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Note from the Faculty Advisor

Congratulations to the editorial team for an excellent job! The papers and reviews cover a wide range of topics and express varied views. Last year the Journal added a new feature, namely the Interview Section. Our sincere thanks to the great Indian economists interviewed for the current issue, for sparing their valuable time. The quality of an interview depends also upon how thought-provoking and succinct the questions are. The interview teams and the editorial team ably led by Bhavya have lived up to the expectations. I hope the readers shall enjoy this issue of the Journal, making it a rewarding experience for the editorial team.

Dr. Neelam Singh

Editorial Note

Following in the footsteps of the journal published by the department every year, we take immense pride in taking it forward to even greater heights. However, this continuously compelled us to put in additional effort to ensure that we did not fall short of the benchmark. Only the learnings that the reader takes back will adequately reflect our success in achieving our objective. We sincerely hope that the following pages help you deconstruct complex ideas that you may want to build upon in the years to come.

This issue of the journal not only mirrors the research ventures that have been undertaken by students of the department but also attempts to cover a range of economic concepts that are relevant to the present day and age. The journal has attempted to capture the themes of the capricious global economic scenario with each paper's writing style being idiosyncratic to the author. While one paper emphasises on statistical techniques, another is a compilation of various case studies and personal narratives.

The Editorial Board hopes to help all its readers develop greater perspective through this issue of the journal. Each of the four interviews target a different domain and the respective experts in that field of study. Our experience while conducting these interviews left us nothing short of amazed by the manner in which the simplest of things can have multiple paradigms. In this context, the journal is a compilation of the varying analyses of diverse topics that are very relevant in the contemporary context.

We have also introduced a Review Papers section where students get a platform to critically analyse the widely read and quoted papers on a given topic in order to present a holistic understanding. The review papers in this issue were completed under the aegis of Prof. Kenneth Button himself, a notable transport economist worldwide.

The Annual Journal of the Department of Economics 2016 tries to act as a reminder of the beauty of economic thought in a discipline that may be lost in its number crunching and econometric models.

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Ownership versus Competition – The Privatization Debate

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Abstract

Since the onset of the neoliberal era which followed the profitability downturn in the global economy, especially in the US economy, the policymakers seem to have come to terms with the fact that privatization is key to combating a crisis. During late 1960s it was believed that the tacit pacts between the big capital owners and the powerful unions were the feature of the period that led to stagflation. The monopolization and interference by the state hindered innovation and fairness and this led to the ushering in of neo-liberal policies of liberalization, privatization and globalization. Privatization and disinvestment by the state have become common occurrences in the past few decades all across the globe with an aim towards an increase in the productive efficiency. This brings forth the debate of whether it is ownership or competition that helps in the achievement of productive efficiency.

Key words: Competition, Privatisation, State ownership
JEL Classification: L12, D14, D42

1. Introduction

This paper tries to answer whether it is competition generated by the private sector or mere ownership by the private players in the market that leads to the attainment of productive efficiency. There is innumerable literature on the effectiveness of privatisation with the primary argument being with regards to the creation of competitive environments. The paper questions this claim and emphasises on the importance of regulation.

2. Does Privatisation lead to Efficiency?

The proponents of 'ownership in achieving efficiency' present two arguments. Those who are in the **favour of state ownership, generally present a case of market failure and natural monopolies.** In certain sectors, involving high fixed cost, the cost of production can only be reduced at high levels of output and hence, monopolizing the sector seems rational. Generally, these monopolies are owned by the state since privatizing them (like railways) could have severe political economy implications in terms of consumer and worker welfare. Those who strongly favour the notion that private sector ownership is the prime reason behind efficiency, target the nature of state ownership. They say that it is under the state's nature to bail out the firms if they perform poorly, over and above a lack of incentive to innovate due to lack of competition. Hence, it must be noted that **they do not target the ownership of the state, but instead lay emphasis on the lack of competitiveness under state ownership.** Furthermore, there are few academics who favour private ownership over state ownership even after an adequate level of competition has been attained, but their claims are mostly based on empirics. The rationale here is that there is no doubt that natural monopolies do exist and that state ownership might be imperative in such cases, but it is also true that the **state tends to overuse the natural monopoly argument. For example: In the telecommunications sector,**

advancement in technology helped overcome the presence of natural monopolies and there have been immense gains derived from the increase in competition in that sector.

On the other hand, the proponents of importance of competition in achieving efficiency make the point that an **increase in competition coupled with no "too big to fail" argument presents a threat** to the firms inducing them to innovate, perform, reduce costs and hence lower prices in order to be able to survive in the market. Competition allows free market entry and exit and hence allows the welfare gains to be maximised. Those on this side of the debate generally take a stance in favour of private ownership as against state ownership that originates from skepticism regarding the nature of state ownership. This results in those who put their faith in private ownership also being in favour of competition. Thus, when analysed in depth, it essentially becomes a debate between the public and the private sector for most policymakers. The rationale here is that the proponents believe that enhancing **competition implies doing away with monopolies.** But this is generally not the case. Theorists of political economy have mentioned time and again the relevance and importance of **"monopoly capitalism"**. There might be n number of firms competing in a sector but merely 3-4 firms would be able to capture a major market share. For example: In the supermarket sector in the US, the four major firms currently capture a market share of approximately 32%, while in software stores, the top four firms capture 73% of the market share. The 25th firm barely has even a percentage or rather, half of a percentage of the market. Similarly, the value of acquisitions and mergers has been increasing over time, with the bigger firms acquiring the smaller ones (the author believes that **in reality there is nothing like a merger, it is always an acquisition**). Moreover, the arguments regarding free entry and exit seem hollow because these big firms in power want to continue to stay in power and **hence they create barriers to entry for new prospective entrants**. Another argument is that competition improves welfare only if participants are rational. Economic models assume rationality but everyone knows that the truth is far from the same. It is irrational behaviour that firms take advantage of in order to enhance profits. Thus, it might not be necessary for that competition improves welfare.

So far, the argument has been discussed on theoretical grounds. Analysis of empirical evidence suggests that **no strong conclusion can be arrived upon in favour of privatisation and disinvestment.** In a paper that analyzed productive efficiency and welfare gains from privatization in Malaysia (Hassan, et al., 2015), it had been empirically shown that although efficiency, when measured by instruments of welfare did not make a strong case for privatization, contrary results were found when efficiency was measured with respect to financial ratios. Critical examination of the result suggests that it is possible for the firms to attempt to create an illusion of a stronger financial position in order to attract investors. Another crucial result from the same paper substantiates the claim that ownership under private sector has had a great positive impact on efficiency. On the other hand, P. Orazem and N. Vodopivec (2003) have presented a case for the Slovenian manufacturing industry wherein results highlighted that while a change in ownership did not contribute significantly to efficiency, competition was able to make a difference to the same. Y. Zhang, D. Parker and C. Kirkpatrik (2004) have analysed the telecommunication sector in 25 developing countries and concluded that competition was a prerequisite for regulation and efficiency. However, empirical research to substantiate this result is lacking in context of the global economy as a whole.

3. Conclusion

Thus, it is the lack of a single strong claim for or against any given side of the debate which presents **the relevance of both sides**. The author of this paper does not deny that the nature of the public sector inhibits competition and that private sector could substantially contribute towards the attainment of efficiency. However, it must be noted that in the present context monopoly rule is seen in the private sector. Therefore, **comparison of a monopoly private sector to a monopoly public sector does not present a difference on theoretical grounds.** One could predict that a few decades down the line, the private sector could lose its knack to compete due to a lack of incentives. It is the author's opinion that the possibilities of efficiency being led by a change in ownership can be ruled out on a theoretical basis. Is it then competition that has led to efficiency? Intuition suggests that competition does provide incentives to innovate and attain efficiency in production and delivery. But the larger question that needs to be answered is **if privatization or a change in ownership eventually leads to perfect or even near perfect competition.** So far, privatisation is seen to provide oligopolies a market to flourish in through tacit or explicit collusion. Hence, there arises a need for the **regulating agencies to maintain a certain level of competition** through appropriate steps despite the goal of regulators to support and protect the smaller industries until they are able to catch up with the bigger players in the market. **Only when competition is kept intact will privatization be able to reap benefits.**

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Understanding Urbanization in the Indian context – Role of Urban Local Bodies

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Abstract

Unbridled urbanisation of India, due to rapidly growing urban population, greater migration to cities than ever, expansion of smaller towns and an increasing pressure on the already existing mega-cities in terms of housing, employment and basic amenities, is becoming a nightmare for policy makers. An attempt is made here to understand city growth in general as well as from the perspective of India. The paper also examines the costs and benefits flowing from the process of urbanisation. The challenges ahead in developing strong foundations of infrastructure in cities, especially the financing aspect and the need for fiscal autonomy of Urban Local Bodies (ULBs) are outlined in detail.

Key Words: Urbanisation, Infrastructure, Urban Local Bodies, Municipal Bond Market, Fiscal autonomy
JEL Classification: H70; O18; R51

1. Introduction

India is experiencing a massive rise in its urban population. According to Goldman Sachs's economic research projections, an estimated 140 million people will move to cities by 2020, and a whopping 700 million will urbanize by 2050. The number of cities with populations above 1 million in size will nearly double by 2020. It is estimated that urbanization adds about 1 percentage point to growth every year in India simply from productivity gains from the movement of rural workers to urban areas (Poddar and Yi, 2007).

Hence, cities have become vital areas of economic activity and wealth creation. During a period of rapid urbanization all cities, however, do not grow at the same rate. As urbanization becomes a global phenomenon, its enormous scale in India makes it important to understand its implications and consequent challenges and opportunities. In this paper, the author makes an attempt to understand the phenomenon of urbanization in the global context as well as in the Indian context. The paper outlines the possible challenges and argues that strengthening the financing aspect and the need for fiscal autonomy of Urban Local Bodies (ULBs) is essential for sustainable development of urban infrastructure.

The outline of the paper is specified in the following paragraph. The first section attempts to understand the process of city growth and the consequent advantages from a greater pace of urbanisation. The focus of the second section is to highlight the challenges of Urban Local Bodies in funding the infrastructural requirements to be able to reap the benefits of rapid urbanisation. The objective of the paper is to make certain policy recommendations for better utilisation of the opportunities that entail rapid urbanisation in India.

2. Literature Review

In their paper, Poddar and Yi (2007) have discussed the potentialities that India can benefit from, due to its increasing urban population. It analyses the growth drivers of the Indian economy in detail that include industry and services. The paper also makes baseline projections regarding the investment to GDP ratio, growth rate in average years of schooling, number of people entering the labour force in the year 2020 and the total factor productivity. They analyse the reasons for making these projections and discuss the constraints in India's growth story. The paper concludes with a mention of India's business environment, the challenges and opportunities for the same.

The primary purpose of the paper by Rao and Bird (2010) is to make policy recommendations to improve both citizen participation and accountability of urban governments in the process of harnessing the opportunities provided by rapid urbanisation. It also suggests measures to augment resources of urban governments to ensure better amenities in the urban areas. It discusses the Fiscal Federalism Theory in detail, which deals with the efficiency, accountability and equity aspects of public service delivery. A very important policy recommendation made by the paper is the removal of ambiguities in expenditure assignment. The paper also focuses on utilising Public Private Partnership models in a more efficient manner to tap the opportunities posed by rapid urbanisation.

The paper by Overman and Venebles (2005) analyses the determinants and effects of rapid urbanisation with empirical methods. They present three theses surrounding the concept of urbanisation and the role of a primate city, namely, productivity, rent seeking and urban costs. The paper entails an analysis of urban market failure with special focus on determinants of a city size and other market failures. In conclusion, they emphasise the importance of identifying market failures and the significance of institutions that promote efficiency in the entire process of rapid urbanisation.

3. Understanding City Growth

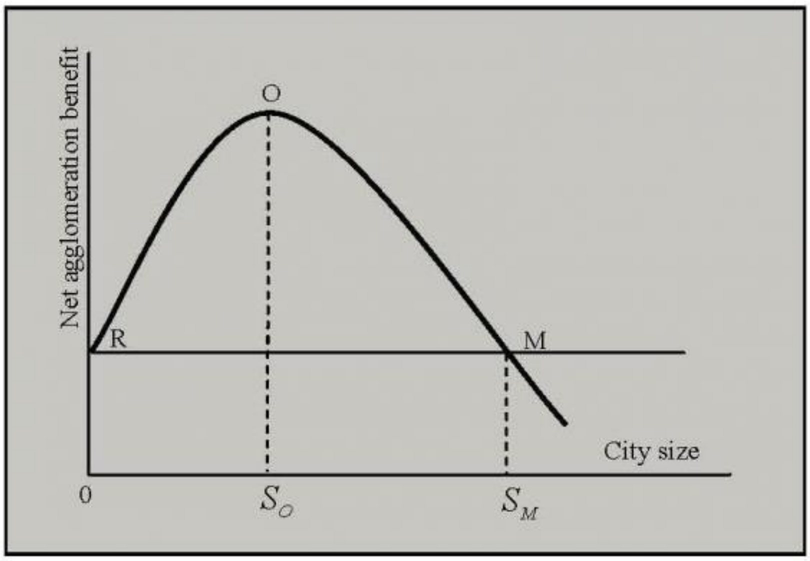
Urbanization of a nation should not only be associated with an increase in city populations, but also with growth in the number of cities. It would be wrong to presume that urban growth is dominated by mega-city development. Four of the largest cities in India are home to only 5.5% of the country's total population. **Much of urbanization takes place by developing new cities and by the growth of smaller metro areas**. There were just 12 cities in India which had populations greater than 1 million in 1981. By 2001, that number had grown to 35 cities. If future projections are to be believed, there may be 68 such cities by 2020 (Poddar, 2007).

The major growth drivers of cities can be grouped under two broad categories: Having a natural advantage such as a port city or having a favourable climate and being the hub of industrial activity or knowledge. Other drivers of growth can be found in cities that are centres of administration, governance, as well as infrastructural facilities. There is a considerable first-developer advantage for a city— once it starts developing rapidly, there are greater chances that it will continue to do so, as industries, workers, and consumers are attracted, creating a clustering effect. However, it can be noted that none of the above mentioned factors can be considered 'sufficient' for a city to witness rapid growth. But the presence of at least one of them is 'necessary' for them to develop.

However, it is interesting to note that a version of Zipf's Law (Volker & Zipf, 2005) is relevant to studying city growth; if one multiplies the rank of a city in terms of its population, with its size, then the outcome is a constant for all cities within that urban system. Thus, in an urban system, **cities do not generally converge to a certain population size, and only a few cities are not favoured by most of the population while the rest shrink**. Zipf's Law has been relevant in India especially since the 1990 reforms and rise in the pace of urbanisation, wherein the Zipf's exponent has been stable around one (Luckstead & Davadoss, 2014). Indeed, when cities become too large, costs outweigh benefits, which then make the nearby smaller towns more attractive. This phenomenon can be observed in the two major urban centres of India, Mumbai and Delhi.

In the context of Indian urbanisation, cities' contribution ranges from 60%-80% of the total output. Here, growth of cities is primarily driven by economic growth and demographics—the younger workers migrate more than the older workers, better transport facilities (especially roads), better communications and openness. But **India's urbanization rate continues to be slower than that of China and other emerging economies**; in fact, India has the highest rural population in the world. Although, a lower growth rate and a smaller manufacturing sector vis -à-vis China are fundamental factors, government policies such as lack of investment in urban infrastructure, inadequate housing facilities act as a deterrent to the movement of labour to towns as the migrant labour ends up with much lower living standards. This prevents the realization of gains from urbanization and leads to a sub-optimal city size (Poddar, 2007).

Figure 1: The Benefits and Costs of Urbanisation



Source: *Overman & Venables (2005).*

It would be incorrect to consider that urbanization leads to the growth of metropolitans only leading to increase in congestion and other costs because most of the urbanization actually takes place in small towns. Figure 1 illustrates the benefits/costs of urbanization. Agglomeration benefits initially increase with an increase in population because of productivity advantages resulting from an increasing scale of urban activity. Returns start decreasing after a point as urban costs increase. After point O the congestion and pollution costs increase, leading to negative externalities as population continues to expand. We can define an **optimal city size as S_0 at which the average social benefits are maximized. So it will be efficient if we grow each city up to this point, and then expand the nationwide urban population**

further by replicating such cities rather than expanding this sole city beyond its limits (Overman &Veneables, 2005).

The gains from urbanization to the economy stem from several factors. When a number of firms are located in the same place, the variety of goods offered is greater, search and travel costs fall, and competition becomes stronger. This is known as 'economies of scale'. It is said to happen when the city starts experiencing agglomeration benefits. A good example of agglomeration benefits is a shopping mall which leads to efficiency gains in retail. There is also a powerful force for clustering of firms in related industries in cities. Good examples include the clustering of software firms in Bangalore and hosiery and garment factories in Ludhiana. Cities also become centres of innovation in the production of ideas and their commercialization. Large cities therefore facilitate learning, and are particularly attractive for highly-talented enterprising people. Some other benefits include proximity to the administrative and governance centres, and sociologically, the anonymity that the city life provides. The latter is especially the case in India where urbanization can often mean freedom from the oppressive caste system of the villages.

Excessive urbanization, however, has its own costs which include the cost of travel and commuting incurred by urban residents, higher urban rents, congestion and air and water pollution. **Since cities have a pull-factor for labour, they also tend to become centres of unemployment and poverty**, which can then lead to the development of slums, crime and poor health conditions. In India, broad classifications of cities can be made on the basis of their average population growth rates, that is, the fastest growing metropolitans, large metros with steady growth rates and the slow growing ones. While it is extremely rare for cities to show an absolute decline in their population growth, some cities grow at a relatively slower pace. Other than Delhi, almost none of the other large metros have a high growth rate. It is the smaller cities like Surat in Gujarat, Asansol in West Bengal, Faridabad and Noida in U.P. which reap benefits from their industrial bases or spill-overs from adjacent metropolitan cities and thereby experience rapid growth rates.

4. Financing Urban Infrastructure

The benefits that we are able to reap from urbanization essentially depend on the infrastructure in place to house, employ and transport the floating and permanent populations of the cities. Huge investments are required for urban development especially for basic amenities like water supply, health, sanitation, education and transportation along with investments in power, telecom and roads. Considering the pace of urbanization in India, financial requirements are expected to grow in the future and a major issue is raising sufficient amount of funds for these development projects while keeping up with the rates of economic growth.

The revenues of Urban Local Bodies (ULBs) from their own sources for funding these developments are more often than not insufficient. Up until 1992, India was a two-tier structure comprising of the centre and the states. The third tier, the local bodies, was added after the 73rd and 74th Amendments. The 74th Amendment added a new component pertaining to the ULBs to provide for; and among other items, this included constitution of the following municipalities (Mohanty et al., 2007):

a) *Nagar Panchayats*: Areas those are in transition from rural to urban areas
b) Municipal Councils: Smaller urban areas
c) Municipal Corporations: Larger urban areas

The Government of India has been providing financial support from time to time to local governments through Five Year Plans (FYPs) and Finance Commissions. The First FYP (1951-56) made a lump-sum provision of Rs. 15 crores for local development works to draw local initiative and resources. Various allocations, proposals and recommendations for ULBs were made in successive FYPs. **However, for most municipalities, especially the smaller ones, the dependence on state and central governments through fund allocations has become substantial and indispensable.** While the constitution of India specifies that the taxes are to be divided between the centre and state governments, it does not specify the revenue base for urban and local bodies. The ULBs are often not even aware of the opportunities and avenues of revenue generation through taxes and non-tax charges. Even if they are, they seldom have the skill to optimize their tax collection (Singh & Singh, 2015).

As the demand for better public services in urban areas increases, in contrast, the resources available with ULBs fall short of the recommendations of the Zakaria Committee in 1963. It was found that from the period 1999-2000 to 2003-04 the primary spending in 30 large municipal corporations of India was just about 25% of the requirements established by the Zakaria Committee around fifty years ago (Rao & Bird, 2010). In such a case, **part of the capital expenditure requirements of ULBs can alternatively be financed through borrowings.** Development of the municipal bond market can hence be an important area which needs to be explored. Since their first issuance in 1998, 28 municipal bond issues have been made, mobilizing funds amounting to approximately Rs. 30 billion. The Rating Information Services Ltd (CRISIL) was a pioneer in credit rating municipal corporations around 1996, and around that time the groundwork for a municipal bond market was laid. The government, over the years has been looking into this concept and allowed the municipalities to issue tax-free bonds in 2001. India's local bodies have been able to raise around Rs. 4,450 million from the capital market by issuing taxable municipal bonds (Government of India, 2011). But given the trend in municipal securities market, bond issuances have not been able to gain much popularity with the Indian investors (Singh & Singh, 2015). There are constraints on both the supply and the demand side that stop the local bodies from fully exploring the municipal securities market. While for the civic bodies lack of financially viable projects and administrative bottlenecks act as constraints, for the private investors municipal bonds are not as attractive alternatives given the delays in finishing projects and their dependence on political willingness. Also, these bonds are relatively illiquid investments and have longer tenures making it difficult to exit in times of need.

The union government has recently carried out discussions about developing '100 Smart Cities' as satellite towns of larger cities or modernizing the existing mid-size cities. The **proposed funds distribution is in a ratio of 40:40:20 between the centre, state and the local government**. Under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) of the erstwhile UPA government, the municipalities had to fund around 10% of the particular project undertaken. Most of the municipalities failed miserably in raising the required amount, thus leaving many projects stalled and unfinished. It is a matter of concern as to how these civic bodies can rise up to the challenge of raising 20% of the funding.

5. Conclusion

It is imperative that policymakers focus on effective **urban reforms which ensure fiscal and administrative autonomy for the civic bodies**. Making them aware of user charges, cost recoveries and other tax and non-tax sources of revenue along with equipping them with trained personnel is necessary. Also, the urban development policy planning has to be more holistic and must aim at attracting private investment in urban infrastructure. The World Economic Forum report on urban development recommendations for Government of India talks about a stable policy framework to attract private investment. This is an area where we can tap the enormous potential of the municipal bond market in India. It is important to improve the credit-worthiness of the ULBs and reduce the administrative bottlenecks. Moreover, rather than just raising the adequate amount of funds, it is also important to make sure the funds are allocated for the right purposes. In this case, a consolidated analysis of the local body budgets must be conducted. RBI carries out an annual analysis of state budgets to study the transparency in fiscal transfers. A similar reliable and comprehensive analysis could poise local bodies towards extracting greater dividends from economic growth and urbanisation.

Finally, as infrastructure deficit grows and resources available fall short; effective urban reforms, administrative and financial autonomy to ULBs, simplification of tax collection mechanism, efficient generation of revenues, proper utilization of grants become the need of the hour. In order to utilise the municipal bond markets to mop up the resources from the open market, municipalities have to be encouraged to undertake reforms, and ensure hard budget constraints to develop a healthy bond market. Effective fiscal decentralization not only means adequate finances devolved to the local governments, but also control over those they employ and the projects they undertake. Establishing proper governance should not only ensure efficient spending and allocation, but also improve the responsiveness and accountability with which public services are delivered to the common man. An implementable strategy for bottom-up accountability in local governments could also be social auditing. That is, a mechanism put in place to keep a check on leakages in implementation and one that encourages community participation in governance and grievance redressal.

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Demographics of a Potential Utopia or Dystopia?

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Abstract

This paper analyses certain salient features of the demographic profile of India and assesses whether the demographics will serve as a source of opportunities or press as a deterrent in achieving development and economic stability. High fertility rates working on a large cohort in the child bearing age provides momentum to population growth. Members of smaller cohort size generally have it easy in achieving education and finding jobs, while equally capable and qualified members of the larger cohort (youth bulge) struggle to maintain similar standards of living. This adds to gender discrimination as the economic capability of women is undermined in the wake of resource constraints. Moreover, an increase in the supply of working age population may not necessarily lead to an increase in productivity without significant improvements in the health status of the population. Equitable access to social opportunities is influenced by other steadfast components of demographic profile like urbanisation and rural development. From a policy perspective, the nuanced account of demographic indicators provides additional arguments for interventions. The paper also proposes some recommendations to supplement the process of exploiting potential demographic dividend.

Key Words: Demographic profile, Demographic dividend, Youth bulge, Cohort, Urbanisation, Gender discrimination
JEL Classification: I310, I320, I380, J130, J100

1. Introduction

The rhetoric on the capability of India to emerge on the world platform with bold growth digits and economic stability cannot undermine the urgent requirement to reap the opportunities offered by its demographic profile while keeping the threats in check. The ultimate aim of India's development draws on its realties and time frame from its population and certain salient characteristics of the populace. There are pressing issues plaguing the nation's demographic profile which open up prospects for policy interventions. These may act as possible correctives to ensure that demography serves as a valuable opportunity and does not press as a detriment. A nuanced approach towards such critical facets of India's demographic profile is essential to frame an appropriate demographic policy.

2. Salient Features of India's Demographic Profile

2.1 Utilizing the youth bulge: Education, employment and employability

India's youth bulge periodically fuels the persistent debate among the proponents and opponents of the neo-Malthusian school of thought. While the former associate a large population with problematic per capita distributional issues in terms of income (or more importantly, consumption), the latter makes a cogent case with the argument, "every mouth to be fed comes with two hands that can be put to work" (Chandrasekhar, Ghosh, and Roychowdhury 2006).

A young population can catapult a country into the higher echelons of socio-economic development. The "child, adolescent and youth" are "critical ingredients" for development as they feed into the labour force (Majumder 2013). However, their capacity to contribute in today's India comes constrained by the economics of 'excessive population'.

High fertility rates working on a large cohort in the child bearing age provide momentum to the growth of population size. The negative ramifications on the male and female population belonging to the youth bulge are manifested in **increasing difficulty to convert education and employment opportunities into tangible realities**. Other things equal, the relative chances of attaining education, employment and associated magnitude of income are inversely related to the cohort size of the job seeker. Members of smaller cohort size generally have it easy in achieving education and finding jobs, while equally capable and qualified members of larger cohorts struggle to maintain similar standards of living. This opens up an interesting gap between the labour demand and supply. The working-age population does not have sufficient employment avenues and the employers find a dearth of 'employability' among the workers. This is reflected not just in high youth unemployment but also in high incidence of 'working poor'.

The scenario calls for compulsory intervention through sufficient and targeted investment in education, training, and market-ready skill development for the cohort. The Economist (2013) expounded the potential squandering of India's biggest economic asset through deficiencies in education, skill development and employment opportunities. Education and skill building need to cope with the mammoth numbers who need to be trained.

2.2 Economic capability: Gender differentials

The increasing pressure emerging from shrinking opportunities dents the economic valuation of female capabilities. Indian social norms unquestioningly put childbearing and child upbringing responsibilities on women. This reduces the female labour force participation and their ability to earn. Women also suffer from relatively low wages and a lower probability of getting employed. In a world where employment opportunities are few and not fully able to employ 'more capable' men, the weak profile female has hardly any economic value left.

According to WHO, a biologically normal child sex ratio ranges from 102 to 106 males per 100 females. In Indian terms of measurement, it would correspond to 943-980 females per 1000 males. Shockingly but imaginably (considering economic valuation), the Indian sex ratio is just 918! Therefore, as Amartya Sen puts it, many women are 'missing' from the Indian sub-continent.

Women make up 48.5% of the Indian population, yet only 29% comprise of the labour force. In 2014 Global Gender Gap Index's list of countries, India ranked 114th in terms of women's economic participation. Within the female workforce, 94% are employed in the unorganized sector. This further exacerbates gender discrimination as formal rules of equality in informal employment are not well established. Female literacy rate also paints a dismal picture. Approximately 85% rural and 59% urban women remain illiterate.

The lack of equitable access to land and property rights for women lowers India's overall economic growth through women's absent investment and savings possibilities (Senegal, 2013). Limited financial inclusion, with women getting less than 10 per cent of all loans granted along with regressive compliance, has contributed to women being left behind.

Recent IMF estimates have shown that **if the number of female workers were to increase to the same level as the number of men, GDP in India would expand by 27%.** An increased number of women in the labour force are indicative of increased family income and hence, enhanced household savings, providing a major boost to the GDP. Educated and working women are able to build social capital through increased concern for their child's education and health. This is called a 'double dividend'.

2.3 Health Status: Influences on productivity

Higher productivity for leveraging capability can be built only on better health status. The decreasing crude death rates are now also being reflected in lower infant mortality rates and maternal mortality rates but child malnutrition still remains a major concern.

However, there is a significant regional diversity and large variation in health and educational attainments between South and North India primarily because of the fact that health is a state subject and that the Centre only assists the states in strengthening their healthcare system. According to an official review, the flagship programme "National Rural Health Mission" has been considered only as a minor success. There remains the basic problem of inadequacy of financial resources in the health sector with the government expenditure approximately amounting to 1.2 percentage of GDP.

Expansion of health facilities in the public sector (Public Health Centres, Community Health Centres and hospitals) and private sector "has been inadequate" for universal and quality healthcare. The rural-urban and inter-state differences emerge due to "insufficient public investments" and lack of "synergies" between Centre and State financing and administration (Rama Baru, 2010). There is excessive dependence on 'highly expensive, many times more exploitative and unregulated' private sector for outpatient and inpatient care, due to weakness in delivery by the public sector. The out-of-pocket expenditure on medicines of the poorest quintile is as high as 87% (Garg and Karan, 2005) affecting them adversely in the absence of any financial protection. Unregulated commercialisation, variable quality of care and lack of accountability are other areas of concern.

2.4 The rural-urban conundrum: Challenges for equitable access

Urbanisation is a steadfast component of India's demographic profile with potential to dynamically alter the interplay of the extant youth bulge and its realisation as a part of the demographic dividend. The declining trends in growth of urbanisation factoring from the declining "natural increase" and the reduction in the share of "net reclassification of settlements" (Ram. B. Bhagat, 2008) brings to focus the trends followed by inter-census migrants. Amitabh Kandu opines "immobility" of male migrants which unveils the "transfer encompassed poignant vulnerabilities" as the society and production mechanisms shift from mass-based to knowledge-based systems in the wake of globalisation (Kandu, 2007). The unskilled youth cohort is unable to establish a stronghold in urban areas characterized by growing demand for employable skills, information and finances.

The increasing sense of regionalism as well as assertion of local and linguistic identity, resulting from the frustration towards rising inhospitality of the urban centres is panning out of the recent developments of skill-oriented urbanisation and globalisation. All these barriers might "discount the proposition" (Kandu, 2007) of efficient allocation of economic activities with mobility of labour through a market-based mechanism. The regional disparities due to global investments strengthening only the economic base of cities (Kandu, 2007) with growing globalisation induced "immobility" of male migrants pose a conceivable threat to the internal security, educational and health up-gradation.

The handicap of the large majority of the Urban Local Bodies in identifying crucial infrastructural projects, their capital requirements, assessment of their environmental repercussions and in realizing their socio-economic benefits boosts private participation with bias towards high credit rating projects. Often investment conducive avenues fall short of fulfilling the needs of the local community.

The pressure on "a few" urban cities will further deteriorate the quality of urban life, "gridlocks will hopelessly compromise productivity" and investors will mark these centres to be too chaotic for investment (Shirish Sankhe, 2010). In the wake of insufficiency in the approach to urban development, the Smart Cities Mission with perceived **inter-urban linkages is a welcome step**.

In 2005, JNNURM (Jawaharlal Nehru National Urban Renewal Mission), now subsumed in AMRUT (Atal Mission for Rejuvenation and Urban Transformation) and Smart Cities Mission, unlike other schemes has recognised the unprecedented importance of cities as the engine of growth and development. AMRUT, complementary to Smart Cities Mission, follows a project based approach in over 500 cities with a population of one lakh and above, comprising water supply, sewerage and seepage management, storm water drainage, urban transport and development of green spaces and parks (Bhagat, 2015)**.**

3. Transforming 'Demographic Nightmare' into 'Demographic Dividend': Proposed Recommendations

India's current age structure warrants targeted fulfilment of the needs of a "critical ingredient" of demographic dividend. The younger echelons of the population merit complete and solemn attention in terms of their needs for quality education, health, skill development and gainful avenues for employment through a complementary partnership between the State, the market and the community. The recommendations focus on achieving equitable access to social opportunities for all.

- **Availability, accessibility, affordability** of the health and education facilities and **accountability** of public and privately administered institutions delivering them will help in taking advantage of the demographic dividend.
- Considering the **expenditure on health** of different countries like China, which spends approximately 5.4 percentage of its GDP (Deloitte, 2015 Health Care Outlook China), India should increase its health and education expenditure comparatively in order to eliminate infrastructural bottlenecks and focus majorly on enhancing the efficiency, accountability and transparency in the system.

- There has been **wide gap in data collection** in the health sector as NFHS-3 was conducted in 2005-06 and NFHS-4 was conducted in 2015-16. This gap must be shortened so that there is some solid basis on which policies are formulated and investments made.
- **Employment creation** remains a persistent bottleneck that the incumbent government hopes to solve through schemes such as 'Make in India'. Following in the footsteps of the erstwhile Asian Tigers, by trying to tap international demand, is both commendable and ambitious. However, in the current scenario of depressed world demand, emphasis should also be on expanding domestic demand to make significant progress in reducing unemployment.
- Incorporating **gender education** in school curriculums and encouraging more girls to attend school by a facilitative framework encompassing safety guidelines for schools and gender sensitive infrastructure will go a long way in curbing gender discrimination.
- Under the economic umbrella, **strengthening budgetary policies** like the **Gender Responsive Budgeting** (GRB) is an important step towards improving gender relations and bridging gender gaps. Formal acknowledgement of women's unpaid labour as valuable work and recognition of their rights to social supports and benefits are also necessary. These can include tax deduction schemes for childcare payments as well as reduction of unpaid labour through provision of state-supported child and elderly care, creation of a national pension plan and greater enforcement of pay equity between genders. This in turn will strengthen India's overall productivity.
- **Urbanisation** can unleash development opportunities only through the right mix of policy with specific targeting of issues of importance.
- **Census towns which could serve as a link** between the cities and the villages have been largely left uncovered by the Union government's urban development schemes. The development is hampered as it is the sole responsibility of the village *panchayats* and local bodies who in turn lack resources, institutional capacity and administrative capability. Inclusion of these towns can lead to the actualisation of the opportunity offered by urbanisation (Bhagat, 2015). There should be increased concentration on inter-cities connections to mitigate unbalanced development and flow of economic activity towards a particular region.
- Emphasis should be on identifying and developing **stable internal sources of funds** like loans from development and banking institutions for formula based urban intervention as opposed to policies aimed at making urban centres attractive avenues only for foreign investment. Joint private and public projects can also supplement the financial constraints to overhaul small towns and cities.
- The **decentralised model of governance** which empowers the local leadership with adequate authority and resources while holding them accountable is a huge requirement for realising the benefits of urbanisation. The recent training workshops for mayors and members of municipal bodies in light of Smart Cities Mission should pave the way to further such efforts.
- The **Smart Cities Mission**, which concentrates on the area-based development approach, opens up an opportunity to inculcate effective commuting mechanisms to and from business centres focusing on walkability and bicycle trips.

4. Conclusion

The paper illustrated how various aspects of demographic profile like the expanding youth bulge, influence of health status on productivity, gender differentials and urbanisation can pose impediments to the translation of the projected growth into sustainable and inclusive economic development.

The macro inertia created by the interplay of higher fertility rates and large cohort compounds population growth rate. The members of the cohort find it increasingly difficult to achieve higher standards of education and employment due to limited opportunities. **Other things equal, the relative chances of attaining education, employment and associated magnitude of income are inversely related to the cohort size of the job seeker.** The working-age population does not have sufficient employment avenues and the employers find a dearth of ‘employability’ among the workers. This circularity leads to high incidence of ‘working poor’.

Shrinking opportunities further dent economic valuation of women who are assumingly held responsible for child bearing and rearing. Women also suffer from low relative wages and lower employability. There might be a link between women belonging to larger cohort size and lower wages. This requires further empirical investigation.

Pan Indian and regional health statistics fare poorly for India in comparison to other Asian countries. There are glaring inadequacies in health provisioning, accessibility and affordability. Higher productivity for leveraging capability can be built only on better health status. The rural-urban and the inter-state differences emerge due to “insufficient public investments” and lack of “synergies” between Centre and State financing and administration (Rama Baru, 2010). There is excessive dependence on the ‘highly expensive, exploitative and unregulated’ private sector for outpatient and inpatient care due to weakness in delivery by the public sector.

Changing trends in urbanisation and thinning employment opportunities under the wake of globalisation constrict inclusive and sustainable economic development. Amitabh Kandu opines “immobility” of male migrants which unveils the “transfer encompassed poignant vulnerabilities” as the society and production mechanisms shift from mass-based to knowledge-based systems in the wake of globalisation (Kandu, 2007). The unskilled youth cohort is unable to establish a stronghold in urban areas characterized by growing demand for employable skills, information and finances.

The paper proposes some recommendations which were thought needful to resolve various above-mentioned issues. Increased public expenditure, exhaustive and frequent collection of data, gender sensitive policies, inclusion of census towns under direct focus of urbanisation and strengthening the existing model of decentralized governance might prove helpful.

Thus, demography holds the key to inclusive realisation of economic progress. The above policy package, we hope, will shift the demographic pivot away from an impending doom towards a reservoir of strengths ensuring holistic development and a better life for all.

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Impact Analysis of Comprehensive Economic Cooperation Agreement signed between India and Malaysia

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Abstract

Since time immemorial, trade has been central to a nation's economy. With the evolution of international movement of commodities, international trade flourished. Ever since modern history, countries have been signing trade agreements to facilitate international trade and to reap the benefits of easy trade. In the process, several countries have had an upper hand in terms of the favourability of these agreements, leading to a favourable position of their balance of trade with the partner country. The impact of these agreements is not only felt at a macro level, but also at a micro level chapter-wise segregation of commodities. This paper seeks to assess the impact of the Comprehensive Economic Cooperation Agreement (CECA) signed and implemented between India and Malaysia in 2011, both at the macro and the micro level. For the analysis, the project uses several statistical tools which include trade intensity and competitiveness indices. These indices have been interpreted in the Indian-Malaysian context and conclusions have been derived.

Key words: CECA, Trade, India, Malaysia, Free Trade Agreements
JEL Classification: F14, F53, F62

1. Introduction

Free Trade Agreements are arrangements between two or more countries or trading blocks, which result in the reduction or removal of tariff and non-tariff barriers for substantial trade between them. Free Trade Agreements can cover trade in goods, services and intellectual property rights.

On the same lines, Comprehensive Economic Cooperation Agreements/Comprehensive Economic Partnership Cooperation Agreements are arrangements which are comparatively more holistic as compared to Free Trade Agreements. They deal with the trade of goods, services, investment, Intellectual Property Rights, government procurements, disputes etc between member nations/blocs.

1.1 Historical prelude

No country in this world possesses all the resources for economic production of all goods and services consumed by its people. Post-independence and before the liberalisation era, India followed a protectionist policy for protecting the indigenous manufacturers, complete with import substitution. Our average tariffs exceeded 200% and there were extensive quantitative restrictions on imports. However, the government was encouraging export but due to the Balance of Payments crisis and several other contributory factors, India adopted the New Economic Policy in 1991, with its three-pronged approach of liberalisation, privatisation and

[1]This paper was written during an internship at the Rakshak Foundation where the author got the opportunity to work with the Tariff Commission.

globalisation. Since then, substantial liberalisation has been carried out. The tariff line wise import policy was first introduced in 1996 and at that time itself, 6161 tariff lines were made free. In line with India's commitment to the WTO, substantive restrictions on all import items have been withdrawn. Since then, India's share in world's exports has risen, and so has its share in the world's total imports. All of India's trade agreements have been implemented after 1991.

2. Data extraction

This paper draws its conclusions from the data analysis done with the help of certain statistical tools like the Compounded Annual Growth Rate (CAGR), Trade Competitiveness Index, Trade Intensity Index, Balance of Trade, etc.

For the purpose of impact analysis of the CECA between India and Malaysia, it is necessary to compare current situation with the situation prior to the implementation of the CECA. Since it is undeniable that international markets take some time to adjust to the changed tariffs, the impact of most trade agreements is observed after a period of 2-3 years. In this paper, the author has compared the data 3 years prior to the agreement and 3 years post the agreement.

3. India-Malaysia CECA

Indo-Malaysian Comprehensive Economic Cooperation Agreement was signed between the government of the Republic of India and the government of Malaysia on 18th February, 2011 and was implemented from 1st July, 2011.

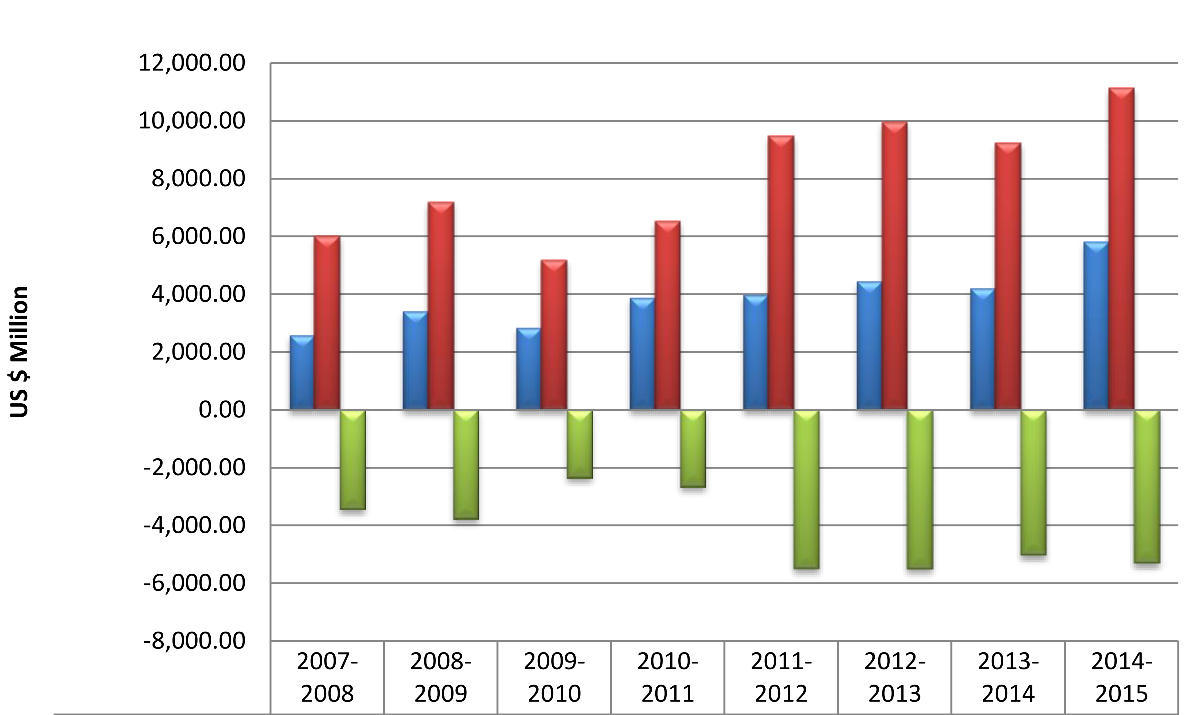
Malaysia has signed 14 Free Trade Agreements and implemented 13 of those as of now. Some of them were signed as a part of ASEAN, and others individually, Negotiations pertaining to 7 Free Trade Agreements have been launched.

3.1 Macro-analysis

In order to understand the impact of the CECA on the trade between India and Malaysia, this paper looks at the following:

- Trend of exports and imports and hence the trend of Balance of Trade between India and Malaysia
- Percentage share of Malaysia in India's total imports and exports
- Trade Intensity Index, Export Intensity Index and Import Intensity Index
- Trade Competitiveness Index
- Compounded Annual Growth Rate of trade between India and Malaysia.

Figure 1: Trend of exports, imports and Balance of Trade between India and Malaysia

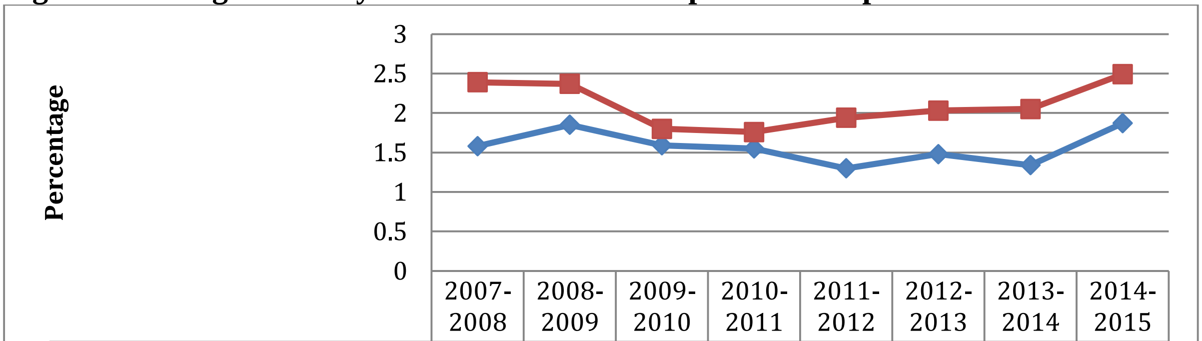


	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
EXPORT	2,575.26	3,419.97	2,835.41	3,871.17	3,980.36	4,444.07	4,197.93	5,819.19
IMPORT	6,012.90	7,184.78	5,176.78	6,523.58	9,473.64	9,951.06	9,229.88	11,133.95
TRADE BALANCE	-3,437.64	-3,764.81	-2,341.37	-2,652.41	-5,493.28	-5,506.99	-5,031.95	-5,314.76

Source: *DGFT, Ministry of Commerce and Industry, Government of India.*

The red bars show India's imports from Malaysia. The blue bars show India's exports to Malaysia, and the red and blue bars together denote the total trade between India and Malaysia. It is evident from the data and the graph that after the implementation of the CECA in 2011, the volume of both exports and imports increased. However, the rate of increase of imports was higher than the rate of increase of exports, leading to an even larger Balance of Trade deficit.

Figure 2: Change in Malaysia's share in India's exports and imports



	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
India's imports from Malaysia as a percentage of India's total imports	0.81	0.52	0.21	0.21	0.64	0.55	0.71	0.62
India's exports to malaysia as a percentage of India's total exports	1.58	1.85	1.59	1.55	1.3	1.48	1.34	1.87

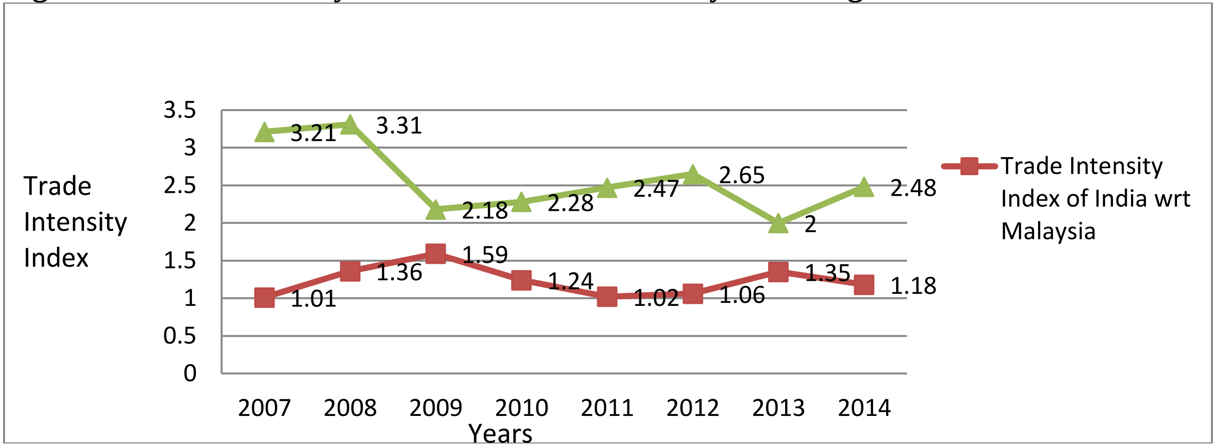
Source: *DGFT, Ministry of Commerce and Industry, Government of India.*

Malaysia's share in India's imports and exports was falling before 2011, the year of the signing and implementation of the CECA. After the CECA, both the shares started rising.

3.2 Interpretation of trade indicators between India and Malaysia

Trade intensity indices quantify the benefits to the countries involved in the agreement. As the intensity of trade deepens, both the countries benefit. Trade Intensity Index (TII) is the ratio of a trading partner's share to a country/region's total trade and the share of world trade with the same trading partner. Trade Intensity Index can be further broken down into Export Intensity Index and Import Intensity Index. Export Intensity Index (EII) is the ratio of a trading partner's share to a country/region's total exports and the share of world exports going to the same trading partner. Whereas the Import Intensity Index (III) is the ratio of import share of a country to the share of world import from a partner. The interpretations of the three indices have been given below.

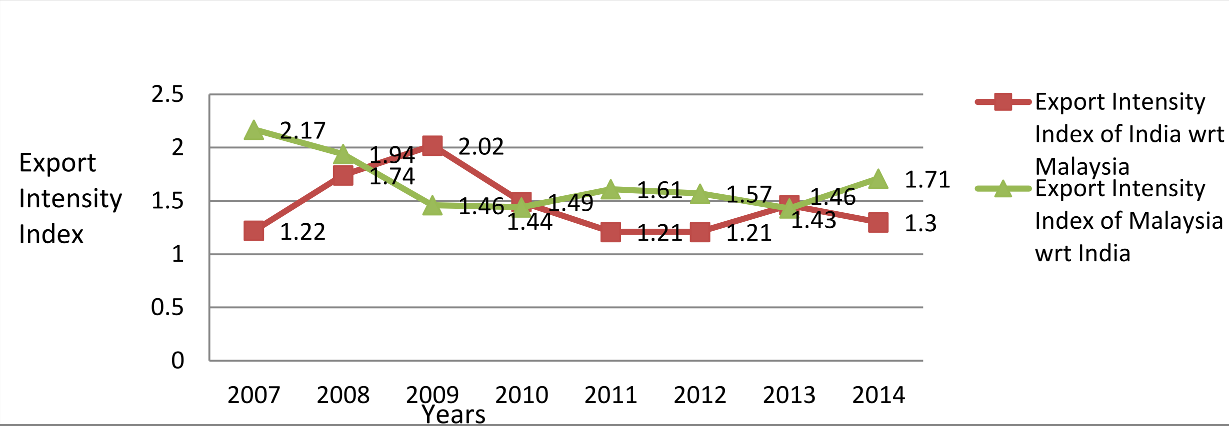
Figure 3: Trade Intensity Indices of India and Malaysia during 2007-2014



Source: *Author's calculations based on UN Comtrade data.*

The TII between India and Malaysia has remained greater than 1 between 2007 and 2014, indicating that the trade between India and Malaysia was intense during this period. However, the TII of India with Malaysia in years post-agreement is found to be less than the TII in 2009, indicating that the intensity of trade between India and Malaysia did not improve significantly after the CECA. On the other hand, the TII of India with Malaysia increased post the agreement years (2013 being an exception), as compared to the TII in 2009. Additionally, throughout the period under study, the TII of Malaysia with India has remained higher than the TII of India with Malaysia, implying that Malaysia's trade with India is more intense as compared to India's trade with Malaysia.

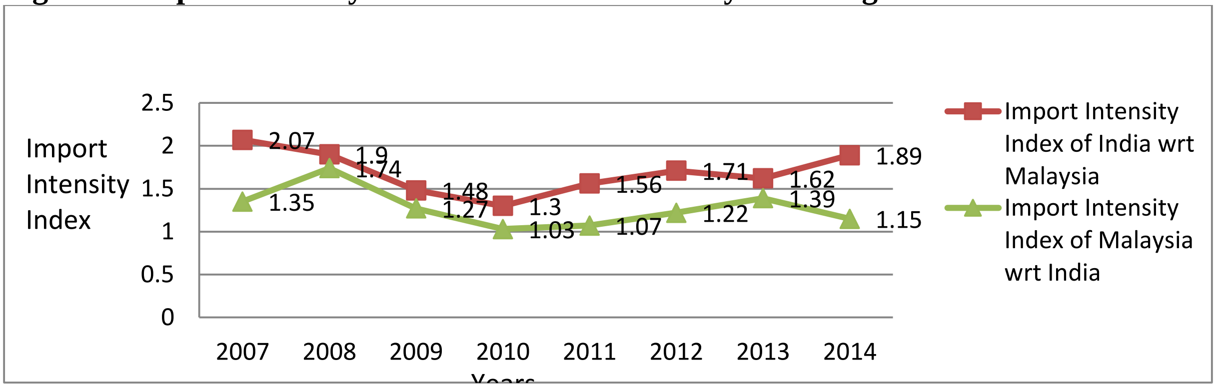
Figure 4: Export Intensity Indices of India and Malaysia during 2007-2014



Source: *Author's calculations based on UN Comtrade data.*

As the TII is further broken into EII and III, it can be seen that both remain greater than 1 during the period of study indicating that India's exports and imports are intense with Malaysia. But the EII of Malaysia with respect to India is greater than the EII of India with respect to Malaysia, during the period 2009-2014 implying that Malaysia's exports to India are more intense than India's exports to Malaysia. On the other hand, the reverse is true in the case of India's imports from Malaysia, as compared to Malaysia's imports from India. The III is higher for India with respect to Malaysia than the III for Malaysia with respect to India during 2009-2014.

Figure 5: Import Intensity Indices of India and Malaysia during 2007-2014



Source: *Author's calculations based on UN Comtrade data.*

It is worth noting that the III of India with respect to Malaysia has increased significantly after 2011, the year of the agreement. However, in the case of Malaysia, the III with respect to India in the post agreement years has either fallen or remained the same (with 2013 being an exception).

From the analysis of TII, EII and III, it appears that post CECA, India's trade intensity with Malaysia is biased against imports as compared to exports to Malaysia.

3.3 Trade Competitiveness Index

Table 1: Calculation of Trade Competitiveness Index

Year	India's exports to Malaysia	India's imports from Malaysia	Total trade between India and Malaysia	Trade Balance between India and Malaysia	Trade Competitiveness Index[2]
2007-2008	2,575.26	6,012.90	8,588.16	-3,437.64	-0.40
2008-2009	3,419.97	7,184.78	10,604.75	-3,764.81	-0.36
2009-2010	2,835.41	5,176.78	8,012.19	-2,341.37	-0.29
2010-2011	3,871.17	6,523.58	10,394.75	-2,652.41	-0.26
2011-2012	3,980.36	9,473.64	13,454.00	-5,493.28	-0.41
2012-2013	4,444.07	9,951.06	14,395.13	-5,506.99	-0.38
2013-2014	4,197.93	9,229.88	13,427.80	-5,031.95	-0.38
2014-2015	5,819.19	11,133.95	16,953.15	-5,314.76	-0.31

Source: *Worked out by the author on the basis of Export/Import Data Bank, Department of Commerce [Extracted on 8 June 2015, 1130 hours].*

Interpretation of TCI:

Since the TCI[2] lies between 0 and -1 throughout, it implies that India faces a trade disadvantage. The TCI increased in magnitude immediately after the implementation of the CECA in 2011, and then went on to decrease in magnitude at an increasing rate. Though the CECA did not improve the competitive position of India significantly, it points towards a positive trend in India's competitive advantage.

Compounded Annual Growth Rate

Table 2: Compounded Annual Growth Rate

	2008-09 - 2010-11 (Pre-agreement)	**2012-13- 2014-15 (Post-agreement)**
Exports from India to Malaysia	**6.39%**	**14.43%**
Imports from Malaysia to India	**-4.71%**	**5.78%**

The Compounded Annual Growth Rate[3] smoothens out the increase/decrease in the volume of exports and imports. The CAGR for both exports and imports has increased after the implementation of CECA in 2011, but not considerably. Hence, not much can be derived from the CAGR analysis.

[2]Trade Competitiveness= (E_j-I_j)/ E_j+I_j) where E_j is the industry exports of a country and I_j is the imports. The values of TCI range between 1 and -1. For the purpose of interpretation, if the value of TCI is greater than 0, it means that the industry under study is in a dominant position. On the other hand, if the value of TCI is less than 0, it means that the industry under study is at a competitive disadvantage.

[3]Formula for CAGR: $\mathrm{CAGR}(t_0, t_n) = (V(t_n)/V(t_0))^{\frac{1}{t_n - t_0}} - 1$

3.4 Micro analysis

In this section, macro analysis of various commodities has been conducted.

Table 3: Top few commodities imported from Malaysia to India as of 2014-15

HS Code /Chapter	Commodity	Import value (in US $ Million)	Percentage share %
27	MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES.	2,762.69	25%
15	ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVAGE PRODUCTS; PRE. EDIBLE FATS; ANIMAL OR VEGETABLE WAXEX.	2,591.87	23%
85	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS.	1,263.58	11%
84	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF.	709.07	6%
44	WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL.	675.71	6%
	Total	**8,002.92**	**71%**
	Total (Chapter 1-99)	**11133.95**	**100%**

Source: *Export/Import Data Bank, Department of Commerce [Extracted on 8th June, 2015, 1130 hours].*

Table 4: Top few commodities exported to Malaysia from India as of 2014-2015

HS Code/ Chapter	Commodity	2014-2015	Percentage share
27	MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATION; BITUMINOUS SUBSTANCES; MINERAL WAXES.	1,248.69	21.46%
89	SHIPS, BOATS AND FLOATING STRUCTURES.	935.08	16.07%
29	ORGANIC CHEMICALS	436.57	7.50%
2[4]	MEAT AND EDIBLE MEAT OFFAL.	423.11	7.27%
84	NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCES; PARTS THEREOF.	318.76	5.48%
74	COPPER AND ARTICLES THEREOF.	215.9	3.71%
75	NICKEL AND ARTICLES THEREOF.	198.87	3.42%
85	ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS, AND PARTS.	159.27	2.74%

[4] Data unavailable

	Total	**3926.25**	**67.65%**
	Total (Chapter 1-99)	**5819.19**	**100%**

Source: *Export/Import Data Bank, Department of Commerce [Extracted on 8th June, 2015, 1130 hours]*.

The number of commodities chosen for exports and imports are different because of the share of each commodity. Commodities have been chosen in a way such that more than 65% of the volume of trade (either imports or exports) between India and Malaysia is covered by those commodities.

The following are the summaries of the TCI and CAGR calculations:

Table 5: Trends in Trade Competitiveness for selected Chapters (India w.r.t. Malaysia)

Chapter No.	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
27	-0.89	-0.81	-0.63	-0.69	-0.67	-0.69	-0.36	-0.44
89	-0.76	-0.5	0.83	0.74	-0.42	0.13	-1	0.71
29	-0.47	-0.16	-0.12	-0.32	-0.04	-0.14	0.14	-0.01
84	-0.76	-0.74	-0.56	-0.63	-0.67	-0.66	-0.37	-0.37
74	0.59	0.62	0.16	0.31	-0.2	-0.88	0.19	-0.41
75	-0.08	-0.7	-0.12	-0.04	-0.58	-0.67	-0.57	-0.82
85	-0.76	-0.68	-0.51	-0.8	-0.72	-0.8	-0.76	-0.77
15	-0.81	-0.82	-0.93	-0.95	-0.97	-0.99	-0.99	-0.97
44	-0.997	-0.995	-0.997	-0.996	-0.995	-0.997	-0.993	-0.995

Source: *Calculated by the author on the basis of UN Comtrade data.*

Chapter 27: TCI has increased over the years. The change in exports smoothened over the two periods indicates that the CECA has been favourable for Chapter 27's exports to Malaysia. In the case of imports too, the CECA has resulted in an increase in the rate of increase of imports.
Chapter 89: The TCI for Chapter 89 shows an ambiguous trend. There can be several reasons for this, but the impact of the CECA on Chapter 28 cannot be inferred, nor can its reasons be attributed to specific causes unless the specific industry is studied in both the countries. After 2011, the CAGR has dropped substantially to 9.34%. On the other hand, the CAGR has increased substantially for imports of Chapter 89. Hence, the CECA has put India at an unfavourable position as compared to Malaysia with respect to Chapter 89.
Chapter 29: The TCI for Chapter 29 is decreasing. This illustrates that with the advent of the CECA, the exports have increased more than the imports. This implies that the CECA was favourable for India in terms of Chapter 29.
Chapter 84: The TCI for Chapter 84 is negative throughout, however, it has shown an increasing trend after the CECA. This suggests that the CECA has been favourable for India in terms of Chapter 84.
Chapter 74: The TCI for Chapter 74 shows an ambiguous trend. However, it can be observed that the TCI has increasingly turned negative after the CECA. Hence, it can be inferred that the CECA has been unfavourable for India, in terms of Chapter 74.

Chapter 75: TCI for Chapter 75 has decreased. This shows the unfavourability of CECA for India with respect to Chapter 75. This is because the imports have increased at a greater rate than the exports.
Chapter 85: The TCI for Chapter 85 has remained stable over the years, so no significant conclusion can be drawn related to this chapter by just examining TCI as a statistical tool.
Chapter 15: The analysis of TCI for Chapter 15 is the same as that of Chapter 85.
Chapter 44: The analysis of TCI for Chapter 44 is the same as that of Chapter 85.

4. Conclusions and Findings

Trade Agreements are signed to facilitate trade between countries. The impact of trade agreements can be favourable for one country and unfavourable for the other, and the same can be said for different commodities as well. Trade is dynamic and the impact of trade agreements on international trade is complex. The exports from India to Malaysia have increased after the implementation of CECA in 2011. India's imports from Malaysia have also increased after the implementation of the CECA. However, the rate of increase in imports was much higher than the rate of increase in exports. Hence, the Balance of Trade has shown an increasingly downward trend. The Balance of Trade position of India with respect to Malaysia has worsened after the Indo-Malaysian CECA, 2011.

From the analysis of TII, EII and III, it appears that post CECA, India's trade intensity with Malaysia is biased against imports as compared to exports to Malaysia. Since the TCI lies between 0 and -1 throughout, it implies that India has been at a trade disadvantage. The TCI increased in magnitude immediately after the implementation of the CECA in 2011, and then went on to decrease in magnitude at an increasing rate. Though the CECA did not improve the competitive position of India significantly, it points towards a positive trend in India's competitive advantage. The CAGR for both exports and imports has increased after the implementation of CECA in 2011, but not considerably. The CECA has been favourable for some Chapters, unfavourable for others, and insignificant for a few others. The Chapter-wise analysis was shown in the previous section.

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Social Auditing: An Implementable Strategy to Ensure Good Governance

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Abstract

This paper aims to analyse the current framework in the field of social audits in implementation of government schemes in India. The paper begins by explaining what social audits are and how they can facilitate the process of good governance in India. To strengthen the argument in favour of social audits the example of Andhra Pradesh has been taken. Andhra Pradesh has successfully used social auditing to provide insights about MGNREGS with the help of organisations such as the Society for Social Audit, Accountability and Transparency (SSAAT). The paper also examines whether social audits have been successful in putting pressure on states to make them more responsive and accountable. It also assesses the impact of social audits on the efficient functioning of schemes like MGNREGS.

Keywords: Social audit, Accountability, Governance, Transparency
JEL classification: I32, I38, J38, I31

1. Introduction

India is a democratic country in which people are the masters and the government helps regulate the system to serve the people to the best of their abilities. To establish a good governed country and strengthen democracy we need to make a strategy to ensure that the benefits actually percolate down to the real beneficiaries. The Government of India is trying to pass on the benefits to the public in the form of various schemes like MGNREGS, National Livelihood Mission, Mid-Day Meal Scheme, Indira Awaas Yojana, etc. Given India's geographical conditions, management of government schemes is cumbersome and therefore the benefits may not reach the targeted people. An element of corruption comes into the picture and reduces the social welfare intended by the schemes. Corrupt officials may be present in each and every organisation as a result of which no machinery can run without bribes. The intermediaries or bureaucrats can cheat the state subsidy system and swindle wages. These possibilities are very common across all welfare schemes run by the government. In case of MGNREGS, most of the people complain about inadequate maintenance of records and job cards, delayed or no payment of wages and fake names on registers. This paper discusses social auditing – the procedure of evaluating a firm's various codes of conduct, operating procedures, and other factors to determine its effect on the society.

2. Literature Review

The paper by Sushmita Gahlot (2013) analyses the current framework in the field of social auditing in implementation of government schemes in India. It traces the evolution of the concept over the last 3 decades. The paper examines Andhra Pradesh, Rajasthan and the North Eastern states where social audits have helped improve the implementation of government

[1]This paper was written during the course of an internship at the Rakshak Foundation.

schemes. The author concludes the paper by mentioning the problems faced while conducting social audits and suggests measures to improve the conduction of social audits of various government schemes.

The paper by Aiyar, Yamini and S Samji (2009) documents Andhra Pradesh's experience of institutionalizing social audits into the implementation of the MNREGA and uses it to analyze the social audit process. They also make use of the empirical work aimed at measuring the effectiveness of social audits conducted in Andhra Pradesh between March and December 2007. The paper focuses on the role of the government in conducting social audits. They elucidate measures which can be adopted to make social audits more effective.

The purpose of the paper by Swapan Kumar Roy (2012) is to analyse the importance of social auditing in every social activity. In this paper, the author has tried to explain the significance of social audits in the current scenario. Universal and imperative factors regarding social audits are demonstrated with examples in the paper. The paper discusses the developments in the public or private sector along with their social achievements. It also explains the availability and use of the social audit method.

3. What is a Social Audit?

Social audit is an emerging concept that is becoming popular and relevant to ensure good governance.

It is defined as a standard process in which the civil society identifies the gap between the actual impact and desired impact of a project/programme/policy. It revolves around the principles of equity, social responsibility, trust, transparency, accountability, community benefit and inclusiveness. It is a process by which the details of the public resources that are used for development purposes are shared with the public, often through a public platform. Financial as well as non-financial resources are shared with the beneficiaries. The need of the hour is to bring about a few changes in the existing rules. Hence, the government should make social auditing mandatory in every field.

3.1 Social auditing in India

The term "social audit" was introduced by the Government of India with the passing of the MGNREGA. According to Section 17 of the Act, it is mandatory to conduct social audits twice a year under this scheme. The guidelines of the Mid-Day Meal scheme issued by the Government of India have included "social audit" as a fundamental part of the 12th Five Year Plan. Civil Society Organisations (CSOs), political representatives, civil servants, Non-governmental Organisations (NGOs), and workers of Rajasthan and Anantapur district of Andhra Pradesh collectively organised social audits to eradicate mass corruption under the government scheme Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). A grass root organisation, Mazdoor Kisan Shakti Sangathan (MKSS) has struggled tirelessly for minimum wages in Rajasthan. They started the concept of social audit while fighting corruption in the public works in the early 1990s. It is recommended that the government should expand the ambit of social audits to cover the National Rural Health Mission, the Sarva Shiksha Abhiyan and the Accelerated Rural Water Supply Programmeas well.

3.2 Social auditing – How can it help?

Following are some of the advantages of social auditing:

- The most vital **advantage of social auditing is that it helps empower people by making government procedure more accountable and transparent**. It also improves the financial performance of the government as well as that of other organisations. Social audits utilise externally verified auditing which helps validate their transparency and cohesion.
- It facilitates decentralisation of the country by helping communities participate in decision-making, promoting the concept of sharing of responsibility among individuals and empowering grass root organisations.
- It helps to create and implement policies in a more socially responsible manner by including the perspectives of all the stakeholders, minimising corruption and maximising social benefits. It also encourages interdependence between the government and the stakeholders as well as between the organisation and stakeholders.

4. Case Study: Social Auditing in MGNREGA

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is a flagship programme introduced by the Government of India in 2006 under the National Rural Employment Guarantee Act, 2005. Under MGNREGA, **the rural households that are willing to undertake unskilled manual labour are intrinsically entitled to demand employment up to hundred days in a year from their *gram panchayats*.**

Central ideas of the MGNREGA are provision of social security measures, eradication of rural poverty, creation of imperishable and productive assets, and conservation of the environment. It guarantees the "Right to Work" to pave the way for comprehensive growth. Ever since social auditing has been made mandatory under MGNREGA it has found a place in almost all social sector programmes in India.

4.1 Why do we need social audits in MGNREGS?

MGNREGS faces many complaints regarding alleged corruption in its implementation. Researchers like Sowmya Kidambi from SSAAT believe that people are not getting the promised wages and proper records have not been maintained. As a result, the scheme is not reducing rural-urban migration or fulfilling its aim. Some of the key features of corruption under MGNREGS are as follows:

- **Introduction of ghost workers and fake names on the muster rolls allowing middlemen to siphon off the funds from this scheme**.
- Inflation of the number of trips taken by transporting vehicles to receive more funds from the government.
- Collaboration between middlemen and politicians allowing both parties to continue wrongdoings.

Table 1: State wise data on comparison between total funds available and the total funds utilised

Sr. No.	States	Central Release (in crores)	Total Funds Available (in crores)	Total Expenditure (in crores)	% of Total Expenditure against Available Funds	Expenditure on Wages (in crores)
1	Andhra Pradesh	4413.38	4653.24	2960.71	63.63	2276.30
2	Arunachal Pradesh	118.53	132.61	34.73	26.19	22.03
3	Assam	573.50	690.01	480.22	69	315.60
4	Bihar	1505.71	2218.12	1349	60.82	796.78
5	Chhattisgarh	1321.02	1922.97	1223.36	63.64	888.67
6	Gujarat	245.90	432.23	303.66	70	170.00
7	Haryana	316	353.97	230.47	70.76	174.26
8	Himachal Pradesh	402.29	509.40	373.38	73	254
9	Jammu and Kashmir	428.26	670.77	342.95	51.13	157.78
10	Jharkhand	621.43	998.68	645.70	64.66	416
11	Karnataka	1303.52	1698.20	1367.19	80.51	907.56
12	Kerala	1027.11	1175.93	981.94	83.76	918.8
13	Madhya Pradesh	1753.34	2021.30	1207.87	59	804.12
14	Maharashtra	1152.92	1462.75	910.49	62.25	603
15	Manipur	186	203.87	119.29	58	87
16	Meghalaya	218.91	275.33	134.81	48.96	97.6
17	Mizoram	184.74	322.34	133.91	41	112.24
18	Nagaland	260.63	287.73	116.40	40	88
19	Odisha	726.92	1081.32	788.30	72.52	564
20	Punjab	172.34	194.81	167	85	117
21	Rajasthan	1909.43	2771	2009.71	72	1157
22	Sikkim	82.46	87	14	39	20
23	Tamil Nadu	4690.21	5246	2805.40	51	2671
24	Tripura	803.66	899	575	64	418
25	Uttar Pradesh	2796.39	3470	2820	81.26	1835.90
26	Uttarakhand	330.01	348	251	72	159
27	West Bengal	2314.38	2915	2441	83.76	1576
28	Andaman and Nicobar	17.18	18	5.96	32	4.84
29	Dadra and Nagar Haveli	NR	NR	NR	NR	NR
30	Daman & Diu	NR	NR	NR	NR	NR
31	Goa	0	3	1.09	28.12	0.84
32	Lakshadweep	0.17	1	0,50	45.27	0.27
33	Pondicherry	8.80	18	9.16	49,66	8.84

34	Chandigarh	NR	NR	NR	NR	NR
	TOTAL	**29885.92**	**37084.76**	**24848.75**	**67.01**	**17832.19**

Source: *Ministry of Rural Development, Government of India (2014).*

After examination of data from the financial year 2013-14 uptil December 2013, it may be established that implementation of the scheme is lacking in many aspects due to corruption which necessitates the need for social audits. In the above mentioned time period Rs 17,832 crore, 76% of the total expenditure, was spent on wages. Out of the 4.3 crore household that seeked employment only about 3.8 crore actually got employed and only 3.45% of households completed hundred days of work. Work taken up at the beginning was 1.1 crore out of which only 10 lakh was completed by the end of the year, this constituted only 10% of the total number. Data clearly establishes that the scheme is plagued with corruption and hence is not able to meet its objective of alleviating poverty.

4.1.1 Gap analysis in MNREGA scheme (Andhra Pradesh)

Loopholes found in the MGNREGS upon conduction of social audits in Andhra Pradesh, 2013-2014:

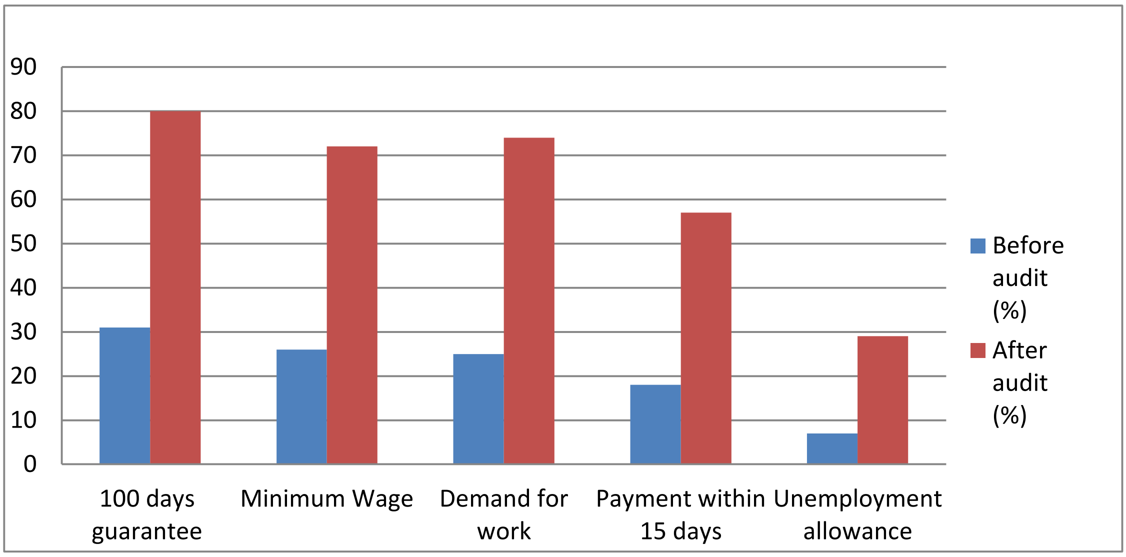
- Corruption in distribution of wages and absentee payment are a serious concern. Money is paid only after a cut is taken from the wages. To eliminate corruption, defaulters need to be given exemplary punishments including termination of services in case of the involvement of government employees.
- The scheme was established for the poor but **daily wages under the scheme are extremely low keeping in mind the present inflation rate**.
- Social audits are allotted to NGOs via auctions leading to a biased evaluation which does not allow the correct picture to emerge. Instead, independent agencies or the central government should conduct them for an objective review.
- **Inclusion of only temporary asset building or disaster mitigation activities in the scheme leads to corruption because more often than not these get washed away in the rains or floods thereby leading to limited or no evaluation of the work which is carried out.**
- Excessive control is exercised by the center and thus the states do not have the power to alter schemes to make them more accountable.

4.2 Results

Society for Social Audit, Accountability and Transparency (SSAAT) conducted social audits in different villages of Andhra Pradesh on MGNREGS (2013-2014). Their findings are summarized below (Figure 1):

- Increased awareness about the hundred-day employment scheme, namely, MGNREGS.
- 46% increase in individuals receiving minimum wages.
- Approximately 40% increase in the number of people who received wages within 15 days of the work.
- Increase in the number of individuals who received unemployment allowances 15 days post registration from 7% in 2013 to 29% in 2014.
- Increase in permanent assets as well as the number of people employed for hundred days.

Figure 1: Impact of Social Audits in Andhra Pradesh



Source: *Live Mint, the social audits record.*

Andhra Pradesh is a state with relatively low levels of corruption and has become a model for other states. Social audits have helped the state remove corruption from government schemes and organisations. The figure above clearly shows the advantages of social audits for the people and how they can make any scheme more effective so that no middlemen can take advantage of the scheme. The government has decided to carry out social audits in MGNREGS in other states as well drawing from guidelines of the study conducted in Andhra Pradesh.

5. Conclusion

India is growing at a fast rate and this trend needs to continue in the future. Four important aspects that determine a country's growth are as follows:

- Growth - Rate of growth, quality of growth and the extent of growth.
- Globalisation - Trade (exports and imports), investment and communication.
- Geo-Politics - Relations with neighbouring countries.
- Governance - Governance is of crucial significance for sustainable growth. Good governance is explained as a system which ensures participation by the public, but most importantly good governance must fortify accountability of government schemes.

India needs social audits to promote growth with transparency and accountability. Former Prime Minister, Rajiv Gandhi said, **"Only 16 paisa out of one rupee allotted by the government reaches the poor sections of the society"**. The Times of India published an article on the 19th of December, 2004 in which Aiyar Swaminathan commented, "**Likelihood of money reaching the poor would be higher if we simply drop the money via a helicopter or a gas balloon into rural areas than route it through employment programmes"**.

Public schemes are not able to achieve their objective and the situation of the poor has not changed even after so much effort by the government via the introduction of various schemes. Even today, there exists a crisis of credibility and trust in government programmes and schemes. High economic growth can be stalled by corruption at all levels and by leakages of funds in public programmes. The misuse of resources belonging to shareholders and stakeholders calls for social audits in the private as well as the public sector. **Social audits are a toolkit for strengthening accountability in the service delivery system of the government**.

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Role of an Organisation in the Implementation of Government Schemes

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Abstract

This paper is aimed at examining the differences at the ground level in the implementation of government schemes due to the active involvement of an organization in increasing awareness of the village populace and in empowering women. The field of research for this paper is a small village in the Muzaffarpur District in Bihar, where Samaj Parivartan Shakti Sangathan (SPSS) has actively been working for the past five years. MGNREGS is the government scheme on which the research work was focused with the aim of finding out its importance in improving the social structure and lowering corruption levels to augment the people's welfare in the region. The paper also cites different case studies to capture the ground realities of MGNREGS. The paper includes interviews of people which reflect how the lives of poor rural households have transformed after their family members became an active member of an organization or *sangathan*.

Keywords: Organisation, Corruption, Development, MNREGS
JEL classification: J38; I38; I32

1. Introduction

The Mahatma Gandhi National Rural Employment Act (MNREGA) is a national act funded principally by the central government and is implemented in all states with the aim of creating a justifiable "right to work" for rural households. This was introduced in 2005 in order to set an unofficial minimum wage for all workers and to provide employment to all. The MGNREGS wage was always the lowest because it was expected to create a thrust to allow the people in the rural markets to eventually become independent such that they would be able to rise above their need for the scheme. Initially, it was expected that it could be phased out after 10 years, but the Indian economy needs this scheme even today due to the number of people who depend upon this. For some it helps to hedge against the risk of climate change in agriculture while for others it is a source of empowerment.

Reetika Khera and Nandini Nayak wrote a paper in 2009 titled "Women Workers and Perception of the National Rural Employment Act" which focused on the socio-economic consequences of MGNREGA (previously known as NREGA) for women workers. Data was collected from six Hindi-speaking states in North India and the findings suggest that a **miniscule increase in employment has resulted in a substantial difference in the standards of living of the women through NREGA**, clearly setting stage for the need for such an act. However, the analysis is limited only to one gender, that is the females, and this provides a basis for further improvement in the paper.

[1]The author wrote this paper during the month that she spent with SPSS at Muzaffarpur. The content of the paper is based on her observations and data collection during the period.

Scholars have done extensive research on the various aspects of MGNREGA, like its impact on wage rates, household incomes and social relations (Dreze & Oldiges, 2011; Khera, 2011; Carswell & DeNeve, 2014).

According to Mathur (2007), a system of regular and continuous flow of information is essential. The government must take the lead, be proactive, mobilise institutions and groups, and use the media effectively. NREGS involves lakhs of government officials, *panchayat* functionaries, elected representatives, NGOs and community groups. They play a critical role, but are not prepared for the challenge. Khera (2008) thinks that the successful implementation of the NREGA in the Pati block in Orissa (India) goes beyond the ability of its residents to claim their rights. This is brought out by the high levels of engagement with the programme in terms of planning, implementation and monitoring.

Mathur (2009) states that in a social audit undertaken in Andhra Pradesh (India), it was found that in certain villages, some people stated that they had not been paid for the work done. When comparisons were made between the payments as per the pass book and the payments as per the job card, it was discovered that the job card did not contain the inner pages that record the work done by each person; the job card itself was incomplete.

Dutta (2012) brings out the importance of accountability for any government scheme particularly in NREGA, where he divides accountability into three parts. The first being donor governments and agencies who consider accountability an integral aspect of good governance and essential for economic development, in exchange for development assistance. The second discourse is non-government-organisation-related, on accountability to various stakeholders, including beneficiaries of development assistance. The third discourse encompasses the voices of individuals and civil society groups that demand greater accountability from government and non-government-agencies.

Various other reports have highlighted that the MNREGA has more utility than the claim of various sceptics who regard it as a scheme of "digging and filling up wells". This paper does not aim to deal with the data that has been collected so far in order to prove the worth of this Act, but instead tries to examine the role that a particular organization plays in the implementation of government programmes like MGNREGA, PDS or ICDS. It aims to understand how organizations such as SPSS help in preventing leakages in schemes like MGNREGS and empower its female members to become the leaders of change.

2. MGNREGS and the Lives Affected

The Samaj Parivartan Shakti Sangathan (SPSS) is an organisation working in an extremely impoverished region of Bihar. It was founded by Sanjay Sahni in the year 2009 in the Ratnauli Panchayat in Muzaffarpur district of Bihar. Previously, Sanjay Sahni was an electrician in Delhi, where he had been seeking employment since the age of 14. In the summer of 2008, he visited his village to witness dissatisfaction among people with regards to the behavior of local leaders and corrupt government officers involved in MGNREGS. Their grievances were regarding non-payment for their labour and in some cases no compensation for even 15 days of work under this policy. The MGNREGA promises 100 days employment in rural India to adult members of a family. Sanjay was not intimated with information regarding MGNREGA barring the fact that it promised 100 days of employment to job card holders. He was perplexed as the efforts of the government were not translating into results for the villagers. After researching about MGNREGA and its implementation in his district he was able to establish that there were records of payments to workers known to him who had in fact not received the concerned payment. Official records did not add up to the testimony provided to him by the workers. On continuing his research further he was able to contact Nikhil Dey, a social activist known for his contribution to Mazdoor Kissan Shakti Sangathan (MKSS), the Right to Food and Right to Information campaigns, and MGNREGA.

After this he was acquainted with the nuances of the issue and took it upon himself to assist people to remove corruption and facilitate the smooth functioning of the scheme which was vital to the livelihood of so many. He seeked employment under MGNREGA and became a job card holder. He worked towards organizing the workers by creating awareness and urged them to unite in the fight for re-attainment of their rights. He initiated his campaign to **mobilise against corruption** in the implementation of the scheme. His aim was to attain 100 days of employment for every card holder, payment for days when labour is supplied and provision of unemployment allowance in case work is not allotted. He now strives to campaign for corruption free villages as well. SPSS enabled others to start organizations within their own *panchayats*. Currently, there are 15 independent organizations (*sangathans*) working in the Muzaffarpur District, founded by female NREGA workers; like Hamara Ekta Manch, Bihar MNREGA Watch, Majdoor Ekta Manch.

Gulaab Devi's tale proves to be even more captivating and motivational. Her fight commenced as a fight aginst corruption in MGNREGA. She was the first person from Taravishunpur Village to join SPSS. But later went on to initiate her own *sangathan*, 'Hamara Ekta Manch' (HAM) in Rampur Mani Panchayat. Almost 90 percent of the members of the *sangathan*, SPSS or HAM, are **women from different caste and class backgrounds but there is a sense of equality amongst them in all spheres**. Currently, her struggle has taken a new turn, she is campaining against the corruption in the Aanganwadi in her *panchayat* where the *sevika* is distributing grains without weighing them. This allows the *sevika* distribute grains of inferior quality. She has fought collectively with her *saathis* when government officers denied them the Muster Roll (MR) of the work that was allotted. Officers claimed that workers were not allowed to have the MR with them at the work sites, whereas the official rules say otherwise. The villagers refused to work without the MR and asked the concerned officers for the unemployment allowance that they were entitled to instead.

One of their biggest achievements is the ease with which they are now able to complain against local officers to the District Magistrate (DM) and call the concerned officer to demand what they have been entitled to. The *sangathan* has covered issues other than those related to MGNREGA as well, like the ongoing battle against corruption in the Public Distribution System. When they were made aware of the fact that the Deputy District Commissioner (DDC) had ordered the dealer to give lesser quantities of grains to the people they directly approached the DDC and fought for their rightful share of the ration. This was one of the numerous cases in *panchayats* around Mahant Maniyari, working head quarter of SPSS now.

There are a wide variety of debates regarding MGNREGS and economists are divided in to two groups. One, which thinks that MGNREGS is a policy which can help thousands improve their living conditions and free themselves from servitude, and the other which believes that it is nothing more than a fiscal burden to be borne by the government to placate people and hence the government should put an end to this program which provides unproductive employment.

There are different aspects to consider when critically analyzing MGNREGS. It is a promising initiative for a majority of the unskilled labor force in rural India which **guarantees equal**

wages to both male and female workers and unemployment allowance in case the government is unable to provide work. One of the drawbacks of the scheme is that mostly *mitti* (soil) work is covered under this program. The shortage of funds and the level of corruption hamper its functioning even further. While it may be true that if the government is unable to think of an alternative to this program in the future unskilled labour will become even more dependent on the scheme. This will make them worse off than they are now. Hence, it is certainly not true that the government is wasting money on the MNREGS, because it is one policy which has **taught many to fight for their rights** and become more concerned about the steps taken by the government in their interests.

Dukkhan Das is a 60 years old man in the Mahant Maniyari Panchayat. He is still earning at least Rs 120 per day on his working days under MGNREGA and this financial year he completed 100 days of work for his job card. He explained that five years ago, the *mukhiya* would give them 10 days employment and pay them Rs 100 or Rs 150 and get the work done by tractors and machines instead of the workers.

There is a big contrast between the current implementation of NREGA and its implementation five years ago when no organization was actively speaking against injustice. Earlier both local leaders and government officers were profiting from the ignorance of the people but now both male and female workers hold these authorities accountable.

The account of Mandeshwari Devi, reveals how she never questioned the *mukhiya* when he sent her away with Rs 50 for 4 days of work. Though recently when the same *mukhiya* refused to give her the muster roll she complained to the DDC. When he refused to speak to her she told him "*Ae DDC aap Sarkari naukar hai aur sarkar hum banate hai, to aap hamare naukar huye. ab mere kaam karwao nai to DM ke paas chale jayenge*" (You are a government servant, either get the work done or we shall file a complaint against you in the DM's office). And the very next day she was able to receive her MR and she went to the work site.

These case studies show that the problems with implementation do not suggest that we should do away with the scheme as active people's participation proves to be an effective solution. MGNREGS has always been hotly debated but its existence is crucial for our economy. In the past few months when states like Uttar Pradesh, Andhra Pradesh and Odisha were affected by droughts, NREGA provided employment to many and helped them survive. MGNREGS treats male and female workers equally; Mandeswari Devi earns the same as Dukkhan Das. It has also **empowered rural women to take charge of their families and take financial decisions independently**. In the presence of an organization, women have been emboldened to speak up in public spaces to claim their rights, and even organize strikes in extreme cases. Gulaab Devi explained that they organised a strike in front of the DM's office in December 2015 because their plea for unemployment allowance was ignored for a very long period of time and no new work site was allotted to them. They protested in front of the office for a day and they decided that they would not get up until the DM would accept their demands. Within a day, the DM came out to talk to them and ensured that all the pending work was done within a week.

Numerous lives have benefitted from this scheme. The income that people have received from working under MRNREGS has helped them **to improve their standard of living**. Now people are able to send their kids to private institutes for education as well. Women have also internalized the importance of education as they have taken up financial responsibility in their family.

Our public institutions and social structures are such that even basic entitlements become very difficult to attain for those belonging to lower castes and classes. In addition to a right to life, the **right to a life of dignity** should also be recognized in our country. These programmes allow people to live a life of dignity the despite low wages. The Preamble to our constitution mentions '…all its citizen', this highlights the importance of inclusive development in India and the respectful life awarded by our constitution to all citizens.

3. Conclusion

There are a numbers of articles, journals and research work available on the MGNREGS, many of which claim that MGNREGS is not providing the benefits it was conceptualized to deliver and hence the government should do away with it. Many even believe it to be an economic failure which is a drain on the country's resources. But there are many economists and social activists who comprehend the changes brought about in rural society due to the introduction of this program; changes in terms of both economic and social values.

This paper deals with the issues faced at the ground level regarding the implementation of government schemes, especially MGNREGS. It also discusses case studies providing viable solutions to the challenges posed. Many of the challenges can be countered simply by putting into place a system fixing leakages at different levels. MGNREGS, passed in the year 2005, is a demand driven programme which needs better implementation and should not be done away with without proper considerations. Organisations such as SPSS have helped the villagers become cognizant of their rights and have enabled them to stand up for their rights in case they obtain information regarding any wrongdoing on part of the government officials. The village under consideration in this paper has a negligible amount of corruption under schemes such as PDS, ICDS and MGNREGA only because of the **proactive initiatives that were taken up by all the stakeholders involved**. Hence, it can be established that an organization of a particular ideology can leave an impact on the systems around it by helping its members recognize their rights and by giving them the strength to claim their rightful share.

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The Future Generation: Are we Cutting it in Half?

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Abstract

Since independence, gender discrimination in education in India has been an omnipresent vice despite various attempts of the government to mitigate it. This research papers seeks to map the trends in the gender gap in literacy across states of India using Gender Parity Index (GPI) to fathom its reverberating implications on socio-economic indicators. The GPI is calculated by dividing the female literacy rate by male literacy rate and is used for measuring the gender gap in literacy. The paper begins by providing an overview of gender disparity in education and its ramifications on the efficient functioning of the economy. The second section discusses the main objective of the paper, which is to explain that when investments are made with a notion of achieving gender parity in education the returns accrued are higher. The following sections assess the relationship of the GPI with each of the three variables: per capita income, total fertility rate and sex ratio using correlation. In addition, a correlation between male literacy rate and each of the three variables is compared to the correlation between female literacy and the same. The paper attempts to show that returns from investing in the education of the disadvantaged sex, females, are higher because the law of diminishing returns does not apply to them. Thus, this paper emphasises the need for higher investment in education for females.

Keywords: Gender parity in education, Per capita gross state domestic product, Total fertility rate, Sex ratio
JEL Classification: I2, J16, J13

1. Introduction

Gender gap in all spheres is a crucial indicator of social discrimination and has been a major concern in India. It serves as a useful tool to understand the differences between men and women in social, political, educational and economic attainments. India has been ranked 101 among 136 countries in Global Gender Gap Index by World Economic Forum in 2013 and it stands lowest among the BRIC Nations.

Literacy reflects the socio-economic and cultural well-being of a country and is one of the major drivers of economic growth. Gender gap in literacy is an important indicator of gender inequality. A UNESCO Institute for Statistics Report revealed that three out of five youths who are illiterate were females and that the gender gaps in less developed countries have continued to remain substantial. A study by the World Institute for Development Economics Research (WIDER) observed that greater financial capacity in the family has a significantly higher positive effect on attendance for girls as against that of boys. That is, it affected girls' education rates almost twice as much as it did for boys. However, studies on gender gap in India have indicated that elements such as gender pay gaps and differential treatment of sons and daughters in the family have also led to gender disparity in education (Geeta Gandhi Kingdon, 2001). Previous studies have shown that gender gap in literacy affects the socio-economic development of a country. Murthi, Guio and Dreze (2005) have found that there is a significant negative relationship between female literacy and child mortality in India while Forbes (2000) has proven that gender bias hampers economic growth. This is because gender disparity in education means that the full potential of human capital in the economy has not been tapped and thereby points to the reduced efficiency of the economy (G. Balatchandirane, 2007). Thus, educating women will empower them to fight for equality and stand up for their rights (United Nations, 2010). This is the existing literature in the area of study. However, the prevailing literature fails to ascertain if investment in the education of the disadvantaged gender (women, in the case of India) leads to sustained higher returns in terms of economic, health and social betterment due to the benefits derived from moving towards the achievement of gender parity.

2. Hypothesis Building

The paper aims to study the pattern of gender gap in literacy rate across Indian states and ascertain its relationship with health, social and economic development. To calculate the gender gap in literacy, the **Gender Parity Index (GPI)** has been used[1]. It is a measure indicative of the relative access to education for males and females. The Index measures "gaps in the variables rather than their levels" and thus, ranks states on the basis of gender equality rather than women's empowerment. According to the United Nations, gender parity is reached with a GPI between 0.97 and 1.03. A GPI below 0.97 suggests a gender disparity against women, while a GPI above 1.03 is indicative of a disparity against men. GPI of India as of the 2011 Census is 0.797, indicating a high degree of gender disparity in literacy in favour of males.

To understand the relationship between gender gap in literacy and the economic development, health profile and demography, a **correlation** between the Gender Parity index and one variable of each aspect has been carried out as follows:

i. **Per capita GDP** for representing the economic status of each state.
ii. **Total fertility rate**, one of the major components of health profile.
iii. **Sex ratio**, an important feature used for explaining the demography of the population.

In this paper, the returns accrued from attaining gender parity (that is, by investing in female education) have been defined in terms of higher per capita GDP, sex ratio and achievement of replacement-level fertility rate which stands at 2.1. Gender gap, male literacy rate and female literacy rate are compared individually with the above-mentioned variables using correlation. Thus, the paper seeks to test the hypothesis: **Returns from increasing targeted investment in female education will be higher because it will lead to attainment of gender equality in the literacy rate.**

The reason for aforementioned returns being higher is the operation of the **Law of Diminishing Returns**. With gender gap being constant, a continuous investment in education (not specific to females) will lead to lower returns in the long run. On the other hand, when the same investment is diverted towards female education, the female literacy rate rises along with a simultaneous reduction in the gender gap. Consequently, higher returns in terms of social factors could be realized.

3. Variation in Gender Gaps across India

The female literacy rate in India was at an appalling rate of 8.86% as per the 1951 Census. Since male and female literacy rates were very low at the time of independence, the GPI

[1] United Nations

calculated using these two variables recorded a low value of 0.32 denoting the highly unequal access to education for females. However, due to expansion of education through various policies by the Government of India in favour of girls, the female literacy rate has been rising consistently ever since. Even though the female literacy rate is increasing at a higher pace as compared to the male literacy rate, as per the 2011 Census, the number of illiterate females is almost twice that of illiterate males[2]. Meghalaya, Kerala and Mizoram are the states with the highest GPI of about 0.96 denoting very low discrimination against women in education. In contrast, Rajasthan showed the lowest GPI of 0.66. As for the rural areas of Rajasthan, specifically, the conditions are worse as shown by a GPI of 0.597.

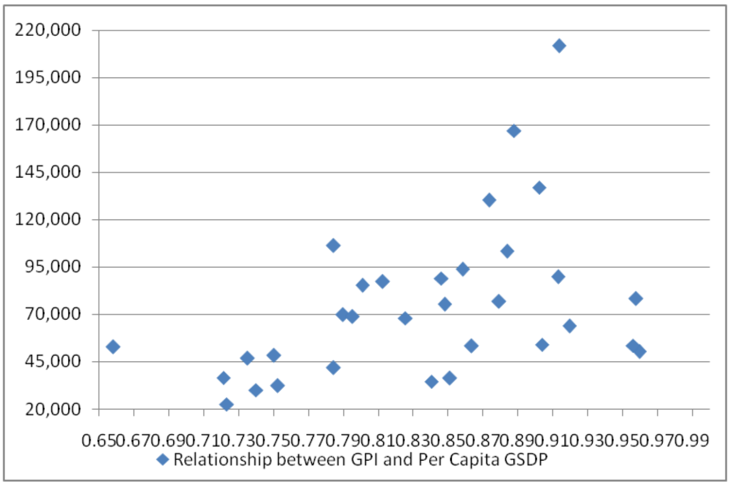
4. Relationship between GPI and Per Capita Income

Per capita GDP of the state is the mean income of the people in the state[3]. Correlation between Per Capita Gross State Domestic Product (GSDP) and the GPI of Indian States[4]for the year 2011 is 0.434 asserting previous studies'[5] claim that these two variables share a positive relationship.

This implies that financial prosperity of households is an important factor in educating a girl child. The relationship between them is moderate because income is only one of the many factors leading to a gender gap in literacy. The other factors which affect the parents' decision to educate a girl child include parental attitude, quality of the primary education available and the distance between home and school.

The scatter diagram depicts the positive relationship between Gender Parity Index and the total fertility rate. Gender Parity Index is measured on the x-axis while Per Capita GSDP is measured on the y-axis.

Figure 1: Relationship between GPI and Per Capital GSDP



Source: *Census of India, 2011 and The Planning Commission.*
Correlation = .434

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[2] Number of Illiterate Females = 1,19,74,251, Number of Illiterate Males = 62,47,826.
[3] Government of India.
[4]Planning Commission.
[5]G. Balatchandirane, (2007) *Gender Discrimination in Education and Economic Development: A Study of Asia.*

Per Capita GSDP and gender gap in literacy are complementary implying that a high gender gap leads to lower income and vice versa. This is because on the one hand, financial constraints affect gender gap in literacy and on the other hand, gender gap in literacy implies underutilization of human capital which hampers economic growth and thereby adversely affects the financial health of the economy.

A stronger relationship exists between the male literacy rate[6] and Per Capita GSDP which has been revealed by their correlation of 0.6. This means that due to high gender disparity in education, the contribution of female education to the GSDP has been minimal. In order to strengthen the same and realize the returns of gender parity, it is necessary to increase the investments in female education.

5. Relationship between GPI and Total Fertility Rate

World Bank has defined total fertility rate as the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates. For evaluating the relationship between the total fertility rate and GPI, correlation between total fertility rates of the bigger states of India as defined by the Census and GPI of those states has been carried out. The relationship was negative with a correlation of **-0.7401** implying that states with lower gender gap in literacy are associated with lower fertility rate. This result is consistent with previous findings by Murthi, Uio and Dreze (2005) that increase in female literacy rate positively contributes in reducing the total fertility rate. The following table shows Gender Parity Index in literacy along with the total fertility rates of major states in India:

Table 1: Gender Parity Index in literacy and the Total Fertility rates of major states in India.

States	**Gender Parity Index**	**Total Fertility Rate**
Rajasthan	0.658164	2.9
Jharkhand	0.721239	2.8
Bihar	0.723315	3.5
Jammu and Kashmir	0.735244	1.9
Uttar Pradesh	0.739907	3.3
Chattisgarh	0.750467	2.7
Madhya Pradesh	0.752445	2.9
Haryana	0.78444	2.3
Orissa	0.784532	2.1
Andhra Pradesh	0.789931	1.8
Gujarat	0.812595	2.3
Karnataka	0.825512	1.9
Tamil Nadu	0.846375	1.7
Himachal Pradesh	0.848096	1.7
Assam	0.851252	2.4
Maharashtra	0.858452	1.8

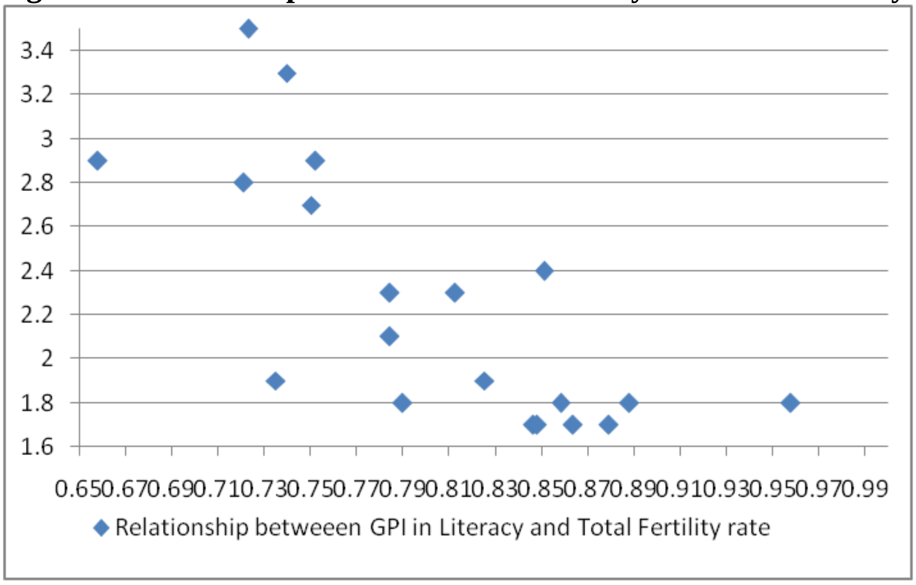
[6]Male literacy rate as per Census 2011 has been taken for calculation.

West Bengal	0.863508	1.7
Punjab	0.879289	1.7
Delhi	0.888058	1.8
Kerala	0.957965	1.8

Source: *Census of India, 2011.*

The scatter plot diagram depicts the negative relationship between the Gender Parity Index in literacy and the total fertility rate. Gender Parity Index is measured on the x-axis while the total fertility rate is measured on the y-axis.

Figure 2: Relationship between GPI in Literacy and Total Fertility Rate



Source: *Census of India, 2011.*
Correlation: -0.7401

A strong negative relationship exists between these two variables primarily because educated women are more aware about the responsibilities and consequences of having more than two children. Education also raises the age of marriage for women and leads to a higher work force participation and thus, decreases the fertility rate. Higher female autonomy in deciding birth control measures resulting from lower gender gap in education, is also an important factor determining lower fertility rates. The relationship between GPI and total fertility rate is stronger than the correlation between male or female literacy rate with the total fertility rate (correlation = -0.61 and -0.71 respectively). This result is in favour of the hypothesis that higher returns are realized when gender parity is achieved in education.

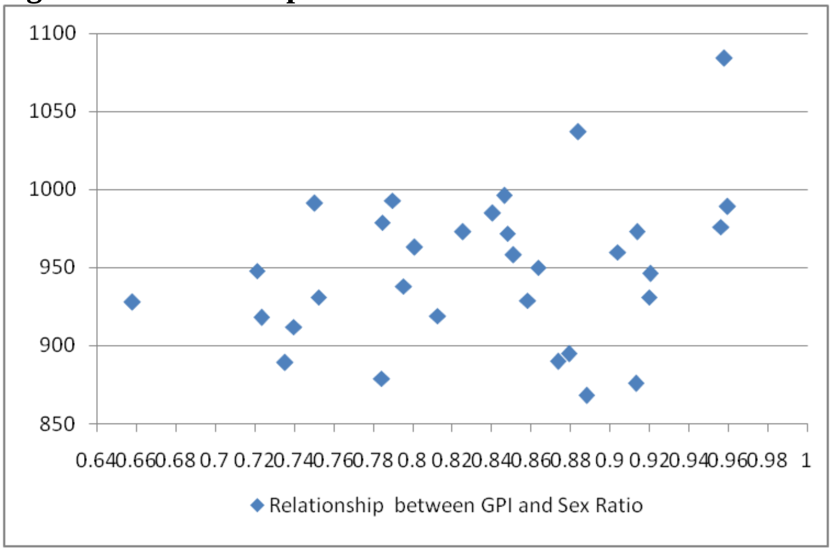
6. Relationship between GPI and the Sex Ratio

Sex ratio is defined as the number of females per thousand males. The sex ratio and calculated GPI[7] have a very weak positive relationship which has been inferred from a correlation of 0.13 between the two.

[7]2011 Census.

The scatter plot diagram shows the weak positive relationship between Gender Parity Index and the sex ratio. Gender Parity Index is measured on the x-axis while the sex ratio is measured on the y-axis.

Figure 3: Relationship between GPI and the Sex Ratio



Source: *2011 Census of India.*
Correlation: 0.13

Interestingly, when five states of the highest and lowest GPI are considered for calculating the correlation between GPI and the sex ratio, the resulting relationship is much stronger with a **correlation of 0.66**.

The following table shows five states of highest and lowest GPI along with their sex ratio:

Table 2: Five states of highest and Lowest GPI and their Sex Ratios

States	GPI	Sex Ratio
Rajasthan	0.658164	928
Jharkhand	0.721239	948
Bihar	0.723315	918
Jammu and Kashmir	0.735244	889
Uttar Pradesh	0.739907	912
Nagaland	0.919758	931
Lakshadweep	0.920364	946
Mizoram	0.956294	976
Kerala	0.957965	1084
Meghalaya	0.95971	989

Source: *2011 Census of India.*
Correlation: 0.66

The major factors which determine the sex ratio are maternal mortality rates, female foeticide and migration. However, education gives women the ability to make decisions in an informed manner such as whether or not to abort the child and makes them more concerned about their own health. This helps in reducing the incidence of female foeticide and maternal mortality rate and thereby, indirectly improves the sex ratio.

The male and female literacy rates have a weaker relationship with the sex ratio as revealed from a low correlation between them of -0.05 and 0.05 respectively. In fact, there is a slight negative trend between the male literacy rate and the sex ratio implying that there is a possibility that a rise in male literacy rate necessarily will not contribute towards improving the sex ratio. Thus, gender parity in education attained through higher investment in female education will have higher returns on demography than investment in male education.

7. Conclusion

The ultimate development goal for a country is not just achieving economic growth but also development in all aspects leading to a better quality of life for its citizens. Attaining gender parity in education is a step towards the same. Though the trends suggest that female access to schooling has been increasing, a substantial amount needs to be achieved to eliminate the gender gap in education. There is a need to galvanize both the demand and supply factors of female education. Parents’ attitude towards educating a girl child can be rectified by taking measures to improve the quality of schooling, infrastructural facilities, security on campus and by reducing the distances to improve access to schools. It has been inferred from the analysis, using correlation, that a stronger relationship exists between the gender gap and socio-economic development than that of male and female literacy rates individually with socio-economic development. This is in accordance with the hypothesis that an increase in the investment in female education will lead to higher returns.

Therefore, India, a country with a wide gender gap, will yield lower returns in case of investment in education in general rather than investment in female education in particular due to the operation of the Law of Diminishing Returns. That is, increasing female education investment has a two-fold benefit: reduction in gender gap and empowerment of women leading to higher returns. There is scope to expand this research further in order to ascertain causation (rather than mere correlation) by employing more sophisticated econometric tools.

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Interview of Prof. Debraj Ray

Prof. Debraj Ray is a Julius Silver Professor of Economics in the Faculty of Arts and Sciences at New York University, Research Associate at the National Bureau of Economic Research and the co-editor of the American Economic Review. Prof. Ray is a Fellow of the Econometric Society, a Guggenheim Fellow, a recipient of the Mahalanobis Memorial Medal and a recipient of the Outstanding Young Scientists Award in mathematics from the Indian National Science Academy. He received the Dean's Award for Distinguished Teaching from Stanford University and the Gitner Award for Teaching Excellence in Economics from Boston University. His areas of interest include Development Economics and Game Theory.

Interviewer: *In an article in the Economic and Political Weekly, Angus Deaton and Jean Dreze had written about how the current level of nutrition-based poverty line is an overestimated figure in India. The reason behind the same is that in today's day and age we have lower calorie requirements due to diversification of the food basket, better transport facilities, improved water facilities, higher literacy rates and with higher number of children being vaccinated. Sir, in your opinion, is this argument justified?*

Prof. Ray: We don't have a nutrition-based poverty line any more, and have correctly moved to income- or expenditure-based measures, though there continues to be debate about what constitutes adequate expenditure. The same conceptual concerns (and political expediencies) that surrounded "adequate nutrition" will resurface in the study of "adequate expenditure." But the Deaton-Dreze observation is still worth thinking about. Here are my thoughts:

Given that sedentary living has gone up the world over and also in India, there is some truth to their argument. If you can take a scooter or a car (or even a bicycle) to work, nutritional requirements will invariably fall to some extent. Better public health also contributes by reducing wastage (via illness). But to my mind, this sort of effect is second-order for relatively poor people who are engaged in hard manual labor. The choice between walking and riding a bike is probably not the main component of their nutritional needs.

Many years ago, P.V. Sukhatme argued that nutritional needs are lower because people are smaller and adapt to their conditions of undernutrition. The Deaton-Dreze argument is certainly far more reasoned than Sukhatme's — as Partha Dasgupta and I showed in 1990, Sukhatme's fallacious argument rested in part on a misunderstanding of what the word "adapt" means in the bio-medical literature. One has to tread very carefully before concluding that nutritional requirements have come down, certainly via "small-is-healthy" Sukhatme-style arguments, but also when referring to improvements in transportation, work requirements and sedentary lifestyle (e.g., watching TV) that certainly apply to the relatively rich but perhaps not as forcefully to the poor.

Actually, the main point in Deaton and Dreze isn't the normative question of requirements, but an empirical puzzle: that observed calorie intakes have come down over time (though the cross-sectional Engel curves are still significantly upward sloping). Their argument that calorie needs may be lower is an attempt to explain this puzzle, and has to be assessed in that context. As they themselves point out, India still has appalling levels of undernutrition as is evident from anthropometric measures. So for me, reduced calorie requirements is not the first suspect to explain this puzzle. My first suspect — all the red lights would be flashing here — would be the rising prices of essential non-food items, such as housing. This can crowd out food expenditure, and my empirical bet is that a careful study (yet to be conducted) will reveal this. Other suspects: a possibly status-related or “cultural” decline in the consumption of coarse cereals, and in this context also the possibly lower nutritive value of packaged foods. Falling calorie requirements — especially among the increasingly sedentary non-poor — could explain the observed puzzle, but this wouldn’t be first-order to me in studying the consumption behavior of the poor.

Interviewer: *The Jan Dhan Yojana has resulted in the opening of several bank accounts but there has hardly been any effort to ensure transfer of government subsidies through these accounts. How do you think the government should channel its focus from increasing numbers to a more holistic approach? And what, according to you, would be the end goal of such a policy when we look at transfers in kind versus transfers in cash?*

Prof. Ray: The JDY is pretty impressive in the number of accounts that have been opened. I believe that by mid 2015 there were around 150 million accounts (you will have to correct my numbers if I am far off, but I think this is right). Of course, there were also close to 100 million accounts with a zero balance. I know that the zero-balance number has been bandied around as if to say, nothing real has been accomplished, but on the whole having the accounts is a good thing. It does take time for people to get used to them and use them, and in addition it is a necessary condition if we are to seriously transit to government direct deposit for programs such as NREGA, and thereby to reduce corruption in these programs.

That said, I hasten to add that the JDY is far from being sufficient in this respect. We need, first, that people be comfortable with electronic banking and the use of it. I don’t think this is an insuperable problem. Brazil, admittedly a more literate country, runs the Bolsa Familia (a huge conditional transfers scheme) entirely on individual electronic deposits coupled with debit cards. Now Brazil has a tradition of very efficient banking (a serendipitous byproduct of its experiences with hyperinflation, so cash had to be moved fast), but if they can do it, so can we. The only point is that it won’t happen overnight.

But then there are other problems. The first of these is that if a program like NREGA can be restricted by local village interests, then corruption remains endemic with or without direct deposits. The unmet demand is huge, and only a fraction of the households get their full 100 days of work as the program stipulates. So even with bank accounts and direct deposits, a worker may need to pay the *sarpanch* or other local worthies in the village to make sure that work is available. No electronic bank account has solved the problem of corruption at that level. What it does address are issues such as questions of fictitious identity (so that individuals cannot be invented to be paid).

But electronic accounts can, in principle, be used to address the question of unmet demand, at least to some extent. Assuming literacy and familiarity with the electronic process (a strong assumption at present, even for those administering the process), one might even contemplate registering demands to work at the individual level, thereby bypassing local authorities. Likewise, NREGA could be expanded into a broader scheme of conditionalites, a bit like Bolsa Familia but not quite the same because of the unique right to work afforded by NREGA. Employment can be conceptually viewed as a “condition” for getting money. Once we look at this, once can include other conditionalities and administer them electronically, such as regular health checkups or keeping children in school. So there is huge potential here, especially if an electronic account can be integrated with an electronic communication scheme, in which —

for instance — warnings (for noncompliance) could be sent to your account, and demands (for employment) could be uploaded by you.

The cash versus kind debate is also largely orthogonal to bank accounts. Surveys by Reetika Khera and others have shown that often people like to be paid in kind, either because cash-in-hand can be spent in ways that they don't themselves like in the longer term, or because other family members (notoriously husbands) spend money in ways that may not be appropriate for the family as a whole. Having a bank account doesn't solve this problem, and in fact as financial literacy and ease-of-use becomes easier (as we all agree it should) the problem will remain just as more chronic — or get even worse if it is easier to whip out a debit card at the local alcohol outlet rather than cash.

And when I say orthogonal, I mean it. It is not that cash can be administered electronically while kind cannot. Both can. Think of money as a "scalar," and kind as a "vector" — say rice credits, sugar credits, kerosene credits, bicycle credits, whatever you want. If a scalar can be electronically deposited, so can a vector. You can take your "vector debit card" to a shop and the shopkeeper can issue you rice or sugar against those points and later get reimbursed for having "sold" you those products. From the shopkeeper's point of view it's all money. From your point of view these are points which are very difficult to transform into cash directly. It doesn't entirely solve the problem of inappropriate spending, but it goes a long, long way.

Interviewer: *Shamika Ravi, a fellow at Brookings Institution wrote, "The data on state-supported crop insurance programs finds that for such government programs, costs exceeded revenues by 4.6 times in Brazil and Japan, 3.7 times in Mexico and 2.4 times in United States. The question is: can India do better?" In light of the above statement, what is your take on the Pradhan Mantri Fasal Bima Yojana that has recently been announced as the crop insurance scheme?*

Prof. Ray: India has tried many crop insurance schemes but these have had limited success, to put it mildly. There are two major problems that loom particularly large with crop insurance. The first is that crop failures are often correlated, so that an insurance company cannot take full advantage of the law of large numbers, as it can, say, with car insurance. Therefore the payouts, when they come, are large and companies won't get into the business unless the premia are also high. Often, farmers can't afford these premia. The second major problem is verification: the extent to which a loss has occurred, and indeed even the very definition of a loss. We all know when a car has been damaged, but how does one define a crop loss: relative to what benchmark? Even if the benchmark is known, how accurately does one measure the actual output? Finally, if losses below a benchmark are covered, might that create problems of "moral hazard," in which the famer possibly takes less-than-adequate care to protect the crop against (partially) avoidable calamities, such as pests?

It's precisely because of the second set of problems that agricultural insurance often retreats from the individual to a larger "insurance unit" where historical yields are compared to actual yields using crop-cutting experiments and payouts are made to all farmers in the insurance unit depending on whether the former exceeds the latter. But these are beset with their own issues: for instance, why would a farmer trust the crop-cutting experiment that determines their payout? And why is the insurance unit relevant to their particular historical experience? This is the basic tradeoff: the more we try to steer clear of individual experiences because of verification and moral hazard issues, the more the individual farmer feels that he is not "in control" of the way in which the scheme works.

A few things are different about the PMFBY. The first is that the premia are lower, uniform across all non-commercial crops. Of course, all other things being equal, lower premia must be associated with higher government subsidy; this alone does not make the insurance program per se a success, it is just that it will be associated with a larger transfer to farmers (I'm not quarreling with that, just pointing out that that in itself isn't rocket science). The second is that technology will be used on a mandatory basis for monitoring —- including drones! Once again, I am fine with that: there is no question that to move to a truly individualized scheme, better monitoring of individual outputs is needed. What would be really innovative is to think more carefully about the insurance scheme itself. And here I am not so sure how different the new scheme is.

What I would like to see, perhaps, is a mixture of index schemes and idiosyncratic schemes. An index scheme is something that insures against unit deviations from an index, say current village yield deviating from historical village yield, or even village rainfall from historical rainfall. All farmers get paid for that (depending on how much insurance they've purchased), and the questions of moral hazard etc are minimized (unless rain dances do work). But a farmer could supplement that with an idiosyncratic purchase which pays out when his yield falls short of the average village yield for that year. Yes, the average yield for the village is moving but insurance against that movement will be covered by index insurance. The farmer will be required to succumb to drones and inspections when he takes out idiosyncratic insurance, but not if he only takes the indexed insurance. The idiosyncratic scheme makes it easier for smaller insurance companies to administer, as it effectively restores the law of large numbers, and the index schemes can be handled by larger companies.

Combining index and relativized personal schemes in the way I've described above can go quite far. The personal schemes can bring in a variety of insurance companies, and in freeing up the index schemes from verification the larger nationwide companies can operate with less constraints and (in the longer run) offer better terms. There is a lot to be done here.

Interviewer: *According to the neo-classical paradigm, sharecropping contracts and interlinked credit contracts in farming are observed to be mutually beneficial and efficient for both the tenant (or the borrower) as well as the landlord (or the lender). Sir, does the above discourse assume equal bargaining power of both parties? Also, do you believe that there is an exploitative element in contemporary agriculture?*

Prof. Ray: This is a more theoretical question than the others, and I will treat it in that spirit. A typical contract between two individuals (say landlord and agrarian tenant) will often be inefficient. The reason is simple. As an example, the tenant cannot afford to pay a fixed rent independent of output and to some extent, his rent will vary with the output he produces, if for no other reason than limited liability. Once that happens, however, moral hazard problems kick in and the outcome is typically inefficient. The literature on sharecropping and interlinked contracts all look at ways in which new innovative contracts can push up against this efficiency barrier. For instance, one view of interlinked output-credit contracts is that they preserve the "correct" relative prices for the producer and thereby induce the optimal level of effort.

To some extent — but not completely — the above considerations can be separated from the question of the *division* of the resulting surplus. You are absolutely correct that this latter outcome will depend on the bargaining power between the two agents. You can write an interlinked contract, and then *if* you can move the terms up or down, while maintaining the correct relative price incentives, you can reallocate the surplus freely across the parties. If that is possible, the question of surplus creation and surplus division become entirely separate from each other. But sometimes that isn't possible. For instance, if there is limited liability, then better bargaining power on the part of the tenant not only provides more surplus to the tenant, but *also* gives the tenant better incentives. In general, as Parikshit Ghosh, Dilip Mookherjee and I have pointed out in both separate and joint work, the greater the bargaining power of the agent with moral hazard (be it the tenant in a land contract or the borrower in a credit contract), the better are the implications for social efficiency. It provides an instrumental argument against inequality.

Electronic interview conducted by: Aakriti Chowdhary, Meghana Mungikar, Pragya Yadav
Date of the interview: 30th of March, 2016

Interview of Prof. Prabhat Patnaik

Prof. Prabhat Patnaik is a Professor Emeritus at the Centre for Economics Studies and Planning in the School of Social Sciences at the Jawaharlal Nehru University. Prof. Patnaik was elected as a fellow of Clare College, Cambridge where he was a professor of Economics and Politics. His areas of interest include macroeconomics and political economy; he is a renowned Marxian economist and a staunch critic of neo-liberal policies. He was the only Asian to be a part of a four-member high power task force to the UN to recommend reforms to the global financial system after the 2008 financial crisis.

Interviewer: *Sir, would you say that the remnants of the feudal mode of production can still be seen in agriculture? If so, then according to you where does India stand in Marx's theory of social formation?*

Prof. Patnaik: There has been a long debate about the mode of production in Indian agriculture. Many people argue that it is feudal or semi-feudal but the point is that there was, in that period, a development of capitalism from within agriculture which was of two kinds. One is peasant capitalism. The peasants who were the beneficiaries of tenancy reforms and various government subsidies and support through assured prices were beginning to rise up to become capitalist farmers. On the other hand many of the old landlords (not just the *zamindars*) lost their lands but quite a lot of them went in for capitalist farming. A lot of the landlords bought tractors and expanded their lands. So, you had two kinds of capitalism developing from within traditional agriculture; peasant and landlord capitalism. Therefore, now there is this debate that says that capitalism is developing in Indian agriculture but it would be incorrect to say that Indian agriculture is capitalist because a large number of landless labourers constitute a class of labour. The general understanding is that they actually constituted a class of landless peasants. Some labourers have been here from Mughal times, particularly those belonging to Dalit communities, who were never allowed to own lands, but they are a fraction of the total number of labourers and they cannot just be considered as the proletariat; they mainly constitute the landless peasant class.

In the more recent period you actually have a very different phenomenon in the encroachment of corporate capitalism into the agriculture sector. That can be seen in the dearth of credit to agriculture from institutional sources; a lot of it is diverted for other purposes and agricultural credit is really not for the agriculture sector. You have corporate players going for buying things in the agricultural sector. Now, the provision of seeds and pesticides is done by corporate players, which was not the case earlier. In the past there was a huge extension service deployed by the government by which it reached out to agriculture. But much of that has now declined, now what you have is the corporate sector, and the most glaring example of this is that of land grab, the land ordinance which still has not been made into a bill. Taking the example of Smart Cities: where is the land going to come from? So now what you really have is capitalism encroaching on agriculture in a different manner as compared to earlier. What I would say is that if we are talking only about the nature of Indian agriculture, it is agriculture in which you have landlord capitalism, peasant capitalism and the encroachments of outside capitalism, which has had adverse impacts on the development of peasant agriculture, and particularly on peasant capitalism. I think a lot of the farmer suicides in the current times are not just of very poor peasants, but even of the somewhat better off peasants who were taking loans and were unable to pay them back due to uncertainties and crop failures. I think all these complexities have to be kept in mind when characterising contemporary agriculture.

I do not accept the whole idea of the sequence of social formations that all countries must go through. Different countries have different histories. In the case of India, there has been a lot of debate about whether colonial India was feudal or not. Many people have argued strongly that it was not feudal because it comprised of a highly centralised administration; the ruling class consisted of few feudal lords. Even if you accept that it was feudal, the impact of colonialism implies that you cannot just experience a transformation from feudalism to capitalism, like was spontaneously seen in Europe. In Europe, there was a transition from feudalism to capitalism. In India, colonialism affected the society in a way that you could not have had that kind of a transition. The society got hitched to world capitalism not as a capitalist society in itself, but as a society from which capitalism took away the surplus and de-industrialised it. What is happening after independence is definitely under capitalism and is not just restricted to the agricultural sector, but also outside of it.

Starting from roughly around the mid-nineteenth century, the Indian capitalist class came up slowly from merchant capitalists, like the Tatas, who were servicing the British colonial interest. They then started to develop some interest in manufacturing, and during the inter-war period protection of industries was brought about to help the Birlas to expand their market influence. And then after independence you had the development of capitalism, but that development of capitalism was aided to an extent and was also kept in check by the public sector. While the public sector did bring about investments, there was some restraint with regards to capitalism. Capitalism was not a spontaneous development. With neo-liberalism we now have unfettered development of capitalism, which also has an impact on agriculture. So, the point regarding the current Indian mode of production is that we have the development of late capitalism in a society which was actually semi-feudal and colonial. When we discuss modes of production, it is not a good idea to just think of it in terms of one phase, that is, is it feudal or capitalist; what is important are the processes involved.

Interviewer: *Taking from your mention of encroachment of corporate capital, Pranab Bardhan had expanded literature on the Indian state having always been a bourgeois state, such that the initial emphasis on the public sector was only to establish a precondition for the growth of the private sector. Sir, do you agree with these views? If not, then why?*

Prof. Patnaik: Yes, that is actually true. I mean I will just not say bourgeois state, but bourgeois landlord state. But, there is a difference between the Indian State as it existed in the Nehruvian era and as the current neo-liberal state. I think not so much in class terms; the very basic difference is that the Nehruvian state, that emerged from an anti-colonial struggle, was a state standing above classes. There was labour law legislation, which they are now trying to remove for labour market flexibility. There was nationalisation of banks. Even though it had been a bourgeois landlord state as capitalism was developing, the state was not devoted to the exclusive interest of the bourgeois landlords. What is happening now is that, under neo-liberalism the state is more exclusively concerned with defending the interests of the globalised corporate capitalist class which includes multi-national corporations and international finance. If the state does not do so then you will have an outflow of capital. Suppose tomorrow, Arun Jaitley introduces, in the Budget, a tax on corporate profits, there will be an immediate outflow of capital just like the kind of noise that was made when the Mauritius route was sought. The fact that we have the nation state on the one hand and globalised capital on the other, implies that the nation state forever has to do things, which would be appeasing capital and therefore the state is exclusively committed to the interest of the class of corporate capital. Hence, there is a big difference between the neo-liberal state and the Nehruvian state.

Interviewer: *Sir, in one of your articles you wrote that, "The nature of the capitalist state, which is sometimes mistakenly called the 'retreat of the state', is manifest in the shift that occurs from it being a spender, an investor and a producer, to its new role in carrying out privatization and disinvestment". So, according to you, are reforms and growth mere repackaging of neoliberalism and capitalism?*

Prof. Patnaik: No, it is not repackaging because as I said, during the transition from Nehruvian to the neo-liberal state, very important political and economic differences took place. In other words, there is a very basic change in the role of the state. Earlier, the state was committed to expanding the home market. In fact, even Raghuram Rajan talked about 'Make for India' when 'Make in India' was launched. While earlier it was about expanding the home market, now the effort is really to entice capital to come in and locate plants here to sell in the international market. Expansion of the home market can come about in three ways; one, you have substantial public investment, which is not going to happen. Two, you have a redistribution of incomes in favour of the poor, in which case the market would expand due to higher marginal propensity to consume. Or three, you can have public investment devoted to sectors like agriculture, in which case you would have an increase in the agricultural base and the home market. None of these is being done; there is an agrarian crisis, which is due to primitive accumulation of capital. There is no redistribution of anything, and the MGREGA is being wound up. There is no increase in public investment, on the contrary a squeeze in public investment can be noticed through an attempt to privatize the public sector. So, the emphasis is no more on the expansion of the home market. There are very basic changes taking place, which are reflected in the anti-labour and anti-redistribution attitude. A lot of evidence shows that there has been a substantial increase in the income and wealth inequality in India in the neo-liberal period so much so that unlike earlier, post 2001 there is no access to income tax data.

Interviewer: *In your opinion, why is India a democracy of communities and not of individuals? Why is it that in a country like ours, modernity has failed to do away with the deep-rooted entrenchments of the caste system? Why has the Indian society simultaneously adapted to the caste system and fails to do away with it?*

Prof Patnaik: Basically, there are two different concepts of nationalism; in Europe there was a particular development of nationalism in the seventeenth century. They decided to have peaceful coexistence among their existing nation states but they were fighting for territories all over, like the fight between the French and the British for the colonisation of India. European nationalism was more of an imperialist form of nationalism. A nationalism which was majoritarian, which was imbued in Christians and was against minorities. Oliver Cromwell who was, at that time, the embodiment of English nationalism attacked Ireland which was the first colony. I think the nationalism, which we, in India, tried to have was an anti-imperialist nationalism. They are now saying that it goes back to the times of Khusro, but India is a nation with equal rights being given to individuals. It is a very modern concept which emerged out of the anti-colonial struggle. Because it was anti-imperialist, it solidarized with other countries which had similar struggles, like Palestine, and at the same time it was very specifically designed to have equal rights. Universal adult suffrage came in France in 1945 and in India in 1952, so it actually guaranteed individual rights, like the right to equality because it was a very different trajectory of nationalism.

Therefore, I believe, that even the notion of modernity in India is of a very different trajectory as compared to that in Europe. Modernity in Europe is associated with the emergence of capitalism, whereas in India caste capitalism actually exacerbates the differences. Consequently, the modernity here could come through a much greater emphasis on equality and therefore towards an egalitarian transition, which capitalism is incapable of allowing. The Nehruvian state recognized this, whether it achieved or not is a different point. When inequality increased, Nehru set up a Mahalanobis committee in 1960. So, if in societies like ours we have capitalist modernity which is being imposed when we speak of neo-liberalism then what we have is an exaggeration of differences, of which social disintegration is the result.

Getting rid of the caste system requires the emergence of individuals. It would require, for a start, full employment. This is because unemployment, as is seen in America, becomes a way of suppressing communities because unemployment leads to a situation of desperation making them indulge in activities that are against the law. And a society like ours does have a huge amount of unemployment. Even if you have full employment, you need a way of creating a society with equal opportunities, which again means that we have to achieve quality education and healthcare for all, which is a set of economic rights that we have never had. These are the necessary but not the sufficient conditions to do away with the caste system.

Interviewer: *Speaking of capitalism, in the light of global capitalism, a recent Bloomberg article titled 'Goldman Sachs Says It May Be Forced to Fundamentally Question How Capitalism Is Working' has highlighted that unlike the expectation of profit margins oscillating in coherence with the business cycle, the profit margins were actually seen to be rising. Why do you suppose that these margins have elevated? Can this be traced back to imperialistic tendencies? Has capitalism mutated itself? If yes, then how?*

Prof. Patnaik: Globalisation means that because of the possibility of globalisation of capital two things happen; one is that the financial sector grows by making profits through speculative capital gains, where if not absolute profits then the rate of profit inclusive of capital gains is substantial. The other is the fact that now with globalised capital, the American workers' wages get linked with the Indian and Chinese labour reserves and as Arthur Lewis said, the labour reserves push wages to a subsistence level. Earlier labour was not allowed to migrate from India or China to America, and still is not, but capital from America can locate plants in India and China. Previously, you had a segmented world in which the American wages rose with American productivity. They were unaffected by the Indian or Chinese labour reserves, which kept Indian and Chinese wages low. Hence, there was a wage difference between the advanced and third world countries which expanded historically, but that is no longer the case because now capital can locate in China through outsourcing. Stiglitz has estimated that in America, the male workers' wages have not increased in absolute or real terms since 1968. So the point is that if that is happening, then you find that the profit margins are rising because labour productivity is increasing, and if profit margins are rising sharply, to the extent that unutilized capacity builds up during the crisis, the profit rate gets adversely affected. But if the profit margins rise substantially and profit rate is not as affected as it would have been if profit margin would not have increased, despite the unutilized capacity; there is a shift from wages to profits, financialization which gives you very high rates of profit. Taking from the concept of primitive accumulation, financialization helps to boost profits because it allows you to get hold of all kinds of assets.

Interviewer: *Sir, continuing from what you were talking about with regards to finance capital and how it has dominated this form of capitalism especially for speculative purposes, you have written in a lot of articles that it increases the probability of a crisis under capitalism. Does it seem plausible that an increase in the proportion of trade between countries will make the* *financial crisis less severe because you would use a greater amount of finance capital in the tradeable sector?*

Prof. Patnaik: No, you know the reason why contemporary capitalism would promote prices is firstly due to, as I have said earlier, the shift from wages to profits which affects demand. Secondly, capitalism has always had a colonial thrust, which is something that cannot be simply explained. It is about the whole expansion of the white settlement into temperate regions. Actually if you look at colonies like India, the British sold their goods in India, but there was a drain from India. But if you have a drain from India then where does that surplus get invested? So, the bulk of investment took place in the temperate regions of white settlement, and that provided an enormous boost to capitalism almost until the First World War. Alvin Hansen, a Harvard Economist, explained the Great Depression in terms of the closing of that frontier. Migration used to take place from Europe to the temperate regions of the white settlement and along with the migration of labour there was also migration of capital. Much of the migration of capital was financed by the colonial trade. That is something that kept capitalism going for a very long period of time.

There is a view that post the Great Depression capitalism could have been revived through state investment. Now, state investment is something that is mentioned but is no longer very acceptable. Therefore, contemporary capitalism lacks a certain kind of external stimulus. What it does have is bubbles of various kinds. In other words, you have stock market booms which can give rise to all kinds of investment bubbles. But when they collapse you have a problem. So not only do you have a general slowing down of the growth rate, but you also have greater fluctuations around. So the aspect of finance in my view comes in there, it comes in to sustain bubbles. While everybody is critical of Alan Greenspan on the grounds that he was the one who was responsible for the housing bubble, one must understand that if he hadn't done it, then you wouldn't have had the boom in the first place. Keynes has said in his 'The General Theory of Employment, Interest and Money' that if you find that there is collapse of the boom, then that is the period to lower the interest rates to keep the boom going. He makes a very interesting case where he says that we cannot have capitalism being mired in quasi-stagnation. This is all linked to a debate he enters into with Dennis Robertson, another Keynesian economist. Robertson says that in order to avoid fluctuations, at the beginning of the boom you should raise the interest rates, and as the boom collapses you should lower the interest rates. So, the monetary policy would imply that the fluctuations are kept in check. Keynes's argument is if you did that then the economy would always be stuck in the stage of stagnation, and that is not good for an economy. On the contrary, he argues, that whenever you have a tendency towards a decline, you should lower the interest rates so that the boom continues. This is basically what Greenspan was doing.

Interviewer: *Sir, what would you say with regards to the Chinese economy today? In an article it has been mentioned that the Chinese economy has been investing in productive sectors which will give returns later providing the grounds for why the Chinese economy might not fall into a crisis. What are your comments on the same?*

Prof. Patnaik: Originally the Chinese economy was highly export dependent and still is. But when the world economic crisis began, in China there was a substantial investment boom. It was also aided by a bubble when the government promoted an investment boom. Now, the problem with the investment boom is that you build factories that are not used and build up houses that are not demanded and so on. Therefore, that kind of a bubble is bound to collapse. I think that the Chinese economy is moving towards a crisis. The fact that the Yuan is getting devalued is, in my view, a Beggar Thy Neighbour policy. I think what is required in China, or for that matter in India, is actually a revival of the home market which is based not on simply an investment boom but also a consumption led growth which would mean that you enlarge the people's consumption.

To answer the second part of your question, you must understand the accelerator mechanism for investment. The accelerator tells you how investment rises when the output rises. The multiplier tells you how output rises when investment rises. And the multiplier and accelerator together give you booms. So the point is, if you enlarge the consumption sector, the market expands and the unutilised capacity shrinks. For example, the interest rate was down to zero and banks had a lot of funds, but why didn't people invest? First, there were no takers because the banks themselves preferred to hold equity than give out loans because you don't know who has toxic assets. Second, there was no demand for investment because of a stagnant economy. So, if you boost consumption, the market expands and capital stock is better utilised and this encourages capitalists to make investments.

Interviewer: *Sir, I read an article by Dani Rodrik wherein he was not completely in coherence with what you just said. First he praised and cited India as an example in terms of its public expenditure, but then he mentioned that there is a gap between saving and investment. So, even though countries like India and China are saving well, they have to realize that investment by utilising their savings. Does this not differ from what you have just mentioned with regards to consumption?*

Prof. Patnaik: There is a big difference between the two; while China is saving a large sum, in India it is the other way round. India has a large current account deficit. If you occasionally look at what Arun Jaitley says, I don't think that they have an idea about what to do. But I think that one thing that they probably had in mind was how to get the public sector to invest more in infrastructure because the private sector is not investing in the same. And even if the public sector is not investing in infrastructure in India, the task is to get Public Sector Banks to give loans to the private sector. This may be one of the reasons for the Non-Performing Assets crisis that we are reading about in the papers recently. C P Chandrasekhar wrote a piece on it and unearthed loans given by many private sector banks to specific companies for investment in infrastructure. But investment in infrastructure has the same problem as that in the Chinese economy; there are unutilized buildings among other things which have no rates of return. This is the problem with investment led growth. Consumption led growth is thus required by many economies like India and China today. Consumption led growth is something which has political economy dimensions, it requires changes in class correlations. After all, the government that is currently squeezing the MGNREGS, is not going to suddenly start boosting the people's consumption.

Interviewer: *Economists worldwide have been talking about the rise of Left wing politics like Syriza in Greece and Podemos in Spain. Where does this rise of the Left wing factor into a world which is moving towards the Right?*

Prof. Patnaik: It is not necessarily moving towards the Right. Economic crisis is something which produces both a tendency towards fascism and a tendency towards the Left. In the 1930s, it produced in Germany, Hitler on one hand, but on the other it produced a remarkable upsurge in the German Communist Party. They made mistakes, that is, they didn't get together with the social democrats. But that is exactly what is happening across the world. You have Donald Trump and Bernie Sanders, similarly in Britain you have Jeremy Corbyn and you have all kinds of fascist, racist outlets coming up. So crisis produces both kind of things, fascism and left progressive ideologies.

Interviewer: *The ongoing crisis in Syria has forced thousands of Syrians to escape to other countries in search for homes. These refugees have had been at the receiving end of xenophobia. People across the world are 'scared' of what the refugees might do to their native land. Do you think this fear is driven by paranoic patriotism which could potentially imply capitalistic influence?*

Prof. Patnaik: It has always been a feature. For a very long period of time the western population was largely unaware of the kind of damage that their governments were doing in Third World countries. Most Americans didn't even know where the Vietnam was, but when the death tolls of American soldiers mounted, they realized it. Now what is happening is that all these interventions of their governments in Iraq, Syria and other countries, are producing an impact in terms of refugees, which is why they are suddenly waking up to this fact. Paranoia of this kind has always been a sort of petty-bourgeois trade. The petty-bourgeoisie are always insecure because they are afraid of losing their jobs and insecure of the increasing threats. They live a precarious existence and this insecurity makes them vulnerable to this kind of paranoia.

Interview conducted by: Aakriti Chowdhary, Bhavya Srivastava, Meghana Mungikar, Pragya Yadav, Ujjavala Bothra
Transcript submitted by: Aditi Priya
Date of the interview: 12th of February, 2016

Interview of Prof. Jagdish Bhagwati

Prof. Jagdish Bhagwati is currently a professor of Economics and Law at Columbia University. He was awarded the Mahalonobis Memorial Medal of Economics society, Padma Vibhushan and The Lifetime Achievement Award from the Indian Chamber of Commerce to name a few. Prof Bhagwati's primary contribution is in the field of international trade and he is a staunch proponent of free trade for economies. In 2006, Prof. Bhagwati was part of a panel of eminent economists who reviewed the work of the United Nations Conference on Trade and Development (UNCTAD). In 2004, he was a part of the experts who took part in the Copenhagen Consensus Report; a project that seeks to establish priorities for advancing global welfare using methodologies based on the theory of welfare economics using cost–benefit analysis.

Interviewer: *In your 2010 speech delivered to the Indian Lok Sabha, you spoke about Stage 1 and Stage 2 reforms. Sir, do you not think that since we have already implemented (in part) the Stage 1 reforms it is now time to start working towards the Stage 2 reforms? Redistribution has been taking place in India, however the pace of this redistribution is rather slow. How do you propose that we quicken this pace?*

Prof. Bhagwati: Track I and Track II reforms are important to distinguish while understanding how growth reduces poverty. Track I reforms increase income and opportunity; a growing economy enables the poor to climb out of poverty. It is also an enabling device for social legislation to become effective. For example, you may pass legislation that enables women to file for divorce. But when neither the in-laws nor often the parents will be supportive, the legislation lacks force. But if the woman can get a job and support herself, she can profit from the legislation. Track II reforms are ways in which the growing revenues can be used to provide an added blow for the poor: these revenues can be used to provide healthcare and education to the poor.

We are not done with Track I reforms yet. Our trade is not yet as free. Since 1991 reforms, we have come a long way in opening up the economy, but not far enough. Prime Minister Modi was expected to do more "scaling up" to the national levels like what he had done in Gujarat. But by appointing a Minister for Trade who has been "trained" at JNU, where you are brainwashed into thinking that trade is bad, the Prime Minister has thrown away a fine opportunity to strengthen the Track I reforms.

On Track II reforms, there is also a tendency to subscribe to what many of us call the Second Amartya Sen fallacy (the First Amartya Sen fallacy being that "growth does not matter", a fallacy that he has been recently backing away from since it lacks credibility and common sense), that if revenues are spent for health and education of the poor, they must be spent on expanding public sector facilities. But we know how public sector facilities are characteristic of "no shows" by doctors and teachers. Why not spend the money to better advantage by spending it on the countless private schools that have sprung up and which could use better medical supplies, text-books etcetera?

Interviewer: *In the book, Fault Lines, it has been pointed out that competitive exports for rapid growth comes at the cost of household consumption in the domestic economy. This makes* *the developing economies rely on the demand in developed economies, making the dependence a fault line. Sir, you have been a proponent of free trade since times immemorial. How do you propose that a country like India can overcome this dependence at a time when the world demand for goods is falling?*

Prof. Bhagwati: The book, "Fault Lines", which I have not seen, is an apt description of its own errors: its contention that exports can happen only by depriving local consumers/markets is wrong. By investing in more capacity you can supply both domestic and foreign markets. As for the contention that one cannot export more today, that is, a revival of the "export pessimism" that led us in the 1970s and 1980s into excessive import substitution and undermined both growth and the associated reduction in poverty. Thus, when some people in India say that the slogan "Make in India" should be replaced by "Make for India", they are reviving export pessimism and its associated downside for our policy.

Interviewer: *Considering that developing countries mainly compete to export primary products which have inelastic demand in the world market, how plausible does it seem for these countries to fall into the trap of immiserizing growth in today's time?*

Prof. Bhagwati: You are reproducing the "export pessimism" argument of the earlier periods. Markets are not that inelastic and for any one country, for most commodities and manufactures, one can take markets away from the "pessimists" the way East Asia, which did not subscribe to these views, prospered while we, Indians, with our pessimism withdrew as effective competitors! Export pessimism can also be derived from the fear that as we export more, the importing countries will resort to protectionism to close their markets. But today, that is not credible. WTO has enough teeth today to prevent protectionist closure of markets and we have not witnessed a general closure of markets even when the world macroeconomic conditions have deteriorated in the last 10 years.

Interviewer: *From the perspective of international trade, given India's demographic dividend and the comparative advantage that we have in low skilled labour, do you think India will be able to reap the benefits of emphasis on imparting advanced skills to the populace?*

Prof. Bhagwati: You can profit even from exporting products made with low skills. However, unless you have skills you are unlikely to profit much from importing technology-intensive machines by exporting commodities and primary products. Singapore exploited international markets having her exports grow rapidly. It then imported technology-intensive machinery that embodied substantial technical change. But the returns from that technology would have been small if there was no skilled manpower to use these machines productively. Singapore was therefore correct in importing skills and in building up the skills of its own citizens: the export strategy would not have yielded such dramatic results otherwise. I have written extensively on the East Asian experience in this vein.

Interviewer: *The Indian Marxist economists are of the belief that globalisation is ruling today's world and its imperialistic tendencies have spread their tentacles in the Indian economy as well. Given the nature of capitalism and the need to expand its territory, today's developing economies have fallen prey to neo-colonialism. In light of this, what is your assessment of the 'Make in India' policy of the NDA government? Isn't such a policy only going to result in increased exploitation of labour for higher profits of the multinational corporations?*

Prof. Bhagwati: I am sorry that I find these “Marxist” arguments pathetic. Marx himself was a great thinker and would have been embarrassed that shoddy arguments were called “Marxist”. The postwar period of massive opening up of the world economy has benefited several developing countries and this has "pulled up" their poor into gainful employment. For India, the work of Devashish Mitra and others has shown that even inequality, no matter how measured, has shown no clear upward trend. I recommend your fellow students to read the extensive discussion of these issues in the book, India's Tryst with Destiny - a wit has called it India's Tryst with Dynasty. As for our becoming vassals of multinationals or foreign "imperial" powers, I can only think of what a brilliant observer of the India scene said many years ago: India is a big country that has the mentality of a small country.

Electronic interview conducted by: Bhavya Srivastava, Ujjavala Bothra
Date of the interview: 29th of March, 2016

Interview of Mr. Harun Khan

Mr. Harun Rashid Khan is currently a Deputy Governor at the Reserve Bank of India to which post he was appointed in July 2011. He oversees diverse areas such as financial markets, reserve management & external investments, Government debt markets, foreign exchange, balance sheet of the RBI, Payment and Settlement systems and Information technology. A career Central banker, he has served as the Executive Director of the RBI. He presently represents the Reserve Bank of India on the Board of NABARD. He is also a member of the Committee on Global Financial System (CGFS) of the Bank of International Settlements. His most important contribution to the Indian Economy was as the Chairman of the Internal Group on Rural Credit and Microfinance, also known as the Khan Committee which recommended the introduction of Business Correspondent and Business Facilitator models which have revolutionised the efforts at financial inclusion in India. Mr. Khan has also made significant contributions to India's banking and finance system in the field of rural credit, financial inclusion, internal debt management, external investment and exchange control.

Interviewer: *Sir, you had said that "the big risk as all of us know is of US action" with reference to the Fed rate hike. Given that the Federal Reserve has recently hiked the interest rates, what is your opinion on its impact on the global as well as the Indian economy?*

Mr. Khan: The Federal Reserve Bank (FED) hiked the Federal Fund Target Range (FFTR) on December 16, 2015 by 25 bps to 0.25-0.50 per cent. The FED Chairman Yellen indicated that the "process is likely to proceed gradually". Assessment of the FOMC members suggest rate hikes of 100 bps during the year 2016. With the FED itself noting that actual inflation is not measuring up to its 2 per cent target and given the continuing expected weakness in commodities (more particularly oil) prices, the actual inflation may fall short of expectations. Unanticipated weakness in China is likely to add to the deflationary pressure. Consequently, there is a possibility that the future hikes of the FFTR by FED could be less than anticipated.

The impact of FED action on the performance of the global economy is difficult to judge. On the one hand, as interest differential between the US and the rest of the world, particularly the emerging market economies (EMEs) narrows and the US growth picks up. Capital flows to the EMEs will reduce and there may be a possible adverse impact on the real economy and the financial markets in these countries. On the other hand, a strongly growing US economy is a positive for global growth. Correspondingly, should US inflation fall short of expectations, and if the FED is constrained to flatten its hiking path, the world growth would be negatively affected. The dollar is likely to continue to hold its strength against the major currencies. US yield curve is likely to flatten with the sell-off at the short end, depending on FED rate path.

With no immediate possibility of FED unwinding its balance sheet, and with India being one of the better performing large economies, it should continue to find favour with foreign capital. Though there was a net outflow of US$ 1.2 billion by the Foreign Portfolio Investors (FPIs) during December 2015, a net inflow of US$ 10.6 billion was experience in the whole year 2015 (US$ 3.2 billion in equities and US$ 7.4 billion in debt). There may be pressure on the rupee, but given our better macro-economic conditions (e.g., low current account deficit) and good level of foreign exchange reserves, we are much better prepared to weather the impact. Of course, continuing the reform process in India and taking the measures to boost growth, containing inflation and improving macro-economic conditions (e.g., fiscal consolidation) will further help India in becoming an attractive investment destination.

Interviewer: *In the light of China's attempt at including the yuan as a part of the IMF reserve currencies, do you think that the Indian financial markets have much to gain if India followed in China's footsteps?*

Mr. Khan: The Special Drawing Right (SDR) basket will be expanded to include the Chinese Renminbi (RMB) from October 1, 2016. Till September 30, 2016, the respective weights of the U.S. Dollar, Euro, Japanese Yen, and Pound Sterling would be about 42%, 37%, 9%, and 11% respectively. With effect from October 1, 2016, the revised basket would comprise of the U.S. dollar (42%), Euro (31%), Renminbi (11%), Japanese Yen (8%) and Pound Sterling (8%). This could be seen as an important milestone in the process of China's global financial integration. The benefit to China in material terms is a little too early to identify. Assuming that there will be some additional international demand for Chinese financial assets, this is unlikely to be a big boon for China given its trade surplus. On the flip side, China will be pressured to open up its capital markets and free its currency, which, going by recent experience, might undermine its financial stability.

The impact of SDR restructuring on India's financial markets is unlikely to be noticeable. Assuming it is desirable for the Indian Rupee to be included as a part of the SDR (and this is by no means clear, at this stage), requires India's external sector to be much larger than what it is currently.

Interviewer: *Even though the RBI is not concerned with urban infrastructure financing, it has still taken interest in sensitizing the market for funding requirements. In one of your speeches you had mentioned that municipal bonds lack a secondary market and this proves to be a hindrance in financing projects of the Urban Local Bodies. How do you propose that this can be overcome?*

Mr. Khan: An active corporate bond market would enable market for municipal bonds issued by the Urban Local Bodies (ULBs). The potential for issuing municipal bonds assumes importance in context of the proposal to set up 100 smart cities. The size of the municipal bond market in India is, however, rather limited and is distributed over a few strong municipalities of Ahmedabad, Nasik, Nagpur, etc. The possible reasons could be the overlapping jurisdiction on municipal bodies leading to a plethora of rules; perceived lack of specialized project management support in ULBs, non-transparent budgeting and accounting systems in many of the ULBs and the limited exit route for investors due to the lack of secondary market trading. To address these issues some of the measures which could be considered are strengthening of the governance structure of the municipal issuers by ring fencing the municipal bond funds, providing partial or full guarantee by the central/state government, mandating Escrow account for debt servicing of bond proceeds, etc. SEBI has since issued the Regulations for Issue and Listing of Securities by Municipalities.

Interviewer: *According to you, how would the introduction of cross-country futures benefit the Indian economy? What motivated the RBI to adopt this decision?*

Mr. Khan: The rationale for introducing cross-currency futures is to provide cheaper alternatives to market participants to hedge their cross currency exposures instead of going through the USD-INR pair. This will also provide opportunities to market participants to trade their views on cross currency pairs and provide liquidity to those who need to hedge.

Interviewer: *The RBI has recently commissioned the opening of brick and mortar branches in villages without the branch of a scheduled commercial bank. Could you please discuss the viability of the same?*

Mr. Khan: Contrary to common perception, financial inclusion is a potentially viable business proposition because of the huge untapped market that it seeks to bring into the fold of banking services. Banks need to view this as 'money at the bottom of the pyramid' and business models should be designed to be at least self-supporting in the initial phase and profit-making in the long run. Banks which understand this concept and take steps to penetrate their services deep into the rural areas will be better positioned to take on the challenges of banking in the future. Many believe, and rightly so, that banking in rural areas will be highly profitable in the coming years as there is tremendous opportunity in tapping savings, extending micro-credit, providing remittance services and offering other products like insurance, micro-pension, mutual funds, etc.

Reserve Bank had, in 2011, mandated banks to open 25 per cent of branches during a year in unbanked rural centres. Statistics have shown that banks have opened more than the required percentage (i.e., 25 per cent) of branches in the unbanked rural centres. Subsequently, RBI decided to allow banks to front load opening of branches in these centres so that they could carry over the credit of additional branches opened in these centres during a year for future years.

To make it more convenient and viable for banks, RBI has allowed banks to open intermediate brick and mortar structures (i.e. ultra small branches) between the present base branch and agent/Business Correspondent (BC) locations so as to provide support to about 8-10 BC units at a reasonable distance of 3-4 kilometers. This could be in the form of a low cost simple brick and mortar structure consisting of minimum infrastructure such as a Core Banking Solution (CBS) terminal linked to a pass book printer and a safe for cash retention for operating larger customer transactions. This is expected to enhance efficiency in cash management, documentation, redressal of customer grievances, better supervision of operations of the BCs and at the same time, it will be financially viable for banks to set up such low cost structures. Banks are being encouraged to simplify procedures and take more customer friendly measures to enhance the business opportunity arising out of financial inclusion efforts.

Interviewer: *What are the steps that could be taken to tackle the systemic risks imposed on banks (due to outstanding activities) and MFIs (concentration and funding risks) due to efforts towards financial inclusion? The highest Non-Performing Assets are in the agricultural sector, what steps are being taken in order to tackle this high rate of default in priority sector lending?*

Mr. Khan: Efforts of the Reserve Bank have been towards ensuring a balance between equity and efficiency considerations so that financial inclusion is furthered and at the same time financial health of banks is not hampered while their lending capacities are preserved.

The fundamental objective of priority sector lending and of overall financial inclusion is to ensure that there is an adequate flow of credit to those vulnerable sections of the society which, though viable and creditworthy, may not get timely and adequate credit in the absence of this special dispensation.

The deterioration in asset quality of the banks has emerged as a concern from within and outside the Reserve Bank. Moreover, data on NPAs suggests that NPAs in the priority sector are comparable with NPAs in other sectors. A Working Group, constituted by the Reserve Bank, which had been set up to review the existing prudential guidelines had recommended tightening of the provisioning norms and doing away with regulatory forbearance regarding asset classification, provisioning and capital adequacy on the restructuring of loans and advances.

While opening the Basic Savings Bank Deposit (BSBD) accounts including the Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts, the banks were advised to follow the Know Your Customer (KYC) norms as prescribed by the Reserve Bank. The process was facilitated due to digital identity available through Aadhaar. Therefore, the issues relating to money laundering have been addressed. The supervisory departments of the Reserve Bank verify the adherence to KYC norms and takes corrective measures wherever required.

As far as MFIs are concerned, since the reach of banks is not adequate in some pockets of the country, intermediaries like MFIs, which have a reach in the excluded segments of the society may be necessary. MFIs will help in expanding financial access to the disadvantaged people. More duet to their closer interactions will continue to remain an important segment of the financial inclusion efforts.

Particularly for the Non-Banking Financial Company MFIs (NBFC-MFIs), the Reserve Bank has put in place several measures for healthy growth of the sector.

Interviewer: *Based on the recommendations by the Khan committee, the RBI expanded the list of Business Facilitators and Business Correspondents for achieving financial inclusion. What were the desired objectives and to what extent have they been achieved?*

Mr. Khan: I am happy that you asked this question. The Reserve Bank allowed banks to appoint Business Correspondents and Business Facilitators to extend banking services outside the brick and mortar structure since 2006 following the recommendations of the Internal Group on Microfinance and Rural Credit of 2005 chaired by me (often referred to as Khan Committee). I would like to add that “Business” rather than “Banking” is the correct usage as the term would imply licensing for banking activities under the Banking Regulation Act. Since then banks have deployed more than 2.5 lakh Business Correspondents which are managing more than 5 lakh BC outlets across the country.

Banks under their Financial Inclusion Plans have increasingly chosen the BC set-up as the agent banking model for extending financial services since this could provide an accessible and affordable alternative to the traditional brick and mortar model.

Statistically speaking, as I mentioned earlier, the performance of BCs has been very significant. Through these BCs, nearly 22 crore Basic Savings Bank Deposit accounts have been opened. In these accounts operations are increasing over time. There are, however, a few issues that need to be addressed adequately for reaping the full benefits of the BC model. These include training, remuneration, expanding the activities by adding more services including monitoring loan accounts and the sale of other products, technology support, cash management, higher limits for conducting transactions, etcetera. Banks are now focused on tackling these issues.

Often people in villages are not willing to deposit huge amounts with the BCs as they cannot withdraw beyond a certain limit per day. RBI has advised banks to consider increasing the daily cash limit and to also taper down deposit requirements, if any, over a period of time based on the performance of the BCs.

RBI has taken some more initiatives to expand the reach and viability of BCs. It has allowed non-deposit taking NBFCs to become BCs of banks. Payments Banks, which are being set up to do only deposit and remittance business can become the BCs of full-fledged banks. In the recent Report on Medium-term Path on Financial Inclusion (Mohanty Committee) for enhancing the efficiency of the BC model, some more possible solutions have been suggested. These include the creation of a registry of BC Agents wherein banks will have to compulsorily register BCs before commencement of operations, and a GIS mapping of all banking access points which could help banks and other agencies to track the movement of BCs and supervise their operations more efficiently.

Further, the most significant change can be brought about if all the central/state governments to person payments are routed through the banking channel. This will ensure that the last mile delivery of these payments are routed through the BCs which will help in increasing the activities in a large number of dormant accounts. In addition to this, involving BCs in the origination, disbursement, monitoring and recovery of small value loans and other allied activities like exchange of currency notes and coins and providing remittance facilities will generate more income for BCs to sustain their operations.

Interviewer: *What specific steps is the government going to take in order to integrate NABARD's Potential Linked Credit Plan with RBI's priority sector lending for long terms loans in the agricultural sector?*

Mr. Khan: Potential Linked Plans (PLPs) prepared by the National Bank for Agriculture & Rural Development (NABARD) are a part of decentralized credit planning with the objective of mapping the existing potential for development through bank credit. PLPs take into account the long term physical potential, availability of infrastructure support, marketing facilities, and policies/programmes of the government, etcetera for mapping the credit potential of a district so as to stimulate balanced growth. PLPs are prepared by involving the banks and the government agencies taking into account major financial and socio-economic developments in the district that needs to be prioritised. The PLP estimates subsequently form the basis for preparation of branch credit plans, block credit plans, district credit plans and finally the state level credit plan. It may also be mentioned that the time bound approach adopted by NABARD for preparation of PLPs enables the banks to prepare their respective Annual Credit Plans (ACPs) based on the PLP estimates.

For more effective integration of PLPs with priority sector lending (PSL) guidelines of the Reserve Bank of India, NABARD has advised its offices that in view of the changes brought about by the RBI in the coverage, composition and classification of activities covered under the PSL guidelines, the composition and content of the PLP document should be revised to align with the changed PSL guidelines. The new PLPs released for different districts include new areas, such as, renewable energy, credit to medium enterprises and social infrastructure and are expected to be in line with the revised RBI guidelines regarding the priority sectors.

Electronic interview conducted by: Adya Behra, Bhavya Srivastava, Pariroo Rattan, Pragya Yadav, Sameeksha Satpathy
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Congestion Pricing

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1. Introduction

Road pricing is the practice of charging urban motorists for usage of busy roads at certain times, especially for optimizing congestion on roads and for generating revenue for road infrastructure. With roughly 1.2 billion vehicles on the world's roads, traffic congestion is no longer just an urban or road problem. Building more roads or subsidizing public transport has not been successful in addressing these problems. To end the traffic woes of commuters and to deal with the adverse effects of traffic and pollution on the environment and human health, road pricing is necessary. As the New York City Mayor, Michael Bloomberg said, "The question is not whether we want to pay the costs of congestion – but how do we want to pay it".

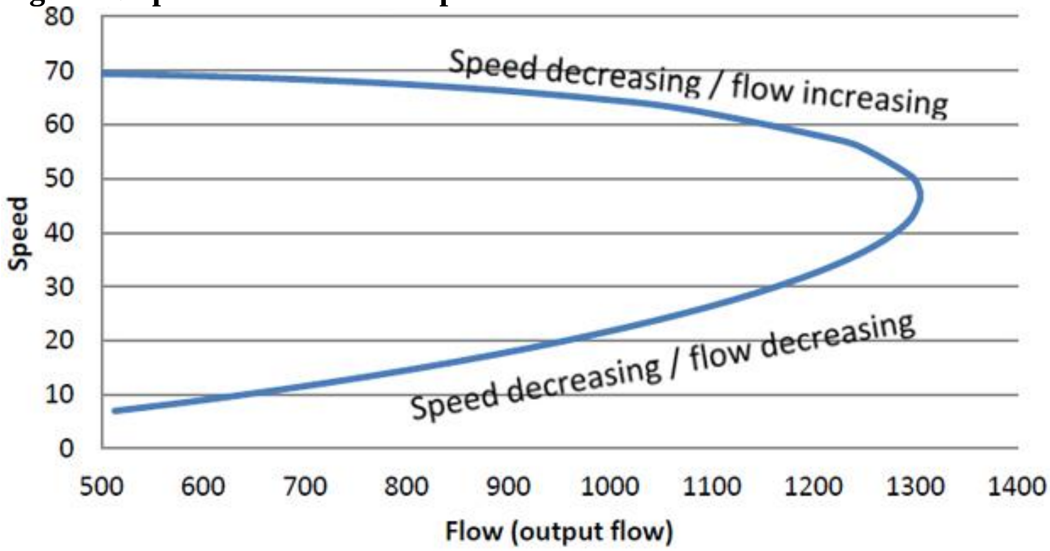
Different countries have adopted different road pricing models to manage traffic. From the HOT lanes initiated in the United States to manage its traffic (due to the high demand and limited capacity) to the Electronic Road Pricing System adopted by Singapore, countries around the world have felt the need for a well-developed road pricing system. To understand which model works the best, given different conditions, it is necessary to look at the effects of these road-pricing models adopted by different countries and to also examine the problems faced by each of these countries while implementing them.

In this review paper, four academic papers on road pricing have been discussed with the aim of studying and comparing various aspects and effects of road pricing in different parts of the world. However, it would be unfair to focus on the nodes without first concentrating on the hub, which in this case is the underlying principle behind road pricing. Thus, the first paper being reviewed discusses the rationale behind road pricing as against the next three papers which are country specific road pricing studies of Britain, United States and Norway.

2. Literature on Various Congestion Pricing Models

K. Button (2004), in his paper 'The Rationale for Road Pricing: Standard Theory and Latest Advances' gives an in-depth analysis of road pricing by covering the varied aspects of congestion pricing including the basic concepts behind congestion costs, time valuation and capacity expansion. Transport infrastructure capacity is limited in the short run, leading to the generation of congestion, a negative externality that must be reduced. While the ways of reducing congestion are being contemplated upon frequently, this paper reminds us that **some amount of congestion is important to avoid the under-utilization of capacity**. The paper then delves upon **Walter's concept of speed-flow relationship which is used to calculate the economic costs of congestion in the form of decreased speeds due to an increase in the number of vehicles on the road**. The speed falls up to a certain extent but flow continues to rise uptil the effect of additional vehicles is greater than the effect of reduced speed and the maximum capacity has not yet been reached. After this capacity has been utilised, the flow and speed decrease as can be seen in the diagram that follows:

Figure 1: Speed-flow relationship



Source: *Button (2004).*

Button's (2004) paper also sheds light on Morrison's work on social cost flow curve (ASC), the Marginal Private Cost (MPC), the time flow curve which is the reverse of speed-flow curve and the Marginal Social Cost (MSC) curve which is the extra cost the additional user places on traffic flow. As speed tends to zero, time and costs tend to infinity and the MSC approaches infinity as flow approaches the optimal capacity. **The difference between ASC and MSC reflects the marginal congestion cost, which the paper suggests should be the price charged to road users to optimize congestion**; it gives the mathematical model to compute the same. It also highlights the reasons behind the sudden interest in road pricing in the 1960s such as expanding car ownership and practical considerations. The paper then makes an interesting leap from 1960s to the current scenario and looks at the recent refinements in short run pricing which must vary according to traffic demand as well as time and road conditions, infusing more realism into the previous models.

An interesting aspect brought out in the paper is related to 'Parking', which may be regarded as a complementary good. It explains that parking costs are fixed and spread over longer trips. The paper addresses environmental costs and postulates that if the price reflects the marginal social costs, they would be internalized along with congestion. According to the paper, **capacity expansion is justified only when there is economic profit under constant returns to scale**. The author of this review paper believes that the most important issue the paper explores is that of the value of time which is explained in context of a major catastrophic event during which large scale evacuation will not be possible due to the congestion and chaos.

Button (2004) mentions that in London congestion pricing has been quite successful as there have been significant reductions in car traffic and the enhancement of the bus services. Initially, it was expected that the success of road pricing in London would lead many other cities in Britain to adopt the system but this did not happen barring the exception of a minor scheme in Durham.

The reasons for this as well as other developments in road pricing in Britain have been explained by Chris Nash (2007) in his paper 'Road Pricing in Britain'. Before discussing the studies conducted on a national road pricing scheme in Britain and explaining why congestion pricing has not been adopted in other parts of Britain despite its success in London, Nash (2007) gives a brief history of the road pricing scheme and its effects in London. In 1997, Ken Livinstone, the mayor of London, supported road pricing and introduced a flat charge of £5 for driving within a small area of Central London and installed an automatic number plate recognition equipment to check number plates of cars driving within that area. As a result of this charge the number of vehicles entering the zone dropped by14 per cent in the first year itself. The prices kept increasing in the years to follow. In 2005, when the charge was £8, more than £200 million was received as revenues (Transport for London, 2006). The paper mentions that this was possible in London because most people use public transport and only a small fraction use cars, something that is not true for the rest of the country.

Looking at Britain, it is found that initially charges for national road pricing system were based on a fully allocated cost which excluded congestion but included capital costs of expansion. A different approach given in a study by the Department of Transport, Environment and the Regions (2001) showed that with the development of modern techniques, marginal external cost of road use could be calculated. Button had mentioned in his theory that speed-flow relationships should be used to calculate optimal traffic and **marginal congestion cost should be the price charged to road users to optimize congestion**. An application of this is brought out by Nash (2007) where he explains that speed-flow relationships were used in estimating the impact of an additional vehicle in Britain on the travel time of other vehicles. In 2004, it was suggested by the Department of Transport feasibility study of the national road pricing system that marginal social cost pricing would yield benefits of £10.2 billion in 2010 with a net revenue of £9 billion and a reduction in congestion with a fall in traffic of about 3 per cent.

Nash (2009) mentions policies to implement a nationwide scheme in Britain which would be expensive initially but whose costs would reduce over time. He also suggests that a marginal social cost based road pricing system would reduce prices in rural areas but raise them in cities, with distributional consequences as well as potential land use effects. A politically acceptable scheme would require high charges and retention of revenues in highly congested areas, thus not using marginal social cost pricing which is a revenue neutral scheme as that would require a reduction in fuel tax, which would encourage traffic growth and congestion (a perspective different from the one discussed in the previous papers).

While Nash conducted a national road pricing systems study in Britain, a detailed state specific study was conducted by Michael Janson & David Levinson (2014), in their paper 'Hot or Not: Driver Elasticity to Price on the MnPASS HOT Lanes', to evaluate driver elasticity to price on the MnPASS HOT (High Occupancy Toll) Lanes in Minnesota, a state in the mid-western United States of America. He specifically focused on the MnPASS lanes on I-394 and I-35W in Minneapolis which were added by the Minnesota Department of Transportation (MnDOT) on two freeway corridors in the Twin Cities. The MnPASS lanes possess a dynamic pricing schedule based on the density of traffic with the price changing every three minutes. While it is usually assumed that congestion pricing tends to reduce traffic on roads, this study through data and field experiments, shows that **the driver elasticity to price is actually positive**. It also shows that the amount people are paying is greater than their average value of time. The paper looks at a state where congestion pricing exists and analyses its impact using field studies and data analysis unlike the previous paper by Nash (2007) where congestion pricing was already present in a state and the focus was on the movement of the whole nation towards congestion pricing. As the paper focuses on a particular state, it begins by providing an introduction and a background to HOT lanes and their inception in the state of Minnesota without much deliberation on road pricing at the national level in US, unlike the previous paper by Nash (2007).

Since 1992, Minnesota faces a high demand and limited capacity. The freeway corridors initially contained High Occupancy Vehicle (HOV) lanes reserved only for vehicles with a driver and one or more passengers, busses, motorcycles and carpools. However, the Single Occupancy Vehicles (SOV) complained about the underutilization of the lane. Thus, in 2005, MnDOT converted the HOV lanes into HOT lanes which give a free or discounted trip for HOV users and charge a dynamic congestion price to the SOV users to ensure that the HOV users would continue to use them. The toll price for SOVs is displayed at various plazas along the corridor. Loop detectors monitor the density in the HOT lanes and as the density of the lane increases, the toll price also increases. The paper also gives an economic theory of the demand curve of the toll roads using the assumption that **HOT lanes are not Veblen goods, but rather ordinary goods** (Beggs, 2010). As price increases, the demand curve shifts to the right and thus drivers consider the HOT lanes as a means of greater time saving.

Nash (2007) looked at different policies and studies conducted on national road pricing systems and quoted many useful examples to give a better view. The methodology for researching this case consisted of conducting three field experiments wherein pricing changed. It also analysed two years of toll and traffic data for which the frequency of use was looked into. MnPASS users have a transponder which determines the entry and exit locations and charges accordingly. On the basis of the analysis of the transponder's log for users throughout 2011 and 2012, the paper comments on the frequency of use by saying that **most users do not use MnPASS lanes every day, they select various days to use the lanes**. For I-394 and I35W, the average payment for time savings on the MnPASS lanes was calculated using toll and loop detector data (2011 & 2012). The time savings values ranged from $60-120 per hour, which were much higher than the typical values of time calculated in other studies. Using various methods, the elasticities were calculated and found to be statistically significant between 0.03-0.85. Thus, it was concluded that **as prices for MnPASS lanes increased, the demand also increased due to the perception of drivers that higher prices indicate greater time savings** as travel time and congestion details were not made available to drivers entering those lanes so they made a quick decision solely based on the prices. Hence, while congestion pricing came into effect to reduce the SOV traffic on the HOT lanes, it actually increased the demand.

Nash (2007) postulates that while something might work for a particular state, it might not work for a country as a whole and through the analysis of Minnesota we can deduce that sometimes the effects of road pricing can be completely opposite to what was expected. Other than reducing congestion, **road pricing is also used by countries to increase revenues for financing road infrastructure projects to cope with the growing traffic**. An example of this is Norway and the Norwegian toll cordons have been described by Odd I. Larsen & Knut Ostmoe (2001) in their paper 'The Experience of Urban Toll Cordons in Norway: Lessons for the Future.' Toll cordons operate in three Norwegian cities including Bergen, Oslo, and Trondheim whose geographical features have facilitated the implementation of toll cordons in these cities. Bergen has a manual system and reserved lanes for vehicles with seasonal passes, while Oslo and Trondheim have an electronic system for detection and debiting. All the cities have a common feature that only inbound traffic is tolled. The authors believe that the toll cordons have been successful in fulfilling their aim of generating revenue in these cities which have, and in some cases, exceeded expectations. The projects financed by toll revenue have been completed on schedule and without major cost overruns. In Norway, according to the Road Act, road tolls can be used only for financing road projects. However there has been a recent amendment to the Road Act that the revenue from road pricing need not be allocated to road projects but must be invested in the transport sector. As there is no legal action against toll rates differentiated by time of day, people have started considering alternative road pricing systems with a gradual movement towards congestion pricing.

Janson and Levinson (2014) in their paper 'Hot or Not' have also modelled congestion pricing in Oslo. They worked on data gathered through field studies after the implementation of pricing in a particular area while this model studies the impact of congestion pricing in Oslo before its actual implementation and makes an injudicious assumption that the destination choice and trip generation would be unaffected by pricing policy. Using OD-matrices (438 zones), four sub models, which gave a choice between car and other modes of transport, were derived and using logit models it was seen that the **use of public transport increases with higher toll rates in the peak time**. The following demand responses; timing of car trips within peak periods, choice of mode for travel, route choice for road traffic and public transport users were used to test four alternatives. It was found that fuel reduction varies between 14-18% in the peak periods. The paper also estimated that the social benefits of moving to differentiated toll rates in Oslo may approach NOK 200 million on an annual basis.

This congestion pricing model based in Oslo shows reduction in fuel consumption and increase in usage of public transport with increase in prices while the model presented by Janson and Levinson (2014) for Minnesota shows that increase in prices leads to an increase in the usage of the toll roads by SOV users. Finally, Larsen and Ostmoe (2001) conclude that with congestion pricing more funds will be available for financing infrastructure in the transport sector which will do away with subsidization of public transport and result in an efficient fare system. While Larsen & Ostmoe (2001) focus more on doing away with subsidies, Button (2004) mentions that they could be used under certain conditions.

Button (2004) mentions that the **revenue generated through the road pricing mechanism should be returned to the road users in the form of enhancing road networks**. This philosophy is shared by all the other papers as well. While Larsen & Ostmoe (2001) have shown that in Norway it is compulsory for the government to spend the revenue from road pricing on the transport sector, Nash (2007) has mentioned that in London, revenue of about £200 million was reinvested in transport system mainly in the form of improved bus services without the existence of a law directing the usage of revenue.

Another interesting aspect brought out in all the papers is with regards to the political realm. Button (2004) presents a political point of view of placing more weightage on the effects on different groups which has also been cited as the reason for the delay in approval of congestion pricing in democracies. This has been elaborated on by Nash (2007) using an example of London in his paper 'Road pricing in Britain' where he mentions that while the results of a major study in London were published in 1997 by the Government Office for London, the first congestion pricing scheme in Central London was introduced after the Smeed report came out in February 2003. He also mentions that a **crucial factor in the development of road pricing schemes in various cities has been the change in political control** at a crucial time. A similar view was brought out by Larsen and Ostmoe (2001) in their paper, where they mention that in Norway road pricing has been discussed for decades, but has never moved past the initial studies. The government benefits from the increased revenue from road pricing but fears on losing votes. However, in case of Norway, Larsen & Ostmoe (2001) point out that the risk of losing many voters at the next election was minimal for the parties that supported the cordons as dissatisfied voters would not have many alternatives to vote for other than some minor parties.

Finally, Button (2004) has raised and provided solutions to many problems in the implementation of road pricing ranging from political issues to high operating costs and problems with technological road pricing systems including privacy and reliability concerns. Button (2004) mentions that **by offering various congestion charges the congestion level could be optimized**. The opposition by general public is another problem in implementation of road pricing. Nash (2007) points out that in Edinburgh road pricing proposals were overwhelmingly defeated at a referendum. A solution to this problem has been provided by Larsen and Ostmoe (2001) who believe that while the opposition in the initial phase is strong, like threats of destruction in Oslo, most people eventually accept cordons as a part of life like parking fees and restrictions, which are a necessary evil and must be adopted.

3. Conclusion

Road pricing is essential but it comes with its own set of problems. From the high costs of implementing road pricing to the opposition by the general public and the political pressure, there are many issues which emerge when deciding on which road pricing model is to be adopted. Even after a particular pricing scheme has been adopted, many loopholes remain such as diversion of traffic to alternate routes and other technological issues. Despite these issues, we saw through this review paper how different countries have been successful in adopting this necessary evil and how they overcame various obstacles in their path of optimizing congestion on roads. The experiences of countries which have already adopted road pricing models will continue to guide countries which are currently in the process of adopting road pricing systems and countries which will embrace these practices in the future.

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The Use of Auctions in Infrastructure Allocation

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1. Introduction

Infrastructure investment is key to the growth of any nation as it assists either, directly or indirectly, in increasing the mobility of resources. Infrastructure projects are usually undertaken by government bodies. However, in light of the increasing excess funds held by the private sector, public-private partnerships are becoming common in the development and operation of infrastructure projects. This establishes the need for auction procedures as they help to determine which private player should be given the authority to develop or operate the given project. Since the infrastructure projects that are being referred to in this paper are undertaken for social benefit and are thus public goods, it becomes all the more important to determine which bidder to hand the project over to so that efficient functioning of the public good can be attained at minimum costs to the public or the government.

Having highlighted the important role played by auction theory in infrastructure construction and operation it is imperative to note that this review paper shall not be focusing on the various types of auctions but shall instead deal with the competition involved while auctioning procedures are undertaken and how that is affected by the various market player types. This paper shall discuss the same on the basis of three journal articles by examining their findings in light of the assumptions that they have made in order to contribute to the existing literature in the field of auctions in the allocation of infrastructure projects.

2. An Overview of the Papers

Verhoef (2008) in his research paper discusses the two ways in which an infrastructure project is allocated, that is, either through auctions or by means of free entry. Since the latter is not a prevalent feature and is beyond the ambit of this paper, the author of this paper shall only emphasize on the former. Verhoef (2008) has studied toll networks in roads which were initially untolled in order to argue that **both free-entry and auctions are second-best optimums** but in the case of auctioning the **zero-profit long run equilibrium can be attained faster** or more rapidly. This makes the auctions more efficient as it allows for the price to be quickly set at the zero-profit level and prevents the resources from being used for reasons other than those for which they were initially deployed. The optimums arrived upon are considered second-best because the model proposes that bidders try to maximise their patronage on the road through a combination of toll and capacity, however there is a possibility of unpriced congestion elsewhere on the network, which makes the new link (or the link that the owner has patronage over) the second best. Also, zero-profit equilibria applies to the model since it inherently assumes that no subsidies are granted by the government to private bidders.

Empirical evidence is used in order to substantiate that this theory is applicable to both series as well as parallel networks. The series networks refer to complementary services where, to travel from A to C you need to travel from A to B and then B to C whereas parallel networks are substitute roads that move from one point to another. Interestingly, the results suggested that irrespective of the type of network, i.e. parallel or serial, the prices tend to be more efficient as more firms enter on the same route. The system finds applicability of the **Wardropian equilibrium** conditions on each individual road segment (Verhoef, 2008). That is, the price faced by users must be generalized on each link on a segment carrying traffic irrespective of the traffic on different links. The Wardropian equilibrium condition is a byproduct of parallel links being considered perfect substitutes as well as road users being assumed as homogeneous.

The paper postulates that bids are placed bearing in mind the long run cost function, which is essentially based on the average user cost and the average capacity cost. The paper then theorizes that firms will not only act on the basis of the long run cost, but will also set a lower bound on the tolls they bid for in order to prevent loss making activities from resulting in the future. The basis for this is that the bid shall minimize the sum of the average user cost and the average capacity cost, such that post-investment flow on the new link is done at a minimised social cost (Verhoef, 2008). Since this is independent of the scale of operations, this zero-profit toll is also the first-best toll. However, as further additions of capacity follow later on, the firm would want to raise the toll, but it cannot do so because it has committed to keep it unchanged, making this the second-best equilibrium. This establishes the need for the lower bound mentioned above, as the entering or bidding firm does not want to incur losses. This analysis assumes that entering firms do not renegotiate, which may not be highly practical when compared to real world scenarios.

While Verhoef (2008) helped characterize the auction market and the results that it helped produce, Estache & Iimi (2010) define the competitive market of auctioning (in the case of sealed auctions) and thereby empirically study the degrees of aggression in bidding across some infrastructure markets by classifying bidders as either incumbents or entrants. Incumbents have been defined as those bidders who had bid during the first half of the sample period from 1997-2002 and the entrants are those who bid in the second half of the sample period from 2003-2007. Hence, unlike in the case of Verhoef (2008) where bidders were considered homogeneous, in this model the bidders are considered to be heterogeneous. The paper draws the conclusion that **entrants bid more aggressively when there are incumbents in the market** as the coefficient of the regression stands at -0.247, which is significant at 10% and thereby substantiates the asymmetric auction theory. This is done in order to compensate for the advantage of brand value that incumbents have.

However, as entrants try to bid for projects at a lower cost, they have a tendency to fall prey to the ‘low bid and broke winner’ phenomenon. This aggressive bidding will be such that the costs will be very high leading the entrant to make a substantial loss. Hence, even though the entrant may have won the bid, the company will not be able to meet the low bid and still profit from the venture. At this stage, the government will be forced to renegotiate the project since re-bidding is costly and inefficient as the bidder would have already started contributing to the project. Information asymmetry or lack of knowledge about rivals in the market will only make the situation worse. It must be noted here that if the contractor thinks that contract renegotiation is a possibility in the future, then that company has a tendency to bid lower to win the bid and to then opt for re-negotiation of the contract on a later date. Verhoef (2008) in the above paper had assumed that re-negotiation is not possible for private players, which may be unrealistic in the market conditions, making the Estache & Iimi (2010) model more realistic in terms of the strategies that players opt for on the basis of their future expectations.

Interestingly, the effect in the reverse scenario is not the same (Estache & Iimi, 2010). When **incumbents bid in a market where entrants are also bidding, they bid less aggressively**. The reason behind the same could be, as suggested by Amaral, et al. (2013), because they know their own brand value in the market due to their good performance and are also aware of some political bias in their favour, if any. However, one must not fail to note that the definition of incumbents differs in the two papers. Amaral, et al.(2013) define incumbents as those companies which have performed well in the past and have won bids as against the definition of Estache & Iimi (2010) which is narrow and specific to the sample as it fails to account for previous contracts and takes into account the bids placed instead of the bids won. Here it is important to consider that Amaral, et al. (2013) empirically prove that incumbents do not benefit from first mover advantage, implying that the **advantage that incumbents have in winning the bid is not related to cost efficiency**.

As mentioned above, bidders have a tendency to compete aggressively when they know that renegotiation of the contract is a possibility. This sets the stage for a careful assessment of bids during auctions. Amaral, et al. (2013) in their paper discuss the case of the London bus transit system wherein they empirically study the factors that influence winning of the contract. Hence to some extent, their paper helps to identify the faulty bids that were mentioned by Estache & Iimi (2010). Their paper is based on the theoretical grounds that there are two effects that bidders keep in mind while placing their bid; the competition effect and the winner’s curse effect.

The competition effect simply states that as the number of bidders rise, the auction market becomes more competitive and there is more aggressive bidding in terms of lower prices. However this effect is contestable given that in common-value auctions, more competition may not lead to price reduction due to the winner’s curse effect pushing towards higher expected prices. Winner’s curse is the state where bidders bid for projects at a value such that it exceeds the intrinsic value of the project itself and thereby makes the winner worse off in terms of having incurred a higher cost. Winner’s curse effects also increases prices with number of competitors such that when the winner’s curse effect outweighs the competition effect, the prices are likely to increase with competition (Amaral et al., 2013). This could be attributed to the **increased price mark-up companies start to charge when they recognize that at lower prices they shall be subject to the winner’s curse**.

This phenomena is not just subject to common-value auctions, it is also relevant in the case of private-value auctions. The common-value and private-value auctions differ in terms of the type of the goods being auctioned; common-value auctions are usually held in the case of public goods such as infrastructure projects whereas private-value auctions are to satisfy specific or individualistic desires such as acquisition of antiquities.

Since the paper is dealing with London bus routes which are more or less homogeneous and satisfy the conditions of knowledge of contracts not being renegotiated clubbed with the conditions that prevent prediction errors in cost (due to the implementation of competitive tendering since 1994), we can more or less eliminate the winner’s curse effect. The above conditions along with the bidders having perfect knowledge of what is being auctioned result in only the pure competition effects being realized. The statistical results complied with this theoretical base, as the average cost per mile decreased from £7.80 in a one-bidder auction market to £2.66 in an auction market with 9 bidders (Amaral et al., 2013). In contrast, Estache & Iimi (2010) arrive upon an unexpected result that defies the competition effect. But upon the use of the fixed effect model (which shall be discussed further ahead), the competition effect can be reaffirmed in the context of the entrant effect wherein the competition intensifies when incumbents participate in the bidding process.

In London bus route auctions bidders can bid for specific routes or route packages such that the bidder cannot bid a value for a route package more than the stand-alone bids (a package bid with the value equal to the sum of individual route bids) of that package and the bidder should keep in mind that all the bids must be made such that the company's share in the total London bus route must not exceed 25%. These policies allow small companies to join the network, foster competition and also prevent incumbent bidders from excessively benefiting from economies of scale such that they are able to acquire the market power to drive away competition.

One limitation of the model lies in the fact that winning bids and number of bidders are endogenous variables and may lead to inaccurate OLS regression results. The degree of competition anticipated by the bidders, as was in the case of Estache & Iimi (2010), determines the bidding strategy. Hence, unlike in the other two papers, Amaral et al. (2013) do not assume that the number of bidders is known. They propose that the bidding strategy is determined on the basis of the expected number of bidders which may or may not coincide with the actual number of bidders. The empirical results conclude that the **winning bids are less aggressive when the actual number of bidders exceeds the expected number of bidders, but are very aggressive when the actual number of bidders is inferior to the expected number of competitors** (Amaral et al., 2013). This highlights the tendency of bidders to contest in auctions which were less competitive in the past, as they feel that their chances of winning are higher in such a scenario. Conversely, bidders bid more aggressively when they participate in auctions that were previously more competitive.

In order to address the above mentioned problem of endogeneity, the lagged variable of the number of bidders in the previous auction is used along with the number of auctions in the present month and the number of auctions that have already been won by the bidder in the previous month in order to arrive upon the number of bidders or rather more accurately, the expected number of bidders through a log-log OLS linear regression model. On the other hand, Estache & Iimi (2010) had used the fixed effects model where auction specific variables like the number of bidders were removed from the estimation equation, essentially maintaining the argument that they were kept fixed. This not only reduces the variation in the bids but also fails to estimate the marginal effect of the contract characteristics of the bids. Hence, in this context, the lagged variable used by Amaral et al. (2013) is a better model to arrive upon accurate results.

The paper by Amaral et al. (2013) also includes an independent variable to account for joint bids, but the results show that it is not significantly different from zero implying that, on an average, winning individual routes does not reap economic benefits which are significantly different from that of winning a package bid. Thus, it can be concluded **that package bidding is driven by strategic motivation rather than cost synergy consideration** (Amaral et al., 2013). However, this does not imply that economies of scale do not exist. The results reflect that unit operating costs reduce with increased number of miles and increase with the variable which is the square of the miles, indicating that non-linear economies of scales exist.

3. Conclusion

Thus, it can be seen that the three papers studied deal with different aspects of the use of auctions for infrastructure allocation. While Verhoef (2008) studies the auctions in the case of tolls and the various factors that influence the behavior of new-entrants or bidders in the market by differentiating allocation of infrastructure in the two cases of free entry market and auctions market, Estache & Iimi (2010) help to differentiate the bidder as either an incumbent or an entrant. They then study the strategic behavior of these bidders based on whom they will be bidding against in a sealed auction set up, as is done in a simultaneous game. Finally, Amaral et al. (2013) simply study the case of the London bus services in order to determine the competition effect and the winner's curse effect so as to study the degree of competition in the markets in order to then determine how each player in the bidding would strategize to win the bid. The papers help to understand that auctions are strategic games where the government tries to identify bidders with the lowest feasible cost and where the bidders themselves try to identify what costs to bid at such that they do not incur losses from their investment.

References

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