

**AFFORDABLE HOUSING BY REAL ESTATE PLAYERS IN INDIA:
A CRITICAL ANALYSIS IN THE ERA OF RERA AND GST**

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ABSTRACT

Housing shortage is a major problem in India, urban housing shortage being more acute than the rural. In the current scenario, the Government of India is committed to the national goal of 'Affordable Housing for All by 2022'. In view of the immense potential of housing investments for economic development of a nation due to its vast linkages, and the urgency of attaining the national goal as above, the Government of India has been actively promoting housing development in the country.

The promulgation of Real Estate Regulatory Authority Act (RERA) and the implementation of Goods Services Tax (GST) Act have had their impact on the housing and real estate sector. Considering the capacity of this sector to kick-start an economy facing slowdown, this paper suggests strategies for the economic revival of India.

KEYWORDS

Affordable Housing, RERA, GST, ICT, Sustainable Housing Development. etc.

INTRODUCTION

It is widely acknowledged that housing and residential real estate sector has immense potential for economic development of any country, besides the vital social development role played by this crucial sector. This fact is especially true in respect of developing countries like India. There have been many initiatives to promote housing development in India over the years.

In the last few years in particular, there have been a few landmark developments like the promulgation of Real Estate Regulatory Authority Act (RERA) and implementation of Goods and Services Tax (GST). In the ongoing regime since the start of FY 2017 (i.e. April 2016 onwards, to be specific) India is passing through an economic slowdown.

RELEVANCE AND SIGNIFICANCE OF STUDY

The economic slowdown has affected the housing and real estate sector as well. Hence, special attention on the promotion of housing development becomes very meaningful because of the vast forward and backward linkages of this industry with not less than 269 other industries. Besides, since India is already committed to the national goal of 'Affordable Housing for All by 2022', promotion of housing and real estate sector is more meaningful in the Indian scenario.

The case of encouraging affordable housing initiatives of the real estate developers in India assumes high significance in the above backdrop, considering the fact that such a policy would help to kick-start the Indian economy, which is facing a slump. The implementation of GST and RERA has given another dimension to the above imperative.

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OBJECTIVES OF STUDY

- To study the current status in respect of the residential real estate sector in India when the economy is facing an economic slowdown;
- To study the impact of RERA and GST on the housing and real estate sector in India, and to suggest suitable strategies for sustained growth of the sector in the new regime.

METHODOLOGY USED

The present study is descriptive-analytical as well as exploratory in nature. The study is descriptive to the extent that it describes the developments in the field of housing and real estate sector in India, in the present regime of RERA and GST.

The paper is analytical too as it seeks to analyze the need for promotion of affordable housing schemes of real estate players in India, to ensure faster and sustainable housing development in the country, and also to tide over the prolonged slowdown faced by the economy as a whole. The study is based on secondary data from authentic sources like RBI, NHB, CRISIL, industry reports etc.

LITERATURE REVIEW AND RESEARCH GAP

Kiran Keswani (1997) [11] has studied the reasons for the slow growth in low-cost housing projects in India. The author has suggested that the Government should assume the role of a facilitator rather than a provider. A three-pronged strategy has been suggested for promoting low cost housing viz. (i) examining critically the archaic laws on housing, (ii) disseminating information on technical aspects of house building, and (ii) training in updated technologies on low-cost housing.

Peer Smets (1999) [30], has argued that a definitional issue associated with formal housing finance and 'eligibility' for the same in terms of 'affordability criteria in one go' has resulted in exclusion of the vast majority of the urban poor from availing finance from formal sources of finance. The author has advocated the need for 'incremental housing' and the need to assess the 'affordability in a phased in manner' and 'not in one go'.

Manoj P K (2003) [13] in his research paper, 'Retail Banking: Strategies for Success in the Emerging Scenario' in *IBA Bulletin* has suggested strategies for the sustained growth of the retail credit portfolio of banks, that mainly comprises of housing finance, as a safer way of increasing business and also kick-starting the then recession-hit industry of India. 'Linkages' – both forward and backward – of housing with large number of other industries, and the positive effect of such linkages for bringing about faster economic growth have been pointed out in the paper.

Manoj P K (2004) [14] in his another research paper, 'Dynamics of Housing Finance in India' in *Bank Quest* has pointed out the growing appetite of commercial banks (CBs) towards housing credit, the falling share of housing finance companies (HFCs) in the market, and allied aspects. Some macro level strategies for the sustained and balanced growth of housing finance in India are suggested. The relevance of promoting secondary mortgage market (like, RMBS), alternative models like Housing Micro Finance (HMF) etc. has been noted.

Working Paper 19 by IFMR (2007)[7], has noted the utmost importance of promoting Housing Micro Finance (HMF) – an alternative model for housing finance for the poor – for addressing India's chronic housing problem, which in turn is primarily that of the poor and marginalized in the country, like the LIG (Low Income Group) and EWS (Economically Weaker Sections). Only models like HMF could cater to such deprived sections that are not served by the formal sector agencies. So, models like HMF are required to solve India's 'real housing problem'. The report seeks to design the suitable HMF model for the Indian poor.



Manoj P K (2008) [15] in his paper, 'Learning from Cross-country Experiences in Housing Finance: A Microfinance Approach' in *Journal of Global Economy* has suggested suitable macro level strategies for promotion of housing micro finance (HMF) in the Indian scenario by appropriately replicating the successful and time-tested models like HMF or other similar alternative housing finance models prevalent elsewhere in the world.

A paper by Manoj P K (2010) [21], "Prospects and Problems of Housing Microfinance in India: Evidence from "Bhavanashree" Project in Kerala State" in *European Journal of Economics, Finance and Administrative Sciences* has studied in detail the utmost importance of HMF for balanced and equitable housing development in India, and hence rapid economic development of the country. Strategies for promotion of HMF in India have been suggested, along with specific and category-wise strategies for the HMF based in Kerala and sponsored by the state government namely 'Bhavanashree'.

Manoj P K (2010) [18] in his paper, 'Benchmarking Housing Finance Companies in India: Strategies for Enhanced Operational Efficiency and Competitiveness' in *European Journal of Economics, Finance and Administrative Sciences* has made a detailed analysis of the relative competitive position of the leading housing finance companies (HFCs) in India and has suggested strategies for the enhanced operational efficiency and competitiveness of HFCs.

KPMG (2010) [11], in its Report, 'Affordable Housing – A key growth driver in the real estate sector?' has sought to discuss the immense growth prospects of real estate players in the affordable housing market in India, given the huge demand and grossly under-penetrated market, very favorable Governmental policies etc. The demand and supply constraints, the relevance of PPP in the real estate sector etc. have also been dealt in detail.

In a research paper by Manoj P K, (2010) [19] 'Determinants of Successful Financial Performance of Housing Finance Companies in India and Strategies for Competitiveness: a Multivariate Discriminant Analysis' in *Middle Eastern Finance and Economics*, has attempted to find the determinants of superior financial performance of HFCs. Using the tool Multivariate Discriminant Analysis (MDA), Discriminant Function having five distinct parameters (selected from the total 21 parameters used for MDA) which significantly influence the financial performance of HFCs has been derived.

Yet another paper by Manoj P K (2010) [17], 'Financial Soundness Housing Finance Companies in India and Determinants of Profitability: A 'CAMEL' Approach along with ROE Decomposition Analysis' published in *International Journal of Business Policy & Economics* has employed the methodology of 'CAMEL' ranking along with ROE decomposition analysis to identify the determinants of profitability of HFCs.

A research paper by Manoj P K (2011) [22], 'Determinants of Profitability of Housing Finance Companies in India and Strategies for Competitiveness: a Multiple Partial Correlation Approach' in *International Journal of Business Intelligence and Management* has suggested competitive strategies for various groups of HFCs with the help of the basic parameters that significantly influence the respective groups of HFCs.

A joint research paper by Hrushikesh Mallick & Mantu Kumar Mahalik (2015)[5] 'Factors determining regional housing prices: evidence from major cities in India', in *Journal of Property Research* has sought to identify the factors determining the housing prices with respect to 15 major cities in India using data relating to 16 Quarters (4 years, 2010 to 2013). It has been noted that fundamental factors are more significant than speculative factors.

In a research paper by Manoj P K (2015) [25], "Socio-Economic Impact of Housing Microfinance: Findings of a Field-based Study in Kerala, India", published in *International Research Journal of Finance and Economics*, the reasons for the failure of 'Bhavanashree' – the HMF initiative of the Government of Kerala have been studied in detail. The author suggests strategies for effective implementation of HMF projects based on the "learning from the failure of 'Bhavanashree' project" in Kerala.

IFMR (2015) [8] in its report on affordable housing makes a detailed analysis of the need, relevance and significance of affordable housing in India in the context when the national goal of 'Affordable Housing for All by 2022' is implemented by the Government of India. The crucial role that HFCs have to play in this context is



specially noted in the IFMR report. The fact that there is a gradual re-emergence of HFCs since 2013, thus overtaking the CBs in growth rate and significantly improving their market share has been specifically pointed out.

In a paper by Manoj P. K. (2015) [23], “Deterrents to the Housing Microfinance: Evidence from a Study of the Bankers to ‘Bhavanashree’ in Kerala, India”, in *International Research Journal of Finance and Economics*, the major problems associated by the bankers in financing ‘Bhavanashree’, the HMF initiative of the Government of Kerala, has been dealt in detail. Various issues like the unclear land tenure, fragile institutional framework of the HMF and its parent (mentor) ‘Kudumbashree’ etc. have been studied in detail. Suggestions have been made for more meaningful implement HMF initiatives in the future, ‘Bhavanashree’ initiative being more or less a failure.

In a research article by Manoj P K (2015) [24], “Housing Microfinance: A Study on Quality, Cost and Default Rate with Respect to ‘Bhavanashree’ in Kerala”, in *International Research Journal of Finance and Economics*, a detailed and critical study of the asset quality, administrative (transaction) costs, and default rates in respect of the HMF initiative of the Govt. of Kerala i.e. ‘Bhavanashree’ has been made. Suggestions are made for more effective implementation of HMF projects by the state government.

A research paper by Manoj P K (2016) [26], “Real Estate Investment Trusts (REITs) for Faster Housing Development in India: An Analysis in the Context of the New Regulatory Policies of SEBI” in *International Journal of Advance Research in Computer Science and Management Studies* has made an exploratory study of the utmost relevance of REITs in a developing country like India for promotion of its housing and real estate sector and hence the whole economy.

BCG (2018) [2] in its report, *Digital Lending* has sought to highlight the immense opportunity for digital lending in India. According to BCG, it is a USD 1 Trillion opportunity over the next 5 years and the stakeholders can utilize the same. IBEF (2018) [6] in its report on real estate industry in India has noted the vast growth prospects of the India’s real estate industry that is estimated to attain the size of USD 1 Trillion by 2030. Its estimated size as of 2019 is 3.7 Million Square feet and it is the fourth largest sector in terms of FDI flows. Rapid urbanization, growing affordability, and Governmental commitment to attain ‘Affordable Housing for All’ etc. brighten the prospects of India’s real estate sector.

In view of the foregoing analysis, it is noted that though there are many studies on housing and real estate sector in India, studies focusing on the impact of landmark developments like RERA and GST are nil. This study seeks to bridge this gap.

HOUSING AND REAL ESTATE SECTOR IN INDIA: AN OVERVIEW

As a primary human need, housing which ranks second only to the need for food and clothing and hence housing development has high socio-economic implications in any society. This is particularly true in respect of developing nations like India wherein the housing stock is inadequate to meet the growing housing needs of the masses. It may also be pointed out that housing industry has the capacity to kick-start a recession-hit economy, and further it can withstand the recessionary pressures too, better than any other industry.

In the ongoing era in India characterized by GST and RERA, even when there is a clear slowdown in every sector in Indian economy, housing and real estate sector could register a reasonable level of resilience despite a fall in its annual year-on-year growth rates. Therefore, if we interpret the future in terms of the current developments, the best can be attained by more housing investments. In fact, housing development and GDP growth are mutually interconnected and accordingly contribute to each other’s growth. This crucial reality regarding housing development is well reflected in the policy of ‘Affordable Housing for all by 2022’ – an official goal of the Govt. of India since 2017.

The present policy of the Govt. of India is that of promoting integrated housing development, which can satisfy, not only the basic human needs but also can facilitate the holistic development and that too within the parameters of a planned welfare economy. Accordingly, safe, secure and affordable housing can by any means enhance the



opportunities for employment and education for the citizens. Moreover, it can enrich the communities thus resulting in a better civil society as well as better quality of life of individuals. Besides the direct contribution, that housing investments make to the country's GDP it increases social capital, which is intelligible wealth that comes with good social network at the heart of which lies clean environment, hygienic living and quality housing.

India, with its 130 Crore plus population, still witnesses an acute shortage of houses. As per the 12th Plan (2012-2017) estimates, the urban housing shortage is 18.78 million units. Studies reveal that the population in the five most populous cities viz. Mumbai, Kolkata, New Delhi, Chennai and Hyderabad are set to grow at a high pace of more than 50 percent between 1995 and 2010 and by 2025, this will be more than double. All these indicate a high level of migration from the rural and semi-urban areas to urbanized areas. The percentage of urban population (31.16 percent as of 2011) is estimated to be about over 50 percent by 2050.

Coupled with the demand for dwelling units, another major factor, which has contributed to the buoyancy of housing activity, is the affordability of properties. This, in turn, has been the result of a combined effect of stabilized property prices, higher level of incomes and lower cost of borrowings. In fact, the boom witnessed by the housing finance sector can be attributed to these factors. Housing is often called the "Engine of Domestic Growth" of an economy.

As investment in housing and construction triggers investments in many allied sectors, like, Steel, Cement, Paint, Furniture, etc. Thus, because of the above 'Linkage effect', housing investments drive as many as 269 other industries, directly and indirectly. Housing ranks third among the 14 major industries in terms of total linkage effects, and the linkage effect with respect to Steel and Cement industries are very prominent.

In terms of contribution to the GDP, for every rupee invested in housing and construction, 78 paisa is added to the GDP. Housing ranks fourth in terms of the multiplier effect on the economy, ahead of sectors like transport and agriculture. Investments in housing sector has steadily increased throughout during the Plan era in India, right from the first Plan to the XII Plan (2012-2017). The present Niti Ayog era so far (2017 to 2020) is no exception.

Perhaps the greatest socio-economic impact of Housing is in employment generation. Housing is the second largest employment generator in the country after agriculture. A host of vocations and professions derive their livelihoods from housing, either directly or indirectly. Construction workers, builders, developers, suppliers, civil engineers, valuers, property consultants, furnishers, interior decorators, plumbers – the list is virtually unending.

In a developing nation like ours, housing can be the solution to the most nagging problem that any Government faces – that of employment. Apart from various indirect benefits that the economy derives from housing, the Government itself is a direct beneficiary in terms of collection of stamp duty rising out of acquisition of real estate assets.

It is therefore not surprising that the Government has left no stones unturned to support Housing activities. The continued tax incentives on Housing Loans to trigger a higher off-take in credit for retail Housing is a reaffirmation of the Government's commitment to aid the sector. Other initiatives like extension of benefits u/s 80 I to mass housing projects, scrapping of the Urban Land ceiling act, implementation of the Securitization Act are all in line with the same objective of propelling growth through Housing. However, it may also be added here that there is scope of further improvement in various areas, mainly with reference to streamlining of laws related to construction activities and rationalizing of stamp duties on transfer, securitization, etc.

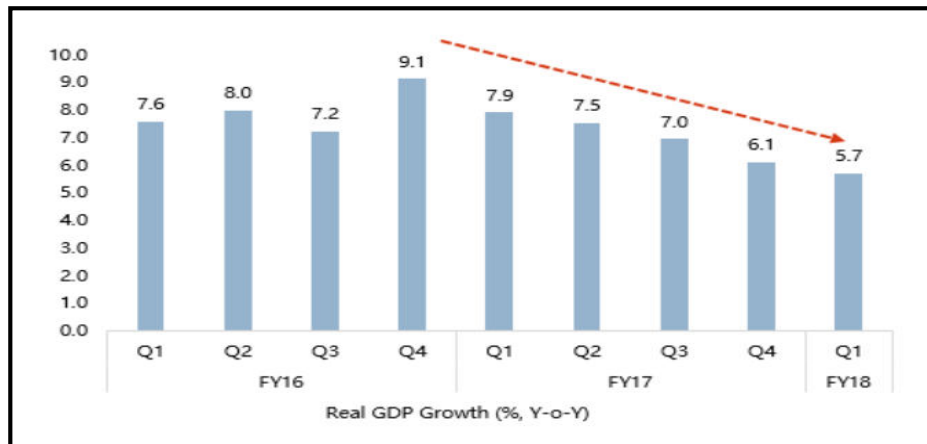
When one looks at the future, the 'big picture' appears to be very bright. A comparison of the Mortgage Finance to GDP ratio places India at the foot of the table with a penetration rate of nearly 10 percent which is one of the lowest in the world. Thus, there is high growth potential for housing in India. With India's population steadily increasing, it will not be long before India overtakes China and attains the top position. Demographic experts have predicted India's working age population – the segment which has the highest demand for housing – to be the highest. This ensures that the demand for housing is as long as well as sustained. Rapid strides in infrastructure development like the Golden Quadrilateral Project and the National Highways Development Programme, are progressing at an impressive pace. This is bound to trigger off a fresh round of housing and habitation through further development of semi urban and rural areas as well as setting up of new satellite townships. The recent developments in this regard include the Smart City mission of the Govt. of India which envisage the development of 100 selected cities in India

which have high growth potential and are fast emerging into sustainable, integrated smart cities that follow the SDGs.

STATUS OF INDIAN ECONOMY AND SITUATION OF HOUSING AND REAL ESTATE SECTOR

There is a steadily falling trend in respect of GDP of India over the last few quarters and this is very prominent since the fourth quarter of 2016 (Q4, 2016). As per the latest statistics, this falling trend is continuing also. (Figure I).

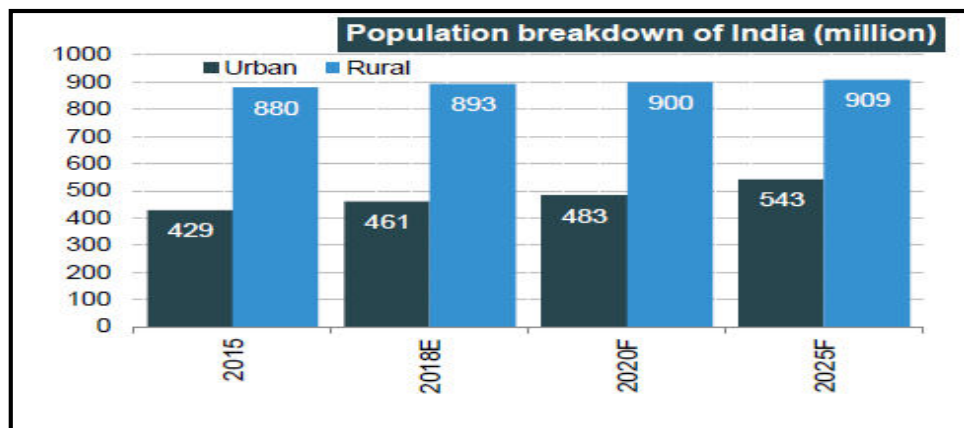
Figure-I: Real GDP Growth Rate in India: Steadily Declining Trend after Q4 2016



Sources: CRISIL (September 2018) [3]

Housing shortage is a reality in India even after 70 years of independence. Though there is a gradual fall in housing shortage in rural India, it is still acute in urban areas and is showing a generally growing trend too. The urban housing shortage of the low income group (LIG) and economically weaker sections (EWS) categories is India’s ‘real housing problem’. Owing to the growing demand for housing in the above segment and also governmental efforts in promoting housing development, many players have entered this segment. Given the fact that the mortgage to GDP ratio in India is at a very low level of nearly 10 percent which is one of the lowest among the world nations, and the fact there exists a huge housing shortage in India even after 70 years of independence, there are high growth prospects for the housing finance and real estate industry. As vast majority of the housing shortage relates to the low income groups, ‘Affordable housing’ has bright growth prospects.

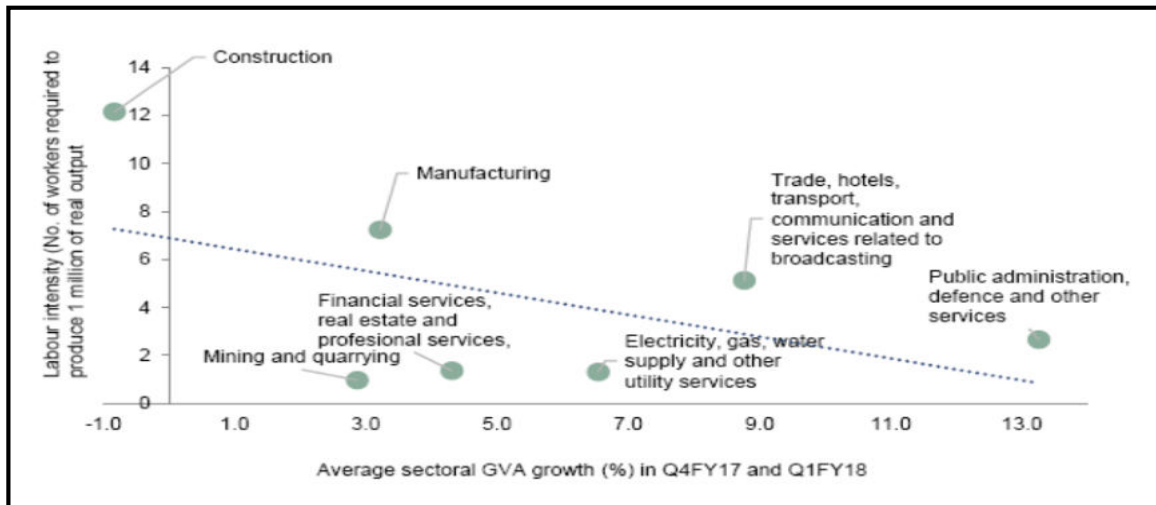
Figure-II: Urbanization in India – Steadily Growing Trend



Sources: IBEF (2018), Real Estate [9]

As the urbanization process is fast taking place in India, urban housing shortage (which is more acute than rural housing shortage) will therefore become more severe in the future. This in turn would call for concerned efforts to solve the urban housing problem. (Figure II).

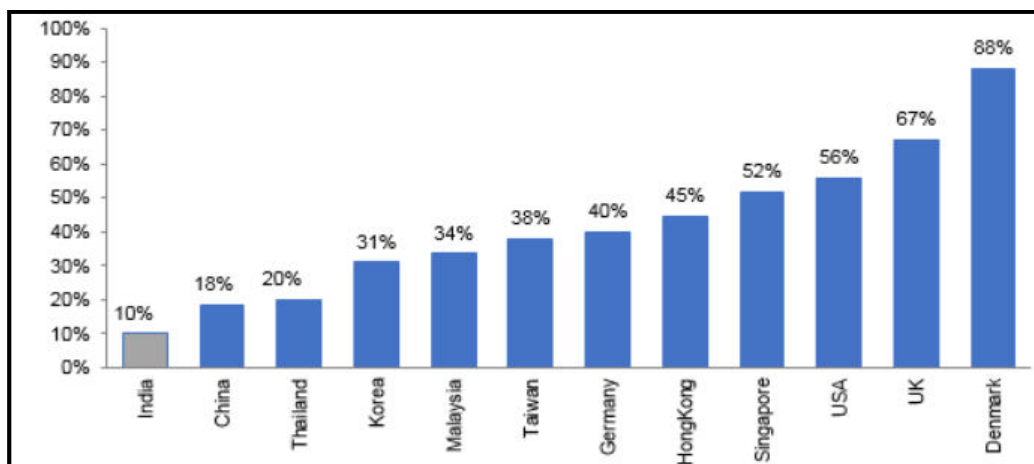
Figure-III: Deceleration in Labour-Intensive Construction Sector affects Employment



Sources: CRISIL (September 2018) [3]

In fact, the current economic slowdown has adversely affected the employment market in the country, and is particularly true in respect of the labor-intensive Construction sector. This indicates the need for promotion of real estate activities like housing. (Figure III).

Figure-IV: Mortgage to GDP Ratio of India (2012) vis-a-vis Selected Other Countries



Sources: CRISIL (September 2018) [3]

The Mortgage to GDP ratio in India is still at a very low level of about 10 percent, though the same has been gradually growing over the years. The case of India in this regard is one of the lowest in the whole world. This fact points to the fact that there is enough scope for the housing and real estate sector in India to grow. (Figure IV).

IMPACT OF RERA AND GST ON THE HOUSING AND REAL ESTATE SECTOR IN INDIA

In India, the year 2017 is a milestone as far as the housing and real estate sector is concerned, because the Real Estate Regulatory Act (RERA) has been enacted in this year. This landmark policy initiative has had a direct impact on the supply-demand dynamics in this sector. RERA is supposed to lead to better transparency, prompt delivery, and more systematic as well as organised real estate operations.

In fact, RERA does not allow the real estate developers to launch new projects prior to their formal registration with RERA – a radical shift from the practices earlier followed by the developers whereby they could sell even parts of the projects by way of soft/pre-launch deals. Furthermore, RERA is expected to curb diversion of funds. With proper implementation of RERA, real estate developers will be forced to disclose the relevant project-related information, like, project plan, layout, approvals from Government, carpet area, status of construction, and delivery schedule. This enables the prospective buyers to take objective and informed decisions regarding the purchase of houses.

It is expected that RERA will have far-reaching impacts on the diverse stake-holders in the housing and real estate market, like, Real estate developers (Builders), Regulatory authorities at the Central and State levels, Banks and Financial institutions (lending agencies), Consumers and so on. The implications of RERA are summarised in Figure V.

Figure-V: Impact of RERA on Different Stakeholders

<p>Developers</p> <ul style="list-style-type: none"> ❖ Mode of land agreement may change (JDA vis-à-vis land ownership) ❖ Radical shift from the current practice (soft launch/pre-launch deals) ❖ Consolidation in the real estate industry is expected in the medium term
<p>Regulators</p> <ul style="list-style-type: none"> ❖ RERA will have state-level authority (State RERA) to monitor ongoing projects ❖ RERA will act as dispute-resolution authority; will reduce resolution time
<p>Bankers</p> <ul style="list-style-type: none"> ❖ Banks insist on extra collaterals from developers due to RERA impact ❖ Banks insist on RERA registration as a pre-condition in real estate lending ❖ Better information availability, hence improved due diligence by banks ❖ Change in terms of lending (applicability of 70% Escrow Clause)
<p>Consumers</p> <ul style="list-style-type: none"> ❖ RERA ensures enhanced transparency as well as timely delivery of units ❖ RERA may support end-user demand for projects under construction.

Sources: Adapted from, CRISIL (2018) [3]

Along with RERA another landmark development which has got a bearing on the housing and real estate sector in India has been the implementation of Goods and Services Tax (GST). The most important implication of GST on the real estate sector is the availability of ITC (Input Tax Credit) that is paid on inputs, capital goods and input services. In the Pre-GST era, developers were liable to remit multiple number of taxes like VAT, Central Excise, Entry Tax, LBT, Octroi, Service Tax, and so on. Because, credits from these were not freely available against the output tax liability of developers. However, in the current GST regime, they are eligible for ITC on their construction and allied activities. This will minimize inefficiency arising out of the cascading effect of multiplicity of taxes. The key implications of GST as far as housing and real estate sector is concerned are briefly discussed hereunder:

- Under GST, the effective tax rate is pegged at 18 percent (12 percent for affordable housing projects) with a standard 33 percent abatement being provided towards the value of the land. It may be noted that the effective tax rate is only 12 percent in respect of affordable housing projects, i.e. an incentive of 6 percent has been provided so as to encourage the builders to take up more affordable housing projects.



- It may be noted that sale of land is not eligible to GST and immovable property is not defined under GST. Thus, the GST provides for a standard abatement of 33 percent of the total contract/agreement value as value of land for taxable real estate transactions.
- ITC restrictions/Reversals under Development Projects: In fact, while GST permits ITC of GST paid on inputs, input services and capital goods against the construction/works contract services provided by developers, but it restricts ITC of GST paid.
- While sale of land or plots is a common phenomenon, and is not considered as supply of goods and services. However, under GST law deems sale of land as an exempt supply and mandates proportionate reversal of common credits.
- Under GST, 'services' is defined to be anything other than goods. Further, entry no 5 of Schedule III to the Central Goods and Services Tax Act, 2017 provides that sale of land would be treated as neither as goods nor as services. Thus, the transfer of development rights may be considered as taxable service. Therefore, reverse charge implications in case of acquisition of development rights from the Government will also need to be analyzed.

CONCLUDING REMARKS

Policy reforms like GST and RERA as well as easing of FDI norms will have far-reaching and largely positive implications on the investment in housing and real estate sector in India. These positive impacts include better transparency, compliances and corporate governance. Hence, the real estate sector will get a boost and will prosper well in the future. Implementation of the GST is really a landmark achievement for the Government of India as well as India's corporate sector. Though it is in its infancy now, since GST has started on a positive note, its benefits will accrue to all stakeholders in due course of time.

GST has greatly simplified the tax treatment for the real estate sector and has resolved many long-standing issues like those on valuation, nature of supply etc. The most important benefit seems to be with regard to greater input credit on the procurement of goods and services. Despite the above positive outcomes, there exist a few grey areas, which need to be resolved.

Some of these include (i) taxability of land value where the same exceeds 33 percent of the total sale price and the developer has contracted separate agreements for the supply of land and construction property; (ii) use of diverse tax computation methodologies for different projects or phases of the same project, (iii) Taxability of the charges in respect of preferential location, car parking, electricity deposits etc. the eligibility of one-third land deduction on the same; (iv) Eligibility of developers to claim refund under the inverted duty structure.

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INDIA-BANGLADESH TRADE POTENTIAL UNDER SAFTA

Vipin Sharma³

ABSTRACT

In this paper, the Potential Trade Approach is used to examine the trend and potential of trade between India and Bangladesh under SAFTA. SAFTA was formed with the intention to replace SAPTA, which was limited in its scope. SAFTA's ultimate aim was to put in place a full-fledged South Asian Economic Union on the lines of the European Union. The 'Contracting States' recognized that it was necessary to progress beyond a Preferential Trading Arrangement to move towards higher levels of trade and economic cooperation in the region by removing barriers to cross-border flow of goods. Thus, the SAFTA agreement was signed on 6th January 2004 and came in to effect on 1st January 2006. The proposed study will make use of the secondary data. The time of the study extended from 1991-2014/15. The results show that there is tremendous trade potential with Bangladesh and trade can more than double.

KEYWORDS

Integration, trade Potential, SAARC, SAFTA, SAPTA etc.

INTRODUCTION

Economic Integration is defined as a process and as a state of affairs. As a process, it encompasses measures designed to abolish discrimination between economic units belonging to different nations. When defined as a state of affairs, it can be represented by the absence of various form of discrimination between national economies (Balassa, 1961). Thus, Economic Integration is the abolition of tariff and non-tariff barriers to the flow of goods, services, and factors of production between a group of nations or different parts of the same nation. Balassa talked about five forms of economic integration, viz. 1) a Free Trade Area, 2) a Custom Union, 3) a Common Market, 4) an Economic Union, and 5) complete Economic Integration.

SAARC provides a platform for the people of South Asia to work together in a spirit of friendship, trust and understanding. It aims to promote the welfare of the people of the South Asia and improve their quality of life through accelerated economic growth, social progress and cultural development in the region. The cooperation in SAARC is based on five principles of Sovereign Equality, Territorial Integrity, Political Independence, and Non-Interference in mutual affairs of the member states and mutual benefits.

The South Asian Free Trade Area (SAFTA)

South Asian Free Trade Area was formed with the intention to replace SAPTA, which was limited in its scope. SAFTA's ultimate aim was to put in place a full-fledged South Asian Economic Union on the lines of the European Union. The 'Contracting States' recognized that it is necessary to progress beyond a Preferential Trading Arrangement to move towards higher levels of trade and economic cooperation in the region by removing barriers to cross-border flow of goods. Thus, the SAFTA agreement was signed on 6th January 2004 and came in to effect on 1st January 2006.

The process of shifting SAPTA to SAFTA was not new. It was the Sixteenth session of the Council of Ministers held in New Delhi, 18-19 December 1995 in which members agreed on the need to strive for the realization of SAFTA. Therefore, an Inter-Governmental Expert Group (IGEG) was set up in 1996 to identify the necessary steps for progressing to a free trade area. The 10th SAARC Summit held in Colombo, from 29-31 July 1998 decided to set up a Committee of Experts (COE) to draft a comprehensive treaty framework for creating a free trade area within the

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region. The SAFTA Agreement was signed on 6 January 2004 during Twelfth SAARC Summit held in Islamabad, Pakistan. The Agreement entered into force on 1 January 2006, and the Trade Liberalization Programme commenced from 1st July 2006. The agreement is to be completed by 2016 and all contracting parties will need to reduce their tariffs from 0-5 percent at the full implementation of SAFTA.

REVIEW OF LITERATURE

Jain, Subhash C. (1999) examined the working of the Regional Trade Agreement in the presence of enmity between India and Pakistan along with poverty among member countries. Nations in South Asia had, more or less, complementary economies, diverse industries, different natural resources and varying agricultural bases. The study found that economic complementarity was not a problem among South Asian countries. What was lacking was the political will to make the joint effort toward Free Trade and, in turn, improve the economic conditions in the region. The only hope was that economic benefits that a trade agreements promises might force the leaders to keep aside the political differences and pursue economic cooperation fully.

Taneja, Nisha (2001) examined the significance of a Free Trade Area in shifting trade flows from unofficial to official channels. She identified two factors, hampering official trade flow, those that were likely addressed by SAFTA and, those that laid outside the domain of SAFTA. SAFTA would eliminate both tariff and non-tariff barriers, therefore it would induce a shift of illegal trade flow from the illegal to legal channels. Thus, India had a relatively more balanced trade with other SAARC member nations on the unofficial account than it had on official account. The prevailing high rates of tariff and non-tariff barriers were considered the main reason behind India's informal export to SAARC countries, with SAFTA such goods automatically shift to the formal channel and consequently India's official exports to south Asia would rise.

Siriwardana, Mahinda (2004) examined the likely impact of Indo-Lanka Free Trade Agreement (ILFTA-1998). To quantify the impact of liberalized trade between Sri Lanka and India, multi country Computable General Equilibrium model developed at Global Trade Analyses Project had been used. He also examined the implication of extending the free trade agreement to other SAARC nation. Sri Lanka benefits relatively more from ILFTA. India being the largest economy in the region might enjoy the highest benefits from free trade in South Asia. The extension of the agreement to all SAARC nations under SAFTA would likely to benefit the region as a whole by increased trade within South Asia. The SAARC nations should work hard to fully implement SAFTA as soon as possible.

Rahman, W.B. Shadat and N.C. Das (2006) investigated the trade creation and trade diversion effects of Regional Trade Agreements, with special focus on SAFTA. They used the Gravity model to examine the effect of various RTAs, particularly the impact of SAFTA on its member countries. They used the bilateral export flow as dependent variable. The coefficients of all the common gravity variables founded to bear expected sign and statistically significant. Reduction in tariff and non-tariff barriers along with the introduction of Rules of Origin (RoO) could raise intra-regional trade in the SAARC region.

Perera, M.S. (2009) tried to compare the impact of different trade policy options on Sri Lanka. The Global Trade Analysis Projects (GTAP) database was used with 2001 as a reference year. Descriptive method, the Computable General Equilibrium (CGE) model under GTAP was used. Five simulations for SAPTA and different bilateral FTA between Sri Lanka and other SAARC member countries were performed. The household utility was found highest in case of multilateral trade liberalization followed by South Asian Custom Union, SAFTA and the bilateral trade agreements. It was estimated that welfare was positive for other members of the RTA and SAARC. Therefore, Sri Lanka should gather the support from other SAARC member countries for promoting the SAFTA in the region. It would raise the welfare of the all member counties.

Akhter and Ghani Ejaz (2010) analysed the SAFTA in terms of trade potential and benefits for the member countries. To measure the bilateral trade flow and trade potential between the SAARC countries the Gravity model was used. This study founded that the potential for trade creation exists if Pakistan, India and Sri Lanka sign regional trade agreements. However, the integration of South Asian countries had little potential for trade creation if all the countries of the region would include and signing of FTA of South Asian countries would divert their trade with the non-member countries. However, these findings were based on the data, which cover the period of SAPTA. SAFTA



might not be beneficial in the short run but it would be beneficial in the end. The trade liberalization process and movement toward industrialization of region would minimize the trade diversion effect under SAFTA. SAFTA would require an encouraging economic and political environment and a strong willingness for integration and liberalization of the SAARC member countries.

Khoso, Ram, Shah, Shafiq and Shaikh (2011) analyzed and investigated the welfare impact of SAFTA on the economy of Pakistan in general and South Asia in perspective. They used the Global Trade Analyses project (GTAP) model to analyze the possible impact of SAFTA on Pakistan on a multi-country, multi-sectoral applied general equilibrium framework. The findings of the study revealed that current demand of Pakistan's products expanded after the implementation of SAFTA. Thus, Pakistan experienced the highest gain under SAFTA. SAFTA allows the participating countries to achieve larger economies of scale in production, attain specialization, increase competitiveness and diversify their export basket, thus assisting domestic economic reform.

Hur, Tung and Cheolbeom Park (2012) analysed whether a bilateral FTA raises the growth rates of the two countries engaging in the FTA. They used the panel data for the individual countries from 1971 to 2003 with an annual frequency. FTAs had an insignificant effect in the first 10 years after its launch. However, the gap between the growth rates of per-capita GDP was found enlarging among countries within a FTA. Thus, some member nation might get positive FTA effect while other might get negative FTA effect. Thus, caution should be exercised in designing of FTAs in order to ensure the FTA's positive effect.

Jha, Sejuti (2013) tried to answer the question, whether Regional Trade Agreements benefit the traders, the ultimate user of such agreements. Data from EIC, FIEO and Directorate-General of Commercial Intelligence and Statistics (DGCI&S) Calcutta, was collected in 2009 up to 2008-09 fiscal. The study revealed that exporters were using ISFTA more than other RTA, Indian exporter exports a lot to Singapore but not through RTA. SAPTA was a more preferred route than SAFTA. Upgrading FTA to comprehensive Economic Agreements is expected to bring benefits beyond trade in goods. However, in order to reap all such benefits, careful consideration should be given to the current planning of the agreements.

Taneja, Parkash and P. Kalita (2013) examined the India's role in South Asian trade integration, ground covered so far by India and the challenges that remain for it. The Indian economy accounted for more than 80 % of South Asian GDP. Therefore, India's relations with other member nations of the region have significant importance in promoting economic integration in South Asia. India had offered tariff concessions separately to NLDCs and LDCs. Thus, from India's standpoint, all tariff liberalization efforts with its SAARC members should be done bilaterally. The study found that trade enhancing measures was implemented particularly with respect to India's trade with Pakistan and Bangladesh. With these developments, the risks of failed integration in South Asia had been greatly minimized improved connectivity holds the key to successful integration in trade in goods, however, this will require large investments. Other challenges include institutional reform at the borders. Thus to make SAFTA successful, it is important to identify and adopt strategies to deal with such forces.

GAPS IN LITERATURE

In view of the above analysis, the following gaps emerge regarding different aspects of Regional Economic Cooperation in South Asia.

- Most of studies are conducted to measure total trade potentials of SAARC. Few studies are conducted in separate analysis of bilateral trade especially between India and Bangladesh and are based on the time up to 2013.
- Majority of the studies examined the impact of SAPTA on intra-regional trade. However, SAFTA is the new form of integration among SAARC countries and its impact on intra-regional trade is examined by a few.

The present study is an attempt to fill existing gaps in literature by making a comprehensive examination of relative contribution of SAFTA in enhancing intra-regional trade among SAARC countries.

Data

The proposed study will make use of the secondary data. The time of the study will extend from 1991-2014/15. The data for trade will be obtained from Direction of Trade Statistics (DOTS), IMF; International Trade Centre; WITS database; Export-Import Data Bank, Ministry of Commerce & Industry (GOI); World Bank Tables; UN Comtrade database; Directorate-General of Commercial Intelligence & Statistics (DGCI&S) Kolkata and SAARC official website. Information regarding the economic and financial development of SAARC countries will be taken from International Financial Statistics (IFS) Yearbook; World Development Indicators (WDI); ADB’s Asian Development Outlook database; World Economic Outlook; Economic & Social for Asia & Pacific; Social Indicator & Human Development Report, UNDP and World Bank Reports.

An Overview of India and Bangladesh: India and Bangladesh are the founding members of SAARC nations. Both countries differ enormously in terms of size, population and economic development. They share divergent economic, social, cultural and political arrangement. These divergences offer enormous opportunities as well as numerous difficulties and challenges in their Trade opportunities. India predominates the Bangladesh's economic parameters including GDP and population.

Table-1: Economic Indicators of India and Bangladesh 2014

Indicator	Bangladesh	India
Population (mil)	161.0	1311.1
Area (sq. km)	148460	3287260
Growth rate of GDP(% 2010-2014)	6.14	7.24
GDP per capita(US\$)	1,086.8	1,581.5
Agricultural Sector(% of GDP)	16.1	17.8
Manufacturing Sector (% of GDP)	17.4	17.1
Service Sector (% of GDP)	56.3	52.1

Sources: <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

India is the largest country in the region and occupies 64 per cent of the landmass of the region. Its territorial and maritime boundary encompasses all the SAARC countries. Bangladesh share territorial broader with India. In the availability of natural resources and minerals, India ranked first among the SAARC nations. In terms of population, India accounts for 75 per cent of the region’s population. India’s dominance is not restricted to size only - it accounts for nearly 73 per cent GDP and 82 per cent of the export trade of the regional bloc. Its exports to other SAARC countries have increased from 5.5 per cent in 1999 to 6.45 percent in 2014 whereas import share declined from 0.9 per cent to 0.58 per cent over the same period. Predominately primary agricultural and semi-manufactured commodities are the major traded items from and within SAARC countries. Rice, fruits, vegetables, nuts, spices, cotton, tea, fish are the some primary exports of agricultural products while, textiles, textile yarn, knit crochet fibres, garments and carpet are the major exporting products of manufacturers. One of the major SAARC countries, India, is increasingly exporting high tech products and motor vehicles.

Trade Trends between India and Bangladesh

Trade between India and Bangladesh though at low levels has grown significantly in recent years. During 1992 and 1999, trade between the two countries moves up and down but subsequently there has been an increase except 2009. During 2004-05 to 2014-15, trade has increased by more than four times from US\$ 1686 million to US\$ 7137 million. In fact, the share of Indo-Bangladesh trade in India's total trade with SAARC countries declined from 31.77 % in 2004 to 30.80% in 2014 and Bangladesh has been India's largest trading partner since 2012. Trade balance has been in India's favour throughout the period during 1992 to 2014 (Table 2).

Table-2: India-Bangladesh Trade (1992 to 2014) (US\$ million)

Year	Exports to Bangladesh	Imports from Bangladesh	Total Trade	Trade Balance
1992	353	10	363	343
1993	430	13	443	417
1994	521	34	555	487
1995	960	79	1039	881
1996	832	58	890	774
1997	807	54	861	753
1998	943	60	1003	883
1999	726	74	800	652
2000	860	80	940	780
2001	1087	67	1154	1020
2002	1130	61	1191	1069
2003	1600	74	1674	1526
2004	1625	61	1686	1564
2005	1656	110	1766	1546
2006	1637	203	1840	1434
2007	2595	250	2845	2345
2008	2575	296	2871	2279
2009	2181	235	2416	1946
2010	3024	359	3383	2665
2011	3765	583	4348	3182
2012	5018	597	5615	4421
2013	5710	554	6264	5156
2014	6580	557	7137	6023

Sources: Direction of trade Statistics, IMF

An analysis of the commodity composition of goods traded between the two countries indicates that in 2004-05 the top five items comprising of vegetable products; textile and textile articles; base metals & articles of base metals; tobacco and manufacturing substitutes; and products of chemicals and allied industries accounting for 34.46%, 17.15%, 10.19%, 8.82% and 7.69% respectively (Table 3). These product categories accounted for 78.31% of Indian exports to Bangladesh. By 2014-15, the commodity basket was more diversified accounting for 74.44% of the total exports to Bangladesh (Table 4). The top five items included textile and textile articles; vegetable products; vehicles aircraft vessels & associates transport equipment; products of chemicals and allied industries; and tobacco and manufacturing substitutes accounting for 30.59%, 17.91%, 9.37%, 8.79% and 7.78% respectively. On the other hand, the import basket concentration declined in the two times under consideration from 87.81% in 2004-05 to 81.06% in 2014-15 (Table 3 and Table 4). The major items imported in 2004-05 included products of chemical and allied industries; textile and textile articles; live animals, animal products; raw hides, skins, leather, fur & articles of animal gut (excl. silkworm), travel goods, handbags & similar containers; and plastics, rubber & articles thereof accounting for 47.28%, 20.40%, 13.76%, 3.62% and 2.75% respectively (Table 3). In 2014-15 the top five products included textile and textile articles; vegetable products; base metals & articles of base metals; tobacco and manufacturing substitutes; and prepared foodstuffs, beverages, spirits & vinegar, tobacco & manufacturing substitutes accounting for 49.14%, 11.93%, 7.33%, 6.93% and 5.74% respectively (Table 4). A notable change in the trade basket for Indian exports and imports from Pakistan is the increasing trade in textile products.

Table-3: Commodity-wise India's Exports to & Imports from Bangladesh in 2004-05

HS-Sections	Descriptions	HS-Chapters	Exports US\$ Million	% Share in Total	Imports US\$ Million	% Share in Total
I	Live Animals, Animal Products.	01-05	26.05	1.60	8.17	13.76
II	Vegetable Products	06-14	562.04	34.46	1.45	2.44

III	Fats or Oils & Cleavage product; Prepared Edible Fats; Waxes	15	2.09	0.13	0.1	0.17
IV	Prepared Foodstuffs; Beverages. Spirits & Vinegar; Tobacco & Manuf. Substitutes	16-24	80.88	4.96	1.46	2.46
V	Tobacco & Manufacturing Substitutes	25-27	143.83	8.82	0.44	0.74
VI	Products of Chemical & Allied Industries	28-38	125.42	7.69	28.07	47.28
VII	Plastics. Rubber & Articles Thereof	39-40	50.54	3.10	1.63	2.75
VIII	Raw Hides. Skins. Leather. Fur & Articles of Animal Gut (Excl. Silkworm). Travel Goods. Handbags & Similar Containers	41-43	0.6	0.04	2.15	3.62
IX	Wood. Cork. Wood Charcoal & Articles Thereof; Basketware & Wickerwork. Straw	44-46	1.63	0.10	0	0.00
X	Wood Pulp or other Cellulose Material, Wastes/Scrap of Paper or Paperboards	47-49	17.19	1.05	0.04	0.07
XI	Textiles & Textile Articles	50-63	279.81	17.15	12.11	20.40
XII	Footwear. Headgear, Umbrella. Walking Sticks. Prepared Feathers. Artificial Flowers	64-67	1.21	0.07	0.14	0.24
XIII	Articles of Stones, Plaster Cement, asbestos. Mica. ceramic Etc.; Glass & Glassware	68-70	2.89	0.18	0.06	0.10
XIV	Pearls; Precious Stones, Metals; Semi-Precious Stones, Imitation Jewellery	71	0.48	0.03	0	0.00
XV	Base metals & Articles of Base Metals	72-83	166.25	10.19	1.34	2.26
XVI	Machinery & Mechanical Appliances; Elec. Equip. Sound & Television Image recorders & Reproducers & Parts & Accessories Thereof	84-85	99.35	6.09	0.54	0.91
XVII	Vehicles. Aircraft. Vessels & Associates Transport Equipment	86-89	58.72	3.60	0.02	0.03
XVIII	Optical, Photographic. Cinematographic, Measuring, Checking Precision Medical or Surgical Equip, Clock Watches, Musical Instruments. Parts & Accessories Thereof	90-92	5.34	0.33	0	0.00
XIX	Arms Ammunitions. Parts & Accessories Thereof	93	0	0.00	0	0.00
XX	Miscellaneous Manufactured Articles	94-96	4.72	0.29	0.19	0.32
XXI	Works of Art, Collector Pieces & Antiques	97-99	1.85	0.11	1.43	2.41
	Total		1631.12	100.00	59.37	100.00

Sources: Government of India, and Export Import Data Bank

Table-4: Commodity-wise India's Exports to & Imports from Bangladesh in 2014-15

HS-Sections	Descriptions	HS-Chapters	Exports US\$ Million	% Share in Total	Imports US\$ Million	% Share in Total
I	Live Animals, Animal Products.	01-05	74.96	1.16	24.09	3.88
II	Vegetable Products	06-14	1155.71	17.91	74.16	11.93
III	Fats or Oils & Cleavage product; Prepared Edible Fats; Waxes	15	2.34	0.04	4.57	0.74
IV	Prepared Foodstuffs; Beverages. Spirits & Vinegar; Tobacco & Manuf. Substitutes	16-24	317.46	4.92	35.65	5.74
V	Tobacco & Manufacturing Substitutes	25-27	502.2	7.78	43	6.92
VI	Products of Chemical & Allied Industries	28-38	567.33	8.79	14.45	2.33
VII	Plastics. Rubber & Articles Thereof	39-40	233.05	3.61	21.15	3.40
VIII	Raw Hides. Skins. Leather. Fur & Articles of Animal Gut (Excl. Silkworm). Travel Goods. Handbags & Similar Containers	41-43	13.71	0.21	20.91	3.37
IX	Wood. Cork. Wood Charcoal & Articles	44-46	2.41	0.04	0.23	0.04

	Thereof; Basketware & Wickerwork. Straw					
X	Wood Pulp or other Cellulose Material, Wastes/Scrap of Paper or Paperboards	47-49	35.88	0.56	1.38	0.22
XI	Textiles & Textile Articles	50-63	1973.3	30.59	305.32	49.14
XII	Footwear. Headgear, Umbrella. Walking Sticks. Prepared Feathers. Artificial Flowers	64-67	4.98	0.08	10.98	1.77
XIII	Articles of Stones, Plaster Cement, asbestos. Mica. ceramic Etc.; Glass & Glassware	68-70	19.37	0.30	1.89	0.30
XIV	Pearls; Precious Stones, Metals; Semi-Precious Stones, Imitation Jewellery	71	4.65	0.07	0.04	0.01
XV	Base metals & Articles of Base Metals	72-83	358.1	5.55	45.54	7.33
XVI	Machinery & Mechanical Appliances; Elec. Equip. Sound & Television Image recorders & Reproducers & Parts & Accessories Thereof	84-85	501.31	7.77	10.13	1.63
XVII	Vehicles. Aircraft. Vessels & Associates Transport Equipment	86-89	604.35	9.37	6.21	1.00
XVIII	Optical, Photographic. Cinematographic, Measuring, Checking Precision Medical or Surgical Equip, Clock Watches, Musical Instruments. Parts & Accessories Thereof	90-92	32.89	0.51	0.04	0.01
XIX	Arms Ammunitions. Parts & Accessories Thereof	93	0	0.00	0	0.00
XX	Miscellaneous Manufactured Articles	94-96	47.03	0.73	1.54	0.25
XXI	Works of Art, Collector Pieces & Antiques	97-99	0.18	0.00	0.06	0.01
	Total		6451.47	100.00	621.37	100.00

Sources: Government of India, and Export Import Data Bank

Trade Potential between India and Bangladesh

To know the trade potential between the two countries the Potential Trade Approach is used. Products having trade potential are identified as those that have (a) adequate demand in the receiving country (b) adequate supply capabilities in the source country. Potential trade for any commodity is calculated by Minimum differences between supplier's World Exports, receiver's world Imports and the current trade (2015) between the two countries. In this paper, Bangladesh posed as a supplier to assess its potential to India and then India posed as a supplier country.

The simple rule of thumb followed was that as long as a country 'A' demands a product (import greater than zero) from the Rest of the World (RoW) and is being supplied (export greater than zero) by a country 'B' to the rest of the world there is potential for country 'A' to import the product from country 'B'.

Table-5: India's Import Possibilities from Bangladesh: Top 10 items (US \$ 000)

S. No.	HS-Code	Description	India's Imports from ROW	Bangladesh's Exports to ROW	India's Imports from Bangladesh	Trade Potential
1.	'64	Footwear, gaiters and the like; parts of such articles	477380	696816	11653	685163
2.	'63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	555534	818596	65657	489877
3.	'42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles ...	322801	293246	4738	288508
4.	'41	Raw hides and skins (other than furskins) and leather	674859	298994	14901	284093
5.	'53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	355930	681185	129066	226864
6.	'62	Articles of apparel and clothing accessories,	314532	13765226	99049	215483

		not knitted or crocheted				
7.	'61	Articles of apparel and clothing accessories, knitted or crocheted	246713	12767100	33596	213117
8.	'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	32047180	171256	5604	165652
9.	'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	104645637	178121	20048	158073
10.	'87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	4948809	130520	5136	125384

Sources: International Trade Centre (2019)

Under export potential from Bangladesh to India, top 10 items comprise largely of textile items (52%). India imports all of these items from Bangladesh but in a smaller amount as compare to its imports of the same items from the rest of the world, clearly indicating the vast untapped potential (Table 5).

Table-6: India's Export Possibilities to Bangladesh: Top 10 items (US \$ '000)

S. No.	HS-Code	Description	India's Exports to ROW	Bangladesh's Imports from ROW	Bangladesh's Imports from India	Trade potential
1.	'52	Cotton	7470346	7150498	1646632	5503866
2.	'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	31393703	5219953	169543	5050410
3.	'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	13231404	4792326	389814	4402512
4.	'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	7935913	2450614	188130	2262484
5.	'72	Iron and steel	6308179	2407667	219892	2187775
6.	'39	Plastics and articles thereof	5012759	1795192	156324	1638868
7.	'55	Man-made staple fibres	2127190	1623932	102862	1521070
8.	'54	Man-made filaments; strip and the like of man-made textile materials	2190204	1102783	104065	998718
9.	'89	Ships, boats and floating structures	4063750	994162	7269	986893
10.	'25	Salt; Sulphur; earths and stone; plastering materials, lime and cement	1770680	991994	62333	929661

Sources: International Trade Centre (2019)

Table-6 shows the top ten items of export potential from India to Bangladesh comprise largely of automobile products. Cotton is on the top in term of Bangladesh's Imports from India and India's Export Potential to Bangladesh.

CONCLUSION

In this article, the trend in bilateral trade and trade potential between India and Bangladesh has been estimated. To analyse trade potential, Commodity wise data been taken from International Trade Centre for the year 2015.

Despite trade liberalization through SAFTA, India-Bangladesh experienced low bilateral trade. Even though SAFTA is an ambitious agreement to achieve its fundamental goal of trade liberalization, it is being criticized because its coverage has been limited to trade in goods. However, there is a vast trade potential between India and Bangladesh. Thus, both countries should use this vast trade opportunity to increase their bilateral trade.



THE POLICY IMPLICATION

The policy implications of the results obtained are that all kinds of trade barriers in countries involved must be liberalized largely in order to enhance bilateral trade as openness is found as a main determinant.

FUTURE AREA OF RESEARCH

Services should also be added and emphasis should be including as many services as possible.

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FINANCIAL STATEMENT ANALYSIS WITH REFERENCE TO MEGHA FRUIT PROCESSING PRIVATE LIMITED AT PUTTUR OF KARNATAKA: A CASE STUDY

Anantha Shayana⁴ Zubaida Nuzha Alam⁵ Pavithra Kotyan⁶ Navyashree⁷ Alisha Pinto⁸ Savitha M.⁹

ABSTRACT

Finance is the core aspect of each business. It is also lifeblood of money. This paper is concerned with financial analysis with reference to Megha Fruit Processing Private Limited. The basic objective of this paper is to determine the financial health of the company with the help of comparative, common-size, and trend analysis and ratio analysis statements. The paper is based on primary data collected through finance department of the company and secondary data, which consists of past five years annual reports, and P&L account. The paper discloses brief information about the company, its product profile. Further theoretical aspects in connection to techniques and tools of financial analysis are explored as a base. The tools of financial statement analysis is implemented by use of comparative statement, common-size statement, balance sheet to know the percentage change in assets and liabilities from a period to period and presented in graphs. Trend analysis and ratio analysis is done to know efficiency of resources utilized by company and to determine its financial condition. Overall study of financial analysis of the company with reference to Megha Fruit Processing Private Limited was successful and sharpened our skills, techniques in financial analysis.

KEYWORDS

Financial Statements, Ratio, Assets, Liabilities, Data, Figures, Increase, Decrease, Profit etc.

INTRODUCTION

Finance is the lifeblood of money. It can also be defined as the science of money management. Finance is a field that is concerned with the allocation of assets and liabilities over space and time, often under conditions of risk and uncertainty. Financial analysis is an aspect of the overall business finance function that involves examining historical data to gain information about the current and future financial health of a company. The three main sources of data for financial analysis are a company's balance sheet, income statement, and cash flow statement. The balance sheet outlines the financial and physical resources that a company has available for business activities in the future. The income statement provides information about a company's performance over a certain period. The cash flow statement is similar to the income statement in that it records a company's performance over a specified period. Finally, finance involves analyzing the data contained in financial statements in order to provide valuable information for management decisions. In this way, financial analysis is only one part of the overall function of finance, but it is a very important one.

OBJECTIVES OF STUDY

- To evaluate the financial statement of the company.
- To identify the factors affecting the improvement and development of financial statement of the company.
- To study the relationship between profitability and liquidity.
- To make comparative, common-size, trend analysis and ratio analysis statements.
- To sharpen our financial analytical techniques and skills.

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SCOPE OF STUDY

This project as a source of information, gives the idea about the financial analysis of the firm. The study is confined to financial statements of Megha Fruit Processing Private Limited, Puttur. The study covers five years annual reports related to 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17. The main objective of the study was to put into practical the theoretical aspect of the study into real life work experience. Various ratio analyses have been used to analyze the financial position of the firm and widen the knowledge of financial management and the allocation of resources in an efficient manner.

METHODOLOGY USED

Primary Data: The primary data has been gathered from personnel of finance department of Megha Fruit Processing Private Limited.

Secondary Data: The main source of data for this project is the financial statement of the company, which is collected through the company's past 5 years annual reports and profit and loss account.

LIMITATIONS OF STUDY

- The time given for the study is constrained.
- Due to non-availability of all the data, a detailed study was difficult.
- The study will be mainly based on the published information and does not deal with an in-depth study.
- The study is restricted only to five years data of Megha Fruit Processing Private Limited.

Megha Fruit Processing Private Limited was registered on November 2003 with the Corporate Identification Number (CIN) U51221KA2003PTC032843 and Registration Number 032843. Megha Fruit Processing Private Limited was incorporated in the year 2004 by Mr. Sathya Shankar under the Shankar Group of Companies (SG) as a private limited company by keeping the objectives of manufacturing fruit juices (PET bottles) marketed under the brand Sip on. In 2007, the company entered into co-packaging juice drinks in Tetra Pack. Presently the firm is manufacturing fruit drinks such as Sipon Mango, Apple, Sip On guava drink, Ziva soda, Zing Ginger drink and Fruit Punch.

The group has its manufacturing unit in Puttur (Karnataka) and warehouses in different places such as Puttur, Bengaluru, Hubli, Hyderabad, Kalaburagi, Pune, Kasargod, etc. with total storage capacity of 2,78,500 cases. The company's annual production capacity is 3.47 million 250 ml pet bottles and 0.83 million 500m/1000m bottles at 6% utilization. The products are sold in Karnataka, Kerala, Andhra Pradesh, Tamil Nadu, Orissa and Southern Maharashtra. The company exports the products also. From this purpose, they engage the services of M/s Anil and Company, Mumbai during the year 2014-2015. The company exported 21 KL of mango fruit juice to USA, UK & Dubai.

Megha Fruit Processing Private Limited considers packed soft drinks as the chief product of the company supplies pure and unadulterated drinking water, Shankar Groups chose its brand name as "BINDU" from the Sanskrit language, which means 'PURE'. It maintains a culture of uniform price to the customers and it provides uniform quality and quantity of soft drinks to its customers. In addition, they are the manufacturer of different snacks. The products are sold by Megha marketing, partnership concern headquartered at Narimogaru post & village, Puttur, with distributors, and stockiest operating completely south India, including Maharashtra and some parts of Orissa and Andaman & Nicobar Islands.

FINANCIAL STATEMENT ANALYSIS

Financial statement analysis is the process of identifying the financial strengths and weaknesses of the firm by the properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial statement analysis is a method of concerning specific technique for evaluating risks, performance, financial health and future scenarios of a company.

TOOLS OF FINANCIAL STATEMENT ANALYSIS

Financial management includes financing investment and dividend policy decisions. In the area of finance, there are various methods to procure funds. For evaluating investment decision, the finance manager has to use various techniques and methods of capital budgeting. The following are the important tools or techniques for financial analysis:

Comparative Financial Statement: Comparative financial statement refers to those statements of the financial affairs of a business, which are prepared in such a way as to provide time perspective to the various elements contained in such statements. Comparative study of financial statements as such is the comparison of the financial statements of the business with the previous year’s financial statements and with the performance of other competitive enterprises, so that weaknesses may be identified and remedial measures applied.

Common-Size Financial Statement: It is a statement in the total of the assets or the total of the liabilities, capital is taken as 100%, and all the items of the balance sheet are expressed as a percentage of the total assets or the total of the liabilities and capital.

Trend Analysis: The trend analysis is a technique of studying several financial statements over a series of years. In the trend percentage are calculated for each item by taking the figure of that item for some base year as 100. It is also termed as Intra-firm comparison, where in financial statements of the same enterprise for two or more years are compared.

Ratio Analysis: Ratio analysis is a widely used tool of financial analysis. It can be used to compare the risk and return relationships of firms of different sizes. In financial analysis, a ratio is used as a benchmark for evaluating the financial positions and performance of the company. Ratio helps to summarize large quantities of financial data and to make qualitative judgment about the company’s financial performance.

Types of Ratio Analysis

- Liquidity Ratio
- Leverage Ratio
- Activity Ratio
- Profitability Ratio
- Solvency Ratio

COMPARATIVE STATEMENTS

Table-1: Showing Changes in Liabilities

Particulars	2015-16	2016-17	Increase / Decrease (in lakhs)	Increase / Decrease (%)
Equity and Liabilities:				
(A) Shareholders Fund				
A. Share Capital	8,06,00,600	12,63,22,600	4,57,22,000	56.73
B. Reserves and Surplus	16,82,77,526	21,25,34,406	4,42,56,880	26.30
(B) Non-Current Liabilities				
A. Long-Term Borrowings	13,29,71,980	18,41,48,042	5,11,76,062	38.49
(C) Current Liabilities				
A. Short-Term Borrowings	22,03,79,849	14,58,09,642	(7,45,70,207)	(33.84)
B. Trade Payables	7,40,95,513	9,24,66,929	1,83,71,416	24.79
C. Other Current Liabilities	96,92,643	49,30,436	(47,62,207)	(49.13)
D. Short-Term Provisions	83,00,293	1,00,92,555	17,92,262	21.59
Total	69,43,18,404	77,63,04,610	8,19,86,206	11.81

Sources: Authors Compilation

Interpretation

In the year 2016-17, contributions to reserves & surplus and capital have increased by 26.30% and 56.73% respectively when compared to 2015-16.

Long-term debt borrowed also increased by 38.49% in the year 2016-17 when compared to previous year.

In year 2016-17, trade payables have been grown up to 24.79% when compared to 2015-16. Short-term provisions also have an increased rate of 21.59% in the year 2016-17 compared to previous year.

Short-term borrowings and other current liabilities have decreased by 33.84% and 49.13% in 2016-17 compared to 2015-16.

Table-2: Showing Changes in Assets

Particulars	2015-16	2016-17	Increase / Decrease (in lakhs)	Increase / Decrease (%)
Assets :				
(A) Non-Current Assets				
A. Fixed Assets	19,98,89,951	22,59,80,161	2,60,90,210	13.05
B. Capital Working In Progress	--	1,19,21,528	1,19,21,528	--
C. Deferred Tax Assets (Net)	--	38,02,089	38,02,089	--
(B) Current Assets				
A. Current Investments	30,20,000	36,20,000	6,00,000	19.87
B. Inventories	33,95,09,899	39,14,27,164	5,19,17,265	15.29
C. Trade Receivables	11,38,12,188	4,28,70,694	(7,09,41,494)	(62.33)
D. Cash & Cash Equivalents	2,17,26,942	3,89,83,531	1,72,56,589	79.42
E. Short-Term Loans and Advances	1,63,59,424	5,76,99,443	4,13,40,019	252.70
Total	69,43,18,404	77,63,04,610	8,19,86,206	11.81

Sources: Authors Compilation

Interpretation

The fixed assets in the year 2016-17 have been increased to 13.05% when compared to 2015-16.

A current investment has also gone up to 19.87% in the year 2016-17.

There is an increase in inventories by 15.29% along with cash & cash equivalents with an increase of 79.42% in 2016-17 when compared to previous year.

Trade receivables has decreased by 62.33% from 2015-16 to 2016-17.

There is a drastic increase in short-term loans & advances by 252.70% in the year 2016-17 when compared to 2015-16

COMMON-SIZE STATEMENT ANALYSIS

Table-3: Balance Sheet and Percentage Change of Liabilities of 2015-16 & 2016-17

Particulars	2016-17	2015-16	2016-17	2015-16
Liabilities:				
Share Capital	12,63,22,600	8,06,00,600	16.27	11.61
Reserves and Surplus	21,50,72,755	16,57,39,178	27.70	23.87
Long-Term Borrowings	18,91,86,391	13,04,33,633	24.37	18.79
Current Liabilities	24,57,22,864	31,75,44,993	31.65	45.73
Grand Total	77,63,04,610	69,43,18,404	100	100

Sources: Authors Compilation

Interpretation

We can see that there is a movement in current liabilities. The percentage of contribution of current liability in the year 2015-16 is 45.73% out of 100% of total liability. Whereas, in 2016-17 the current liability is reduced to 31.65% which is a good sign for the company.

The contribution towards capital in the year 2015-16 is 11.61%, which has increased to 16.27% in the year 2016-17, Long-term borrowed in the year 2015-16 is 18.79% and there was an increase to 24.37% in the year 2016-17. As business expands, borrowings also increase to certain extent.

The reserves & surplus, in the year 2015-16, was 23.87% and it increased to 27.70%, which is one of the good factors to be noted.

Table-4: Balance Sheet and Percentage Change of Assets of 2015-16 & 2016-17

Particulars	2016-17	2015-16	2016-17	2015-16
Assets:				
Fixed Assets	22,59,80,161	19,98,89,951	29.12	28.79
Capital Working in Progress	1,19,21,528	--	1.53	--
Deferred Tax Assets	38,02,089	--	0.49	--
Current Assets	53,46,00,832	49,44,28,453	68.86	71.21
Grand Total	77,63,04,610	69,43,18,404	100	100

Sources: Authors Compilation

Interpretation

The rate of fixed assets is 28.79% in the year 2015-16. However, in the next year it has been quietly increased to 29.12%.

Current assets in the year 2015-16 are 71.21% and it has slightly decreased in the year 2016-17 by 68.86%.

Capital working in progress and deferred tax are the two factors arisen in the year 2016-17 with 1.53% and 0.49% respectively, which is an advantage to the company.

TREND ANALYSIS

Table-5: Representing Trend Percentage of Liabilities

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Equity & Liabilities					
Share Capital	100	585.98	585.98	719.97	1128.38
Reserves & Surplus	100	119.48	150.64	204.66	258.48
Long-Term Borrowings	100	380.71	391.73	356.88	494.23
Short-Term Borrowings	100	167.42	156.52	148.91	98.53
Trade Payables	100	120.17	195.05	126.14	157.41
Other Current Liabilities	100	195.25	216.70	380.91	193.76
Short-Term Provisions	100	82.39	169.36	259.94	316.07
Total		184.07	201.82	202.33	226.22

Sources: Authors Compilation

Interpretation

Share capital is constant in first two years and later it has increasing trend, which has gone up to 1128.38 in the year 2016-17.

Reserves & surplus also shows increasing trend i.e., 100% in the base year. However, at the end of 2016-17 it has gone up to 258.48.

Long-term borrowings have increasing trend in the first two years. However, in the year 2015-16 it came down to 356.88 and again increased to 494.23 in the year 2016-17.

It indicates that the company had highest trade payables of 195.05 and reached up to 157.41 in the year 2016-17.

Short-term provisions also have an increasing trend where base year is 100 and reaches until 316.07 in the year 2016-17.

Short-term borrowings have decreasing trend in the year 2016-17 with 98.53.

Table-6: Representing Trend Percentage of Assets

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Assets					
Fixed Assets	100	296.39	315.06	281.80	318.58
Non-Current Investment	100	100	100	0	0
Current Assets	100	155.16	172.63	182.80	197.65
Total	100	184.07	201.82	202.33	226.22

Sources: Authors Compilation

Interpretation

There is an increasing trend towards fixed asset every year. It increased up to 218.58 in 2016-17.

Current asset also has increasing trend year by year. It increased from 155.16 in 2013-14 to 197.65 in 2016-17.

The overall assets of the company is showing an increasing trend which is considered to be a good sign to the company.

RATIO ANALYSIS

Current Ratio

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$$

Table-7

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Current Assets (Rs.)	27,04,77,158	41,96,70,902	46,73,29,827	49,44,28,453	53,46,00,832
Current Liability (Rs.)	21,24,77,186	32,59,61,879	35,71,39,312	31,24,68,298	25,32,99,562
Current Ratio	1.27	1.29	1.31	1.58	2.11

Sources: Authors Compilation

Interpretation

The current ratio is a measure of the firm's short-term solvency. A current ratio of 2:1 or more is considered satisfactory. The current ratio was high in the year 2016-17 i.e. 2.11. From the year 2013 until 2016, the company's current ratio was not satisfactory. However, in the year 2016-17 the current ratio of the company showed drastic increase i.e. 2.11. It showed a good sign of liquidity and short-term solvency in the year 2016-17.

Quick Ratio

Quick Ratio = Quick Assets / Quick Liabilities

Table-8

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Quick Assets (Rs.)	8,69,21,545	15,03,92,162	14,55,07,722	15,49,18,554	14,31,73,668
Quick Liabilities (Rs.)	21,24,77,186	32,59,61,879	35,71,39,312	31,24,68,298	25,32,99,562
Quick Ratio	0.41	0.46	0.41	0.49	0.57

Sources: Authors Compilation

Interpretation

The quick ratio of 1:1 is considered as a satisfactory financial condition. During 2012-13 and 2014-15, the quick ratio was 0.41. However, in the year 2013-14 there was an increase in the ratio to 0.46 compared to other year. In 2016-17, there was an increase in quick ratio to 0.57 i.e. quick liabilities more than quick assets.

Cash Position Ratio

Cash Position Ratio = Cash / Quick Liabilities

Table-9

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Cash (Rs.)	1,19,48,823	1,55,47,709	1,65,37,110	2,17,26,942	3,89,83,531
Quick Liabilities (Rs.)	21,24,77,186	32,59,61,879	35,71,39,312	31,24,68,298	25,32,99,562
Cash Position Ratio	0.06	0.05	0.05	0.07	0.15

Sources: Authors Compilation

Interpretation

The above data reveals very clear whether a concern is liquid or not in the year 2012-13, the cash position ratio was 0.06. In 2014-15, we can find the changes in cash position ratio i.e. decreased to 0.05 and in the 2016-17; there was a drastic increase in the cash position ratio compared to 2015-16 i.e. 0.07 to 0.15.

Proprietary Ratio

Proprietary Ratio = Net Worth / Total Assets

Table-10

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Net Worth (Rs.)	9,34,19,897	16,38,43,779	18,94,64,314	24,88,78,126	33,88,57,006
Total Assets (Rs.)	34,31,56,725	63,16,58,722	69,25,60,132	69,43,18,404	77,63,04,610
Proprietary Ratio (%)	0.27	0.26	0.27	0.36	0.44

Sources: Authors Compilation

Interpretation

This ratio measures the relationship between owners fund and total assets invested in the business. The above graph shows that proprietary ratio is 0.27 in 2013. In the year 2013-14 and 2014-15, the ratio was 0.26 & 0.27 respectively.

Further, we can find that the ratio has gone up from 0.36 to 0.44 in 2015-16 & 2016-17. This shows that the total asset invested in the business is more in the year 2016-17.

Fixed Asset to Net Worth Ratio

$$\text{Fixed Asset to Net Worth Ratio} = \text{Fixed Asset} / \text{Net Worth}$$

Table-11

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Fixed Asset (Rs.)	7,09,34,018	21,02,42,271	22,34,84,756	19,98,89,951	22,59,80,161
Net Worth (Rs.)	93419897	163843779	189464314	248878126	33885700
Fixed Asset to Net Worth	0.76	1.28	1.18	0.80	0.67

Sources: Authors Compilation

Interpretation

This ratio calculates the proportion of the owners fund invested in fixed assets. In the year 2012-13, the fixed asset to net worth ratio is 0.76. There was an increase in fixed assets to net worth ratio in the year 2013-14 i.e. 1.28. From 2014-15 to 2016-17, we can find the net worth ratio decreasing year by year.

Current Assets to Net Worth Ratio

$$\text{Current Assets to Net Worth Ratio} = \text{Current Assets} / \text{Net Worth}$$

Table-12

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Current Assets (Rs.)	27,04,77,158	41,96,70,902	46,73,29,827	49,44,28,453	53,46,00,832
Net Worth (Rs.)	9,34,19,897	16,38,43,779	18,94,64,314	24,88,78,126	33,88,57,006
Current Assets to Net Worth Ratio	2.90	2.56	2.47	1.99	1.58

Sources: Authors Compilation

Interpretation

In the year 2012-13, the current asset to net worth was 2.9. From the above chart, we can find that the current asset to net worth ratio was decreasing year by year. In the year 2013-14, it was 2.56 and in the year 2016-17, it decreased to 1.58.

Current Liability to Net Worth Ratio

$$\text{Current Liability to Net Worth} = \text{Current Liability} / \text{Net Worth}$$

Table-13

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Current Liability (Rs.)	21,24,77,186	32,59,61,879	35,71,39,312	31,24,68,298	25,32,99,562
Net Worth (Rs.)	9,34,19,897	16,38,43,779	18,94,64,314	24,88,78,126	33,88,57,006
Current Liability to Net Worth	2.27	1.99	1.88	1.26	0.75

Sources: Authors Compilation

Interpretation

This ratio is higher in the year 2012-13 i.e., 2.27. It continuously decreased after 2013-14. It is a good sign to the company. In the year 2015-16, the ratio is 1.26. Then in the year 2016-17, it decreased to 0.75.

Fixed Asset Turnover Ratio

$$\text{Fixed Asset Turnover Ratio} = \text{Net Sales} / \text{Fixed Asset}$$

Table-14

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Net Sales (Rs.)	90,29,60,042	1,26,60,68,766	1,40,63,62,239	1,56,07,67,271	1,63,02,62,023
Fixed Assets (Rs.)	7,09,34,018	21,02,42,271	22,34,84,756	19,98,89,951	22,59,80,161
Fixed Assets Turnover Ratio	12.73	6.02	6.29	7.81	7.21

Sources: Authors Compilation

Interpretation

The above table shows increase & decrease in fixed assets turnover ratio. In 2012-13, the ratio was 12.73. Later on it decreased to 6.29 in the year, 2014-15. We can also find that it showed an increase in the ratio in the year 2016-17 i.e., 7.21. It reveals that the company is efficiently using its fixed assets.

Net Profit Ratio

$$\text{Net Profit Ratio} = \text{Net Profit} / \text{Net Sales} \times 100$$

Table-15

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Net Profit (Rs.)	1,51,95,036	1,60,18,282	2,42,40,535	3,59,30,024	3,68,98,418
Net Sales (Rs.)	90,29,60,042	1,26,60,68,766	1,40,63,62,239	1,56,07,67,271	1,63,02,62,023
Net Profit Ratio	1.68	1.27	1.72	2.30	2.26

Sources: Authors Compilation

Interpretation

The above chart indicates the increasing efficiency of the company because of increase in the profit margin year to year. In the year 2012-13, the net profit ratio was 1.68. However, it decreases to 1.68 in the year 2013-14. Then we can find a growth in net profit ratio. It increases to 2.3 in the year 2016-17.

Debt Equity Ratio

$$\text{Debt Equity Ratio} = \text{Long-Term Debt} / \text{Net Worth}$$

Table-16

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
Long-Term Debt (Rs.)	3,72,59,642	14,18,53,064	14,59,56,506	13,29,71,980	18,41,48,042
Net Worth (Rs.)	9,34,19,897	16,38,43,779	18,94,64,314	24,88,78,126	33,88,57,006
Debt Equity Ratio	0.40	0.87	0.77	0.53	0.54

Sources: Authors Compilation



Interpretation

The debt equity of 1:1 is satisfactory. By analysis the above table and chart, we can find a favorable condition i.e. the equity contents are more than the debt content. From 2012-13 to 2013-14 there was an increase in the debt ratio i.e. from 0.4 to 0.87. After that, we can find the ratio decreasing to 0.54 in the year 2016-17. If this ratio is lower, it is not profitable from the viewpoint of equity shareholders.

FINDINGS

The analysis measures the liquidity, long-term position, profitability, and turnover of the industry. To draw the findings of the study, different techniques of financial analysis like comparative analysis, common-size analysis, and trend analysis and ratio analysis statement have been used. The following are the some of the findings out of them:

- The liquidity of the organization has increased over years as it has sufficient current assets to meet current liabilities with reference to current ratio.
- Efficient resource management can be recognized in liquidity ratio, activity ratio and profitability ratio.
- Market demand for product mainly depends on advertisement, so lack of advertisement is a problem.
- We could find that there has been increase in the net profits when compared with previous year, thus it shows that Megha Fruit Processing Pvt Ltd is in good position.
- There has been huge increase in the sales of the company compared to previous years. The increase in sales is because of high prospectus of the company, the impact of increase in sales indicate that there is huge increase in the profit of the company.

SUGGESTIONS

The company should undertake mass promotional campaigns, consumer awareness programs and advertisement to create a brand image in the minds of customer.

Usage of tetra pack seems to be beneficial, both, for the industry and environment.

More flavors can be given in the “BINDU” brand itself, as it is easy to sell as it has already acquired the market.

As there is availability of its products only in 5 to 7 states, it can aim at enlarging its business in more number of states. Therefore, it can minimize its cost and maximize its profit.

The financial statement of the company is showing that the sales are increasing year by year. Thus, they can concentrate more on improving the quality of the products and the distribution policies.

Excess cash should be invested in short-term securities, if any.

CONCLUSION

Megha Fruit Processing, Pvt Ltd was incorporated in 2004 and saw a tremendous growth since 13 years. The multi-branding strategy of the industry was more efficient, the brand “BINDU” created a benchmark in the market, and it is the reason for development of the industry. The finance is evenly managed in the industry, it is moving in an upward trend with reference to ratio analysis, and it is focusing on its overall development. It is also determined that the availability of the products of the industry is spread in more than five states. The growth of the industry can be analyzed by the reserves & surplus, share capital, etc. which overtakes the industry in a positive route. It has a good liquidity position and sufficient funds. Industry is targeting to increase sale volume and profit to with stand the



competition in the market. By the viewpoint of financial statement of Megha Fruit Processing industry, we analyze that the industry's position is in positive trend. Even though the net profit is fluctuating in nature, the company has balanced its income and expenditure with reference to ratio analysis.

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**THE APPLICATION OF THE LEGAL FRAMEWORKS GOVERNING
MICRO FINANCE: A CASE OF CITY ZONE
OF JIGJIGA OF SOMALI REGIONAL STATE AT ETHIOPIA**

Seid Demeke¹⁰ Nuru Addisu¹¹

ABSTRACT

There is a discontent on the substance of the legal framework governing micro-finance. The discontent is that the law is not designed taking in to consideration some unique contexts of the pastoral and agro-pastoral communities mainly in relation to the livelihood that sticks on livestock production. The gap created due to less participation of experts from pastoral areas in the course of policy and legal drafting. The point here is that if those experts participate in the drafting process, they able to get the opportunity to reflect the pastoral context and interests. Overall, in addition to the practical challenges related with lack of experts and legal awareness, the regional MFIs are having trouble while applying the laws, which are not pastoral friendly. Policies, legal and institutional frameworks should provide incentive for the micro finance clients like tax exemption and creating market channels. NBE should take into consideration the pastoral socio-economic realms while drafting directives and to this effect, the bank should include stakeholders and experts having experience and specialization on pastoral matters. Besides, it is also important to draw lesson from countries having best experiences on pastoral matters like Kenya and Bangladesh.

KEYWORDS

Micro Finance, Legal Frameworks, National Bank of Ethiopia (NBE) etc.

INTRODUCTION

The main objective of this paper is to analyze the practical operation of MFI in the region with a special reference on the enforcement challenges of the legal frameworks regulating MFI. Accordingly, the paper examines whether the legal regime and the practice takes the special needs of the pastoral community in general and mobility, social networking, cultures and tradition as well as the level of awareness of the pastoral community in particular. The methodology employed while conducting the research was qualitative approach-mainly document analysis, interview and focus group discussion are used as tools of data collection. The findings obtained from the qualitative data sources are integrated to reach at equivalent conclusion.

Background of Ethiopian Somali Regional State

Ethiopia Somali regional state is the second largest in the country after Oromia and covers a total area of 350,000 km. It is located in the east and south east of the country and lies between 4 and 11 degrees north latitude and 40 and 48 degrees east longitude. The region has 11 administrative zones consisting of 93 districts, and 6 city administrations, which are further divided into 1864 Kebeles. It shares borders with Somalia to the east and southeast, Kenya to the south and Djibouti to the north. To the northwest and west, it borders with Afar and Oromia regions respectively.

The Population of Region

The population of the region is estimated at 4.7 million out of which 44 percent are females and the remaining 56 percent are males. The average household size in the region is 6.6. The urban population is estimated to be 14 percent

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of the total population. Average population density is calculated to be 13 persons per square km, with major variations among the woredas of the region. Population density is highest in historically crop-growing areas like Jigjiga and the revering areas of Godey, Afder and Liban zones.

Livelihood of the Region

The vast majority of the population of the region is pastoralists and agro-pastoralists who are dependent on livestock and farming for their survival. The region has 17 rural livelihood zones, generically classified as pastoral, agro-pastoral, reverie and sedentary farming. The major sources of income include livestock and livestock product sales, crop sales, firewood and charcoal sales, petty trade and remittance from western living Diasporas of the region.

Jigjiga is a city in eastern Ethiopia and the capital of the Somali Regional State. The city is located on the main road between Harar and the Somali city of Hargeisa, and is known for incense production. It has all infrastructure including telephone service by 1956. An asphalt and concrete road and also Jigjiga is served by garaadwiil-waal international Airport (IATA: JIJ, ICAO: HAJJ).

THE APPLICATION OF THE LEGAL FRAMEWORKS GOVERNING MICRO FINANCE

The Regional Context

The Application of the Existing Federal Laws

The Ethiopian Somali's government sponsored MFI registered as per proclamation No. 626/2009 to provide microfinance services throughout the region. From its establishment, the MFI is providing loan, money transfer and saving services (interview with Ahmed, 2016). These services are among the several activities allowed to MFIs as provided under proclamation No. 626 /2009, art. 3.

When evaluated from its long history of establishment and the diversified demand of the rural and urban people, it can be said that the regional MFI is not that much active, especially to diversify the service provisions other than saving, loan and money transfer. Here, the suggestion is that the MFI should engage in additional activities like drawing and accepting drafts payable within Ethiopia; supporting income generating projects of urban and rural micro and small scale operators; rendering managerial, marketing, technical and administrative advice to customers and assisting them to obtain services in those fields; providing financial leasing services to peasant farmers, micro and small-scale urban and rural entrepreneurs (Proc. No. 626/2009, art. 3)

NBE supervises the operation of the regional MFI through on site (field supervision) and off site (reporting system). The power of the NBE regarding onsite supervision emanates from proclamation No. 626/2009 that provides: "The National Bank may, periodically or at any time, without prior notice, make, or cause to be made, an on-site inspection on any micro financing institution..." (Proc. No. 626/2009, art. 18(1)). In accordance with article 15 of pro. No. 626/2009 and directive No. MFI/18/06 the regional MFI submits periodical reports quarterly ((Proc. No. 626/2009, art. 15)

However, there are some problems in the cooperation between NBE and the regional MFI. The NBE does not invite the regional MFIs in the process of legal and policy drafting that concerns micro finance (interview with Ahmed, 2016). Had it been the regional MFI participated in the drafting phases, the interest and context of the pastoral areas could be addressed in best way than the current one. The other problem related with legal awareness creation. The NBE simply circulates the laws and directives without providing training regarding the practical application of those laws and directives. This problem is contributing to the improper application of the legal frameworks in the region.

Legal Awareness

The regional MFI provides training to its employee about the policy, laws and procedures of MFIs. But, legal awareness creation to the customers is very limited. The service recipients violate their duty and responsibilities in the course of returning the loan. They do not know the legal consequence of non-performance of the contract they



entered with the MFIs. As a result, most of the service recipients are unwilling to return the loan as per the agreed time (interview with Ahmed, 2016).

As far as possible, the MFIs do not take court action against the non-performing party. This is to maintain their social mission and to avoid fear in the society. That means, if the institutions challenge the non-performing party through court system, the later may incur additional costs and injection on the business activities, which ultimately affects the profitability of the overall business engagement. In other word, it is to build confidence and trust on the services of MFI. Thus, to claim the performance of the loan contract, the MFIs use negotiation method. So far, the regional MFI lodged one court action in Fiq zone. In addition, the court decided in favour of the MFI (interview with Ahmed, 2016).

Currently, more than 30 micro-finance institutions are operating in Ethiopia. However, very few of them are working in pastoral areas. Some NGOs and a government run microfinance institutions are trying to provide non-conventional financial services particularly 'interest free' credits in pastoral regions by a 'special permission' from the national bank (Pastoral Development in Ethiopia, 2004). This is good approach. However, when have a look the experience of Somali region as an example; the rural pastoral communities are not utilizing the interest free credits due to lack of awareness as to the introduction of this system. Hence, regional governments need to work for the accessibility of the micro-finance institutions and conduct advocacy, as the institutions are sharia friendly.

Overall, to let GTP II and pastoral oriented poverty reduction policies work in pastoral areas, it is decisive to consider micro-finance institutions as one major alternative income generation means to the pastoralists. Accordingly, priority should be given to rural microfinance for food security. It addresses credit and savings needed for agricultural production and off-farm enterprises, and it includes other demands for financial services, such as financing food consumption and health care as well as providing households' with more effective savings, credit and insurance services for smoothing consumption, holding precautionary savings and diversifying the asset portfolio (Zeller, M., et. al., 1997).

THE CASE OF CITY ZONE: IT INCLUDES TWO CITIES - JIGJIGA AND KEBRIBEYA WOREDA

The Operation of Interest Free Financial Services

City zone micro finance service provides non-conventional financial service based on sharia law. There is no interest claimed during the repayment. To meet with the sharia law, the experts of the institution examine whether or not the proposed business activities are *halale* (permissible under sharia law). During application, the service recipient should submit a business plan as provided under directive No. MFI/0/96, art. 3. Accordingly, in practice, the MFI do not accept a business proposal to engage in alcohol and chat business (FGD).

Performance of Repayment

The payment performance of the debtors in the zone can be leveled as poor. In-group borrowing, it is the responsibility of the group leader to return the money- mostly with in a year. By far, however, the institution rarely successful in receiving the money within the due date. The problem is that rather than investing the money to the intended purpose, the members simply share the money as soon as they received it for their own personal consumption. Two main reasons can be mentioned for this. The one is that people mostly borrow money not to engage in a business activity rather it is to cover emergency costs in time of difficulties and to discharge loan borrowed from individuals. The second reason is due to lack of effective and periodical supervision to ascertain whether the borrowers are investing the money as per the business plan, they submitted (FGD).

At the due date of the repayment, some borrowers disappear from their domicile- even they travel to Djibouti. The office tries to find the debtor through the assistance of the police. If the borrower produces a good justification for the non-performance, the service provider gives two months extension. If the debtor failed to return the money by the two months deadline, the service provider lodges complain before court. However, court complaint is not well utilized. By far, the city zone micro finance bureau lodged only one case claiming payment performance. One of the main reasons is lack of legal expert in the bureau who can prepare court complain and represent before court. When a



person unable to return his debt, the clan that the borrower belongs to pay the debt (FGD). This is an impressive practice in Somali culture.

The Application of Micro Financial Laws

Regarding the application of the legal frameworks that govern MFIs, the researchers observed some problems. The bureau has no legal expert/advisor that may follow up the application of the existing laws (FGD). The existing employees in the bureau did not know the existence of laws that regulate the operation MFIs. Hence, legal expert is necessary in each zonal MFI; and for the rest of the employees, providing capacity building through training is necessary.

THE CASE OF KEBRIBEYA WOREDA

The Kebribeya MFI works in accordance with the rules and regulations of the NBE. The Devotion on the application of rules and regulations and their conformity with the pastoral community's situations were very well (interview with Mohammed Hassen).

To give loans to the pastoral and agro-pastoral community, the National Bank ordered micro-finance institutions to accept voluntary saving before six months of the first grant of loans but the Micro-finance institution, Kebribeya sub office, gives loan even at a time of first saving by the pastoral and agro-pastoral communities to relax them in getting finance for their productivity (interview with Mohammed Abdullah).

The Microfinance institution gives loans to the customers in four phases of release. By analyzing their productivity and profitability, the institution releases in the 1st phase Br. 4000, in the 2nd phase Br. 7,000, in the 3rd phase Br. 10,000 and in the 4th phase Br. 15,000.

The rules and regulations of the national bank provide that every debtor must pay back the loan taken in one lump sum. However, this was very challenging for pastoral communities with much probability of death of livestock and frequently occurred natural disasters. For instance, this year, wild fire in the town has damaged the property of agro-pastoral societies. To help the victims, the micro-finance office and Kebribeya town administration organized fund raising conference and collected much funds from the community, stakeholders and other partners (interview with Mohammed Abdullah).

A lot of rules and regulations have been addressed based on the operational manual given by NBE. However, the institution claims the introduction of especial treatment mechanisms in case when unexpected situations occurred among the pastoral communities (interview with Mohammed Hassen).

The proposal of the institution seems sound, especially to meet with the very mission of proclamation No 626/2009. As it is mentioned in the preamble of the proclamation, one of its mission is to have an appropriate legal framework that further enhances the development and soundness of the micro-financing business. The investigators are in the opinion that the soundness of the legal framework should be tested whether or not it meets with the interest of the pastoral and agro-pastoral communities, which accounts 15% of the total population of the country. Moreover, one of the objectives of directive No MFI/18/06 is to enable MFI to meet the credit demand of their client in a flexible manner. Flexibility should be interpreted to provide exceptional treatment mechanisms in case when unexpected loss occurred among the pastoral communities like death of livestock (directive No MFI/18/06, art.3 (a)).

CONCLUSION

There are some problems in connection with the application of micro financial laws- like lack of legal expert and legal awareness on the rule and regulation governing micro-finance. Moreover, there is a discontent on the substance of the legal framework governing micro-finance. The discontent is that the law is not designed taking in to consideration some unique contexts of the pastoral and agro-pastoral communities mainly in relation to the livelihood that sticks on livestock production. The gap created due to less participation of experts from pastoral areas in the course of policy and legal drafting. The point here is that if those experts participate in the drafting process, they able



to get the opportunity to reflect the pastoral context and interests. Overall, in addition to the practical challenges related with lack of experts and legal awareness, the regional MFIs are having trouble while applying the laws, which are not pastoral friendly.

RECOMMENDATIONS

The federal government especially NBE should provide intensive training and support for staff of the regional MFIs and for those who engage in alternative income generating activities through the support of MFIs. The pertinent bodies should promote entrepreneurship through establishing workable institutional frameworks.

- Policies, legal and institutional frameworks should provide incentive for the micro finance clients like tax exemption and creating market channels.
- NBE should take into consideration the pastoral socio-economic realms while drafting directives and to this effect, the bank should include stakeholders and experts having experience and specialization on pastoral matters. Besides, it is also important to draw lesson from countries having best experiences on pastoral matters like Kenya and Bangladesh.

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PROSPECTS OF THE SOUTH ASIAN FREE TRADE AREA VIA GRAVITY MODEL

Dr. M. P. Singh¹²

The **gravity model of international trade** in international economics, similar to other gravity models in social science, predicts bilateral trade flows based on the economic sizes (often using GDP measurements) and distance between two units. The model was first used by Jan Tinbergen in 1962. The basic model for trade between two countries (*i* and *j*) takes the form of

$$F_{ij} = G \frac{M_i^{\beta_1} M_j^{\beta_2}}{D_{ij}^{\beta_3}} \dots \dots \dots (1)$$

Where F is the trade flow, M is the economic mass of each country, D is the distance and G is a constant. The model has been used by economists to analyse the determinants of bilateral trade flows, such as, common borders, common languages, common legal systems, common currencies, common colonial legacies, and it has been used to test the effectiveness of trade agreements and organizations, such as, the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) (Head and Mayer 2014). The model has also been used in international relations to evaluate the impact of treaties and alliances on trade (Head and Mayer).

The model has also been applied to other bilateral flow data (also 'dyadic' data), such as, migration, traffic, and remittances and foreign direct investment.

Theoretical Justifications and Research

The model has been an empirical success in that it accurately predicts trade flows between countries for many goods and services, but for a long time some scholars believed that there was no theoretical justification for the gravity equation. However, a gravity relationship can arise in almost any trade model that includes trade costs that increase with distance.

The gravity model estimates the pattern of international trade. While the model is basic, form consists of factors that have more to do with geography and spatiality, the gravity model has been used to test hypotheses rooted in purer economic theories of trade as well. One such theory predicts that trade will be based on relative factor abundances. One of the common relative factor abundance models is the Heckscher–Ohlin model.

This theory would predict that trade patterns would be based on relative factor abundance. Those countries with a relative abundance of one factor would be expected to produce goods that require a relatively large amount of that factor in their production. While a generally accepted theory of trade, many economists in the Chicago School believed that, the Heckscher–Ohlin model alone was sufficient to describe all trade, while Bertil Ohlin himself argued that in fact the world is more complicated. Investigations into real world trading patterns have produced a number of results that do not match the expectations of comparative advantage theories. Notably, a study by Wassily Leontief found that the United States, the most capital endowed country in the world, actually exports more in labor-intensive industries. Comparative advantage in factor endowments would suggest the opposite would occur. Other theories of trade and explanations for this relationship were proposed in order to explain the discrepancy between Leontief's empirical findings and economic theory. The problem has become known as the Leontief paradox.

An alternative theory, first proposed by Staffan Linder, predicts that patterns of trade will be determined by the aggregated preferences for goods within countries. Those countries with similar preferences would be expected to develop similar industries. With continued similar demand, these countries would continue to trade back and forth in differentiated but similar goods since both demand and produce similar products. For instance, both Germany and the United States are industrialized countries with a high preference for automobiles. Both countries have automobile industries, and both trade cars. The empirical validity of the Linder hypothesis is somewhat unclear. Several studies have found a significant impact of the Linder effect, but others have had weaker results. Studies that do not support

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Linder have only counted countries that actually trade; they do not input zero values for the dyads where trade could happen but does not. This has been cited as a possible explanation for their findings. In addition, Linder never presented a formal model for his theory, so different studies have tested his hypothesis in different ways.

Elhanan Helpman and Paul Krugman asserted that the theory behind comparative advantage does not predict the relationships in the gravity model. Using the gravity model, countries with similar levels of income have been shown to trade more. Helpman and Krugman see this as evidence that these countries are trading in differentiated goods because of their similarities. This casts some doubt about the impact Heckscher–Ohlin has on the real world. Jeffrey Frankel sees the Helpman–Krugman setup here as distinct from Linder’s proposal. However, he does say Helpman–Krugman is different from the usual interpretation of Linder, but, since Linder made no clear model, the association between the two should not be completely discounted. Alan Deardorff adds the possibility, that, while not immediately apparent, the basic gravity model can be derived from Heckscher–Ohlin as well as the Linder and Helpman–Krugman hypotheses. Deardorff concludes that, considering how many models can be tied to the gravity model equation, it is not useful for evaluating the empirical validity of theories.

Bridging economic theory with empirical tests, James Anderson and Jeffrey Bergstrand develop econometric models, grounded in the theories of differentiated goods, which measure the gains from trade liberalizations and the magnitude of the border barriers on trade (McCallum Border puzzle). A recent synthesis of empirical research using the gravity equations, however, shows that the effect of border barriers on trade is relatively modest.

Adding to the problem of bridging economic theory with empirical results, some economists have pointed to the possibility of intra-industry trade not as the result of differentiated goods, but because of “reciprocal dumping.” In these models, the countries involved are said to have imperfect competition and segmented markets in homogeneous goods, which leads to intra-industry trade as firms in imperfect competition seek to expand their markets to other countries and trade goods that are not differentiated yet for which they do not have a comparative advantage, since there is no specialization. This model of trade is consistent with the gravity model as it would predict that trade depends on country size.

The reciprocal dumping model has held up to some empirical testing, suggesting that the specialization and differentiated goods models for the gravity equation might not fully explain the gravity equation. Feenstra, Markusen, and Rose (2001) provided evidence for reciprocal dumping by assessing the *home market effect* in separate gravity equations for differentiated and homogeneous goods. The home market effect showed a relationship in the gravity estimation for differentiated goods, but showed the inverse relationship for homogeneous goods. The authors show that this result matches the theoretical predictions of reciprocal dumping playing a role in homogeneous markets.

Past research using the gravity model has also sought to evaluate the impact of various variables in addition to the basic gravity equation. Among these, price level and exchange rate variables have been shown to have a relationship in the gravity model that accounts for a significant amount of the variance not explained by the basic gravity equation. According to empirical results on price level, the effect of price level varies according to the relationship being examined. For instance, if exports were being examined, a relatively high price level on the part of the importer would be expected to increase trade with that country. A non-linear system of equations are used by Anderson and Van Wincoop (2003) to account for the endogenous change in these price terms from trade liberalization. A more simple method is to use a first order log-linearization of this system of equations (Baier and Bergstrand (2009)), or exporter-country-year and importer-country-year dummy variables. For counterfactual analysis, however, one would still need to account for the change in world prices.

Econometric Estimation of Gravity Equations

Since the gravity model for trade does not hold exactly, in econometric applications it is customary to specify:

$$F_{ij} = G \frac{M_i^{\beta_1} M_j^{\beta_2}}{D_{ij}^{\beta_3}} \eta_{ij} \dots \dots \dots (2)$$



Where, F_{ij} represents volume of trade from country i to country j, and M_i and M_j typically represent the GDPs for countries i and j, D_{ij} denotes the distance between the two countries, and η represents an error term with expectation equal to 1.

The traditional approach to estimating this equation consists in taking logs of both sides, leading to a log-log model of the form (note: constant G becomes part of β_0):

$$\ln(F_{ij}) = \beta_0 + \beta_1 \ln(M_i) + \beta_2 \ln(M_j) - \beta_3 \ln(D_{ij}) + \varepsilon_{ij} \dots \dots \dots (3)$$

However, this approach has two major problems. First, it obviously cannot be used when there are observations for which F_{ij} is equal to zero. Second, it has been argued by Santos Silva and Tenreyro (2006) that estimating the log-linearized equation by least squares (OLS) can lead to significant biases. As an alternative, these authors have suggested that the model should be estimated in its multiplicative form, i.e.

$$F_{ij} = \exp[\beta_0 + \beta_1 \ln(M_i) + \beta_2 \ln(M_j) - \beta_3 \ln(D_{ij})] \eta_{ij} \dots \dots \dots (4)$$

Using a Poisson pseudo-maximum likelihood (PPML) estimator usually used for count data. One of the authors' more findings that are surprising was that, when controlling for sharing a common language, having past colonial ties does not increase trade. This is despite the fact that simpler methods, such as taking simple averages of trade shares of countries with and without former colonial ties suggest that countries with former colonial ties continue to trade more. Santos Silva and Tenreyro (2006) did not explain where their result came from and even failed to realize their results were highly anomalous. Martin and Pham (2008) argued that using PPML on gravity severely biases estimates when zero trade flows are frequent. However, their results were challenged by Santos Silva and Tenreyro (2011), who argued that the simulation results of Martin and Pham (2008) are based on miss-specified models and showed that the PPML estimator performs well even when the proportions of zeros is very large.

In applied work, the model is often extended by including variables to account for language relationships, tariffs, contiguity, and access to sea, colonial history, and exchange rate regimes. Yet the estimation of structural gravity, based on Anderson and Van Wincoop (2003), requires the inclusion of importer and exporter fixed effects, thus limiting the gravity analysis to bilateral trade costs (Baldwin and Taglioni 2007).

Empirical Results

The present section deals with bilateral trade flows of India with SAARC nations for the period 2000-12 with the help of gravity model of international trade. For this purpose, double-log regression model has been estimated which is given below:

$$\ln(F_{ij}) = \beta_0 + \beta_1 \ln(M_i) + \beta_2 \ln(M_j) - \beta_3 \ln(D_{ij}) + \varepsilon_{ij} \dots \dots \dots (5)$$

Where,

- F_{ij} : Represents the volume of trade from the country i (let India) to country j (let Afghanistan),
- M_i : GDP of India
- M_j : GDP of Afghanistan
- D_{ij} : Denote distance between India to Afghanistan
- ε_{ij} : Error term

Where,

$$E(\varepsilon_{ij}) = 0, \text{Cov}(\varepsilon_{ij}) = 0; i \neq j, \text{and Var}(\varepsilon_{ij}) = \sigma^2 \varepsilon_{ij}$$

In order to accomplish the task, time series data pertaining to $GDP_{(ij)}$, F_{ij} and D_{ij} have been taken for the period 2000-12 and regression results have been represented in the Table-1 to Table-7.

**Table-1: Gravity Trade Model of India with Afghanistan (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Afghanistan	Distance
-21.32** (-2.30)	2.19* (2.13)	-0.57 (-0.51)	0.82 (0.36)
R-squared	0.93		
Adjusted R-squared	0.91		
Durbin-Watson Statistics	1.45		
F-statistics (Probability)	41.42 (0.00)		

Note-1: *** Significant at 1% level of significance;

** Significant at 5% level of significance;

* Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Table-1 presents gravity regression results for India and Afghanistan with respect to GDP of India stood at 2.19. While elasticity of volume to trade from between India and Afghanistan with respect to GDP of Afghanistan stood at 0.57. It shows that Rs.100 Enhancement in the GDP of India has resulted in enhancement of Rs.219 in the volume of trade between these countries, at the same time, Rs.100 enhancement in the GDP of Afghanistan has resulted in reduction into volume of trade by Rs.57 between these two countries during the period 2000-12. Distance factor has been found insignificant as far as trade between India and Afghanistan is concerned during the period 2000-12. The overall gravity model dealings with volume of trade in India and Afghanistan during the period 2000-12 reveal good fit which is shown by high R^2 ($R^2=0.93$), followed by significant F- statistics. The value of D-W statistics (1.45) also indicates non-existence of autocorrelation in the time series data.

**Table 2: Gravity Trade Model of India with Bangladesh (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Bangladesh	Distance
0.31 (0.03)	0.51 (0.91)	0.89 (1.02)	-0.68 (-0.42)
R-squared	0.91		
Adjusted R-squared	0.88		
Durbin-Watson Statistics	1.71		
F-statistics (Probability)	29.74 (0.00)		

Note-1: *** Significant at 1% level of significance;

** Significant at 5% level of significance;

* Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Gravity regression results for India and Bangladesh for the period 2000-2012 are shown in the Table-2. Regression results reveal that elasticity of volume of trade flow between India and Bangladesh with respect to GDP of Bangladesh stood at 0.89. It reveals that RS.100 enhancement in GDP of India has shown increase in volume of trade between these countries by Rs.51. At the same time, RS.100 enhancement in the GDP of Bangladesh has resulted in increase in volume of trade between these nations by Rs.89 during the period 2000-12. As per theoretical justification, distance factor has been found negative so far as trade between India and Bangladesh is concerned

during 2000-12. In terms of goodness of fit, the gravity model for India and Bangladesh is found significant in terms of R^2 ($R^2=0.91$) which is also certified by significant F-statistics test. Value of D-W statistics ($DW=1.71$) reveals absence of autocorrelation in the time series data for the period 2000-12.

**Table 3: Gravity Trade Model of India with Bhutan (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Bhutan	Distance
26.91 (0.91)	-0.32 (-0.11)	2.52 (0.89)	-4.01 (-1.44)
R-squared	0.91		
Adjusted R-squared	0.88		
Durbin-Watson Statistics	0.62		
F-statistics (Probability)	31.08 (0.00)		

Note-1: *** Significant at 1% level of significance;

** Significant at 5% level of significance;

* Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Trade relationship in between Bhutan and India for the period 2000-12 has also been examined with the help of gravity model and regression results are shown in the Table-3. Empirical results show that elasticity of volume of trade flow between Bhutan and India with respect to GDP of India stood at -0.32, while elasticity of volume of trade between these two nations with respect to GDP of Bhutan stood at 2.52 for the period 2000 -12. It means Rs.100 enhancement in the GDP of India has resulted in reduction in the volume of trade between these two by Rs.32 while Rs.100 enhancement in the GDP of Bhutan has resulted in enhancement in volume of trade in these two nations by Rs.252 during the period 2000-12. In addition, as per theoretical justification, distance factor has been found negative and significant as far as trade between India and Bhutan is concerned. Gravity model for India and Bhutan has been found excellent in term of goodness of fit ($R^2=0.91$), R^2 being significant which is certified by significant F-statistics (at 1% LS), D-W statistics ($DW=0.62$) reveal existence of autocorrelation in time series data of volume of trade between these countries during the period of 2000-12.

**Table 4: Gravity Trade Model of India with Maldives (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Maldives	Distance
-10.54 (-0.50)	-0.82 (-1.26)	2.55*** (3.83)	1.49 (0.52)
R-squared	0.94		
Adjusted R-squared	0.92		
Durbin-Watson Statistics	1.77		
F-statistics (Probability)	44.36 (0.00)		

Note-1: *** Significant at 1% level of significance;

** Significant at 5% level of significance;

* Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Table-4 examines gravity regression results for India and Maldives over the period 2000-12. Results show that elasticity of volume of trade flow in between India and Maldives with respect to GDP of India stood at -0.82 while the elasticity of volume of trade in between two nations with respect to GDP of Maldives stood at 2.55. It shows that Rs100 enhancement in the GDP of India has resulted in reduction in volume of trade between these two nations by Rs.82. At the same time, Rs.100 enhancement in the volume of GDP of Maldives resulted in enhancement in the volume of trade in between these two nations by Rs.2.55 during the period of 2000-12. The overall gravity model dealing with volume of trade in India and Maldives during 2000-12 reveal good fit which is shown by high R²(R²=0.94), followed by significant F-statistics. The value of D-W statistics (DW=1.77) reveals absence of autocorrelation in the time series data in the volume of trade in these two countries during the period 2000-12.

**Table 5: Gravity Trade Model of India with Nepal (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Nepal	Distance
-3.94 (-0.49)	1.16 (1.60)	0.36 (0.43)	-0.51 (-0.44)
R-squared	0.94		
Adjusted R-squared	0.92		
Durbin-Watson Statistics	1.64		
F-statistics (Probability)	44.68 (0.00)		

Note-1: *** Significant at 1% level of significance;
 ** Significant at 5% level of significance;
 * Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Regression results pertaining to gravity model for India and Nepal for the period 2000-12 are shown in the Table-5. Empirical results as shown in the table reveal that elasticity of volume of trade flow between India and Nepal with respect to GDP of India stood at 1.16, while elasticity of volume of trade in these two countries with respect to GDP of Nepal stood at 0.36 during the period 2000-12. It means, Rs.100 enhancement in the GDP of India has resulted in enhancement in the volume of trade from Nepal by Rs.116 while Rs.100 enhancement in the GDP of Nepal has resulted in enhancement in the volume of trade from India by only Rs.36 during the period 2000-12. Also, as per theoretical justification, distance factor has been found negative so far as trade between India and Nepal is concerned during the period 2000-12. In terms of goodness of fit, the gravity model for India and Nepal is found significant in term of R² (R²=0.94) which is also certified by significant F-statistics.

**Table 6: Gravity Trade Model of India with Pakistan (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Pakistan	Distance
-14.98* (-1.99)	0.28 (0.15)	2.13 (1.07)	-0.39 (-0.26)
R-squared	0.95		
Adjusted R-squared	0.93		
Durbin-Watson Statistics	1.32		
F-statistics (Probability)	52.99 (0.00)		

Note-1: *** Significant at 1% level of significance;
 ** Significant at 5% level of significance;
 * Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Trade relationship in between India and Pakistan for the period 2000-12 has been examined with the help of gravity model and regression results are shown in Table-6. Empirical results show that elasticity of volume of trade flow in between India and Pakistan with respect to GDP of India stood at 0.28, while elasticity of Volume of trade flow in between these two nations with respect to GDP of Pakistan stood at 2.13 during the period 2000-12. Thus, Rs.100 enhancement in GDP of India has resulted in merely Rs.28 enhancement in the volume of trade between these countries while Rs.100 enhancement in the GDP of Pakistan has resulted in the enhancement of Rs.213 in the volume of trade in these two countries. Further, as per theoretical justification, distance factor has been found negative and significant so far as trade between India and Pakistan is concerned. Gravity model for India and Pakistan has been found excellent in terms of goodness of fit ($R^2=0.95$), R^2 being significant which is certified by significant F-statistics (at 1% LS), Also, D-W statistics ($DW=1.32$) reveal non-existence by and large, autocorrelation in the volume of trade in India and Pakistan during 2000-12.

**Table 7: Gravity Trade Model of India with Sri Lanka (2000-2012):
Estimated Regression Results
Dependent Variable:- Volume of Trade**

Intercept	Slope of India`s GDP	Slope of Sri Lanka	Distance
23.87 (0.97)	2.46*** (3.27)	-0.83 (-1.17)	-4.54 (-4.54)
R-squared	0.94		
Adjusted R-squared	0.92		
Durbin-Watson Statistics	1.79		
F-statistics (Probability)	44.69 (0.00)		

Note-1: *** Significant at 1% level of significance;

** Significant at 5% level of significance;

* Significant at 10% level of significance.

Note-2: Regression Results have been estimated with the help of Gravity Model of Trade as:

$$\ln(F_{ij}) = \alpha_0 + \alpha_1(GDP_i) + \alpha_2\ln(GDP_j) - \alpha_3\ln(D_{ij}) + U_{ij}$$

Gravity regression results for India and Sri Lanka for the period 2000-12 is shown in Table-7. Regression results indicate that elasticity of volume of trade flow between India and Sri Lanka with respect to GDP of India stood at 2.46, while the elasticity of volume trade between India and Sri Lanka with respect to GDP of Sri Lanka stood at 0.83 for the period 2000-12. Elasticity results indicate that Rs.100 increase in GDP of India has shown enhancement of Rs.246 in the volume of trade in between India and Sri Lanka. Similarly, Rs.100 increases in the GDP of the Sri Lanka have resulted in decline in trade flow between two countries by Rs.0.83 during the period 2000-12. Also, as per theoretical justification, distance factor has been found negative between India and Sri Lanka during 2000-12. Gravity model for these two countries has shown better goodness of fit in terms of R^2 ($R^2=0.94$) which is corroborated by significant F-statistics. Further, D-W statistics ($DW=1.79$) indicate absence of autocorrelation for volume of trade for India and Sri Lanka during the period 2000-12.

Concluding Observations

In examining trade among nations, gravity model has been used by the scholars/ academicians to examine the impact of Gross Domestic Product (GDP), distance, population etc. on trade flow among nations over a period. Gravity model, which has been examined for SAARC Countries over the period 2000-12, reveals following interesting results:

- (1) Among SAARC Countries, Gross Domestic Product (GDP) of respective countries has affected trade flow among SAARC nations positively and significantly with some exceptions. In other words, enhancement in GDP has raised volume of trade among countries over the period 2000-12. However, in case of India's trade with relatively much smaller economies (in terms of GDP) like Bhutan and Maldives, enhancement in the GDP of India has resulted in decline in trade flow of India with these nations.



- (2) Largely, distance factor has played negative role in trade inflow among SAARC nations. In other words, higher the distance among two trading partners, volume of trade among these has been declining over the period 2000-12 and vice-versa.

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DETECTION OF INTER-STATE KUZNETS CYCLE THROUGH NEO-CLASSICAL AND NEO-KEYNESIAN PARADIGMS

Dr. Achal Kumar Gaur¹³ Dr. Pragyesh Nath Tripathi¹⁴

ABSTRACT

Kuznets hypothesis (1955, 1963) has established a link between inequality and average well-being at the level of economy. The hypothesis maintains that given a two-sector economy with not much inequality within sectors but different sectoral mean incomes, a continuous transfer of population from one sector to another will initially raise the aggregate inequality and it will decrease at later stage. Several attempts [Knight (1976), Robinson (1976), Sen (1984), Harriss (1986), Braun (1988), Deaton (1989), Anand and Kanbur (1990), Hadd and Kanbur (1992), Alperovich (1992)] have been made to test this hypothesis empirically but this hypothesis was not tested in relation to inter-state income inequality which is imperative for identification of the poorer states / regions during the process of economic development as well as change in the degree of inter-state income inequality. The policy significance of the present analysis is that in view of existence of “inverse U” pattern / Kuznets cycle in inter-state income inequality, it helps in designing the appropriate resource transfer scheme for the states by the federal government in order to establish the horizontal equity among the states.

KEYWORDS

Kuznets Curve, Kaldor-Pasintti model, Concavity of Inequality function, Multi-Sector etc.

1. INTRODUCTION

It is about forty seven years ago, Prof. Simon Kuznets (1955,1963) formulated a hypothesis which maintains that given a two-sector economy with not too distinct degrees of sectoral mean incomes, a perennial shift of population from one sector to another will initially raise aggregate inequality and it will decrease at later stage. This formulation has been labelled as the “Inverted U” (I-U) hypothesis or kuznets cycle (Branlke1983).

There exists difference of opinion as to what the I-U hypothesis actually stands for. Sometimes, it is argued that inverted shape is merely a technical property of some inequality measures (Knight 1976) while Robinson (1976) showed the same to hold true if the variance is taken as measure of inequality. The other group of experts [Oshima (1962), Adelman and Morris (1973), Paukert (1973), Della Valle and Oguchi (1976)] have interpreted the I-U hypothesis as a theory about the nexus between economic development and inequality. There have been several attempts [Ahulwalia (1976), Sen (1984), Harris (1986), Braun (1988), Deaton (1989), Anand and Kanbur (1990), Hadd and Kanbur (1992), Alperovich (1992), Braulke (1983), and Shreman Robinson (1976)] to test this hypothesis empirically, in case of only two sector. The more realistic assumption would be to explore the possibility of existence I-U hypothesis in case of multi-sectoral/region economy. The existence of “I-U” hypothesis, for a multi-sectoral economy has its far-reaching consequences over the policy decisions of the modern welfareistic governments. For instance, in the light of this hypothesis, the poorer states/regions of the economy may be well identified during the process of change in the degree of inter-sectoral economic inequality. Accordingly, the government may introduce corrective measures to check the unwarranted degree of inter-sectoral/inter-regional economic inequality.

In the present paper, an attempt has been made to test the existence of “I-U” hypothesis/Kuznets cycle for a multi-sectotal / multi regional economy under the framework of basic assumption of Neo-classical and Neo-Keynesian growth models. The scheme of the present paper is as follow.

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Section II provides major assumption of the Neo-classical and Neo-Keynesian growth models. In section III, a theoretical model has been developed that provide support for existence of “I-U” hypothesis for a multi-sectoral economy. Section IV deals with a brief discussion pertaining to various inequality indices that are used in the present paper. Concluding observations are contained in section V.

2. NEO-CLASSICAL AND NEO-KEYNESIAN GROWTH MODELS: MAJOR ASSUMPTIONS

The Neo-Classical economist [Solow (1956. 57, 85), Swan (1960)] have derived the conditions of steady state economic growth under certain assumptions. Prof. Solow has taken the assumption of aggregate homogeneous production function, continuously substitutable inputs of labour and capital, fixed technology and constant growth in the labour force. Under these assumptions, Prof. Solow has established a unique growth path that displayed full employment of all resources where the rate of growth of total income equal to the rate of growth of labour force. This growth path is one where total output grows, but output per head remains constant.

In the Neo-keynesian approach to economic growth, Kalechi (1954, 71), Steindl (1952), Kaldor (1955-6, 60) and Pasinetti (1962, 77,81) have explained the inter-relationship between income distribution and economic growth in a lucid manner. The Kalechi-Steindl (K-S) model assumes that the firms set the price level as a mark up on the prime costs; the mark up rate is given¹. Next, the firms have a higher desired rate of accumulation if the profit rate is higher or the rate of capacity utilization is higher. On the basis of these assumptions, the K-S models concludes that reduction in the industrial concentration raises the real wage and provides a re-distribution of income towards workers and it ultimately results in a higher degree of capacity utilization. In other words, a better distribution of income is associated with a higher rate of economic growth.

The effect of skewed income distribution on economic growth is also explained by the growth models of Kaldor and Pasinetti (K-P). The K-P model assumes that income (Y) is divided into two broad categories, wages (W) and profit (P). Next, the model assumes that the marginal propensity to save for wage earners are less than those of capitalists is. Further, assuming the identity between the saving and the investment i.e. I=S, the K-P model concludes that the share of profit in income is direct positive function of ratio of investment to profit². In other words, the skewed income distribution in favour of profit earner class is an essential condition for steady state economic growth.

3. GENERALIZED INVERSE-U HYPOTHESIS: THEORETICAL JUSTIFICATION

At it is obvious from the narrations contained in section II that the economic growth is closely associated with the distribution of income, we shall consider here the “I-U” hypothesis as a theory about the nexus between economic growth and inequality. The basic assumptions of Neo-classical and Neo-Keynesian growth models will be taken here to test the existence of “I-U” hypothesis for a multi-sectoral economy. Since there is a very close positive correlation between per capita Gross Domestic product (GDP) and economic growth, the per capita GDP is considered as good indicator of country’s economic growth.

Let us assume n sectors/states in an economy whose respective GDP are.

$Y_1, Y_2, Y_3, \dots, Y_n$ (3.1)

In a developing economy, sectoral income (Y_i) may be taken as direct positive function of time (t). There would be various functional forms³ explaining the relationship between Y_i and t. Let us assume linear relationship between Y_i and t which is given by eq. (3.2) as.

$Y_i = \alpha_0 + I_{Y.t} + u_i$ (3.2)

Where α_0 is constant, I_Y is a constant which reveals some form of inter-sectoral economic inequality⁴ in the sectoral domestic products and U_i is the random disturbance term. Differentiating Eq. (3.2) w.r.t. time (t), we get,

$$\frac{dY_i}{dt} = I_y \quad (3.3)$$

Obviously, Eq. (3.3) corroborates the basic spirit of Neo-Keynesian model of economic growth. Economic disparity among various sectors is governed by several socio-economic factors but for simplicity, only two factors i.e. GDP (Y_i) and population of respective sectors (P_i) have been taken in the present model. In other words,

$$I_Y = \phi(Y_i, P_i) \quad i = 1, 2, \dots, n \quad (3.4)$$

from (3.3) and (3.4)

$$\frac{dY_i}{dt} = \phi(Y_i, P_i) \quad (3.5)$$

Let us assume that population of the various sectors are growing at a constant rate m . Thus, growth in populations of the sectors will be function of time (t), and we may write.

$$P_i(t) = P_i(o) \cdot e^{mt} \quad (3.6)$$

where $P_i(t)$ is population of the i th sector at time t , $P_i(o)$ is the initial population of i th sector at time t and m is its growth rate.

Substituting population growth rate as specified by Eq. (3.6) in the inequality function (Eq. 3.5), we get,

$$\frac{dY_i}{dt} = \phi\left[Y_i, P_i(O) \cdot e^{mt}\right] \quad (3.7)$$

Equation (3.7) reveals the time path that change in GDP of the various sectors must follow when respective population of the sectors grow at the constant rate (m). It now helps us to investigate the behavior of ratio of GDP of the sectors, and their respective population. To do this, let us introduce a new variable q (per capita GDP of the sectors) where $q_i = Y_i/P_i$ or $Y_i = q_i \cdot P_i$ and substituting this relationship into (3.6), we get,

$$Y_i = q_i \cdot P_i(o) \cdot e^{mt} \quad (3.8)$$

Differentiating Eq. (3.8) with respect to time, we get,

$$\begin{aligned} \frac{dY_i}{dt} &= q_i \cdot m \cdot P_i(o) \cdot e^{mt} + \frac{dq_i}{dt} \cdot P_i(o) \cdot e^{mt} \\ \Rightarrow \frac{dy_i}{dt} &= \left[q_i m + \frac{dq_i}{dt} \right] \cdot P_i(o) \cdot e^{mt} \end{aligned} \quad (3.9)$$

From Eq. (3.8) and Eq (3.9), we get

$$\left[\frac{dq_i}{dt} + q_i m \right] \cdot P_i(o) \cdot e^{mt} = \phi\left[Y_i \cdot P_i(o) \cdot e^{mt}\right] \quad (3.10)$$

In order to express Eq. (3.10) into more meaningful way, let us make use of the assumption that the inequality function follows constant returns to scale. This shows that the inequality function is homogeneous of degree 1. Applying the properties of homogeneous function, Eq (3.10) can be written as:

$$\left[\frac{dq_i}{dt} + q_i m \right] \cdot P_{i(0)} \cdot e^{mt} = P_{i(0)} \cdot e^{mt} \cdot \phi \left[\frac{Y_i}{P_{i(0)} \cdot e^{mt}}, 1 \right] \quad (3.11)$$

or

$$\frac{dq_i}{dt} + q_i m = \phi \left[\frac{Y_i}{P_{i(0)} \cdot e^{mt}}, 1 \right] \quad (3.12)$$

or

$$\frac{dq_i}{dt} = \phi \left[\frac{Y_i}{P_{i(0)} \cdot e^{mt}}, 1 \right] - q_i m \quad (3.13)$$

Substituting $q_i = Y_i / P_{i(0)} \cdot e^{mt}$ in Eq. (3.13), we get,

$$\frac{dq_i}{dt} = \phi(q_i, 1) - q_i m \quad (3.14)$$

Equation (3.14) is a differential equation with per capita GDP (q_i) as its variable and it yields several interesting results.

For instance, if per capita GDP is constant over time then $\frac{dq_i}{dt} = 0$ and therefore the GDP of various sectors must be growing at the same rate m , as the population of the sectors. In this case, from Eq (3.14), we get

$$q_i m = \phi(q_i, 1) \quad (3.15)$$

In the next situation, consider the behavior of the inequality function when per capita GDP is changing i.e. $q_i m \neq \phi(q_i, 1)$. Here, we will consider two limiting cases. First, there is no inter-sectoral income inequality i.e. inequality function is zero and Eq. (3.14) reduces to

$$\begin{aligned} \frac{dq_i}{dt} &= -q_i m \\ \Rightarrow \frac{dq_i}{dt} / q_i &= -m \end{aligned} \quad (3.16)$$

It is obvious from Eq. (3.16) that proportionate change in per capita GDP is minus the proportionate rate of change in population of the sectors. In order to derive the second limiting case, assume that $m=0$ i.e. population of the various sectors is constant over time. Now Eq. (3.14) reduces to:

$$\begin{aligned} \frac{dq_i}{dt} &= \phi(q_i, 1) \\ \Rightarrow \frac{dq_i}{dt} / q_i &= \frac{1}{q_i} \phi(q_i, 1) \end{aligned} \quad (3.17)$$

$$\Rightarrow \frac{dq_i}{dt} / q_i = \frac{P_i}{Y_i} \cdot \phi\left(\frac{Y_i}{P_i}, 1\right) \quad (3.18)$$

$$\Rightarrow \frac{dq_i}{dt} / q_i = \phi\left(\frac{Y_i, P_i}{Y_i}\right) \quad (3.19)$$

It is obvious from Eq. (3.19) that proportionate change in per capita GDP of the various sectors is equal (when $m=0$) to ratio of inequality function to GDP of the sectors.

Eqs. (3.16) and (3.19) reveal that $\frac{dq_i}{dt}$ in Eq. (3.14) is sum of two components as explained by equations (3.16) and (3.19)

In order to plot q_i and $\phi(q_i, 1)$, let us assume that q_i is plotted on the X-axis and $\frac{dq_i}{dt}$ on the Y-axis. To get the line q_i , we set $\phi(q_i, 1)=0$ and plot the relationship between q_i and $\frac{dq_i}{dt}$, ignoring the negative sign. This line which has a slope of m , reveals how fast per capita GDP would be declining for a given rate of growth of population for various sectors.

To obtain $\phi(q_i, 1)$, let us assume that q_i is zero and plot the relationship between q_i and $\frac{dq_i}{dt}$ which is given by

$\frac{dq_i}{dt} = \phi(q_i, 1)$. Here it is important to consider the shape of curve $\phi(q_i, 1)$. The expression $\phi(q_i, 1)$ may be interpreted as inter-sectoral economic inequality curve with sectoral population input held constant at one unit and per capita GDP of the sectors as the variable factor. The assumption of diminishing returns to one factor is enough to assume that the slope of $\phi(q_i, 1)$ must decline as q_i is increased.

It is obvious from fig.1 that the inequality function $\phi(q_i, 1)$ is strictly concave⁵ everywhere for all the possible values in the range $(0, q_i^*)$. The economic inequality function (inter-sectoral economic inequality in per capita GDP) increases, reaches to maximum and then declines as per capita GDP of the sectors increases. More specifically, the inter-sectoral economic inequality in per capita GDP takes the shape of “inverse-U” with respect to time. Next, the relationship between $\phi(q_i, 1)$ determines optimal size of per capita GDP of the n sectors of the economy given the “inverse –U” shape in inequality in per capita GDP.

4. MEASURES OF INCOME INEQUALITY

There exists plethora of literature on measures of income and wealth inequality. The conventional inequality measures (Atkinson 1970, 83) that are most frequently used in empirical research are (a) the coefficient of variation i.e.

$$\sigma/\mu \quad (4.1)$$

and (b) the standard deviation of logarithms i.e.

$$\int_0^{\bar{Y}} \{\log(y/\mu)\}^2 f(y).dy \quad (4.2)$$

where Y , σ and μ are in usual notations.

Dalton's Principle of transfer (1920) has established that measure of inequality should increase when income is transferred from a poor person to a richer person. Chapernownq (1974) argues that coefficient of variation is most sensitive to inequality of extreme income that procedures a flat response to the transfers. The variance of logarithms of income may be interpreted as a measure of concentration of incomes since it can be estimated through the framework of Lorenz's measures of concentration (Aitchinson, J and Brown, J.A.C., 1957).

An attractive way to measure income inequality without imposing a functional form of statistical distribution on income graduation is to use Lorenz-based inequality measures. In the Lorenz diagram (Fig.2), the proportion of income receivers having income less than x is measured along x axis and the proportion of total income accruing to the same income receivers along the y -axis. The points plotted for the various values of x trace out a curve below the line sloping 45° from the curve explains the relation between the distribution function $F(x)$ and the first-moment distribution function $F_1(x)$, given by

$$F_1(X) = \int_0^X t dF(t) / \int_0^\infty t dF(t) \quad (4.3)$$

It is obvious from the Lorenz diagram that the measure of income concentration is the ratio of the shaded area between the Lorenz curve and the 45° line. The income concentration (L) for the log normal hypothesis is defined as.

$$L = 1 - 2 \int_0^\infty F_1(x) dF(x) \quad (4.4)$$

substituting the value of $F_1(X)$ in Eq (4.4) we get

$$L = \left[2N \left\{ \frac{\sigma}{\sqrt{2}} \middle| 0,1 \right\} - 1 \right] \quad (4.5)$$

Obviously, the measure of concentration (L) is monotonically related to value of σ^2 and thus the parameter σ^2 (variance of logarithms of the income) may well be interpreted as a measure of income inequality.

The Lorenz curve may again be generated by defining the income earner units, say, quintile shares where q_i , $i=1,2,..,n$ reveals the share of i th income earner. Let, incomes are arranged in ascending order i.e.

$$0 \leq q_1 \leq q_2 \dots \leq q_i \dots \leq q_n \leq 1 \quad (4.6)$$

From the order of the incomes as shown by Eq. (4.6), several well known income inequality measures may be derived (Slottje, D.J., Basman, R.L. and Nieswiadomy, M., 1989).

For example, the Gini (1912) measure of income inequality is given by

$$G = 1 - \frac{1}{n} - \frac{2}{n} \cdot \sum_{i=1}^{n-1} (n-i) q_i \dots \quad (4.7)$$

and the relative mean deviation (Cowell, 1980)

$$R = \frac{1}{2} \cdot \frac{n}{n-1} \left[\sum_{i=1}^n \left| q_i - \frac{1}{n} \right| \right] \quad (4.8)$$

Theil's (1967) entropy measure (normalised) is given by

$$T = 1 + \frac{1}{\ln(n)} \left[\sum_{i=1}^n q_i \cdot \ln(q_i) \right] \quad (4.9)$$

Kakwani's (1980a, 80b) measure is defined by

$$K = \frac{\left\{ \sum_{i=1}^n \left[\sqrt{q_i^2 + 1/n^2} \right] - \sqrt{2} \right\}}{2 - \sqrt{2}} \quad (4.10)$$

The survey of literature on income inequality reveals that Gini coefficient suffers with serious drawbacks. For instance, the simple aging of populations will raise income inequality (Morgan, 1962). The Gini Coefficient is also insensitivity to non-money components and differential price indices between states, which exaggerate income inequality in rural areas (Jonish and Kau, 1973). It is found that Gini ratio is more responsive to changes in income of the middle class rather than among the rich or poor (Allison, 1978 and Osberg, 1984). Reynolds and Smolensky (1977) have concluded that despite of major changes in taxation and welfare during 1950-70 in United States, inequality as measured by Gini Coefficient remained unchanged. It is obvious that the Kakwani measure and the Gini ratio measure every different properties of the Lorenz Curve (Basmann, R.L. Slottje, D.J., 1987). The Gini ratio measures a property of distribution inequality that varies in direct proportion to the area of the closed geometric representation (Fig.2) and bounded below by the horizontal axis on the right by the Lorenz Curve itself while the Kakwani measure correlates a property of distributional inequality that varies directly with the perimeter if the closed geometric area (Fig.2).

The relative mean deviation violates the principle of transfer since it is insensitive to transfer between income units on the same side of the mean. Theil (1967) proposed decomposable measures based upon the Lorenz Curve that satisfy dalton's Principle of Transfer (Allison, 1978). Theil index is similar to the Gini index since it is too sensitive to movements in the middle part of the income distribution (Osberg 1984).

Atkinson (1970) developed a new measure of income inequality and argued that there should be social welfare function with each measured of income inequality. The index is defined as.

$$\text{Atkin } (I) = 1 - \left[\sum_i \left[\frac{y_i}{\mu} \right]^{1-\epsilon} \cdot f(Y_i) \right]^{\frac{1}{1-\epsilon}} \quad \epsilon \geq 0 \quad (4.11)$$

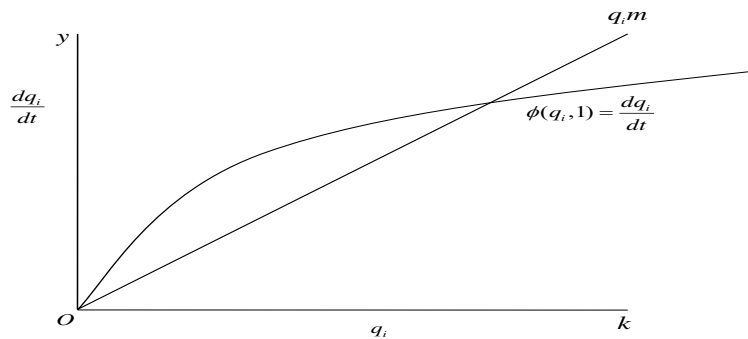
The value of ϵ , which is clearly a measure of the degree of inequality-aversion reveals the relative sensitivity to transfers at various income levels. As ϵ increases, inequality is emphasized much among the poor. Atkinson observed that if we take $\epsilon=1.0$ which implies a lower degree of inequality aversion then the ranking is closer to that of the Gini ratio. A wide range of values of inequality aversion emphasized the inequality at the top of the distribution ($\epsilon=0.5$) and at the bottom ($\epsilon=1.0$).

5. CONCLUDING OBSERVATIONS

The relationship between inequality and average well-being at the level of an economy was first established by Prof. Kuznets. In the present paper, a theoretical model is developed which supports the existence of an inter-state Kuznets curve. More specifically, the inter-state income inequality first increase attains the maximum and then declines as the states become better-off.

The policy significance of the present analysis is that in view of existence of “inverse U” pattern/Kuznets cycle in inter-state income inequality, it helps in designing the appropriate resource transfer scheme for the states by the federal government in order to establish the horizontal equity among the states..

Figure-1: Kuznets’s Hypothesis and Shape of Inequality Function



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Notes

1. The Kalechi-Steindl model of economic growth assumes that the firms are not price takers in a perfectly competitive economy. Under the assumption of fixed coefficients and constant returns to scale, the firms set prices when wage i.e. W is given. Thus, the price becomes independent of demand and is determined by the firms as a markup on the prime costs i.e. $W.a_0$ was such that

$$P = W a_0 (1+z) \tag{N.1}$$

Where Z signifies the degree of monopoly power which depends, among other things, on the extent of industrial concentration. For details, see Dutt, Amitava (1990); Ch.2.

2. The Kaldor-Pasinetti model of economic growth assumes following income identities:

$$Y \equiv W+P \tag{N.2}$$

$$I \equiv S \tag{N.3}$$

$$S \equiv S_w + SP \tag{N.4}$$

Where Y, W, P, I and S stand in usual notation and S_w and S_p denote savings of workers and profit class respectively. Taking investment as given, and assuming simple proportion saving function i.e.

$$S_w = s_w \cdot W$$

And $SP = s_p \cdot P$ (N.5)

We get,

$$I = s_p \cdot P + s_w \cdot W \tag{N.6}$$

$$\Rightarrow I = s_p \cdot P + s_w (Y - P) \tag{N.7}$$

$$\Rightarrow I/Y = s_w + (s_p - s_w) P/Y \tag{N.8}$$

and

$$\frac{P}{Y} = - \frac{S_w}{(s_p - s_w)} + \frac{1}{(s_p - s_w)} \cdot \frac{I}{Y} \tag{N.9}$$

Equations (N.8) and (N.9) reveal interdependence of income distribution and economic growth. For instance, N.8 reveals that increasing proportion of profit in the income is essential for steady economic growth. Similarly, N.9 explains that proportion of profit in the income would be negative when there is no investment in the economy.

3. In additions to linear functional form between two variables, there would be several other functional form i.e. quadratic, hyperbolic, semi-logarithmic, log-quadratic, log-hyperbolic and double logarithmic. For details, see Johnston, J. (1988), *Econometric methods*, Singapore; Mcgraw-Hill Book Company.
4. Inter-sectoral structure of income as well as it change over time (dy_i/dt) may be explained through various measures of inequality in income and wealth. A brief discussion about inequality increases is contained in section IV of this paper.
5. The function $\phi(q_i, 1)$ is strictly concave since $d^2 \phi(q_i, 1)$ is negative definite. It is easy to verify that in the inequality function $I_Y = \phi(Y, P)$,

Equation
$$\frac{\partial^2 I_Y}{\partial Y^2} < 0$$

And

$$\begin{bmatrix} \frac{\partial^2 I_Y}{\partial Y^2} & \frac{\partial^2 I_Y}{\partial Y \cdot \partial P} \\ \frac{\partial^2 I_Y}{\partial Y \cdot \partial P} & \frac{\partial^2 I_Y}{\partial P^2} \end{bmatrix} > 0$$

6. Let, consider a positive variate X ($0 < x < \infty$) such that $Y = \log X$ is normally distributed with mean μ and variance σ^2 then we say that X is log normally distributed or that X is a Λ -variate and write : X is $\Lambda(\mu, \alpha^2)$ and correspondingly Y is $N(\mu, \alpha^2)$. Since we know that $Y = \log X$, the distribution function of X and Y are related by

$$\Lambda(X) = N(\log x) \quad (X > 0) \quad (N.10)$$

And

$$d\Lambda(x) = \frac{1}{X\sigma\sqrt{2\pi}} e^{\left\{-\frac{1}{2\sigma^2}(\log X - \mu)^2\right\}} dx \quad (X > 0) \quad (N.11)$$

It is also true that j -th moment distribution of a Λ -distribution with parameters μ and α^2 is also a Λ -distribution with parameters $\mu + j\alpha^2$ and α^2 . Applying this theorem, Eq. (4.4) can be written as:

$$L = 1 - 2 \int_0^\infty \Lambda\left(X \mid \mu + \sigma^2, \sigma^2\right) d\Lambda\left(X \mid \mu, \sigma^2\right) \quad (N.12)$$

$$\begin{aligned} &= 1 - 2\Lambda\left(1 \mid \sigma^2, 2\sigma^2\right) \\ &= 1 - 2N\left[\frac{-\sigma}{\sqrt{2}} \mid 0, 1\right] \\ &= 2N\left[\frac{\sigma}{\sqrt{2}} \mid 0, 1\right] - 1 \end{aligned} \quad (N.13)$$

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REVIEW OF EDUCATIONAL TRIBUNALS BILL 2010 WITH SUGGESTIONS

Geetha Giriraj¹⁵

There are a number of problems and cases in the field of education, especially where there is requirement for specialist knowledge. The unrest in students' communities is more with respect to awarding system of marks and results declaration. Society is becoming more and more technologically advanced. Globalization and privatization of education have become need of the day.

Definitely Judges who sit in the chair need to be technically sound to solve the disputes of modern-day problems. Even the students are becoming more sensitive and lonelier and are committing suicides for not passing the examinations or getting admission to the courses of their choice. There is so much to do in the system of education from student's point of view. On the side of reservations are bringing down the quality instead of uplifting the needy. With respect to management each influential group in society owning the educational institutions which are financially lucrative. There are umpteen number of cases where the management failed to impress the court's affiliations rules with respect to each university is different.

Having kept in mind all the above a Bill for bringing reforms in the education system has been introduced.

We should know as to how long it will take for a bill to become law. How many numbers of bills are lased? The number of pending bills in the parliament are also more. This shows how much legislative activity is taking place. Once if we observe media and live telecast of legislator's mode of operation in the Houses where they represent, we tend to feel that one they came to fight each other or represent the people to make laws. An important part of everyone's life is education which has been neglected for many years.

The Following is the Procedure of How a Bill becomes Law

An ordinary Bill, bills other than money or a Financial Bill may originate in either House of Parliament. It becomes an Act when it is passed by both Houses and is assented to by the President. The procedure for the passage of a Bill in a House is contained in the rules of procedure of each House.

Usually, a Bill passes through three stages, popularly known as reading in a House. The first is the introduction stage. By convention no discussion takes place unless the Bill is very controversial eg. This convention has been broken when the preventive Detention Bill has been introduced. Then comes the consideration stage which has two parts:

- One, a general discussion of the principles and provision of the Bill (details of the Bill are not discussed at this stage);
- Two, its clause by clause consideration.

The general discussion takes place on motion either that the Bill be taken into consideration or that it may be referred to a select committee or that it be circulated for eliciting public opinion.

An important Bill is usually referred to a select committee of the House or to a joint select committee of both Houses. After the report of the committee is presented to the House, the Bill is discussed clause by clause. Amendments to clauses may be moved at this stage. At the final or third reading stage, after a brief general discussion, the Bill is finally passed. After its passage in one House, the Bill is transmitted to the other House where it undergoes more or less a similar procedure.

During 15th Lok Sabha had by Congress under Prime Minister Dr. Manmohan Singh and the Ministers of HRD Shri Kapil Sibal has introduced the educations Tribunals Bill 2010 with the number (55/2010). The objective of the bill is to provide for establishment of educational tribunals for effective and expeditious adjudication of disputes involving

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teachers and their employees of higher educational institutions and other stakeholders (including students universities institutions and statutory regulatory authorities) and to adjudicate penalties for indulging in unfair practices in higher education and for matters connected therewith or incidental thereto.

The aim of the bill of educational tribunals 2010 is very good. Honourable Finance Minister Mr. Kapil Sibal said that “Education impacts every child in this country very young man and woman who is going to the university every family who try very hard to make sure that their children get very high-quality education. Every thinking member of society is impacted by education that the state and the private sector providers in their country.

The things taken into consideration during the debate on the Bill are:

- To revive the Nalanda University States to India with good quality universities.
- To ensure good quality education to the children as a nation has to move in a forward direction.
- To have a balance between perfect and imperfect laws to build the nation future.
- To create valid solutions as the literacy level is improving day by day and colleges and universities are bound to multiply to the current levels.
- The disputes between universities, affiliating colleges authorities like UGC, AICTE, MCI, etc, for approvals, recognition, inter-university, inter-college, teachers and students’ disputes tend to grow exponentially.
- An architecture for solving the disputes away from civil court, appeal court. Giving importance to the value of time devoted by teachers and students in courtrooms instead of classrooms.
- The private sector in the field of education has multiplied problems though its existence is necessary to meet the increasing requirements of the people. Privatization even causes malpractices like capitation fees, invalid recognition and so on.

The Bill clearly supports the stakeholder of education as being the reasons for recommending the Education Tribunals Bill. The reduction of number of cases, burden of the court is part of it. A specialized or expert person in the adjudicatory body is a definite requirement.

The Department related Parliamentary Standing Committee on Human resource development Presented 225th Report of the committee on the Educational Tribunals Bill, 2010. Under its chairmanship of Mr. Oscar Fernandes, the observations of the committee are as follows:

- The committee is of the view that the Government should identify the weaknesses and lacunae of the existing tribunal's system and then address them in the right perspective.
- The committee hopes that proposed Bill do not in any way hinder the quality, innovation, and creativity in higher education and are able to deliver their mandate efficiently.
- It suggested to create Educational Division or the lines of commercial division may be created in each High court to hear appeals against the decision. If the state tribunals as it was decided in Chandramohan’s case. Regarding the setting of Educational Division, the Committee i.e., of the view that since the Government implementing the commercial dispute bench for the first time, it can consider the formation of such benches by increasing the number of High Court Judges wherever it plans to abolish the tribunals.

- Committee expressed its apprehension on the complex structure of tribunals, which may lead to litigation in other ways, instead of justice in a speedy way to be implemented. An easier and simpler administrative system for resolving disputes to be adopted.
- To overcome the financial burden and fixing of minimum court fee in case of tribunals can be considered. It also observed that before setting up tribunals, the magnitude of cases incurred in litigation should be assessed.
- Instead of three-tier tribunals system suggested in TMA Pai case and law commission report the Bill suggested only for 2-tier tribunals as it was opposed by the States during consultation process as it may escalate costs.
- The committee suggests having district level tribunals where number of educational institutions are concentrated or more.
- The word students must-be included in the Bill and thereby safeguard their interests.
- The committee seeks a clarification of justice delivery system to be different in public and private institutions.
- The committee suggests to keep the interests of the SCs and STs in the tribunal's representation should be protected.

The suggestions on the Bill are good if it can be implemented. There are various reasons for the Bill did not come into reality.

- If we observe the history, the politics, the election mandate by the public plays a vital role in bringing any Bills its shape. Right from 1990's beginning to till 2009 there was no stable government. To get a bill passed in both Houses majority votes are required in both houses where there is no stable government it is difficult to see that any governance taking place.
- Though congress government ruled for 10 years up to 2014 mostly it was with alliances. This led to not bring the major reforms. Even India is still under lower literacy rules. Of course, this led to introduction of Right to Education in the fundamental rights under Article 21-A of the constitutions providing force and compulsory education up to 14 years of age. To get this only it took many years we can imagine the state of affairs of our country where to get primary education guaranteed to its citizens took 62 years after independence. Understanding the importance of quality in higher education system again a step further which is yet to take its shape.
- There was an IT boom and the IT Act 2000 was introduced and it changed the lives of many in India. It brought changes in many Acts like RBI Act. Banker Books Evidence Act. IPC, Evidence Act. This really requires knowledge of basic education to be able to get the benefits.
- Globalization and privatization were advantages in the field of education. However, at the same time, it resulted in many types of disputes.
- When the Bill was introduced, they tried to bring other Bills at the same time. A step by step introduction of Bills could have been a good choice than trying to introduce at a time altogether. Hence, it resulted in the lapse of the Bill, and could not be able to pass in another House due to lack of majority.
- First refining and correction of Hight Education Regulatory authorities establishing tribunals will be of no use.

- There was a lack of political will bring the Tribunals Bill as Government was not here as to how to take a lead.

CONCLUSION

There is definitely a specialized tribunal in the field of education is necessary to improve quality. The number of pending cases in the file of education was not completed as there is insufficient data available Nevertheless, in the point of view of students, teachers and educational institutions there is a necessity to have separate tribunals in education. At primary level and university level some of the states are having tribunals. So a uniform method to bring into one streamline the existing tribunals at different states it is necessary to bring the Bill its shape. As the number of cases is filed by medical & technical colleges are more, there seem to be many changes taking place in the admission process, affiliation regulations, etc. After the National Policy on Education, we can hope to get the implementation of the Educational Tribunals Bill.

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