1985 and 1986 and textile industry was no exception. The government needed, due to prolonged textile strike (1981-83), to see the reasons and reexamine its textile policy. Towards this end, it was also motivated by the consolidation of their respective position in the international market by Taiwan, Honking, South Korea etc. as quality cloth competitors of Indian products. Modernization of textile industry became a key goal of post 1985 textile policies. Towards this end, textile modernization fund got created in 1986 by IDBI (Industrial Development Bank of India) and later in 1991; a National Renewable fund got created in the national budget to handle the voluntary retirement and redeployment of redundant labor of sick mills. Consequently, emphasis got laid on quality of the product. The cotton and textiles industry has an overwhelming presence in the Indian economy. Apart from providing one of the basic necessities of life, the textiles industry also plays a pivotal role through its contribution to industrial output, employment generation and export earnings of the country. Currently, it contributes about 14 per cent to industrial production, 4 per cent to the GDP, and 17 per cent to the country's export earnings. It provides direct employment to over 35 million people. The textiles sector is the second largest provider of employment after agriculture. Thus the growth and all-round development of this industry has a direct bearing on the improvement of the economy of the nation.

Cotton is one of the principal crops of the country, providing substantial employment and making significant contributions to export earnings. It engages around 6 millions farmers, while another 40-50 million people depend on activities relating to cotton cultivation, cotton trade and cotton processing for their livelihood. It is the principal raw material for the domestic textile industry comprising 1608 spinning mills and 200 composite mills, with an installed capacity of 35.61 million spindles, 448,000 open-end rotors and 69,000 looms in the organized sector plus another 1219 small-scale spinning units with 4.00 million spindles and about 157,226 rotors in the small-scale decentralized sector. Cotton has turned out to be an incredibly good performer in the country's agricultural sector. India ranks first in cotton-cultivated area and second in production among all cotton producing countries in the world, next to China.

### Cotton Consumption and Production Trends in Global Market

World cotton consumption has increased at an average annual growth rate of approximately 2% since the beginning of the 1940's. Developing countries accounted for 78% of global cotton consumption between 1981 and 1999, and above 80% since 2000. Based on ICAC figures, it is predicted that developing countries will absorb almost 94% of global cotton output by the end of this year (UNCTAD, 2011). The shift of cotton consumption to developing countries is mainly a reflection of rising wage levels in developed countries. Rising labor costs contributed to the shifting of cotton production and manufacture to low-cost economies—most notably, Asia. Nevertheless, the main cotton producing economies still account for a large part of consumption. According to ICAC data, China, the U.S., India, and Pakistan together accounted for more than 55% of global cotton consumption between 1980 and 2008 (UNCTAD, 2011).

The global market for cotton fibers and cotton-based textile products has undergone drastic changes during the past few decades. One of the most notable changes is China's emergence as the dominant consumer, importer, and producer of cotton. As such, China has been predicted to import around 47 percent of the world's cotton production by the year 2015. India and Pakistan have also entered the ranks of the world's largest producers of cotton, as well as exporters of cotton yarn and fabrics. With increasing competition among cotton producing nations, many of which take advantage of exceedingly low labor costs, the U.S. cotton industry has struggled to keep up. In response, the U.S. has shifted production outside its borders. Whereas cotton was grown in 90 countries in 2007, the four main cotton producing countries today are China, India, the U.S., and Pakistan (UNCTAD, 2011). The most recent statistics on cotton production show that China leads with 29%, followed by





## GROWTH OF TEXTILE INDUSTRY IN INDIA: CHALLENGES AND OPPORTUNITIES

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### Introduction

Indian Textile and Clothing industry is currently one of the largest and most important industries in the Indian economy in terms of output, foreign exchange earnings and employment. The industry contributes 4% to the country's GDP, 14% to the country's industrial production and around 12% to the country's foreign exchange earnings. During 2007-08, Indian T&C exports were valued at US \$ 22.4 billion of which Textile exports accounted for US \$ 12.7 billion Garment exports accounted for US \$ 9.7 billion. Indian T&C industry is also the second largest employment generating industry, after agriculture with direct employment of 33.17 million people (as of March 2006). In addition, the industry generates significant employment through forward and backward linkages; the large number of skilled and unskilled activities in the industry makes it extremely important from the perspective of inclusive. The textile industry in industries traditionally, after agriculture, is the only industry that has generated huge employment for both skilled and unskilled labor in textiles. The textile industry continues to be the second largest employment generating sector in India. It offers direct employment to over 35 million in the country. The share of textiles in total exports was 11.04% during April-July 2010, as per the Ministry of Textiles. During 2009-2010, Indian textiles industry was pegged at US\$55 billion, 64% of which services domestic demand. In 2010, there were 2,500 textile weaving factories and 4,135 textile finishing factories in all of India. According to AT Kearney's 'Retail Apparel Index', India is ranked as the fourth most promising market for apparel retailers in 2009.

India is first in global jute production and shares 63% of global textile and garment market. India is 2nd in global textile manufacturing and also 2nd in silk and cotton production. 100% FDI is allowed via automatic route in textile sector. India is the second largest producer of fibre in the world and the major fibre produced is cotton. Other fibres produced in India include silk, jute, wool, and man-made fibers. 60% of the Indian textile Industry is cotton based. The strong domestic demand and the revival of the Economic markets by 2009 have led to huge growth of the Indian textile industry. In December 2010, the domestic cotton price was up by 50% as compared to the December 2009 prices. The causes behind high cotton price are due to the floods in Pakistan and China. India projected a high production of textile (325 lakh bales for 2010 -11). There has been increase in India's share of global textile trading to seven percent in five years. The rising prices are the major concern of the domestic producers of the country.

Growth in Indian Textile Industry Indian Textile Industry is going through a major change in its outlook after the expiry of Multi-Fiber Agreement. Multi Fiber Agreement was introduced in the year 1974 as a short term measure directed towards providing a limited time period to the developed countries for adjusting their textile industries in accordance with that of the developing countries. The textile industries are characterized by their labor intensive nature of commodity of production. Availability of surplus labor is abundant in the developing countries. These countries have comparative advantage in the production of textile related products and hence are able to supply goods at a very low price. The basic idea behind this policy was to eradicate all sorts of quota system from the apparel and textile industry all over the world so that a level playing field could be established.

This whole process of dismantlement of quota system was completed on 01.01.2005. Now, this era after MFA is being looked upon by the experts as a means through which the Indian textile and apparel industry is going to grow a much faster pace and would consequently be able to leave a mark on the whole world. Integration of Indian industry with that of the whole world started from the last period of 1980s. It came up to the top ten league of countries involved in export of textile as well as apparel products after 1998. According to the statistics of United Nations Statistical Division, 2005 it was clear that during the entire 1990s, the average compounded growth rate of clothing item export was more or less 13%. This report has also highlighted the fact that the entire textile industry along with the apparel one has seen a jump in its export from US\$ 0.9 billion to US\$ 13.5 billion during the period 1985-2003 which accounts to 15 times increase from the base period. Now, let us see some of the figures in order to understand the absolute as well as relative change in the textile industry in terms of projections from the financial year 2002-2003 up to 2006-2007 where the final financial year represents the projected figure.

Indian Textile Industry in fabric sector along with the produce in all the sub sectors under it. This highlights the fact that the total production of fabricated products by the Indian Textile Industry between the period 2002-2003 and 2004-2005 increased at a moderate rate from 41973 million square meters to 45378 million square meters. But after the MFA period (ie. after 01.01.2005), the same has increased from 45378 million sq. mts to 54260 million sq. mts between the period 2004-2005 and 2006-2007. Hence it is evident that the percentage increase in the fabric textile product during the period 2004-2005 and





## GROWTH OF AUTOMOBILE INDUSTRY IN INDIAN SCENARIO

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### Abstract

The present paper examines the category wise production, sales and exports of Automobiles in India. In recent years India has been developing as a market potential for automobiles due to rise in demand and as a result there is an increased production to tap the growing demand both at home and in the foreign markets. This is reflected in the production figures of the industry especially remarkable in the passenger vehicle and three wheeler divisions, where production raised from 1,209,876 vehicles in the year 2004 -2005 to 3,072,651 vehicles in the year 2013 2014. The sales figure of the industry states that sales of commercial vehicles have decreased. The automotive Industry in India is now working in terms of the dynamics of an open market. Many joint ventures have been set up in India with foreign collaboration. India ranks just behind China with the world's second largest population at over 1 billion people.

Hence, the automobile industry less than 1 percent of the population currently owns automobiles, which is a much smaller proportion than the rest of the Southeast Asia region. India also has one of the fastest growing economies, and many U.S. companies view India as a potentially lucrative market. It is expected that the automotive industry will play an important role in helping the economy to continue this growth. This paper gives an overview of Indian Automobile Industry Indian automobile industry embarked on a new journey in 1991 with delicensing of the sector and subsequent opening up for 100 percent FDI through automatic route. In view of this, the study attempts to estimate the economic performance of Indian automobile industry in terms of capacity utilization at an aggregate level. It Demo graphically and economically, India's automotive industry is well-positioned for growth, servicing both domestic demand and, increasingly, export opportunities. A predicted increase in India's working-age population is likely to help stimulate the burgeoning market for private vehicles. Rising prosperity, easier access to finance and increasing affordability is expected to see four-wheelers gaining volumes, although two wheelers will remain the primary choice for the majority of purchasers, buoyed by greater appetite from rural areas, the youth.

### Introduction

Indian Automobile Industry is globally one of the largest industries and a key sector of the Economy. Indian Government policies resulting in the Foreign Direct Investment (FDI) infusion in Auto Sector has had a significant impact on job creation. It is therefore most important to see how various policies enunciated at various times have created employment opportunities directly and indirectly in this fast changing Automobile sector. This research paper attempts to understand the inventory of policy responses of the government especially related to FDI in automobile sector. Foreign Direct Investment (FDI) has been considered as a major catalyst in promoting sustainable development in developing countries. FDI has the potential to generate employment, raise productivity, transfer skills and technology, increase incomes, enhance exports and contributes to the long-term economic development of the world's developing countries. Evidence presented in the form of (available) empirical data with its interpretation suggests there has been significant impact of FDI in Auto Sector in Employment Generation – both in quantity and quality. It can be construed that with further infusion of FDI in this sector as envisaged in Automotive Mission Plan (2006-16) and 12th five year plan (2012-17) of the Government of India.

The Automobile Industry occupies a leading place in Indian economy contributing ~ 7% 1 of GDP. Foreign Direct Investment (FDI) impact on the growth of Automobile Industry is visible across the spectrum of this sector – direct employment in manufacturing, auto component suppliers and auto service segments. In the growth aspect it is distinctly discernible in the passenger vehicle segment. The cumulative Foreign Direct Investment (FDI) equity inflows<sup>2</sup> from January 2000 to December 2010 in this sector is Rs. 25,972.59 crores (5.74 USD in billions) which is 4.52% of the total FDI inflows; the portion of Passenger Vehicle segment is Rs.13,516.25 crores (3.008 USD in billions) which accounts close to 52% of the total inflows in Automobile Industry Sector. This has opened a challenging avenue for training and development centers and employment gateway for aspiring and talented individuals across all levels. The Indian auto industry is one of the largest in the world with an annual production of 23.37 million vehicles in FY 2014-15, following a growth of 8.68 per cent over the last year.

The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP). The Two Wheelers segment with 81 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the





## INDIAN JUTE PRODUCTS AND EXPORT MARKET PATTERN AND PERFORMANCE

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### Introduction

The people of India traditionally used jute to make rope, sacks, paper, and coarse hand woven fabrics for matting and bedding. English traders saw the potential of jute as a substitute for hemp and flax as early as 1793, and eventually a consignment found its way to Dundee in Scotland. The flax spinners there learned how to spin jute yarn by batching fibres with whale oil and water and modifying power-driven flax machinery. Before long they were producing jute goods in substantial quantities. The rise of the jute industry in Dundee and elsewhere in Europe saw a corresponding increase in the export of raw jute from the Indian sub-continent. World production reached one million tons per annum by 1900. By independence in 1947, production grew to over 1.5 million tons and jute was one of the leading producing and export sectors in the sub-continent. The coming of independence to India and the partition of Bengal into part India and part East Pakistan (later to become Bangladesh in 1971) can be seen as a major watershed for the industry.

Hitherto East Bengal had provided raw jute for mills the British had set up in Calcutta. Following partition, in the 1950s and 1960s many new mills were set up in East Pakistan to process the locally grown jute. One consequence was development of jute growing throughout West Bengal and in due course, more widely in Assam and in other Indian states. This was done to satisfy Indian demand locally in India.

The Jute industry occupies an important place in the national economy of India. It is one of the major industries in the eastern region, particularly in West Bengal. Jute, the golden fibre, meets all the standards for 'safe' packaging in view of being a natural, renewable, biodegradable and eco-friendly product. It is estimated that the jute industry provides direct employment to 0.37 million workers in organized mills and in diversified units including tertiary sector and allied activities and supports the livelihood of around 4.0 million farm families. In addition there are a large number of persons engaged in the trade of jute.

Hence Indian jute and jute products are known world over as the best quality jute for its color, texture, luster, length and strength. Jute was the lone most important export item of Bangladesh till the end of the 1980s. Owing to environmental conditions, scarcity of land for cultivation, high input cost, high profitability of highyielding variety (HYV) and hybrid crops, unfavorable jute-rice price ratio, low output prices and inadequate marketing support, extension services had a significant negative impact on jute cultivation and export earnings.

As a natural fiber, jute is second to cotton. After the extraction of fibers, the remaining jute sticks are usually used to make fences, fuel and raw materials. Bangladesh's jute sector started to face a critical time particularly since the 1990s, as jute started to face increasing competitive pressure from synthetic substitutes with technological developments leading to progressive replacement of natural raw materials. Lack of significant efforts and required investments towards product development and diversification as also an inability to undertake the technological transformation undermined jute's prospects as a fiber. Failure to follow modern marketing procedures and international trade practices led to the demise of jute as an important globally-traded commodity. All these had adverse impact on production, consumption and export performance of jute. Owing to environmental conditions, scarcity of land for cultivation, high input cost, high profitability of High-Yielding Variety (HYV) and hybrid crops, an unfavorable jute-rice price ratio, jute at present tends to be cultivated in less productive land. The consequence of lower productivity and low profit thus gave rise to a vicious cycle. Low output prices and inadequate marketing support and extension services had a significant negative impact on jute cultivation and export earnings (BJRI 2008).

### Statement of The Problem

Jute and allied fibers are the second most important natural fibers next to cotton. The jute sector is a significant source of foreign exchange earnings with higher value additions for Bangladesh. This sector provided employment opportunity to large number of people in different regions both urban and rural areas in the country. The worldwide awareness on environment is the reason for the opportunities of Jute, due to environment friendly characteristics. Jute, a natural fiber that can be used in many different areas, supplementing or replacing synthetics, has been receiving increasing attention from the industry. The usages of jute are not only traditional but also on the production of other value-added products such as, pulp and paper, geotextiles, composites and home textiles. Jute is an annually renewable energy source with high a biomass production per unit



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## IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON RURAL INDIA

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### **Introduction**

The number of countries especially those in the developed world and some in developing countries are putting in place policies and plans designed to transform their economies into an information and knowledge economy. In present days developed countries like USA, Canada, and a number of European countries, as well as Asian countries like India, Singapore, Malaysia, South Korea, Japan, and South American countries like Brazil, Chile, and Mexico among others, and Australia and Mauritius either already have in place comprehensive ICTs policies and plans or are at an advanced stage of implementing these programmes across their economics and societies. Some of these countries implementing ICTs and their deployment for socio-economic development as one area where they can quickly establish global dominance and reap tremendous payoff in terms of wealth creation and generation of

high quality employment to strengthen their lively hood. On the other aspect, some other countries regard the development and utilization of ICTs within their economy and society as a key component of their national vision to improve the quality of life, knowledge and international competitiveness.

Over the past two decades, India's information and communication technology industry (ICT) has been among the fastest growing in the world. From 2000 to 2004, the Indian economy grew at a staggering rate of 6.2 per cent, and has since grown at an average annual rate of 8 per cent (Dahlman 2007), becoming "the world's leading exporter of software services" (Gregory, Nollen, and Tenev 2009). Developed countries exhibit this growth but lag behind India, still a developing country, in job creation. The 2013 Global Information Technology Report cited 1,117,753 jobs created in South Asia by



## AIRCRAFT MANUFACTURING INDUSTRY: ISSUES AND CHALLENGES

India is a major new national programme of the Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. Government agencies project that around 500 brown field and green field airports would be required by 2020. The private sector is being encouraged to become actively involved in the construction of airports through different Public Private Partnership models, with substantial state support in terms of financing, concessional land allotment, tax holidays and other incentives.

### Objectives:

- To study investment opportunity in aviation sector.
- To analyze the advanced technology implementation in aviation sector

### Methodology:

This research is based on secondary data. The data are taken from different research reports; journals and websites.

### Government Initiatives:

- The Ministry of Civil Aviation has finalized and put forward for approval to the Union Cabinet, the new aviation policy, which includes proposals such as allowing new airlines to fly abroad, introduction of more regional flights and a new formula for granting bilateral flying rights.
- The Indian Space Research Organization (ISRO) has signed a memorandum of understanding (MOU) with the Airports Authority of India (AAI), aimed at providing space technology for construction of airports.
- The Government of India is planning to boost regional connectivity by setting up 50 new airports over the next three years, out of which at least 10 would be operational by 2017.
- Airports Authority of India (AAI) plans to develop city-side infrastructure at 13 regional airports across India, with help from private players for building of hotels, car parks and other facilities, and thereby boost its non-aeronautical revenues.
- Directorate General of Civil Aviation (DGCA), India's aviation regulator, has signed an agreement with United States Technical Development Agency (USTDA) for India Aviation Safety Technical Assistance Phase II, aimed at bringing in systemic improvements in the area of operation, air worthiness and licensing.
- The Airports Authority of India (AAI) plans to revive and operationalise around 50 airports in India over the next 10 years to improve regional and remote air connectivity.
- Gujarat is expected to get a second international airport at Dholera. The state government has formed Dholera International Airport Co. Ltd. and is obtaining approvals from the union government.
- The Directorate General of Civil Aviation (DGCA) has given its approval to Air India's maintenance, repair and overhaul unit.

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## Phytoconstituents Screening by GC-MS and Evaluation of *In Vitro* Gastroprotective and Antioxidant Activity of *Ulva lactuca*

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### Abstract

**Background:** The discovery and development of antibiotics are among the most powerful and successful achievements of modern science and technology for the control of infectious diseases. Seaweeds are rich source of original and bioactive natural substances. In particular, Green seaweed, *Ulva lactuca* have been demonstrated to metabolize biomolecules with pharmacological potential. **Aim:** The ethanolic extract of collected alga, *ulva lactuca* was subjected to screen phytoconstituents, antioxidant activity and cytotoxicity assays. The bioactive compounds were identified by GC-MS analysis. **Materials and methods:** The antioxidant activity was carried out by reducing power assay, DPPH activity, superoxide and nitric oxide radical scavenging activity, evaluation of total antioxidant capacity of the extract. The phytochemical analysis was carried out as per standard methods and Agilent GC-MS 680 analysis performed using a fused silica capillary column. Cytotoxic activity also employed against gastrointestinal protection in cell line for three different solvent extracts. **Results:** Ethanolic extract of *ulva lactuca* showed higher antioxidant activity and the presence of phytochemicals like alkaloids, flavonoids, steroids, tannins, terpenoids, phenol, carbohydrates and saponins and also possess cytotoxic activity in cell line, ethanolic extract showed highest activity. The GC-MS analysis provided different peaks determining the presence of 20 different compounds, among that 13 major compounds viz., Beta Carotene, Eicosatetraenoic acid Trans-Traumatic acid 1 Naphthalenepropanol, which exhibit the antioxidant, antibacterial, antimicrobial, anti-inflammatory, antilucer and anticancer activity was present in this algae. **Conclusion:** in the present study it was concluded that the *Ulva lactuca* is a rich source of antioxidant and pharmaceutically important by the presence of various bioactive compounds used for the treatment of human pathogenic diseases.



## 2. MATERIALS AND METHODS

### 2.1 Collection of *Ulva lactuca*

*Ulva lactuca* samples were collected from the Marine department, Annamalai University, Chidambaram, Tamil Nadu and authenticated by Dr. Deivasigamani, Marine department, Annamalai University, Chidambaram, Tamil Nadu. Sample materials were washed under running tap water, air dried and then homogenized to fine powder and stored in airtight bottles in refrigerator.

### 2.2 Preparation of Extract

Crude sample extract was prepared by Soxhlet extraction method. About 20 gm of powdered material was uniformly packed into a thimble and extracted with 250 ml of ethanol extract separately. The process of extraction has to be continued for 24 hours until the solvent in siphon tube of extractor become colourless. After that the extract was taken in a beaker and kept on hot plate and heated at 30-40°C till all the solvent got evaporated. Dried extract was kept in refrigerator at 4°C till future use.

### 2.3 GC-MS ANALYSIS OF *Ulva lactuca*

The Clarus 680 GC was used in the analysis employed a fused silica column packed with Elite-5MS (5% diphenyl 95% dimethylpolysiloxane, 30 m x 0.25 mm ID x 250µm df). The components were separated using Helium as carrier gas at a constant flow of 1 ml/min. The injector temperature was set at 260°C during the chromatographic run. The 1µl of extract sample injected into the instrument the oven temperature was as follows: 60°C (2 min), followed by 300°C at the rate of 10°C/min, 1, and 300°C, where it was held for 6 min. The mass detector conditions were: transfer line temperature 240°C; ion source temperature 240°C and ionization mode electron impact at 70 eV, a scan time 0.2 sec and scan interval of 0.1 sec. The fragments from 40 to 600 Da. The spectrum of the components were compared with the database of spectrum of known components stored in the GC-MS NIST (2008) library.

## 2.4 CYTOTOXICITY ASSAYS

### 2.4.1 IEC6 (Rat intestinal epithelial) cells

The rat intestinal epithelial cell line (IEC6) was obtained from ATCC. Cells were maintained in DMEM growth medium supplemented with heat inactivated fetal calf serum (FCS 10%), penicillin (100U/ml) and streptomycin (100 µg/ml). The cells were grown in 25 cm<sup>2</sup> tissue culture flasks and maintained at 37°C in a humidified, 5% CO<sub>2</sub> atmosphere throughout the experiment.

### 2.4.2 Experimental design

A total of 6 groups were used for the experimental studies for cell viability including trypan blue staining and MTT assay.

**Group 1:** (DMSO control 0.25% v/v): These cells were treated with DMSO alone.

**Group 2:** (*ulva lactuca* Extract alone): These cells were treated with 600µg/ml extract alone.

**Group 3:** In this group cells was treated with 10mM indomethacin (IND) only<sup>32</sup>.

**Group 4:** (200 µg/ml *ulva lactuca* extract + IND): These cells were treated with 200 µg/ml extract combined with 10 mM IND.

**Group 5:** (400 µg/ml *ulva lactuca* extract + IND): In this group cells was treated with 400 µg/ml extract with 10 mM IND.

**Group 6:** (600 µg/ml *ulva lactuca* extract + IND) in this group cells was treated with 600 µg/ml extract with 10 mM IND.

The *ulva lactuca* extracts were incubated for 24h for trypan blue staining and 72h for MTT assay. The same kind of experimental groups was designed for three different solvent extracts (Chloroform, ethyl acetate and ethanol) of *Ulva lactuca*.

### 2.4.3 Cell viability

Of the monolayer cultures, 50 µl of 10mM Indomethacin was added to each well followed by the addition of 50 µl of three different solvents (chloroform, ethyl acetate and ethanol) extracts of *Ulva lactuca* at different concentrations (200, 400 and 600 µg/ml) and incubated at 37°C for 24 hours. After incubation, the cell viability was determined by trypan blue dye exclusion method. MTT assay and the minimum effective concentration and effective solvent extract of *ulva lactuca* were also determined.

#### 2.4.3.1 Trypan Blue Staining

Trypan blue is one of the several stains recommended for use in dye exclusion procedures for viable cell counting. This method is based on the principle that live cells do not take up dye unlike the dead cell. After 24h incubation with the extracts and acetaminophen, cells were trypsinised and resuspended in MEM.

A cell suspension containing approximately 2.5x10<sup>5</sup> cells/ml was prepared in MEM and 0.2 ml of cell suspension was added, and mixed thoroughly with 0.4% trypan blue. The mixture was allowed to stand for 5 minutes. The suspension was viewed in a hemocytometer and analysed for viable cells. The Viable cell count was determined as per the method described previously<sup>33</sup> by using the following calculations:

$$\text{Cells / ml} = \text{Average cell count per square} \times \text{dilution factor} \times 10^4$$



### 2.5.5 Evaluation of Lipid peroxidation

Lipid hydroperoxide was estimated by the method of Jiang *et al.* (1992). In this method, oxidation of ferrous ions ( $Fe^{2+}$ ) under acidic conditions in the presence of xylenol orange leads to the formation of a chromophore with an absorbance maximum at 560nm. The Standard is 0.2 M  $H_2O_2$  was prepared. 0.2ml of test sample (in phosphate buffer pH = 7.5) was taken, 1.8ml of the Fox reagent (88mg Butylated Hydroxy Toluene (BHT), 7.6 mg of xylenol orange and 1.9 mg of ferrous ammonium sulphate were taken and mixed with 10ml of methanol and then 10ml of 250 mM sulphuric acid) was added and then incubated for 30 minutes at room temperature and read at 560nm. Lipid hydroperoxide were expressed as  $\mu$ moles/100 mg extract.

### 2.5.6 Hydroxyl radical scavenging assay

20  $\mu$ l solutions were prepared freshly. 1.0 ml of the test solution contained 100  $\mu$ l of 28 mM 2-deoxy-2-ribose (dissolved in phosphate buffer, pH 7.4), 500  $\mu$ l solution of various concentrations of test sample (10 to 80  $\mu$ g), 200  $\mu$ l of 200  $\mu$ M  $FeCl_3$  and 1.04 mM EDTA (1:1 v/v), 100  $\mu$ l  $H_2O_2$  (1.0 mM) and 100  $\mu$ l ascorbic acid (1.0 mM). After an incubation period of 1 hour at 37°C the extent of deoxyribose degradation was measured by the TBA reaction. Measure the absorbance at about 532 nm against the blank solution. Vitamin E was used as a positive control.

## 3 RESULTS AND DISCUSSION

### 3.1 Identification of Phytochemicals in ethanolic extract of *Ulva lactuca* by GC-MS study

In this present study the GC-MS analysis leads to the prediction of chemical constituents present in the ethanolic extract of *Ulva lactuca*. 20 compounds were found in the ethanolic extracts of *U. lactuca*, among that 13 major compounds which exhibit the antioxidant, antibacterial, antimicrobial, anti-inflammatory, antiulcer and anticancer activity was present in this alga are presented in Table 1 and Figure 1. The identified compounds bioactivities were predicted using Dr. Duke's Phytochemical & Ethnobotanical Databases prediction. The results revealed the presence of 20 different phytochemicals viz., Heptanal, Pseduosarsasapogenin-5, 20-Dien, 3-Chloro-5-Cholestene, L-Gala-L-ido-octose, Glutaraldehyde, 8, 11, 14-Eicosatrienoic acid, (Z,Z,Z)-, Cholest-8-Ene-3,6-Diol, 14-Methyl-, (3.Beta., 5.Alpha., 6.Alpha.), 2-Methyl-6-Methylene-octa-1, 7-Dien-3-ol, 3-Decyn-2-ol, 3-Nonyn-2-ol, Pentanoic Acid, 2-(Aminoxy), 17-Octadecynoic Acid, Z, Z-6, 13-Octadecadien-1-ol Acetate, Spiro[Androst-5-Ene-17,1'-Cyclobutan]-2'-One, 3-Hydroxy-, (3.Beta., 17.Beta.), Trans-Traumatic Acid, 5,8,11,14-Eicosatetraenoic Acid, Methyl Ester, (All-Z), 1-Naphthalenepropanol, Alpha-Ethyldecahydro-5-(Hydroxymethyl)-Alpha., 5, 8a-Trimethyl-2-Methyl, 1-Heptatriacotanol, Cholesta-8, 24-Dien-3-ol, 4-Methyl-, (3.Beta., 4.Alpha.), Beta Carotene. We observed boundless activity for the major constituents in the ethanolic extracts of *U. lactuca*. The presence of various bioactive compounds confirms the application of *U. lactuca* for various ailments by traditional practitioners.

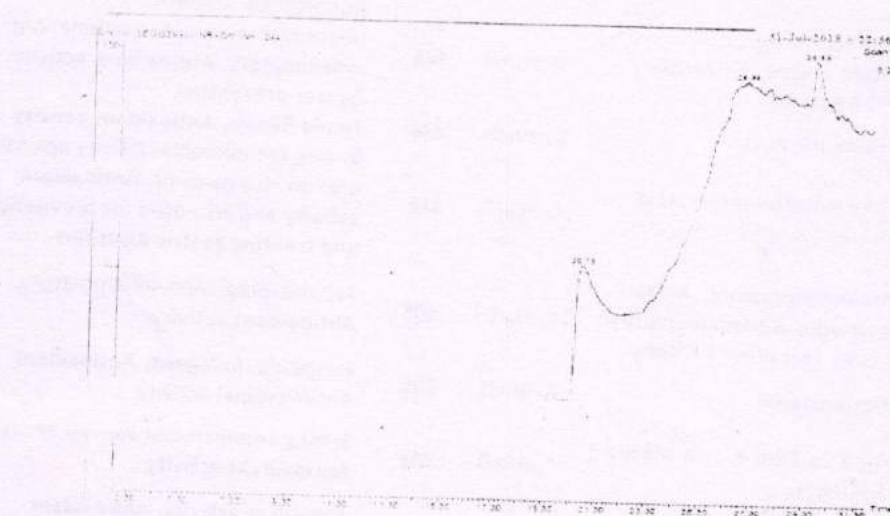


Figure 1. The chromatogram showing different compounds as peaks detected by Gas chromatography-Mass spectrophotometry in ethanolic extract of *Ulva lactuca*

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### 3.2 CYTOTOXICITY ASSAYS

#### 3.2.1 Effect of *U. lactuca* extracts on the cell viability by Trypan blue staining assay

Figure-2 depicts the cell viability by trypan blue assay in terms of percentage of cell death. The percentage of cell death significantly increased ( $P < 0.001$ ) in indomethacin induced group (Group 3) when compared to control (Group 1). All the solvent extracts of *U. lactuca* showed decreases in the cell death after inducement with the IND. The ethanolic extract treatment showed a better effect than chloroform and ethyl acetate extracts ( $P < 0.01$ ). Of the three concentrations of the ethanol extract, 600  $\mu\text{g/ml}$  were more effective ( $P < 0.001$ ) than the other concentrations 200  $\mu\text{g/ml}$  (Group 4) and 400  $\mu\text{g/ml}$  (Group 5). Treatment with extract alone (Group 2) did not change the cell viability when compared to control (Group 1).

#### 3.2.2 Effect of *U. lactuca* extracts on the cell viability by MTT assay

Figure 3 depicted the effect of *U. lactuca* extract on the cytotoxicity of IEC-6 cell lines as determined by MTT assay.

Treatment with indomethacin (1mM) caused significant loss of viability of cells as measured by this assay. Pretreatment with *U. lactuca* extracts (200  $\mu\text{g}$  - 600  $\mu\text{g}$ ) before adding acetaminophen caused significant increment in viability of cells in a dose dependent manner. Both *U. lactuca* extract treatments along with indomethacin significantly increased cell viability by MTT assay. The highest concentration of *U. lactuca* (600  $\mu\text{g}$ ) (Group 6) was most effective as ( $P < 0.01$ ) compared to other concentrations of extract. Efficacies of different solvent extracts of *U. lactuca* were tested. Of these, an ethanolic extract of *U. lactuca* showed the most efficiency ( $P < 0.001$ ) in protecting the cells against indomethacin toxicity.

There was no significant difference in cell viability between cells incubated with algae extract (600  $\mu\text{g/ml}$ ) for 12 hr and control cells, which indicates that extracts of *U. lactuca* no toxic effect up to 600  $\mu\text{g/ml}$ .

The result indicates that moderate to good protection is offered by the extracts of *U. lactuca*. The highest protection is observed in the ethanolic extracts of *U. lactuca*. Hence ethanolic extract of *U. lactuca* were used for the *in vivo* Gastroprotective studies. Cells were treated with 1 mM indomethacin, a concentration previously associated with cytotoxicity and extensively used in *in vitro* cell culture system<sup>33,36</sup> also reported that indomethacin (5-30 mM) caused a significant concentration dependent decrease of cell viability (MTT assay) and depletion of intracellular GSH after 24 hr. Since indomethacin inhibits both COX-1 and COX-2, it inhibits the production of prostaglandins in the stomach and intestines, which maintain the mucous lining of the gastrointestinal tract. Indomethacin, therefore, like other non-selective COX inhibitors can cause peptic ulcers. These ulcers can result in serious bleeding.

In recent years, considerable attention has been directed on Non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin and indomethacin are the most commonly prescribed drugs for arthritis, inflammation, and cardiovascular protection. However, they cause gastrointestinal complications such as ulcers and erosions. The pathophysiology of these complications has mostly been ascribed to NSAID's action on the cyclooxygenase (COX) inhibition and the subsequent prostaglandin (PG) deficiency<sup>35, 37</sup>. Treatment with the algae extracts reduced toxicity induced by indomethacin.

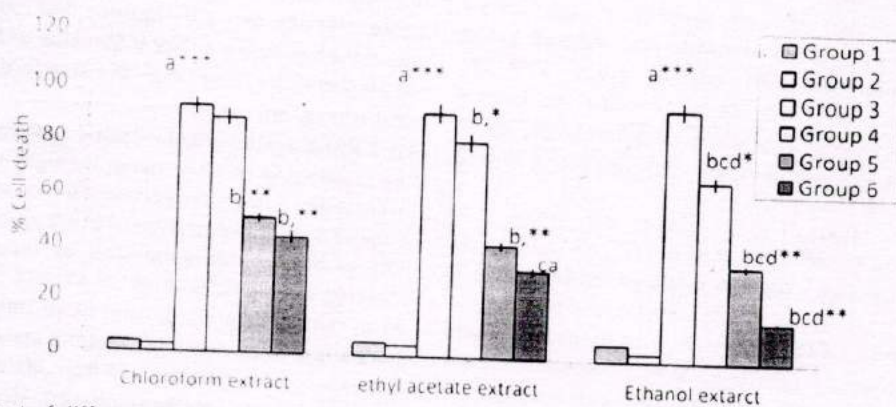


Figure - 2 Effect of different solvent extracts of *U. lactuca* on Indomethacin-induced toxicity in IEC-6 cell by trypan blue staining.



extract thus indicates the consumption of superoxide anion in the reaction mixture. As mentioned in figure 6, the algae extract showed the scavenging activity; IC50 values, 4.7  $\mu\text{g/ml}$  and 5.84  $\mu\text{g/ml}$ , respectively.

### 3.3.4 Lipid peroxidation assay

Activity of algae extract against non-enzymatic lipid peroxidation in rat liver microsomes has been shown in figure 7. Addition of  $\text{Fe}^{2+}$ /ascorbate to the liver microsomes cause increase in lipid peroxidation. The extract showed inhibition of peroxidation effect in all concentrations which showed 50% inhibition effect at 104.0  $\mu\text{g/ml}$ . The extract inhibition value was found to be lesser than the standard, vitamin E (IC50 120.5  $\mu\text{g/ml}$ ).

### 3.3.5 Hydroxyl radical scavenging assay

To attack the substrate deoxyribose hydroxyl radicals were generated by reaction of Ferric-EDTA together

with  $\text{H}_2\text{O}_2$  and ascorbic acid. When the algae extract was incubated with the above reaction mixture, it could prevent the damage against sugar. The results are shown in figure 8, the concentrations of 50% inhibition were found to be 27.0  $\mu\text{g/ml}$  and 32.5  $\mu\text{g/ml}$  for the extract and standard of vitamin E, respectively. The extract inhibition value was found to be lesser than the standard.

### 3.3.6 Reducing power

Figure 9 shows the reductive capabilities of the algae extract compared to butylated hydroxy toluene. The reducing power of extract of *Ulva lactuca* was very potent and the power of the extract was increased with quantity of sample. The algae extract could reduce the most  $\text{Fe}^{3+}$  ions, which had a lesser reductive activity than the standard of butylated hydroxy toluene.

Scavenging effect of *Ulva lactuca* Extract and standard vitamin C on 1, 1'-Diphenyl-2-picryl hydrazyl (DPPH) radical. Results are mean  $\pm$  S.D of five parallel measurements.

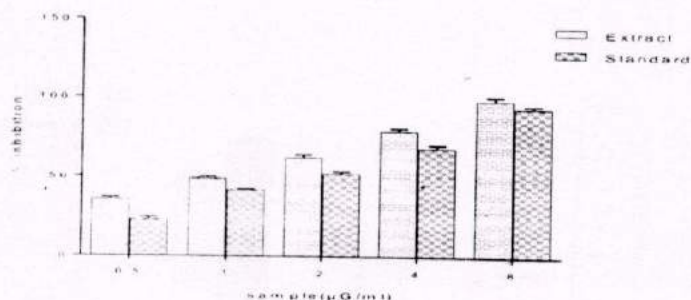


Figure- 4

Scavenging effect of *Ulva lactuca* Extract and standard rutin on Nitric oxide radical. Results are mean  $\pm$  S.D of five parallel measurements.

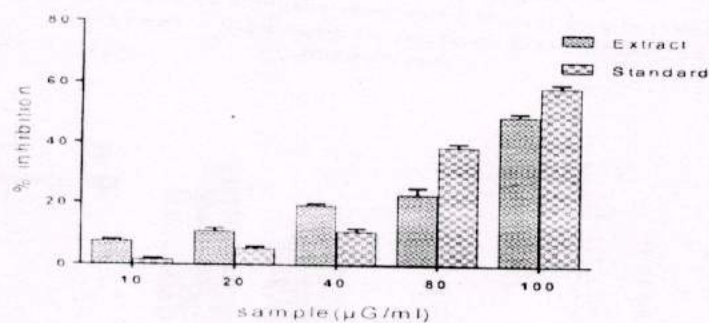


Figure- 5



Reducing power  
The reductive ability of *Ulva lactuca* Extract and butylated hydroxy toluene. Results are mean  $\pm$  S.D of five parallel measurements.

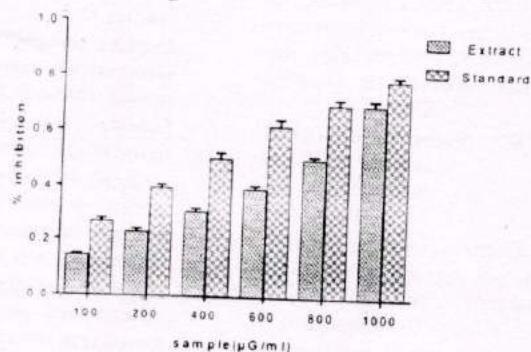


Figure-9

#### 4. CONCLUSION

At the end of this study it was revealed that the phytochemical constituents present in the ethanolic extracts of *Ulva lactuca* have highest antioxidant activity. It can be interesting to use algae in our lives because along with their antioxidant effect, they also contain great amounts of nutrients that are essential for a strong health. Also the highest gastrointestinal protection is observed in the ethanolic extracts of *U. lactuca* in cytotoxicity assays. Hence ethanolic extract of *U. lactuca* were used for the further *in vivo* Gastroprotective studies. Finally, the present investigation brings out adequate data on the phytochemical constitute and emphasize the significance of *Ulva lactuca* as a potential source of powerful broad spectrum of bio activities.

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#### 6. REFERENCES

1. Smetacek V, Zingone A (2013) Green and golden seaweed tides on the rise. *Nature* 504: 84-88.
2. Silva M, Vieira L, Almeida AP, Kijjoa A (2013) The Marine Macroalgae of the Genus *Ulva*: Chemistry, Biological Activities and Potential Applications. *Oceanography* 1: 101.
3. Kong F, Mao Y, Cui F, Zhang X, Gao Z (2011) Morphology and Molecular Identification of *Ulva* Forming Green Tides in Qingdao China. *J Ocean University of China* 10: 73-79.
4. Wolf MA, Sciuto K, Andreoli C, Moro I (2012) *Ulva* (Chlorophyta, Ulvales) Biodiversity in the North Adriatic Sea (Mediterranean Italy): Cryptic Species and New Introductions. *J Phycol* 48: 1510-1521.
5. Lawton RJ, Mata L, de Nys R, Paul NA (2013) Algal bioremediation of waste waters from land-based aquaculture using *Ulva*: selecting target species and strains. *PLoS One* 8(10): e77344.
6. Marinho G, Nunes C, Sousa-Pinto I, Pereira R, Rema P, et al. (2013) The IMTA-cultivated Chlorophyta *Ulva* spp. as a sustainable ingredient in Nile tilapia (*Oreochromis niloticus*) diets. *Journal of Applied Phycology* 25(5): 1359-1367.
7. Gorban EN, Kuprash LP, Gorban NE. *Spirulina: perspectives of the application in medicine*. *Lik Sprava* 2003; (7):100-10.
8. Sode S, Bruhn A, Balsby TJS, Larsen MM, Gottfredsen A, et al. (2013) Bioremediation of reject water from anaerobically digested waste water sludge with macroalgae (*Ulva lactuca*, Chlorophyta). *Bioresour Technol* 146: 426-435.
9. Bruhn A, Dahl J, Nielsen HB, Nikolaisen L, Rasmussen MB, et al. (2011) Bioenergy potential of *Ulva lactuca*: biomass yield, methane production and combustion. *Bioresour Technol* 102(3): 2595-2604.
10. Abdel-Warith AWA, Younis ESMI, Al-Asgaha NA (2016) Potential use of green macroalgae *Ulva lactuca* as a feed supplement in diets on growth performance, feed utilization and body composition of the African catfish, *Clarias gariepinus*. *Saudi J Biol Sci* 23(3): 404-409.
11. Bikker P, van Krimpen MM, van Wikselaar P, Houweling-Tan B, Scaccia N, et al. (2016) Biorefinery

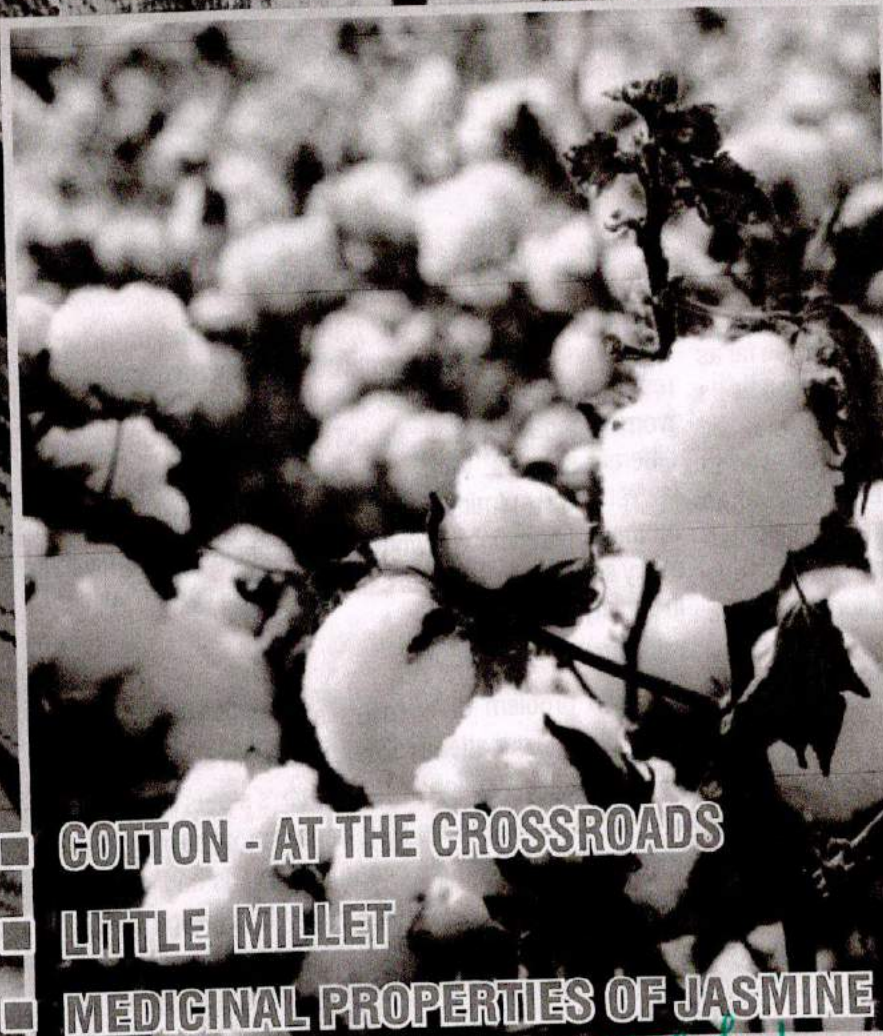
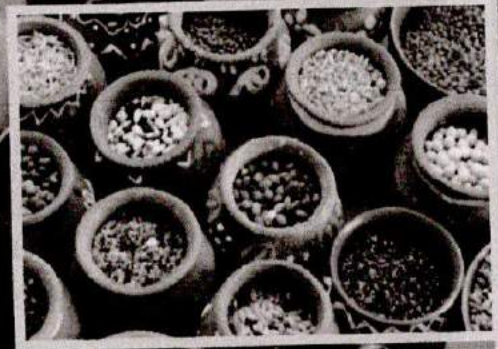
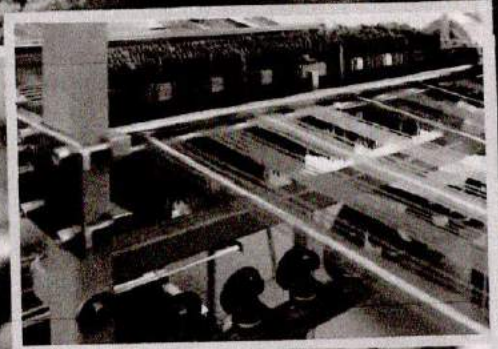


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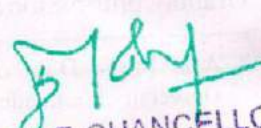
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## CLIMATE AND ENVIRONMENTAL CHALLENGES: RETROSPECT AND PROSPECT



  
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## 37. IMPACTS OF URBANIZATION ON ENVIRONMENT

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### ABSTRACT

**U**rbalization refers to general increase in population and the amount of industrialization of a settlement. It includes increase in the number and extent of cities. It symbolizes the movement of people from rural to urban areas. Urbanization happens because of the increase in the extent and density of urban areas. Due to uncontrolled urbanization in India, environmental degradation has been occurring very rapidly and causing many problems like land insecurity, worsening water quality, excessive air pollution, noise and the problems of waste disposal. This paper emphasizes on the effect of urbanization on environmental components mainly climate, biosphere, land and water resources. A case study of urbanization in India and metropolitan cities have been carried out leading to conclude on the existing causes of damage to the environment due to urbanization and preventive measures to keep a check on them. Although it is impossible to restrict urbanization it has to be ensured that urbanization proceeds in the right path causing minimum impact on environment.

### INTRODUCTION

Urbanization is a process that leads to the growth of cities due to industrialization and economic development, and that leads to urban-specific changes in specialization, labor division and human behaviors. The population is growing at the rate of about 17 million annually which means a staggering 45,000 births per day and 31 births per minutes. If the current trend continues, by the year 2050, India would have 1620 million populations. Due to uncontrolled urbanization in India, environmental degradation has been occurring very rapidly and causing many problems like shortages of housing, worsening water quality, excessive air pollution, noise, dust and heat, and the problems of disposal of solid wastes and hazardous wastes.

### IMPACTS OF URBANIZATION

The most emerging issues are climate changes, freshwater scarcity, deforestation, and fresh water pollution and population growth. These problems are very complex and their interactions are hard to define. It is very important to examine problems through the

social-economic-cultural system.

### IMPACTS ON THE ATMOSPHERE AND CLIMATE

#### *The Creation of Heat Island*

Materials like concrete, asphalt, bricks etc. absorb and reflect energy differently than vegetation and soil. Cities remain warm in the night when the countryside has already cooled.

#### *Changes in Air Quality*

Human activities release a wide range of emissions into the environment including carbon dioxide, carbon monoxide, ozone, sulfur oxides, nitrogen oxides, lead, and many other pollutants.

### POLLUTION

Pollutants are often dispersed across cities or concentrated in industrial areas or waste sites. Lead-based paint used on roads and highways and on buildings is one such example of a widely dispersed pollutant that found its way into soil.

### IMPACTS ON THE HYDROSPHERE AND WATER RESOURCES

#### *Flow of Water into Streams*

Natural vegetation and undisturbed soil are replaced with concrete, asphalt, brick, and other impermeable surfaces. This means that when it rains, water is less likely to be absorbed into the ground and, instead, flows directly into river channels.

#### *Flow of Water through Streams*

Higher, faster peak flows change stream channels that have evolved over centuries under natural conditions. Flooding can be a major problem as cities grow and stream channels attempt to keep up with these changes.

#### *Degraded Water Quality*

The water quality has degraded with time due to urbanization that ultimately leads to increased sedimentation there by also increasing the pollutant in run-off.

### IMPACTS ON THE BIOSPHERE

#### *Modification of Habitats*

The fertilizers that spread across lawns find its way into water channels where it promotes the growth of plants at the expense of fish. The waste dumped into streams lowers oxygen levels during its decay and cause the die-off of plants and animals.

#### *Destruction of Habitats*

There is also complete eradication of habitats as



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CLIMATE AND ENVIRONMENTAL CHALLENGES:  
RETROSPECT AND PROSPECT



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## 72. ENVIRONMENTAL ISSUES AND MANAGEMENT

**Dr. C. SIVAKKOLUNDU**, Assistant Professor, Department of Economics, Thiruvalluvar University, Serkkadu, Vellore - 632 115.

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### INTRODUCTION

Global concern for environmental issues and disaster is of recent origin. It is being increasingly realized that if environmental degradation continues unabated, the very survival of mankind will be at stake. Therefore a thorough understanding of our environment and its issues is necessary for participation in the protection and sustenance of the environment.

### ENVIRONMENT

Environment is the surroundings of organisms in which they live and interact. It includes both natural and man made. Natural environment is found in the form of Biosphere.

### BIOSPHERE

Mother earth is unique in the planetary system, in providing necessary life support of resources such as sunlight, air, soil, water, etc. to enable life to evolve and diversify. Biosphere consists of a large number of eco systems.

### ECOSYSTEMS

Communities of different species of plants, animals and microbes along with non living environment such as soil, air, water, etc.

Major Environmental Issues

Urbanization

Pollution

Deforestation

Green house effect and global warming

Acid rain

Ozone depletion

Loss of bio-diversity

Disaster

### URBANIZATION

The natural increase of population in cities and migration of people from rural areas to cities in search of gainful employment and better amenities of life result in 'Urbanisation'. The adverse impacts of urbanization on environment reflect mainly through deforestation leading to other ecological problems such as pollution, proliferation of slums, energy crisis and health hazards, etc.

The adverse impact of urbanization on the

ecosystem can be managed by proper planning of the cities with adequate governmental programmes on housing, providing pollution control system, encouraging rural and small industries to check large scale migration from rural areas to the cities and use of eco-friendly technology in all day today activities.

### POLLUTION

It refers to the deterioration of environment in terms of quantity and quality. Pollution becomes an inseparable part of our population growth and use of energy and materials. Air, water and soil are essential for living organism. Every day tones of harmful wastes go into the air, water and soil. The wastes poison the environment. Pollution can be controlled to some extent by various methods. It can be done by avoiding direct disposal of household, industrial and other wastes into the sources of water like rivers, ponds, lakes and public places.

### DEFORESTATION

Increasing population growth has placed heavy demands on forest resources resulting in deforestation. The process of clearing the forests for cultivation, grazing, housing, timber, fuel etc. by mankind is called deforestation. It has seriously affected the quality of environment, by increasing temperature, erratic rainfall, top soil erosion (recurring floods) and loss of biodiversity.

### GREEN HOUSE EFFECT AND GLOBAL WARMING

The presence of carbon-di-oxide, methane, CFCs, nitrous oxide, and ground level ozone gases in the atmosphere which surrounds the earth enables to form a 'green house' for earth by retaining the heat that are radiating from earth.

Increase in carbon di oxide in the atmosphere is a major challenge, facing mankind today. CO<sub>2</sub> is a natural constituent in atmosphere. It is 0.032% by volume, having a ratio of 1:450 with oxygen. In spite of its relatively small proportion, CO<sub>2</sub> plays a very important role in the biosphere. On account of industrialization, fossil fuel consumption is growing. As a result CO<sub>2</sub> concentration in the atmosphere is steadily



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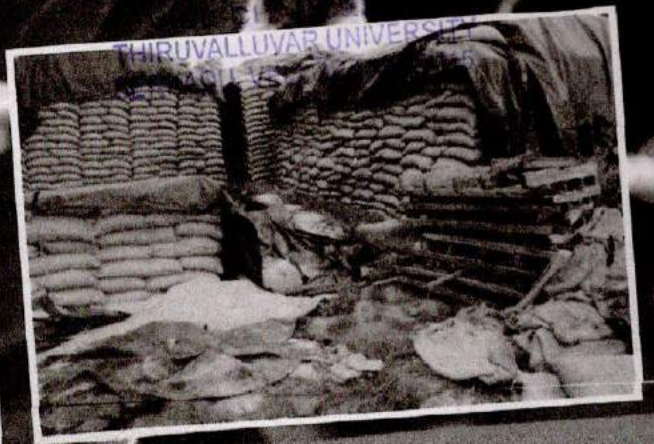


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A Journal of Agriculture and Rural Development  
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- Food Wastage
- Medicinal uses of Tulsi
- Merits and Demerits of GST







# The Indian Economic Journal

JOURNAL OF THE INDIAN ECONOMIC ASSOCIATION

Special Issue, December 2018

## EMPLOYMENT CHALLENGES AND POLICIES

*B. J. Jeyaraj*  
VICE-CHANCELLOR  
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## Make in India or Made in India

P. Jayakumar & C. Sivakkolundu

### MAKE IN INDIA

"If we have to put in use the education, the capability of the youth, we will have to go for manufacturing sector and for this Hindustan also will have to lend its full strength, but we also invite world powers. Therefore I want to appeal of the people world over, from the ramparts of the Red Fort, come, make in India, come, manufacture in India. Sell in any country of the world but manufacture here. We have got skill, talent, discipline, and determination to do something. We want to give the world a favourable opportunity that comes here, come, make in India..."

Prime Minister Narendra Modi, 15 August, 2014

### Escape from Underdevelopment: Is Services-led Growth the Answer?

Historically, there have been three modes of escape from under-development and poverty: geology, geography, and "jeans" (signifying low-skilled manufacturing).

Since the onset of industrial revolution, the majority of countries which have transitioned from low income to high income have done so by undergoing industrialisation and reducing their dependence on agriculture and natural resources. The latest examples of this trend are India's neighbours in the Indian Ocean - the "East Asian Tigers". Only a few smaller countries with valuable natural resources, and small populations, have gone through a period of sustained economic growth without advancing manufacturing.

India, on the other hand, seemed to be charting a completely own course by pursuing a services-led growth in the past two decades. This approach has paid dividends in the short-run as India has come to be known as the back-office of the world. The share of services in the Indian economy has risen to 57% in 2013, which is comparable to India's more developed peers in the BRIC grouping such as Brazil and Russia and also South Korea.

The following table shows the share of services as a percentage of GDP and in employment in the BRIC nations and South Korea in 2013

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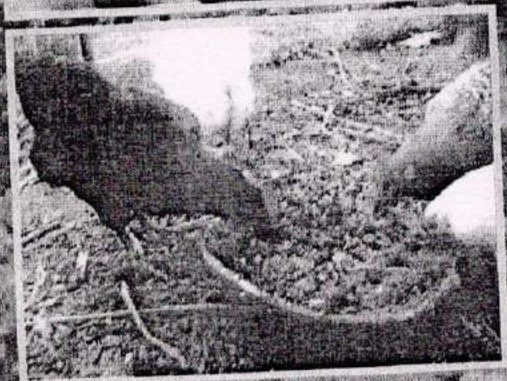
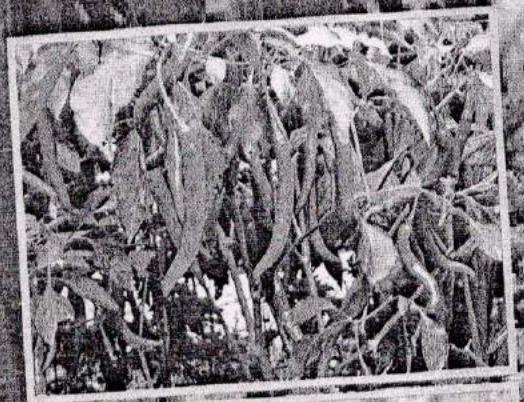


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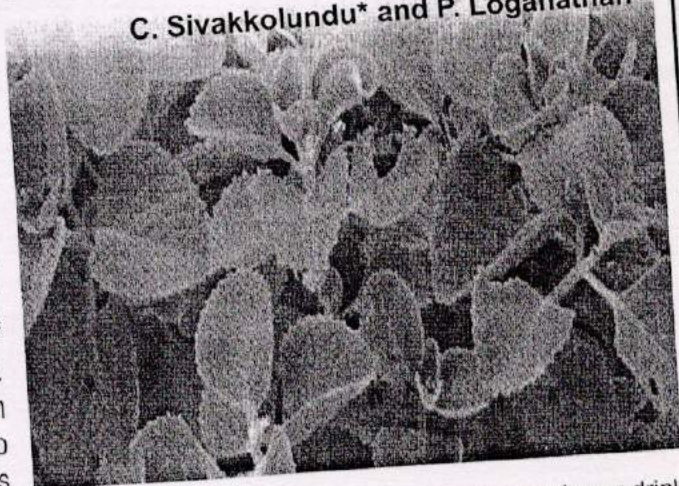


# Medicinal Uses and Health Benefits of Karpooravalli Leaves

C. Sivakkolundu\* and P. Loganathan\*\*

## Introduction

Karpooravalli plants are easy to grow and maintain. Just a stem is enough to start growing a plant in new place. Cut a small piece of the plant from where it is available and plant in soil with ample amount of water. It needs more water. It can grow on any soil. It will spread faster. You can trim the plant if needed. It is also grown as an ornamental plant for its beauty. The leaves are thick juice and look beautiful in medium green colour karpooravalli. In nattu maruthuvam it is advised to give the juice of karpooravalli for babies and the juice is applied on the chest for infant's cold. Karpooravalli leaves are known for its aroma and flavour. It acts as a good mosquito repellent. Other names of Karpooravalli are omavalli leaves are used in many ayurvedic treatments.



## Uses of ajwain leaves

- ◆ In Ayurveda karpooravalli leaf is used to treat cold and cough. Viral fever also can be treated with the help of ajwain leaves.
- ◆ These leaves are very beneficial in treating stomach pain and many other stomach disorders. karpooravalli rasam recipe is one of the best dish to cure stomach related disorders.
- ◆ Karpooravalli leaves are used as general antiseptic for minor cuts and wounds. There is no karpooravalli side effects found in children and adults.
- ◆ The colic symptoms in babies can be cured with the help of ajwain leaves.
- ◆ This is a natural remedy for indigestion and loss of appetite in children.
- ◆ The extracts of ajwain leaves are remedial in treating dysbiosis and microbial imbalance in body.
- ◆ Mix extracts of ajwain leaves in warm water and consumes it to get relief from asthma and bronchitis.
- ◆ Make a fine paste of ajwain leaves and apply in on skin disorders like itching, rashes or eczema. You can apply this paste on painful pimples also to get relief.
- ◆ Women who are suffering from menstrual pain can drink ajwain water. It can also cure the irregular menstrual problem.
- ◆ Ajwain leaves are natural mosquito repellent. Keep this leaves in every corner of house. The strong aroma of the leaves will keep the mosquitoes at the bay.
- ◆ Smelling the strong aroma of ajwain seeds or leaves can be useful in treating headache and nausea.
- ◆ Apply karpooravalli leaves paste on insect bites to relieve the pain and swelling.
- ◆ Soak some ajwain leaves and seeds in water and wash your eyes with that filtered water to clean your eyes thoroughly. The leaves extract of Karpooravalli for hair is highly beneficial to treat dandruff problem.
- ◆ Anti-inflammatory and anti-anaesthetic properties of ajwain leaves and seeds help to reduce the arthritis and rheumatic pain. You can apply paste of seeds and leaves and apply it on painful area to get soothing relief.
- ◆ Karpooravalli plant contains niacin and thymol along with vitamins which is very useful in maintaining good heart health. The consumption of ajwain extracts is beneficial in improving nerve impulsion and blood circulation.
- ◆ Karpooravalli leaves extracts are beneficial in reducing acidity effectively.



- ◆ If you are suffering from problem of hiccups then chew an ajwain leaf or few seeds to get immediate effect.

### Medicinal uses of Karpooravalli

- ◆ Boil a cup of water and add 5 crushed leaves of karpooravalli. Wait until the water reduces to 3/4th. Drinking this tea is a good home remedy for cold and cough. Eating fresh leaves (3 or 4) will also give a relief from cough and cold.
- ◆ For infants, just giving water from crushed leaves will cure the stomach ache. Care should be taken in case of infants. Should not give too much dosage.
- ◆ For common cold, tulasi leaves and karpooravalli leaves are boiled in water and the water must be taken twice a day.
- ◆ Boil karpooravalli and tulasi in water. Cool the water and add a teaspoon of honey will give a relief from dry cough.
- ◆ Leaves crushed and placed in a room will act as a natural mosquito repellent.
- ◆ The itching and irritation of scalp can be reduced by applying paste of ajwain leaves on the affected area.
- ◆ Boil Karpooravalli seeds and leaves in water and inhale the vapour to control asthma effectively.
- ◆ Karpooravalli for babies – The congestion of nose can be treated by inhaling the vapour of the water boiled with Karpooravalli leaves and seeds. Apply leaves juice of karpooravalli for babies chest to reduce congestion.
- ◆ Chutney made with ajwain leaves, red chillies, coconut and salt not only helps digestion but also reduces nausea.
- ◆ To reduce tooth pain or to cure mouth ulcers boil Karpooravalli seeds or leaves in water and rinse the mouth with the same.
- ◆ Make a paste of Karpooravalli seeds and leaves. Apply this paste on heat rashes or swelling due to pimple.
- ◆ To control dysentery chew some Karpooravalli seeds or boil some Karpooravalli leaves in water and sip it.
- ◆ Ajwain leaves paste along with curd can be very beneficial in removing acne effectively.
- ◆ Make a paste of ajwain seeds and leaves with mustard oil and this paste will prevent the entry of mosquitoes in room.

- ◆ Mix Karpooravalli seeds paste in buttermilk and consume it to treat piles.
- ◆ The consumption of ajwain seeds regularly can burn the body fats and thus helps to reduce weight quickly.
- ◆ The Karpooravalli seeds are useful in treating earache. Boil ajwain seeds with milk and few drops dropped in both ears will give a relief.
- ◆ If you are suffering from hiccups, chew half tsp of ajwain seeds and sip little water on it. This remedy will quickly stop your hiccups.
- ◆ To make the syrup, take a spoon of karpooravalli juice, a spoon of honey must be added to the juice, add a pinch of dry ginger(chukku powder), a pinch of fresh ground pepper powder. Mix well to make the syrup.

### The dosage of age wise usage

- ◆ 3-4 leaves (to chew and eat) a day for adult
- ◆ 2 leaves (to chew and eat) for children from 2 to 12 years
- ◆ Juice of quarter to half leaf for children under 2 years of age

### Dosage of karpooravalli syrup for chest congestion

- ◆ 1 drop for infants under 1 year
- ◆ 1 teaspoon for children from 1 to 10 years
- ◆ 2 teaspoons for adults

### Recipes from Karpooravalli

- ◆ Karpooravalli Bhajji ( with leaves)
- ◆ Karpooravalli kashayam
- ◆ Karpooravalli thuvayal
- ◆ Karpooravalli Leaves Rasam
- ◆ Karpooravalli Tea

### Conclusion

If you visit any village in South India, you will find karpooravalli plant very easily. One can easily grow these plants in pots, as it doesn't require much maintenance. But this plant can't be grown indoors, as it needs plenty of sunlight. Try drinking this juice, at least for three days to get good relief from cough. Some people make rasam soup out of these leaves, but extracting the juice directly like this gives the best results. For children reduce the quantity, for young babies a tsp of this juice will be enough.

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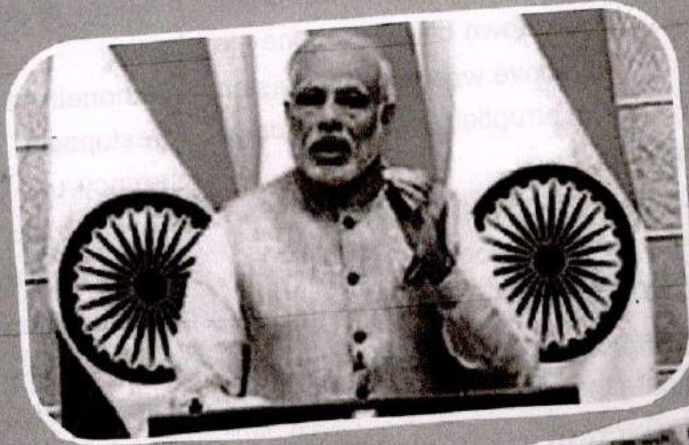


# Proceedings of the ONE DAY INTERNATIONAL CONFERENCE ON CAUSES AND CONSEQUENCES OF DEMONETIZATION IN INDIA - A CRITICAL ASSESSMENT

Volume - I

Editor

Dr. G. Yoganandham, M.A., M.Phil., Ph.D., P.D.F.



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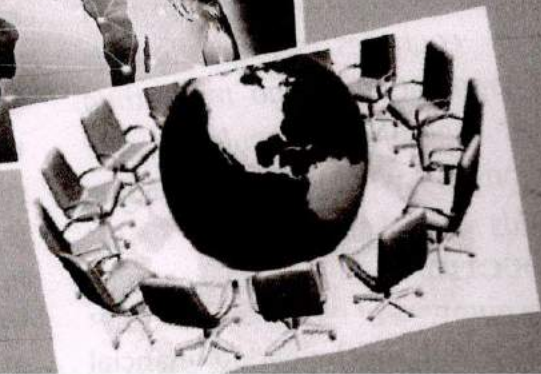
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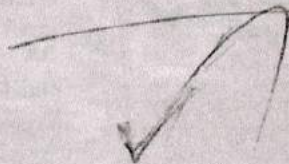


# The Indian Economic Journal

JOURNAL OF THE INDIAN ECONOMIC ASSOCIATION

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**MONETARY AND  
FISCAL ISSUES IN  
DEVELOPMENT PROCESS**

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THIRUVALLUVAR UNIVERSITY  
SERKADU, VELLORE - 632 115.









## Importance of GST and Direct Tax Code on Economic Development

C. Sivakkolundu and D. Vendamani

### INTRODUCTION

GST is the broad consumption tax on the import goods also nearly supplies the goods and services in Singapore. In the other countries, GST is called as the value added tax (VAT). Goods and services tax apply sale, the provision of most financial services, and the lease of residential properties also the importation & local supply of investment of precious metals. Goods that exported also the international services are zero-rated.

The constitution divides the taxation powers between centers also states. Both levels of the government have some exclusive areas where they can levy a tax. Income tax includes based on the company profits is the exclusive domain of the central government. These taxes are referred to the directed taxes.

### Meaning

The GST is a value Added Tax levied on most good and services sold for domestic consumption. The GST is paid by consumers, but it is remitted to the government by the businesses selling the goods and services. In effect, the GST provide revenue for the government.

### Definition

Tax code mapping for GST related transactions and GST accounting entries are new to most of the accounting personal in Malaysia. Knowledge of the 23 recommended tax code and correct setup at the initial stage is crucial to ensure the correctness of GST return submission.

### Objectives of GST

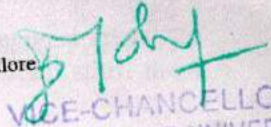
and tax evasion



To realise the  
To know lesser incentive for tax evasion unified market.  
To understand Increasing State Revenue.



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- Fixing the Economy From Ground Up
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- Health Benefits and Traditional Uses of Turmeric

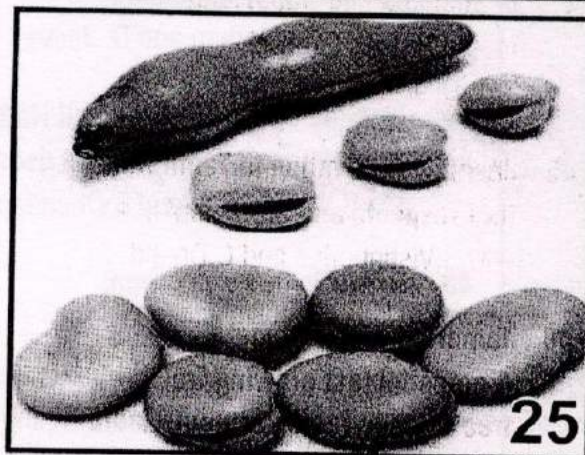
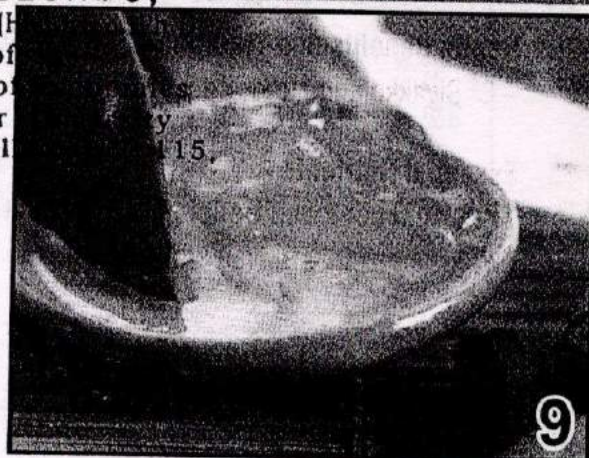


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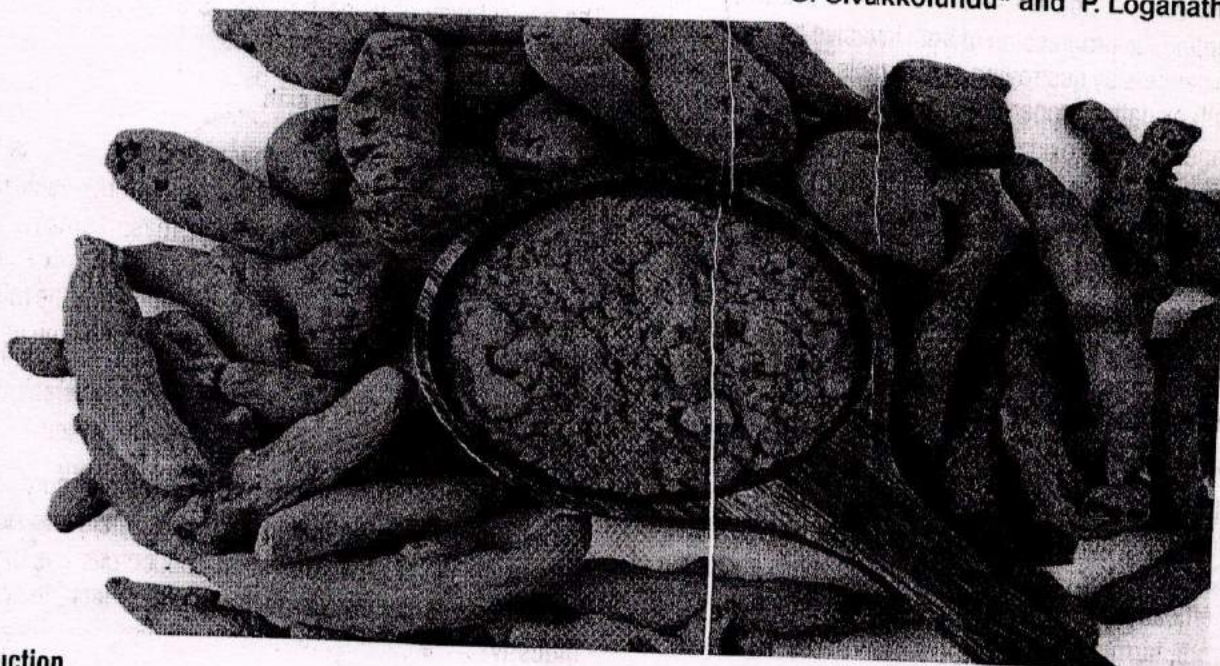
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# Health Benefits and Traditional Uses of Turmeric

C. Sivakkolundu\* and P. Loganathan\*\*



## Introduction

Turmeric is a rhizomatous herbaceous perennial plant of the ginger family, Zingiberaceae. It is native in south-east India, and needs temperatures between 20 °C and 30 °C (68 °F and 86 °F) and a considerable amount of annual rainfall to thrive. Plants are gathered annually for their rhizomes, and propagated from some of those rhizomes in the following season. When not used fresh, the rhizomes are boiled for about 30–45 minutes and then dried in hot ovens, after which they are ground into a deep orange-yellow powder commonly used as a spice in Indian cuisine and even curries, for dyeing, and to impart color to mustard condiments.

## History and etymology

Known as Kasturi Manjal or just Manjal, turmeric has been used in Asia for thousands of years and is a major part of Siddha medicine. It was first used as a dye and then later for its medicinal properties. There may be a Latin origin, terra merita (merited earth). Turmeric grows wild in the forests of South and Southeast Asia. It is one of the key ingredients in

many Asian dishes. Tamil traditional medicine, called Siddha, has recommended turmeric for medicine.

## Medicinal uses

Manjal Pal (turmeric milk) is warm milk mixed with some turmeric powder. It is commonly used in Tamil Nadu as a home remedy for fever. Turmeric paste is often used in Tamil Nadu as an antiseptic in open wounds, while chunholud (turmeric with slaked lime) is used to stop bleeding as home remedies.

The active compound curcumin is believed to have a wide range of biological effects including anti-inflammatory, antioxidant, antibacterial, and antiviral activities, which indicate potential in clinical medicine.

As of December 2013, turmeric is being evaluated for its potential efficacy against several human diseases in clinical trials, including kidney and cardiovascular diseases, arthritis, several types of cancer and irritable bowel disease. Turmeric is also being investigated for potential treatment of Alzheimer's disease, diabetes, and other clinical disorders.



*Handwritten signature in green ink.*  
VICE-CHANCELLOR



Turmeric is packed with nutrients like proteins, dietary fiber, niacin, vitamin C, vitamin E, vitamin K, sodium, potassium, calcium, copper, iron, magnesium and zinc.

### **Health benefits**

#### **Prevents cancer**

The compounds present in turmeric were capable of preventing the progression of both invasive and non invasive colon cancers by destroying cancer cells. It is also found that the anti oxidative properties of haldi protects the body from damage due to oxidative stress and radiation, thereby reducing your chances or suffering from tumours caused due to radiation.

#### **Relieves arthritis**

The compounds present in turmeric were responsible for reducing the inflammation associated with arthritis. The root helps to reduce the pain and inflammation associated with the conditions.

#### **Controls diabetes**

If you have diabetes, haldi is something you simply must include into your diet. The curcumin present in turmeric has a very potent effect in moderating insulin levels and enhancing the efficacy of anti diabetic drugs. By controlling these two factors, turmeric increases the person's sensitivity to insulin lowering his/her total blood sugar.

#### **Prevents liver disease**

Turmeric is great for the liver. It protects it from the damage caused by eating foods that contain high amounts of fat and excessive alcohol consumption. The compounds in turmeric helped in blocking a particular gene that was linked to inflammation and necrosis of the liver due to excessive alcohol consumption.

#### **Lowers cholesterol**

Having turmeric on a daily basis can keep your cholesterol levels in check. Regularly consuming haldi changed the way the body processed cholesterol. This change lowers the total LDL or 'bad' cholesterol and increased the amount of HDL or 'good' cholesterol in the body.

#### **Acts as good blood clotting agent and heals wounds faster**

Whenever you get cut, you must have heard your grandmother or mother tell you to immediately put some haldi on the wound. Leading to the conclusion that haldi had properties that could not only heal a wound faster but also reduce the intensity of the scar seen on the skin.

#### **Fights cough and cold**

Rich in curcumin and volatile oils that have a protective as well as therapeutic action, turmeric is great in treating cough and cold. As soon as you feel a scratchy sensation in your throat, it indicates the onset of a sore throat or cough and the problem can be stopped from getting aggravated. The easiest way of using turmeric is to drink hot milk with half a tea spoon of turmeric.

#### **For beautiful blemish free skin**

If you want your skin to glow with health, haldi is what you need. Just take some young (immature) haldi roots. Every morning, on an empty stomach, mash a small piece of the root (about the size of a one rupee coin) mix it with a small cup of warm milk or warm water, and drink the mixture. This will ensure that your skin is clear, free of blemishes and glows.

#### **Digestive Disorders**

Turmeric is considered as a digestive cure and a carminative. It can be added into foods including rice and bean dishes to improve digestion, reduce gas and bloating. This improves the body's ability to digest fats. For chronic digestive weakness and/or congestion turmeric is recommended.

#### **Liver Diseases**

Turmeric is beneficial for its influence on the liver. In spring more consumption of herbs and foods can strengthen the liver. Turmeric shares similar liver protectant compounds that milk thistle and artichoke leaves contain. It is said to shrink engorged hepatic ducts, so it can be useful to treat liver conditions such as hepatitis, cirrhosis, and jaundice.

#### **Menstrual Problems**

For women who experience monthly menstrual cramps, try using turmeric extract or bitters twice daily for two weeks prior to expected menstruation. Turmeric is an antispasmodic to smooth muscles so it reduces digestive and menstrual cramping. It should reduce the severity of pain, if not ease them completely.

#### **Bacterial Infection / Wounds**

Turmeric is useful as an external antibiotic in preventing bacterial infection in wounds.





### Eye Disorder

Curcumin may prove to be as effective as corticosteroids in the uveitis (inflammation of the uvea, the middle layer of the eye between the sclera - white outer coat of the eye and the retina - the back of the eye) the type of eye disorder.

### Ceremonial uses

Turmeric is considered highly auspicious and holy in India and has been used extensively in various Hindu ceremonies for centuries. Even today it is used in every part of India during wedding ceremonies and religious ceremonies.

Turmeric has played an important role in Hindu spiritualism. The robes of the Hindu monks were traditionally colored with a yellow dye made of turmeric. Because of its yellow-orange coloring, turmeric was associated with the sun or the Thirumal in the mythology of ancient Tamil religion. Orange is the color of the sacral chakra, and tied to the reproductive system.

It is used in poosai to make a form of Ganesha. Yaanaimugathan, the remover of obstacles, is invoked at the beginning of almost any ceremony and a form of Yaanaimugathan for this purpose is made by mixing

turmeric with water and forming it into a cone-like shape.

During the Tamil festival Pongal, a whole turmeric plant with fresh rhizomes is offered as a thanks giving offering to Suryan, the Sun god. Also, the fresh plant sometime is tied around the sacred Pongal pot in which an offering of pongal is prepared.

In Tamil Nadu, as a part of the Tamil marriage ritual, dried turmeric tuber tied with string is used temporarily or permanently as opposed to the Mangalasutra of Hindus in India. The Tamil Marriage act recognizes this custom. Thali necklace is the equivalent of marriage rings in western cultures.

### Conclusion

Turmeric is one of the key ingredients in many Asian dishes. It is being evaluated for its potential efficacy against several human diseases in clinical trials. Turmeric is also being investigated for potential treatment for the liver. It protects from the damage caused by eating foods that contain high amounts of fat. The compounds in turmeric helped in blocking a particular gene that was linked to inflammation.

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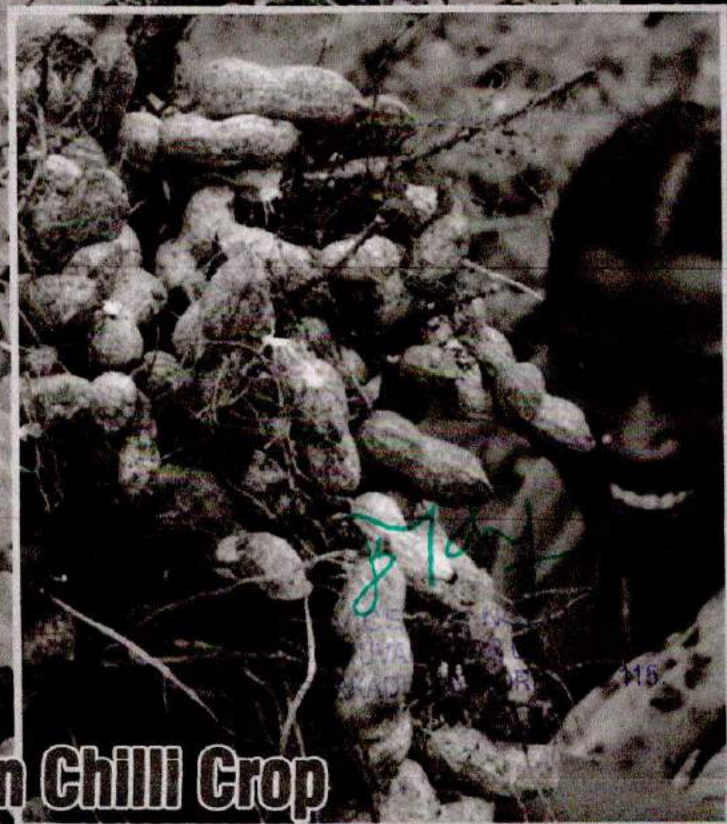
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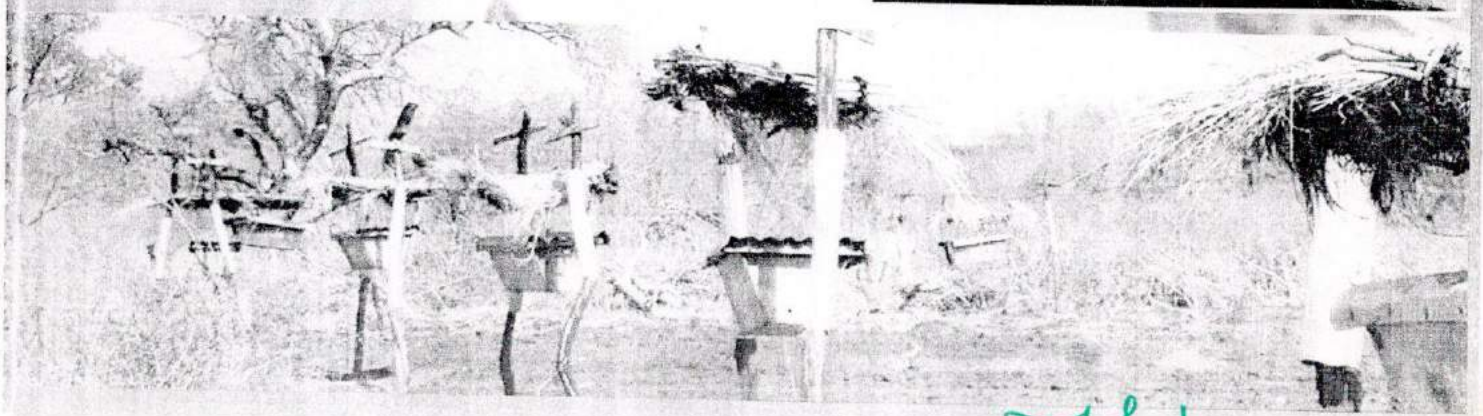
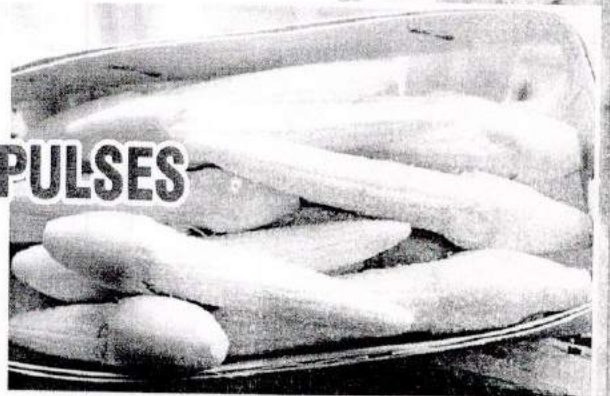
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- 2016 - INTERNATIONAL YEAR OF PULSES
- BEEHIVE FENCE
- BABY CORN : A POTENTIAL CROP



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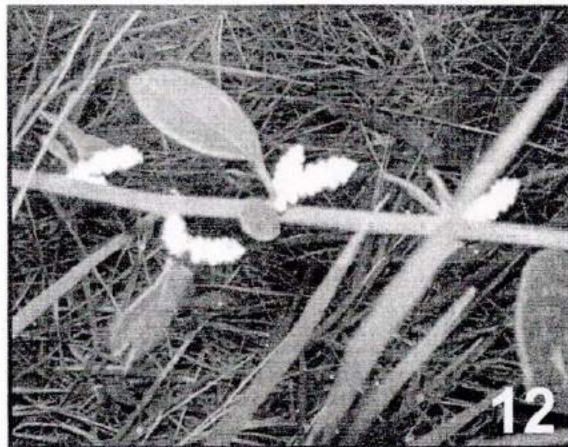


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# SKILL INDIA:

## Opportunities And Scope For Development

C. Sivakkolundu

### Introduction

The Government launched a new programme called 'Skill India' which is supposed to be a multi-skill programme. It was launched in March 2015 and the government launched new skill development policies that would bridge the gap between educational institutions and the labour market. 'Skill India' is a dream project of the Government and the work to launch this programme has already been initiated. The new scheme is expected to move beyond the target of skilling 500 million youth by 2020. A multi skill development programme on mission mode for job creation and entrepreneurship for all socio-economic classes is being worked out.

### Goal of Skill India

- To create opportunities, space and scope for the development of the talents of the Indian youth.
- The new programme aims at providing training and skill development to 500 million youth of our country by 2020, covering each and every village.
- The mission of this campaign is to coordinate, converge, implement and monitor skill development activities across India.
- The government aims at providing training on skill development to 102 million youths in the country within a span of the next five years.
- The end objective is to train and develop the skills of the youths along with speed, scale and standards spread all over the country.

### Features of Skill India

- The emphasis is to skill the youths in such a way so that they get employment and also improve entrepreneurship.
- Provides training, support and guidance for all occupations that were of traditional type like carpenters, cobblers, welders, blacksmiths, masons, nurses, tailors, weavers, etc.
- More emphasis will be given on new areas like real estate, construction, transportation, textile, gem industry, jewellery designing, banking, tourism and various other sectors.

- The training programmes would be on the lines of international level so that the youths of our country can meet the international countries demand.
- The Skill India programme would be to create a hallmark called 'Rural India Skill' so as to standardise and certify the training process.
- The programmes would be initiated for specific age groups which can be like language and communication skills, life and positive thinking skills, personality development skills, management skills, behavioural skills, including job and employability skills.
- The course methodology of 'Skill India' would be innovative, which would include games, group discussions, brainstorming sessions, practical experiences, case studies, etc.

### Advantages of Skill India

- The idea is to raise confidence, improve productivity and give direction through proper skill development. Skill development will enable the youths to get blue-collar jobs.
- Development of skills, at young age, right at the school level, is very essential to channelise them for proper job opportunities.
- There should be a balanced growth in all the sectors and all jobs should be given equal importance.
- Every job aspirant would be given training in soft skills to lead a proper and decent life. Skill development would reach the rural and remote areas.
- Corporate educational institutions, non-government organizations, Government, academic institutions and society would help in the development of skills of the youths so that better results are achieved in the shortest time possible.

### Initiatives of Skill India

- It provides skills to people, especially because India is one of the few countries all across the world whose working age population will be very high, few years down





the line, going by its ever-increasing growth of population, as per the World Bank.

It is also high time now measures are taken to improve the physical and mental development of the youths of the country so that none of them remains unemployed and the country's unemployment problem also gets reduced.

The economy should concentrate on job creation and social security schemes.

### **Skill Development Policies**

National Policy for Skill Development and Entrepreneurship 2015:

This will offer policy direction to all stakeholders for skill development and growth of entrepreneurship ecosystem.

### **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):**

According to this scheme, financial incentives will be offered to those who complete the approved skill training programmes successfully.

### **Recognition of Prior Learning (RPL):**

The skills of the youth who lack formal certification as well as education will be recognised. This will cover young workers in the country's large unorganised sector. Over the next one year, the government aims at certifying 10 lakh youth under the RPL category of PMKVY.

### **Skill loan:**

A skill loan initiative will also be started where more than 34 lakh youth, who want to attend skill development programmes, will be given Rs 5000 to Rs 1.5-lakh loan.

### **Scope of the National Skill Development Policy**

- Institution-based skill development including ITIs/ITCs/vocational schools/technical schools/polytechnics/professional colleges, etc.
- Learning initiatives of sectoral skill development organised by different ministries/departments.
- Formal and informal apprenticeships and other types of training by enterprises.
- Training for self-employment/entrepreneurial development.
- Adult learning, retraining of retired or retiring employees and lifelong learning.

Non-formal training including training by civil society organizations.

### **Challenges of Skill India Programme**

- Disseminating information about the availability and effectiveness of training programs.
- Improper and inadequate development of vocational training system.
- Lack of coordination between vocational training institutions and absence of partnership
- There is a need to identify institutions to carry out impact evaluation studies and Surveys of graduates from vocational institutes on a regular basis.
- Vocational training institutes should be given greater freedom in terms of resource generation
- Increasing capacity and capability of existing system to ensure equitable access to all.
- Promoting lifelong learning, maintaining quality and relevance, according to changing requirement particularly of emerging knowledge economy.
- Creating effective convergence between school education, various skill development efforts of government and between government and Private Sector initiative.
- Capacity building of institutions for planning, quality assurance and involvement of stake holders.
- Creating institutional mechanism for research development quality assurance, examinations & certification, affiliations and accreditation.

### **Conclusion**

India has one of the youngest populations in the world and it has the potential to meet the skill needs of other countries. Ironically, most industries in India are currently struggling with scarcity of skilled labour. The current education system does not focus on training young people in employable skills that can provide them with employment opportunities. Today, a large section of India's labour force has outdated skills. With current and expected economic growth, this challenge is going to only increase further, since more than 75% of new job opportunities are expected to be skill-based. The Government is therefore strongly emphasizing on upgrading people's skills by providing vocational education and training to them.

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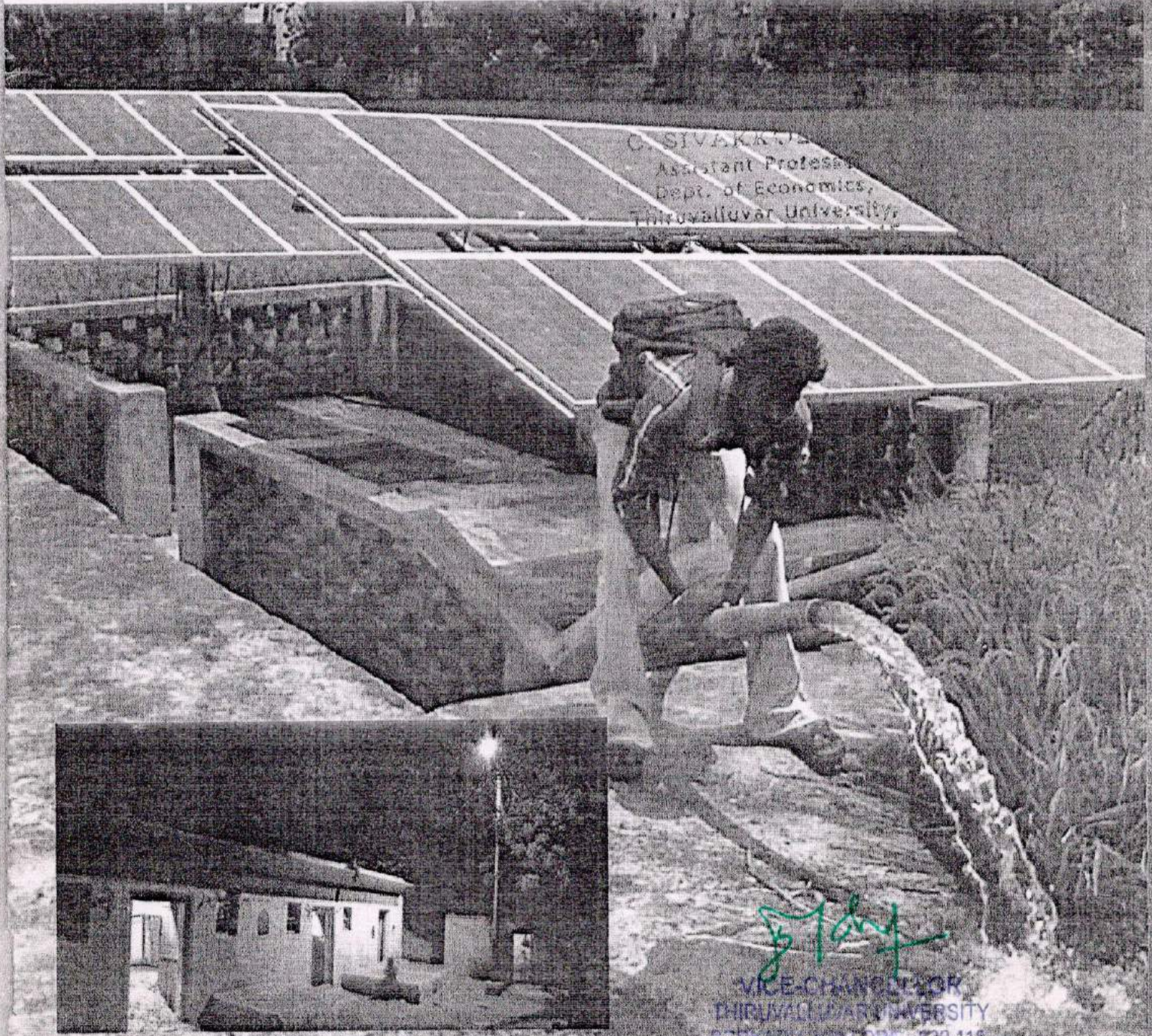


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# The Kolli Hills of Tamil Nadu

C. Sivakkolundu\* and P. Loganathan\*\*

## Introduction

Kolli Hills is a small mountain range located in central Tamil Nadu. The mountains are about 1000 to 1300 m in height and cover an area of approximately 280 km<sup>2</sup>. The Kolli Hills has 72 hair pin bends to reach the top of the hills. The Kolli Hills are part of the Eastern Ghats, which is a mountain range that runs mostly parallel to the east coast of South India. The mountains are relatively untouched by commercial tourism and still retain their natural beauty.

## Climate of Kolli hills

Kolli hills enjoy a salubrious climate throughout the year. This fertile pocket in Namakkal district is where exotic tropical fruits and medicinal plants grow in plenty. The land is still relatively untouched by time, with 16 quaint little tribal villages that once constituted the hill kingdom of Ori. Much of the charm of this hill country still remains. If you can't stand the milling crowds of Ooty and Kodai, this surely is one place where you can head for a quiet holiday.

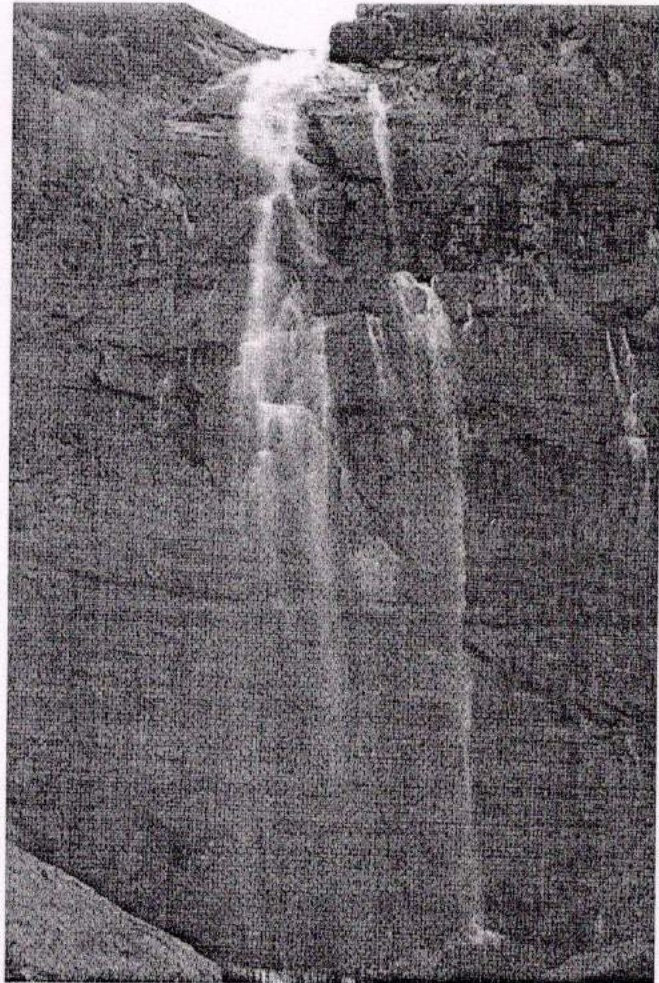
## Beautiful hill station

The history of Kolli Hills is closely linked with ancient Tamil literature. It is believed that in the Ramayana, these hills are called Madhuvanam (forest of honey), the abode of the monkey king Sugriva. In the ancient Tamil epics, zSilapadikaram and Manimekalai, there is an interesting reference to Kollipavai, the deity in the sacred grove, who is also considered the guardian of the forests here. According to this legend, the sages were looking for a peaceful place to do their penance, and they chose Kollimalai as their abode.

When they began their rituals, the demons invaded the hills to destroy their penance. The sages prayed to Kollipavai, who according to the myth chased away the demons with her enchanting smile. The Kollipavai is still worshipped by the people here and her smile is revered. The Kollipavai temple is located in one of the 15 sacred groves here and can be approached only on foot.

## History of Kolli hills

According to the references in Tamil Sangam literature, Kolli Hills was once ruled by the benevolent and most valiant King



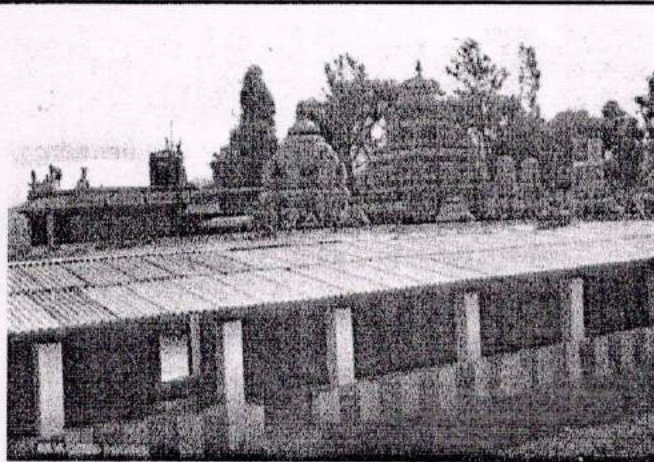
Ori, who lived sometime during 200 A.D. The region, consisting of 18 nadus (villages) including the present Rasipuram and Senthamangalam, were under his rule. His reign was perhaps the most prosperous, as far as these hills were concerned, s paddy, millets and spices grew abundantly and the king himself was a patron of arts and the most generous among all rulers. The Tamil literary works also talk about his extraordinary valour and archery skills. It is believed that he once killed an elephant, tiger, deer, wild boar and monitor lizard with a single arrow.

## Kollimalai Arappaleeswarar Temple

The Arappaleeswarar temple in Kollimalai hills near Salem is a very ancient one and it dates back to the period of Appar, who has referred to it in his KshetraKovai Tiruttandakam. Arunagirinathar has sung of the Subramanyar shrine here.







### History of Arppallilswarar Temple

A Shiva temple in the Valappur Nadu is situated on the stream Aiyaru. Its is dedicated to Arppallilswarar. The deity's other names are ThiruArappalliAshavar, ThiruArappalliMahadhevan and ThiruArappalliUdaiyar. The Deity's consort is Archalai. It is a 12th century temple. Valli Amman, also known as Sucathamba, and Thayammai. Because of the belief that Arappallilswarar resides in the small fish of Aiyaru, the temple has also the name of Fish temple.

It is customary for the pilgrims to catch the sacred fish by hand, adorn them with gold or silver nose rings in fulfilment of vows. The Hindu legends of the temple's origin claim that the lingam in the main shrine was unearthed during the ploughing of a field. The scar on its top is supposed to have been caused by the plough. The mountain is a site of pilgrimage, because of the Arapaleeswarar temple, which is believed to have a secret path to the Shiva temple in Rasipuram. The Shiva temple is said to have been built by Valvil Ori in the 1st or 2nd century when he ruled this area.

### The ancient Tamil ruler Val Vil Ori

This temple is associated with the ancient Tamil ruler Val Vil Ori, who ruled this region. This temple is held in high regard by the tribes of this region and by several others around. It is believed that the shrine has the power to bring back to life, severed fish – taken out of the streams flowing on the hill. A three-day festival concluding with PathinettaamPerukku in the month of Aadi attracts several here. This temple is home to several fine bronzes. It is also said to have had an exquisite chariot. There are many such legends and interesting myths associated with these hills, which make it all the more interesting and worth visiting.



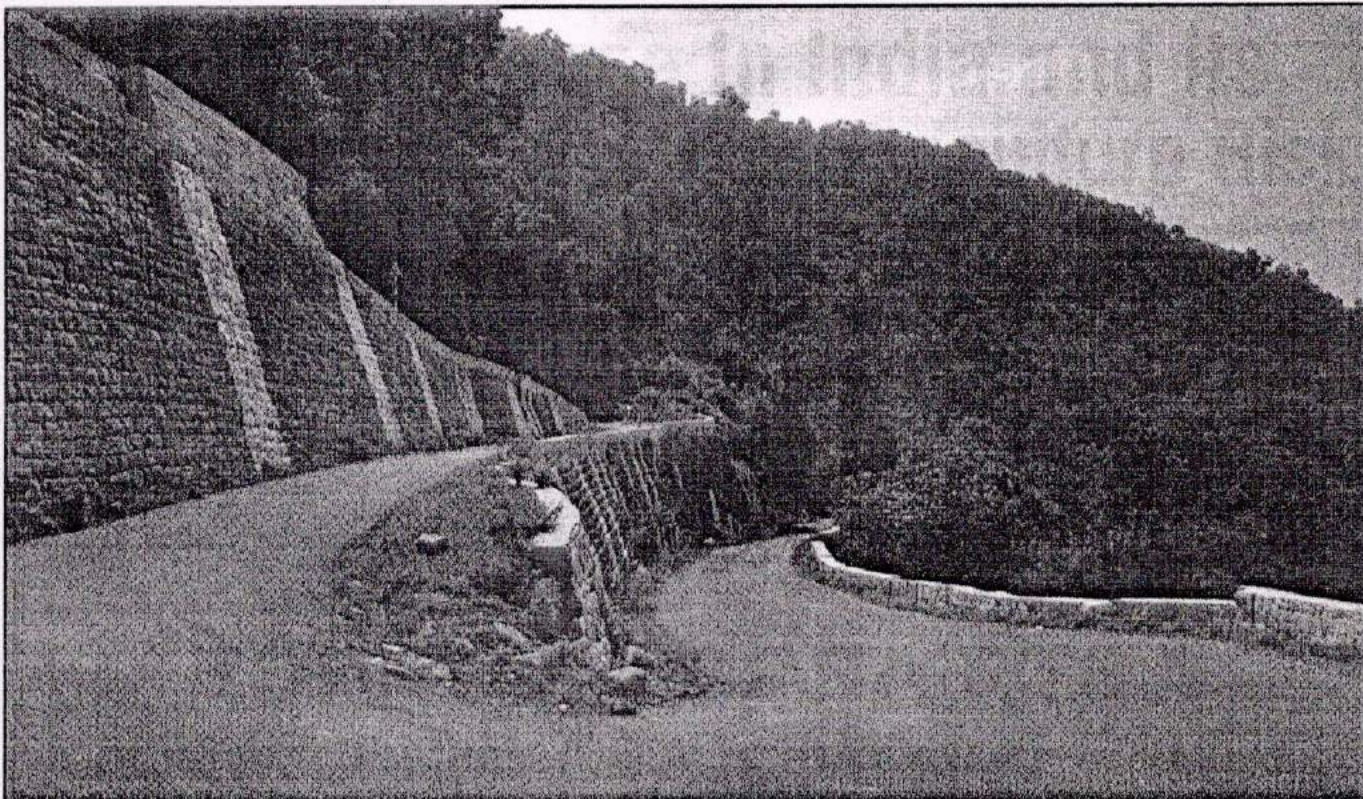
### Attractions of the hills

The drive up the hill will take you to Solakkadu, the main town here, which is also one of the highest points in the hills. But for the few shops, bus stand, a Highways Department Guest House, a higher secondary school and the weekly shandy, Solakkadu is just an overgrown village. The viewpoint inside the Highways Bungalow compound is worth visiting, as one can have a spectacular view of the surrounding hills and plains from here.

The bi-weekly shandy (dawn market) on Wednesdays and Saturdays attracts fruit vendors and wholesale dealers from the plains. The shandy begins on the previous evening as tribal's trickle in with their produce. Many walk all the way from their villages, and camp at Solakkadu for the night, for the actual business begins at 5.00 in the morning and is over by 10.00am. Plantains, Jackfruit, Pineapple, Orange, Pepper, Coffee and Honey are what the Kolli Hills are famous for, though you may get a better deal from the vendors than the tribal themselves.

AgayaGangai (Tamil: " ") waterfalls is located in Kolli Hills of the Eastern Ghats. Panchanathi, a jungle stream cascades down over 150 feet deep as the AgayaGangai (Ganges of the Sky), near the Arapaleeswarar temple atop the Kolli Hills in Namakkal district, Tamil Nadu. AgayaGangai is an enchanting 300 feet waterfall of river Aiyaru, located near Arapaleeswarar temple. It is situated in a beautiful valley surrounded by the mountains on all sides. En route, one sees the natural beauty of the valley and the vegetation-covered peaks. The location is ideal for trekking and the breeze is pleasant, the cascade of silvery water touching and brushing the innumerable herbs which abound in Kolli Hills keeps every one spell-bound and fresh with its herbal touches.





Water is so cool, and if you want to bathe, you need to swim across the pool which is of 7 Meters deep, minimum, there is one more way in which you need to jump across rocks, but in monsoon time there is no way to reach the fall. We need to just stay away and see the majestic view and believe it is falling from the height of 90+ meters. People who do not know swimming can bathe in the pool with caution, just stay in the start of the pool. Even if you use mugs for bathing you will feel the same as under the falls. Really the water is so refreshing.

#### Two viewpoints – Seekuparai and Selur Nadu

Two viewpoints – one at Seekuparai and another at Selur Nadu – are being developed to encourage tourism. As of 2007, creation of a park and formation of an approach road to the Seekuparai viewpoint were nearing completion. The government maintains a pineapple research farm where hybrid varieties are created. Research on medicinal plants is also being pursued in these mountains. The government holds a tourism festival in August. Kolli Hills has been the top choice for nature lovers, hiking enthusiasts, trekking clubs and meditation practitioners among the hill stations in Tamil Nadu. In comparison to other hill stations in Tamil Nadu, Kolli Hills is not commercialized; less polluted and offers unique mountain ranges. Recently, the local administration has been in full swing to create a Botanical Garden, a Boat House and giving an overall facelift to the view points.

#### Trekking

There is a trekking trail with yellow & red arrow marks which leads to Pambatti Siddhar Guhai. 30 minutes of trek you will reach a rock, in white paint they have written the name in Tamil, opposite to that write up you will find the cave, in which only one can go inside at a time, beware of bats. Trek down another 30 minutes, and the route does not end there, people say it leads further down to another cave called Agasthiar Guhai. This trek is not recommended for people who are not physically fit. Be sure to carry water everywhere.

#### Conclusion

The sages were looking for a peaceful place to do their penance, and they chose Kollimalai as their abode. The sages prayed to Kollipavai, who according to a myth chased away the demons with her enchanting smile. The Kollipavai is still worshipped by the people here and her smile is revered. Kolli Hills has been the top choice for nature lovers, hiking enthusiasts, trekking clubs and meditation practitioners among the hill stations in Tamil Nadu. In comparison to other hill stations in Tamil Nadu, Kolli Hills is not commercialized, it is less polluted and offers unique mountain ranges.

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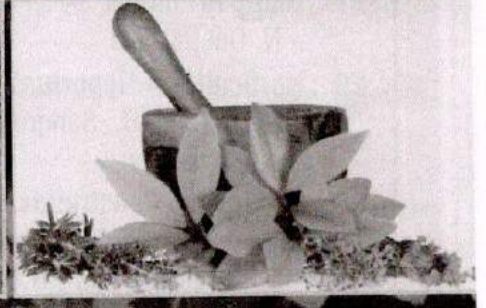


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# Ayurveda : A Type of Alternative Medicine

C. Sivakkolundu\* and P. Loganathan\*\*

## Introduction

Ayurvedic medicine is a system of Hindu traditional medicine native to the Indian subcontinent. Practices derived from Ayurvedic traditions are a type of alternative medicine. Ayurveda is a discipline of the upaveda or "auxiliary knowledge" in Vedic tradition. The origins of Ayurveda are also found in the Atharvaveda, which contains 114 hymns and incantations described as magical cures for disease. Ayurvedic practices include the use of herbal medicines, mineral or metal supplementation, surgical techniques, opium, and application of oil by massages. Ayurveda significantly developed during the Vedic period and later some of the non-Vedic systems such as Buddhism and Jainism also incorporated in the system.

## Origins

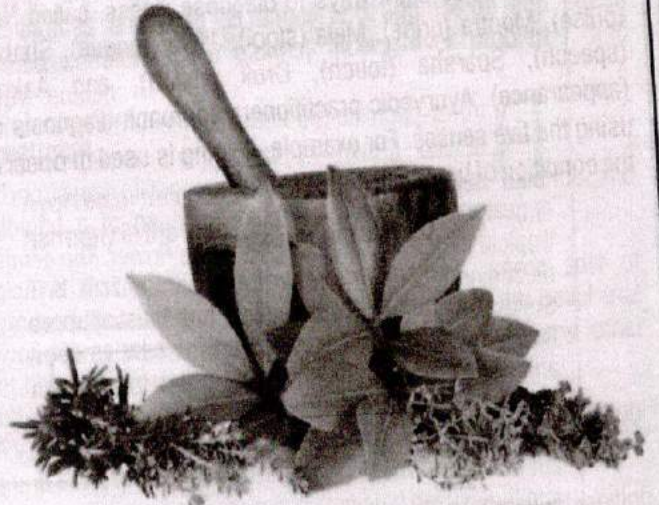
- Ayurvedic medicine originated in the early civilizations of India some 5,000 years ago. It is mentioned in the Vedas, the ancient religious and philosophical texts that are the oldest surviving literature in the world, which makes Ayurvedic medicine the oldest surviving healing system.
- According to the texts, Ayurveda was conceived by enlightened wise men as a system of living harmoniously and maintaining the body so that mental and spiritual awareness could be possible. Medical historians believe that Ayurvedic ideas were transported from ancient India to China and were instrumental in the development of Chinese medicine.

## Elements and oldest texts of Ayurveda

- The doshas (called Vata, Pitta and Kapha) and their states in a state of balance results in health, while their imbalance results in disease.
- The Susruta Samhita and Charaka Samhita are written in Sanskrit. Ayurvedic practitioners had developed various medicinal preparations and surgical procedures by the medieval period.

## Components of Ayurveda

- Kaumara-bhatya and Bala Roga, deals with the treatment of children.
- Shalya tantra, deals with surgical techniques.
- Śalākya-tantra, deals with diseases of the teeth, eye, nose, ear etc.



- Bhuta-vidya, deals with the causes, which are not directly visible and not directly explained by tridosha, pertaining to micro-organisms or spirits.
- Agada-tantra, deals with antidotes to poison.
- Rasayana-tantra, deals with rejuvenation.
- Vajikarana tantra, deals with healthy and desired progeny.

## Basic tissues of Ayurveda

- plasma (rasa), blood (rakta), muscles (mamsa), fat (meda), bone (asthi), marrow (majja) and semen (shukra). Like the medicine of classical antiquity, Ayurveda has historically divided bodily substances into five classical elements panchabhuta viz. earth, water, fire, air and ether. There are also twenty gunas which are considered to be inherent in all substances.
- These are organized in ten pairs of antonyms: heavy/light, cold/hot, unctuous/dry, dull/sharp, stable/mobile, soft/hard, non-slimy/slimy, smooth/coarse, minute/gross, and viscous/liquid.

## Practice of Ayurvedic

- Ayurvedic doctors regard physical existence, mental existence, and personality as a unit, with each element being able to influence the others. This is a holistic approach used during diagnosis and therapy, and is a fundamental aspect of Ayurveda.
- Another part of Ayurvedic treatment says that there are channels which transport fluids, and that the channels can



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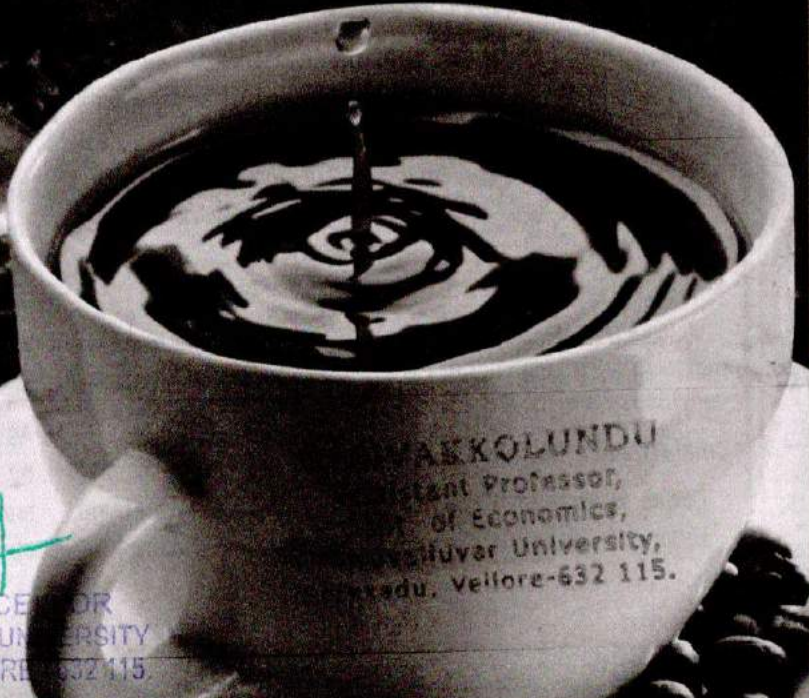
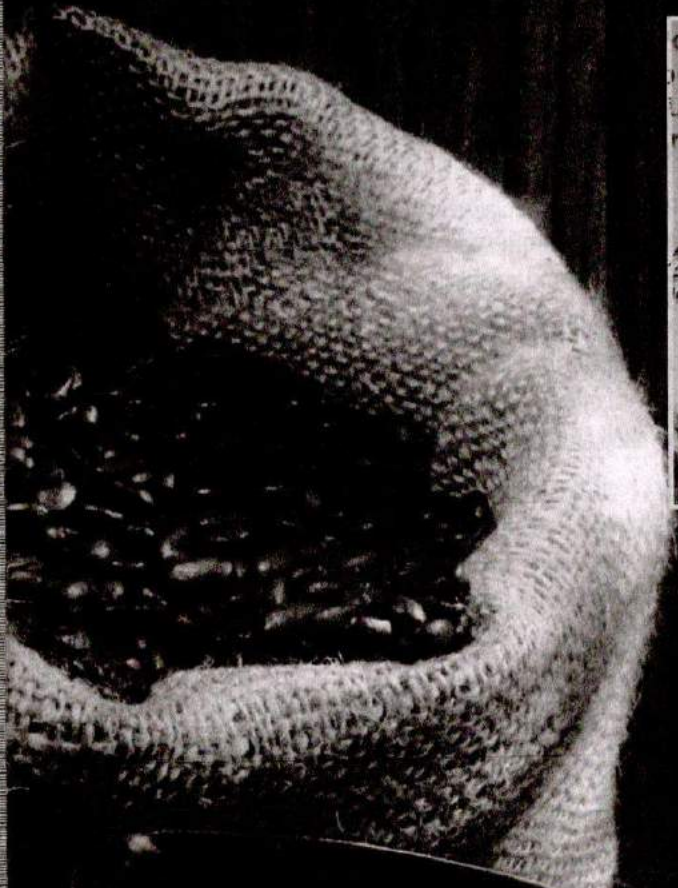
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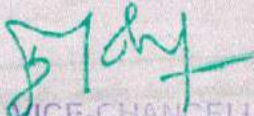
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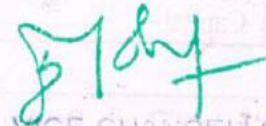
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# Public Distribution System And Food Subsidy

C Sivakkolundu\* Dr P Loganathan\*\*

## Introduction

Public Distribution System (PDS) is an Indian food security system. Established by the Government of India under Ministry of Consumer Affairs, Food and Public Distribution and managed jointly with state governments in India, it distributes subsidised food and non-food items to India's poor. Major commodities distributed include staple food grains, such as wheat, rice, sugar, and kerosene, through a network of Public Distribution Shops (PDS) established in several states across the country. Food Corporation of India, a Government owned corporation, procures, maintains and issues food grains to the state. Distribution of food grains to poor people throughout the country is managed by the state governments. As of date there are about 4.99 lakh Fair Price Shops (FPS) across India.

## Food security network

In terms of both coverage and public expenditure, it is considered to be the most important food security network. However, the food grains supplied by the ration shops are not enough to meet the consumption needs of the poor or are of inferior quality. The average level of consumption of PDS grains in India is only 1 kg per person / month. The PDS has been criticized for its urban bias and its failure to serve the poorer sections of the population effectively. The targeted PDS is costly and gives rise to much corruption in the process of extricating the poor from those who are less needy. Today, India has the largest stock of grain in the world

besides China, the government spends Rs.750 billion (\$13.6 billion) per year, almost 1 percent of GDP, yet 21% remain undernourished.

## Authorities to regulate PDS

Both the central and state governments shared the responsibility of regulating the PDS. While the central government is responsible for procurement, storage, transportation, and bulk allocation of food grains, state governments hold the responsibility for distributing the same to the consumers through the established network of Fair Price Shops (FPSs). State governments are also responsible for operational responsibilities including allocation and identification of families below poverty line, issue of ration cards, supervision and monitoring the functioning of FPSs.

## Schemes of PDS

Under PDS scheme, each family below the poverty line is eligible for 35 kg of rice or wheat every month, while a household above the poverty line is entitled to 15 kg of foodgrain on a monthly basis. However, there are concerns about the efficiency of the distribution process.

Several schemes have augmented the number of people aided by PDS, but the number is still extremely low. Poor supervision of FPS and lack of accountability have spurred a number of middlemen who consume a good proportion of the stock meant for the poor. There is also no clarity as to which families should be included in the BPL list and which excluded. This re-

sults in the genuinely poor being excluded whilst the ineligible get several cards.

The stock assigned to a single family cannot be bought in installments. This is one of the biggest barriers to the efficient functioning of PDS in India. Many BPL families are not able to acquire ration cards either because they are seasonal migrant workers or because they live in unauthorized colonies. A lot of families also mortgage their ration cards for money.

## Malpractices of PDS

- Generally, the consumers get inferior food grains in ration shops.
- Deceitful dealers replace good supplies received from the F.C.I (Food Corporation of India) with inferior stock.
- Many retail shopkeepers have large number of bogus cards to sell food gains in the open market.
- Many FPS dealers resort to malpractice since they acquire less salary.
- Despite the PDS, India accounts for over 400 million poor and hungry people.

## Measure to improve PDS

- Vigilance squad should be strengthened to detect corruption, which is an added expenditure for taxpayers.
- Personnel-in-charge of the department should be chosen locally.
- Margin of profit should be increased for honest business,

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in which case the market system is more apt anyway.

- F.C.I. and other prominent agencies should provide quality food grains for distribution.
- Frequent checks and raids should be conducted to eliminate bogus and duplicate cards, which is again an added expenditure.
- The Civil supplies Corporation should open more Fair Price shops in rural areas.
- The Fair Price dealers seldom display rate chart and quality available in the block-boards in front of the shop. This should be enforced.

### Financial support

Food stamps is an indirect financial support given to the needy and to the underprivileged by issue of coupons, vouchers, electronic card transfer etc. they can purchase commodities at any shop or outlet and would not have to purchase food from an particular shop as in the case of the PDS system in India.

This was the plan proposed by the Finance Minister in his budget but the United Progressive Alliance (UPA) government which came to power in 2004, decided on a Common Minimum Programme (CMP) and one of the agenda was food and nutrition security. Under that the government had plans for strengthening the Public Distribution System (PDS). However the Finance Minister P. Chidambaram in his budget speech went contrary to the idea proposed in the CMP and proposed the idea of the food stamp scheme and has proposed to try the scheme in few districts of India to know its viability.

In the CMP the government had proposed that if it is viable it would universalize the PDS but if the Food stamps would be introduced it would be a Targeted public

distribution system and a group of about 40 economists have cautioned the NAC headed by Sonia Gandhi against the food security bill as it would put an additional burden on the exchequer and instead have advised to go ahead and experiment with food stamps and other alternative methods and did point out the flaws in PDS. These set of 40 economist hail from different institutes like Delhi School of Economics, Indian Statistical Institute, Jawaharlal Nehru University, Indira Gandhi Institute of Development Research, Centre for Development Studies, Harvard, MIT, Columbia, Princeton, London School of Economics, University of British Columbia, University of California and University of Warwick.

### Distribution of food

It will reduce tariff on wheat and 80% percent tariff on rice which further resulted in one of the outlandish incidents in the Indian history that was accumulation of buffer stocks which were exported which, incidentally, came back for sale at high MSP's for instance in 2002-03, the government sold 1.6 million tones to exporters but actual exports were only 0.682 million tones.

The government may have to set up a complete system for the same or would have to put this responsibility on Post office, banks or such other institutions. In this process there could be leakages which are a matter of concern. Also there would be a burden which would come on the poor class who has to benefit from the same of going and collecting the food stamps.

### Substitute of cash subsidy

In the midst of sweeping political reforms to transform the public functioning making it corruption-free, the Government of India has put in place several proposals to tackle corruption hence defending its stand. Among the proposals

have been the policies on food, fertilizers and fuel to help the lower bulk of population in both rural and urban help attain a sustainable living standard. Pranab Mukherjee in his February 6 2011 budget speech had put forward the proposal of Cash Subsidy as a substitute.

These subsidies could only complement but no substitute for a solution. Another basic argument lies in search for evidence that such conditional cash subsidies would work better than the Mid-Day Meal schemes of the Central government. To concise, such conditional cash transfers are productive in providing scholarships to poor students or cycles to girl student as seen in Bihar. They could further complement the existing Public Distribution Systems but the idea of it being a substitute is a mere failure.

### Inflationary pressure

Often the Whole Sale Price Index of measuring inflation in India is marked by a high degree of fluctuation. These incidences could well change the cash transfer process in compensating public with a deregulated market where prices fluctuate so often. Hence, designing a specific average weighted index in lieu of price fluctuations seems quite unrealistic in nature. To consider the works of a Public Distribution Centre, it always has provided for an inflation proof mechanism.

### Changes in food consumption pattern

Dramatic changes in food consumption patterns have taken place in India in the post Green Revolution period. At the All India level, cereal consumption in the rural areas declined from 15.3 kg per capita per month in 1972-73, to 13.4 kg per capita per month in 1993.94 the corresponding decline in the



urban areas was more modest - from 11.3 kg to 10.6 kg over the same period. At the same time, consumption of milk and meat products as well as vegetables and fruits has increased. Such changes are a natural outcome of economic development.

The food subsidy bill for 2002-03 is budgeted at Rs.21,200 crore, which works out to 5.2 per cent of total Central Government expenditure. The level of food subsidies as a proportion of total government expenditure has gone up from a level of 2.5 per cent or below in the early 1990s to more than 5 per cent today.

**Table-1: Food subsidy of Central Government**

Year	Amount (Rs. crore)	% of total Government expenditure
1990-91	2450	2.33
1991-92	2850	2.56
1992-93	2785	2.27
1993-94	5537	3.9
1994-95	4509	2.8
1995-96	4960	2.78
1996-97	5166	2.46
1997-98	7500	3.23
1998-99	8700	3.11
1999-00	9200	3.03
2000-01	12125	3.61
2001-02	17612	4.83
2002-03	21200	5.17

**Targeted Public Distribution System**

The government streamlined the system by issuing special cards to BPL families and selling food grains under PDS to them at specially subsidized prices with effect from

June 1997. Under this Targeted Public Distribution System (TPDS), each poor family was entitled to 10 kg of food grains per month at specially subsidized prices. In keeping with the consensus on increasing the allocation of food grains to the BPL category and to better target the food subsidy, the Government increased the allocation to BPL families from 10 kg to 20 kg per month at 50 per cent of economic cost from 1 April 2000. The number of BPL families increased with effect from 1 December 2000. The allocation of foodgrains for the BPL category thus increased to 147 lakh tonnes per annum.

**Some implementation of PDS**

Items other than rice and wheat need to be excluded from the purview of TPDS. The main objective of providing food subsidy to the poor is to ensure food security. Sugar should be kept outside the purview of PDS. It should be de-controlled and the system of levy on sugar discontinued. It is argued that encouraging production of coarse cereals in dry land areas can check environment damage like degradation of soil to some extent. Kerosene oil is also supplied through PDS and is intended for the poor.

All further attempts to include more and more commodities under the coverage of food subsidy should be resisted. The coverage TPDS and food subsidy should be restricted to the BPL population. For the APL population, which has the purchasing power to buy food. With the liberalization of external sector, the operation of the buffer stock can be supplemented by timely exports and imports. Ration

cards should not be used by the administration as an identification card for various purposes.

**Conclusion**

It is clear that a task of utmost importance today is to guarantee adequate access to food to ensure food security and to end endemic hunger. A well functioning universal public distribution system can be the mean to ensure adequate physical access to food at the local and house hold levels. The proper PDS schemes to provide and regulate the systems as well. The plan schemes strengthening the food and public distribution system. It points out the various allocation of expenditure and methods in different states. The proposal for a universal public distribution system is likely to require higher food subsidies. In choice between fiscal restraint and basic food security, if the former is chosen, the result will be a very high welfare cost to the majority of our people in this and the next generation.

**References**

1. The Public Distribution System (<http://indiabudgetnicin/es2000-01/chap53>.)
2. Public Distribution System (<http://www.fcamin.nic.in/dfpd/EventListing.asp?Section=PDS&idpki=1&ParentID=0>)
3. As Grain Piles UP, India's Poor Still Go Hungry (<http://www.nytgimes.com/2012/06/08>)
4. UP foodgrain scam trail leads to Nepal, Bangladesh.
5. Public Distribution System in India (<http://iimand/academia.edu/ArnabSaha/Papers/349179>)
6. Targeted food stamps, The Hindu, Retrieved 27 September 2011.
7. Food Stamps: A Model for India, Retrieved 27 September 2011.

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ISSN 0038-4046

# SOUTHERN ECONOMIST

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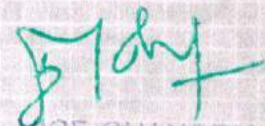
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Assistant Professor  
Dept. of Economics  
Tiruvalluvar University  
Vellore, Vellore-537 110



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**Hearty Greetings and Best Wishes to  
Shri Narendra Modi**



2014

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# INDIAN Economic Panorama

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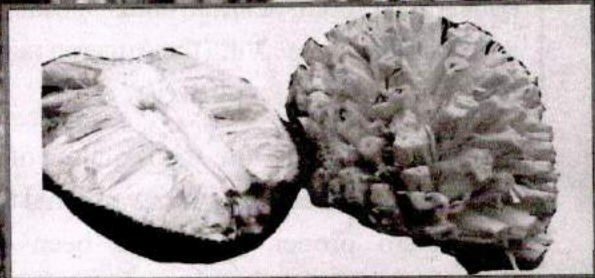
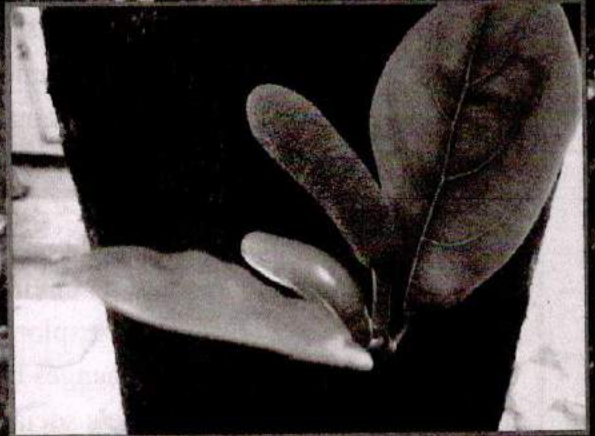
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# Jack Fruit

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EDITOR



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**ஆய்வு மன்றம்**

தமிழ் முதுகலை மற்றும் ஆய்வுத்துறை

**தாய நெஞ்சக் கல்லூரி (கன்னடபி)**

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**தமிழியல் ஆய்வுத் தடங்கள்**

தேசியக் கருத்தரங்கம் - 12.03.2016

**சான்றிதழ்**

திருச்சித / முனைவர்.....**ந. சிவகுரு**.....**உதவை**.....**கிராமாசிரியர்**.....**திருவள்ளூர்**.....

.....**ப.மீ.கலைக் கழகம்**.....**வேலூர்**.....


அவர்கள் ஆய்வு மன்றம், தமிழ் முதுகலை மற்றும் ஆய்வுத்துறை, தாய நெஞ்சக் கல்லூரி


(தன்னாட்சி) திருப்பத்தூர் தமிழியல் ஆய்வுத் தடங்கள்” என்னும் பொருண்மையில்


12. 03. 2016 அன்று நடத்திய தேசியக் கருத்தரங்கில் கிராமாசிரியக்/பங்கேற்பாளராக கலந்து

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அருட்பந்தை முனைவர் **தர். மரிய அந்தோணிராஜ்**

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நெறியாளர் மற்றும் சுருக்கரங்க இயக்குநர்











தீருவள்ளுவர் பல்கலைக்கழகம்  
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Serkkadu, Vellore-632 115 Tamilnadu

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சான்றிதழ்

தஞ்சை .. கணவன் .. நான் .. சிவகுரு .. சென்னை .. திருவள்ளுவர் பல்கலைக்கழகத்  
தமிழ்த்துறை ஆய்வாளர் மன்றம் .. 08.08.2017 .. அன்று நடத்திய “தமிழ் இலக்கியங்களில் குடும்பம்”  
என்னும் தலைப்பிலான ஒருநாள் தேசியக் கருத்தரங்கில் அமர்வுத் தலைவர் / ஒருங்கிணைப்பாளர் / கட்டுரையாளர்  
/ பங்கேற்பாளர் ஆகக் கலந்து கொண்டார் எனச் சான்றளிக்கப்படுகிறது.

ஆய்வுக்கட்டுரைத் தலைப்பு : .. திருவள்ளுவர் - மகாபாரத காட்சி காட்டும் இடம் ..

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paper titled / chaired a session / organized / .....in the  
one day national conference on “Families in Tamil Literatures” Conducted by Research Scholar  
Association at the Dept of Tamil Thiruvalluvar university Serkkadu Vellore on .....

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துறைத் தலைவர்

பதிவாளர்

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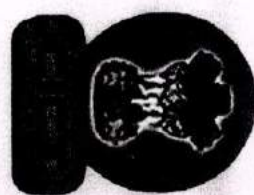
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செம்மொழித் தமிழாய்வு மத்திய நிறுவனம்

CENTRAL INSTITUTE OF CLASSICAL TAMIL

Chennai - 600 113.



சான்றிதழ் Certificate

தீரு... நா. சுவாமிநாதன் உதவியுடன் திருவள்ளூர் பல்கலைக்கழகம்

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23 - 25 இல் நடத்திய செம்மொழித் தமிழின் தொடர்வழி

அமைப்பு என்ற கருத்தரங்கில் கலந்து கொண்டு

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has presented the paper .....

in the seminar on **SYNTACTICAL STRUCTURE OF CLASSICAL TAMIL** organized by the Department of Tamil, Thiruvalluvar University, Vellore in collaboration with the Central Institute of Classical Tamil, Chennai, from 23<sup>rd</sup> to 25<sup>th</sup> March 2015

.....

.....

Dr. R. Jeyaraman

Professor & Head Dept. of Tamil

Co-ordinator of the Seminar, Thiruvalluvar University

.....



Dr. R. Jeyaraman

Professor & Head Dept. of Tamil

Co-ordinator of the Seminar, Thiruvalluvar University

.....

Dr. R. Jeyaraman

Professor & Head Dept. of Tamil

Co-ordinator of the Seminar, Thiruvalluvar University

.....







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ஒரு நாள் தேசியக் கருத்தரங்கம்

24 மார்ச்சு 2017

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செல்வன்/செல்வி/திரு/திருமதி. அனாசூரன்... 2017 மார்ச்சு 24 ஆம் நாள்

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*Shankar*

முனைவர் வெ. இராமு

துறைத்தலைவர்

முனைவர் கே. ஆனந்தராஜ்

முதல்வர்

என்.குமார்

செயலர் & தாளாளர்

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வேலூர் திருவள்ளூர் பல்கலைக் கழகத் தமிழ்த்துறை  
சென்னை கலைக் குழுவுடன் இணைந்து 2017  
செப்டம்பர் 15, 16, 17, 18, 19 ஆகிய நாட்கள்  
நடத்திய நாடகப் பயிற்சிப் பட்டறையில் கலந்துகொண்டு  
பயிற்சி பெற்றார்.

முனைவர் **க.இரமேஷ்**

**Dr. G.Ramesh**

Co-ordinator of the workshop,

Dept. of Tamil

Assistant Professor,

Thiruvalluvar University

Serkadu, Vellore-632 115.

திரு. **பிரளயன்**

**Mr. Pralayan**

Convener,

Chennai Kalai Kuzhu,

Chennai.

முனைவர் **வி.பெருமதி**

**Dr. V.Peruvalluthi**

Registrar,

Thiruvalluvar University,

Serkadu, Vellore-632 115.

முனைவர் **க.முருகன்**

**Dr. K.Murugan**

Vice - Chancellor,

Thiruvalluvar University,

Serkadu, Vellore-632 115.

#### RESIDENTIAL THEATRE WORKSHOP

This is to certify that Mr/Ms/Dr. ....

.....  
has participate in the Residential Theatre workshop  
organized by the Department of Tamil, Thiruvalluvar  
University, Vellore is collaboration with Chennai Kalai  
Kuzhu, Chennai from 15th to 19th September 2017.





**DEPARTMENT OF TAMIL  
GOVERNMENT COLLEGE, MUNNAR  
IDUKKI DIST., KERALA - 685 612.**



**CERTIFICATE**

This is certify that Mr. / Ms. / Mrs. / Dr. .... N. SIVAGURU, Assistant Professor .....

Dept. of Tamil, Thiruvalluvar University, Vellore..... has participated / presented a research paper in the National Seminar on "Tamil Malayalam Literature : Views & Trends" held on November 23 & 24 - 2017, sponsored by the Directorate of Collegiate Education, Thiruvananthapuram.

*V. Arulchelvi*  
**Prof. V. ARULCHELVI**  
Co-Ordinator

*Dr. S.P. Srinivasan*  
**DR. S.P. SRINIVASAN**  
Head of the Department



**DR. K. JAYAKUMAR**  
Principal  
Principal College  
Government Munnar

*[Handwritten signature]*

VICE-CHANG  
THIRUVALLUVAR U  
SERKADU, VELLOR





செம்மொழித் தமிழாய்வு மத்திய நிறுவனம், சென்னை  
பெரியார் ஈ.வெ.ரா. கல்லூரித் தமிழாய்வுத்துறை, திருச்சிராப்பள்ளி - 23.

இணைநூல் அடத்தூல்  
தேசியக் கருத்தரங்கம்

செவ்வியல் நூல்களில் பெண்ணியப்பதிவுகள் - உருவாக்கமும் உருமாற்றமும்

27.12.2017 - 29.12.2017

சான்றிதழ்

முனைவர் நா. சிவகுரு, தமிழ் உதவிப் பேராசிரியர், திருவள்ளூர் பல்கலைக்கழகம், வேலூர் அவர்கள்

27.12.2017 முதல் 29.12.2017 வரை நடைபெற்ற செவ்வியல் நூல்களில் பெண்ணியப்பதிவுகள் - உருவாக்கமும் உருமாற்றமும் என்ற பொருண்மையிலான தேசியக்கருத்தரங்கில் பங்கேற்று 27.12.2017 அன்று அள்ளூர் நன்முல்வையார் பாடல்களில் பெயர்ப்பாடுகள் என்றும் தலைப்பில் ஆய்வுரை வழங்கினார் எனச் சான்றளிக்கப்படுகிறது.

முதல்வர்

தமிழாய்வுத்துறை  
பெரியார் க.வெ.ரா. கல்லூரி (சென்னை-23)  
திருச்சிராப்பள்ளி-23

தமிழாய்வுத்துறைத் தலைவர்

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சுருத்தரங்க ஒருங்கிணைப்பாளர்





ஸ்ரீ சேவுகன் அண்ணாமலை கல்லூரி, தமிழ்த்துறை, தேவகோட்டை  
 Sree Sevugan Annamalai College, Tamil Department, Devakottai  
 மலேசிய தமிழ் இலக்கியக் கழகம், மலேசியா  
 Tamil Literary Society of Malaysia, Malaysia



**சங்ககாலத் தமிழரின் சடங்குகள்**

**STAR ICON 2018**

பன்னாட்டுக் கருத்தரங்கம் - 2018

SANGAM TAMIL'S AGELESS RITUALS International Conference

சனவர் 4.5, 2018 January 4,5, 2018

**சான்றிதழ்**

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.....

நா. சுவாமி உதயபிரகாசர், தலைவரவர் பங்காக்கிழை

..... Presented a paper on .....

அவர்கள் கலந்து கொண்டு .....

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சிலை அரக்கியங்களைக் குறித்து, தேசம் .....

.....

என்னும் தலைப்பில் ஆய்வுக்கட்டுரை வழங்கினார் எனத்

at the International Conference of Sangam Tamil's

சான்றளிக்கப்படுகிறது.

Ageless Rituals - 2018.

**Dr. R. Chandramohan**

**Dr. A. Marimuthu**

முனைவர் இ.ர. சந்திரமோகன்  
 Dr. R. Chandramohan  
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 SERKADU VELLORE - 652 115.





**தீருவள்ளுவர் பல்கலைக்கழகம்**  
**THIRUVALLUVAR UNIVERSITY**  
**(A State University)**

Serkkadu, Vellore – 632 115, Tamilnadu, India

**தமிழ்த்துறை**

தீருமிக முனைவர். டாக்டர். சி.வெ.ந. சீ.கவிப்பொருள்கிரியர்..... தீருவள்ளுவர் பல்கலைக்கழகத் தமிழ்த்துறையில் 11.01.2018 அன்று நடைபெற்ற “முத்தமிழும் முருகனும்” என்னும் தலைப்பிலான கவியரங்கில் கவிதையாளர் / பாங்கேற்பாளர் ஆக கலந்து கொண்டார் எனச் சான்றளிக்கப்படுகிறது.

*ச.சிவசுப்பிரமணியன்*  
ஒருங்கிணைப்பாளர்

*S. M. M.*  
பதிவாளர்

*S. M. M.*  
VICE-CHANCELLOR  
THIRUVALLUVAR UNIVERSITY  
SERKADU, VELLORE - 632 115

*S. M. M.*  
துணைவேந்தர்





# திருவள்ளூர் பல்கலைக்கழகம்

சேர்க்காடு, வேலூர் - 632 115.

## THIRUVALLUVAR UNIVERSITY

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### தமிழ்த்துறை : ஆய்வாளர் மன்றம்

### Department of Tamil : Research Scholar's Association



திரு. செல்வி திருமதி/முனைவர்.....**நா. சிவசூர்**.....**உதவி பேராசிரியர்**  
**தமிழ்த்துறை**.....**திருவள்ளூர் பல்கலைக்கழகம்**.....**அளவர்கள்**

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திருவள்ளூர் பல்கலைக்கழகத் தமிழ்த்துறை ஆய்வாளர்  
மன்றம் 28-02-2018 அன்று நடத்திய "வயப்பாட்பயல்  
நோக்கில் தமிழ் இலக்கியங்கள்" என்னும் தலைப்பிலான  
ஒருநாள் தேசியக் கருத்தரங்கில் அமர்வுத் தலைவர் /  
ஒருங்கிணைப்பாளர் / கட்டுரைப்பாளர் / பங்கேற்பாளர் ஆகக்  
கலந்துக் கொண்டார் எனச் சான்றளிக்கப்படுகிறது.

Participated / Presented a Paper / Chaired a session in A  
one day National Conference on "Historionics  
in Tamil Literatures" Conducted by Research Scholar's  
Association at the Department of Tamil, Thiruvalluvar University,  
Serkkadu, Vellore on 28-02-2018.

ஆய்வுக்கட்டுரைத் தலைப்பு : .....

Title of Paper : .....

**ம.சி. சுவாமி**  
மன்றத்தலைவர்

Chairman

**துறைத்தலைவர்**

Head of the Department

**பதிவாளர்**  
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SERKKADU, VELLORE - 632 115

Registrar

**விகிட்டுரை**  
Vice-Chancellor





# தீருவள்ளுர் பல்கலைக்கழகம்

சேர்க்காடு, வேலூர் - 632 115.

## THIRUVALLUVAR UNIVERSITY

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### தமிழ்த்துறை : ஆய்வாளர் மன்றம்

### Department of Tamil : Research Scholar's Association



தீருவள்ளுர்/தீருமதி/முனைவர்.....  
தீருவள்ளுர்/தீருமதி/முனைவர்.....

This is to Certify that Mr./Ms./Mrs./Dr.....

தீருவள்ளுர் பல்கலைக்கழகத் தமிழ்த்துறை ஆய்வாளர்  
மன்றம் 28-02-2018 அன்று நடத்திய "வெய்யாடர்பயல்  
நோக்கில் தமிழ் இலக்கியங்கள்" என்றும் தலைப்பிலான  
ஒருநாள் தேசியக் கூடுதரங்கில் அமர்வுத் தலைவர் /  
ஒருங்கிணைப்பாளர் / கட்டுரையாளர் / பங்கேற்பாளர் ஆகக்  
கலந்துக் கொண்டார் எனச் சான்றளிக்கப்படுகிறது.  
ஆய்வுக்கட்டுரைத் தலைப்பு : .....

Participated / Presented a Paper / Chaired a session in A  
one day National Conference on "Historionics  
in Tamil Literatures" Conducted by Research Scholar's  
Association at the Department of Tamil, Thiruvalluvar University,  
Serkkadu, Vellore on 28-02-2018.

Title of Paper : .....

பதின் வெய்யாடர்பயல்

M. G. S. ...  
மன்றத்தலைவர்

Chairman

துறைத்தலைவர்

Head of the Department

பதிவாளர்  
SERKKADU, VELLORE - 632 115.  
VICE-CHANCELLOR  
தலைவரவர்கள்  
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Vice - Chancellor





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இணைந்து நடத்திய

செம்மொழி இலக்கியத் திணைகளும் புலவர்களும் ஆய்வுக் கருத்தரங்கம்

Seminar on SEMMOZHI ILAKKIA THINAIGALUM PULAVARGALUM

19-02-2019

சான்றிதழ்

தீகு- / ஈசன் / திசுதி. / மூலவர் நா. சுவசூ அலர்கள்,

செம்மொழி இலக்கியத் திணைகளும் புலவர்களும் ஆய்வுக் கருத்தரங்கம் உராளாராகக் கலந்து ஈகாண்ட

புணர் காலம் மகிழ்ச்சி

எனும் தலைப்பில் ஆய்வுக் கட்டுரை வழங்கிச் சிறப்பித்தார் எனச் சான்றளிக்கப்படுகிறது.

பேராசிரியர் இரா. ஈசுதீசன்  
கருத்தரங்க ஒருங்கிணைப்பாளர்  
திருவள்ளூர் பல்கலைக்கழகம், வேலூர்

பேராசிரியர் வெ. மருமுகி DE-CHANCELLOR  
புலவர் (Snr) THIRUVALLUVAR UNIVERSITY  
திருவள்ளூர் பல்கலைக்கழகம், வேலூர்  
செம்மொழி இலக்கியத் திணைகளும் புலவர்களும் ஆய்வுக் கருத்தரங்கம் உராளாராகக் கலந்து ஈகாண்ட

திருவள்ளூர் பல்கலைக்கழகம், வேலூர்





# சண்முகா தொழிற்சாலை கலை அறிவியல் கல்லூரி

பல்கலைக்கழக மாணியக்குமுவின் 219 மற்றும் 12B அங்கீகாரம் பெற்ற கல்லூரி,  
திருவள்ளூர் பல்கலைக்கழக நிரந்தர இணைவு பெற்றது, ISO 9001 : 2015 தரச்சான்று பெற்றது  
மணலூர்பேட்டை சாலை, திருவண்ணாமலை- 606 803.

## முதுகலை மற்றும் தமிழாய்வுத்துறை

### நடத்திய கருத்தரங்கம்

## பார்வையிதழ்

திருவள்ளூர் - 2050  
மாசி 29-ஆம் நாள்

நாள் : 13.03.2019  
கிழமை : புதன்கிழமை

திரு/திருமதி/முனைவர்.....**டாக்டர் சி.வகுடு**.....அவர்கள்

சண்முகா தொழிற்சாலை கலை அறிவியல் கல்லூரி, முதுகலை மற்றும் தமிழாய்வுத்துறை,  
'தமிழ் இலக்கியங்களில் அறம்' என்னும் பொருண்மையில் நடத்திய தேசியக் கருத்தரங்கில்  
பங்கேற்று.....**புறநானூறு - புவவர் அழகர்**.....என்னும்  
தலைப்பில் ஆய்வுக்கட்டுரை வழங்கினார் என்பதற்காகப் பாராட்டி இச்சான்றளிக்கப்படுகிறது.

பேரா. இரா.சங்கர்  
தமிழ்த்தயைநீர் தலைவர்,

முனைவர் **கே.ஆனந்தராஜ்**  
முகல்வர்

VICE-CHANCELLOR  
THIRUVALLUVAR UNIVERSITY  
செயலர் & தாளாளர்

சண்முகா தொழிற்சாலை கலை அறிவியல் கல்லூரி.

சண்முகா தொழிற்சாலை கலை அறிவியல் கல்லூரி





# தீருவள்ளுவர் பல்கலைக்கழகம்

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**தமிழ்த்துறை : ஆய்வாளர் மன்றம்**

Department of Tamil : Research Scholar's Association

### சான்றிதழ் - Certificate

திரு.செல்வி/திருமதி/முனைவர் ..... **DR. சீவகிடு**

அவர்கள்

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திருவள்ளுவர் பல்கலைக்கழகத் தமிழ்த்துறை ஆய்வாளர் மன்றம்  
09-04-2019 அன்று நடத்திய “**தமிழ் இலக்கியங்களில்**  
**அறநெறிக் கருத்துக்கள்**” என்னும் தலைப்பிலான ஒருநாள் தேசியக்  
கருத்தரங்கில் கட்டுரை வழங்கினார் எனச் சான்றளிக்கப்படுகிறது.

has presented a paper in one day National Conference on “**Ethics**  
**in Tamil Literatures**” Conducted by Research Scholar's Association  
at the Department of Tamil, Thiruvalluvar University, Serkkadu,  
Vellore on 09-04-2019.

ஆய்வுக்கட்டுரைத் தலைப்பு : **அறநெறிக் கருத்துக்கள்**

Title of Paper : .....

**மேன்மை**

*Dr. David*  
மன்றச் செயலர்

Secretary

*Dr. S. S. S.*  
தலைமைக்கமிட்டவர்

Head of the Department

THIRUVALLUVAR UNIVERSITY  
SERKKADU, VELLORE - 632 115.

Registar

*V.M.*  
பதிவாளர்





# தீருவள்ளுவர் பல்கலைக்கழகம்

சேர்க்காடு, வேலூர் - 632 115.

## THIRUVALLUVAR UNIVERSITY

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**தமிழ்த்துறை : ஆய்வாளர் மற்றும்**

**Department of Tamil : Research Scholar's Association**

### சான்றிதழ் - Certificate

திரு.செல்விதிருமதி/முனைவர் **சுனன்வர் தா. சிபுரா**

அவர்கள் திருவள்ளுவர் பல்கலைக்கழகத் தமிழ்த்துறை ஆய்வாளர் மற்றும் 09-04-2019 அன்று நடத்திய ஒருநாள் தேசியக் கருத்தரங்கில் வெளியிடப்பட்ட “தமிழ் இலக்கியங்களில் அறநெறிக் கருத்துக்கள்” என்னும் தொகுப்பில் கட்டுரை வெளியிட்டார் எனச் சான்றளிக்கப்படுகிறது.

தலைப்பு ..... **அறநாளைநினைவு சேர் அறம்**

This is to Certify that Mr./Ms./Mrs./Dr .....

has published a paper in the compilation work on “Ethics in Tamil Literatures” Published by Research Scholar's Association at the Department of Tamil, Thiruvalluvar University, Serkkadu, Vellore at the one day National Conference on 09-04-2019.

Topic : .....

*Santhya*  
மன்றச் செயலர்

Secretary

*Santhya*  
மன்றத் தலைவர்

Chairman

VICE-CHANCELLOR  
THIRUVALLUVAR UNIVERSITY

Head of the Department

*Santhya*  
துறைத்தலைவர்





தீருவள்ளுவர் பல்கலைக்கழகத் தமிழ்த்துறையும்  
தீருமலைக்கோடி, ஸ்ரீ சக்தி அம்மா கல்வி அறக்கட்டளையும்

இணைந்து நடத்திய

மூன்று நாட்கள் தேசியச் சுவடியியல் பயிலரங்கம்

THREE DAYS NATIONAL WORKSHOP ON MANUSCRIPTOLOGY

(04-09-2019 முதல் 06-09-2019 முடிய)

சான்றிதழ்

திரு. / சகல்வி / திருமதி. / மூலாளர் நா. சிவசுரு. சுவர்கள்,

உதவிப் பேராசிரியர், தமிழ்த்தொலைநகல், திருவள்ளூர் பல்கலைக்கழகம்.

மூன்று நாள் தேசியச் சுவடியியல் பயிலரங்கம் கலந்து கொண்டு சிறப்புப் பயிற்சி பெற்றார்

எனச் சான்றளிக்கப்படுகிறது.

முனைவர் எம். சரேஷ்யாபு

அறிவாளர்  
ஸ்ரீ சக்தி அம்மா கல்வி அறக்கட்டளை  
தீருமலைக்கோடி

பேரா. முனைவர் இரா. ஜெகதீசன்

பயிலரங்க ஒருங்கிணைப்பாளர்  
தமிழ்த்தொலைநகல் தலைவர்  
தீருவள்ளூர் பல்கலைக்கழகம்.

பேரா. முனைவர் வெ. வகுமுகத்

பதிவாளர் (வா)  
தீருவள்ளூர் பல்கலைக்கழகம்,  
வேலூர்.

பேரா. முனைவர் சோ. தாமரைச்செல்வி

தலைவர்  
தீருவள்ளூர் பல்கலைக்கழகம்,  
வேலூர்.

VICE-CHANCELLOR  
THIRUVALLUVAR UNIVERSITY  
SEKKADIVELI





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*Dr. S. Dharmasekaran,  
Asst. Professor of Economics,*

**SLOWDOWN IN GROWTH  
AND FUTURE PROSPECTS  
FOR REVIVAL**

*S. Dharmasekaran*

VICE-CHANCELLOR  
THIRUVALLUVAR UNIVERSITY  
SERKADU, VELLORE - 632 115





## Income Inequality in India – An Analysis

S. Dhanasekaran

### INTRODUCTION

Inequality measures can be relative, absolute, or intermediate. A relative measure is one whose value remains unchanged when all incomes in an income distribution are raised or lowered by the same proportion. An absolute measure is one whose value remains unchanged when all incomes in a distribution are raised or lowered by the same absolute amount. The French economist Serge-Christophe Kolm observed that in a period of labour unrest in the late 1960s, French workers agreed to an across-the-board increase of 13 per cent in all remuneration. It was only later that they realized that there was a specific sense in which this arrangement could increase inequality among wage earners. Imagine two employees with remuneration of 100 francs and 1,000 francs, respectively, before the wage hike. The difference in their remuneration is 900 francs. After the wage hike, their remuneration becomes 113 francs and 1,130 francs, respectively, and the gap between these increases from 900 francs before the hike to 1,017 francs after the hike!

In the presence of income growth, relative measures tend to behave like "rightist" measures, and absolute measures like "leftist" measures, as Kolm put it. He, therefore, saw the case for more "moderate", "centrist/intermediate" measures, which register an increase in value when all incomes in a distribution are raised equi-proportionately and a decline in value when all incomes are raised equally. These are what one may call income-centrist measures. An analogous problem is encountered with a reckoning of inequality in the presence of population changes. Most extant inequality measures are population-relative, in the sense that when the numbers of persons at all income levels are raised equi-proportionately, the value of the inequality index remains unchanged. In contrast, a population-absolute index would register a k-fold increase in its value for a k-fold replication of the population at each income level. Population-intermediate measures, which avoid the "extreme values" of both relative and absolute indices, would typically register, in the presence of equi-proportionate increases of population at all income levels, a less-than-proportionate increase in inequality.

There is a strong case, from the perspectives of both logical and ethical acceptability, for employing comprehensively intermediate (that is, income-cum-population-intermediate) measures of inequality in empirical work. The predominant mainstream practice, however, is to employ strictly relative measures. One such measure is the Gini coefficient of inequality. What happens when we replace the relative Gini with the intermediate Gini coefficient? It

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# The Indian Economic Journal

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Special Issue, December 2018

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December 2018



The Indian Economic Journal

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**ACCELERATING  
AGRICULTURAL  
GROWTH**



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## A Study on Watershed Development Programmes and Implementations in Tamilnadu

A. Kaveri and S. Dhanasekaran

### INTRODUCTION

The Integrated Wasteland Development Programme (IWDP) has been under implementation in Tamil Nadu since 1993-94 in non-DPAP blocks to develop non-forest Wastelands on the principles of watershed development. The basic theme of the programme is to harvest the rainwater and to bring the degraded lands into productive use. From 1st April 1995, the programme has also been brought under the purview of the Common Guidelines like Drought Prone Areas Programme; presently it is governed by Hariyali Guidelines. As per Hariyali Guidelines, the User Groups have identified the works and execute the works through Village Panchayat. The duration of the project is five years.

The unit cost for a hectare is Rs.6, 000/-. The cost of the works undertaken under this programme is entirely met from project fund. However, contributions are collected from beneficiaries at 10%. In respect of community works and SC/ST, the contribution amount is 5% of the value of the work. Presently, the expenditure is shared between Central and State Government in the ratio of 11:1 at present, this programme is being implemented in 96 blocks of 24 districts viz., Coimbatore, Dharmapuri, Dindigul, Karur, Krishnagiri, Namakkal, Perambalur, Pudukkottai, Ramanathapuram, Salem, Sivagangai, Tiruvannamalai, Thoothukudi, Tiruchirappalli, Tirunelveli, Vellore, Erode, Theni, Madurai, Kancheepuram, Walupuram, Tiruvallur, Cuddalore and Virudhunagar. The works taken up under the Integrated Wasteland Development Programme are of a special nature and involve a variety of activities such as:-

*Land Development:* Land Leveling, Contour Bunding, Silt Application, Stone Bunding, Retaining Wall, Summer Ploughing, Vegetative Bunding and Continuous trenching.

*Water Resources Development:* Cattle Pond, Farm Pond, Formation of Oorani, Desilting of Tanks, Formation of Supply Channel and Desilting, Check Dams, Percolation Pond and Development of Drinking Water Resources.

*Plantation Activities:* Agro Forestry, Horticulture Plantation, Fodder Development, Crop Demonstration, Community Nursery, Social Forestry and Homestead Garden. Since the inception of the programme 85 projects have been sanctioned in 24 districts at a cost of Rs. 27,364.21 lakhs to tackle a total degraded land of 4,75,239 hectares. Out of 85 Projects,

A. D., Research scholar, Dept. of Economics, Thiruvalluvar University, Serkkadu, Vellore and Assistant Professor, Dept. of Economics, Thiruvalluvar University, Serkkadu, Vellore.



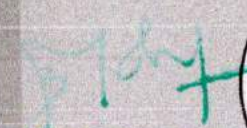


# The Indian Economic Journal

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Special Issue, December 2018

**ECONOMY OF  
TAMIL NADU**

  
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## Economic Impacts of Tourism in Tamilnadu

S. Dhanasekaran and S. Kalaiselvi

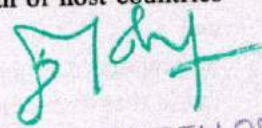
### INTRODUCTION

In recent years, the role of tourism in the economic development of a country has been the focus of study and research. It is the general consensus that tourism has been pivotal in social progress as well as an important vehicle of widening socio-economic and cultural contacts throughout human history. Over the past years, many developing and developed countries have considered tourism as an option for sustainable development of their nations. The importance of tourism as a contributor to economic growth is so widely accepted that year after year throughout the world a massive investment continues to pour in its development. It is with this backdrop, this paper is an attempt to investigate the dynamics of the relationship between tourism sector development and economic growth of India.

### GLOBAL TOURISM

Tourism has emerged from being a relatively small-scale activity into one of world's largest industries and a fastest growing global economic sector of the world economy from the 1960s onwards. The international tourist arrivals have shown an uninterrupted growth from 25 million in 1950, to 681 million in 1980, to 438 million in 1990 and to 681 million in 2000. The international tourist arrivals were 880 million and the corresponding international tourism receipts was US\$ 852 million in 2009. Global tourism is increasing every year with the number of people travelling abroad reaching 903 million in 2007. The United Nations World Tourism Organization (WTO) has predicted that the number of international arrivals will reach 1.6 billion by the year 2020, with 1.2 billion of those being intra-regional travellers and 378 million being long-haul travellers. The tourist arrivals in Asia and the Pacific were 181 million and corresponding tourism receipt was US\$ 204 million. As per UNWTO estimates, the worldwide international tourist arrivals increased by 7 per cent between January and June 2010. For the full year 2010, UNWTO projects a growth in international tourist arrivals of between 3 to 4 per cent. In 2010, tourism is expected to generate 21.7 per cent of world gross domestic product; 10 per cent of global capital investments; 9 per cent of worldwide employment; and 22.2 per cent of worldwide exports of goods and services. All these cast for a significant role of tourism sector in the long-run growth of host countries across the globe.

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## 82. IMPACTS OF TOURISM AND ENVIRONMENTAL POLLUTION

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**Dr. S. DHANASEKARAN**, Assistant Professor, Department of Economics, Thiruvalluvar University, Serkkadu, Vellore - 632115.

### ABSTRACT

*The quality of the environment, both natural and man-made, is essential to tourism. However, the relationship of tourism with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. The negative impacts of tourism development can gradually destroy environmental resources on which it depends. On the other hand, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance. We describe that the effects of tourism on natural resources, environmental pollution and physical environment. In addition, we explain environmental impacts of tourism on global scale, industrial impacts on tourism and, finally, how tourism can contribute to environmental conservation.*

### INTRODUCTION

Tourism especially, marine and coastal tourism is one the fastest growing areas within the world's largest industry. Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources.

### WATER RESOURCES

Water, and especially fresh water, is one of the most critical natural resources. The tourism

industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water. In dry and hot regions like the Mediterranean, the issue of water scarcity is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 liters a day.

Golf course maintenance can also deplete fresh water resources. In recent years golf tourism has increased in popularity and the number of golf courses has grown rapidly. Golf courses require an enormous amount of water every day and as with other causes of excessive extraction of water, this can result in water scarcity. If the water comes from wells, over pumping can cause saline intrusion into groundwater. Golf resorts are more and more often situated in or near protected areas or areas where resources are limited.

### LOCAL RESOURCES

Tourism can create great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Greater extraction and transport of these resources exacerbates physical impacts associated with their exploitation. Because of the seasonal character of the industry, many destinations have ten times more inhabitants in the high season than in the low season. High demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.).

### LAND DEGRADATION

Important land resources include minerals, fossil fuels, fertile soil, forests, wetland and wildlife. Increased construction of tourism and recreational facilities has increased pressure on these resources and on scenic landscapes. Direct impact on natural resources, both renewable and non-renewable, in the provision of tourist facilities can be caused by the use of land for accommodation and other infrastructure provision, and the use of



## 94. IMPACT OF CLIMATE CHANGE ON INDIAN AGRICULTURE: A REVIEW

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**G.URMILA** Research Scholar, Dept. of Economics, Thiruvalluvar University, Vellore.

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### ABSTRACT

*During the recent decade, with the growing recognition of the possibility of climate change and clear evidence of observed changes in climate during 20th century, an increasing emphasis on food security and its regional impacts has come to forefront of the scientific community. In recent times, the crop simulation models have been used extensively to study the impact of climate change on agricultural production and food security. The output provided by the simulation models can be used to make appropriate crop management decisions and to provide farmers and others with alternative options for their farming system. It is expected that in the coming decades with the increased use of computers, the use of simulation models by farmers and professionals as well as policy and decision makers will increase. In India, substantial work has been done in last decade aimed at understanding the nature and magnitude of change in yield of different crops due to projected climate change. This paper presents an overview of the state of the knowledge of possible effect of the climate variability and change on food grain production in India.*

### INTRODUCTION

Climate change and variability are concerns of human being. The recurrent droughts and floods threaten seriously the livelihood of billions of people who depend on land for most of their needs. The global economy is adversely being influenced very frequently due to extreme events such as droughts and floods, cold and heat waves, forest fires, landslips etc. The natural calamities like earthquakes, tsunamis and volcanic eruptions, though not related to weather disasters, may change chemical composition of the atmosphere. It will, in turn, lead to weather related disasters. Increase in aerosols (atmospheric pollutants) due to emission of greenhouse gases such as Carbon Dioxide due to burning

of fossil fuels, chlorofluorocarbons (CFCs), hydro chlorofluorocarbons (HCFCs), hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) etc., Ozone depletion and UV-B filtered radiation, eruption of volcanoes, the "human hand" in deforestation in the form of forest fires and loss of wet lands are causal factors for weather extremes. The loss of forest cover, which normally intercepts rainfall and allows it to be absorbed by the soil, causes precipitation to reach across the land eroding top soil and causes floods and droughts. Paradoxically, lack of trees also exacerbates drought in dry years by making the soil dry more quickly. Among the greenhouse gases, CO<sub>2</sub> is the predominant gas leading to global warming as it traps long wave radiation and emits it back to the earth surface. The global warming is nothing but heating of surface atmosphere due to emission of greenhouse gases, thereby increasing global atmospheric temperature over a long period of time. Such changes in surface air temperature and consequent adverse impact on rainfall over a long period of time are known as climate change. If these parameters show year-to-year variations or cyclic trends, it is known as climate variability. However, the official definition by the United Nations Framework Convention on Climate Change (UNFCCC) is that climate change is the change that can be attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. However, scientists often use the term for any change in the climate, whether arising naturally or from human causes. In particular, the Intergovernmental Panel on Climate Change (IPCC) defines climate change as a change in the state of the climate that can be identified by changes in the mean and / or the variability of its properties and that persists for an extended period, typically decades or longer.



## 97. AIR POLLUTION AND HEALTH IN INDIA

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### ABSTRACT

*The multiplicity of sources, modes of exposure and complexity of outcomes associated; there is no easy solution to address the problem of air pollution in India. Addressing it will require an evidence informed, multi-sectoral approach to policymaking that aims to maximize exposure reductions. While several aspects of a health-centric air pollution policy are currently under consideration, there are aspects of the issue that require more creative thinking and solution development. In previous sections, we have outlined the scale of the issue and barriers to effective action on air pollution. Taking those into consideration, we outline below suggestions for areas of intervention to address what is now a key risk factor not just to India's health but also to its economy.*

### INTRODUCTION

Air pollution is a major and growing risk factor for ill health in India, contributing significantly to the country's burden of disease. As per the Global Burden of Disease comparative risk assessment for 2015, air pollution exposure contributes to approximately 1.8 million premature deaths and 49 million disability adjusted life-years (DALYs) lost, ranking it among the top risk factors for ill health in India. Home to 10 of the top 20 cities with the highest annual average levels of PM2.5 as per the WHO Urban Ambient Air Quality Database (2016) and with several studies showing a worsening trend over time it is safe to say that rapid urbanization and industrial development have adversely affected urban air quality due to vehicular and industrial emissions. Simultaneously, over two-thirds of rural Indians caught in the 'chulha trap' use biomass fuels such as wood, dung or coal to satisfy their cooking and heating needs, resulting in smoke-filled homes and extremely high levels of exposure especially to women and children.

Rural and urban India is both affected by poor air quality. There is, however, heterogeneity in

sources and pollutant profiles. For instance, use of cooking fuels varies between urban and rural households, vehicular density is vastly different in cities and villages, and differing climatology and geography across India affects regional and seasonal levels of ambient air pollution. Air pollution has been termed a democratizing force but it is far from that, as it propagates existing environmental injustices. Studies have shown that children and the elderly are particularly vulnerable to air pollution exposure. Air pollution exposure has shown to slow lung development in children, affect cognitive development, and has resulted in high levels of mortality from respiratory infections. The elderly are more likely to develop chronic respiratory and cardiac illnesses as a result of long-term exposure, and are more susceptible to heart attacks and strokes during episodic high pollution events. Vulnerable also are those of a lower socio-economic status, with studies showing they are more susceptible to insults from air pollution exposure for a variety of reasons including occupation, housing, cooking fuel use, the common link being poverty.

### AIR POLLUTION EXPOSURE & TRENDS

Air quality, whether ambient or household, differs across India, with varied sources, pollutants, climatology, geography, and cultures. Over time, however, trends indicate deterioration in both urban and rural India, whether it is due to rapid urbanization and consequent rising vehicular and industrial emissions or the 'chulha trap' resulting in poor indoor air quality.

### HOUSEHOLD AIR POLLUTION

Individuals spend close to three-fourths of their day (around 18 hours) in indoor environments, which include residences and workplaces. Indoor activities such as cooking, heating, cleaning, incense burning, tobacco smoking, refrigeration, and air conditioning are significant contributors of air pollutants



DIAMOND JUBILEE YEAR (1957-2017)



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### ABOUT THE EDITOR



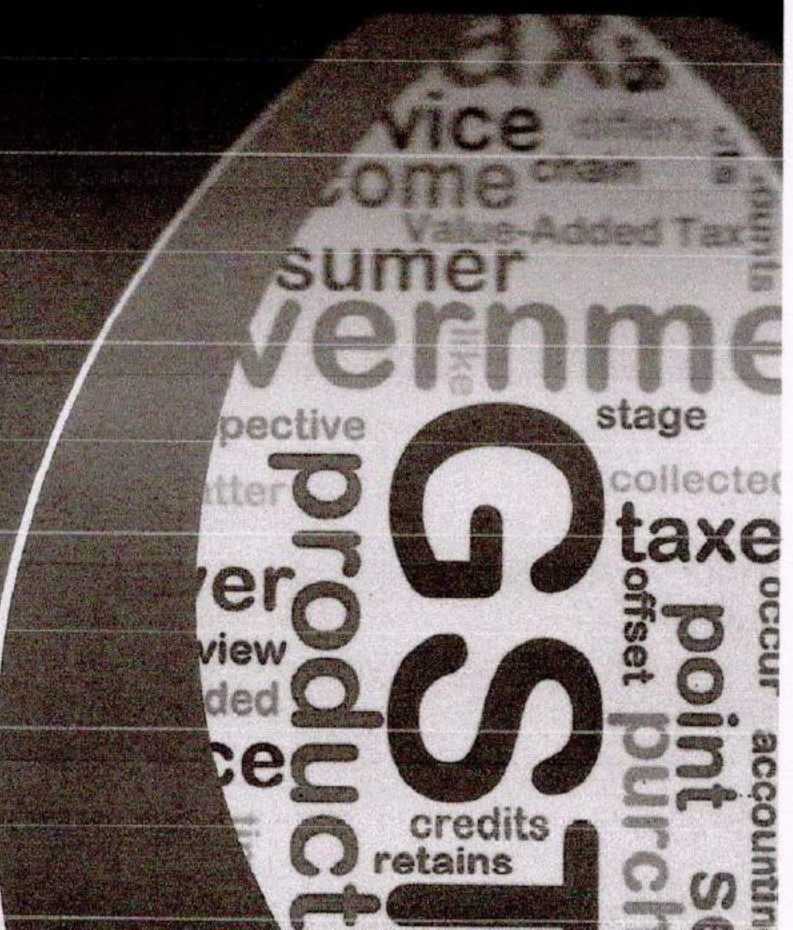
**Dr. P. Anbalagan** (Born on June 11, 1976) graduated in Economics from Voorhees College, Vellore and Pursued Research Studies in University of Madras. He specialized in education and child labour. He is now head of the Post-Graduates and Research Department of Economics, Voorhees College, Vellore. He has published more than 45 Articles in leading Journals/reputed Periodicals in India. He edited book on Tamil Nadu Economy Today: New Realities and Challenges and Shell (Self-Groups and Socio-Economic changes in India). His scholarship and Guidance in research enticed a number of students to acquire Ph.D./M.Phil. Degrees in Economics. He is the member of Institute of Research Engineers and Doctors (IRED), University Association of Arts and Management Professionals (UAAAMP), Indian Economics Association (IEA) and Association of Economists of Tamil Nadu (AET). He visited Thailand and Singapore for International Conferences. He is a dedicated teacher and always endeavored to explore new areas of study in different field.



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## GOODS AND SERVICES TAX IN INDIA



# GOODS AND SERVICES TAX IN INDIA

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## PREFACE

Over the centuries system of taxation has been shaped and reshaped to make it acceptable, effective and efficient. The journey of restructuring the tax system has been going on to make it more and more meaningful. While the innovations and developments in information and communication technology have made the tax system more objective, transparent and effective, the innovations and developments in finance and business models, globalization and liberalization policies, emergence of MNEs as lead players, increase in the international trade have contributed in making the tax system a complex one.

As per the GST bill the Centre will administer Central GST (CGST) and the States administer State GST (SGST). Compliance will be monitored independently at the two levels. The rates of both CGST and SGST will be fixed by the GST Council, whose members will be State Finance/Revenue Ministers and the Chairman will be the Union Finance Minister. Once the rates are set by the GST Council, individual states will lose their right to tax commodities at the rates they want. The major impact of introducing GST in India is the transformation in the fiscal structure of the Indian federal setup.

We record thanks to all contributors from various college and Universities in India. Apart from Academics, we have compiled published material from leading economic journals, Tamil Nadu Government plan policy document and important speech given by eminent industrialists. Our grateful thanks are due to all of them is a special way.

Thanks are due to Ms.M.LakshmiPriya, Assistant Professor in Economics, Voorhees College, Vellore for their diligent computerized work. Special Thanks are due to 'L. ORDINE NUOVO PUBLICATION' for publishing this book within a short span of time.

Editor  
Dr.P.Anbalagan

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# Infrastructural Development and Environment issues and challenges

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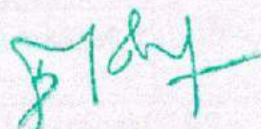


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## INFRASTRUCTURE AND ECONOMIC GROWTH IN INDIA

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### Abstract

The present paper attempts at studying the interactions between regional development and infrastructure availability at state level for India. There exists substantial and significant positive association between levels of development and levels of infrastructure. The question of causation is important, and requires further enquiry. However, the association is clear, and higher for economic infrastructure than social. States with remarkable economic performance are also leaders in terms of availability of transport and power infrastructure. Social infrastructure does not directly appear as an important prerequisite for economic growth. Applying growth accounting framework to measure the impact of infrastructure availability on total factor productivity provides justifiable results. Transport and power infrastructure are still significant contributors, but a decline in the magnitude of coefficients indicates towards their limiting role. From the point of view of policy, results indicate underinvestment in the economic infrastructure sectors. Underdevelopment of eastern and central regions of the country can be associated with low growth in availability of economic infrastructure. Proactive efforts from state governments are required to raise the level of infrastructure availability, as is exhibited by states in South and West India. Railway infrastructure severely needs unbiased augmentation.

**Keywords:** Economic infrastructure, growth, power

### Introduction

India's rise in recent years is a most prominent development in the world economy. India has re-emerged as one of the fastest growing economies in the world. India's growth, particularly in manufacturing and services, has boosted the sentiments, both within country and abroad. With an upsurge in investment and robust macroeconomic fundamentals, the future outlook for India is distinctly upbeat. According to many commentators, India could unleash its full potentials, provided it improves the infrastructure facilities, which are at present not sufficient to meet the growing demand of the economy. Failing to improve the country's infrastructure will slow down India's growth process. Therefore, Indian government's first priority is rising to the challenge of maintaining and managing high growth through investment in infrastructure sector, among others.

There have been attempts in the literature to show the significant contribution of infrastructural capital, on national output, growth, productivity and interregional competitiveness. The response to these claims has been cautious. It has been argued that these contributions are overstated while ignoring other factors. That there also lies an inverse causality in the argument that even if the historical relationships are estimated correctly; they provide no clear direction for future policy. Present paper is not an attempt to answer all these criticisms. It is just an attempt to provide one more brush stroke to the emerging relationship of infrastructure availability and productivity growth. It does so by measuring the impact of availability of different type of infrastructural facilities on growth of total factor productivity in state economies in India. The paper consists of four parts. First part discusses the main findings in the present literature. Since there is no comprehensive measure of infrastructure availability at state level, the second section presents the construction of such data and describes the regional distribution of these facilities. Third section deals with generation of comprehensive measure of productivity in a growth accounting framework for state economies in India. Fourth section then uses these data to estimate the relationship empirically.

### Infrastructure and Economic Growth

Infrastructure is one of the important factors that drive the economic growth of a country. Good infrastructure is the basic requirement for any production process to work efficiently. Infrastructure itself may not be the part of the production process, but is important for the services it provides. It is an important input to the production process and raises the productivity of all sectors. Infrastructure connects goods to the markets, workers to industry, people to services and the poor in rural areas to growth centers. Infrastructure lowers costs, enlarges markets and facilitates trade. Thus, infrastructure provides facilities that support economic growth by increasing the productivity of labor and capital thereby reducing the costs of production and raising profitability, production, income and employment. A country's development is strongly linked to its infrastructure strength and its ability to expand trade, cope with population growth, reduce poverty and produce inclusive growth. The World Bank in its "World Development Report 1994" pointed out that productivity growth is higher in countries with adequate and efficient supply of infrastructure services. Provision of infrastructure services to meet the demands of





## PUBLIC PRIVATE PARTNERSHIPS IN INDIA

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### Abstract

PPP is not a new concept in field of infrastructure in India; PPP story began with investments in "Indian railroads" in the latter half of the 1800s. By 1875, about million were invested by British companies in Indian railways. With 65% of power generation was done by private companies alone before independence. In early 1900s, distribution of power supply was handing by Tata in Calcutta and in Mumbai which plays a keen role to promote Indian infrastructure. To enforce PPP in infrastructure, government made many amendments in laws to promote PPP concept. By announcement of New Economic Policy (1991), the doors to the private sector were opened for participation in infrastructure development. Policies related with the provision of public services and infrastructure make by both the Government and private sector. Managerial skills, technological skills, working skills and financial strength of the private sector are relieving government various types of Risk and huge capital expenditure. Partnership between public and private sector makes thing reliable for development of economic as well as infrastructure.

**Keywords:** PPP, Fast Track Infrastructure

### Introduction

Public private partnership sometimes referred to as PPP, P3 etc. PPP refers to a long-term contractual partnership between the public and private sector agencies. Facilities and services like financing, implementation, designing, operation and technology which influence public sector to work separately with private firms. PPP model simply works on low risk and high growth. PPP is a joint collaboration between public and private units so as to meet the lack of invested capital to fulfil the requirement of development of infrastructure. A legal entity in which 51% or more of equity is with private partners. The union government has estimated an investment of \$320 billion in the infrastructure in the 10th plan. The major infrastructure development projects in Maharashtra (more than 50%) are based on the PPP model. In the 2000s, other states such as Karnataka, Madhya Pradesh, Gujarat, and Tamil Nadu also adopted this model. Sector-wise, the road projects account for about 53.4% of the total projects in numbers, and 46% in terms of value. As like Brazil, China and Russia, India is developing and growing at a faster pace in recent years and catching up with the other fastest growing economy. The journey to keep growing and faster pace, it's important to develop a strategy for encouraging private investment in infrastructure through Public Private Partnerships (PPP). The Government of India developed a strategy for encouraging private investment in infrastructure through Public Private Partnerships (PPP). Because of competitive global environment, governments around the world are focusing on new ways to finance projects, build infrastructure and deliver services. Public-Private Partnerships (PPP's) are becoming a common tool to bring together the strengths of both sectors. Investment from PPP sources would contribute approximately 1.2% of GDP. Thus, PPP which makes Indian economic and infrastructure modernize in new era to provide needed capital to finance government programs and projects.

### Cabinet Committees to fast track infrastructure investments

The Committee on Infrastructure (CoI) was constituted in August 2004 under the chairmanship of the then Prime Minister, with the objectives of initiating policies that would ensure time-bound creation of world class infrastructure, delivering services matching international standards, developing structures that maximise the role of PPPs and monitoring the progress of key infrastructure projects to ensure that targets are achieved. A dedicated Division, namely, "Infrastructure Division" was set up in the erstwhile Planning Commission to service the Committee on Infrastructure. Seventeen different meetings of CoI were held from time to time to decide PPP policy issues in infrastructure sectors.

In January 2013, the Government constituted the Cabinet Committee on Investment (CCI) under the chairmanship of the then Prime Minister. The key functions of the Committee inter alia included identifying key projects involving investments of Rs.1,000 crore or more in infrastructure, manufacturing etc., prescribing time limits for requisite approvals and clearances by concerned Ministries/ Departments, monitoring the progress of identified projects and reviewing implementation of projects delayed beyond stipulated timeframe. With the constitution of the Cabinet Committee on Investment (CCI), the Cabinet Committee on Infrastructure was merged with the Cabinet Committee on Economic Affairs (CCEA). CCI has since been abolished and all decisions are being taken by the CCEA. Cabinet Secretariat services the CCEA.

### Public Private Partnership Models

The range of options for public-private partnerships has expanded enormously over the past 30 years. Agreements between public and private entities take many shapes and sizes for both new and existing services. At one end of the spectrum is a





## AGRICULTURAL AND BIOTECHNOLOGY

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### Introduction

Major events in human history have, to a large extent, been driven by technology. Improved awareness of agriculture and metalworking brought mankind out of the Stone Age, while in the nineteenth century the Industrial Revolution created a multitude of machinery together with increasingly larger cities. The twentieth century was undoubtedly the age of chemistry and physics, spawning huge industrial activities such as petrochemicals, pharmaceuticals, fertilisers, the atom bomb, transmitters, the laser and microchips. However, there can be little doubt that the huge understanding of the fundamentals of life processes achieved in the latter part of the twentieth century will ensure that the twenty-first century will be dominated by biology and its associated technologies.

Societal changes are increasingly driven by science and technology. Currently, the impact of new biological developments must be absorbed not just by a minority (the scientists) but by large numbers of people (the general public). If this does not happen, the majority will be alienated. It is increasingly important to ensure a broad understanding of what bioscience and related technologies will involve, and especially what the consequences will be of accepting or rejecting the new technical innovations. The following chapters will examine how the new biotechnologists are developing new therapies and cures for many human and animal diseases; designing diagnostic tests for increasing disease prevention and pollution control; improving many aspects of plant and animal agriculture and food production; cleaning-up and improving the environment; designing clean industrial manufacturing processes; exploring the potential for biological fuel generation; and unraveling the power of stem cell technology. Undoubtedly, biotechnology can be seen to be the most innovative technology that mankind has witnessed. The development of biotechnological products is knowledge and resource intensive.

For about 10,000 years, farmers have been improving wild plants and animals through the selection and breeding of desirable characteristics. This breeding has resulted in the domesticated plants and animals that are commonly used in crop and livestock agriculture. In the twentieth century, breeding became more sophisticated, as the traits that breeders select include increased yield, disease and pest resistance, drought resistance and enhanced flavor. Traits are passed from one generation to the next through genes, which are made of DNA. All living things—including the fruits, vegetables and meats that we eat—contain genes that tell cells how to function. Recently, scientists have learned enough to begin to identify and work with the genes (DNA) that are responsible for traits.

### Agricultural Biotechnology

Agricultural biotechnology is a collection of scientific techniques used to improve plants, animals and microorganisms. Based on an understanding of DNA, scientists have developed solutions to increase agricultural productivity. Starting from the ability to identify genes that may confer advantages on certain crops, and the ability to work with such characteristics very precisely, biotechnology enhances breeders' ability to make improvements in crops and livestock. Biotechnology enables improvements that are not possible with traditional crossing of related species alone.

### Agricultural Biotechnology Used

Genetic engineering: Scientists have learned how to move genes from one organism to another. This has been called genetic modification (GM), genetic engineering (GE) or genetic improvement (GI). Regardless of the name, the process allows the transfer of useful characteristics (such as resistance to a disease) into a plant, animal or microorganism by inserting genes (DNA) from another organism. Virtually all crops improved with transferred DNA (often called GM crops or GMOs) to date have been developed to aid farmers to increase productivity by reducing crop damage from weeds, diseases or insects.

### Molecular Markers

Traditional breeding involves selection of individual plants or animals based on visible or measurable traits. By examining the DNA of an organism, scientists can use molecular markers to select plants or animals that possess a desirable gene, even in the absence of a visible trait. Thus, breeding is more precise and efficient. For example, the International Institute of Tropical Agriculture has used molecular markers to obtain cowpea resistant to bruchid (a beetle), disease-resistant white yam and cassava resistant to Cassava Mosaic Disease, among others. Another use of molecular markers is to identify undesirable genes that can be eliminated in future generations.



## WATER PURIFICATION SYSTEM IN INDIA

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### Abstract

Water purification is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from contaminated water. The goal is to produce water fit for a specific purpose. Most water is disinfected for human consumption (drinking water), but water purification may also be designed for a variety of other purposes, including fulfilling the requirements of medical, pharmacological, chemical and industrial applications. The methods used include physical processes such as filtration, sedimentation, and distillation; biological processes such as slow sand filters or biologically active carbon; chemical processes such as flocculation and chlorination and the use of electromagnetic radiation such as ultraviolet light. Purifying water may reduce the concentration of particulate matter including suspended particles, parasites, bacteria, algae, viruses, fungi, as well as reducing the amount of a range of dissolved and particulate material derived from the surfaces that come from runoff due to rain. The standards for drinking water quality are typically set by governments or by international standards. These standards usually include minimum and maximum concentrations of contaminants, depending on the intended purpose of water use. Visual inspection cannot determine if water is of appropriate quality. Simple procedures such as boiling or the use of a household activated carbon filter are not sufficient for treating all the possible contaminants that may be present in water from an unknown source. Even natural spring water – considered safe for all practical purposes in the 19th century – must now be tested before determining what kind of treatment, if any, is needed. Chemical and microbiological analysis, while expensive, are the only way to obtain the information necessary for deciding on the appropriate method of purification. According to a World Health Organization (WHO) report, 1.1 billion people lack access to an improved drinking water supply, 88 percent of the 4 billion annual cases of diarrheal disease are attributed to unsafe water and inadequate sanitation and hygiene, while 1.8 million people die from diarrheal diseases each year. The WHO estimates that 94 percent of these diarrheal cases are preventable through modifications to the environment, including access to safe water. Simple techniques for treating water at home, such as chlorination, filters, and solar disinfection, and storing it in safe containers could save a large number of lives each year. Reducing deaths from waterborne diseases is a major public health goal in developing countries.

### Introduction

Ensuring that your client's household or domestic water supply is clean for use cannot be done without some form of a water purification unit. Unwanted compounds, debris, and bacteria from organic and inorganic materials can cause various type of sickness for members of the household if specific contaminants are not removed from the supply. Through various channels, these impurities can find their way into the water supply that serves your home. The public water supply can become contaminated while in transit even though tremendous effort is placed in the treatment and conditioning of water at public water facilities run by municipal authorities. Public water systems can carry germs and hazardous parasites before the distribution to residential homes in urban areas; this is the main challenge faced by water treatment facilities. Water borne diseases caused by protozoan water bacteria cause more sicknesses or serious illnesses than any other form of bacterial based contaminant. A water purification system using RO membranes can easily remove contaminants from water using modern membrane technologies.

### Water Purification

Water purification is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from contaminated water. The goal is to produce water fit for a specific purpose. Most water is disinfected for human consumption (drinking water), but water purification may also be designed for a variety of other purposes, including fulfilling the requirements of medical, pharmacological, chemical and industrial applications. The methods used include physical processes such as filtration, sedimentation, and distillation; biological processes such as slow sand filters or biologically active carbon; chemical processes such as flocculation and chlorination and the use of electromagnetic radiation such as ultraviolet light. Purifying water may reduce the concentration of particulate matter including suspended particles, parasites, bacteria, algae, viruses, fungi, as well as reducing the amount of a range of dissolved and particulate material derived from the surfaces that come from runoff due to rain. The standards for drinking water quality are typically set by governments or by international standards. These standards usually include minimum and maximum concentrations of contaminants, depending on the intended purpose of water use. Visual inspection cannot determine if water is of appropriate quality. Simple procedures such as boiling or the use of a household activated





## A STUDY ON TOURISEM DEVELOPMENT IN CHENNAI CITY

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### Introduction

Tourism is travel for recreational or leisure purposes. The World Tourism Organization defines tourists as people who —travel to and stay in places outside their usual environment for not more than one year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited. Tourism is a major growth engine for economic development in terms of providing employment and eradication of poverty. The economic significance of tourism in terms of employment, income, foreign exchange earnings and regional development is a major driving force to place tourism appropriately in development. The economic liberalization, open-sky aviation policy, luxury cruises, improved surface transport, tourist trains, increased business travel and e-booking facilities have created a paradigm change in the tourism sector. From a mere service industry, tourism has transformed into a major revenue generating industry.

### World Tourism Scenario

The World Tourism Organization (WTO) plays a vital role in promoting the development of responsible, sustainable and universally acceptable tourism and is paying particular attention to the interests of developing countries. People in general now view tourism as a way of life rather than a luxury reserved for the affluent and the elite. Tourism has emerged as the largest service industry globally in terms of gross revenue as well as foreign exchange earnings. With rapid developments in the field of transport and communications, the global tourism industry is likely to double in the next decade. The 21st century will see a higher percentage of the total population travelling, especially in developing countries. People, in general, undertake short-distance and long-distance tours during their vacations, subject to their convenience and seasonal conditions. Tourism is the industry of industries and has a great multiplier effect on other industries. Tourism serves as an effective medium for transfer of wealth because here income earned in places of residence is spent in places of visit.

Tourism industry is the highest generator of employment. Out of every nine persons, one person earns a living from tourism. For every million rupees of investment, 13 jobs are created in manufacturing industries, 45 jobs in agriculture and 89 jobs in hotels and restaurants. Tourism is considered to be an important area for intensive development for all governments. As the fastest growing foreign exchange earner, especially, in developed countries, it is being given priority. The service providers play a vital role in ensuring a safe and comfortable trip for the tourists.

### Tourism in India

India has emerged as the fastest-growing market in Asia in terms of international tourist spending. India has incredible monuments, Forts, Palaces, Temples, Beaches, Water Falls, Wild Life Sanctuaries, Memorials, Music, Dance and Culture. There is vibrancy of the culture, both ancient and modern. Indian culture is considered to be amongst the world's oldest, richest and most diverse. Many travelers have come here and been enchanted by its natural beauty, splendor, beliefs, philosophies and practices. India is one country all men long to see, and having seen it once, would not give up that glimpse for all the wonders of the world. This results in increase in Foreign Exchange Reserves.

The tourism potential of our country, especially in a global context, remains far from realized. Towards realization of this potential, the Ministry of Tourism envisages a target of 12% growth rate in inbound as well as domestic tourists for the 12th five year Plan period. It is projected that with this growth rate, the sector will generate 2.5 crore additional jobs. The Tourism Ministry has launched the —Clean India Campaign recently. The objective of the Campaign is to ensure an acceptable level of cleanliness and hygiene at various public places. It involves sensitizing all sections of the society on the importance of cleanliness and hygiene in public places. The Campaign will be a blend of persuasion, education, training, demonstration and sensitization of all segments of our society.

### Tourism in Tamil Nadu

Tamil Nadu is a State with several distinguished tourism genre. It has cerulean mountains, Silver Falls, verdant vegetations, sandy beaches, mammoth monuments, timeless temples, fabulous wildlife, scintillating sculptures and reverberating rural life. It has picturesque spots, continuing heritage, cultural confluence and aesthetic magnificence. Tourism enhances the performance of the tourism sector in an environmentally and culturally sustainable and socially inclusive manner. This would be reflected in:





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## DEMAND AND SUPPLY OF WATER RESOURCE SANITATION MANAGEMENT IN TAMIL NADU

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### Abstract

Global environmental changes and demands for multiple use of increasing population make water management a difficult task, especially in developing countries like India with exploding population, weak economy and several social issues such as disputes over Trans-boundary Rivers, resettlement and rehabilitation issues during project implementation, corruption and vested political and regional interests. The principal source of water for India is the southwest monsoon that undergoes spatial and inter-annual variations associated with global climate anomalies. Any further extremes in rainfall and change in the frequency and intensity of severe weather systems due to a changing climate will have serious impact on water resources and agriculture, and it will be reflected in all facets of life. More specifically, growing demand across competitive sectors, increasing droughts, declining water quality, particularly of groundwater, and unabated flooding, inter-state river disputes, growing financial crunch, inadequate institutional reforms and enforcement are some of the crucial problems faced by the country's water sector. Availability of safe drinking water is inadequate. Severe water shortages have already led to a growing number of conflicts between users (agriculture, industry, domestic), intra-state and inter-state. With the increasing demand for water from various sectors like, agriculture, household industries, a pertinent need arises both from the government sector as well as from the private sector on the management of water resources. This requires the understanding of the resources available. Among the various states of India, Tamilnadu stands fourth in terms of state income and industrial development. The fast growing population has results in the fast urbanization and increasing demand for water from various sectors of the state economy. This requires an understanding the various sources of water supply and the demand arising from various sectors. The present paper attempts to provide a description of the demand and supply of Water in the state of Tamilnadu culled out from various sources.

### Introduction

Water is the basic necessity of life, not only for human beings, but also for plants and animals. Life began in water and it is a basic component of every living cell. Water accounts for 65 per cent of our body weight. If we lost even 12 per cent of it we would die. About 83 per cent of our blood is water. It helps digest our food, take in oxygen, transport body wastes and control body temperature. We need water in almost every domestic activity, from cooking and washing to bathing and sanitation. Water, to a large extent, determines climate. Places near large Water bodies are cooler because the water bodies act as large sinks for heat, thus moderating the climate of the area. Regions near water bodies generally have milder winters and cooler summers. Water has an even more basic role in climate control through the water cycle. The evaporation of water requires huge amount of energy, which comes from the sun. When the water vapor falls back to earth as rain, this energy is released. Thus water acts as an energy transfer and storage medium for the climate system. Food cannot be produced without water. Vegetables are 80-90 per cent water and milk about 87 per cent. Agriculture is the major consumer of water in India, accounting for nearly 93 per cent of the total water. Almost all industrial process need water which is needed as a solvent, as a coolant, as a medium, as a cleansing agent, etc. Water plays very important role in disposing of waste, be it domestic sewage or industrial effluents.

### Water Resource Use

Water is a renewable resource. After it has been used it returns to the water cycle and in time it will be used again. In theory, there is plenty of water in the global cycle to meet all present and expected human needs, but water resources are used unevenly around the world, and much water use is wasteful and inefficient. Problems of maintaining reliable supplies of usable water are not confined to dry lands. Water is the most basic and most important of all natural resources, Human bodies are largely water (by weight), and most food contains a high proportion of water. We require regular supplies of water, but it must be fresh water.

### Water is used in Many Different Ways, Including

**Domestic uses:** such as water used for showering, washing clothes, and watering lawns and gardens.

**Industrial uses:** Water used for processing, washing cooling in facilities that manufacture products.

**Agricultural uses:** this includes water used in irrigation systems.

**Thermo-electric uses:** including water used for cooling to condense the steam that drives turbines in the generation of electric power with fossil fuels and nuclear or geothermal energy.



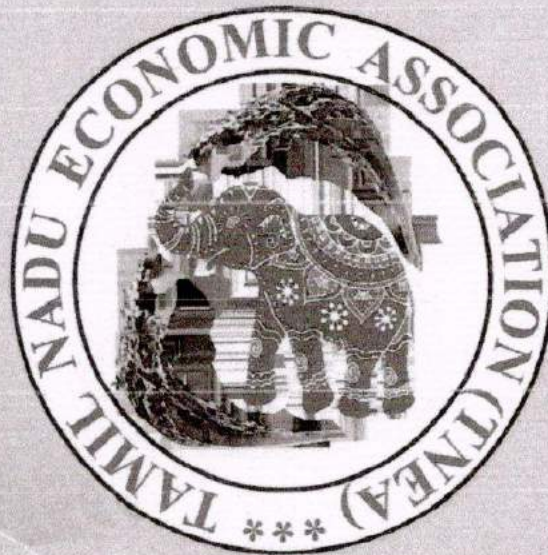
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# ECONOMIC DEVELOPMENT OF TAMIL NADU

**A long term study since 1950s.**

**Editor**

**Dr S.N. SUGUMAR**



**TAMIL NADU ECONOMIC ASSOCIATION (TNEA)**

**University of Madras,**

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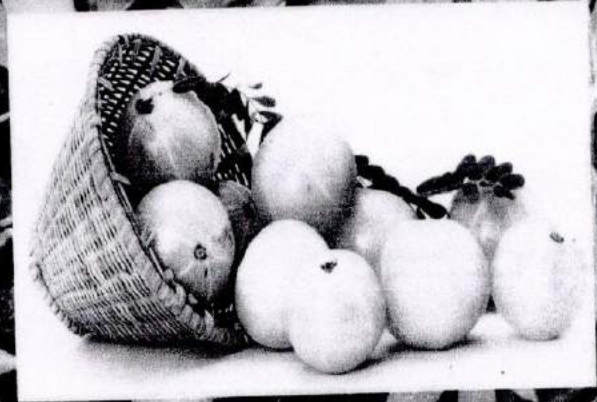


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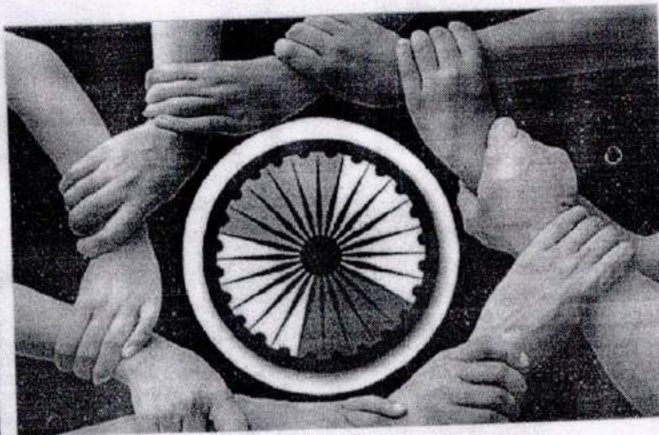
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# YOUTH IN INDIA

P. Chennakrishnan



## Abstract

Youth are the innovators, creators, builders and leaders of the future. But they can transform the future only if they have skills, health, decision-making capacity, and real choices in life. Today's record of 1.8 billion young people present an enormous opportunity to transform the future. The potential economic gains would be realized through a "demographic dividend" which can occur when a country's working age population is larger than the population that is dependent. In order to maximize the dividend, countries must ensure their young working age population is equipped to seize opportunities for jobs and other earning possibilities.

India has the world's largest young population despite having a smaller population than China (latest UN report said today) with 356 million with 10-24 years olds. Global number of youths is the highest ever as the world is home to 1.8 billion young people between the ages of 10 and 24 years, 9 in 10 of the world's young population live in less developed countries. China is second with 269 million young people, followed by Indonesia (67 million), the US (65 million), and Pakistan (59 million) the United Nations population Fund's (UNFPA) State of the World's population report said.

India has one of the highest adolescent (253million) and youth populations in the world. The census of India (2011) has highlighted the profile and status of the adolescent and youth population, which constitutes a critical segment of the total population of India. Socio-political, economic and demographic developments depend on them. The transition from education and training to economic activity marks an important phase in the lives of youth who are the productive workforce of the country. The huge unemployment among youth due to lack of skills and

poverty is a long term challenge for India.

Never before have there been so many young people. Never again is there likely to be such potential for economic and social progress. How we meet the needs and aspirations of young people will define our common future, the report said. With the right policies and investments in human capital, countries can empower young people to drive economic and social development and boost per-capita incomes. Between 2000 and 2010 the number of students enrolled in universities outside of their own country rose from 2 million to 3.6 million added that search for jobs and a decent livelihood is among the biggest motivators of migration and the search for security and freedom from violence and discrimination is a major driver of refugee flows. India's population is expected to become the world's youngest; more than 500 million Indian citizens will be under 25 years of age and more than two-thirds of the population will be eligible to work. It means that a growing number of India's youth need the right education infrastructure to develop skills and adequate opportunities to get employed or become entrepreneurs.

Table 1 the percentage of various age groups to the total age group has been estimated from census 2011. The adolescent age group (10-19 years) and youth age group (15-24 years) form a significant section of the total population of India; India can realize the demographic dividend by enabling and empowering more youth through targeted areas such as skill development, appropriate education, healthy lifestyle and non targeted areas such as food subsidies and employment opportunities.

Table No-1: Percent of various age groups in India

S.No.	Age group	%of various age groups to the total population
1	0-4	9.32
2	05-Sep	10.48
3	Oct-14	10.96
4	15-19	9.95
5	20-24	9.2
6	25-39	22.72
7	40-59	18.42
8	60-79	7.65
9	80+	0.93
10	Age not stated	0.37

Source: Census, 2011 New Delhi India, New Delhi.

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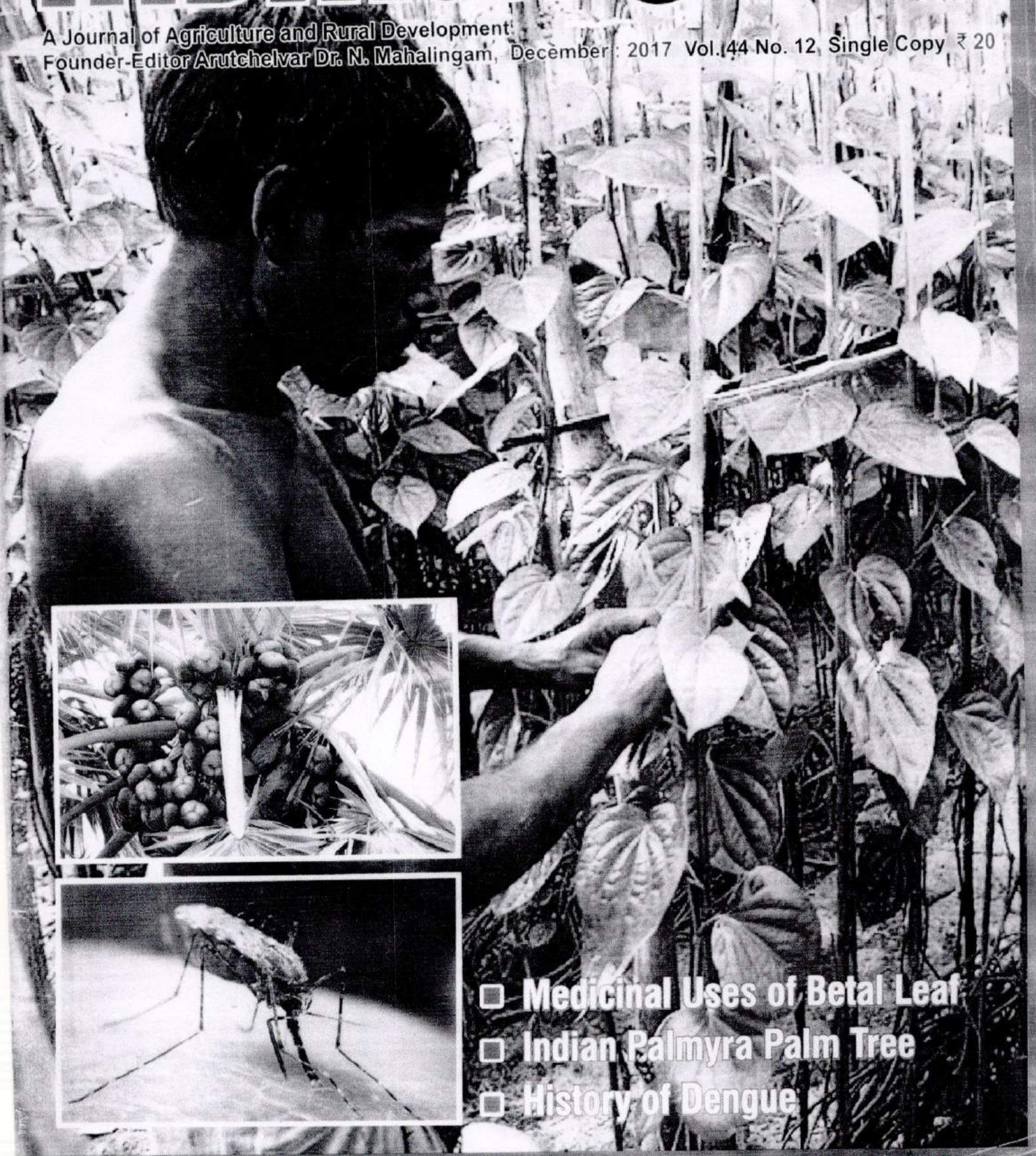
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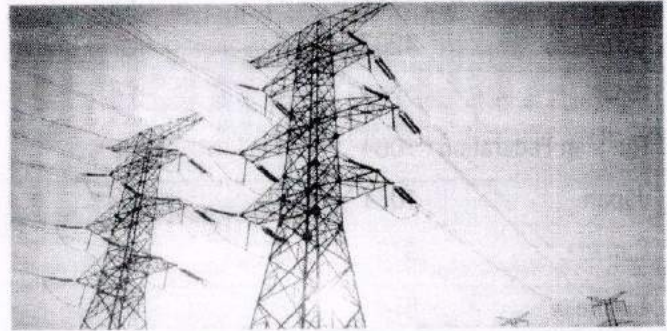
# ELECTRICITY CONSUMPTION AND ECONOMIC GROWTH

P. Chennakrishnan

## Introduction

Power is one of the most critical components of infrastructure crucial for the economic growth and welfare of nations. The existence and development of adequate infrastructure is essential for sustained growth of the Indian economy. India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste. Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required. Indian power sector is undergoing a significant change that has redefined the industry outlook. Sustained economic growth continues to drive electricity demand in India. The Government of India's focus on attaining 'Power for all' has accelerated capacity addition in the country. At the same time, the competitive intensity is increasing at both the market and supply sides (fuel, logistics, finances, and manpower).

India will soon be the largest country in the world in terms of population, and India is already the world's third largest market in terms of gross electricity generation (Figure 1). Of the 10 largest electricity systems in the world, India is likely to have the fastest growing electricity market over the next decade. While Indonesia and Australia are the two largest exporters of coal, India's domestic coal production is larger than either. Combined, China, the U.S. and India produced 68% of the world's total coal in 2014, and account for 72% of the world's total consumption. While 85% of all coal is consumed in the country of production, the international coal market exceeds 1,100Mtpa. China was the largest coal-importing nation in 2014. However, Chinese coal imports declined by 11% in 2014 and are down a further



38% year-over-year to date in 2015. India, with a history of below-forecast domestic coal production, has tripled imported coal volumes over the past five years, to supply 22% of India's total coal consumption in 2014. By 2015, IEEFA expects India to be the world's largest importer, consuming 20% of all internationally traded coal. Coal-fired power generation provided 74% of India's electricity in 2014/15, making India the most coal-dependent nation among the top 10 (China is second at 72%, down from 79% in 2011). In contrast, Brazil and France are the lowest coal-dependent countries among the world's 10 largest electricity systems, having achieved a less than 5% reliance on coal in 2014. What happens in India is important, too, because the country's electricity sector in 2014 was the second most carbon emission intensive among the top 20 nations, behind only Australia.


The Government of India's announcement in 2014 of policies aimed at transforming the country's electricity sector also makes India a more important global force in energy markets. The government's plan, to install 175GW of renewable energy, is one of a number of initiatives that stands to underpin a significant diversification away from coal-fired power generation. Such a move would progressively lower the emissions intensity of Indian electricity, and if global capital can be leveraged to facilitate this transformation, it could create a "Road to Paris" platform that aligns India's need for more sustainable growth with the developed world's need for decarbonization. Changes in India also will probably carry substantial weight in their effect on the structural decline of the seaborne thermal coal market.

DECEMBER 2017



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## MIGRATION AND YOUTH IN INDIA: TRENDS AND EMERGING CHALLENGES

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### Abstract

*These pieces of writing review the philosophy on migration and progress from two points of view. Primary, it looks at additional theoretical thoughts in the academic prose on long-term and macro level approaches to the topic. Subsequent, it examines approaches to the management of migration in the current policy debate on migration and development. The focus is primarily on international migration, although reference is made to internal migration where appropriate and opposing views and critical approaches are highlighted. The article conceptualizes migration as an integral part of development that changes systematically as development, however defined, evolves.*

### Introduction

Migration is together significance and a cause of development and is an essential part of the enlargement process. Analyses of migration generally involve the study of the factors that bring about the population movement, the so-called drivers of migration. Analyses also incorporate the impact that the movement has on both origin and destination areas. Both the drivers and the impacts can be seen as aspects of development. Migration includes both movements within a country's borders, internal migration, and movements from one country or territory to another, international migration. Simple in concept, migration has proven extremely difficult to measure in practice in a way that can give comparative data from one part of the world to another. Just one difficulty is that migration, international as well as internal, is rarely a simple, one-way 'permanent' move from one jurisdiction to another, but rather a complex path of return and remigration. If forms of temporary migration are to be incorporated into the discussion, how are they to be defined? Development, too, is an equally complex term, its meaning often assumed without precise definition. Both migration and development are multidimensional terms. Migration and development in this article will be considered from two perspectives: first, migration as an integral part of development and how forms of migration change with development and, second, the perspective of the current debate on migration and development in which migration is seen to be something that can be promoted to bring about development. The primary focus in this article will be on international migration but readers should be aware that many of the points made apply equally to internal migration.

United Nations estimates placed the number of international migrants in the world at 232 million in 2013, around 3% of the population (United Nations, 2013). While the absolute numbers of migrants had increased from 154 million in 1990 and 175 million in 2000, the proportion of the world's population that was defined as migrant under United Nations definitions had remained around the 3% mark. One can argue that the increased numbers of people migrating and moving are simply the result of an increase in global population numbers from 5.3 billion in 1990 to 7 billion in 2012

### Managing Migration for Development

Migration was seen, perhaps still is seen by some, to be brought about by a lack of development. People left because of a lack of opportunity at home. However, if such opportunities could be generated through a development program, then migration would cease. Hence, migration should slow consequent upon development. The experience has proven quite the reverse: migration tends to be positively associated with development. Education programs increase aspirations and agricultural improvement or industrial employment should provide increased income, and so development gives both potential internal and international migrants the information and the means through which to move. The volumes of remittances discussed earlier and revisionist interpretations of skilled migration away from brain drains drew

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(CASA) proportion. CASA is condensing of current Account Savings Account. It is the proportion which demonstrates the amount of the aggregate stores with bank in the present record and investment account. In a basic dialect, the stores with the bank are in the present record and investment account. Banks don't pay enthusiasm on the present record stores and pays an exceptionally low% of enthusiasm on funds on account stores. Consequently, it is a decent measures to get stores at no or minimal efforts.

### Review of Literature

**Nikita Gajjar (2016)** examined demonetization and its effect on Indian Economy. They opined that demonetization has here and now negative effect on various segments of the economy and such effects are comprehended when the new money notes are broadly coursed in the economy. They additionally contended that the legislature should clear every one of the issues made because of demonetization and help the economy to work easily.

**Nithin and Sharmila (2016)** thought an investigation on Black Money in India: Present Status and Future Challenges and Demonetization. She portrayed the structure, approach choices and systems that Indian Government should adjust to handle with this issue and the future difficulties to be looked by the Government.

**Manpreet Kaur (2017)** demonetization and its entire money related incorporation. They felt that the prizes of demonetization are much reassuring and the demonetization is in the long haul enthusiasm of the nation. They communicated that it had given brief agony yet it educated money related lessons. It affected saving money enterprises to do extensively venture on digitalization of saving money administrations.

**Vijay and Shiva (2016)** inspected led an examination on demonetization and effect on Cashless Payment System. He said that the cashless framework in the economy has numerous productive advantages less tedious, less cost; paper less exchange and so on and he expected that the future exchange framework in every one of the divisions is cashless exchange framework.

### Objectives

1. Aimed at combating corruption. And Check black money and fake currency note.
2. 1000 and 500 were put out of circulation and Effect on parallel economy.
3. All the bank accounts are tied up to one PAN (Permanent Account Number).
4. This move shows strength of the Banking system, Retail boost, and increases deposit.
5. This move will also cause short-term pain for the working class, small businesses and nearly anybody who deals with cash on a daily basis.
6. Remove black money from the economy as they will be blocked since the owners will not be in a position to deposit the same in the banks.

### Methodology of the Study

The study is based on Secondary Sources of data. It includes available published literatures such as books, journals, newspapers and relevant government websites. The study tries to look at the extent of demonetization influence on normal banking operations.



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# PERFORMANCE OF RURAL AGRICULTURAL FINANCE – AN ANALYSIS

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## Abstract

*Agriculture is the backbone of the Indian economy. Although the sector accounts for 15 percent of the national GDP, as well as roughly 11 percent of its exports, half the population still relies on agriculture as the most important source of income, and agriculture is a source of raw material for a large number of domestic industries. India ranks second in total farm output on a global level. During 2013-14 the total production of cereals amounted to 245.6 million tonnes. The horticulture production reached 277.4 million tonnes in 2013-14, representing a 66.2 percent increase from 2004-05. The dairy sector is one of the major livelihood activities in rural India, and a significant contributor to the country's agricultural economy. With an estimated 139.7 million tonnes of production, the country is responsible for approximately 17 percent of global milk production, the majority of which is consumed domestically. Milk production has increased by approximately 51 percent during the last 10 years. By keeping a sustained growth rate, the production is expected to reach 180 million tonnes by 2020-21.*

## I. INTRODUCTION

Indian agriculture finance is a most important of development and technologies for sustainable agriculture cultivations in India. The Indian agriculture cultivation technical inputs can be

purchased and used has farmers only if the sufficient funds available with the Indian farmers. Most of the time farmers suffer from the problem of inadequate financial state. This situation leads to borrowing from an easy and comfortable source. In the Indian at farmers borrow the agriculture credit has heavily burdened of debt in the rural farmers.

Agricultural finance has liquidity services credit provides to farm of borrowers. It is also considered as the study of those financial intermediaries who provide loan to agriculture and the financial intermediaries obtain their loanable funds of farmers.

Agricultural production in this country depends upon millions of small farmers. The farming community must be kept informed about the various sources of agriculture finance. Agricultural finance possesses its usefulness to the farmers, lenders and extension workers. The knowledge of lending institutions, their legal and regulatory environment helps in selecting the appropriate lender who can adequately provide the credit with terms and related services needed to finance the farm business.

## Statement of the Problems

Agriculture plays a crucial role in the development of the Indian economy. It accounts for about 19 per cent of GDP and about two thirds of the population is dependent on this sector. Agricultural finance is a subset of rural finance dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale,



# ***AGRICULTURAL SUBSIDIES IN INDIA – AN OVERVIEW***

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## **I. INTRODUCTION**

Agriculture plays an important role in the economic growth of our country. Almost all the activities revolve round agriculture. It provides employment to around 60 per cent of the total workforce in the country. Extremities in climate and variety of soil condition have made possible the cultivation of every item. Introduction of new high yielding varieties after the spread of Green Revolution in the late sixties resulted in record of food grains production. For stimulating agriculture production and attaining self-sufficiency the government provides various incentives together with price supporting schemes. Among the agriculture production incentives, subsidies are considered to be the most powerful instruments for accelerating the growth of agricultural production.

Although agriculture now accounts for only 14 per cent of Gross Domestic Product (GDP), it is still the main source of livelihood for the majority of the rural population. Agriculture is the most important sector in India in terms of the population dependent on it. With more than two third of the population engaged in agriculture related activities. A country with one billion populations, and 56 per cent workforce engaged in agriculture means this is the only sector where such a huge force is engaged. Many countries in the world even do not have their total population, which India is having the workforce engaged in agriculture. As such rapid growth of agriculture is critical for development of rural economy. A viable development of rural economy

will leads to inclusive growth. Thus, it is imperative to study the constraints faced by Indian farmers. Like other sectors, agriculture also requires capital. Capital implies the credit required for the purchase of inputs and machinery. In a poor agricultural country like India, where savings are negligible among the small farmers, agricultural credit appears to be a critical factor affecting agricultural productivity (Goayal, 2014:22). For many Indian farmers, it is inevitable to incur debt within every stage of the agricultural process. The main obstacles before Indian agriculture are finance. Unlike industry, agriculture is not getting proper credit. As a result, labours are migrating from agriculture to industry in order to earn two squares meal. Credit supply is an important determinant of investment in agriculture. In India, access to credit remains a significant challenge for low income households. Typically, the poor access credit through the informal sector, where monopolistic practices frequently occur, and interest rate can easily exceed 100 per cent per year (Dooner, 2008:14). Besides, poorer households live in remote regions; have hardly any assets, and are viewed as being “unprofitable” by formal institutions

### **Agricultural Subsidies in India**

Major items of agricultural subsidies are food, fertilizer, irrigation, power and credit. While food and fertilizer subsidies are borne by the Centre, power and irrigation subsidies are borne by the respective state government. Credit subsidies are given through the banking system. Food subsidy is the difference between the price at which the Food Corporation of



# TECHNOLOGY ASPECTS OF AGRICULTURE LIVELIHOODS: ISSUES CHALLENGES

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## Abstract

*The Agricultural sector has the greatest potential for improving rural livelihood and eradicating the Growth and Transformation Plan (GTP). By the end of the GTP period, the government seeks to double yields of smallholder farmers largely by scaling-up best practices, producing high value crops, expanding irrigation development and promoting natural resource conservation. A substantial increase in agricultural yield and output is expected to be realized by implementing interventions aimed at speeding-up the assimilation and adoption of improved agricultural technology and management practices of the f these strategies on productivity and production are analyzed to determine their adequacy in meeting the GTP production targets. The analysis shows that while production and productivity targets are generally achievable, the country needs to adopt more cost-effective, innovative and modern approaches to agricultural knowledge management and reform and modernize its agricultural extension system.*

## I. INTRODUCTION

Knowledge management can play a pivotal role in enhancing agricultural productivity and addressing the problem of food insecurity. If properly managed, it enables appropriate knowledge and information to

reach knowledge intermediaries and smallholder farmers in a timely manner. Such delivery of knowledge and information undoubtedly minimizes the risk and uncertainty smallholder farmers face from production to marketing of their produce. But, to effectively engage in agricultural knowledge management, adequate mechanisms are needed for generating, capturing, and disseminating knowledge and information through the use of effective processes and institutional arrangements. Sources of agricultural knowledge include scientific research and indigenous knowledge. After the creation, sourcing or accumulation of knowledge, the knowledge has to be disseminated to users to support the innovation process. Information and communication technology (ICT) can play a critical role in facilitating rapid, efficient, and cost effective knowledge management. However, ICT application in Ethiopia remains low in comparison with several African countries. For instance, in a number of Sub-Saharan African countries, smallholder farmers get technology-related advice as well as location-specific market information on inputs and outputs through ICT kiosks. Furthermore, mobile telephone service is being used to deliver agricultural information to users.

To speed up technology adoption, the government of Ethiopia needs to quickly review and modernize its public extension service delivery system and particularly the agricultural extension



# INDIAN INFORMAL RURAL WORKERS IN INDIA: AN ANALYSIS

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## Abstract

*The Indian economy is characterized by the existence of a vast majority of informal or unorganized labour employment. In India nearly 92.38% of workers are still engaged in informal employment and 7.46 per cent are engaged in formal sector enterprises. However, the employment has*

*increased in informal sector, where in wages; salaries are quite low and working conditions deplorable as compared to those in the organized sector, while the contribution of unorganized sector to GDP is about 50 per cent as per National Commission for Enterprises in the Unorganized Sector.*

## I. INTRODUCTION

The informal sector plays a central role in economic development of all the countries. Particularly, developing countries one third of national income comes from this informal sector only. The informal sector reduces the unemployment problems. The entrepreneurs are in this sector for their livelihood, not for making more profit. Some informal entrepreneurs are earning more than the formal employees in our country, like vegetable vendors, agents, brokers, foot-path traders etc. Majority of the entrepreneurs are community based in this sector. In India, each community has their own business. Rural, urban and city side also community based entrepreneurs are more. For example, foot wears and beauty parlor etc. The informal sector develops the Indian economy invisibly. Most of the rural and urban people are continuing their family business, because of lack of employment opportunity, In India most of the family businesses are in the informal sector. The earned income from this sector has utilized for the purpose of their children

education, family commitments, personal savings, etc. So the government should take necessary steps to convert this sector into formal.

About 370 million workers constituting 92% of the total workforce in a country were employed in the unorganized sector as per NSS Survey 1999-2000. It plays a fundamental role in terms of providing employment opportunity to large segment of the working force in the country and contributes to the national product significantly. The contribution of the unorganised sector to the net domestic product and its share in the total NDP at current prices has been over 60%. In the matter of savings the share of household sector in the total gross domestic saving mainly unorganised sector is about three fourth. The informal sector constitutes largest portion of the economy in terms of value addition, savings, investments etc. The share of formal sector is around 12 -14 percent in our national income while that of informal sector is more than 30 percent. In the case of United States, the share of corporate business is nearly 70 percent.



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## ICT IN RURAL DEVELOPMENT: OPPORTUNITIES AND CHALLENGES

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### Introduction

India still breathes in villages and this becomes obvious when the fact is taken into consideration that more than 700 million of its population reside in about 636 thousand villages of this country; but even after sixty years of independence, rural India is characterised by severe poverty, illiteracy, lack of health services, lack of employment opportunities and over all backwardness. Rural areas are often regarded as information-poor and information provision has always been a central component of rural development initiatives. Keeping in view these predominant features of rural India – Information and Communication Technology (ICT) has earned its reputation to be the key to information-flow for intensifying the development efforts in rural India and is being considered as an imperative strategy for achieving the goal of sustainable rural development. To empower the rural communities with a sustainable approach, ICT has been one of the most

effective instruments and the following table provides a better insight to this fact.

### ICT and Sustainable Rural Growth

#### Strengthening Rural Governance:

Introduction of ICTs in rural India is expected to bring in changes in the whole process of rural governance by improving transparency, accountability and administrative efficiency of rural institutions, promoting participation of the poor in decision-making processes and improving the efficiency and responsiveness of rural service delivery. It can facilitate speedy, transparent, accountable, efficient and effective interaction between rural citizens - this not only promotes better administration but also saves time and transactions costs of government operations. At the same time, ICT improves interaction with and within civil society and encourages civil society participation in the rural governing process. Ø Encouraging social transformation: access to information is of



## CHALLENGES AND OPPORTUNITIES FOR ICT IN AGRICULTURAL LIVELIHOODS

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### Introduction

In recent years, the International Institute for Communication and Development (IICD) in the Hague, the Netherlands, has been engaged in projects that focus on the use of ICT in the agricultural sector. The experiences of IICD and other organisations form the basis for the recommendations for future action in Commonwealth countries. The agricultural sector is confronted with the major challenge of increasing production to feed a growing and increasingly prosperous population in a situation of decreasing availability of natural resources. Factors of particular concern are water shortages, declining soil fertility, effects of climate change and rapid decrease of fertile agricultural lands due to urbanisation. However, the growing demand, including for higher quality products, also offers opportunities for improving the livelihoods of rural communities. Realising these opportunities requires compliance with more stringent quality standards and regulations

for the production and handling of agricultural produce. New approaches and technical innovations are required to cope with these challenges and to enhance the livelihoods of the rural population. The role of ICT to enhance food security and support rural livelihoods is increasingly recognised and was officially endorsed at the World Summit on the Information Society (WSIS) 2003-2005. This includes the use of computers, internet, geographical information systems, mobile phones, as well as traditional media such as radio or TV. Although it is a relatively new phenomenon, evidence of the contribution of ICT to agricultural development and poverty alleviation is becoming increasingly available. Since 1998, IICD has been involved in projects and policy trajectories and consistently monitors the progress and impact of the use of ICT.

### Objective

- To know the study Increasing and efficiency, productivity and



## ICT SUSATINABILITY OF INDIAN AGRICULTURE: CHALLENGES AND OPPORTUNITIES

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### **Introduction**

Knowledge management can play a pivotal role in enhancing agricultural productivity and addressing the problem of food insecurity. If properly managed, it enables appropriate knowledge and information to reach knowledge intermediaries and smallholder farmers in a timely manner. Such delivery of knowledge and information undoubtedly minimizes the risk and uncertainty smallholder farmers face from production to marketing of their produce. But, to effectively engage in agricultural knowledge management, adequate mechanisms are needed for generating, capturing, and disseminating knowledge and information through the use of effective processes and institutional arrangements. Sources of agricultural knowledge include scientific research and indigenous knowledge. After the creation, sourcing or accumulation of knowledge, the knowledge has to be disseminated to users to support the innovation process. Information and

communication technology (ICT) can play a critical role in facilitating rapid, efficient, and cost effective knowledge management. However, ICT application in Ethiopia remains low in comparison with several African countries. For instance, in a number of Sub-Saharan African countries, smallholder farmers get technology-related advice as well as location-specific market information on inputs and outputs through ICT kiosks. Furthermore, mobile telephone service is being used to deliver agricultural information to users.

To speed up technology adoption, the government of Ethiopia needs to quickly review and modernize its public extension service delivery system and particularly the agricultural extension system and provide an enabling framework for utilizing advances in information and communication technology to deliver agricultural extension services. Using available ICTs will not only improve information and knowledge management for extension workers and



## EMPLOYMENT OPPORTUNITIES FOR INFORMATION COMMUNICATION

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### Introduction

Indian telecom sector is more than 165 years old. Telecommunications was first introduced in India in 1851 when the first operational land lines were laid by the government near Kolkata (then Calcutta), although telephone services were formally introduced in India much later in 1881. Further, in 1883, telephone services were merged with the postal system. In 1947, after India attained independence, all foreign telecommunication companies were nationalised to form the Posts, Telephone and Telegraph (PTT), a body that was governed by the Ministry of Communication. The Indian telecom sector was entirely under government ownership until 1984, when the private sector was allowed in telecommunication equipment manufacturing only. The government concretised its earlier efforts towards developing R&D in the sector by setting up an autonomous body – Centre for

Development of Telematics (C-DOT) in 1984 to develop state-of-the-art telecommunication technology to meet the growing needs of the Indian telecommunication network. The actual evolution of the industry started after the Government separated the Department of Post and Telegraph in 1985 by setting up the Department of Posts and the Department of Telecommunications (DoT).

The entire evolution of the telecom industry can be classified into three distinct phases.

- Phase I- Pre-Libralisation Era (1980-89)
- Phase II- Post Libralisation Era (1990-99)
- Phase III- Post 2000

Until the late 90s the Government of India held a monopoly on all types of communications – as a result of the Telegraph Act of 1885. As mentioned earlier in the chapter, until the industry was liberalised in the early nineties, it was a heavily government-controlled and small-



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# ***A STUDY ON IMPACT OF GST: WITH SPECIAL REFERENCE TO SMALL BUSINESSES ENTREPRENEURS IN TAMIL NADU***

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## **I. INTRODUCTION**

The proposed GST is likely to change the whole scenario of current indirect tax system. It is considered as biggest tax reform since 1947. GST is one of the most crucial tax reforms in India which has been long pending. It was supposed to be implemented from April 2010, but due to political issues and conflicting interests of various stakeholders it is still pending. It is a comprehensive tax system that will subsume all indirect taxes of states and central governments and unified economy into a seamless national market. It is expected to iron out wrinkles of existing indirect tax system and play a vital role in growth of India. This paper presents an overview of GST concept, explains its features along with its timeline of implementation in India. The paper is more focused on advantages of GST and challenges faced by India in execution.

Tax policies play an important role on the economy as they have an impact on improving the efficiency in tax administration, tax compliance and tax payment. It also aims to bring about equity among all states leading to overall development and growth of the nation. A good tax system should endeavour to generate tax revenues to support

government expenditure on public services and infrastructure development. The tax laws should be such that they raise a given amount of revenue in an efficient, effective and equitable manner. GST is an indirect tax levied on domestic trade at a single rate (with only very few exemptions) which becomes a proportional tax on consumption. It is a destination based tax in the sense that the tax on a goods goes to the state in which the concerned consumer lives.

GST is said to be a transparent tax law that is expected to result in higher tax compliance. Transparent in the sense that the payer of tax is clear about the rate of tax paid on the value of goods and the amount that is to be paid as tax and the amount of tax paid stated in the bill. It also aims to minimize any distortions in the economy caused by the existing tax policy and are framed to establish a tax system that is economically efficient. An efficient tax system should minimize the cost of tax compliance and should pave way for effective tax administration. The disparities in the economy could be removed if there is proportional tax payment system based on the spending of the individuals. The uniformity in the tax rates is to bring about free movement of goods along



# IMPACT OF GST ON INDIAN ECONOMY

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## I. INTRODUCTION

The word tax is derived from the Latin word 'taxare' meaning to estimate. A tax is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is any contribution imposed by government whether under the name of toll, tribute, impost, duty, custom, excise, subsidy, aid, supply, or other name.

The introduction of Goods and Services Tax (GST) would be a significant step in the reform of indirect taxation in India. Amalgamating several Central and State taxes into a single tax would mitigate cascading or double taxation, facilitating a common national market. The simplicity of the tax should lead to easier administration and enforcement. From the consumer point of view, the biggest advantage would be in terms of a reduction in the overall tax burden on goods, which is currently estimated at 15%-30%. As India is a federal republic GST would be implemented concurrently by the central government and by state governments.

Goods and service tax is a comprehensive tax levy on manufacturing, sale and consumption of goods and services at a national level. GST is a tax on goods and services with value addition at each stage having comprehensive and continuous chain of set-of benefits from the producer's service provider's point up to the retailer's level where only the final consumer should bear the tax.

India has seen a number of tax reforms in the past two decades. The Goods and Services Tax(GST) is one of the biggest taxation reforms in the history of Independent India that shall change the face of the tax system of the nation. The primary idea behind this move is to replace a multitude of existing taxes in the form of value-added tax, service tax, excise duty and sales tax by levying a single integrated and comprehensive tax on the manufacture, sale and consumption of goods and services in the country. The tax reform is expected to unite India economically by removing different taxes levied by different entities at different points. GST is a tax on goods and services with value addition at each stage having comprehensive and continuous chain of set-of benefits from the producer's/ service provider's point up to the retailer's level where only the final consumer should bear the tax.

## Indian Taxation System

India has got a well-structured and simplified taxation system, wherein an authoritative segregation has been done among the Central Government, the different State Governments as well as the Local Bodies. The Department of Revenue under the Government of India's Ministry of Finance is solely responsible for the computation of tax. This department levy taxes on individuals or organizations for income, customs duties, service tax and central excise. However, the agriculture based income taxes are levied by the respective State Governments.



# A STUDY ON IMPLEMENTATION OF GOODS AND SERVICE TAX IN INDIA

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## Abstract

*GST is an indirect tax which will subsume almost all the indirect taxes of central government and states governments into a unified tax. As the name suggests it will be levied on both goods and services at all the stages of value addition. It has dual model including central goods and service tax (CGST) and states goods and service tax (SGST). CGST will subsume central indirect taxes like central excise duty, central sales tax, service tax, special additional duty on customs, counter veiling duties whereas indirect taxes of state governments like state vat, purchase tax, luxury tax, octroi, tax on lottery and gambling will be replaced by SGST. Integrated goods and service tax (IGST) also called interstate goods and service tax is also a component of GST. It is not an additional tax but it is a system to examine the interstate transactions of goods and services and to further assure that the tax should be received by the importer state as GST is a destination based tax.*

## I. INTRODUCTION

India has got a well-structured and simplified taxation system, wherein an authoritative segregation has been done among Central Government, the different state Governments as well as the Local bodies. The department of revenue under the government of India's ministry of finance is solely responsible for the computation of tax. This

department levy taxes on individual or organizations for income, customs duties, service tax and central excise. However, the agriculture based income taxes are levied by the respective state Governments. Local bodies have got the power to compute and levy taxes on properties and other utility services like drainage, water supply and many others. The past 15 years have witnessed tremendous reformations of the taxation system in India. Apart from the rationalization of the rates of tax, simplification of the different laws of taxation has even been republic of India.

## II. OBJECTIVE

1. To study about the challenges of Introduction of Goods and Service Tax (GST in India)
2. To study on prospects in Implementation of Goods and Service Tax (GST) in India

## III. METHODOLOGY

Researcher used an exploratory research techniques based on past literature from respective journals, annual reports, newspaper and magazines covering wide collection of academic literature on Goods and Service Tax.

### Timeline of GST in India

In 2000, an empowered committee was set up by NDA government under the chairmanship of Asim Das Gupta to design GST model With UPA in





# GOODS AND SERVICE TAX OPPORTUNITY AND CHALLENGES

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## Abstract

*India has witnessed a number of reforms in indirect taxes over the last two decades with the replacement of State Sales Taxes by Value Added Tax (VAT) in 2005 marking a watershed in this regard. A Modified Value Added tax (MODVAT) was introduced for selected commodities at the Central level in 1986 and subsequently extended to all commodities through Central Value Added Tax (CENVAT). Value Added Tax (VAT) at the State level was introduced in a phased manner during 2003 to 2008. Prior to the implementation of VAT, the indirect tax structure in the country was considered somewhat problematic due to the "cascading effect of taxes" where by an item is taxed more than once from the production stage to the final retail sales stage. Exporters were also becoming less competitive in the international market due to the relatively higher input costs involved through the earlier sales tax mode (tax burden of a commodity increases when it is taxed repeatedly) –reflected in higher prices of products as compared to global competitors*

## I. INTRODUCTION

The major role of taxation economic development with much awaited GST system and in-depth analysis, here we are final GST bill passed by the parliament. Because taxes are only means for financing the public goods because they cannot be properly priced in the market. And government is only source of funding using the taxation methods. As taxes are the drivers of the economy. Tax regimes should be designed in such a manner that is does not become the source of distortion in the market or result in failure of market. Raising a sufficient amount of revenue is main aim of tax law in efficient, effective and quotable manner. Tax policies are important contributor to the economy in both cases efficiency and equity. Good tax system should keep in view the issues of income distribution and also focused on strategies to generate tax revenues to support government expenditures on public services and infrastructural development. At present, separate tax rates are applied to goods and services.





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*Stanly*



# Japan-India Relations in the 21st Century

Dr. P.Chennakrishnan

*[The emerging strategic relationship between India and Japan is significant for the future security and stability of the Indo-Asia-Pacific region. It is also a critical emergent relationship for U.S. security objectives across the Asia-Pacific. India possesses the most latent economic and military potential of any state in the wider Asia-Pacific region. Therefore, India is the state with the greatest potential outside of the United States itself to contribute to the objectives of the "Rebalance to the Pacific" announced by Washington in 2011. This "rebalance" was aimed at fostering a stable, prosperous, and rules-based region where peace, prosperity, and wide respect for human rights are observed and extended. Implicit in the rebalance was a hedge against a China acting to challenge the existing post-Second World War rules-based international and regional order. India and Japan share complementary, but not identical strategic vision. Both seek to manage—and minimize—the potential negative impacts from the rise of China in accord with their own strategic perspectives.]*

As of early 2017, Japan perceives China's growing assertive actions to be a great and rising strategic threat. India is concerned about China's increasingly worrisome behavior but finds it relatively more dependent upon China for economic growth and less worried about its immediate physical threat than Japan. As a result, India has been, and will continue to be, less vocal in complaints about Chinese behavior, preferring to warn Beijing with subtle signaling and actions.

The Japan-India relationship dates back to centuries, involving both cultural and commercial interaction. Buddhism came to Japan from India in the 6<sup>th</sup> and 7<sup>th</sup> centuries. The Asuka Temple in Nara was constructed in 588 and the Great Buddha of Nara was added in 609. Travel of Buddhist scholars from India to Japan and of Japanese students to India can be traced back to the 8th century.

The shared Buddhist tradition spiritually and culturally links the Japanese and Indian people and differentiates Japan from Confucian Asia. The Dutch East India Company established trade routes between Japan and the subcontinent that remained active even during Japan's seclusion

period (1638–1858). The first direct economic contact can be traced to the beginning of Japan's Meiji period (1868), when Japan used raw materials from India to enable its early industrialization.

The focus of this monograph is the 21st-century evolution of the Indo-Japanese strategic relationship. Modern forces are driving this relationship forward—in particular, the rise of China, the promise of India, and the re-emergence of Japan as an active contributor to international peace and stability. The Indo-Japanese strategic relationship shares a clear symmetry, in language and processes, with the historic U.S.-Japan alliance and with the emerging U.S.-India strategic partnership. In this context, the United States has a conspicuous stake in the success of the relationship and seeing that it reaches its full strategic potential.

The monograph was researched over the course of a year from late 2015 to late 2016. It is based upon extensive research into primary Japanese and Indian sources and references. It is leavened by author's interviews with key political and security officials in New Delhi and in Tokyo during visits to those locations in December 2015 and May 2016, respectively.

\* Asst Prof., Dept of Economics, Thiruvalluvar University, Vellore.

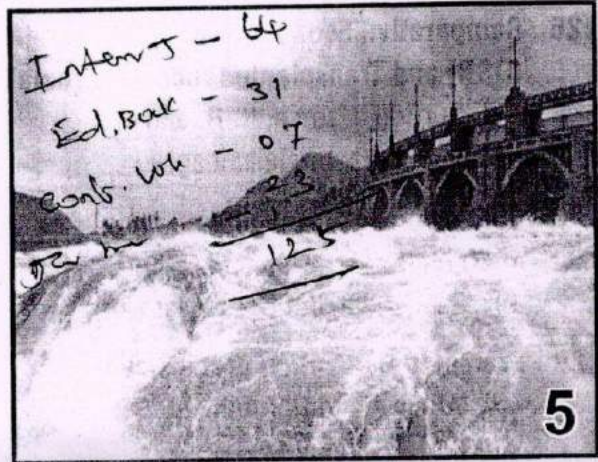


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VICE-CHANCELLOR



# TURMERIC: THE GOLDEN SPICE OF HEALTH BENEFITS

P. Chennakrishnan

*Turmeric production in India is about 78% of total production in the world. Turmeric can be grown as a monocrop or with other plantation crops as intercrop. Discover how to grow turmeric. Let's know more about it.*

## Introduction

Turmeric, known as Haldi in Hindi, and Manjal in Tamil, is a popular and sacred spice from India. It is nicknamed as 'Indian Solid Gold' and 'Indian Saffron' owing to its golden yellow color. It has profound significance as a condiment, dyeing agent, flavoring agent and even as a medicine. It is an inseparable ingredient in Asian cuisine especially in Indian curry preparations. A by-product of turmeric is 'kumkum' or the sacred



vermillion. It has a place of importance in many Hindu religious ceremonies, offerings and festivals. Owing to the increasing demand of pure, organic food products, turmeric is an important food coloring agent. Turmeric is a spice made from the root of the *Curcuma Longa* plant. Its mustard yellow color comes from the orange flesh of the plant, and it has a bold, spicy flavor that tastes like a combination of orange, ginger and peppers. Turmeric is a popular ingredient in many Indian, Caribbean and Asian dishes and has many nutritional benefits. Magnesium and iron are its most prominent nutrients, and you can use it as spice or take it in capsule form.

## Magnesium

Turmeric is rich in magnesium, which is necessary for more than 300 biochemical functions. These include supporting your immune system, keeping your bones strong and maintaining your hearts rhythm. Sprinkle turmeric on magnesium-rich foods, including black beans, broccoli, spinach and tofu, to ensure that you consume enough of this important mineral. Add turmeric to roasted peanuts,

almonds or pumpkin seeds for a healthy, magnesium-rich snack.

## Iron

Just one teaspoon of turmeric provides 16 percent of the daily requirement for iron in men and women. Without iron, your bodys red blood cells will deplete, causing weakness and extreme fatigue. Combine turmeric with other spices that are rich in iron, including coriander, celery seed and garlic powder. Sprinkle your combined seasoning on lean red meats, clams, leafy green vegetables and other iron-rich foods if you are anemic or to sustain your bodys iron levels.

## Fatty Acids

Turmeric contains more than 32 milligrams of omega-3 fatty acids and 114 milligrams of omega-6 fatty acids per teaspoon. These fatty acids enhance brain function, reduce inflammation, keep arteries clear and improve your bodys response to insulin. Add a few teaspoons of turmeric to your salmon, mackerel, turkey or pork dishes to increase your





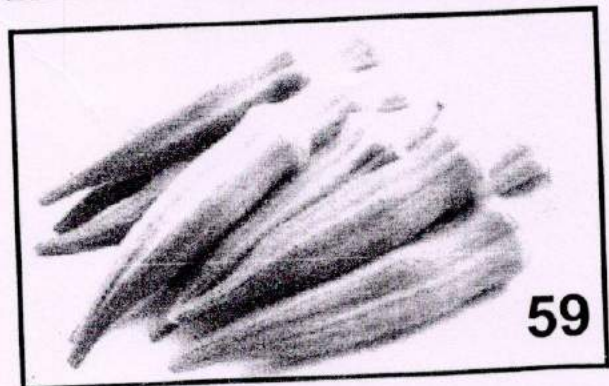
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# FLOWERS : Their Medicinal Properties and Uses

P. Chennakrishnan<sup>1</sup> and K. Jayaraman<sup>2</sup>

Flowers and plants have been used for centuries in the treatment of a wide range of medical conditions. Flowers don't just raise our spirits by their attractiveness and fragrance. They have also been used as effective remedies. Ayurveda utilizes flowers to cure certain diseases. For thousands of years, flowers perform a significant role in our lives. Flowers of different shades and colors relieve your mood and relax your mind. The aroma of certain flowers cools you down. Particular flowers can cure diseases when eaten. They contain the medicinal secrets for everything from broken bones to heart failure. Following is some flowers used for handling diseases.



## Introduction

India's 'flower power' continues to bloom with the country emerging as the second largest grower of flowers around the world, surpassed only by China. India is currently producing about 283 million tonnes of horticulture produce, and horticulture production has surpassed the food production in the country. It has proven beyond doubt that productivity of horticulture crops is much higher compared to productivity of foodgrains. Productivity of horticulture crops has increased by about 34% between 2004- 05 and 2014- 15. The special thrust given to the sector, especially after introduction of the Horticulture Mission for North East & Himalayan States (HMNEH) and the National Horticulture Mission (NHM) in the XI plan, has borne positive results. Given the increasing pressure on land, the focus of growth strategy has been on raising productivity by supporting high density plantations, protected cultivation, micro-irrigation, quality planting material, rejuvenation of senial orchards and thrust on Post-Harvest Management, and marketing of produce for better price realization.

India is the second largest producer of fruits and vegetables globally. Horticulture contributes about 30% of GDP in agriculture, using only 17% land area. Horticulture exports valued at Rs. 27,753 crore in 2013- 14. Area under horticulture increased 29% in 8 years, from 18.7 million ha in 2005- 06 to 24.2 million ha. in 2013- 14 as more farmers are venturing into horticulture in their quest for diversification in agriculture. Horticulture production increased from 167 million tonnes in 2004- 05 to 283 million tonnes in 2014- 15 or 69% increase in 9 years.

India is a leader in producing fruits like Mango, Banana, Pomegranate, Sapota, Acid Lime and Aonla. Per capita availability of fruit to the Indian population is 189 gm/ person/ day and has been helping in supplementing nourishment. Productivity of vegetables in India continues to be low compared to world average productivity per capita availability of vegetables in India is 357 gm/person/day, which is helping in fighting malnutrition. India is second largest producer of vegetables after China and is a leader in production of vegetables like peas and okra. Besides, India occupies the second position in production of brinjal,



*B. Jay*



## A STUDY ON BANKING CREDIT AND DEPOSIT RATIO IN PUBLIC SECTOR IN INDIA

Dr.P.Chennakrishnan

Assistant Professor, Department of Economics  
Thiruvalluvar University, Serkkadu, Vellore, Tamil Nadu

### Abstract

*This paper examines bank credit and Deposits ratio in public sector Banks are germane to economic development through the financial services provided by them. The performance efficient and effective of the banking industry over time is an index of financial stability. Banks has mobilization and allocation of resources play an important role in the economy. The whole economy of the nation, the sound financial position of a bank is the guarantee not only to its depositors but equally important it. Respectively, of funds of the bank's Deposits and Credits are inflow and outflow. In order to optimize credit flow and to ensure higher efficiency of credit creation, a monetary tool, called Credit-Deposit (C-D) ratio was introduced by RBI. Credit-Deposit ratio is proportion of loan created by banks from deposits it receives, in other words its capacity of banks to lend. High ratio indicates banks are generating more credit from its deposits and vice-versa. The outcome of this ratio reflects the ability of the bank to make optimal use of the available resources. The purpose of this study is to examine the impact of Credit-Deposit ratio on the profitability of public sector banks for the period of 2009 to 2015.*

### Introduction

In Indian Banking Sector has a very play an important role in economic development of the country. The people service in the banking system of India is featured by a large network of bank branches and serving many kinds of financial services of the people. The State Bank of India, popularly known as one of the leading bank of public sector in India. SBI has 14 Local Head Offices and 57 Zonal Offices located at important cities throughout the country. HDFC Bank Ltd is a major Indian financial services company based in Mumbai. The Bank is a publicly held banking company engaged in providing a wide range of banking and financial services including commercial banking and treasury operations. The Bank at present has an enviable network of 2201 branches and 7110 ATMs spread in 996 cities across India. The purpose of the study is to examine the financial performance of SBI and HDFC Bank, public sector and private sector respectively. The research is descriptive and analytical in nature. The data used for the study was entirely secondary in nature. The present study is conducted to compare the financial performance of SBI and HDFC Bank on the basis of ratios such as credit deposit, net profit margin etc. The period of study taken is from the year 2008-2009 to 2012-2013. The HDFC Bank is performing well and financially sound than SBI but in context of deposits and expenditure both is SBI and HDFC bank has better managing efficiency. In the era of globalization the utilization of finance is considered as the most important function of an organization. The firms are facing a stiff competition from the whole market, so the inflow and outflow of funds will be managed well. Finance is one of the most important aspects of business management. Without proper financial planning an enterprise is unlikely to be successful.



# A Study on Women Entrepreneurship in Rural Tamil Nadu with Special Reference to Vellore District

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Assistant Professor, Department of Economics  
Thiruvalluvar University, Serkkadu, Vellore, Tamil Nadu, India

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## Abstract

Enterprise assumes an essential part in creating open work door for provincial social orders, giving independent work to the individuals who began up their own particular business and enhancing the financial status of the rustic zone too. Presently ladies' are additionally intrigued to begin their own business in both the country and urban zones due to defeat neediness, produce family salary and creating Standard of living. Ladies' are taking an interest in farming, business, and exchange with no social and different limits. Be that as it may, in India, there are numerous social and social restrictions for rustic ladies. Subsequently, the ladies commitment in entrepreneurial exercises is less in the social and monetary development of country India. Presently the United Nations has been celebrating fifteenth October as International Rural Women's Day since 2008 for assessing them. Who complete entrepreneurial action building up enterprises, specialty units in rustic territories by utilizing agribusiness sources are called provincial business enterprise.

**Keywords:** Women Entrepreneurship, social, Monetary, development, country, business.

## Introduction

In the present globalized time, ladies are ending up socially and financially enabled through creating their own business; there has been an extreme advancement in the field of economy. In this advancement, ladies' support is of more prominent significance. A lady business person assumes a critical part in India to the wake of globalization and financial progress. Ladies enterprise is essential ideas for improvement of country regions. Country Entrepreneurship can make new commercial open doors for provincial ladies and add to generally speaking development and leaving from neediness. It likewise gives an incredible open door in the current time for the improvement of the country or semi-provincial individuals who relocate to urban zones. In this field country lady business, people can't be overlooked. There is a significant commitment of ladies rustic business visionaries in the development of created provincial territories; however, the improvement of ladies enterprise in country regions is low because the rural ladies' confront more difficulties and issues. The motivation behind this paper is to examine the problems and to think about the supporting component in point by point concerning ladies enterprise in provincial regions of India and furthermore to feature on the situation of ladies rustic business people in India.

Conceptual Nowadays, ladies are ending up socially and financially engaged through producing their own business. A lady business visionary assumes an imperative part in India to the wake of globalization and financial advancement. Ladies business is essential ideas for improvement of rustic regions. Rustic Entrepreneurship can make new monetary open doors for



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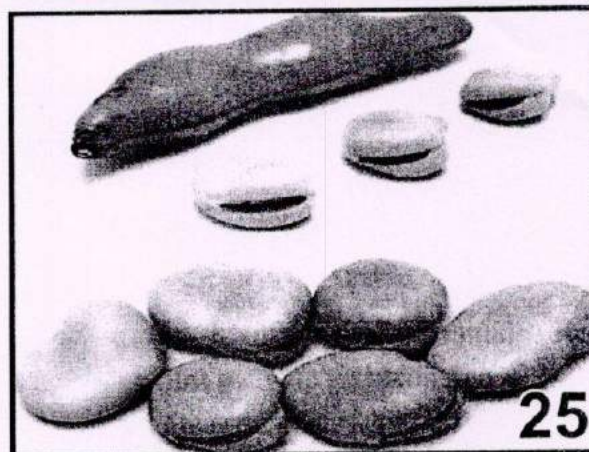
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# INFLATION AND ECONOMIC GROWTH IN INDIA

P. Chennakrishnan

## Abstract

This paper aims to review the theoretical and empirical studies on the impact of inflation on economic growth. Our critical review shows that there is no consensus on the relationship between inflation and economic growth both in theoretical and empirical studies. The results mostly depend on the assumptions adopted in the study. Accordingly, the theoretical literature indicates that the inflation-growth nexus can be positive, negative, or neutral. Also, the empirical findings are diversified based on the economic conditions, methodology employed, data used, nature of the study, whether cross section, panel data or country specific and time period of study as well as the economic growth.

## Introduction

Inflation is a highly controversial economic concept which has seen many modifications ever since it was first defined by neoclassical economists. For them inflation is a monetary phenomenon: prices of commodities tend to increase only because of increase in money supply. For example, Friedman (1968) asserted that inflation is always and everywhere a monetary phenomenon and could occur only by a more rapid increase in the quantity of money than output. Keynes (1936) had earlier disputed such an argument by negating the fundamental neoclassical assumption of full employment. He argued of the existence of underemployment in the economy, so that an increase in money supply would lead to an increase in aggregate demand, which in turn would lead to an increase in output and consequently employment. There are several theories explaining inflation, such as cost-push theory of inflation (Batten, 1981), demand-pull theory of inflation (Barth and Bennett, 1975), and demand shift theory of inflation (Schultze, 1959). According to cost-push theory, inflation results basically when the increase in money wages is more rapid than the increase in productivity of the workers. Commodity prices are increased to account for the rise in cost

of production. Wages are further raised to factor in the rise in cost of living. Thus prices rise because of the continuation of wage-cost spiral. Demand pull theory of inflation is a traditional explanation of rise in prices. It takes place when aggregate demand is high, while the supply of goods is less. Goods are in short supply either because resources are fully utilized or production cannot be increased rapidly to meet the increasing demand.

## Statement of the Problem

Evidence showing relationship between inflation and economic growth from some of the Asian countries such as India showed that the growth rate of Gross Domestic Product (GDP) in India increased from 3.5% in the 1970s to 5.5% in the 1980s while the inflation rate accelerated steadily from an annual average of 1.7% during the 1950s to 6.4% in the 1960s and further to 9.0% in the 1970s before easing marginally to 8.0% in the 1980s (Prasanna and Gopakumar, 2010). Likely, for the case of China, Xiao (2009) revealed that from 1961 to 1977, China's real GDP growth and real GDP per capita growth averaged at 4.84% and 2.68% respectively. Since 1978, China's economy grew steadily although growth rate fluctuated among the years. From 1978 to 2007, the growth rate of China's real GDP and real GDP per capita were recorded at 9.992% and 8.69% respectively. The experiences from East African countries, for example showed that Kenya had 5 years of very positive economic development with four consecutive years of growth above 4%. But average annual inflation of Kenya increased from 18.5% in June 2008 to 27.2% in March 2009, before falling marginally to 24.3% in July 2009. Uganda was one of the faster growing economies in Africa with sustained growth averaging 7.8% since 2000 with the annual inflation rate decreasing from 5.1% in 2006 to 3.5% in 2009. The average annual real GDP growth rate for Rwanda from 1990-1999 was -0.1 but from 2006 to 2009, Rwanda had an annual average growth rate of 7.3% (Stein, 2010). Since late 1970s, Tanzanian economy experienced many internal and external shocks. All





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# GOODS AND SERVICE TAX OPPORTUNITY AND CHALLENGES

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## Abstract

*India has witnessed a number of reforms in indirect taxes over the last two decades with the replacement of State Sales Taxes by Value Added Tax (VAT) in 2005 marking a watershed in this regard. A Modified Value Added tax (MODVAT) was introduced for selected commodities at the Central level in 1986 and subsequently extended to all commodities through Central Value Added Tax (CENVAT). Value Added Tax (VAT) at the State level was introduced in a phased manner during 2003 to 2008. Prior to the implementation of VAT, the indirect tax structure in the country was considered somewhat problematic due to the "cascading effect of taxes" where by an item is taxed more than once from the production stage to the final retail sales stage. Exporters were also becoming less competitive in the international market due to the relatively higher input costs involved through the earlier sales tax mode (tax burden of a commodity increases when it is taxed repeatedly) – reflected in higher prices of products as compared to global competitors*

## I. INTRODUCTION

The major role of taxation economic development with much awaited GST system and in-depth analysis, here we are final GST bill passed by the parliament. Because taxes are only means for financing the public goods because they cannot be properly priced in the market. And government is only source of funding using the taxation methods. As taxes are the drivers of the economy. Tax regimes should be designed in such a manner that it does not become the source of distortion in the market or result in failure of market. Raising a sufficient amount of revenue is main aim of tax law in efficient, effective and quotable manner. Tax policies are important contributor to the economy in both cases efficiency and equity. Good tax system should keep in view the issues of income distribution and also focused on strategies to generate tax revenues to support government expenditures on public services and infrastructural development. At present, separate tax rates are applied to goods and services.



# A STUDY ON IMPLEMENTATION OF GOODS AND SERVICE TAX IN INDIA

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## Abstract

*GST is an indirect tax which will subsume almost all the indirect taxes of central government and states governments into a unified tax. As the name suggests it will be levied on both goods and services at all the stages of value addition. It has dual model including central goods and service tax (CGST) and states goods and service tax (SGST). CGST will subsume central indirect taxes like central excise duty, central sales tax, service tax, special additional duty on customs, counter veiling duties whereas indirect taxes of state governments like state vat, purchase tax, luxury tax, octroi, tax on lottery and gambling will be replaced by SGST. Integrated goods and service tax (IGST) also called interstate goods and service tax is also a component of GST. It is not an additional tax but it is a system to examine the interstate transactions of goods and services and to further assure that the tax should be received by the importer state as GST is a destination based tax.*

## I. INTRODUCTION

India has got a well-structured and simplified taxation system, wherein an authoritative segregation has been done among Central Government, the different state Governments as well as the Local bodies. The department of revenue under the government of India's ministry of finance is solely responsible for the computation of tax. This

department levy taxes on individual or organizations for income, customs duties, service tax and central excise. However, the agriculture based income taxes are levied by the respective state Governments. Local bodies have got the power to compute and levy taxes on properties and other utility services like drainage, water supply and many others. The past 15 years have witnessed tremendous reformations of the taxation system in India. Apart from the rationalization of the rates of tax, simplification of the different laws of taxation has even been republic of India.

## II. OBJECTIVE

1. To study about the challenges of Introduction of Goods and Service Tax (GST in India)
2. To study on prospects in Implementation of Goods and Service Tax (GST) in India

## III. METHODOLOGY

Researcher used an exploratory research techniques based on past literature from respective journals, annual reports, newspaper and magazines covering wide collection of academic literature on Goods and Service Tax.

## Timeline of GST in India

In 2000, an empowered committee was set up by NDA government under the chairmanship of Asim Das Gupta to design GST model With UPA in



# ***A STUDY ON IMPACT OF GST: WITH SPECIAL REFERENCE TO SMALL BUSINESSES ENTREPRENEURS IN TAMIL NADU***

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## **I. INTRODUCTION**

The proposed GST is likely to change the scenario of current indirect tax system. It is considered as biggest tax reform since 1947. GST is one of the most crucial tax reforms in India which has been long pending. It was supposed to be implemented from April 2010, but due to political and conflicting interests of various stakeholders it is still pending. It is a comprehensive tax system that will subsume all indirect taxes of state and central governments and unified economy to form a seamless national market. It is expected to iron out wrinkles of existing indirect tax system and play a key role in growth of India. This paper presents an overview of GST concept, explains its features along with its timeline of implementation in India. The paper is more focused on advantages of GST and challenges faced by India in execution.

Tax policies play an important role on the economy as they have an impact on improving the efficiency in tax administration, tax compliance and payment. It also aims to bring about equity among all states leading to overall development and unity of the nation. A good tax system should be able to generate tax revenues to support

government expenditure on public services and infrastructure development. The tax laws should be such that they raise a given amount of revenue in an efficient, effective and equitable manner. GST is an indirect tax levied on domestic trade at a single rate (with only very few exemptions) which becomes a proportional tax on consumption. It is a destination based tax in the sense that the tax on a goods goes to the state in which the concerned consumer lives.

GST is said to be a transparent tax law that is expected to result in higher tax compliance. Transparent in the sense that the payer of tax is clear about the rate of tax paid on the value of goods and the amount that is to be paid as tax and the amount of tax paid stated in the bill. It also aims to minimize any distortions in the economy caused by the existing tax policy and are framed to establish a tax system that is economically efficient. An efficient tax system should minimize the cost of tax compliance and should pave way for effective tax administration. The disparities in the economy could be removed if there is a proportional tax payment system based on the spending of the individuals. The uniformity in the tax rates is to bring about free movement of goods along



# IMPACT OF GST ON INDIAN ECON

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## I. INTRODUCTION

The word tax is derived from the Latin word 'taxare' meaning to estimate. A tax is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is any contribution imposed by government whether under the name of toll, tribute, impost, duty, custom, excise, subsidy, aid, supply, or other name.

The introduction of Goods and Services Tax (GST) would be a significant step in the reform of indirect taxation in India. Amalgamating several Central and State taxes into a single tax would mitigate cascading or double taxation, facilitating a common national market. The simplicity of the tax should lead to easier administration and enforcement. From the consumer point of view, the biggest advantage would be in terms of a reduction in the overall tax burden on goods, which is currently estimated at 15%-30%. As India is a federal republic GST would be implemented concurrently by the central government and by state governments.

Goods and service tax is a comprehensive tax levy on manufacturing, sale and consumption of goods and services at a national level. GST is a tax on goods and services with value addition at each stage having comprehensive and continuous chain of set-of benefits from the producer's service provider's point up to the retailer's level where only the final consumer should bear the tax.

India has seen a number of changes in the past two decades. The Goods and Services Tax (GST) is one of the biggest tax reforms in the history of Independent India. The face of the tax system of the nation has changed. Behind this move is to replace a number of taxes in the form of value-added tax, excise duty and sales tax with a single integrated and comprehensive tax on manufacture, sale and consumption of goods and services in the country. The tax reform will unite India economically by levying a single tax on goods and services at each stage having a continuous chain of set-of benefits from the producer's point up to the retailer's level where only the final consumer should bear the tax.

## Indian Taxation System

India has got a simplified taxation system. The segregation has been done between the Central Government, the different States and the Local Bodies. The Central Government is solely responsible for levying taxes on income, customs and excise. However, the taxes on goods are levied by the states.



# THE EFFECT OF THE GST ON MANUFACTURING INDUSTRY IN INDIA

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## Abstract

*GST stands for Goods and Services Tax, which will be levied on the supply of goods or services or both in India. GST will subsume a number of existing indirect taxes being levied by the Centre and State Governments, including Central Excise Duty, Service Tax, VAT, Purchase Tax, Central Sales Tax, Entry Tax, Local Body Taxes, Octroi, Luxury Tax, etc. It brings benefits to all the stakeholders viz. industry, government and the citizens. It is expected to lower the cost of goods and services, boost the economy and make our products and services globally competitive. GST aims to make India a common national market with uniform tax rates and procedures and removes the economic barriers, thereby paving the way for an integrated economy at national level. By subsuming most of the Central and State indirect taxes into a single tax and by allowing a set-off of prior-stage taxes for the transactions across the entire value chain, GST would mitigate the ill effects of cascading and thereby improve our competitiveness. GST is a destination based consumption tax. It has been designed in a manner so that the tax is collected at every stage and the credit of tax paid at the previous stage is available to set off the tax to be paid at the next stage of transaction, thereby eliminating cascading of taxes. This eradicates "tax on tax" and*

*allows cross utilization of input tax credits, which benefit the industry by making the entire supply chain tax neutral. GST will give a major boost to the 'Make in India' initiative of the Government by making goods or services produced or provided in India competitive in the national and international markets. Further, all imported goods will be charged with integrated tax (IGST), which will be more or less equivalent to Central GST + State GST. This brings parity in taxation on local and imported products. Under the GST regime, exports will be zero rated in entirety unlike the present system where refund of some taxes is not allowed due to fragmented nature of indirect taxes between the Centre and the States. All taxes paid on the goods or services exported or on the inputs or input services used in the supply of such export goods or services shall be refunded. The principle of exporting only the cost of goods or services.*

## I. INTRODUCTION

Goods and Services will boost Indian exports, thereby improving the balance of payments position. Exporters will be facilitated by grant of provisional refund of 90% of their claims within seven days of issue of acknowledgement of their application, thereby resulting in the easing of position with respect to cash flows. GST is expected to bring



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CLIMATE AND ENVIRONMENTAL CHALLENGES:  
RETROSPECT AND PROSPECT



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## 70. FACTOR AFFECTION WATER POLLUTION: CAUSES AND REMEDIES

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### ABSTRACT

Water pollution has become a global problem now a day's on going evaluation of water resource policy is needed to counter this problem. Deaths and diseases are caused worldwide due to water pollution and approximately 14000 people die every day due to water pollution. Both developed as well as developing countries are facing water pollution problems. Water quality is influenced by many factors like precipitation, climate, soil type, vegetation, geology, flow conditions, ground water and human activities. The greatest threat to water quality is posed by point sources of industries and municipalities. Activities like mining, Urban development and Agriculture also effect water quality. Non-point source pollution also includes nutrients, sediments and toxic contaminants. Clean water is the basic need of the human being. It is one of the main substances of the survival of human being. Water has multifunctional role in daily life. It is used for drinking, bathing, cleaning and irrigation etc. The main water bodies from where water can be accessed are lakes, rivers, oceans, ponds and groundwater. This polluted water also seeps through the surface and poisons groundwater. It is estimated that cities with populations of more than one lakh people generate around 16,662 million litres of wastewater in a day. Strangely enough, 70% of the people in these cities have access to sewerage facilities. Cities and towns located on the banks of Ganga generate around 33% of wastewater generated in the country.

### INTRODUCTION

Water pollution is one of the biggest issues facing India right now. As may be evident, untreated sewage is the biggest source of such form of pollution in India. There are other sources of pollution such as runoff from the agricultural sector as well as unregulated units that belong to the small-scale industry. The situation is so serious that perhaps there is no water body in India that is not polluted to some extent or the other. In fact, it is said that almost 80% of the water bodies in India are highly polluted. This is especially applicable of ones that some

form or the other of human habitation in their immediate vicinity. Ganga and Yamuna are the most polluted rivers in India. State also provides water to the people. Right to access clean water is the basic human right of a person. On July 28, 2010 UN General Assembly passed a resolution to make water and sanitation as right. Mr. Pablo Solon the Bolivian Representative to the UN, while tabling the Resolution said that "Drinking water and sanitation are not only elements or principal components of other rights such as "the right to an adequate standard of living. The right to drinking water and sanitation are independent rights that should be recognized as such. In India, Government is the trustee of all natural resources which are meant for public use and enjoyment by nature and water is one of these natural resources.

### CAUSES OF WATER POLLUTION INDIA

The single biggest reason for water pollution in India is urbanization at an uncontrolled rate. The rate of urbanization has only gone up at a fast pace in the last decade or so, but even then it has left an indelible mark on India's aquatic resources. This has led to several environmental issues in the long term like paucity in water supply, generation and collection of water to name a few. The treatment and disposal of wastewater has also been a major issue in this regard. The areas near rivers have seen plenty of towns and cities come up and this has also contributed to the growing intensity of problems. Uncontrolled urbanization in these areas has also led to generation of sewage water. In the urban areas water is used for both industrial and domestic purposes from water bodies such as rivers, lakes, streams, wells, and ponds. Worst still, 80% of the water that we use for our domestic purposes is passed out in the form of wastewater. In most of the cases, this water is not treated properly and as such leads to tremendous pollution of surface-level freshwater.

### EFFECTS OF WATER POLLUTION

Water pollution can have some tremendous adverse effect on the health of any and every form living in the vicinity of the polluted wa



# ECONOMIC ANALYSIS OF SOLID WASTE MANAGEMENT TAMIL NADU

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## ABSTRACT

Mumbai generates 6256 tons of waste every day, of which 17-20% is recyclable, and a fraction of this is retrieved by rag-pickers. The economic value of the retrieved waste is not considered by the Municipal Corporation of Greater Mumbai in valuing the waste management system as there is no price mechanism except the informal rag-picking activity. Moreover, the cost of land used for dumping of waste is also not accounted for. In the present paper, a comprehensive cost-benefit analysis for the present system of municipal solid waste management in Mumbai is carried out, with due consideration for implicit costs and benefits. Accounting for the external costs and benefits showed a difference of Rs 1000 per tonne of waste disposal. This shows a considerable difference in policy implications at the municipality level. Demand curve analysis proved that the present system of waste management would not yield a socially optimal solution without private sector participation. With the increasing demand for efficient waste management, private sector participation is essential and a Pigouvian tax is a necessary tool to make the private sector participation in solid waste management a viable proposition.

The increasing level of solid waste, is now a serious problem in the urban and rural areas. A high rate of growth of population and rising per-capita income have resulted in the generation of enormous solid waste which is a serious threat to environmental quality and human health. Improper disposal of waste often results in spread of diseases, contamination of water bodies and soils. The impacts of these wastes on the economy cannot be ignored and managing them has become a major problem. This paper examined the economics of solid waste in Madurai district in Tamil Nadu state. A random sampling technique was used to select 37 solid waste collectors from the list of registered members provided from municipal authority. With the structured questionnaire information on the quantity of waste collection, number of trips,

number of year spent in this business, number of years spent in the vehicles, managed waste container and so on were sought. Gross margin and multiple regression analysis were the analytical tools. The regression results showed that only the number of trips made to dump site were statistically significant in determining the quantity of waste collected and disposed by the waste contractors.

## INTRODUCTION

India producing about 40 million tons of solid waste from activities produces waste that has negative effect on household and commercial activities every year. As the welfare (environmental pollution), that is not taken into account by competitive markets. Solid Waste Management (SWM) is of local nature it is account by competitive markets. Economists generally the responsibility of the state which in turn has entrusted agree that environmental issues can arise when the market to local authorities who carry out the solid waste system fails to create an appropriate price mechanism in management in areas under their control using mostly relation to environmental resources their own funds, staff and equipment. The urban local These resources can be used freely and they are bodies spend approximately Rs 500 to Rs 1500 (approx USD 12-36) per tonne on solid waste for collection, imposes an external cost, such as water, soil, air, noise, transportation, treatment and disposal. About 60-70% of smell pollutions and other negative environmental this amount is spent on collection, 20-30% on impacts. Economic activity that harms the environment transportation and less than 5% on processing and final creates present or future losses to humans in the form of disposal out of the total municipal waste collected about damaged health, lower productivity, depleted natural resources and reduced enjoyment of nature. 94% is disposed by open dumping and the rest is resources and reduced enjoyment of nature. Environmental economics seeks to quantify these losses the predominant mode of disposal has been open and determine the most efficient way to reduce them, as dumping (94%) and



# RURAL WATER SUPPLY SANITATION AND PUBLIC HEALTH IN TAMIL NADU: AN ECONOMIC ANALYSIS

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## ABSTRACT

India is one of the largest countries of the world with diverse population both in geographical and cultural terms. The ideology of the existence made India one of the most ancient civilizations of the world. With a population of about 1,000 million, India is the most populated country in the world. India has about half million locally self-financed institutional in rural areas. Given the fact that it has been a challenge to universally provide safe drinking water and sanitation facilities in India. As per census 2001, only 36.4 percent of the total population of the country resides within their households. This was less in rural areas i.e. 21.9 percent, and of this, only 7.1 percent households have access with water closet. Also, only 34.2 percent households had drainage facilities for wastewater disposal in rural areas. Though, the status has improved over the years and the coverage of rural sanitation has increased which as per the recent estimates is about 35 percent. Similarly, inadequate use of water and sanitation facilities and poor hygiene practices has enhanced the severity of the challenges. This is indicated in National Health Survey, 54th round published in 1999, which showed the usage behavior restricted to only 17.5 percent in the rural population.

## INTRODUCTION

Ever before 1947 the statement of Mahatma Gandhi "Sanitation is more essential for independence" that is backed by the Prime Minister of India in 2014 by reiterating "Toilet Temple next" indicates the pressing need for the improvement of sanitation standard in India. The term "sanitation" be that as it may, much more extensive but neglected subject. Poor and insufficient sanitation has been the central reason for spread of a few preventable and transmittable diseases in developing countries of the world. Sanitation is closely associated with the individual cleanliness as well as a reflection of the human pride, society, economic action, monetary and social improvement for the general public. WHO defines "sanitation as the provision of facilities and services for

the safe disposal of human urine and feces" the United Nations-World Health Organization Joint Monitoring Program for Water Supply and Sanitation defines "improved" sanitation as: "the means that hygienically separate human excreta from human contact and hence reduces health risks to humans". A Sanitation handbook defines the term "sanitation as a process whereby people demand, effect, and sustain a hygienic and healthy environment for themselves by erecting barriers to prevent the transmission of disease agents a third of the 2.5 billion people worldwide without access to improved sanitation live in India, as do two-thirds of the 1.1 billion practicing open defecation and a quarter of the 1.5 million who die annually from diarrhoeal diseases. We aimed to assess the effectiveness of a rural sanitation intervention, within the context of the Government of India's Total Sanitation Campaign, to prevent diarrhoea, soil-transmitted helminthic infection, and child malnutrition.

## OBJECTIVES OF THE STUDY

To historical review of Economic impact of Sanitation Programmes India and Tamil Nadu

- 1.To examine historical review and improvement in Sanitation Programmes in Tamil Nadu
- 2.To study analysis Socio-economic conditions of Sanitation Programmes in Tamil Nadu
- 3.To study the status of cleanliness of these toilets.

## REVIEW OF LITERATURE

**K.Balachandra Kurup (1990)** examine the social and economic aspects should be given equal importance in the water and sanitation programme for getting the full support and commitment of the community at every stage of the programme. Efforts will be made to collect periodically the existing database, such as sources of water-points, distances, knowledge, attitude and practices of various health and sanitary habits, in the SEU programme additional emphasis will be a danger of applying uniform solutions all over the project area. monitoring of programme



## 10. RECENT TREND IN SOLID WASTE MANAGEMENT IN INDIA

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### INTRODUCTION

India has having second biggest population in the humanity following China with more than 1.27 billion population contributing 17% of world's total population (Official population clock). On the contrary, India is occupying only 5% of world's area accounting 3,287,263 km. Out of total population, 68% lives in rural areas, while 32% lives in urban areas. Urban population is increasing day by day since last few decades. In modern society, industry becomes an essential part. Developing countries like India is in industrialization phase, which also contribute to urbanization. Large number of people is migrating towards city for better opportunities. In terms of GDP, India is one of the fastest growing economies in the world with 7.30% GDP. It is expected that by 2030 India will be growing with GDP of 10%. Higher GDP will result into improved living standards.

Uncontrolled urbanization and improved living standards thereby lead to increased rate of per capita waste generation. Currently, 1,27,486 kg per day of municipal solid waste is being generated due to various household activities and other commercial & institutional activities (Misra, 2012). Municipal waste and certain industrial waste have comparatively significant impact on environment. A substantial amount of these wastes is extremely dangerous to the living organisms including humans (Misra et al. 2004). It may downgrade groundwater quality by leachate percolation. It also cause air pollution by emission of greenhouse gases through various course of incineration. Nowadays, E-waste and nuclear waste are other waste streams which are attracting attention due to fastest growing electronics & nuclear sector. To overcome this problem, effective solid waste management should be implemented. The objectives of solid waste management are to control, collect and transport, utilize and dispose of solid wastes in an economical way which protects health and environment and well-being of those served by the system.

### REVIEW OF LITERATURE

Mishra and J.K. Bhattacharyya (2006)

generation of huge quantities of solid waste. This paper presents an assessment of the existing situation of municipal solid waste management (MSWM) in major cities in India. The quantity and composition of MSW vary from place to place, and bear a rather consistent correlation with the average standard of living. Extensive field investigations were carried out for quantification, analysis of physical composition, and characterization of MSW in each of the identified cities. The MSW management status has also been assessed, and an action plan for better management has been formulated; both are presented in this paper. Studies carried out in 59 selected cities in India have revealed that there are many shortcomings in the existing practices used in managing the MSW. These shortcomings pertain mainly to inadequate manpower, financial resources, implements, and machinery required for effectively carrying out various activities for MSWM. To overcome the deficiencies in the existing MSWM systems, an indicative action plan has been presented incorporating strategies and guidelines. Based on this plan, municipal agencies can prepare specific action plans for their respective cities. Mufeed Sharholly, Kafeel Ahmad (2007) Municipal solid waste management in Indian cities – A review Municipal solid waste management (MSWM) is one of the major environmental problems of Indian cities. Improper management of municipal solid waste (MSW) causes hazards to inhabitants. Various studies reveal that about 90% of MSW is disposed of unscientifically in open dumps and landfills, creating problems to public health and the environment. In the present study, an attempt has been made to provide a comprehensive review of the characteristics, generation, collection and transportation, disposal and treatment technologies of MSW practiced in India. The study pertaining to MSWM for Indian cities has been carried out to evaluate the current status and identify the major problems. Various adopted treatment technologies for MSW are critically reviewed, along with their advantages and limitations. The study is concluded with a few fruitful suggestions, which may be beneficial to encourage the competent authorities



## 122. INFRASTRUCTURE DEVELOPMENT USE OF POLLUTING VEHICLES AND FUELS INDIA

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### ABSTRACT

The distribution of urban population by city size widely varies and is skewed towards larger cities. One specific feature of India's urbanization is the increasing metro politicization, that is, growth in the number and size of cities with a million plus population. The trends indicate the continued urbanization and metro politicization in the years to come. Often, there is a debate as to whether it is an index of development or distress. The very process of urbanization has sometimes been looked as something undesirable. While the objections used to be on social and moral grounds earlier, the criticism lately is more on economic grounds such as provision of requisite infrastructure and civic amenities at rapidly escalating per capita costs. Despite all the objections, the rate of urbanization has not even retarded, not to speak of its being halted. Certain inevitability about the process is being accepted steadily. It is now felt that urbanization is necessary for the benefits of sharing modern technology for the growth and development of the entire national economy. In India, urban areas contribute more than sixty percent of the national income. In the coming years, as India becomes more and more urbanized, urban areas will play a critical role in sustaining high rates of economic growth. But, economic growth momentum can be sustained if and only if cities function efficiently -that their resources are used to maximize the cities' contribution to national income. Economic efficiency of cities and well-being of urban inhabitants are directly influenced by mobility or the lack of it.

### INTRODUCTION

City efficiency largely depends upon the effectiveness of its transport systems, that, efficacy with which people and goods are moved throughout the city. Poor transport systems stifle economic growth and development, and the net effect may be a loss of competitiveness in both domestic as well as international markets. Although Indian cities have lower vehicle ownership rate than their counterparts

congestion, delay, pollution, and accidents than the cities in developed countries. In Kolkata, for example, average speed during peak hours in Central Business District (CBD) area goes down as low as around 10 Km/h. The problem of congestion and delays is not only faced by Kolkata but also by most of the big cities which indicates both the amount of time and energy that are wasted and the scale of opportunity for improvement. A high level of pollution is another undesirable feature of overloaded streets. The transport crisis also takes a human toll. Statistics indicate that traffic accidents are a primary cause of accidental deaths in the Indian cities. The main reason for all these is the prevailing imbalance in modal split besides inadequate transport infrastructure and its sub-optimal use. Public transport systems in cities have not been able to keep pace with the rapid and substantial increases in demand over the past few years. As a result, people have turned towards personalized modes such as mopeds, scooters, motorcycles, and cars and intermediate public transport modes such as auto-rickshaws, tempos, and taxis. Cities cannot afford to cater only to the private vehicles and there has to be a general recognition that policy should be designed in such a way that reduces the need to travel by personalized modes and boosts public transport particularly bus transport system. Much needs to be done if public transport is to play a significant role in the life of a city. Measures need to be taken to enhance the quality as well as quantity of public transport services and to impose constraints on the use of private vehicles. People should also be encouraged to use non-motorized transport and investments may be made to make it safer. It must not be forgotten that cities are the major contributors to economic growth, and movement in and between cities is crucial for improved quality of life.

### OBJECTIVE OF THE STUDY

1. To know the study trends of vehicular growth and availability of transport infrastructure in Indian cities.

2. To know the building on this background, the



## 123. TRENDS AND IMPACTS OF GLOBAL CLIMATE CHANGE IN INDIA

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### INTRODUCTION

Agriculture plays a pivotal role in the Indian economy. Although its contribution to gross domestic product (GDP) is now around one sixth, it provides employment to 56 per cent of the Indian workforce. Also, the forward and backward linkage effects of agriculture growth increase the incomes in the non-agriculture sector. The growth of some commercial crops has significant potential for promoting exports of agricultural commodities and bringing about faster development of agro-based industries. The impacts of climate change are being felt all over the world. It is becoming warmer, rainfall is more erratic, the sea level is slowly rising and extreme weather events are becoming more frequent and intense. Prolonged periods of drought, floods and shifting climatic zones are endangering development successes. The poor and marginalised are often most affected by climate variability and change. India is a large emerging economy with a great variety of geographical regions, biodiversity and natural resources. However, the country is one of the most vulnerable to climate change risks worldwide. More than half of India's population of over 1 billion people lives in rural areas and depends on climate-sensitive sectors like agriculture, fisheries and forestry for their livelihoods. Natural resources and the environment are already under pressure as a result of rapid urbanisation, industrialisation and economic development.

### CLIMATE CHANGE IMPACTS

The climatic changes described above will have serious implications for a number of sectors and resources, including agriculture, water availability and quality, and ecosystems like coastal zones. They will also have an influence on the frequency and magnitude of natural disasters. Very minor changes to temperature can have major impacts on systems on which human livelihoods depend, including changes to water availability and crop productivity, the loss of land due to sea level rise and the spread of disease. The lives and livelihoods of many different communities will be at risk.

Rural areas are highly vulnerable to climate change, since people there depend heavily on natural resources such as local water supplies and agricultural land. In fact, about 70% of the population in developing countries live in rural areas, where agriculture is their main source of livelihood.

The agricultural sector is already threatened by existing stresses such as the limited availability of water resources, land degradation, biodiversity loss and air pollution; climate change will thus make already sensitive systems even more vulnerable. Whereas climate change could improve yields of some crops in mid- to high-latitudes, in areas such as the tropics even minimal warming will lead to crop yield losses. A temperature increase of between 2 and 4 °C may, for example, cause agricultural losses in the Philippines, yet rice yields in Indonesia and Malaysia are projected to increase (IPCC 2007b). Agricultural yields and livelihoods will also be affected by climate-related impacts on the quantity and quality of water resources. As temperatures increase, the need for irrigation will rise in those areas projected to become drier. Especially the Middle East and South-East Asia will suffer increasing water stress, expressed as a high ratio of water withdrawal to renewable water resources.

### CLIMATE CHANGE IMPACT AGRICULTURE

Climate change will have a major impact on biophysical and socio-economic conditions, as the table below illustrates. Agriculture will be one of the sectors that will be hardest hit by adverse climate conditions, since agricultural production is extremely vulnerable to underlying climate risks such as drought, intense and erratic rainfall, and temperature shifts, which are a result of the intensification of the water cycle. Yet, the intensity of the impacts will differ from community to community, region to region and continent to continent. Agriculture is one of the largest contributors to India's GDP, approximately 20%. It is the main source of livelihood for almost 60% of the country's total population. The impacts of climate change on agriculture



## 124. PERFORMANCE OF AGRICULTURE SECTOR IN INDIA: SPECIAL REFERENCE TO POST REFORM PERIOD

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### ABSTRACT

*India is one of the fastest growing economies in the world today. The economic reforms implemented in the country since the early 1990s have helped India grow at 6-plus percent on an average since 1992-93. India as well as Assam's economic performances in the post-reform have many positive features. The present review reveals that the area under cereal crops, pulse crops, oilseeds crops of Assam are declining in the reform period. Area, production and productivity increased significantly under fruit and vegetable crops. Agriculture provides basic needs for our food and livelihood security and support for the economic growth and social transformation of the country the nation's food security depends on the performance of the agricultural sector.*

### INTRODUCTION

post-reform macro development experiences in India show that higher rate of economic growth has been achieved with disproportionate poverty and inequalities across groups and regions leaving more space for socio-economic exclusions to continue, especially in lagging states and regions. Though importance of inclusive growth on faster poverty reduction has been debated over period varying results at sub-national and sub-regional levels during last few years, the post-reform period growth experience of many backward states found not only low but instable and highly volatile. In this context, the present paper discusses some on key inter-related elements of inclusive growth: performance of agriculture, poverty reduction, human development and regional disparities in some backward states in India in general and examines the performance of Odisha in pa

Till 1991 when markets and trade were not truly liberalized and higher competition and entry of external investment were not accelerated, growth performance continued depend on agriculture, manufacturing and personnel and administrator's reforms and structural adjustments in the 1990s resulted in experience of a higher growth and improvement in the manufacturing sector. But agriculture and small and

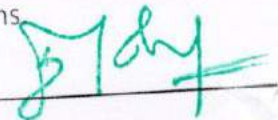
medium manufacturing sectors were not the key contributors to growth. Service sector led growth perhaps given over importance than primary sector and agriculture in particular. It was also observed that unlike in the 1980s, in the 1990s poverty reduction appears to have slowed down and level of poverty even fluctuated in the 1990s. It indicates that the benefits of the economic reforms accrue differently and there were winners and losers, both within and across regions and sectors.

It may be seen the data presented in table - 1(A) that the growth pattern among select backward states was quite dissimilar and more so during post-reform period. It was mostly characterized by considerable instability.

While many states from both forward and backward groups improved their growth performance considerably in the 1980s some backward states received a setback, particularly, in the second half of the 1990s. Among backward states, while MP and Rajasthan forged ahead with better growth performance, Odisha and Bihar experienced dismal growth after mid 1990s.

On the other hand, volatility of growth appears to be a dominant characteristic of the Indian states apart from instability. Krishna (2004) found three backward states (Odisha, Rajasthan and Uttar Pradesh) in the four most volatile states over the long period of 1970-71 to 1995-96. While the volatility of growth at the national level was lower in the 1990s than in the 1980s, two backward states (Madhya Pradesh and Odisha) were among the most volatile states.

The trend continued during 1990s, as Odisha and Bihar experienced sharp increasing in volatility in contrast to decline in volatility at the national level. Its adverse impact on poverty reduction was also experienced in these states. We have discussed it in detail in subsequent sections.





## 8. IMPACT OF DEMONETIZATION IN AGRICULTURE SECTOR IN INDIA

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### Abstract

A farmer can take a day out and manage to go to a bank and get the cash back, however the limit on the amount forces him to do that again and again and if your bank is some 20 or 25 kms from your home, the roads in rural areas can make it look like 50. However, the limit has been exceeded than before and government is taking other necessary steps which would ensure that the farmer doesn't have to commit suicide. The farmers struggled a lot at the time of demonetisation because the saving habits as well the payment mode of farmers were only on cash. Farmers used to handle liquid cash as it is essential for their day to day transactions. 70% of the farmers market their products through Farmers Market or they may be street vendors where cashless transaction is impossible. Daily wage earners in agriculture were earning small amount per day. When the withdrawals from banks were limited the farmers were unable to draw cash to pay their labors which result on postponing their works and get the labors jobless for days or months. Cash is the primary mode of transaction in agriculture sector. The farmers who own limited acres will not have bank accounts, which had a large impact on the farmers at the time of demonetisation. Not only agriculture sector but also other industries which depend on agriculture were also affected. It's a really

tough time for farmers, who are unable to sell their crop after harvest, With effect from people 8th Nov. 2016 Tuesday Midnight PM Shri Narendra Modi is Banned the Currency notes of 500 and 1000 Rupees.

### Introduction

The sector typically sees high cash transactions and therefore near-term impact could be seen till liquidity is infused in the rural areas. As farmers face a temporary shortage of cash in hand, it could lead to a delay in payment which in turn would hurt the related companies in the short term. As liquidity eases and cashless transactions gain acceptance, the fundamentals would be driven by the longer term drivers of normal monsoons and positive traction in acreage. Agriculture is affected by changes in both domestic and international financial markets. The changes in financial markets in the past two decades have been dominated by the deregulation of domestic markets, the growth and integration of international markets, and the technologies of information management, interacting with the other two changes. Like all markets, financial markets carry information as well as resolve terms of exchange.

Agriculture still forms the life line of our Indian economy and vital activity of a human being. Agriculture sector in India contribute nearly half of the national income, provides jobs to 3/4th of the total population and





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## EMPLOYMENT CHALLENGES AND POLICIES





## A Study on Financial Crisis on MSME in Tamil Nadu

P. Chennakrishnan

### INTRODUCTION

In recent years, the Indian economy has shown an excellent growth performance of Small-scale industries have been playing an important role for development of the Indian economy. Micro, Small and Medium Enterprises (MSMEs) play a significant role in the economic growth of the country owing to their contribution to production, exports and employment. The sector contributes 8 per cent to the country's GDP, 45 per cent to the manufactured output and 40 per cent to the country's exports. It provides employment to 60 million people through 28.5 million enterprises.

Significantly, the MSME sector has maintained a higher growth rate vis-à-vis the overall industrial sector during the past decade. According to a survey, exports from these enterprises have been on the rise, despite increased cost of raw materials, sluggish global demand and stiff

International competition. Today, the sector produces a wide range of products, from simple consumer goods to high-precision, sophisticated finished products. It has emerged as a major supplier of mass consumption goods as well as a producer of electronic and electrical equipment and drugs and pharmaceuticals. An impetus to the sector is likely to have a multiplier impact on economic growth.

Since 1971-72, the small-scale industrial sector has grown at an impressive rate and its share in the national exports increased from 9.6 per cent in 1971-72 to 26.5 per cent in 1981-82 and further to 31.5 per cent in 1991-92. At present the SMEs share in national exports is about 35 per cent. The share of India at world trade declined to 0.4 per cent due to insufficient contribution from SME sector. This paper goes deeper into the structure of exports, employment potential, and production.

### STATEMENT OF THE PROBLEM

MSMEs are the best vehicle to create local demand and consumption and also to fight the global meltdown. The problem of access to finance for the MSME sector is intrinsically linked to the problem of financial exclusion in the country. The ability of banks to rapidly increase their coverage of MSMEs through credit facilities would depend on their ability to expand their reach to the hitherto unbanked segments of the country.



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## WOMEN ENTREPRENEURSHIP IN MSME IN TAMIL NADU

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### INTRODUCTION

The Indian MSME has fast growing countries in the world today, and this sector contribute very much has been socio economic development of the country approximately 78 percent of own business operate in service sectors. MSME play an important role in providing with a GDP growth rate of 9 percent during the twelfth plan period. The women entrepreneurship refers to the achieved immense development act of setting up a new business in the state of mind or reviving an existing business so as to take advantages from new opportunities. Thus, entrepreneurs many entrepreneurial opportunities especially for women have been creating their skills with maintaining balance in their life shape the economy by creating new wealth and new jobs and by inventing new products and services.

However, an insight study reveals that it is not about making money, having the greatest ideas, knowing the best sales field of entrepreneurship and also they are gradually changing the face of business of today, applying the best marketing strategy. The total finance requirement of women-owned MSMEs in 2012 was around Indian rupees 8.68 trillion (\$158 billion). Within the segment, small enterprises led the demand for financing: around Indian rupees 6.42 trillion (\$116 billion), approximately 74 percent of the total requirement. This was mostly due to unmet working capital and investment finance needs. Micro enterprises with a requirement of Indian rupees 2.05 trillion (\$37 billion), accounted for 24 percent. Most of this requirement was largely focused around working capital needs. Women-owned medium-scale enterprises, which account for 0.01 percent of the total MSME sector had finance requirements of around Indian rupees 0.21 trillion (\$4 billion), about 2 percent of the total requirement. Women Entrepreneurship in India Empowering women has become the key element in the development of any economy the total supply of formal finance to women-owned MSMEs in 2012 is around Indian rupees 2.31 trillion period and large employment opportunities of Indian economy over the last two decades.

The Indian economy has been substantially liberalised in recent years with an increasing role for small-scale private enterprise is based on the only seven percent of the total entrepreneurs in Indian women. At the side of economic liberalisation has come a drive to enhance the role of women with moves to ensure that women have at least 30 per cent of seats in local councils and many other elected bodies of Indian women are in no way substandard to men in all walks of life and they can be as good entrepreneurs as men in the country. Women have a unique position in every society, it is essential to exploit the potential of Indian women. Real development cannot take place if it bypasses women who not only represent one half of a country's population but also the kernels around which societal revolution take place. Entrepreneurship enhances financial independence and self esteem of women. Around 50 per cent of India's population is women, yet business spheres such as trade, commerce and industry is still considered a male preserve. Entrepreneurial work has also been predominantly a man's world in India. Therefore, promotion of entrepreneurship and economic

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## Future Food Production in India

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### Abstract

According to FAO (2016) world agricultural statistics, India is the world's largest producer of millet and the second largest producer of wheat, rice and beans in the world. Performance of food grains and production of non-food grains. Of these two items, food grain agricultural production is more significant for two reasons. First, it provides a basis for subsistence by supplying basic foodstuffs and secondly, it is the only agricultural product group in which the "Green Revolution" was first introduced and more successful. The implementation of land reform increasingly adds a new dimension to Indian agriculture. Therefore the successful implementation of the Green Revolution and Land Reform not only increased productivity but also increased the area of cultivation which paved the way for higher growth of the agricultural sector.

### I. INTRODUCTION

India only accounts for around 2.4% of the world's geographic area and 4% of its water resources, but must support around 17% of the world's human population and 15% of livestock. India has the second largest agricultural land (179.9 million hectares) in the world. Food grain production includes the dominant part of the area planted (65%) in Indian agriculture. According to FAO (2016) world agricultural statistics, India is the world's largest producer of millet and the second largest producer of wheat, rice and beans in the world.

The performance of food grain production for analyzing self-sufficiency and the challenges of agriculture are described as our economic foundation and the most frequently cited reason is that almost 58 percent of the workforce derives their livelihood mainly from agriculture and this population segment, where income is generally lower than in other countries and in the short term, increased income on agriculture will obviously help increase income in the agricultural and allied sectors.

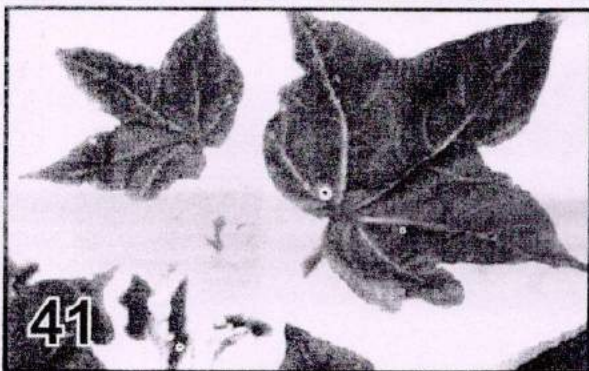
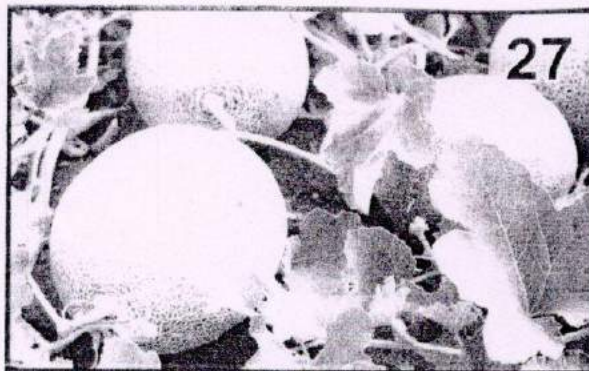
Global context, Considering that after the US and China, India is in 3rd place in cereal production. Considering the population growth rate of 2.1 percent between 1950-51 and 2006-07, the average growth rate of cereals is 2.5 percent. To some extent, except occasionally, this has prevented food imports between 1976-77 and 2005-06. But unfortunately between 1990-2007, the growth rate of food grain production has dropped to 1.2 percent, at the same time the population growth rate has risen to 1.9 percent, indicating a clear indication of the decline in food grain self-sufficiency. At the same time, per

*5/1/19*



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# STATUS OF RURAL TRIBAL POPULATION IN INDIA

P. Chennakrishnan,

## Introduction

India is a home to a large variety of indigenous people. The Scheduled Tribe population represents one of the most economically impoverished and marginalized groups in India. With a population of more than 10.2 crores, India has the single largest tribal population in the world. This constitutes 8.6 per cent of the total population of the country (Census of India, 2011). Education is one of the primary agents of transformation towards development. Education is in fact, an input not only for economic development of tribes but also for inner strength of the tribal communities which helps them in meeting the new challenges of life. It is an activity, or a series of activities, or a process which may either improve the immediate living conditions or increase the potential for future living.

It is the single most important means by which individuals and society can improve personal endowments, build capacity levels, overcome barriers, and expand opportunities for a sustained improvement in their well-being. Professor Amartya Sen recently emphasized education as an important parameter for any inclusive growth in an economy. So, education is an important avenue for upgrading the economic and social conditions of the Scheduled Tribes. Education is in fact, an input not only for economic development of tribes but also for inner strength of the tribal communities which helps them in meeting the new challenges of life. Literacy and educational attainment are powerful indicators of social and economic development among the backward groups in India. Currently, the tribes lag behind not only the general population but also the Scheduled Caste population in literacy and education. This



disparity is even more marked among Scheduled Tribe women, who have the lowest literacy rates in the country (Maharatna, 2005). The male-female gap in literacy and educational attainment among the scheduled tribes is significant. Education, especially in its elementary form, is considered of utmost importance to the tribals because it's crucial for total development of tribal communities and is particularly helpful to build confidence among the tribes to deal with outsiders on equal terms.

## Status of Tribal Population in India

The tribal population constitutes a majority in the northeastern states of Mizoram and Lakshadweep (94.4 per cent), Meghalaya (86.1 per cent), and Nagaland (86.5 per cent). The states with no Scheduled tribe groups are Punjab, Chandigarh, Haryana, Delhi and Pondicherry. India has total tribal population of 10.43 crores (Table-1) which is 8.6 per cent (Table-2) of total population of India as per 2011 census.

## Literacy Trends of tribes in India

Literacy is an important indicator of development among tribal groups. The trend of literacy of tribes in India



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## Employment Growth in India

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### Abstract

The focus of employment in the overall development planning had emerged around second half of 1970s and 1980s when it was felt that unemployment was on a rise. With the initiation of reforms post 1990s, it has generally been analysed whether reforms driven growth of the Indian economy has been job creating or not. These are also commonly used to track sectoral potential for generating employment and in forecasting future growth in employment. Mining & Quarrying and construction sectors provided more employment. Almost all the sectors showed positive elasticity of employment. More people were absorbed in these two sectors due to its continuous growth.

---

### I. INTRODUCTION

Employment has an important element of the growth and development process of the Indian economy. India being a highly populated country, employment becomes a crucial element. Employment acts as a link between economic growth and poverty reduction. Employment serves as a significant variable in the attainment of inclusive and sustainable growth. The focus of employment in the overall development planning had emerged around second half of 1970s and 1980s when it was felt that unemployment was on a rise. With the initiation of reforms post 1990s, it has generally been analysed whether reforms driven growth of the Indian economy has been job creating or not. The great recession has further renewed the concerns about unemployment and job creation due to the slow down, both globally as well as in India. Against this backdrop, this paper aims to compute employment elasticity for the Indian economy, over the decades and more specifically for the 2000s using the latest available data.

#### Employment Elasticity

Employment elasticity is a measure of the percentage change in employment associated with a 1 percentage point change in economic growth. The employment elasticity indicates the ability of an economy to generate employment opportunities for its population as per cent of its growth (development) process. Employment elasticity measurement generally faces two sets of criticisms: (1) the relationship between employment and output need not be uni-directional and (2) the notion of employment elasticity is valid for a given state of technology, wage rate and policies. Notwithstanding these criticisms, employment elasticity represents a convenient way of summarising the employment intensity of growth or sensitivity of employment to output growth (Islam and Nazara, 2000). These are



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# ***DIMENSION OF TRIBAL DEVELOPMENT LEARNING PROCESS AT GRASS ROOT LEVEL***

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## **Abstract**

*The presence of tribal and non-tribal reflect heterogeneous character of India economy of the Indian economy, while the tribal represent the traditional, conservation and isolated group of people living in mountain and terrains, the non-tribal represent the aspiration for faster change and modernization. The gap between these two groups of people has been expanding ever since the development programmes have been implemented. The characteristics of the tribal economy are described as forest based, family as a unit of production, consumption and pattern of labour, periodical local market, and interdependence.*

## **I. INTRODUCTION**

In 1951, the government of India had started making efforts to raise the general standard of living of the weaker sections as well as tribal development in the form of National Extension Schemes, (NES) with the objective to intensify the block level development activities. It was actually done to translate the spirit of the fundamental rights and Directive Principles of State Policy provided in Article 46, the State shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Caste and Scheduled Tribes, and shall protect them from social injustice and all

development of the weaker sections, the Tribal Development Block (TDB) was introduced later. Since desired goals could not be realized through these Programmes. The Tribal Integrated Development Project (ITDP) was started in 1972, and when it failed in practice another scheme, Tribal Sub-plan Scheme for Tribal Development (SSTD), was introduced in 1972 without defining the coverage area, and the objectives. Integrated Tribal Development Projects (ITDP) and Integrated Area Development Programme (IADP) were started functioning under this almost all states.

## **II. OBJECTIVE**

1. To find out the constraints involved in availing the benefit of tribal development programmes and to suggest suitable policy measures.
2. To study the socio economic conditions of tribal in Thiruvannamalai Taluk
3. To study the impact of tribal development programmes in Thiruvannamalai tribal area.

## **Methodology**

The study in the researcher Evaluation Tribal development programmes At Grassroots Level Thiruvannamalai Taluk tribal area, the set of data analysis the annual reports, tribal sup plans, statistical hand books and tribal welfare departments etc. The researcher used the secondary

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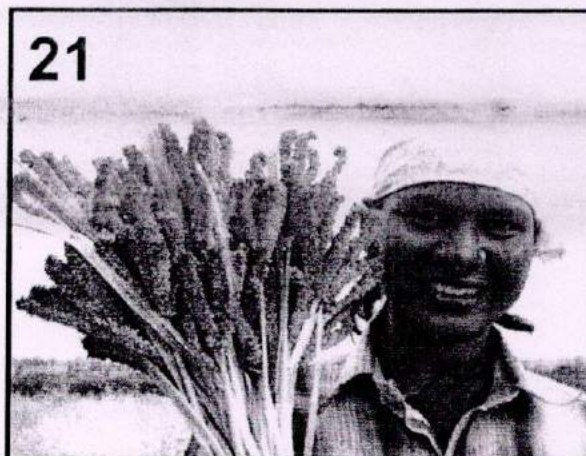


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# HEALTH AND MEDICINAL BENEFITS OF ORANGE

Dr. P. Chennakrishnan



**O**range is a popular fruit across the world for its numerous health and medicinal benefits. Oranges are good for overall development of the body because of the presence of vitamin, minerals, anti-oxidants, and other phyto-nutrients. Orange and orange juice can be taken at any time, however, one glass of orange juice at the time of breakfast keeps you charging and refreshing for a longer time. Orange is known to have several health benefits and is among the most popular fruits around the world.

Oranges can be had not only as a snack but also as a major recipe ingredient in various dishes. Nowadays orange juice is an integral part of a healthy breakfast thus promoting a healthy start to the day. They're mainly available in two categories — sweet and bitter, with the former being the type most commonly consumed. Generally an orange should have smoothly textured skin and be firm and heavy for its size. These will have higher juice content than those that are either spongy or lighter in weight.

Table -1 Orange Production and Productivity in India

Year	Production	Productivity
2011-12	3128.5	9.5
2012-13	2906.3	9.3
2013-14	3431.4	10.4
2014-15	3699.0	12.4
2015-16	4112.8	10.4
2016-17	4753.9	11.1

An orange of 130 grams contains following nutrition. Vitamin C dominates in the nutrition profile of orange. It contain vitamin C (116.1%), Fibre (12.5%), Folate (9.8%), vitamin B1 (7.3%), Potassium (6.7%), vitamin A (5.8%), Calcium (5.2%) and Calories (3%).

## Orange for cancer prevention

Oranges are abundant in Vitamin C. Vitamin C acts against free radicals and reduces the risk of colon cancer. Orange is having enough dietary fibre in the form of pectin, a great laxative, and prevents cancer causing cells to bind with colon. The presence of flavonoids group of anti-oxidants such as alpha and beta-carotene, beta-cryptoxanthin, zeaxanthin and lutein in orange help to protect against lung cancer, oral cancer, breast cancer and prostate cancer. Oranges contain beta-cryptoxanthin which checks lung cancer and promote better respiration. Orange peel contains d-limonene which prevents skin cancer and tumours in skin. Drinking of orange peel juice is great to ward off numerous infections and diseases.

## Orange reduces inflammation

Orange peel helps to lessen inflammation and acts like as anti-inflammation. Orange, being the effective source of vitamin C, develops resistance in the body against many infections and acts like as pro-inflammatory for free radicals. High fat meal causes inflammation in the body. A research paper published in "The American Journal of Clinical Nutrition" shows that taking orange along with high fat meal and sugar tends to decrease the impact of inflammation in the body. Oranges are full of phyto-chemicals, phyto-nutrients and flavonoids which are having strong anti-inflammatory features.

## Prevents cold and cough

Oranges are an excellent source of vitamin C which boosts the immune system, thus helping to overcome common cold. Orange peel tea works against cough and cold. If you are suffering from cold, a mix of dried orange



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# Nutritional Quality of Vegetables as Health Food

Neerja Rana, Arti Ghabru and Kavita Rana

**Q**uality is the composite of attributes that differentiate among units of a product and have significance in determining the degree of acceptability of the unit by the buyer. The emphasis on the cosmetic value of a vegetable does not always equate with the body's need for a high nutritive value. In India, plant breeders always focus on higher yield, disease resistance, herbicide resistance, drought and salinity tolerance and to some extent quality. Only the physical aspect of quality i.e. shape, size, texture, color and tenderness are given consideration in the breeding programmes.

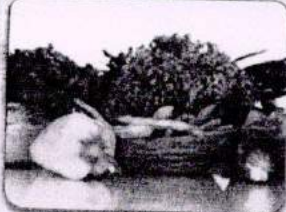

However, there is little or no emphasis on biochemical quality which includes protein, vitamin, sugars, dry matter, alkaloids, etc. the increasing quality consciousness in developed countries will demand more emphasis on quality in future breeding programmes.

This is the need of the hour especially in our country with future plant of globalization of agricultural produce. It would be impossible to penetrate in the foreign market with inferior quality produce.

Vegetables not only provide flavor, diversity to diet but are also beneficial for our health. Vegetables have emerged as most important food source because of their high nutritive value as well as their protecting ability against many diseases.

## BENEFITS OF VEGETABLES

Organic Facts

Strengthen bone health		Help maintain healthy weight
Rich in antioxidant properties		Aid in improving eye health
Beneficial for healthy skin and hair		Prevent hypertension and multi-morbidity

Note: Buy whole vegetables that are free from spots, blemishes, fungal growth and marks of insecticide spray

[www.organicfacts.net](http://www.organicfacts.net)

## Source of nutrition

### Carbohydrates

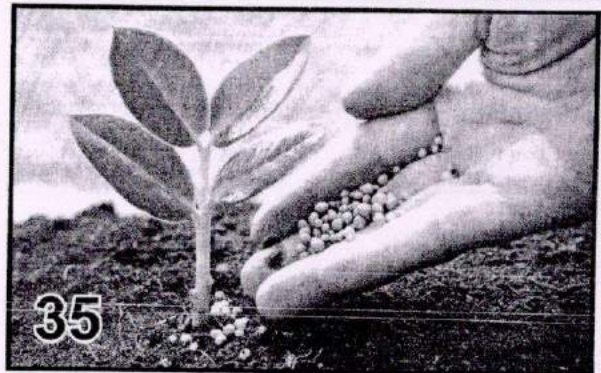
Carbohydrates contain carbon, hydrogen and oxygen in the proportion of  $C(H_2O)_x$  where  $x \geq 3$  in plant the main carbohydrates of nutritional value are glucose, fructose, sucrose and polysaccharide starch. The carbohydrate content is generally low in most vegetables except certain starchy vegetables like cassava, sweet corn and potato. As the carbohydrates are low in vegetables they are unable to provide sufficient amount of energy. The contribution to daily caloric demand is about 110 K cal which is only 4-5 per cent of the total. However, in vegetables, carbohydrates are responsible for sweetness and flavor. Total soluble solids directly associated with the amount of sugars. In tomato, 50





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# TRENDS AND GROWTH OF PUBLIC EXPENDITURE ON EDUCATION GROWTH IN INDIA

P. Chennakrishnan

**'Sustainable development starts and ends with safe, healthy and well-educated children.'**

*Anthony Lake, UNICEF Executive Director*

**E**ducation is a fundamental human right. It is the key to sustainable development. Education plays an important role in human capital development which is a key to scientific and technological advancement. Education is also regarded as a sustainable route to economic prosperity. It combats unemployment, confirms sound foundation of social equity, awareness and cultural vitality. It raises the productivity and efficiency of individuals and produces skilled manpower for leading the country towards the path of economic development. The existing view in modern economic growth theory is that education is an important key to economic prosperity. On the other hand, Fiscal policy of government affects the long-term growth rate through decisions on public spending in the process of budget announcement. As education is an important index of socio-economic development, public financing on education has been a priority for governments in developing countries. Bangladesh is one of the developing countries which is striving to achieve economic goal through reduction of poverty, increasing efficient manpower and accomplishing social welfare to a greater extent through better public financing decision. Between the years 2000 and 2009, the annual public expenditure on education was on an average 2 to 2.5 percent of GDP.

In most countries basic education is nowadays perceived not only as a right, but also as a duty – governments are typically expected to ensure access to basic education, while citizens are often required by law to attain education up to a certain basic level. This was not

always the case: the advancement of these ideas began in the mid 19th century, when most of today's industrialized countries started expanding primary education, mainly through public finances and government intervention. Data from this early period shows that government funds to finance the expansion of education came from a number of different sources, but specifically taxes at the local level played a crucial role. The historical role of local funding for public schools is important to help us understand changes – or persistence – in regional inequalities.

The second half of the 20th century marked the beginning of education expansion as a global phenomenon. Available data show that by 1990 government spending on education as a share of national income in many developing countries was already close to the average observed in developed countries. This global education expansion in the 20th century resulted in a historical reduction in education inequality across the globe: in the period 1960-2010 education inequality went down every year, for all age groups and in all world regions. Recent estimates of education inequality across age groups suggest that further reductions in schooling inequality are still to be expected within developing countries.

The relationship between education and economic growth has been extensively investigated, with the theoretical and empirical models, although the question of how education affects economic growth is not yet fully resolved. One of the issues that causes controversy is that of

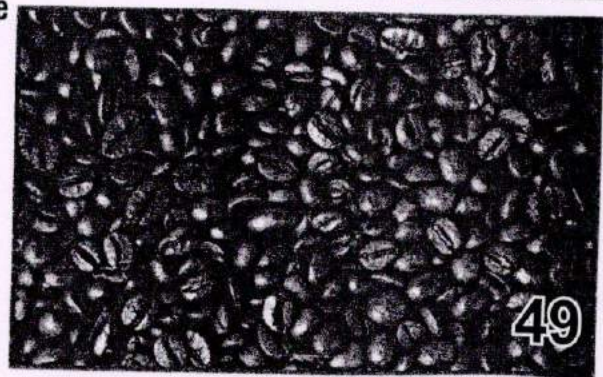
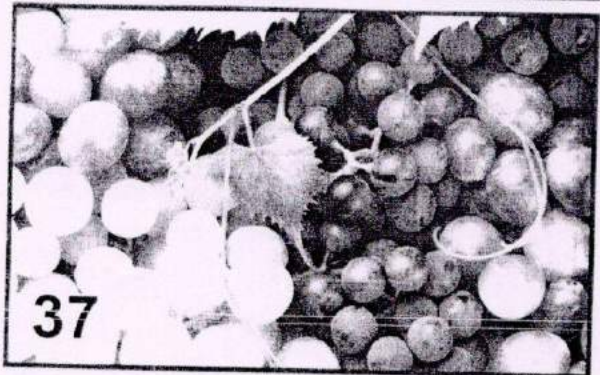
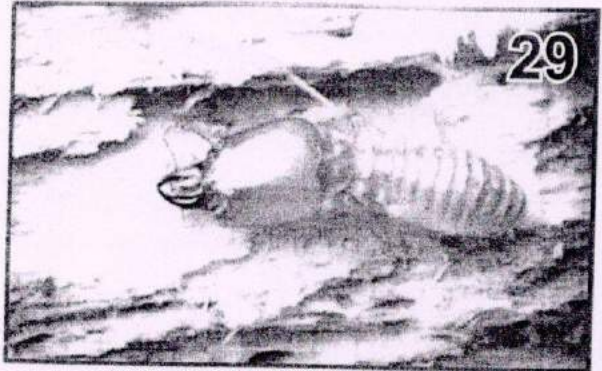


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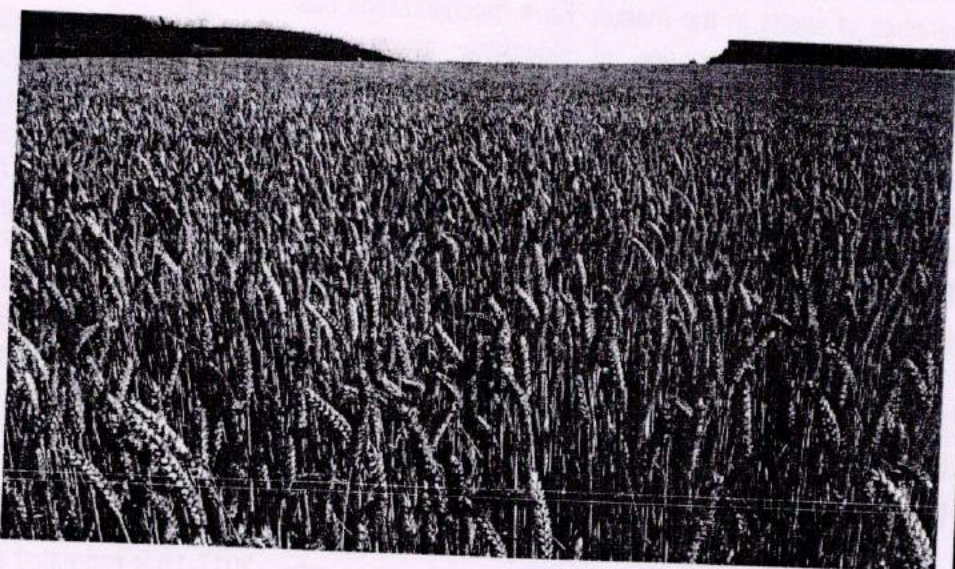


# FUTURE FOOD GRAIN PRODUCTION IN INDIA

P. Chennakrishnan

## Introduction

India accounts for only about 2.4% of the world's geographical area and 4% of its water resources, but has to support about 17% of the world's human population and 15% of the livestock. India holds the second-largest agricultural land (179.9 million hectares) in the world. Food grain production covers a major part of the cropped area (65%) in Indian agriculture. According to FAO world agriculture statistics (2016), India is the world's largest producer of millets and second-largest producer of wheat, rice, and pulses.



The performance of food grain production to analyze the self sufficiency and challenges of agriculture is described as the bedrock of our economy and the most commonly cited reason is that almost 58 percent of the labour force derives their livelihood primarily from agriculture and this segment of population, where incomes are generally lower than in the rest of the country and in the short run, increased income generation in agriculture will clearly help increase incomes in the agriculture and allied sectors.

In the global context, after USA and China, India stands at the 3rd place in the production of cereals. Considering the growth rate of population of 2.1 per cent between 1950-51 and 2006-07, the annual average growth rate of cereals was 2.5 per cent. To some extent, except occasionally, this has prevented food imports between 1976-77 and 2005-06. But unfortunately between 1990-2007, the growth rate of food grain production has come down to 1.2 per cent, but during

the same time the growth rate of population has increased to 1.9 per cent, showing a clear indication of decrease in food grain self sufficiency. At the same time, the per capita consumption of cereals had come down from a high point of 468 grams per day per person in 1990-91 to 444 grams per day per person in 2008-09, showing a clear decline of 05 per cent during this period.

The performance of food grains and non-food grains production: From these both items of agriculture, production of food grain is more significant due to two reasons. Firstly, it provides the base for subsistence by supplying basic food items, and secondly, it is the only group of agricultural produce where Green Revolution was introduced firstly and more successfully. Its importance has also increased due to the inception of World Trade Organization (WTO) in 1995 and therefore in the present study we shall concentrate on the production side. At the time of independence agriculture occupied the most dominant place in the Indian economy by providing livelihood to about 70 percent of population and contributing about 48.6 percent of GDP (Sharma, P.N.,

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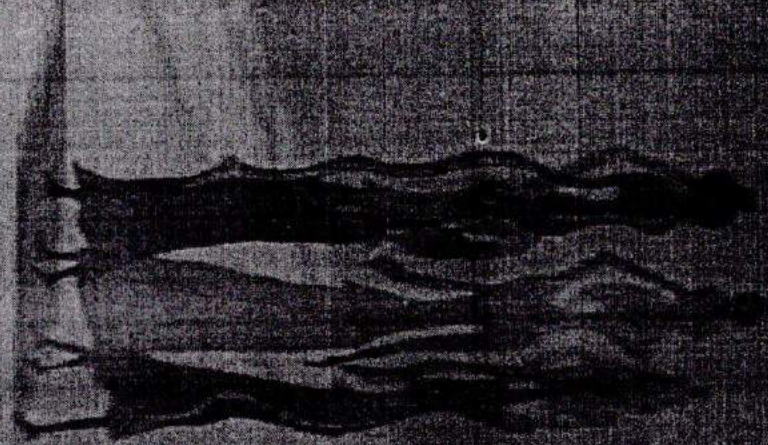
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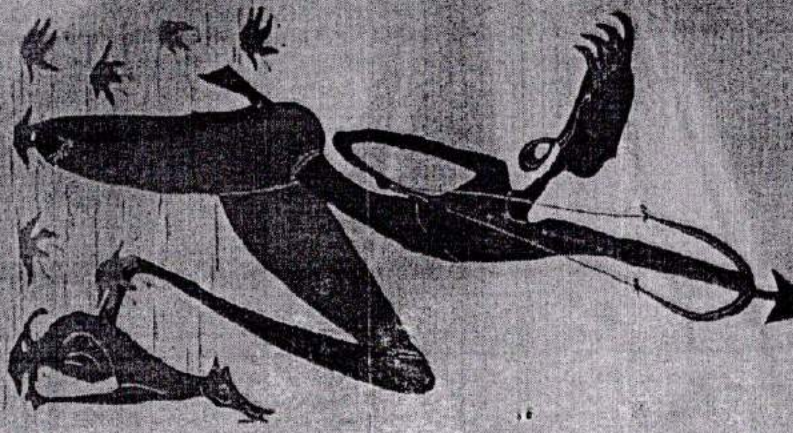


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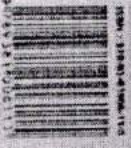
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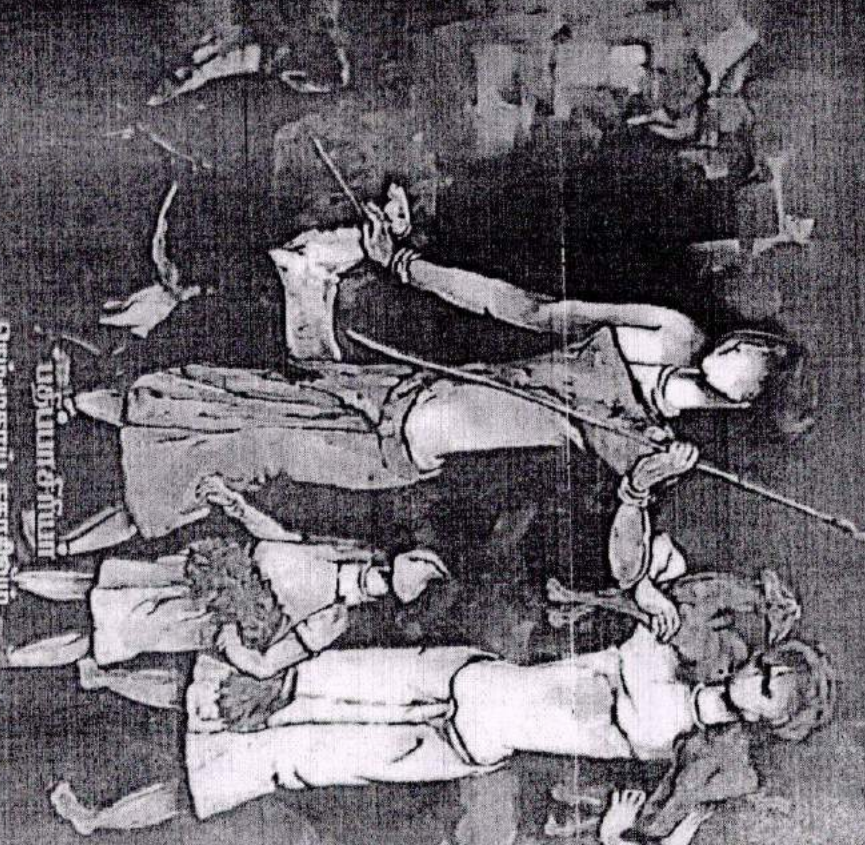
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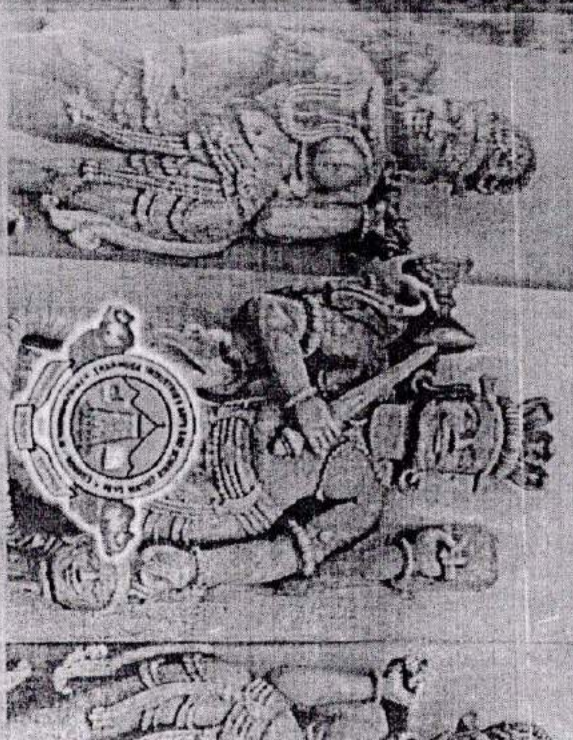
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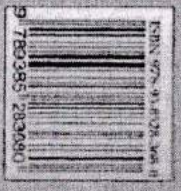
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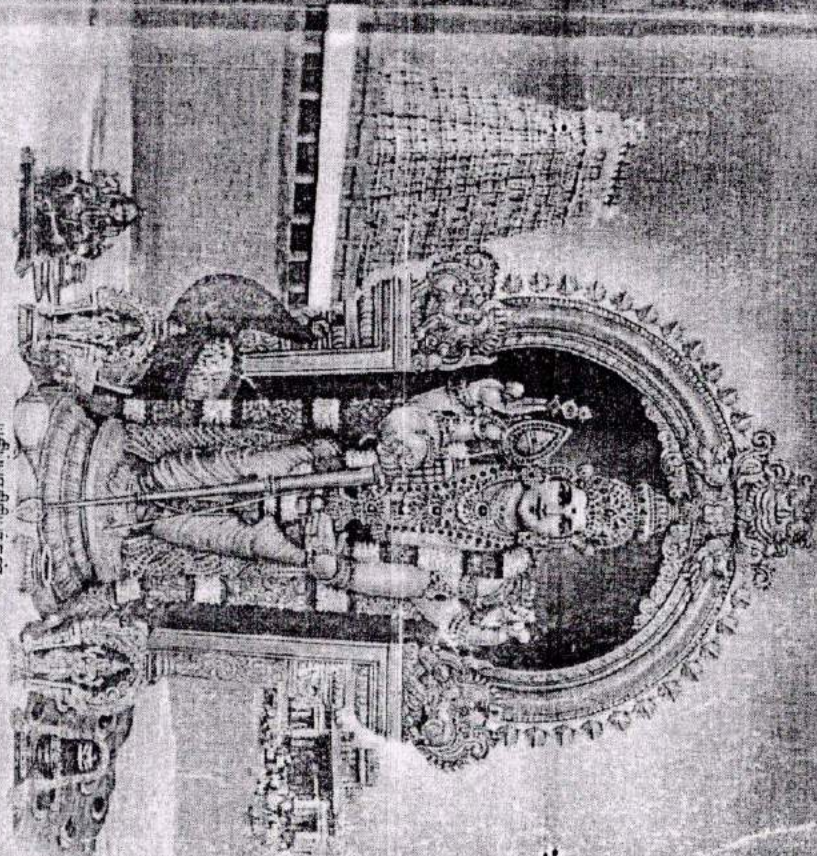
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