

# **Economic Growth and Income Distribution: An Assessment of the Development Thoughts in Post-Independent India**

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in partial fulfillment of the requirement for the award of*

Doctor of Philosophy  
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Economics

By

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December 2022**



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## **DECLARATION**

I, Anagha Tobi, hereby declare that the PhD thesis entitled “**Economic Growth and Income Distribution: An Assessment of the Development Thoughts in Post-Independent India**” submitted by me under the guidance and supervision of Prof. K Ramachandra Rao and Prof. S Limakumba Walling, School of Economics, University of Hyderabad, is a *bona fide* research work, which is also free from plagiarism. Furthermore, I also declare that it has not been submitted previously in part or full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodganga/INFLIBNET.

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**CERTIFICATE**

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**A. Publication**

1. Srujana Boddu, Anagha Tobi (2022): “Is Rising Pharma Market a New Burden? Introspecting the Implications of India’s Healthcare Journey from public to a private good. International Journal of Health Governance (accepted)

**B. Presentations in conferences:**

1. Presented a paper: “The ‘U’ Shaped Female Labour force Function in the Economic Development of Kerala”, in the International Conference on Achieving Youth Specific SDG’s: Key Challenges & Policy Responses”, an international conference held at RGNIYD, Sriperumbudur, Tamil Nadu, 25-27 July 2018.
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| Course Code | Course Title                    | Credits | Pass/Fail |
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# **Economic Growth and Income Distribution: An Assessment of the Development Thoughts in Post-Independent India**

## **Abstract**

The thesis explores the conundrum between economic growth and income distribution in a Post Keynesian/ Kaleckian framework. The adherence to the principle of effective demand generates the potentiality of the coupling of growth and distribution in the Kaleckian mechanism, with the advancement of the functional distribution of income. The study examines the development trajectory of India post-independence, and situates the conditions that steered the transcend from a job-less to a job-lost growth pattern. The general argument of the thesis is that- First, when taken into account the development phases in India (post-independence), it is discerned that the macroeconomic policies for the enhancement of growth and income distribution were viewed in divergence. The process of distribution can instead be embedded in the pursuit towards economic growth, with the re-thinking of the macroeconomic policies. Second, the decline in the labour share or low wages can have adverse impacts on the Indian economy due to the weakening effects on consumption and investment, and thereby, aggregate demand. The present study seeks to examine whether the re-distribution of income via the Kaleckian mechanism can expediate the process of economic growth. Instituting an empirical model, the thesis pursues to bind the Post Keynesian/ Kaleckian connotations to the Indian economy; given the development trajectory of the country.

**Keywords: Economic Growth, Income Distribution, Kaleckian Models, Post Keynesian Economics, Economic Development**

**JEL Classifications: O40, O15, E11, E12, O1**

# Chapter 1

## Introduction

### 1.1 Economic Growth and Income Distribution

An inquiry into who benefits from economic growth is a fundamental thought in development economics. The concept of income distribution is ordained to throw light on how the total income generated in the society is distributed amongst its members. With the rekindling of the neo-classical consensus in the 1980s, the neo-classical growth models which has been embedded in the static optimal (equilibrium) allocation, became the new fixation. The neo-classicals also embraced the assumption of a smooth substitution between factors of production, which is inferred to be paid in accordance to their marginal productivity. Emerged from Solow's re-interpretation of the Harrodian dynamics of instability postulates, the criticisms with regard to the consideration of technological progress as an exogenous variable gave rise to 'new growth models'. In regard to the effect of economic growth on the personal income distribution, Kuznets (1955) has established it to be hump shaped due to two reasons. First, it is asserted that the income inequality is said to rise in the initial phase of development, as saving is concentrated on the upper class of people. Second, it is also due to the onset of structural transformation which has been argued to augment inequality at first; but then the tendency of income distribution is claimed to smoothen once the 'trickle down' settles in.

The foundations of the critique of the neo-classical theories of distribution and growth lies in the heedlessness on the role of aggregate demand. On the contrary, in the Post-Keynesian model of economic growth, aggregate demand is considered the major impetus that drives growth; and hence the income distribution is given a central role. Kalecki built a coherent theory of distribution which was based on the aphorism that, "the workers spend what they get; the capitalists get what they spend" (Gladys Foster, 1990). Following him, the Post Keynesians proponents advanced the functional distributional distribution theory of income. The foundation of the Post Keynesian distribution theory lies in an investment function which is independent, and on the notion of the differing propensity to save between capitalists and workers; which is higher among the former and lower among the latter. The Kaleckian models are also based on the mark-up price setting of the firms on oligopolistic and monopolistic

markets, where the profit or wage share and the savings propensity out of profits are considered important determinants of aggregate demand.

The neo- Kaleckian model that emerged at first solely concentrated on a wage led or stagnationist regime, and is based on the notion that a lower wage share and a subsequent higher profit share can result in a downfall in consumption. This has been said to occur via the route of dampening capital accumulation, which in itself is due to the result of reduced investment and hence, capacity utilization. But the Post Kaleckians embraced the possibility of a profit-led or an exhilarationist regime in addition to the stagnationist one; which is said to occur when the increased profit share strengthens investment so much so that the negative effect of consumption is overpowered. From the mid-1990s, the Kaleckian literature has generated much theoretical and empirical research. We attempt to emulate the Kaleckian model of growth and income distribution in the Indian economy, to perceive an integrated aim of growth and distribution.

With regard to the fact that the growth transformation in the Indian economy has been proclaimed as ‘job-less and job-lost’, the thesis attempts to analyse the growth trajectory from an aggregate demand perspective. We attempt to examine whether the Kaleckian mechanism can expedite the process of economic growth in the Indian economy; with due regard given to the growth and distribution phases in the country post-independence. Hence, chapters two and three of the thesis embarks on analysing the various development phases in the Indian economy post-independence, and inspects the country’s journey towards job-less growth. The empirical model and the simulations employed in the fourth and fifth chapters explores how the employment of the Kaleckian mechanism can couple the process of economic growth and income distribution. The final chapter summarizes and concludes whether the focus on distribution via the Kaleckian mechanism precludes or abet economic growth.

## **1.2 Motivation and Scope**

When the development phases in India is taken into account, it has been observed that the efforts to augment the domestic demand in the country post the mid 1960s (the Nehruvian era) has been inadequate. This has had wider repercussions in the economy and

has accentuated deeper inequality; and the narrative of trickle down has had limited effects on the economy. The recurrent crises in the capitalist structure, increased divergence between wages and profits and waning economic growth (in the last decade) has instigated the necessity to perceive the development trajectory of India from a heterodox perspective. The thesis is a two-fold exercise, and the empirical modelling via the Post Kaleckian/Post-Keynesian tradition has been constrained to the database of the organised industrial sector.

The empirical application of the Post Keynesian/Kaleckian framework in various countries, has often not taken into account the social, economic and institutional structure of these countries. And invariant to the wage and profit led regimes, the cases of growth and distribution with due regard towards the development and structural transformation hasn't had much consideration. The thesis seeks to assess the compatibility of a heterodox discourse, taking into consideration the relevance of demand side policies on a developing country like India. The core of the Kaleckian mechanism lies in evaluating the relationship between profit and wage share in the country, henceforth to examine its impact on the net exports (in case of an open economy), investment and consumption in the country. The usage of income approach of National Income for the employment of empirical exercise is restricted in the Indian case, because of the difficulty in bifurcating the mixed component of national income towards operating surplus and compensation of employees (V. Kohli, 2018). But the database of the organized industrial sector, Annual Survey of Industries (ASI) provides the route in the dissemination of income based on the factors of production. Henceforth, the scope of the empirical exercise is bounded by the ASI database.

### **1.3 Methodology and Data Sources**

The discernment of development phases in India to assess the growth and distribution trajectory was based on explorative narrative study using secondary data and literature sources. The data on employment prospects and its elasticity with respect to economic growth, along with the assessment on structural transformation and on the divergence between labour income and productivity (on major sectors) in the country were examined from the Employment and Unemployment Surveys from National Sample Survey Organization (NSSO), Annual Survey of Industries (ASI), National Accounts Statistics (NAS) and from the India KLEMS database (2018) published by the Reserve Bank of India (RBI). Being a two-fold exercise, the empirical modelling in the Post Keynesian/ Kaldorian tradition is bound by

the ASI database, as it is hard to break up the national income accounts for profit and wage components. The data is taken for the period between 1981- 2018, and was utilized to obtain the parameters of investment, wage, profit share and output for the empirical modelling. The time series modelling employed follows Vector Autoregressive (VAR) procedure. And the data for the estimates used for the calibration of the model were extracted from the RBI Handbook of Statistics on Indian Economy for various years.

#### **1.4 General Arguments of the Thesis**

When the phases of development in India are taken into account, it is discerned that the macroeconomic policies for the enhancement of both growth and distribution were often viewed in divergence. The process of distribution can instead be embedded in the pursuit towards economic growth; and a rethinking of macroeconomic policies are inevitable.

The decline in the labour share or low wages can have an adverse impact on the growth prospects of the Indian economy due to its weakening effects on consumption, investment and hence on the aggregate demand. The distribution of the economic growth matters and it can expediate the process of growth in itself.

#### **1.5 Objectives**

- To examine the distinctive development phases in India post-independence, with respect to analyse the growth and distribution trajectory of the country
- To situate the conditions that steered the country's transcend towards job-less and a job-lost growth pattern
- To ascertain whether the re-distribution of income via the Kaleckian mechanism can expediate the process of economic growth

Having stated the motivation and scope, general arguments and objectives of the problem, we proceed towards analysing the distinctive development phases in the Indian economy in the next chapter.

## **1.6 Chapter Structure**

The thesis has been incorporated in six chapters;

The first chapter initiates the discussion on economic growth and income distribution; proceeded by the motivation and scope, methodology and data sources, and the general arguments which augment to the objectives of the thesis

The second chapter delves into the development phases in the country and discusses its influence on economic growth and distribution; in contemplation to the transition in macroeconomic management

The third chapter proceeds to situate the job-less and job-lost growth in India and establishes the requisite to perceive economic growth and income distribution from a heterodox perspective

The fourth chapter encompasses the Post Keynesian contribution with regard to economic growth and income distribution, and institutes an empirical model to consider its pertinence in the Indian economy

The fifth chapter elucidates on the validity of the Post Keynesian/ Kaleckian mechanism on the Indian economy, in light of the empirical estimates and simulations

The sixth chapter deals with summary and conclusions, and binds the Post Keynesian connotations to the Indian economy, given its development trajectory

## **Chapter 2**

# **Beyond the Paradigmatic influences in Development Trajectory of India: Towards Changing Perspectives on Macro-Economic Management**

### **2.1 Introduction**

At the time of the emergence of development economics in 1950s, the discipline showed a rapid departure from neo-classical tendencies. The role of the state and public action were prioritised at the time, and it was widely believed that the governments can play a positive role in the raising of national welfare (Sen, 1983). The dominant theoretical prepositions in the discipline were influenced by Keynesian ideas, but with due regard given to the supply side bottlenecks in developing economies. Then came the era of stagflation which reduced faith in the state planning, and the economy began to transition towards neo-classical dogmas. This was in the aftermath of the stagflation in 1970s, caused by declined productivity effects and oil shocks; after two decades of capitalist prosperity. Along with the disintegration of the Keynesian consensus, the discipline of development economics also met with severe criticisms due to the logically inadequate micro foundations (Toye, 2006). Gradually, it began to lose its way as the mainstream principles didn't account for the economic problems raised by the discipline. By 1970s, many developing countries (India included) began to face political instability, and the planning expectations (based on the development models) were unable to resonate with the growth of these countries. The effectiveness of planning in leading towards advancement was questioned due to the increasing political instability. And the political perspective also began to transition from the 1980s, with the advocacy of the international organisations. The discipline kept shifting in tune with the macroeconomic ideas, and from 1990, the macroeconomic management began to take the centre stage (Collier, 2015). But the stable growth which receded after the macroeconomic reforms has been incommensurate with development. Gradually, development economics began to lose its way as the mainstream principles didn't account for the economic problems raised by the discipline (Gualerzi, 2012).

The chapter attempts to trace the development trajectory of the Indian economy, with respect to the changing dynamics in macroeconomic management. Section 2.2 is a

walkthrough the notable development paradigms, taking into account its connotation in the Indian economy (2.2.4). Section 2.3 embarks on India's development trajectory on the Nehruvian era and the section 2.4 discusses the East Asian success. The chapter proceeds to analyse the factors that led towards the embarkment of neo-liberalism (2.5) and dives to elucidate on the phase of 'dream run' in the country (2.6). The section 2.7 discusses the development route post 2010s and the next section (2.8) attempts to bind the arguments and conclude the chapter.

## **2.2 Through the Notable Development Paradigms**

### *2.2.1 The Paradigm of Balanced Growth*

The balanced growth proponents such as Rosentein Rodan, Ragner-Nurkse and Lewis broke new grounds in giving a re-orientation to the field of development economics. The 'big push' arguments (established by Rodan and Nurkse) gained significance as the focus of attention were on developing economies and European economies which were war torn. And the demand side contingencies which can be faced by developing countries were given pivotal consideration in their arguments. The preposition upholds that, to ameliorate the problems on demand and supply sides, the economic growth must grow step by step.

#### **Rosenstein Rodan**

"Had there been an integrating, synchronising "big push", the course of economic history of the world would have been different " (Rosenstein-Rodan, 1961)

Rosentein Rodan, in his theory of development, formulates a pursuit path, which must be satiated in order to transition the economy in a dynamic path towards development. He maintains that in order to reap the advantages of 'external economies'<sup>1</sup>, investment must be planned simultaneously in several complementary industries. His preposition embraces the utilisation of 'disguised unemployment'<sup>2</sup> (using it as a source of

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<sup>1</sup> " External economies of scale refer to factors that are beyond the control of an individual firm, but occur within the industry, and lead to a cost benefit " (CFI, 2022)

<sup>2</sup> " Also known as hidden unemployment, this refers to a situation where labour that is employed in a job is not actually utilized for the production of goods and services. In other words, such employment doesn't contribute to the output of an economy and thus akin to a form of unemployment. Sometimes disguised unemployment could be a form of underemployment wherein the skills of a labour force are not utilized to their full capacity. In many other cases, however, such unemployment could simply be due to the lack of other alternative avenues of production where the surplus labour could be employed profitably " (The Hindu, 2018)

strength), taking advantage of ‘pecuniary external economies’<sup>3</sup>, building of ‘social overhead capital’<sup>4</sup> and reaping of ‘technological external economies’<sup>5</sup> for the same. In addition, he argues that the market mechanism may not be viable to achieve the ‘increasing returns to scale’<sup>6</sup> via these complementarities, and hence must be acceded by public investment. It is implied in his theoretical preposition that that in order to launch a country into a self-sustaining path, there is a critical minimum level of resources (i.e., a minimum quantum of investment) which is considered as necessary. He diverges from the tradition of a ‘static equilibrium theory’<sup>7</sup> through his ‘big push’ theory, and contends that the theory of growth is necessarily a theory of investment. And hence, is deemed inevitable for every country to promote industrialisation, as it can help reap more ‘external economies’ and promote greater international ‘division of labour’<sup>8</sup>. The major detriment to investment in developing countries is considered the lag in the provision of ‘social overhead capital’, due to their long gestation periods and huge overhead costs; which is also the resultant of the indivisibility in the supply of savings and the complementarity of demand. Though he adheres that international trade can reduce the size of the push required due to partial specialisation, it is argued that it is not substitutable for a big push, which is hence inevitable. It is held that the lumpiness of the social overhead capital along with the lower wages in developing countries can contribute to growth, if the force applied via the big push is integrating and synchronising (Rosenstein-Rodan, 1961).

### **Ragner Nurkse**

Ragner Nurkse also pinpoints the need for a big push, with the aim to fight the deficient real capital in developing countries. He believes that only a wave of investments can

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<sup>3</sup> “ According to Scitovsky, pecuniary external economies refer to the interdependence among producers through market mechanism that indicates that profits of a producer are not only affected by its own actions but also of actions of other producers ”(Padhi, 2019) (Scitovsky, 1954)

<sup>4</sup> “ The concept of social overhead capital (SOC) is used to identify the source of certain basic services required in the production of virtually all commodities ” (Encyclopedia, n.d.)

<sup>5</sup> “ technological external economies are the only external economies that can arise, because of direct interdependence among producers ” (Scitovsky, 1954)

<sup>6</sup> “ returns to scale is the quantitative change in output of a firm or industry resulting from a proportionate increase in all inputs. If the quantity of output rises by a greater proportion, the production process is said to exhibit increasing returns to scale ” (Britannica, n.d.-b)

<sup>7</sup> “ Any theoretical law which is such that it involves the notion of rate of change or the notion of speed of reaction (in terms of time), is a dynamic law. All other theoretical laws are static ” (Frisch, 1992)

<sup>8</sup> “ division of labour, the separation of a work process into a number of tasks, with each task performed by a separate person or group of persons. It is most often applied to systems of mass production and is one of the basic organizing principles of the assembly line ” (Britannica, n.d.-a)

help in overcoming the stationary equilibrium and hence, a self-enforced growth process. He recognises a ‘poverty trap’<sup>9</sup> in underdeveloped countries due to the deficiency of the real capital, which arise from both the demand and supply side. He establishes that the supply of real capital is obstructed by lower savings, which itself emanates from low income; and the low income is a result of low labour productivity, which is an outcome of deficient capital. For overturning the vicious cycle into a virtuous cycle by the underdeveloped countries, it is considered imperative to overcome these bottlenecks via resource mobilisation (Bass, 2009).

### **Lewis**

In his ‘Development with Unlimited Supplies of Labour’ (1954), Lewis addresses the transferring of surplus labour from the traditional agricultural sector to the modern industrialist sector. He argues that the capital accumulation tends to play a pivotal role in the enhancement of production; and proposes the same via a structural change model. The roots of the essay on Lewisian development thought lies in the prepositions of the classical school. The existence of ‘unlimited supply of labour’ in developing countries is an inherent assumption of the model which emanates from those traditions. While making a claim that the wages in the capitalist (industrial) sector is 30 times more than that of the subsistence (agricultural) sector; he asserts that the process of economic expansion is believed to continue until labour surplus exhausts in the developing countries. This process has been said to continue until the exhaustion of the ‘unlimited supply of labour’, which gives capitalists the incentive to invest more (Lewis, 1954).

### **Criticisms**

The preposition of balanced growth isn’t devoid from criticisms, Hirschman being the major one of them. He establishes a case for ‘unbalanced growth’, stating that balanced growth can be more of a hindrance to development because of the advanced planning and forecast needed to implement the same. He argues that, “if the economy is to be kept moving ahead, the task of development policy is to maintain tensions, disproportions and disequilibrium” (Hirschman, 1958). Concomitantly, Streeton claims that the state of unbalance can act as a stimulus to growth in combination to taking away the stumbling blocks in the path towards growth (Streeton, 1959).

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<sup>9</sup> “Poverty trap is a spiralling mechanism which forces people to remain poor. It is so binding in itself that it doesn't allow the poor people to escape it” (The Economic Times, 2022a)

### *2.2.2 The Paradigm of Unbalanced Growth*

“Simultaneously starting many activities appears to be the pure model of balanced growth. If we turn to the less rigorous, but more realistic idea that the various sectors of an economy will have to grow jointly in some (not necessarily identical) proportion, we shift attention from demand to the necessity to avoid supply bottlenecks. In this form, the balanced growth theory is essentially an exercise in retrospective comparative statics” (Gualerzi, 2012)

#### **Albert Hirschman**

Hirschman adheres to the supremacy of unbalanced growth, and maintains that the sequential solutions must be given predominance over the simultaneous solutions in addressing the problems of industrialisation. He holds that backward and forward linkages can be used for the expansion of the industrial sector and for the maximisation of employment. In addition to backward and forward linkages, the consumption linkage is also credited to sequentially promote domestic production; which further leads to fiscal linkages, and the outcome is the better financing of investment by the government through taxes. He considers inflation as a part and parcel of an unbalanced growth strategy, which often results from weaknesses in supply. Furthermore, he argues that the critical minimum effort for development can be indispensable if one has to move from one equilibrium position to the next (Hirschman, 1958).

#### **Paul Streeton**

Streeton also argues for the case of unbalanced growth; and claims that unbalanced growth can create indivisibilities, which can stimulate growth under conditions of complementarities. Moreover, this growth pattern is argued to aid in the growth of the complementary activities which has been lagged behind due to several bottlenecks. He suggests that especially in a growing economy, imbalance has the ability to create higher income. He insists that the major objective of development is to generate supply elasticities, and that the higher elasticity of the same can accommodate unbalanced growth (Streeton, 1959).

#### **Criticisms**

While it is agreed that the practical significance of the balanced growth hasn't been satisfactory; even the unbalanced proposition isn't regarded to be entirely convincing. It is contended that even in the absence of satisfactory statistics in underdeveloped countries, balanced planning can yield results if the underdeveloped countries have stable governments

(Nath, 1962). The centralised planning and democracy is argued to act toe in toe to lead the underdeveloped countries out of impoverishment.

### *2.2.3 The Dependency Theory*

“Drawing on Baran’s work, Andre Gunder-Frank argued that underdevelopment was not a passive condition, but an active process by which rich nations pursuing more wealth pushed nations that were backward further behind” (Srivatsan, 2016)

Dependency theory was developed in the late 1950’s from the Neo-Marxists proponents such as Raul Prebisch, Paul Baran, Andre Gunder Frank etc. Its core idea lies in the fact that economic development of a state is based on its historical premise and external influences pertaining to its social, cultural and economic state. The linear modernization (balanced growth) theories were widely criticised by these Neo-Marxist advocates, as they argued that that backward countries can be trapped by the disadvantageous terms of trade.

### **Andre Gunder Frank**

“The ignorance in the history of underdeveloped countries and the assumptive notion that the same resembles to that of the developed ones is regarded as the major hurdle in overcoming the misconceptions of underdevelopment in underdeveloped countries. Rather, the historical product of past and continuing economic and other relations between the satellite underdeveloped and now developed metropolitan countries has seemed to have widened the inequality further” (Gunder Frank, 1978)

Frank has been quite dubious about the tendencies of growth diffusion between the underdeveloped and developed countries, and argues that it can lead towards the perpetuation and intensification of underdevelopment conditions in the underdeveloped countries. He confirms the same with the economic, political and social conditions of Latin American countries and characterises its external relationship as being monopolistic and exploitative.

One major implication emanating from his preposition is that: “in contrast to the development of the world metropolis which is no one’s satellite, the development of the national and other subordinate metropolis is limited by their

satellite status and the satellites experience their greatest economic development and especially their most classically capitalist industrial development if and when their ties to their metropolis are weakest” (Gunder Frank, 1978)

He maintains the notion that the ties with the developed nations results in persistent underemployment of resources in developing nations, which can perpetuate via capitalism.

### **Paul Baran**

“Capital didn’t move from countries where its marginal productivity was low to countries where it could be expected to be high” (Baran, 1952)

Baran, in his “Political Economy of Backwardness”, maintains that it is the inefficiency in the resource utilisation and the unemployment of the masses which results in the underutilisation of productive resources in underdeveloped countries. He discusses the cases of exploitation and stagnation within the underdeveloped countries, which are caused by the inequalities of income within these countries. On top of that, he asserts that capitalism has the power in influencing the already disrupted backward societies. In order to tackle this capitalist tendency, Baran believes that these countries must be able to stimulate their industrial production so as to productively employ the displaced labour from the agricultural sector. But the prevalence of lack of external economies and the disruptive monopolistic market structures in these countries is argued to act as a hindrance in the process. He states that in order to move towards the path of economic development, the political framework in the underdeveloped countries must be able to break the vested interests with the feudal landlords, capitalists etc. This is regarded as vital in turning the historical wheel towards development (Baran, 1952).

#### ***2.2.4 The Connotation for Indian Economy***

The balanced and unbalanced growth propositions overlooked the Say’s dictum that, “supply creates its own demand”. The cornerstone of these theoretical underpinnings is the ‘interdependence of consumption demand’, which takes up a pivotal frame and unifies the debate. But the state at the time (in the post independent phase prior to reforms), was not so successful in developing a strong domestic base (by investing in Social Overhead Capital and Direct Productive Activity); which has its repercussions in the Indian economy even today.

The Neo-Marxist propositions also has its relevance while contemplating the development trajectories of many countries. Moreover, the Indian planning process has had a strong bias towards policies that orient import substitution, and favoured to develop the domestic market instead. But with the neo-classical counter revolution in 1980s; the underdevelopment in the countries began to be associated as that, which has been perpetuated by internal causes, and the external motives were undervalued. This resulted in the fading of the dependency theory from the limelight, and the policies that augmented for fiscal austerity further countered the relevance of balanced and unbalanced prepositions. But these theoretical schema has had wider implications in the past and even in the current times.

### **2.3 On the Indian Planning Process: The Journey in the Nehruvian era**

The development paradigm that has emerged in the Nehruvian period (1947-63) probed to analyse the constraints that can limit the possibility of growth in the economy. It explored ways to overcome those constraints, and to set the policy prescriptions in tune to overcome them. Along with the resource creation, the management of effective demand via the restructuring and balancing the production structures was one of the intended aims (Bharadwaj, 1994). At the time, the major objective of the process of planning in India was the identification of feasible investment for the consistent generation of income. The planning process was hence directed towards the allocation of investment to priority sectors in the economy, with the growth targets being revised continually.

In the Indian context, the system of planning had an integral part in the upheaval of development tendencies unlike the liberal mode. The classical dilemma of growth and equity remained as a major concern for the development planners in the early 1950s. The low level of industrialisation in the country caused by the low level of capital investment, in turn, gave way to low employment levels, poverty, illiteracy etc. This was also the resultant of poor consumption levels and weak market structure, which gave rise to lower purchasing power and lower wages. And hence, the lower taxation base and the question of distribution of the meagre resources in the country to ensure capital investment and growth became the target point of planners in the country (Srivatsan, 2016).

In the Nehruvian era, there was a rising need to strengthen the social overhead capital in the country. And the programmes of economic development in India can be said to have been initiated through the first five year plan in 1951. A modest long term plan of doubling

the per-capita income in 27 years and the strengthening of investment in the country was one of the major goals of the plan. The resources in the first plan (1951-56) have been mostly devoted towards agricultural and community development and also for infrastructural developments in the same such as, irrigation and power programmes. Inspired by the growth model of Harrod and Domar, the crux of the plan was to increase the savings ratio in the economy for the acceleration of growth processes; so as to meet its target for the increased agricultural production.

Drafted by P.C Mahalanobis, the second plan document was considered the most ambitious; and the perspective of planning was shifted to prioritise industrial development in the capital goods sector (Chakravarty, 1986). The main objective of the plan was to inculcate a domestic base for heavy capital industry in India; and targeted to increase capital formation and hence, income and employment in the economy. There was an ongoing criticism on the underemphasis of the agricultural sector in the second plan, amidst an excess supply of labour employed therein.

The third plan was said to be in continuum to the second, and aimed to direct the economy in a self-sustaining growth path via rapid industrialisation. The plan also aimed to double the exports of the country, so as to make the economy self-reliant. There was a continued pressure to increase industrial investment at the time, in order to reap the contribution it can generate to output and employment. Though agriculture was given emphasis in the planning, the progress of the same in the third plan remained low. But the prioritisation of the agricultural sector led to the criticism that the third plan has had a lack of congruence to the second. It can be said that the planners were overly optimistic about the ability of the agricultural sector to build up a modern industrial sector; and the time lags involved therein were underestimated (Chakravarty, 1986). The country began to face a balance of payment crisis at the time due to higher imports and feckless rise in exports. As a result, by the mid-1960s, there was a slackening of government investment in the industrial sector followed by the drop in the growth of the sector. And due to the havoc created by the lack of monsoons and the subsequent wars, there was a fall in agricultural production followed by a Balance of Payment (BoP) crisis between 1965 and 1967; which impacted private consumption as well.

In the Indian planning process, the period between 1947 to 1968 is characterised as that of a moderate regulation phase (Mukherji, 2009). Often termed as the ‘socialist’ phase

of India's development, as the state occupied the prominent position in economic development. In the Nehruvian era, while the state committed to provide a sufficient industrial base; the main objective was to allow for an industrial oriented development scheme. The public investment was the fastest riding component at the time, which aimed to create conditions beneficial for the private capital. The infant industries were also protected via import substitution strategies and through higher tariffs. Though imports were high, exports were quite negligent in the regime; which resulted in huge current account deficits in the period (Das et al., 2021). Moreover, India was quite dependent on foreign aid at the time, which was the largest riding component in the capital account in this phase (Vakulabharanam & De, 2016).

The first three plans can be said to have had the imprint of Nehru, and the second plan was in-built to give a concrete shape of transformation in growth and development. Though the achievements of the first three plans cannot be regarded as insignificant; the lack of effective land reforms and the traditional agricultural input base gave rise to vulnerability in the sector. And the premature mechanisation in agriculture and in the light consumer goods industries brought forth distributional questions at the time; which were dealt with only under the purview of economic planning.

## **2.4 East Asian Success**

The growth story of India was deemed insignificant in comparison to the fast growing East Asian countries in the late 1960s. The implementation of free markets and the employment of limited monetary and fiscal instruments were said to be the cornerstone of East Asian success. The growth in these countries have been said to have happened via the export promotion strategies in the late 1960s. The growth was purported to be labour absorbent in nature, and along with the same, the targeted state intervention turned out to be quite advantageous as well. The technically sound labour force in these countries due to the investment in education were critical add-ins which accelerated the growth process. Furthermore, the successful East Asian economies had a labour intensive industrial sector, where the demand for labour was quite high, which led to increased industrial wages (Sharma, 1993). This was widely proclaimed by the neo-classical theorists as the biggest example of how a political system can be complementary to liberalist tendencies.

## 2.5 The Dwindling of the Planning Process

There is broad consensus among development practitioners that good governance and policy reforms are vital to ensure efficiency in the competitive market. And it is often argued that the political and social institutions laid out in the early 1950s were vital for pursuing the objectives of growth. But though the period between 1950-64 is regarded to be creditable; the one between the mid-1960s to late 1970s is marked by secular stagnation. And while the former period is characterised as interventionist, the latter was acceded as the period where the state intervention started to lose out its legitimacy. This is because the government could support the domestic capitalist class in the first phase by investing in infrastructure in the first phase, i.e., between 1950-64. But as the governmental stimulus began to dry up in the latter phase, the maintenance of investment expenditure for expanding the domestic market became quite difficult (Chandrasekhar, 2010). There are debates that assert that growth diverged from 1960s only due to the exceptional situations the country had to endure, such as droughts, wars etc.; which had an impact on agricultural production and hence, capital formation as well. And it is argued that these exogenous events cannot be regarded as a discredit to the planning process, rather, the public investment at the time were considered vital to break the ‘low level equilibrium trap’<sup>10</sup> (Balakrishnan et al., 2017).

But planning as an instrument became entirely politicised from the late 1960s, which had been under severe pressure due to fiscal constraints. The traditional agricultural sector being susceptible to monsoon failures (1965, 67), and the sharp rise in defence spending (due to wars), stew the ‘acceleration principle’<sup>11</sup> in reverse gear. This led to excess capacity in capital goods sectors (resulting in the downhill of the industrial sector), which was a result of the cut-back in public investment and diminution of agricultural productivity (Joshi & Little, 1987). The low levels of savings in the economy began to reciprocate in the investment domain as well, with the private entrepreneurs unwilling to undertake risky endeavours. The rate of generation of employment in the organised private sector began to have setbacks, and these were mainly attributed to governmental regulation of the private industrial sector at the time.

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<sup>10</sup> “ it is an economic concept given by Richard R. Nelson. It is an economic situation in which the per capita income is too low to save or invest a part of it. The individuals in such economies live hand to mouth ” (Economic Survey, 2017)

<sup>11</sup> “ The acceleration principle holds that the demand for capital goods is a derived demand and that changes in the demand for output lead to changes in the demand for capital stock and, hence, lead to investment ” (Junankar, 2008)

Though there was a revamp of public investment by the mid 1970s, the state gradually began to take the backstage in industrial development. The fifth five year plan (1974-78), instead emphasised on the redistribution of consumption from the richer sections of the population to the poorer sections. The plan laid its focus on two objectives, that is, the elimination of poverty and the achievement of self-reliance. The focus was on integrated rural development and employment generation via the wage goods model. It was situated as an optimal alternative to the 'heavy industrialization plan', but failed to yield the result that was desired (Masani, 1978). And this model was adopted in the backdrop of a stumbling growth rate, high unemployment and persistent inflationary tendencies in the economy. The government policy at the time also began to tilt towards more regulatory regimes such as that of the Monopolies and Restrictive Trade Practises Act (1969), Foreign Exchange Regulation Act (1973) etc. The number of "sick enterprises"<sup>12</sup> in the public sector began to rise, and the trade regime of the country was also garnered with severe criticisms as it was tilted towards import substitution and export pessimist policies. The economy embarked on a period of instabilities in the late 1970s again with the stagnation in public investment as well as private corporate investment, and its rising revenue expenditure also began to give away to fiscal deficit. This, along with the oil price crisis in the 1970s pushed the economy to its limits. And by 1980s, the government had to resort to borrowings to combat the underlying problems. The plan aimed to address the same and strengthen the redistributive policies, and also focused on industrialisation and in the achievement of technological self-reliance (Metha, 1985). But the plan failed to comply to its target and by the sixth five year plan period (1980-85), almost 51 per cent of the population were living below the poverty line. The economy was stabilised from different crises in 1980s due to the loan from the IMF, and plunged into partial liberalisation policies. The role of the state in the developmental apparatus of the country began to be questioned; which led to the inherent distrust in the ability of market mechanisms to allocate resources efficiently (Byrd, 1990).

The attempts of the East Asian economies to bring down the hostility between state and the private sector has been proved conducive, and there was an attitudinal shift

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<sup>12</sup> "A sick company, according to Sick Industrial Companies (Special Provisions) Act, 1985, is one where at the end of a financial year, accumulated losses are equal to or more than its net worth" (Kumar, 2015)

amongst developing nations towards pro-business policies in 1980s (A. Kohli, 2006). The orientation towards the private sector from the late 1970s led to the gradual knock-down in the controls, and with the easing of restrictions for large businesses. This gradually led to substantive achievement in the growth front in the decade of the 1980s, with the impressive growth in the industrial sector in the latter half of 1980s. And eventually, the planning processes gave way to macroeconomic management from 1980s onwards; and the re-balancing of the growth and development trajectory was dictated by the liberalised market structure.

The economy jumped into a higher growth trajectory in the 1980s with industrial and services sectors taking the lead. But there was an instability in investment due to the cutback in public investment, and this was counteracted by investment from the private corporate sector and household sector. The growth in this period was led by consumption (both public and private) and structural transformation. The economy shifted to a pro-business policy and actively supported the profitability of the business groups. The resources from the state were directed more towards the financing of debt and transfer payments, and the productive investment slumped at the time. This eventually led to a severe investment and debt crisis, which resulted in a significant change in the macroeconomic dynamics of the country. This embarked a complete shift towards the market directed policies; the liberalised and the fiscal austerity policies being at the top of the agenda.

India embarked its shift towards pro-business policies from the mid 1980s; and there are arguments that the acceleration of growth proceeded due to the same. On the contrary, there have been debates that the growth in the economy would have been unsustainable if it wasn't for the pro-market reforms in the early 1990s. The former argument augments from the fact that the growth in the economy decelerated from 1992-96 to that between 1986-91; while, the average rate of growth was 5.3 per cent per year for the latter in comparison to 5.9 per cent in the former (Nagaraj, 1997). Moreover, there was an escalation in Total Factor Productivity (TFP) in 1980s, as there was a supportive tilt on the part of the government towards businesses. But scholars including Rodrick and Subramanian opine that the performance and sustenance of the growth patterns cannot be attributed solely to the post-liberalisation period. Characterising the growth in the 1980s as that of a pro-business one, they attributed it to the unleash of the animal spirits of the private entrepreneurs. The growth in India has been said to have triggered due to the same, followed by the rise in the Total Factor Productivity (TFP). The manifestation of the internal reforms and the improvement in the manufacturing sector has

been said to have created additional spill overs as well. They argued that the business friendly attitude in the 1980s fuelled the growth, while the reforms in 1991 had assisted in the sustenance of growth patterns. But the common argument that downplays the growth in 1980s is the stark build-up of external debt, and hence the fiscal unsustainability that surfaced therein (Rodrick & Subramanian, 2005).

Meanwhile, the pro-market proponents claim that the acceleration of growth in 1980s is just a part and parcel of the freeing up of the economy from the continuing restraints (Panagariya, 2004). Scholars including Joshi and Little (1994), Ahluwalia (2002) and Srinivasan and Tendulkar (2003) and Panagariya (2004) etc. have recognized that the growth in the 1980s as unsustainable and financed by borrowings and fiscal expansion. Panagariya holds that the economic growth during the 1980s was fragile and propelled by an unsustainable fiscal expansion which resulted in the crisis. He considers the growth in the 1980s as feeble and having high variability except for a high average in 1988-91, which culminated in the crisis. He takes into account the average growth rates from 1978-79 to 1987-88 which was a meagre 4.1%, and regarded it as a continuance of the Hindu growth path. He upheld the view that this debate itself wouldn't have been sustainable unless for the high growth rates during 1988-91, which was 7.6%. He maintains that the import liberalisation, exchange rate flexibility, maintenance of public expenditure through borrowings and the export incentives which contributed to productive efficiency and faster industrial growth, played a significant role in the spurt in growth rates (Panagariya, 2014). Basu and Maertens (2007) take the argument further and maintains that the focus on the international sector after the economic reforms has led to the betterment of the macroeconomic indicators. And they further asserted for microeconomic foundations, ordaining that it has to be laid for the sustenance of growth. That is, for the regulations in the labour market, the addressal of infrastructural bottlenecks and bureaucratic corruption etc. (Basu & Maertens, 2007).

From the period between 1950-1970, India has been showing the so-called 'Hindu Rate of Growth'<sup>13</sup>, but the growth rate averaged around 6% from 1980-2005. It is of no doubt that the fiscal balances improved after 1991, and one cannot dispute that the growth in 1990s had been more sustainable and less volatile. Further, the pro-market policies in 1990s

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<sup>13</sup> “ The Hindu rate of growth was a term used disparagingly to indicate the low growth rate of the Indian economy for more than three decades, between the 50s to the 80s ” (Bhagwat, 2013)

led to the lowering of tariff and non-tariff barriers and the liberalisation of foreign direct investment (FDI) along with the revamp of industrial regulation policies. The development of the external sector in terms of massive growth of exports as a percentage of GDP and the accumulation of foreign reserves are often attributed to systemic reforms in 1990-91. It has been argued that this has resulted in the much needed macroeconomic stability the country needs to boost its economic growth (Panagariya, 2011). The spurt in growth rate was also contributed by the export growth, and a moderate growth rate of 5% was achieved at the time.

The country was able to overcome the balance of payment crunch in the early 1990s via the increased foreign capital inflows, though the raising of foreign capital through the export channel was minimal. But even the economic reforms in the country couldn't upheave the stagnant industrial sector. It was the investment in the household sector which contributed to the resurgence in total investment in the late 1990s; and rather the growth of the industrial sector in this period remained unstable and fluctuating in the phase. And India was unable to build a viable manufacturing sector, but wasn't able to increase the share of exports from the sector as that of East Asian countries. The manufacturing being a dynamic sector, would have been able to absorb skilled labour force from the rural sector. The labour intensive export sector was also expected to rise following the reforms, and the gap in the growth rate of labour force vis a vis employment generation remained unfulfilled (Siddiqui, 2018). But the development of the external sector such as massive growth of exports in the skilled intensive sectors and the accumulation of foreign reserves are often attributed to systemic reforms in 1990-91. But it is doubtful whether this has resulted in the much needed macroeconomic stability the country needs to boost its economic growth.

## **2.6 Did the slumbering elephant become a roaring tiger post-2000s? The case of Indian Economy**

Many economists weighed up India's growth rate as that of a slumbering elephant (in the period between 1960s and 80s) in comparison to the miraculous growth of the East Asian economies. But there was a strengthening of the growth momentum in the country in the second phase of economic reforms (attributed to the period between 2003 and 2012). The state increased the public investment, which was accompanied by strong private corporate investment and high inflows of foreign direct investment. And the channelising of domestic savings to investment were said to be the cornerstone in the growth acceleration at the time (Mohan, 2008). India's GDP growth accelerated to 8.5% in the period between 2003-10, which

is mainly the resultant of the increased foreign private capital and service sector exports at the time. When the world was shaken by the Asian Financial crisis (1997-99), India could make its way into prominence through the software services (Aiyar, 2011). This can be said to have shaped the ‘take-off’ of the Indian economy, staggering the existing pre-supposition that the growth must be industrial oriented and export-led. And the country has been said to have morphed into a tiger post 2000’s as it emerged into power in the brain intensive service sector economy.

And the overall rise in investment at the time was brought about by the rise in private sector investment, which ensued corporate growth. But the investment was highly skewed towards the capital and skill intensive sectors in manufacturing, and the growth of investment in labour intensive manufacturing sectors were inadequate (Nagaraj, 2013a). This is the reason for the absence of a sustained rise in exports in the country, which slumped in the latter half of 2000s (see A.2.3); resulting in the rise of current account deficits. This led to capital flights; and the government intervened in the economy (see A.2.2), which resulted in the rise in savings and investment after the fall in 2008-09 (see A.2.5). And the Indian industrial sector was more directed towards capital and skilled labour intensive production rather than being labour intensive. While India could attract Foreign Direct Investment (FDI), the labour intensive exports still lagged behind. Whilst it has been debated that it is the strict labour laws (labour inflexibility) in the country which hampered its progress in the same; on the contrary, the adoption of pro-market policies and the lack of government initiatives can also be seen as a major impediment. There are arguments that the ‘dream run’ only had the longevity of five years; and after the financial crisis of 2008, it is argued that the fiscal stimulus tapered the effects of the downhill in the growth process.

Though the post 2000s is often ascertained as a period of exceptional rise in output from both industrial and service sectors, this can be said to have had a narrow base, which is skewed to capital and skill intensive sectors. The sharp rise in growth during the period is said to be the part and parcel of a debt led process, which was boosted by the rise in Foreign Direct Investment (FDI), Foreign Currency Convertible Bonds (FCCB’s) and Foreign Portfolio Investment (FPI). This led to a rise in the corporate leverage, which eventually paved its way into asset markets as well. The result was the unclogging of the corporate debt burden and the rise in Non-Performing Assets (NPA’s) after the financial crisis (Nagaraj, 2013b). In short, from 2003-04 to 2007-08, the growth rate of the country averaged at 9%, which resulted in

several positive spill overs; such as rise in domestic savings, investments and increase in corporate profitability. But for the maintenance of economic growth, the macroeconomic stability must be sustainable, for which the ‘re-delivery’ of the public sector mechanisms assumes an important role.

## **2.7 Has the Economic Growth in the Country Post 2010 been Commensurate with Development?**

The 21st century is often regarded as the decade of development for the Indian Economy. But being a labour surplus economy with abundant unskilled labour resulted in deeper misallocation of the country’s labour force; and is considered the resultant of the country’s premature deindustrialization and precocious servification. India also exhibits low competitiveness in its manufacturing exports in relation to the skill intensive services sector. In short, Lewisian transformation cannot be said to have happened in the Indian economy; as the labour force in larger quantities haven’t moved out of agriculture (Lamba & Subramanian, 2020).

In the country, the faster growth has co-existed with increasing inequality post 2000’s. The country doesn’t enjoy much export surplus and the balance of payment surplus is maintained via the money in financial assets parked by corporations and private financial firms. The maintenance of fiscal austerity is a necessary condition for these capital inflows, which restraints the welfare expenditures. But at the same time, the large private businesses are provided with umpteen amounts of credits which has led to Non-Performing Assets (NPA’s); which is often an outcome of wilful defaults.

The domestic savings in the economy faced downturns after 2011-12 (see A.2.4); there was also the piling up of bad loans, the slowing up of growth and increased unemployment at the time. While the liberals called for bailouts for indebted corporations and increased market reforms, the Keynesian camp emphasised the need for fiscal activism to boost aggregate demand. The Indian economy is currently run by corporate investments that are debt incentivized, and the growth regime post 2011 is characterised as that of ‘financial fragility and vulnerability’(Dasgupta, 2020a). The Modi government swept to power again in 2014-19 on the premise of ‘Minimum government, maximum governance’. The term ‘riskless capitalism’ was used in 2014 by the then RBI governor, due to the piling up of corporate debts and the credit bubble which was accumulated via the public sector banks (Azad et al., 2017).

The current government has also aimed to promote industrialisation and to improve the business conditions in the country for the promotion of economic growth from 2014. For the realisation of the same, the 'Make in India' campaign was launched, which is also in succession to the 'National Manufacturing Policy' (2011). The 'Ease of Doing Business' and the 'Digital India' initiatives were garnered with critical attention in the regime. The government further liberalised FDI, and the cap on the same was raised in sectors such as defence, railways, construction, retail and insurance sectors. The GST bill was implemented in 2017, and is considered one of the major tax reform policies in post-independent India. This was to facilitate the reduction of tax base and expansion of tax base, and to further improve the business climate of the country. The Modi government attempted to address poverty through 'Direct Benefit Transfers' (DBT), and the 'JAM' (Jan Dhan, Aadhar, Mobile) trinity was proposed for the same.

The heavy FDI equity inflows in the country are one of the major results of Modinomics, but the situation of 'jobless growth' still puts the country under peril. There has always been an increased call for government intervention in the manufacturing sector. As a country which experienced premature deindustrialisation, the rejuvenation in the industrial sector called forth for fundamental reforms. The targets under the 'Make in India' programme haven't been achieved, for which the shift towards export oriented industrialization strategy and job creation is considered vital (Esho, 2020). And there is often a relentless pressure to increase labour productivity and to reduce labour cost so as to promote international competitiveness (Bhaduri, 2016). But it can be said that the drive towards combating jobless growth and the strive to achieve international competitiveness is resulting in a vicious rather than virtuous cycle in the country. With the lack of an employment generation in the labour intensive sectors, the macroeconomic stability will depend on how quickly the country will turn over to the path towards inclusive capitalism (Chandra & Walton, 2020).

## **2.8 Conclusion**

The early development paradigms perceived that the problem of development is far beyond the mere allocational efficiency of resources. The development models emerged at the time intended to create productive capacity in the economy and were influenced from the Keynesian accelerator-multiplier mechanism. And, the paradigms were in harmony with both the creation of resources and the management of effective demand. But, the state mechanisms have failed to take into account the peculiarities in the institutional conditions in

India from the time of independence. The confinement of development policies along the lines of macroeconomic management, with the sole focus on rationality and optimisation of agents; following the embarkment of the pro-market policies have had detrimental effects.

Even in the current times, the growth prescription of the neo-liberal proponents lies similar to that of the growth path forged by the East Asian countries, which calls forth for competitive efficiency. It is validated on account of the country's peril with 'Hindu rate of growth' from 1950-80, which are often contemplated as the lost decades for growth. But the slow growth between 1950-80 can be considered more of an institutional failure, and the non-fulfilment on the part of the government in provisioning the social and economic conditions viable to enhance the growth processes. Moreover, with the recurring financial crisis and the susceptible export-led growth, the smooth sailing of the growth path which is resonant to that of the East Asian countries remains questionable at the end of the day.

Instead, it can be deemed that the centring of growth around the domestic demand assumes immense importance. The falling private final consumption expenditure (see A.2.1) in the country is irritating the investment demand, and along with the same, the exposed position in the trade is having detrimental effects. With domestic demand being restrained by the process of investment demand in the economy, it is imperative that it has to be complemented by the 'crowding-in' mechanism. The backlash from the failure to provision the social and institutional infrastructure has had its repercussions in the country, which is observable after the depression in 2008-09. The Indian economy remains in peril due to stagnant growth combined with the repercussions caused by inflation and unemployment. This is the resultant of the economic policies in the country that favours solely the big businesses, and mostly the supply side oriented policies. The economy can take a long term hit, if it remains vulnerable to external imbalance and global uncertainties. If it is concentrated only on giving short term incentives to foreign capital so as to manage the current account deficit, it can turn out to be quite risky as well.

The next chapter dives into the factors that were antithetical to the positioning of a strong domestic market in India and the implications due to the same.

## Chapter 3

# From Jobless to Job lost Growth? An Analytical Paradigm of Indian Economy from the 1980s

### 3.1 Introduction

The post-World War II marked a period of embarkment towards the Keynesian demand management policies. But a breakdown in this orthodoxy took place as a result of stagflation, which was an anomaly from the Keynesian paradigm. And it resulted in the full-fledged dominance of the monetarist paradigm from late 1970s to 1980s. The major macroeconomic objective shifted from unemployment to inflation at the time, and the Washington Consensus became the inclined policy recipe for economic growth. This steered the responsibility of resource allocation away from the domain of the state, which was left to unfettered markets. The public policies were just meant to be ordained to deal with externalities and price rigidities within the system. This interpretation got re-applauded with East Asian capitalist success, and the success story upheaved the notion of this new role of the state. The openness towards international trade and the renewed role of the state as facilitator of the market was considered the major elements that contributed to the success. It was believed that from the success story that, if all the developing nations followed the policies of liberalisation, then they could ‘catch up’ with the western world. It focused on the high rates of investment to GDP, curbing consumption at home and targeting replacement of imports and promotion of exports. The institutional arrangements were also ordained in such a way that the central bank was assigned an independent status with an aim to ensure price stability in the economy (Wade, 2018). Even though many developing countries started following these growth recipes, they tend to be stuck in a ‘middle-income trap’ and that of ‘jobless growth’. Rather than stressing on the growth of exports, it is indispensable for the developing countries to go beyond neo-liberal consensus. The strategy of industrial transformation, if exercised with foresight, can steer the growth performance of these countries.

The chapter is organized into the following sections. The section 3.2 embarks on the journey from Washington Consensus towards Post Washington Consensus, and the section 3.3 embodies the principle behind trickle-down economics. The next section (3.4) dives to explore how the development debate in Indian economy ought to be transcended beyond the Bhagwati-Sen debate. Section 3.5 penetrates to explore deeper into the jobless and job lost

employment pattern in the Indian economy. The next section (3.6) probes into the conundrum between wages and profits and the section after (3.7) seeks to explore how a Post-Keynesian framework would have resulted in a contrast to the above dynamics. The last section (3.8) ties up the arguments and set the tone for the next chapter.

### **3.2 From Washington to Post- Washington Consensus**

“ If there is a consensus today about which strategies are most likely to promote the development of the poorest countries in the world, it is this: there is no consensus except that the Washington Consensus did not provide the answer ”  
(Stiglitz, 2007)

The Washington Consensus was initially aimed as a policy prescription for Latin American countries in 1970's, with the aim to reduce the participation of the state in addressing the development problems. The policies of Washington consensus hinged on the pillars of fiscal austerity, market liberalisation and privatisation. The essence of the programme lied in entrusting the supremacy to market forces, with the intended objective of opening up the economy to trade and capital inflows. Later, these prescriptions were canvassed for the developing countries of Asia and Africa as well. The acceptance of Washington Consensus in the Indian economy can be viewed in the backdrop of vulnerability to pressure from the international lending agency, International Monetary Fund (IMF). This is in context to the country's availing of loan from IMF in 1980's, so as to cover its revenue account deficits; and the resultant was the obliged adoption of the policy package in 1991 (Goyal & Rao, 2002).

The dictum of “no alternative” to Washington consensus was pronounced by the British Prime Minister in 1980's, in the midst of the widespread opposition for this market fundamentalist policy prescription. Many economists who support the Washington consensus argue that the distributional concerns are outside the purview of growth on account of ‘trickle down economics’ (see section 3.3), and reasons that, “a rising tide will lift all boats”. But the critics shatter this idea and maintain that the market fundamentalist policies fostered by the developing countries after 1990's have been erroneous; and maintain that there are other feasible opportunities in the promotion of economic growth. Stiglitz also maintains that the development strategies pursued in Washington consensus were in sharp contrast to those of East Asian countries, as an active role was taken by the development states in those countries. Along with the same, it has raised many eyebrows that these policies failed to enhance growth

in many African and Latin American countries. When the policies of Washington consensus failed to materialise growth, the supplementation of the same with second generation reforms in the form of Washington consensus plus policies were included (Stiglitz, 2007).

The Asian financial crisis of the late 1990's resulted in the embarkment of a crisis period for neo-liberal capitalism, in the aftermath of the growing realisation that people must be put at the centre of the development process. This led to the development of the Post Washington Consensus (PWC); which was the resultant of many dissenting voices against the initial formulation of the Washington Consensus and the high 'social costs' associated with the same. The PWC is considered a theoretical interplay between the neo-liberal and neo-Keynesian paradigms. The Poverty Reduction Strategy (PRS) is the nuanced tool brought in the new approach, and is often argued that PWC is the stepping stone towards inclusive neoliberalism. The inculcation of actors of civil society and stakeholders in its attempts for PRS was one of the major tenets of PWC (Ruckert, 2006).

**Table 3.1 Original vis a vis Augmented Washington Consensus**

|                                        |                                                               |
|----------------------------------------|---------------------------------------------------------------|
| Original Washington Consensus          | Augmented Washington Consensus (previous plus the below ones) |
| Fiscal Discipline                      | Corporate Governance                                          |
| Re-orientation of public expenditures  | Anti-corruption                                               |
| Tax reform                             | Flexible labour markets                                       |
| Financial liberalisation               | WTO agreements                                                |
| Unified and competitive exchange rates | Financial codes and standards                                 |

|                        |                                                |
|------------------------|------------------------------------------------|
| Trade liberalisation   | Prudent capital account opening                |
| Openness to DFI        | Non-intermediate exchange rate regimes         |
| Privatisation          | Independent Central Banks/ Inflation Targeting |
| De-regulation          | Social Safety Nets                             |
| Secure property rights | Targeted Poverty Reduction                     |

*Source: (Rodrik & World Bank, 2006)*

The ‘augmented Washington Consensus’ as proposed by Rodrick, ‘seeks to save the core tenants of the original programme from embarrassment and refutation by modifying a few of its less central policy prescriptions’ (Chang & Grabel, 2004). But via the PWC, there was wider acceptance of the complementary role of the state in the stimulation of development processes and in the management of markets. Though the PWC also banked on the ultimate goal of ‘market integration’, the satisfactory development of the domestic market in the preliminary stage was welcomed (Krogstad, 2019). It has also been criticised that PWC is just the enhancement of the original Washington consensus policies that transfer gravity towards the primacy of institutions. But there are debates that, as institutions are already an embedded part of society; institutional reform can hardly be a policy agenda in developing countries (Rodrik & World Bank, 2006). And it has been debated that the analytical base for PWC is weak, as the new policy prescriptions of Washington haven't altered the neo-liberal character of the reforms. It rather seeks to extend the same by promoting flexible labour markets.

### **3.3 Trickle-down economics: Did it work?**

‘Trickle down’ implies a vertical flow of income from rich to poor. The mechanism perpetuates the reasoning that, with the overall increase in economic growth, all income groups benefit proportionately. It is believed that the first generation development economists considered growth, in itself, as an inegalitarian process. There have also been criticisms that the development practitioners at the time were quite pre-occupied in bringing up the developing countries to the footing of developed ones, rather than adhering to the

problems of inequality that is inherent within them. This has been argued to have reinforced the trickle down phenomenon, and has widely influenced the development policies from the period between 1950s and 1970s (Arndt, 1983).

And after 1970s, the outcome of growth and re-distribution began to be viewed in bifurcation, which is the resultant of the waning Keynesian consensus. The customary elements of trickle down approach which were followed from 1980s included, tax cuts for those engaged in entrepreneurial activities; with the presupposition that it will generate production and create jobs. In conjunction, it squeezed the fiscal space of the government, with the resultant of compromised social sector spending (fallacy of trickle down). The US economy became the flagbearer of this model; with staggering wages, but increased private consumption via credit expansion, dual earner households, expansion in working hours etc. The resultant was the deepening of inequality and growing white-collar crimes of fraudulent nature, followed by a period of recurrent crisis in the world economy.

The dogma of trickle down waged the era of export-led growth, and the increased divergence between wages and profits became the new dogma. In addition, there was an endless emphasis and stimulus for the countries following export-led policies to keep low wages and prices (Pieterse, 2012). But the export-led growth of the East Asian Tigers, who were often attributed the winner status in the post-globalisation period, also fettered in the post 2008 period. Even though the dogma of trickle down which reciprocated from the principles of Washington Consensus could survive the crisis of 1990s, the crisis in 2008 revoked the question of social policies. This led to re-thinking with regard to the shifting of gear from supply led to demand led policies, and the adoption of social policies for the sustenance of effective demand. The belief in the mechanism of trickle down left the process of distribution to tend to themselves. In the world economy and in India, it can be said to have led to stagnancy in wage growth, lack of generation of new jobs, strengthening of inequalities and even sluggishness in growth.

### **3.4 India's Development Problem: Beyond Bhagwati - Sen Debate**

One cannot deny that in India, hunger, poverty and destitution were taking its toll in the post-independence period, prior to the economic reforms. That is, the dismantling of the Hindu Rate of Growth and the embracement of economic liberalisation was deemed necessary to make the entire growth pie bigger. Though there was an overall decline in the

poverty rates after 1990s, it is in the non-inclusivity in the same that the whole debate lies. The Bhagwati-Sen debate has been one of the most scrutinised, and both scholars were in broad consensus that it is the sustenance of growth which is an essential precondition in the improvement of human welfare. But Bhagwati and Panagariya take the argument further and ordain that if and only if there is growth, the government can expedite the process of inclusive growth. Once the growth path is sustained, the state eventually can mitigate the inequality via redistributive programmes. They argued that the pace of the liberalisation must be accelerated so as to sustain the labour intensive employment in the manufacturing sector; and believed reforms are crucial to strengthen the industrial base of the country. But on the other hand, Amartya Sen and Dreze reject the idea of a trade-off between growth and equitable distribution; and argue that economic growth mustn't be left unattended. They believe that the decade long rapid growth preceding the period of financial crisis only benefited the elites and the middle classes. It has failed to reach down to the most vulnerable sections of society; which is mostly accounted for by the low rate of growth of employment. They are in favour of boosting up public expenditure along with the pursuit of growth, and stress the importance of targeted public policies for the promotion of social infrastructure (Sharma, 2016).

But it is inevitable that macroeconomic policies that enhance growth along with development should be embedded within the economic thinking itself. The fostering of employment creation and the nurturing of institutions in developing countries were forsaken following the abandonment of Keynesian consensus. The macroeconomic policies were followed with a narrowed base after 1970s, and the primacy was given to current account balance and price stability. The cutting back of the fiscal deficit was also considered inevitable for macroeconomic management, accompanied by the lack of overall fiscal flexibility of the government (Nayyar, 2011). But when the public investment is cut down, the multiplier mechanisms which can bring about crowding-in (which can stimulate aggregate demand and employment) are being wobbled. The rethinking of macroeconomic policies in itself, is considered vital in pursuing the development objectives.

### **3.5 An Inquiry into the Jobless and Job lost Growth in India**

“Rapid employment growth reduces the burden of re-distributive justice through state intervention on the one hand, and, on the other, if this employment is gainful, it also contributes to the national product making the task of growth

with distributive justice easier. This essentially is the premise of inclusive growth centred on decent employment creation ” (Himanshu, 2011)

In the post-independent Indian economy, the job creation was considered in synonymy to the growth of the agricultural and industrial sector, which has been envisaged with the state. With the Industrial Policy Resolution of 1956, the public sector was given a strategic role towards employment generation in the country. But the macroeconomic changes in the world and the transition towards neo-liberal capitalism from the late 1970s has had profound impacts on the development trajectory of India and on the well-being of labour. Employment and growth, rather being treated as intertwined variables, is often postulated to be independent variables. Economic growth can also be regarded as an outcome of either an increase in employment or productivity, whereas, the former tends to be more desirable in a country like India (Papola, 2013)

### *3.5.1 In View of Structural Change*

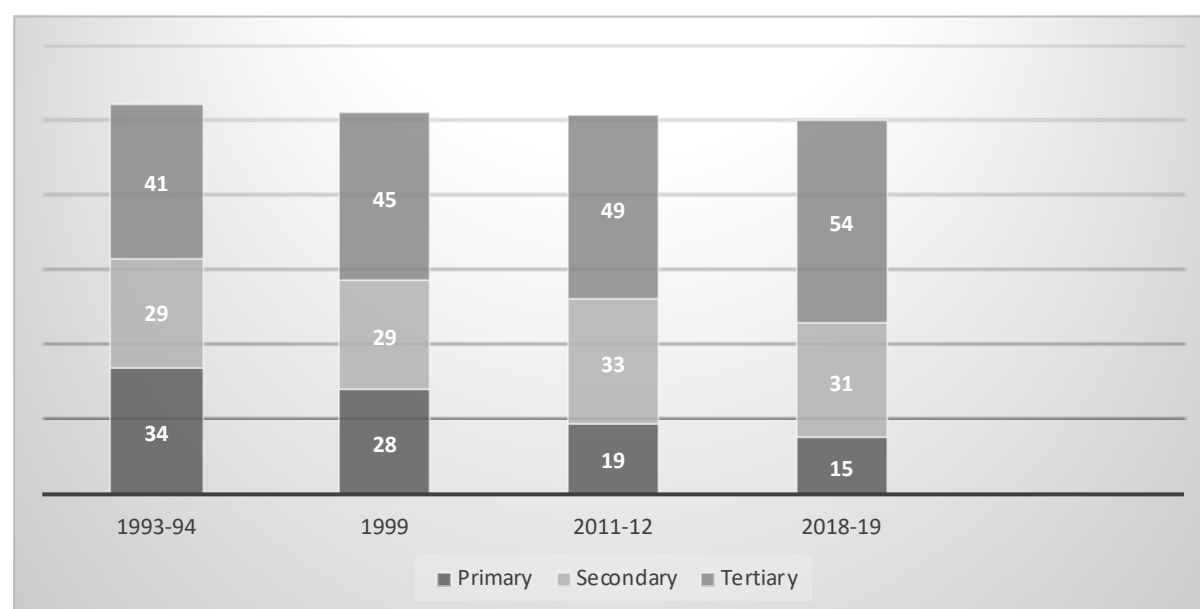
“ Re-allocation of labour from lower productivity economic activities to higher productivity ones is not just an important contributor to growth but is also the principal route to improvement in employment conditions in developing economies ” (Ghose, 2021)

According to structural change theorists, with the rise in productivity growth which displaces labour, the labour gradually transitions towards service sector occupations. But the structural change in India was truly an exception; the pace of advancement in employment conditions has been sluggish, though it has been growth intensive. And the productivity gap between sectors held out to be much larger in comparison to that of China, and the result was the lethargic transition of growth into development. While the East Asian tiger economies and China have said to have reached Lewisian transformation by the mid-1960s, India has hit the roadblock on the same; with the slow growth rate in job creation in non-agricultural sectors. This is argued to be so because India was unable to build a viable manufacturing sector, and wasn't able to increase the share of exports from the sector.

Instead, India's growth acceleration as the fastest growing economy can be attributed to the service sector growth, and the sector contributed to more than 40 per cent of the GDP in the country from 1990s. It can be observed that the gross value added in the

industrial sector has been showing a staggering tendency over the years; whereas, the agricultural sector indicates a declining trend (figure 3.1).

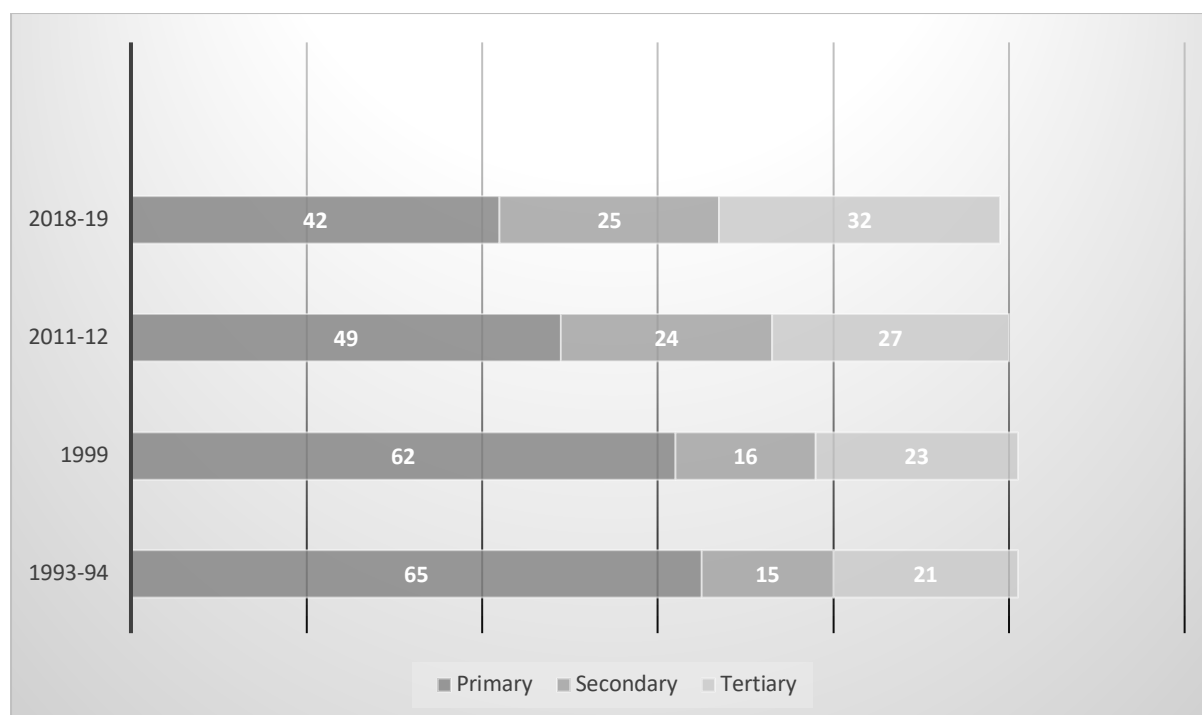
**Fig 3.1: Structural Composition of Economy (GVA at constant prices: 2011-12)**



*Source : National Accounts Statistics*

On the other hand, the service sector route failed to absorb the low skilled agricultural workforce, which is the consequence of premature de-industrialisation along with the premature services led growth. That is, although the economy has been guided by the gross value added in the services sector, the concentration of the labour force in the sector has been minute. Whereas, the reduction in the participation of people from the agricultural sector hasn't been in corroboration with the decline in GVA in the sector. There was a very minute decline in employment in the primary sector between 1993 and 1999 and between 2011 and 2018. Though there was a stark decline between 1999 and 2011-12, but is concerning that the pace of structural transformation slowed down tremendously between 2011-12 and 2018-19 (figure 3.2).

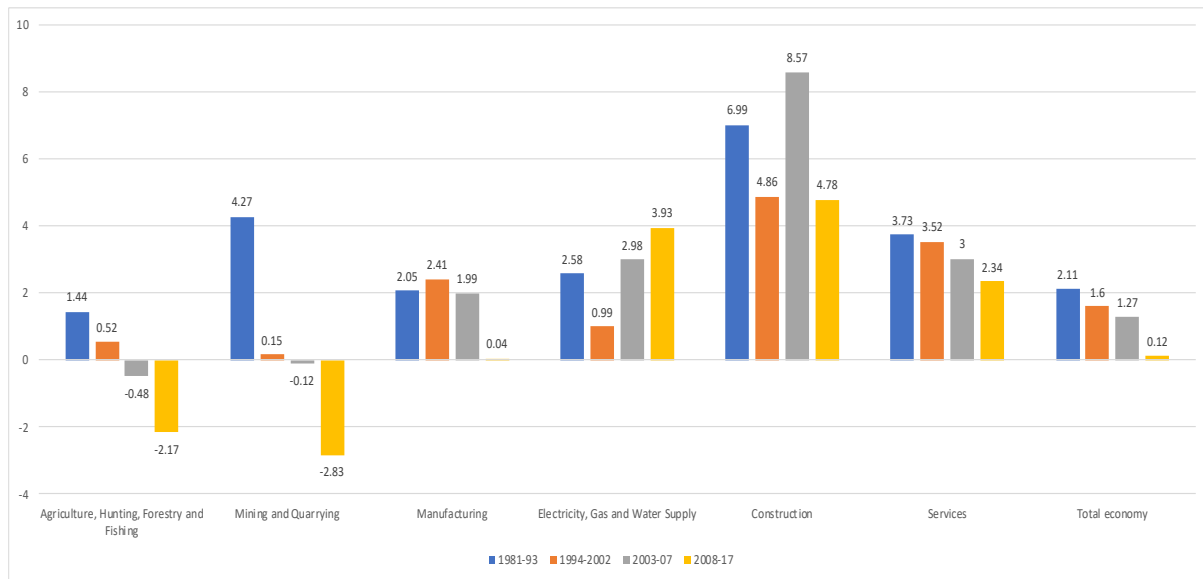
**Fig 3.2: Structure of Employment in the Economy**



*Source: Compilation of various years of NSSO and PLFS*

But at the same time, the growth rate of employment in the broad sectors of the economy has been showing a precarious trend (figure 3.3). With the rise in overall economic growth, the fewer rise in the growth rate of employment in the agricultural sector is a predicted trend. But the lack of a contemporaneous rise in the rate of employment in other sectors can place the economy in serious peril. There is an overall decline in employment in all the sectors of the economy (except electricity, gas and water supply) between 1981-93 and 2008-17 from 2.11 per cent to 0.12 per cent respectively. Between 2003-07 and 2008-17, the growth rate has even been negative in the sectors of agriculture and mining and quarrying. Between the same years, the growth rate has been sliding down in the manufacturing and services sectors as well. It can be perceived that though the employment in the construction sector boomed between 2003-07, it went downhill between 2008-17.

**Fig 3.3: Growth of Employment (Broad Economic Sectors)**



*Source: RBI, KLEMS database 2018*

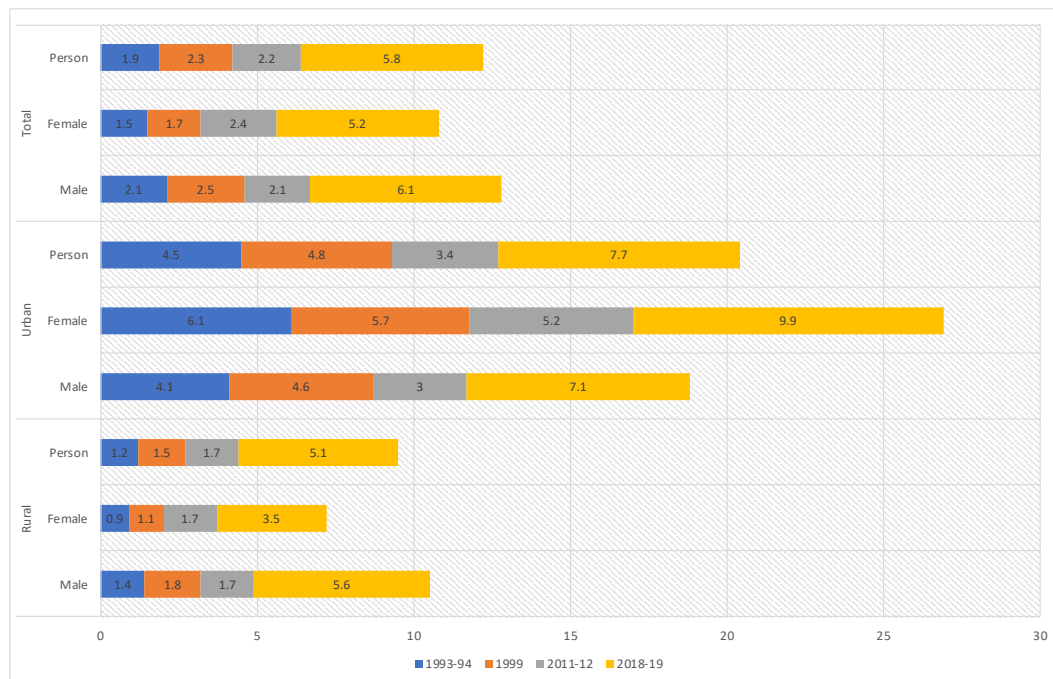
While the construction sector was reckoned to create an additional employment of 38% between 1993-94 and 2009-10; between 2004-05 and 2009-10, 81% of non-agricultural employment was generated by the sector. Hence, the falling employment in the country was mitigated by the rise in employment in the construction sector, which further posited the vulnerability of employment in the country (Nigam, 2014). The substitutability of labour from the agricultural to construction sector took place due to the almost equal skill composition required between them, and both constituted a less educated labour force. The unskilled surplus Lewisian labour force have been unable to transform for the service sector economy, where the skill composition requires an ‘educated or skilled’ labour force (Aggarwal, 2016). Though there was a massive expansion of GDP growth in the decade of 2000s, the growth of employment faltered except that for the construction sector.

There is no doubt that the country needs to focus on quality job creation. The manufacturing led growth can still be advantageous for developing countries as it can be sustained by the augmentation of domestic production and domestic demand contemporaneously. On the other hand, the services led growth has to be succoured by the perpetual inflow of foreign finance and a continued tolerance towards income inequality. This rather lays down the question of India’s sustainability of service-led growth, alongside the surge in inequality (Ghose, 2021). It is imperative that India adjoin its service-led growth prospects and dive into manufacturing-led growth as well, with the emphasis on job creation and demand from the domestic market.

### 3.5.2 In view of precarious employment

The nature of structural transformation in India has resulted in a spike of unemployment rate over the years; which showed an ever worsening trend between 2011-12 and 2018-19. The unemployment rate showed a stark increase from 2.2% to 5.8% between 1993-94 and 2018-19. And the rates in urban areas reveal a much subdued trend in comparison to the rural counterparts, amongst which the unemployment rate of females is at a whopping 9.9% in comparison to 3.5% in rural women (figure 3.4).

**Fig 3.4: Unemployment Rate in India (in per cent terms)**

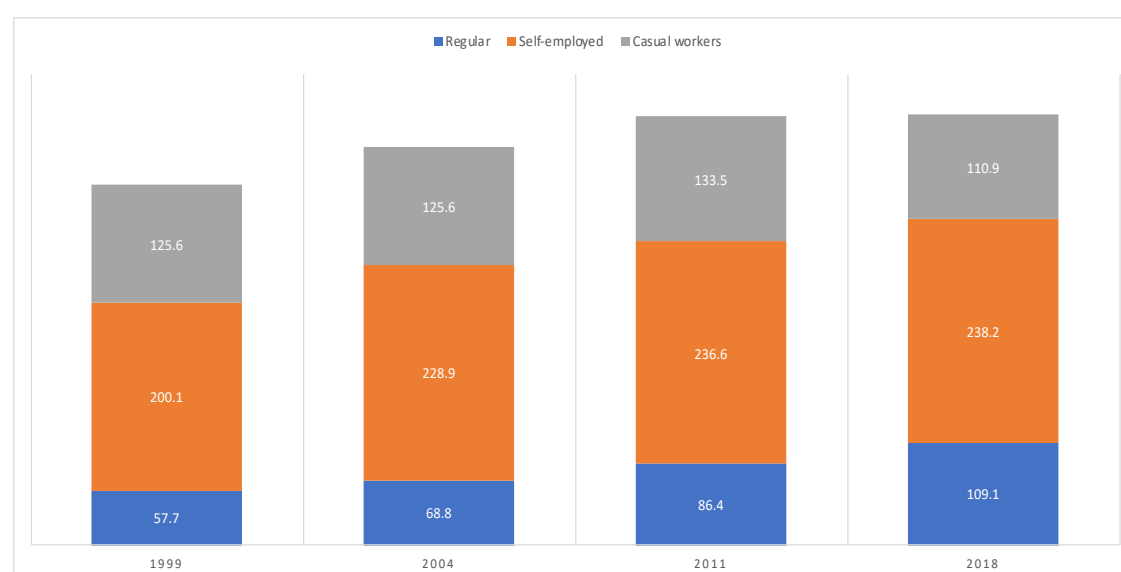


*Source: Compilation of various years of NSSO and PLFS*

The lower unemployment rates in rural areas is also a sign of precariousness. It is often argued that the choice of employment amongst the poorer sections of the population in India is supply driven (and not demand driven) (Aggarwal & Goldar, 2019). It is also appalling that the overall female participation has also been declining over the years. This combined with the stalled structural transformation in the country along with the massive number of unemployed workers is resulting in a massive number of ‘discouraged workers’ (not in employment, education and training) in the country (Mehrotra et al., 2014).

But it has often been debated (based on the data in figure 3.5) that there has been a slight improvement in the quality of employment in India in the years between 1999 and 2018. This has been argued so because of the rise in the employment of regular workers and the subsequent decline in the casual workers, and the gradual rise in the number of self-employed workers (figure 3.5).

**Fig 3.5: Employment by Type (in millions)**



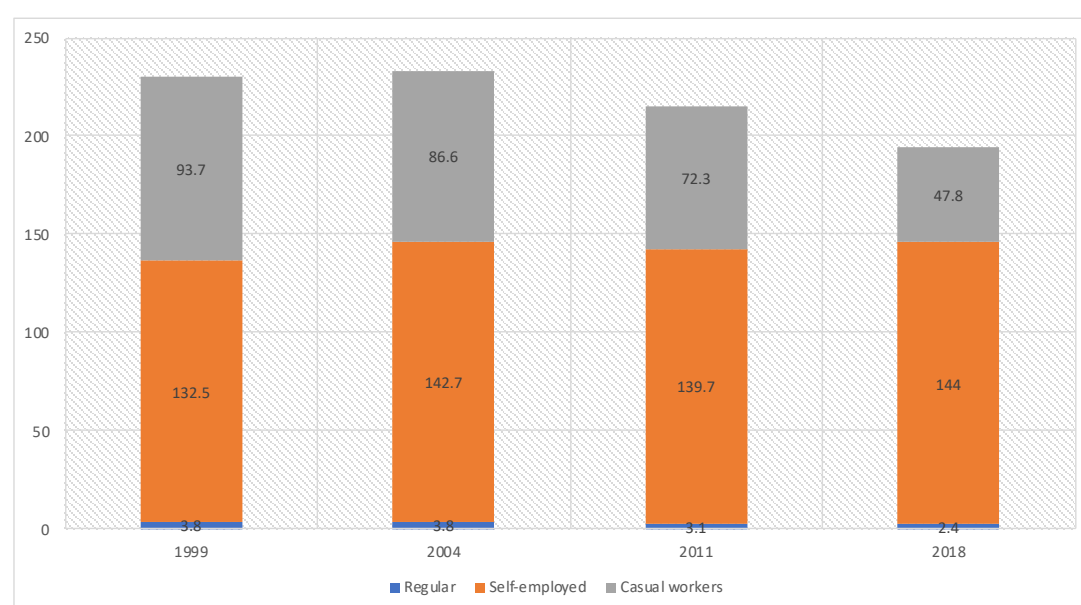
*Source: Compilation of various years of NSSO and PLFS*

Though there has been a substantial rise in employment (especially in the self-employment sphere) between 1999 and 2004, the quality of the employment generated remained poor. It has been argued that it is mostly the rural women who entered the self-employed workforce between 1999-2000 and 2004-05, which was mostly linked to rural distress (Unni & Raveendran, 2016). The much more accelerated pace of decline in the agricultural workforce in the latter half of 2000s has also been associated with the increase in agricultural incomes due to the adoption of Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) scheme (Thomas, 2012).

“Self-employed often self-exploit themselves in a bid to work harder than the wage and salary earners to earn enough income for their livelihood” (Sundar & Sapkal, 2019)

This is true especially for a low productive sector such as agriculture, where the increased number of self-employed populace indicates the above. The figure 3.6 mirrors that the self-employed workers have been increasing in the agricultural sector between the years 1999 to 2004 and 2011 to 2018. It reveals a rather precarious situation; as between the years 2011 and 2018, the number of workers in the agricultural sector has increased from 456 million (236 million in the self-employed stream) to 458 million (238 million in the self-employed stream).

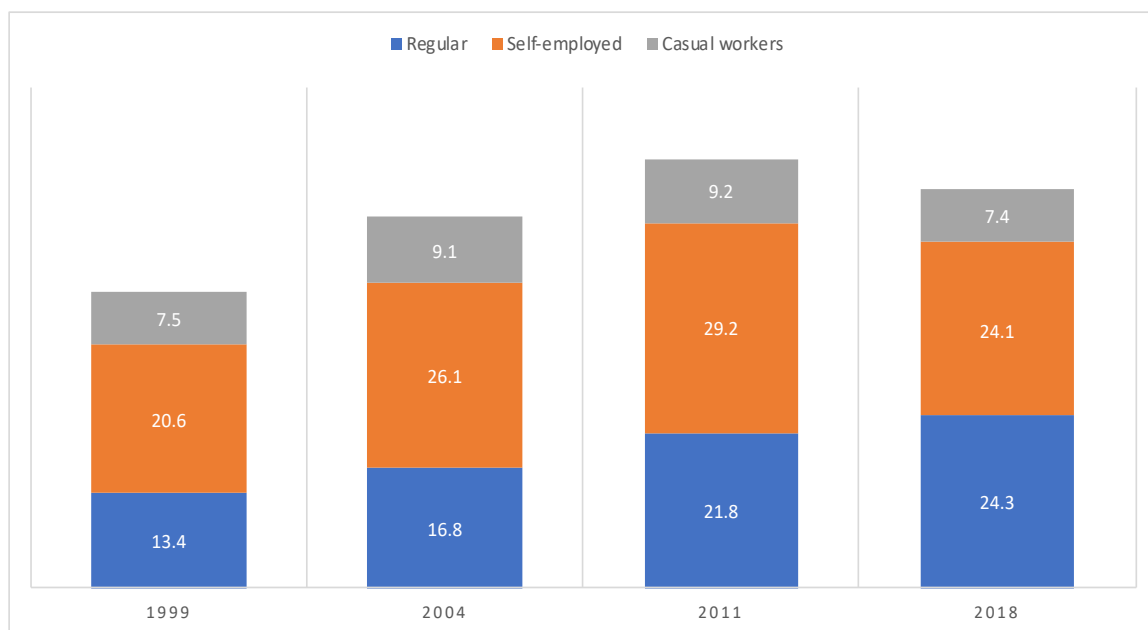
**Fig 3.6: Employment by Type- Agriculture (in millions)**



*Source: Compilation of various years of NSSO and PLFS*

At the same time, figure 3.7 reveals that the regular employment in the manufacturing sector has showed an increasing trend between the years 1999 and 2018. And, there is a reduction in the casual and self-employed workforce between 2011 and 2018, which can be considered a positive trend. But the decrease in the self-employed and casual workers between 2011 and 2018 (6.9 million) isn't compensated by the rise in regular workers (2.5 million). This implies a reduction in overall employment in the sector.

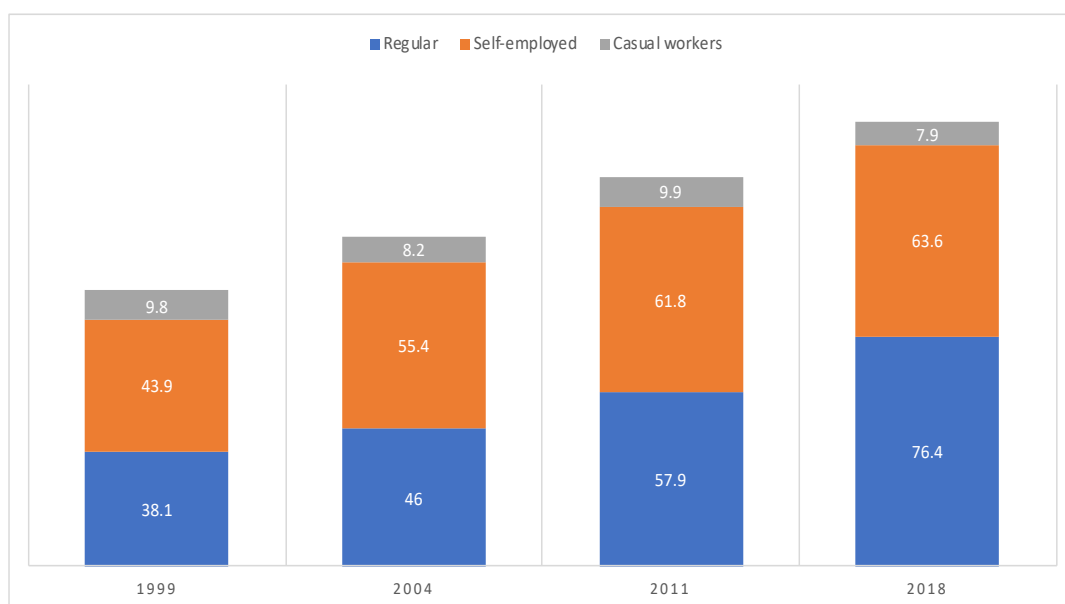
**Fig 3.7: Employment by Type- Manufacturing (in millions)**



*Source: Compilation of various years of NSSO and PLFS*

It can be seen that the self-employed and casual workers is showing a rising trend in the services sector (figure 3.8). The economy can be said to be sailing by the overall rise in quality employment in the services sector.

**Fig 3.8: Employment by Type- Services (in millions)**



*Source: Compilation of various years of NSSO and PLFS*

Moreover, between 70 to 90 percent of the populace in the country is constituted by ‘informal workforce’<sup>14</sup>, and are devoid of any social security benefits’ (R. Abraham, 2016). And in low productive occupations, self-employment can be viewed in synonymity to vulnerability. It is mirrored in table 3.2 that the average earnings of the self-employed workers doesn’t carry much difference that of the casual workers in rural areas. And the average earnings of the female self-employed workers in rural areas lies even below than that of the casual workers.

**Table 3.2: Earnings - A Comparison between Self-employed, Casual and Regular workers (July-September, 2017-18)**

| Employment Category   | Rural  |        | Urban  |        |
|-----------------------|--------|--------|--------|--------|
|                       | Male   | Female | Male   | Female |
| Regular wage/salaried | 12,659 | 8777   | 17,314 | 13,895 |
| Self-employed         | 8,493  | 4,342  | 15,935 | 7,488  |
| Casual Labour         | 7,590  | 4,980  | 9,420  | 5,760  |

*Source: PLFS (2017-18)*

Precarious employment is often considered as vital by the neo-liberal proponents; it is often argued that the difficulty in job creation in the country is the resultant of the inflexibility in the labour laws (Panagariya, 2013), and hence, the critics of labour laws have been pushing for flexibility. And, the current policies can be said to be those consisting of promoting a flexible labour market, which further enhances precarity (Sapkal & Sundar, 2017).

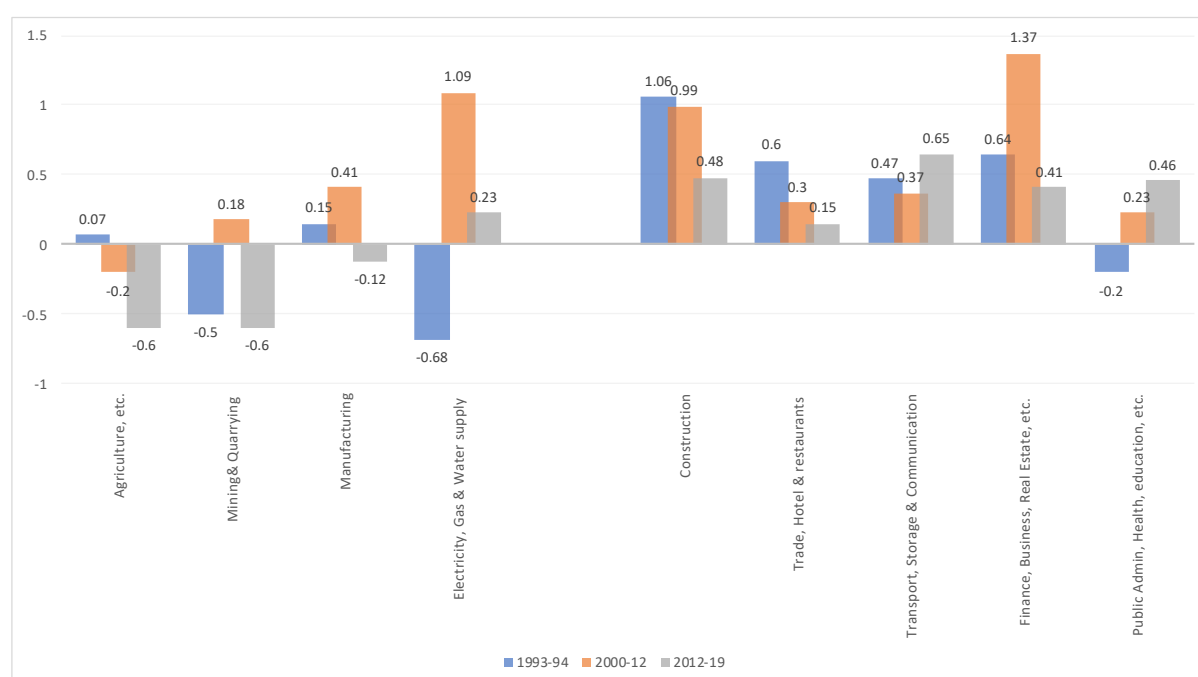
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<sup>14</sup> “ As per the NCEUS definition, informal workers consist of those working in the informal sector or households, excluding regular workers with social security benefits provided by the employers and the workers in the formal sector without any employment and social security benefits provided by the employers ” (Mehrotra, 2019)

### 3.5.3 In view of employment elasticity

It can be perceived from the previous chapter that the decades succeeding the 1970s swayed the course of economic development in India. From around the annual growth rate of 3.5 per cent in the preceding decades, the Gross Domestic Product (GDP) showed a spike of 5 percent in 1980s to 6 per cent in 1990s (Kotwal et al., 2011). But by 1999-2000, only 24% of employment in India was contributed by the services sector (Banga, 2006). The labour market transition in the country has been revealing an inert pace; due to large number of agricultural workforce who are pre-dominantly employed under the self-employed category, distress employment driven by the vulnerability of the populace and dualism in the labour market behaviour (Himanshu, 2011). But there was a stark decline in the employment elasticity of all the three sectors (i.e., primary, secondary and tertiary) in the economy following the post-reform period. Moreover, it has been observed from various NSSO rounds that the employment growth marked a deceleration from the post-reform period, with a tendency towards ‘job-less growth’ (Bhattacharya & Sakthivel, 2003). This has worsened between 2003-15, and the period marked a decline in the employment growth of all the major sectors in the economy. And, the jobless growth (after the adoption of neo-liberal capitalist policies) can be said to have translated itself to ‘job-lost’ growth in the last decade (Jha & Prasad, 2020).

**Figure 3.9: The employment elasticity (at constant prices 2011-12)**



*Source: Computed from various rounds of NSSO and PLFS and CSO*

The figure 3.9 takes into account the employment elasticity between the years 1993-94 and 2012-19, and the elasticity in the overall economy has declined starkly over the years. It can be seen that the elasticity of employment has been on a downward trend between the years 2000-12 and 2012-19, for all the sectors except transport, storage and communication and public administration, health and education. The employment generation has been meagre even for those sectors which indicated a positive trend in gross value added. It is indeed vital that the strategies for the rapid economic growth in the country must necessarily consist of those targeting the creation of quality employment as well. It is imperative to encourage the labour intensive manufacturing sectors and to provide the pillar for Micro, Medium and Small Enterprises (MSME's) for the same.

#### *3.5.4 In view of wages or labour income*

It is revealed from the table 3.3 that the labour income shares have an overall declining but fluctuating tendency in the economy. The labour income in the agricultural sector, construction and services have remained almost stagnant between the years 1980 and 2018, while it has marked a sharp decline in the mining and quarrying sector.

**Table 3.3: Labour income share in broad sectors**

| Broad sectors                              | 1980-81 | 1993-94 | 2002-03 | 2007-08 | 2017-18 |
|--------------------------------------------|---------|---------|---------|---------|---------|
| Agriculture, Hunting, Forestry and Fishing | 57.6    | 56.1    | 54.8    | 55.1    | 55.9    |
| Mining and Quarrying                       | 58.4    | 30.9    | 29      | 27.9    | 29      |
| Manufacturing                              | 38.9    | 30.7    | 30      | 25.7    | 30.5    |
| Electricity, Gas and Water Supply          | 35.5    | 23.4    | 26.8    | 31.0    | 33.6    |
| Construction                               | 79.1    | 79.9    | 78.4    | 71.3    | 77.5    |
| Services                                   | 57.8    | 54.8    | 52.5    | 45.6    | 53.3    |
| Total economy                              | 55.1    | 50.7    | 49.5    | 45.2    | 50.8    |

*Source: KLEMS Database, 2019*

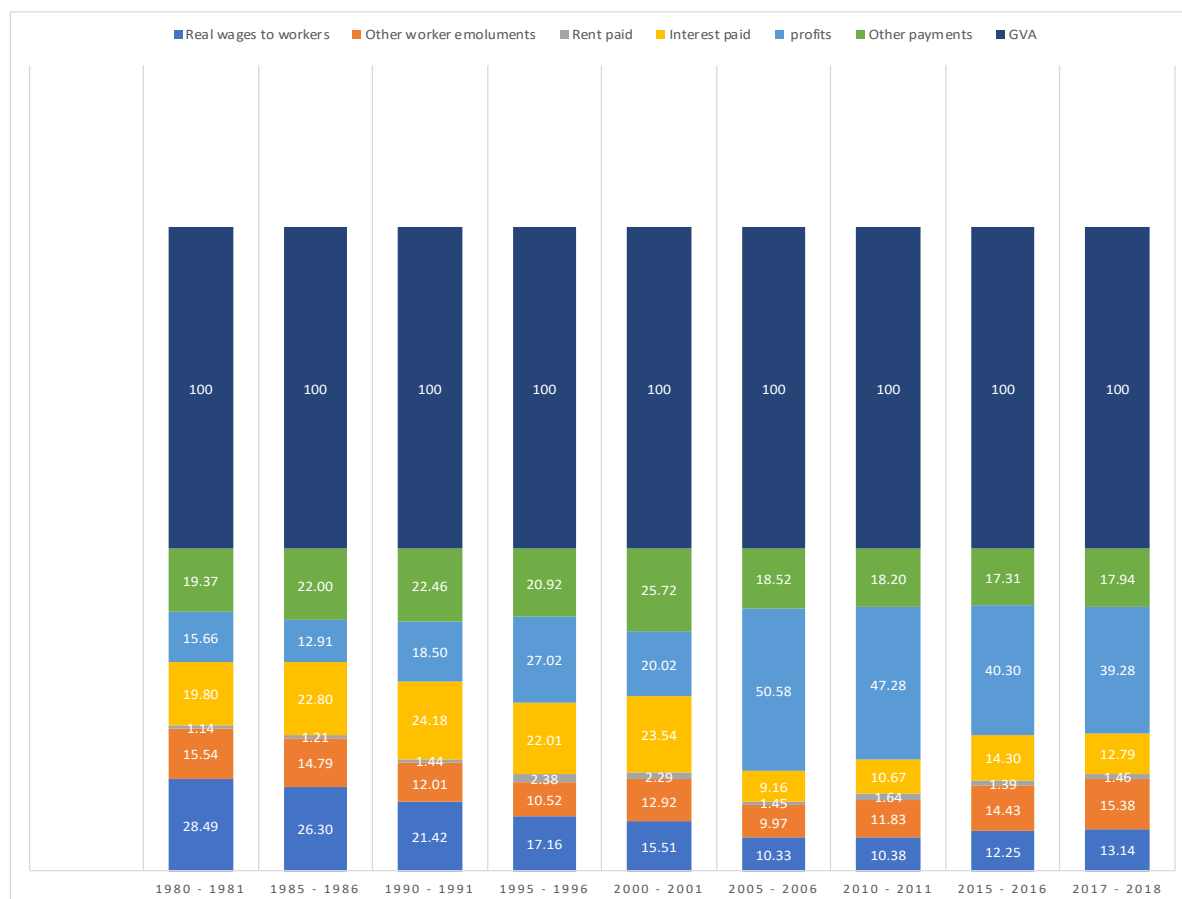
There was a sharp decline in the labour income for almost all the sectors (except electricity, gas and water supply) between 2002-03 and 2007-08. This is rather a surprising trend, as the above phase was characterized to be that of the 'dream run' (see section 2.6).

Though the labour income share shows a modest rise between 2007-08 and 2017-18, it is more or less sluggish and immobile when the overall trend is taken into consideration.

### **3.6 The Conundrum between Wages and Profits**

The declining wages and the lower wage share can widen inequalities, which is a core concern in heterodox policy discourses. And the increasing concern for distribution is emerging not only from a social justice point of view, but also from its staggering effects on aggregate demand and hence, Gross Domestic Product (GDP). To assess the divergence between wages and profits, the data of the organised manufacturing sector have been compiled from Annual Survey of Industries (ASI), for the years 1980-81 to 2017-18. The data of Wages of workers, Total emoluments, Other worker emoluments (the difference between total emoluments and wages of workers), Profits and Interest paid are assessed in percentage terms of Gross Value Added (GVA). The values are taken in real terms by deflating the same with the Wholesale Price Index (WPI) of manufactured goods category, and the transition of these values over the last decade is evaluated. The same methodology has been adopted by (V. Abraham & Sasikumar, 2017), and we have extended it over the years (see A.3.1 and A.3.2 for comprehensive database).

#### **Fig 3.10: Share of Factor Payments in GVA**

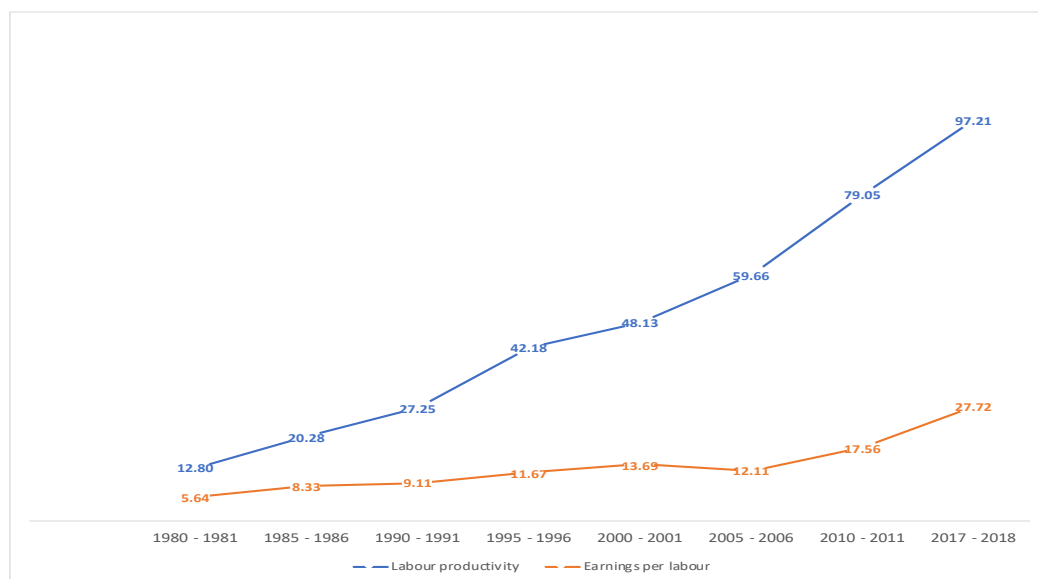


*Source: Author's calculations from EPWRFITS, ASI database*

The figure 3.10 demonstrates the trend of real wages to workers, other worker emoluments, profits, rent paid, interest paid and other payments from 1980. There has been a staggering trend on the share of rate of interest and wages of workers over the years between 1980 and 2018. The profit share has been showing a sharp rise between 1980 and 2005 (except for the fall between 1995 and 2000), but has been showing a falling trend ever since. But, there has been a sharp divergence between wages and profits from 1980s, which augments several distributional questions.

In this sense, it is also imperative to understand whether there is a coherence between labour productivity and earnings per employee. As the figure (3.11) mirrors, there has been an increased de-coupling between the two over the years. And the pace of increase in the growth of labour productivity hasn't been matched by the rise in the growth of wages. The labour productivity marked an increase to a whopping 659.4% between 1980-81 and 2017-18, whereas the growth of wages between the years remained at 391.4%.

**Fig 3.11: Divergence between Labour Productivity and Earnings (per labour)**



*Source: Author's calculations from EPWRFITS, ASI database*

It can also be established that the wage collapse isn't the result of stagnation in labour productivity growth. And is revealed that labour productivity growth isn't synonymous to the growth in wages, instead the policy orientations in pursuit for higher wages is mandatory.

### 3.7 A Post Keynesian Toolkit

It is considered that the combination of individualism and common good along with the target of full employment makes up the Post-Keynesian toolkit. The state intervention was favoured by the Post-Keynesian practitioners so as to ensure full employment and to steer clear of market failure. And the Post-Keynesians have prescribed for a gradual liberalisation along with government intervention with the focus on a sound institutional structure.

**Table 3.4: Alternative Approaches to the Transition Process**

|                         |                        |                                              |                              |
|-------------------------|------------------------|----------------------------------------------|------------------------------|
| Primary elements        | Shock therapy          | Neo-classical Gradualism                     | Post-Keynesian               |
| Economic Analysis       | Neo-classical          | Neo-classical<br>New Institutional Economics | Post Keynesian               |
| What is a good society? | Competitive Capitalism |                                              | Social Democratic Capitalism |

|                       |                   |                                                        |                                          |
|-----------------------|-------------------|--------------------------------------------------------|------------------------------------------|
| Speed                 | Shock Therapy     | Gradualism                                             |                                          |
| Political structure   | Pluralism         | Democracy                                              |                                          |
| Ideological structure | Self-interest     |                                                        | Common good                              |
| Initial conditions    | One size fits all | Some concerns with institutions and initial conditions | Differences in socio-economic background |

*Source: (Marangos, 2004)*

The major differences between post-Keynesian and neo-classical paradigms were the strategy and the mode of transition; i.e., gradualism and social democratic capitalism in the former and shock therapy and competitive capitalism for the latter. And one of the hallmarks of Post-Keynesianism is the discretionary power of the government in economic affairs during and even after the period of transition (Marangos, 2004). But in practice, the majority of the developing countries had the ‘shock therapy’ induced upon them. Post-Keynesians maintain that the gradualist process of reforms ordain the reinforcement of the state intervention.

The failure of competitive capitalism is mainly visible in the slow generation of employment in many major economies at present. Though the economic output could recover from the financial crisis of 2008, the unemployment figures still remain high and fragile. There isn’t a doubt that the pro-market liberalisation and globalisation have weakened labour and strengthened capital, which is detectable from the falling private consumption expenditures, and the flexible labour markets rather fastened the process. The economic growth in the last four decades has been the result of increased productivity rather than an increase in employment, which is discernible from the low elasticity of employment with respect to growth. This has been reinforced by the continued rhetoric towards export-led growth. Hence the policies in favour of the same can turn out to be counterproductive for the domestic markets. The generation of employment can act as a double edged weapon in reducing both inequality

and in the upheaval of growth processes. It is imperative for full employment to take centre stage for the rebalancing of growth processes with stability and equity (Nayyar, 2014).

### **3.8 Conclusion**

It is conferred that unevenness only promote growth via three avenues; through the route of occupational choice, demand channel and along the line of political economy. The route of occupational choice holds when the people in the non-growth sector are able to participate in the growth sector by changing the kind of human capital that they have. The avenue of political economy is where the government wrings the engine of growth through various subsidies, protections etc. The growth by the virtue of the demand channel happens when there is stimulation of income in the non-growth sectors due to the trickling down of income from the growing sectors (Ray, 2010). It can be realised (from the last two chapters) that the process of trickle down via these routes has had limited effects on the Indian economy. Instead, the employment trajectory of the Indian economy has been characterised by widening wage inequalities, falling employment elasticities along with the rise in casualisation and informalisation of the workforce (see section 3.5). Though the export promotion is often seen as an engine to offset the above, the race of the countries in capturing the labour intensive markets may not yield productive results. And the economic growth solely based on labour productivity is no longer sufficient in resolving the problems of the developing countries. At present, the jobless and job lost growth in the country is spiralling informalisation, where the majority of the workers get caught in informal and distress driven sectors.

The subsequent chapters seek to analyse whether the mechanisms of economic growth and distribution can be at par with each other, tuned into a unified objective. The next chapter attempts to understand as to how the channel of distribution can affect the overall economic growth from a Post-Keynesian light; adhering to a narrative framework. The bearing of the same on the Indian economy is considered, and a model is introduced in order to discern the appropriability.

## Chapter 4

### Effective Demand and Income Distribution in a Post-Keynesian Framework: Initiating the Model (Phase I)

#### 4.1 Introduction

Emanating from the works of John Maynard Keynes, Roy Harrod, Nicholas Kaldor, Joan Robinson, Michael Kalecki etc., the cornerstone of the proponents of Post Keynesianism is that the economy is demand driven. The Post Keynesian advocates hold that the capitalist system is conceived on the grounds of conflict and uncertainty. They assert the necessity for an active state mediation; targeting an egalitarian distribution of income. The chapter perceives to analyse the conjoint nature of growth and income distribution in the Kaldorian and Kaleckian dynamics, from a narrative perspective. It embarks towards formulating an empirical model for the Indian economy, in the pursuance to analyse the profit and wage led tone of the economy.

The chapter is organized as follows. Section 4.2 delves into the methodological suppositions of Post Keynesianism and the next section (4.3) analyses the characteristics of Post Keynesian economics. Section 4.4 discusses the Harrodian dynamics and the Kaldor, Robinson and Pasinetti models are explored in section 4.5. The Kaleckian micro foundations along with the Neo-Kaleckian and Post-Kaleckian vision is delved into in section 4.6. The empirical model is introduced in section 4.7 and the section 4.8 engages in the conclusion of the chapter.

#### 4.2 General Methodological Presuppositions of Post Keynesian Heterodoxy

The methodological presuppositions of the Post-Keynesian theorists differ fundamentally from Neo-classicists; and the emphasis lies on realism, holism, procedural rationality and scarcity (Lavoie, 2019).

- The epistemology of instrumentalism, advocated by Milton Friedman, is one of the main dogmas of neoclassical economics. It reasons that, more than the realism of a

particular hypothesis, the predictability of it carries much importance. Instrumentalism has remained as the dominant theoretical dogma amongst the Neo-classicists, and the *realism of assumptions* weren't that of a particular concern. But the realism of a hypothesis is deemed vital by the heterodox authors, and they argue that the theories must be a part and parcel of the real world, and not an imaginary one.

- Methodological Individualism has been another cornerstone of Neo-classical theory, which contends that the world comprises several atomized agents. But the whole is considered way more important than parts in the heterodox approach, which takes into account the social connection of individuals, within the influence of their culture, social class etc.

- The absolute rationality of the economic agents, one of the major dogma of the neoclassical school, is also criticised by the heterodox economists. They argue that the agents don't possess unlimited knowledge to process information. According to heterodox economists, *rationality is bounded* and individuals tend to settle on the satisficing outcome.

- And while neoclassicals are centred around the concepts of scarcity, allocation and exchange; the heart of the heterodox analysis is in production and the existence of surplus resources.

#### **Table 4.1 General Macro Economic Paradoxes**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Paradox of Thrift (Keynes): “More savings can lead to less savings”</li> <li>• Paradox of Public Deficits (Kalecki): Rise in government deficits can promote private profits; used as an argument against ‘crowding-out’ effects</li> <li>• Paradox of costs (Kalecki &amp; Rowthorn): Based on the wage led paradigm of growth, higher real wages lead to higher profits</li> <li>• The open economy paradox (Blecker): Countries may benefit individually if income distribution is tilted towards profits (led by profits from exports) and thereby, suppressing the wages; but will be unsuccessful if all countries follow suit</li> <li>• The flexibility paradox (I): The flexibility in nominal wages and prices can lead to more perverse debt effects. This is the result of worsening of indebtedness in times of recession due to fall in prices</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- The flexibility paradox (II): The higher the flexibility in the labour market (ease in hire and fire), the lesser the employment will be

Source: (Lavoie, 2019)

#### **4.3 Major Characteristics of Post-Keynesian Economics**

“The fundamentalist Keynesians, Kaleckians, Kaldorians, Straffians or Neo-Ricardians and Institutionalists constitute the five major strands in post-Keynesianism. Though they differ in their ideologies, there are five characteristics that tie these different strands together”. (Hein, 2017)

- Money is considered non-neutral both in the short as well as in the long run, and due consideration is given to monetary variables in the analysis of economic processes
- Post-Keynesians believe that growth is demand determined and is underpinned on the ‘principle of effective demand’, where investment creates its own savings through changes in distribution; given the different propensities to save for workers and capitalists
- There is a unified notion regarding fundamental uncertainty in the economy
- Economic events are considered to be path-dependent, which negates the pre-determined equilibrium adjustments
- The distributional conflicts that can arise out of economic outcomes are taken into consideration, and institutions are said to moderate these conflicts

#### **4.4 Harrod’s Dynamics and the Origin of the Post-Keynesian framework**

Unlike the Neo-classicists, Keynes allowed for the prevalence of overcapacity and underemployment in his theoretical underpinnings; which emanates from the lack of effective demand. He regarded that even for an economy which runs under full capacity utilisation, it is investment which determines savings; which eventually accounts for the profits of the capitalist class. This is due to the multiplier effect of investment, which can lead to increased output, employment and productive capacity. The Post-Keynesian framework

emanates from the same, and savings is taken into account as an adjusting variable in its models.

While Keynes considered investment as an income generator; Harrod explicitly considered its capacity generating effects. His theory is based on the combination of the multiplier theory and the principle of acceleration, which together converges to determine income and investment.  $s$  is regarded as the average propensity to save ( $s$ ) in the model, which is proportional to the aggregate saving ( $S$ ).

$$S = su/v$$

The macroeconomic saving rate ( $S$ ) is deemed to be a function of the average propensity to save ( $s$ ), the rate of capital output ratio ( $v$ ) and the rate of capacity utilisation ( $u$ ). For the goods market equilibrium condition, his dynamic theory proposes the growth rate of capital stock to be equal to the savings rate. Then, the expectations of firms with regard to the expectations of the capacity utilisation are fulfilled; and the actual growth rate tends to be equal to the warranted growth rate at the time. But any deviation between the same doesn't tend to be self-correcting, which gives away to a highly unstable equilibrium. This can result in either inflationary overheating or deflationary stagnation, and this deviation is regarded to be the trade cycle problem.

“ The natural rate of growth is defined as the sum of the rate of growth of labour productivity, or in other words, output per worker. If the warranted rate of growth exceeds or falls behind the natural rate of growth, the sustenance of the two via the actual rate of growth isn't possible; and is characterised as the problem of chronic unemployment. The Harrodian dynamic problem is defined by the instability of the actual, warranted and natural rate of growth. Since the Harrodian model assumes the absence of technological change, the natural rate of growth tends to solely depend on the growth rate of labour force. Whereas, the warranted rate of growth is determined by the savings and investing behaviour of both firms and households ” (Blecker & Setterfield, 2019).

Harrod also makes the crucial assumption of fixed proportionality (substitution of labour for capital and vice-versa) in production conditions, which Solow tends to relax later.

The Harrodian instability problem between actual and warranted growth rate is later eliminated by Solow by relaxing the assumption, but the knife-edge equilibrium between the warranted and natural growth rate remained firm. (Hein, 2014)

The attempts to hybridise both the Harrodian dynamic growth model and the neo-classical model by Solow was heavily criticised by the Post-Keynesians. The criticism was mainly laid due to the leaning of the neoclassical economists towards an optimal and equilibrating output that promotes full employment. In short, they regarded the Harrodian dynamics to be mostly based on the functioning of the multiplier and the accelerator; with unstable and highly non-linear advancements towards equilibrium. (Besomi, 2001)

#### **4.5 Kaldor, Pasinetti and Robinson Models**

##### ***A Note on Kaldor's Contributions***

Kaldor's first contributions on Keynesian theory of distribution were highly abstracted single sector models, he later abandoned the same and focused on non-equilibrium-based modelling approaches. He argues that a distribution and growth model must have the capability to explain the 'historical constancies' tending to economic growth. Kaldor, in his theoretical preposition, employs the assumption of full employment of labour, so as to solve the Harrodian instability problem. Thus, while he takes into account the Keynesian prescription of investment-saving causality, the notion of under-employment isn't carried forward.

The period between late 1940s to late 1960s was characterised as the golden age of capitalism, and the growth theorists at the time were interested in explaining how the growth of economies could sustain its 'natural rate' in the long run. Hence, Kaldor was mostly concentrated in solving the instability between the warranted and natural rate of growth. Leaving behind the Pre-Keynesian thought that the expenditure decisions of entrepreneurs are the result of the entrepreneurial income (rather than vice-versa as employed by Keynes), he takes into account the Keynesian habit of thought. Kaldor, being inspired from Kalecki, reinforces the aphorism that "capitalists earn what they spend, and workers spend what they earn". (Hein, 2014)

He believed in different savings propensities for workers and capitalists, and allowed the savings propensity to be the adjusting endogenous variable; given the growth rate

of labour, labour productivity and capital utilisation. It is assumed that the economy operates at full employment level, at the normal or full rate of capacity utilisation. One major implication of the Kaldorian model is the sustenance of the saving-investment nexus, so that the growth of the capital stock is at the same pace as the growth rate of savings out of income. This means that the average propensity to save of the workers and capitalists must equal the rate of investment. In other words, the investment rate must lie between the savings propensities of both wage and profit income. According to Kaldor, the weighted average savings propensity can act as an adjusting variable in bringing the equality between the natural and warranted rate of growth. This equality is brought about by the changes in distribution in income, adjusted via the changes in average savings propensity. But for these to work, the government stabilisation policies need to be brought in so as to ensure the growth of the output and capital at the warranted rate of growth.

The equilibrium profit rate ( $r^*$ ) in the Kaldorian model is determined by the natural rate of growth ( $n$ ) and the propensity to save out of profits ( $s_r$ ).

$$r^* = n/s_r$$

And the equilibrium profit rate can be expressed as,

$$g^* = n = s_r r^*$$

Kaldor's model is criticised for the implication that, given the technology and savings propensities, the unequal distribution of income can trigger an economy to grow faster. The model was also remarked to be un-Keynesian due to the lack of role of aggregate demand in the same, given the supply side adjusted natural growth rate along with flexible wages and prices. (Blecker & Setterfield, 2019)

### ***The Neo-Pasinetti theorem***

Unlike Kaldor who adhered in distinguishing the savings propensity between wage and profit income (between income groups); Pasinetti interpreted the savings propensity out of classes, i.e., between capitalists and workers. This interpretation of Pasinetti took into account one of the major criticisms faced by the Kaldorian model, i.e., workers do not save.

And Pasinetti justifies the Kaldorian notion that the capitalist's propensity to save is higher than that of workers, as they enjoy higher income brackets (Blecker & Setterfield, 2019). It was further established by Pasinetti that, if the workers are only saving a portion of their profits at a lower rate ( $s_w$ ), the Cambridge equilibrium condition which is also confirmed by Kaldor holds;

$$\text{i.e., } g^* = n = s_r r^*$$

### ***The Neo-Robinson Model***

The Robinson model upholds the classical assumption that the profits are the only source of society's savings.

$s_r r = \sigma$  represents the Neo-Robinson savings function, where,  $s_r$  is the marginal propensity to save out of profits,  $r$  is the profit rate and  $\sigma$  is the realised saving rate, which is an endogenous variable.

The investment in the economy is said to be determined by the 'animal spirits', and,

$$g = f(r^e)$$

Where,  $r^e$  represents the expected profit rate which is equalised to net investment (in the absence of depreciation), in which,  $g = \Delta K / K$  and is referred as the 'rate of capital accumulation' or 'growth rate' or 'investment rate'. Robinson also assumes a positive but diminishing responsiveness of investment with respect to expected profit rates.

The major implication of the Neo- Robinson model is that the improvement in business confidence can lead to an increase in the profit and thereby, growth rate; which further propels an outward shift in the investment function, but at the expense of real wage. He regards that the technological improvements can ameliorate the fall in real wages, as it brings in cost reductions.

The cornerstone of the Neo-Robinson model is the equilibrium level of investment and savings (where  $\sigma = g$  holds); and the increased equilibrium savings occurs when the income is redistributed towards profits. She asserts that if the workers are able to attain higher nominal wages, the result would be an increase in cost of firms, which can result in an inflationary spiral. This can give away to dampening of the firm's animal spirits; and the 'real wage resistance' can dissuade the investment-led boom as well.

## Criticisms

The core of the Neo-Keynesian (Kaldor, Pasinetti and Robinson) contention lies in the profit inflation argument; it is advocated that when the rate of profits ( $r$ ) and the rate of accumulation ( $g$ ) rises, the rate of wages ( $w$ ) falls. Due to the same, the savings are adjusted to investment, which is accompanied by the reduced real wage of the workers. But many critics have argued that the assumptions (of the neo-Keynesian proponents) such as full employment and full capacity utilisation go inadequately with the assumption of downward wage flexibility. The notion of aggregate demand also has a limited role to play in the Neo-Keynesian prepositions, as the function of an accelerator mechanism (via the expansionary effect of consumption due to increased wages) is neglected. The restriction of capacity utilisation to a fixed or normal rate (growth in output is deeply intertwined with capital stock) rather limits in taking into consideration the demand side factors that can affect the model. Moreover, the Neo-Keynesians advocated the price adjustment models rather than the quantity adjusted ones, which is often put forth as a major critique. (Blecker & Razmi, 2010)

## 4.6 Kaleckian Micro Foundations

Kalecki endogenizes the rate of capacity utilisation and argues that the functional income distribution in the economy is determined by the 'mark-up'<sup>15</sup> pricing of firms. The mark-up determines the degree of monopoly of firms with respect to the other firms in the industry producing similar products (which is considered a truism except for primary commodities). This is so because of indivisibilities, future uncertainties in demand, for the deterrence in the entry of competitive firms etc., which conceals the normal capacity utilisation below the normal rate. These firms which are mostly oligopolies operate at the point where Marginal Cost (MC) = Average Variable Cost (AVC) (which is constant) and decreasing Average Total Cost (ATC); but the prices are usually set above the ATC for the realisation of

---

<sup>15</sup> “ Mark up refers to the value that a player adds to the cost price of a product. The value added is called the mark-up. The mark-up added to the cost price usually equals retail price ” (The Economic Times, 2022b)

positive profits. The degree of monopoly of the firms is said to be dependent on the industrial concentration, lower fixed costs, increased sales effort etc., which lead to positive mark-ups; whereas, strength of labour unions, external competition etc. can squeeze the same. (Hein, 2014) (Blecker & Setterfield, 2019)

### *Kaleckian Model of Income Determination*

The total national income is divided between wages and profits (incurred by workers and capitalists respectively) in the Kaleckian model, where,  $PY = W + \pi$ . As Kalecki assumes a closed economy with no government, the expenditure on National Income in the economy is wholly used for consumption and investment purposes. While it is the capitalist class who undertakes investment; the consumption is affected by both profits and wages (by workers and capitalists). The Kaleckian model adheres to the assumption that workers do not save, and hence the consumption out of wages is equalized to the total wages in the model.

$$PY = W + \pi = C + I$$

$$W + \pi = C_w + C_\pi + I$$

$$C_w = W$$

$$\text{Therefore, } \pi = C_\pi + I$$

Where  $C$  is the total consumption,  $I$ , is the total investment,  $C_w$  is the consumption out of wages and  $C_\pi$  is the consumption out of profits

Thus, the implication of the Kaleckian model is that the macroeconomic profits are guided by the consumption out of profits and investment by the capitalists. Kalecki presupposes that it is the consumption and investment decisions of the capitalists that determine their profits, and not vice-versa. Moreover, the profits of the capitalists are in proportion to the investment expenditure of the capitalists and inverse to their propensity to save out of profits (Lavoie, 2006). Kalecki argues that the capacity utilisation can be boosted through realised profits, which in turn is determined by the rise in investment, net exports and governmental deficits.

Unlike Neo-Keynesians, Kalecki takes into account the ‘paradox of costs’, and argues that the increase in share of profits doesn’t have an escalating effect on total profits; but

rather, has a dampening effect on aggregate demand and hence, output and employment. He establishes that the ‘paradox of costs and thrift’ holds in the event of positive savings out of wages; even for an open economy with active governmental involvement. Unlike classical, Marxian and Neo-Keynesian approaches, the demand supply adjustments in the Kaleckian framework doesn’t take place due to changes in prices, but via output and capacity utilisation.

#### 4.6.1 Neo-Kaleckian or Rowthorn- Dutt model

Rowthorn and Dutt asserted that the realised profit rate determines the accumulation decisions of the firms; which in itself entails future profitability. They consider the decision to invest as a function of the realised profit and capacity utilisation rates of firms. The saving attunes towards investment via a quantity adjustment process, i.e., as a resultant of the change in output through capacity utilisation.

$$r = h (u/v),$$

Where,  $h$  is the realised rate of profits,  $h$  is the profit share,  $u$  is the rate of capacity utilisation and  $v$  is the capital-output ratio

$$h = 1 - (1/1+m),$$

which denotes that profit share is determined by the mark-up pricing of firms

$$\sigma = s_{\pi} h (u/v)$$

The savings rate ( $\sigma$ ) is determined by the saving of the capitalists, the profit share and the ratio of capacity utilisation to capital output ratio

$$g = I/K = \alpha + \beta u,$$

$\alpha$  represents animal spirits and  $\beta$  represents the impact that the rate of capacity utilisation has on investment

$g = \sigma$  is the equilibrium condition of the model

One major implication in their model is that the equilibrium between the output and aggregate demand takes place through changes in the capacity utilisation rates. If the expected capacity utilisation outpaces the equilibrium value, it can be inferred that the capital accumulation falls short of desired savings rate. It further causes a restraint in production due to the lack of aggregate demand; and the savings can equilibrate back to capital accumulation rate only if there is a reduction in capacity utilisation. The firms adjust their rate of capacity utilisation in the next period, causing them to lower the capital accumulation. The aggregate demand can still fall short of aggregate supply if the desired savings rate continues to tread below the rate of capital accumulation. Eventually, if the actual capacity utilisation falls short

of the equilibrium capacity utilisation, it results in the desired savings falling short of the rate of accumulation. This will result in the expansion of output by the firms, and the convergence towards equilibrium takes place via the above mechanism.

Thus, the paradox of saving has immense validity in the Neo-Kaleckian growth model; a higher propensity to save can result in lower rates of capacity utilisation, whereas, the lower propensity to save is expansionary as it can stimulate capacity utilisation, and hence, capital accumulation. Moreover, the sweeping argument of Rowthorn is grounded on the ‘paradox of cost’, where the increase in profit share is deemed to result in the lowering of the profit rate. This is because a decrease in wage share along with the rise in profit share has rather contradicting effects on the system. The main tenet of the Neo-Kaleckians is that the redistribution towards wages has only a favourable impact on the consumption demand and it rather stimulates investment and hence, capital accumulation. There is an invalidation of the inverse relationship between wage share and profit rate, as a higher wage and lower profit share doesn’t insinuate a lower profit rate. Accordingly, for Neo-Kaleckians, a stagnating level of capacity utilisation and weakened capital accumulation is synonymous to low shares of labour income.

These models haven’t been devoid of criticisms as the Sraffian authors, including Ciccone and Vianello, have argued that the decisions of the firms to invest can be entailed solely in the expected profitability. This implies that  $g = g(r_n)$ , where the role of the capacity utilisation is revoked and the paradox of cost is withdrawn. They argue that the decrease in the profit share in itself can lead to a decline in investment, without recouping the effects of a decline in profit share on capacity utilisation (Hein, 2014).

#### *4.6.2 The Post-Kaleckian or Bhaduri-Marglin Model*

“ If investment demand increases with the rate of capacity utilization, there will be even greater aggregate demand, and both aggregate profits and the profit rate will be higher even as the profit share is lower. In this view, there is no trade-off between growth and distribution. High wage policies promote income equality, output and growth. Policies which increase the worker’s share of the pie also increase the size of the pie ” (Marglin & Bhaduri, 1987)

The exclusive wage led position that emanates from the Neo-Kaleckian model isn't sustained in the Post-Kaleckian model due to the change in the nature of the investment function. This is because of the Post-Kaleckian formulation that both the profit share and the rate of capital accumulation can induce the profit expectations of the firms. Bhaduri, Marglin and Kruz have established an accumulation function, where the decision to invest is argued to be the function of actual profit rate. And the rate of profit is broken down into profit share, the inverse of the potential capital output ratio and the rate of capacity utilisation. The potential capital output ratio is assumed to be constant in the model; the profit share and the rate of capacity utilisation rate are assumed to have positive impacts on the investment decisions of firms.

$$r = h(u/v)$$

$$h = 1 - 1/(1+m)$$

$$\sigma = s\pi h u/v$$

$$g = I/K = \alpha + \beta u + \tau h,$$

in the Post-Kaleckian model, along with the animal spirits ( $\alpha$ ) and capacity utilisation ( $u$ ), the investment decisions are also dependent upon the profit share ( $h$ ) of firms

$$g = \sigma$$

The turnaround in the investment function implies the non-sustenance of the wage led results as that in the Neo-Kaleckian model. The neo-Kaleckians assumed that  $\alpha > 0$ , but it is revoked in the Post-Kaleckian preposition. Based on the same, Bhaduri and Marglin bring forth 'stagnationist' as well as 'exhilarationist' regimes. An exhilarationist or profit-led regime dwells if the elasticity of investment with respect to profit share remains high in combination to a low propensity to save from profits. But if the profit share has only a weak effect on investment and if the propensity to save from profits remains high, the demand is considered wage-led or stagnationist. Bhaduri and Marglin argues that the wage-led regime can lead to 'profit squeeze', if the generation of capacity utilisation via higher wage cannot outweigh the dampening effects of the lower profit share.

The Post Kaleckians offer a more flexible tool in analysing the abstraction of the capitalist framework, and in analysing the period of both cooperative as well as turbulent capitalist phases. But the Kaleckian models have been criticised for their treatment of capacity utilisation as the adjusting variable not only in the short and medium run, but also in the long

run. This is because the equilibrium rate of utilisation can diverge from the normal rate of utilisation, and the models are said to reflect the ‘Harrodian instability’ (Hein, 2014).

## **4.7 Income Distribution and Effective Demand**

### **Related Literature**

The empirical studies which determine the relationship between effective demand vis-a-vis effective demand have blossomed in the last decade. Naastepad and Storm (2006), important contributors to this debate, argues that the wage restraint in an economy can bring down labour productivity growth. This is via the flow of causality from depressed aggregate demand (which is the resultant of wage restraints) towards labour productivity, via the ‘Kaldor Verdoorn’<sup>16</sup> effect. And also, it is argued to be the result of the lack of inducement to invest in the ‘labour saving technical process’<sup>17</sup>, due to the lower wage growth. They hold that labour productivity growth is endogenous, being determined by aggregate demand and real wage growth. And in a wage-led economy, it is contended that though the real wage restraint may beget employment growth; the effect of the same on labour productivity effect may be strong. Therefore, for an economy which is wage-led, they establish that the real wage cut is not a recipe for economic recovery; but is that of stagnation of output and lower productivity. In addition, the creation of precarious jobs is argued to depress labour productivity, as the ill effects of the same outweighs output growth. In a profit led economy, while it is asserted that the cut down in wages can lead to higher output growth; but is only at the expense of technological growth and productivity slowdown. It is contended that the raising of wages alone cannot be a cure for the economic problems; but the progressive taxation, the sharing of gains between capitalists and labourers, employment security and the financing for public sector employment and Research and Development (R&D) can go a long way in the same. (Storm & Naastepad, 2012)

Stockhammer, Onanaran and Ederer also establish that the wage moderation doesn’t stimulate employment amongst countries belonging to the European Union (EU). Instead, it leads to output contractions; and they argue that the macroeconomic policy must

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<sup>16</sup> “ The Kaldor-Verdoorn law refers to a positive but less than one-for-one relationship between the growth rates of output and labour productivity, with causality running from the former to the latter ” (Budhiraja & Basu, 2020)

<sup>17</sup> “ Technical progress which increases the efficiency of labour, so that the labour force in efficiency units increases faster than the number of workers available ” (Oxford Reference, n.d)

tune towards wage setting which is productivity oriented. They argue that the wage policy in the EU is synonymous to that of the situation in ‘prisoner’s dilemma’<sup>18</sup>. This is because the wage restraints may be expansionary for individual countries, but it has a contractionary effect if exercised in all the EU countries (as they mostly trade amongst themselves). The redesignment of the policy package in the EU was proposed, so as to bring in more room for fiscal policies and to undertake output stabilisation via monetary policies as well (Stockhammer et al., 2008).

The functional income distribution in France and Germany for the period between 1960 and 2005 is analysed by Hein & Vogel (2009). It was concluded with an empirical exercise that the economic growth in France was wage - led; whereas, it was undetermined in Germany. But with the simulation approach, the economic growth was concluded to be weakly wage-led in Germany. Though Bhaduri & Marglin maintains that the profit-led growth is said to dominate in an open economy; these economies turned out to be wage-led, even when the effects of redistribution on foreign trade is brought into the picture (Hein & Vogel, 2009).

Jetin & Kurt (2016) analyse the effect of income distribution on the economic growth of Thailand. They maintain that the net exports have a strong negative effect on the Thailand economy in the event of rise in the labour income share. And, they establish that the negative effect on the same isn’t offset by the positive effect of consumption at the domestic level. This result is in tune to the other East Asian Economies. Hence, it is argued that, rather than adopting solely an increase in labour income policy, a change in the overall structure of the economy is needed. This is in view of the fact that the global economy isn’t that coherent with the export-led growth as it did in the past. The staggering recovery after the 2007-08 crisis in itself exposes the need for major re-balancing. It is maintained that the decrease in labour income cannot be a long term viable prescription for higher economic growth (Jetin & Kurt, 2016).

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<sup>18</sup> “ The Prisoner’s Dilemma (PD) is a game whose Nash equilibrium is not Pareto efficient. The sheer perversity of the interaction involved in the PD has bewildered game theorists and social scientists alike. Despite the fact that players could be better off by jointly cooperating, they have individually a dominant strategy for defection that carries out a suboptimal outcome for everyone ” (Ríos & Cresto, 2015)

Onaran and Galanis (2012), estimates the change in wage share focusing on 16 major developed and developing countries, the members of G20. One major implication emanating from their study is that, when only the effects of the private domestic demand (consumption and investment at the domestic level) is being taken into account; it is concluded that the rise in investment due to the positive effect of an increase in profit share doesn't outweigh the negative effect the latter has on consumption. Thus, the determinant of foreign trade is argued to play a conclusive role in predicting the profit led and wage led nature of the countries. In the Euro area as well as for other developed countries such as the UK, US and Japan, the overall demand is concluded to be wage-led. But mostly the developing countries are found to be following a profit-led pattern (especially China), due to the strong effects on exports and imports, rather than on investment. And though India is a profit led economy, it has been estimated that the effect of net exports only slightly offsets the weak effect on consumption. Amongst the developing countries, only Turkey and Korea are found to be wage led, where the effect of consumption on the decline in wage income is so strong that it offset the effect of net exports and investment (Onaran & Galanis, 2012).

#### **4.8 Introducing the Model**

Bhaduri and Marglin, via the Post Kaleckian model, posits that the economies can either be profit or wage-led. The main sub aggregates of aggregate demand consist of private final consumption expenditure, investment and net exports (given the government expenditure). While the increase in wages leads to the surge in private final consumption expenditure; it is the investment which is an obscure component in the profit-led model. The net exports tend to negatively affect aggregate demand via increased wage share due to the loss in competitiveness. It is maintained that the consumption differentials and the responsiveness of investment and net exports to profits and unit labour costs determines whether the country complies with the wage led or profit led regime. It is an empirical exercise to determine whether the positive responsiveness of consumption via increased wages outweigh the negative effect of investment due to the decline in profit share.

The Post Keynesian consumption function asserts that the propensity to consume between wage income and profit income differs. It is based on the Kaleckian framework, and is maintained that the marginal propensity to save out of profit income is higher than that of the wage income. Therefore, the consumption is proposed to increase as the wage rate goes up. Though the improvement in government expenditure can also determine income

distribution, the effect of the public sector isn't considered and is outside the scope of the model. The starting point is in the assumption of the goods market equilibrium conditions.

$$Y = C(Y, \Psi) + I(Y, \Psi) + NX(Y, \Psi)$$

$Y$ ,  $C$ ,  $I$  and  $NX$  are output, consumption, investment and excess of exports over imports respectively. And,  $\Psi$  is the wage share. After the total differentiation of the above equation,

$$dY/d\Psi = (C_{\Psi} + I_{\Psi} + NX_{\Psi}) / (1 - C_Y - I_Y - NX_Y)$$

Where,  $C_{\Psi}$  represents the marginal effect of the wage share on consumption demand and  $I_{\Psi}$  and  $NX_{\Psi}$  represents the marginal effect of wage share on investment and on net exports respectively.  $C_Y$ ,  $I_Y$  and  $NX_Y$  represents the marginal effect of output (income) on consumption, investment and net exports respectively (V. Kohli, 2018).

It is maintained that the marginal effect of wage share on investment and net exports is negative. This is because the increase in Unit Labour Cost (ULC), is said to be affected by a hike in prices ( $p$ ).

$$\text{Where, } \ln p = a_0 + a_1 \ln \text{ULC} + U$$

$u$  constitutes the error term, and  $a$  lies between 0 and 1. And,  $\text{ULC} = \text{RULC} \cdot p$  and the elasticity of price with respect to Real Unit Labour Cost (RULC) or wage share is worked out.

The main argument on the negative relationship between net exports and on price level holds due to the effects of competitiveness. This is because the increase in the unit cost of wages results in the increase in prices, which further brings down the profit share. But

the Post-Keynesian proponents doesn't favour an export-led growth due to the 'fallacy of composition'<sup>19</sup>.

Though the improvement in wage share can also be brought about by reducing the mark-up (profit) component of the cost as well, it is beyond the analytical scope of the model. And the approaches adopted by Stockhammer, Onaran and Ederer (2009) and Kohli (2016) follow the same pattern. The anti-monopoly measures that can be adopted by the policy makers so as to restrain the share of profits isn't given due consideration.

#### 4.8.1 Description of the Model

$$I^{\wedge} = I_0 + \delta_0 h^{\wedge} + \delta_1 X^{\wedge} \dots (1)$$

The investment equation is that of the Bhaduri Marglin form. In the investment growth equation;  $I_0$  is the autonomous component,  $\delta_0$  and  $\delta_1$  represent the elasticity of investment with respect to profit share ( $h$ ) and output ( $X$ ) respectively.

$$C = (c_h - c_w) hX + c_w X \dots (2)$$

This is the Post Keynesian consumption function, where  $c_h < c_w$ , i.e., the marginal propensity to consume out of profits ( $c_h$ ) is less than the marginal propensity to consume out of wages ( $c_w$ ). The equation (2.1) is derived from equation (2), by taking the first difference of the former equation and dividing by  $C$ .

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<sup>19</sup> "The Fallacy of Composition: All the developing countries weren't able to fully emulate the export-led development strategies followed by China and other East Asian countries, as a result of the fallacy of composition (FOC). The FOC have different empirical implications;

- FOC Quantity: This represents the crowding out of exports in some developing countries by the other developing countries
- FOC Price: This is due to price competition in developing countries over capturing markets in industrialised countries.
- FOC Growth: This is the outcome of the real depreciation, which can lead to low relative price of exports in comparison to other developing countries"

The FOC of growth is often considered the strongest version of FOC, because even if the developing countries become price competitive in export markets; it is offset by the fact that the real exchange rate also depreciates in accordance with the industrialised countries. It is clear that the export-led growth suffers from internal contradictions within itself. The rethinking of a development strategy beyond the panacea of export-led growth is inevitable, and labour incomes must be envisioned as an element of aggregate demand rather than as a cost to be minimised" (Blecker & Razmi, 2010)

$$C^{\wedge} = \gamma h^{\wedge} + X^{\wedge} \dots (2.1)$$

$$E^{\wedge} = E_0 + \varepsilon_E k^{\wedge} \dots (3)$$

In the export function,  $E$  explains the growth of exports and  $E_0$ , the autonomous component, which captures the global demand factors.  $k^{\wedge}$  is an index of competitiveness. And  $\varepsilon_E$ , is the elasticity of exports with respect to competitiveness ( $k^{\wedge}$ ).

$$M^{\wedge} = M_0 + \sigma X^{\wedge} - \varepsilon_M k^{\wedge} \dots (4)$$

$M$  is the import growth equation, where  $M_0$  captures the autonomous component due to the fluctuations in tastes and preferences.  $\sigma$  and  $\varepsilon_M$  are the elasticity of imports with respect to output ( $X$ ) and competitiveness ( $k$ ) respectively.

$$G^{\wedge} = G_0^{\wedge} \dots (5)$$

$G$  is the metric of the growth of government expenditure, and is assumed to be equal to  $G_0$ . That is,  $G$  is assumed as an exogenous variable which is said to vary in tune with the fluctuations in fiscal policy.

$$p^{\wedge}_d = w/x(1-h)^{\wedge} \dots (6)$$

$p^{\wedge}_d$  represents the desired price level of the firm and  $(1/1-h)$  is the desired mark-up of the firms, which tends to have a positive association with the profit share.  $w$  and  $x$  are the wages and output per worker respectively.

$$p^{\wedge}_d = w^{\wedge} - x^{\wedge} + (h/1-h) h^{\wedge} \dots (7)$$

This result is reached via the multiplication of both sides of the equation by  $x(1-h)$ , along with taking the first difference of the equation and dividing the same by  $w$ .

$$p^{\wedge} = p^{\wedge}_d \dots (8)$$

The desired rate of inflation is equalised to its actual value. The equality between the two also reciprocates the fact that the actual and desired rate of change in profit share is being ensured.

$$\hat{w} = w_0 + w_1 \hat{p} + w_2 \hat{X} + w_3 \hat{x} \dots (9)$$

The equation elucidates on the money wage bargaining in an economy.  $w_1$  represents the elasticity of money wage growth with respect to the price level. Whereas,  $w_2$  is the growth rate of money wages with respect to the growth of output, and  $w_3$  is the elasticity of growth of money wages in accordance with the growth of labour productivity.  $w_0$  is the autonomous component, which captures the money wage growth as a result of the rise in bargaining power of workers.

$$\hat{L} = L_0 + \theta \hat{X} \dots (10)$$

$\hat{L}$  represents the growth of employment, which is regarded to be a positive function of output growth with elasticity  $\theta$ .  $L_0$  captures the autonomous components that affect employment growth.

$$\hat{x} = (1-\theta) \hat{X} - L_0 \dots (11)$$

The labour productivity growth ( $\hat{x}$ ) is nothing but the surplus component, after taking into account the difference between output and employment growth. If  $\theta = 0$ , it means that the productivity growth is autonomous and employment growth is fully determined by the growth in output.

$$\hat{h} = h_0 + h_1 \hat{k} + h_2 \hat{X} \dots (12)$$

The equation discusses the growth of profit share.  $h_1$  and  $h_2$  are the elasticities of growth of profit share with respect to competitiveness and output respectively. The international competitiveness is argued to have a positive impact on output share as it gives power to the domestic capitalists to increase their prices.

$$\hat{k} = \hat{e} - \hat{p} \dots (13)$$

The equation is that of a growth form which defines competitiveness ( $k^\wedge$ ) as a ratio of nominal exchange rate ( $e^\wedge$ ) and domestic price level ( $p^\wedge$ ).

$$e^\wedge = e_0^\wedge \dots (14)$$

The exchange rate variable is determined as a policy variable

$$X^\wedge = cC^\wedge + iI^\wedge + gG^\wedge + \varepsilon E^\wedge + m(M^\wedge + k^\wedge) \dots (15)$$

The growth of output is equalised to the growth of aggregate demand, and an initial equilibrium is assumed between the same.  $c$ ,  $i$ ,  $g$ ,  $\varepsilon$  and  $m$  represent the shares of GDP in consumption, investment, government expenditure, exports and imports respectively.

#### 4.9 Conclusion

The chapter establishes the Post Keynesian/Kaleckian contributions, considering the dynamics of profits, wages and output. It also sets foot in establishing the upper hand of the Kaleckian over Kaldorian/Neo-Keynesian framework. The model which is introduced is Post Keynesian in nature, and underpins an alternative to the mainstream approach with coherence towards aggregate demand. The model attempts to check whether the resolving of distributional conflict can aid in the spurt towards economic growth. The next chapter embarks towards the estimation and simulation of the model, and seeks to reveal the pertinence of the Kaleckian mechanism in the Indian economy.

## Chapter 5

### Effective Demand and Income Distribution in a Post-Keynesian Framework: Estimations and Model Simulations (Phase II)

#### 5.1 Introduction

Following the introduction of the model to discern the wage and profit led nature of the Indian economy (in the previous chapter), the chapter embarks into estimating and simulating the same. The section 5.2 dives into the computation of elasticities for investment, consumption, trade, wage and employment. The next section (5.3) focuses on attempting to detect the share parameters and initial values for the simulation of the model. After reaching a consensus as to whether the economy is wage or profit-led (in section 5.4), various simulations are drawn to throw light on the sensitivity of autonomous components and elasticities on the model.

#### 5.2 The Calculation of Elasticities

##### 5.2.1 Investment

The investment function is that of Bhaduri & Marglin form and there are two elasticities that is included;  $\partial_0$  (elasticity of investment with respect to profit share) and  $\partial_1$  (elasticity of investment with respect to output). The ASI dataset is used for the estimation of investment function. It is used for the period between 1981-2018 and the growth rate of gross fixed capital formation is used as a proxy for the growth rate of investment function. The growth rate of gross value added is used in substitute to the growth rate of output. The mark-up is also included in the profit component of income in the Post-Keynesian model. Hence, the growth rate of total value of output is subtracted over growth rate of prime costs (which include growth rates of wages and material inputs) to derive the growth rate of profits. The growth rates of interest payments is also included in the model as the financial variables do affect investment as proposed by Minsky and Kalecki (V. Kohli, 2018). The first and second lags of growth rates of gross value added, profits and interest payment (explanatory variables) were included in the estimation. When the regression was implemented, the R-squared of 0.37 was generated, and the Durbin Watson (DW) statistics remained quite high with 2.51. So, a dummy variable for

the year 1994 was included as the residual for the year was quite high. But except for the dummy variable, none of the other variables were significant. Therefore, the Cochrane Orcutt procedure was decided to be implemented, and then the model was pared down further. The result was an improved adjusted R-square of 0.49 and DW stat of 2.14.

**Table 5.1: Investment - Cochrane Orcutt AR (1) regression**

| Growth of real gross fixed capital formation | Coefficient | P value |
|----------------------------------------------|-------------|---------|
| Growth rate of profit share                  | -0.59       | 0.351   |
| Real growth of gross value added             | 1.11        | 0.09**  |
| Growth rate of profit share (Lag 1)          | 0.77        | 0.05*   |
| Interest payment (Lag 2)                     | -0.48       | 0.05*   |
| Year dummy                                   | 65.1        | 0.001*  |
| Constant                                     | -0.39       | 0.93*   |

\*\*below 10% significant \*below 5% significant

The previous studies such as that of Onaran and Galani's and Kohli's on Indian economy haven't detected the association between investment and profit share (Onaran & Galanis, 2012) (V. Kohli, 2018). But the value of output, and the lagged values of growth rate of value added and growth rate of profit share turned out to be significant in our regression.

### 5.2.2 Consumption

There is a significant relation between consumption and profit share according to Post Keynesians. Kohli(2018) calculated the elasticity of consumption with respect to profit share via a social accounting matrix, which was constructed by Pradhan, Saluja & Sharma (Pradhan et al., 2013). And the elasticity was acceded to a value of -0.26 by Kohli(2018), which implies the negative association between consumption spending and profit share. Onaran & Galanis also calculates the same through national income accounts, and arrives at the same value. In our analysis, we use the elasticity of -0.26, as propounded by both Kohli and Onaran & Galanis. (V. Kohli, 2018) (Onaran & Galanis, 2012)

### *5.2.3 Trade*

OG has calculated the export and import prices with respect to relative prices in India. To calculate the export elasticity, Kohli (2018) has averaged the elasticity values from the studies such as UNCTAD (2013), Raissi and Tulin (2015) and OG (2012) and arrives at 0.53 (UNCTAD, 2013) (Raissi & Tulin, 2015) (Onaran & Galanis, 2012). This implies that there is 0.53% increase in exports as a resultant of 1% depreciation in real effective exchange rate. The same conclusion was reached by Pandey (2013) in his study on trade elasticities between 1993 to 2011 (Pandey, 2013). Hence, it was decided to use the same value as elasticity of export in India.

The import demand function in India for an extended period from 1980-2018 was estimated by Chakraborty & Maitra (2016). The income elasticity of demand was found to have a positive impact, and a negative impact was found on the impact of exchange rate on import demand in India. The long run elasticity of import demand with respect to income was estimated to be at 0.98 and the elasticity on exchange rate (when controlled for income expenditure on income) was estimated to be at 0.47 between the period 1980 and 2018 (Chakraborty & Maitra, 2022).

### *5.2.4 Wage*

The ASI dataset was used between the period 1981 and 2018, for the estimation of wages in India. The methodology for the same was adopted from Kohli (2018).

In order to assess the money wage growth, inflation (calculated with respect to Wholesale Price Index in the category of manufactured goods), gross value added (as a proxy for output) and labour productivity growth are used as independent variables (V. Kohli, 2018). A dummy variable from the year 2005 is given, under the consideration that Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGA) will have a positive impact on wages. But the dummy variable didn't turn out to be significant in our regression. The two lags of real wage growth rate is also included in the regression, so as to assess the impact of previous wage negotiations on the current money wage growth. The second lag of real wage growth is significant in the regression (which is similar to the result obtained by Kohli (2018)), and it is argued that; "there exists a ratchet effect in wage determination" (V. Kohli, 2018).

In the regression, inflation, the growth rates of gross value added and labour productivity turn out to be significant drivers of money wages. The adjusted R square value obtained is 0.77 and

the DW stat is 1.93. After paring the model down, we obtain the following results as mirrored in the table below:

**Table 5.2 : Money wage growth (Regression estimates)**

| Money wage growth          | Coefficient | P value |
|----------------------------|-------------|---------|
| Inflation                  | 0.717       | 0.007*  |
| Gross value-added growth   | 1.2         | 0.00*   |
| Labour productivity growth | -1.06       | 0.00*   |
| Real wage growth lag 2     | 0.48        | 0.005*  |
| Constant                   | 0.77        | 0.670   |

\*below 5% significant

### 5.2.5 Profit share

The ASI data between the period 1981-2018 was employed to assess the profit share of the country. The growth rate of total value of output is subtracted over growth rate of prime costs (which include growth rates of wages and material inputs) to derive the growth rate of profits (V. Kohli, 2018). This is because the mark-up is also included in the profit component of income in the Post Keynesian model. The explanatory variables in the regression model included growth rates of gross value added and real effective exchange rate (lag 3). The adjusted R square in the model is 0.64 with the DW stat of 2.14.

**Table 5.3: Profit share growth (Regression estimates)**

| Growth rate of profit share                         | Coefficient | P value |
|-----------------------------------------------------|-------------|---------|
| Gross value-added growth                            | 0.83        | 0.00*   |
| Growth rate of real effective exchange rate (lag 3) | 0.28        | 0.05*   |
| Constant                                            | 2.5         | 0.17    |

\*below 5% significant

### 5.2.6 Employment

To attain the value of  $\theta$ , we adapt the employment elasticity estimated by Tejani (2016), who constructed a panel data using GDP estimates and the employment estimates from NSSO, attuning to various sectors over the years (Tejani, 2016). The realized value of  $\theta$  is 0.5, which is maintained to be the Kaldor-Verdoorn (K-V) coefficient for the Indian economy.

The table below mirrors the elasticities employed in the model along with their source.

**Table 5.4: Parameters of the model**

| Parameter       | Value | Source                     |
|-----------------|-------|----------------------------|
| $\partial_0$    | 0.77  | Own estimate               |
| $\partial_1$    | 1.1   | Own estimate               |
| $\gamma$        | -0.26 | SAM and National Accounts  |
| $\varepsilon_E$ | 0.53  | Kohli and Pandey           |
| $\sigma$        | 0.98  | Chakraborty & Maitra, 2022 |
| $\varepsilon_M$ | 0.47  | Chakraborty & Maitra, 2022 |
| $w_1$           | 0.71  | Own estimate               |
| $w_2$           | 1.2   | Own estimate               |
| $w_3$           | -1.06 | Own estimate               |
| $\theta$        | 0.5   | Tejani (2016)              |
| $h_1$           | 0.28  | Own estimate               |
| $h_2$           | 0.83  | Own estimate               |

### 5.2.7 Share parameters and other initial values

To measure the initial growth rate and exogenous parameters of variables, we employed the methodology adopted by Kohli (2018), and some exogenous and autonomous components were also calibrated. In accordance to his methodology, the arithmetic means between the years 2008 to 2010 were also obtained to determine the initial growth rate and the base year used for the share parameters is 2007 (V. Kohli, 2018). The final estimations based on the above is mirrored in the table below.

**Table 5.5: Share parameters and Initial Values**

| Parameter     | Value | Source     |
|---------------|-------|------------|
| $c$           | 0.57  | RBI        |
| $i$           | 0.29  | RBI        |
| $g$           | 0.19  | RBI        |
| $\varepsilon$ | 0.21  | RBI        |
| $m$           | 0.26  | RBI        |
| $h$           | 0.51  | SAM        |
| $C^\wedge$    | 7.7   | RBI        |
| $I^\wedge$    | 9.9   | RBI        |
| $G^\wedge$    | 7.6   | RBI        |
| $E^\wedge$    | 9.9   | RBI        |
| $M^\wedge$    | 12.09 | RBI        |
| $w^\wedge$    | 11.6  | ASI        |
| $p^\wedge$    | 7.9   | RBI        |
| $e^\wedge$    | 9.6   | Calibrated |
| $k^\wedge$    | 1.7   | RBI        |
| $h^\wedge$    | -1.94 | Calibrated |
| $I_0$         | 3.48  | Calibrated |
| $E_0$         | 8.99  | Calibrated |
| $M_0$         | 5.84  | Calibrated |
| $x^\wedge$    | 1.67  | Calibrated |
| $L^\wedge$    | 5.517 | Calibrated |
| $L_0$         | 1.919 | Calibrated |
| $h_0$         | -8.38 | Calibrated |
| $w_0$         | -0.87 | Calibrated |
| $X^\wedge$    | 7.195 | Calibrated |

### 5.3 Economic Growth in Indian Economy: Wage led or Profit led?

“ Generally speaking, countries should not be uniquely classified as either wage or profit led. Time horizons should be considered. The relative magnitudes of the effects of income distribution on the components of aggregate demand are likely to vary depending on the course of the business cycle. As Blecker (2016) explains, the positive effects of higher profit share on investment are mainly short-run phenomena, while the sensitivity of worker’s consumption to their income is likely to be stronger in the long run ” (Fields, 2021)

Given the limited scope of the model, it is maintained that the Indian economy is tuned towards a profit led phase.

$$\frac{dX^{\wedge}}{dh^{\wedge}} = \frac{\frac{h}{1-h} \left[ \frac{-\varepsilon \varepsilon_E w_1 - m \varepsilon_M w_1}{(1-w_1)} + (-\varepsilon \varepsilon_E - m \varepsilon_M + m) \right] + c\gamma + i\partial_0}{\left\{ \left[ \frac{(1-\theta)(w_3 - w_1) + w_2}{1-w_1} \right] (\varepsilon \varepsilon_E + m \varepsilon_M - m) + (1-\theta)(-\varepsilon \varepsilon_E - m \varepsilon_M - m) + (1-c - i\partial_0 + m\sigma) \right\}}$$

The appendix (A.5.1) furnishes the method of calculation of  $\frac{dX^{\wedge}}{dh^{\wedge}}$ . From substituting the values from tables 5.4 and 5.5, it is estimated that; as  $\frac{dX^{\wedge}}{dh^{\wedge}} > 0$ , and is at 0.48. This implies that a one unit change in profit share is tending towards a 0.48 unit change in output.

Where,  $\frac{dI^{\wedge}}{dh^{\wedge}} = \partial_0 + \partial_1 \frac{dX^{\wedge}}{dh^{\wedge}} = 1.3$ ; which denotes that one unit increase in profit share causes the investment to rise by 1.3 units.

And,  $\frac{dC^{\wedge}}{dh^{\wedge}} = \gamma + \frac{dX^{\wedge}}{dh^{\wedge}} = 0.22$ ; which indicates that a one unit increase in profit share results in 0.22 units of increase in consumption

The assertion that the Indian economy attunes to a profit-led phase, is also confirmed in the multi-country study of Onaran and Galanis, where the variables are estimated from national income accounts (Onaran & Galanis, 2012). Further, the simulations (shocks given to exogenous variables and elasticities) can aid in determining the sensitivity of the variables, and enhances the scope for policy prescriptions.

## 5.4 Simulation Results

### 5.4.1 Shock In Autonomous Profits ( $h_0$ )

#### *Increase*

When the profit shock is given to the autonomous component  $h_0$  at various levels i.e., 5, 10, 15 and 20 per cent, the growth in profit share reveals a stark rise of 13, 25, 38 and 51 per cent respectively. But the major counter effect of rise in profit share is the whopping rise in prices from the base level towards 12, 24, 36 and 49 per cent respectively. As a resultant of the rise in profit share, investment also marks a rise at various simulated shocks, i.e., 3, 6, 9 and 13 per cent. The rise in profit share may not lead to a concomitant rise in investment, which is evident from the above (and which the Kaleckian mechanism also upholds). Consumption rises by 3, 5.8, 8.7 and 11.7 per cent due to the shocks given and the resultant of all of the above, output rises by 0.73, 1.47, 2.2 and 3 per cent respectively. Though the nominal wages mark a rise, the real wages show a consistent decline due to the stark rise in price level. But at the same time, labour productivity shows a significant rise towards 3.6, 7.2, 10.8 and 14.4 per cent; which signifies a divergence between real wages and productivity levels. And the employment growth only shows a slight rise of 1, 2, 3.2 and 4.3 per cent from the base level. The real wage embarks on a constant decline towards -5, -10, -16 and -21 per cent and the output marks a slight rise of 1.6, 3.3, 5 and 6.75 per cent respectively.

**Table 5.6: Increase in Autonomous Profits ( $h_0$ )**

| $h_0$ | $h^{\wedge}$ | $I^{\wedge}$ | $p^{\wedge}$ | $L^{\wedge}$ | $x^{\wedge}$ | $k^{\wedge}$ | $C^{\wedge}$ | Real wages | $X^{\wedge}$ |
|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| -8.38 | -1.93        | 9.91         | 7.91         | 5.30         | 1.68         | 1.69         | 7.70         | 3.69       | 7.20         |
| -7.96 | -1.68        | 10.23        | 8.88         | 5.36         | 1.74         | 0.72         | 7.76         | 3.49       | 7.32         |
| -7.54 | -1.43        | 10.56        | 9.85         | 5.42         | 1.80         | -0.25        | 7.81         | 3.29       | 7.44         |
| -7.12 | -1.18        | 10.89        | 10.81        | 5.47         | 1.86         | -1.22        | 7.87         | 3.09       | 7.56         |
| -6.70 | -0.93        | 11.21        | 11.78        | 5.53         | 1.92         | -2.18        | 7.93         | 2.89       | 7.68         |

#### *Decrease*

When the autonomous profit is given a downward shock towards 5, 10, 15 and 20 per cent, the profit share marks a decline of -13, -25.5, -37.5 and -51.3 per cent respectively. As a resultant

of the same, the investment also mirrors the decline of -3.2, -6.5, -9.5 and -13 per cent. It has to be noted that the fall in investment is frivolous in comparison to the fall in profit share. Due to the above, the consumption falls mildly to -0.73, -1.45, -2.13 and -2.9 per cent. But there is quite a stark decline in prices towards -12, -24, -35.5 and -48.6 per cent, and such a sharp decline in prices is a flow in the theoretical standpoint of the Kaleckian model (Murakami & Asada, 2018). The output also marks a decline of -1.7, -3.3, -4.9 and -6.7 per cent respectively and the real wages increase by 5.4, 10.6, 15.6 and 21.4 per cent respectively. This is where the inflation targeting via fiscal policies (such as a boost in the governmental expenditure) can set foot in the argument. But this is considered outside the purview of our model.

**Table 5.7: Decrease in Autonomous Profits ( $h_0$ )**

| $h_0$  | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | $p^{\wedge}$ | Real wages | $k^{\wedge}$ | $L^{\wedge}$ | $x^{\wedge}$ | $X^{\wedge}$ |
|--------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|
| -8.38  | -1.93        | 9.91         | 7.70         | 7.91         | 3.69       | 1.69         | 5.30         | 1.68         | 7.20         |
| -8.80  | -2.18        | 9.58         | 7.64         | 6.94         | 3.89       | 2.65         | 5.25         | 1.62         | 7.08         |
| -9.21  | -2.43        | 9.26         | 7.59         | 6.00         | 4.09       | 3.60         | 5.19         | 1.56         | 6.96         |
| -9.60  | -2.66        | 8.96         | 7.54         | 5.10         | 4.27       | 4.50         | 5.14         | 1.50         | 6.84         |
| -10.05 | -2.93        | 8.61         | 7.48         | 4.06         | 4.48       | 5.53         | 5.08         | 1.44         | 6.71         |

“inflation is the symptom of deep rooted social and economic contradiction and conflict. There is no real equilibrium path. The major economic groups are claiming pieces of pie that together exceed the whole pie. Inflation is the way that their claims, so far as they are established in nominal terms, are temporarily reconciled. But it will continue and indeed accelerate so long as the basic conflicts of real claims and real power continue” - James Tobin, 1981 (Amitrano & Vasconcelos, 2019)

The Post Keynesian prescriptions upholds the association between inflation and distributional conflict. It is argued that the inflation stems from the unequal distribution between wages and profits, which is the resultant of the rise in mark-ups and decline in the bargaining power of workers (Amitrano & Vasconcelos, 2019). In the Kaleckian model, inflation leads to rise in profits because of the drop in the purchasing power of workers (in real terms). It is this difference in balance of power between the two social classes, i.e., workers and capitalists, which in turn, affects the price level. (Vernengo, 2003)

And though the country shows an attunement towards profit-led growth, it is detected that a shock in autonomous profits can result in adverse outcomes. The increase in profit share is resulting in increased investment, consumption, employment growth, productivity and output at the cost of soaring inflation. While at the same time, a fall in profit share leads to a humungous decline in price level, along with a fall in employment growth and productivity, and even consumption falls mildly at the effect of the same. And the substantial rise (fall) in output due to increased (decreased) profit share can be attributed to the fall (rise) in competitiveness.

#### 5.4.2 Autonomous Wage Shock

##### *Increase*

When the wage rate ( $w_0$ ) is simulated to increase by 10, 20, 30 and 40 per cent,  $w^\wedge$  marks a slight increase of 1.7, 3.5, 5.3 and 6.9 per cent. As a result, the price level rises by 2, 4, 6 and 7.8 per cent from the base level, but the real wages rises towards 1.2, 2.4, 3.7 and 4.8 per cent. The rise in price level causes a decline in the level of competitiveness by about -9.5, 19, -28.4 and -36.8 per cent. The profit share and investment falls towards -2.2, -4.4, -6.6 and -8.5 per cent and -0.3, -0.6, -0.9 and -1.16 per cent respectively. And consumption and output marks a slight rise of 0.18, 0.36, 0.54 and 0.7 per cent and 0.04, 0.08, 0.12 and 0.16 per cent from the base level.

**Table 5.8: Increase in Wage Shock ( $w_0$ )**

| $w_0$ | $w^\wedge$ | $p^\wedge$ | Real wages | $k^\wedge$ | $h^\wedge$ | $I^\wedge$ | $C^\wedge$ | $X^\wedge$ |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|
| -0.87 | 11.60      | 7.91       | 3.69       | 1.69       | -1.93      | 9.91       | 7.70       | 7.20       |
| -0.78 | 11.81      | 8.07       | 3.74       | 1.53       | -1.98      | 9.88       | 7.71       | 7.20       |
| -0.69 | 12.01      | 8.23       | 3.78       | 1.37       | -2.02      | 9.85       | 7.73       | 7.20       |
| -0.60 | 12.22      | 8.39       | 3.83       | 1.21       | -2.06      | 9.82       | 7.74       | 7.21       |
| -0.52 | 12.40      | 8.53       | 3.87       | 1.07       | -2.10      | 9.79       | 7.75       | 7.21       |

##### *Decrease*

When the wage rate ( $w_0$ ) is simulated to decrease by 10, 20, 30 and 40 per cent,  $w^\wedge$  marks a slight decline of -1.5, -3.3, -5 and -6.7 per cent from the base level. And the price level also

marks a decline by about -1.8, -3.8, -5.8 and -7.6 per cent, but the real wages shrink by -1, -2.3, -3.5 and -4.6 per cent respectively. As a result of decline in price level, competitiveness rises by about 8.4, 17.8, 27.3 and 35.7 per cent from the base level. The profit share and investment rises towards 1.9, 4.14, 6.33 and 8.28 per cent and 0.26, 0.56, 0.86 and 1.12 per cent respectively. And consumption and output marks a slight decline of -0.16, -0.34, -0.52 and -0.68 per cent and -0.04, -0.08, -0.12 and -0.15 per cent from the base level.

**Table 5.9: Decrease in Wage Shock ( $w_0$ )**

| $w_0$ | $w^\wedge$ | $p^\wedge$ | Real wages | $k^\wedge$ | $h^\wedge$ | $I^\wedge$ | $C^\wedge$ | $X^\wedge$ |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|
| -0.87 | 11.60      | 7.91       | 3.69       | 1.69       | -1.93      | 9.91       | 7.70       | 7.20       |
| -0.95 | 11.42      | 7.77       | 3.65       | 1.83       | -1.90      | 9.93       | 7.69       | 7.19       |
| -1.04 | 11.21      | 7.61       | 3.61       | 1.99       | -1.85      | 9.96       | 7.67       | 7.19       |
| -1.13 | 11.01      | 7.45       | 3.56       | 2.15       | -1.81      | 9.99       | 7.66       | 7.19       |
| -1.21 | 10.83      | 7.31       | 3.52       | 2.29       | -1.77      | 10.02      | 7.65       | 7.19       |

It can be deciphered that the autonomous rise (fall) in wages have a slight positive (negative) effect on output. The effect of output on increased wages is offset by a decline in profit share followed by a mild decline in investment, increased price level and hence, falling competitiveness. On the contrary, the decline in autonomous wages is being offset by the increasing profit share, a mild rise in investment and higher competitiveness. Even though the Indian economy is established to be profit led, it is mirrored from the simulations that the rise in profit share and competitiveness cannot neutralize the decline in autonomous wages.

#### 5.4.3 Export shock (increase)

When the autonomous shocks in exports are given at levels of 5, 10, 15 and 20 per cent, there is a slight increase in the growth rate of exports towards 1.5, 3, 4.4 and 6 per cent. As a resultant of the same, output also marks a rise towards 4.4, 9, 13.3 and 17.78 per cent. It accelerates the increased growth rate of investment and consumption towards 4.4, 8.8, 13 and 17.5 per cent and 3.8, 7.6, 11.3 and 15.9 per cent respectively. This reciprocates in the growth of profit share and it rises towards 5.5, 11, 16.5 and 22 per cent from the base level. The price level also rises by about 7.2, 14.4, 21.5 and 28.7 from the base, which results in the decline in competitiveness towards -33.8, -67.7, -100.8 and -134.7. There is a slight increase in real wages towards 1.3,

2.7, 4 and 5.35 per cent and output also increases towards 4.4, 8.9, 13.3 and 17.7 per cent from the base level.

**Table 5.10: Increase in Export Shock ( $E_0$ )**

| $E_0$ | $E^\wedge$ | $k^\wedge$ | $p^\wedge$ | $h^\wedge$ | $C^\wedge$ | $I^\wedge$ | Real wages | $X^\wedge$ |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|
| 8.99  | 9.89       | 1.69       | 7.91       | -1.93      | 7.70       | 9.91       | 3.69       | 7.20       |
| 9.44  | 10.03      | 1.12       | 8.48       | -1.83      | 7.99       | 10.34      | 3.74       | 7.52       |
| 9.89  | 10.18      | 0.55       | 9.05       | -1.72      | 8.29       | 10.78      | 3.79       | 7.84       |
| 10.33 | 10.32      | -0.01      | 9.61       | -1.62      | 8.58       | 11.21      | 3.84       | 8.16       |
| 10.78 | 10.47      | -0.59      | 10.19      | -1.51      | 8.87       | 11.64      | 3.89       | 8.48       |

“there are signs that we are at the cusp of the transition to a new regime in which the rules of the game will not be nearly as accommodating for export led strategies” - Rodrick, 2008 (Blecker & Razmi, 2010)

In the past two decades, developing countries have oriented towards export led growth. But the effects of simulations (as explained above) mirror the argument that there is a need to rethink the strategy of export led growth in itself, as established by the Post Keynesians. This is because, though the steep decline in competitiveness can positively impact the trade of a developing country in the short run; the beneficial effect of the same is offset by the depreciation of the real exchange rate with respect to the developed countries (Blecker & Razmi, 2010). It is revealed that though the spike in autonomous exports is leading to increased output, consumption and real wages, it is at the cost of inflation and thereby, declined competitiveness. Due to the ‘fallacy of composition’, increased exports may not be a feasible pathway for the acceleration of output in India.

#### *5.4.4 Autonomous employment growth shock (Increase)*

When the shock (increase) is given to the autonomous component of employment  $L_0$  by 5, 10, 15 and 20 per cent, the growth of employment rises by about 3.7, 7.4, 11.3 and 14.8 per cent. The price level marks an increase towards 8.8, 17.6, 26.8 and 35.2 per cent, and the money

wages shows a steep rise due to the same. Though the increase in money wages offset the rise in prices, the real wages reveals only a slight rise towards 0.22, 0.44, 0.67 and 0.88 per cent from the base level. But the profit share and competitiveness mark a decline by about -9.5, -19, -29 and -38 per cent and -41, -82.5, -125.8 and -164.8 per cent respectively, which further distorts the trade balance. The investment also marks a slight decline of -1.3, -2.6, -4 and -5.18 per cent as a result, and on the contrary, consumption rises towards 0.79, 1.57, 2.4 and 3.14 per cent from the base level. And overall, the output marks a slight rise (due to the strength in consumption) of 0.18, 0.35, 0.53 and 0.7 per cent.

**Table 5.11: Increase in Autonomous Employment Growth ( $L_0$ )**

| $L_0$ | $L^{\wedge}$ | $x^{\wedge}$ | $p^{\wedge}$ | Real wages | $k^{\wedge}$ | $E^{\wedge}$ | $M^{\wedge}$ | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | $X^{\wedge}$ |
|-------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1.92  | 5.30         | 1.68         | 7.91         | 3.69       | 1.69         | 9.89         | 12.10        | -1.93        | 9.91         | 7.70         | 7.20         |
| 2.11  | 5.50         | 1.49         | 8.61         | 3.70       | 0.99         | 9.51         | 12.44        | -2.12        | 9.78         | 7.76         | 7.21         |
| 2.30  | 5.69         | 1.31         | 9.31         | 3.71       | 0.29         | 9.15         | 12.78        | -2.30        | 9.65         | 7.82         | 7.22         |
| 2.50  | 5.90         | 1.12         | 10.04        | 3.72       | -0.44        | 8.76         | 13.14        | -2.50        | 9.52         | 7.88         | 7.24         |
| 2.68  | 6.09         | 0.94         | 10.70        | 3.72       | -1.10        | 8.41         | 13.46        | -2.67        | 9.40         | 7.94         | 7.25         |

The autonomous increase in employment growth is strengthening consumption and output, but at the cost of inflation, profit share and competitiveness. It implies that though measures can be adopted to boost employment growth, it cannot be a sole measure in upheaving the output. Moreover, the distributional concerns also remain untargeted as the real wages only show a modest increase.

#### 5.4.5 Simulations on elasticities

##### *Elasticity of consumption on profit share ( $\gamma$ )*

The association between consumption and profit share is that one per cent increase in profit share results in a fall in consumption by 0.26 per cent. If ( $\gamma$ ) is simulated to rise by 10, 20, 30 and 40 per cent, then the consumption falls by -2, -4.3, -5.8 and -8.2 per cent from the base level. This leads to the fall in output and investment towards -1.5, -3.25, -4.4 and -6 per cent and -1.5, -3.2, -4.3 and -6.8 per cent respectively. The growth of profit share also marks a slight decline towards -1.9, -4, -5.4 and -7.6 per cent from the base level. The growth of employment marks a decline towards -1, -2, -2.81 and -3.9 per cent; which also reflects in the growth of

labour productivity and it declines by -3.4, -7, -9.4 and -13.2 per cent respectively. Due to the above, the price level shows a decline, which reveals the deflationary tendency in the economy. The price level declines by -2.5, -5.2, -7 and -9.9 per cent, but it paves the way for a rise in competitiveness towards 12, 24.6, 33.3 and 46.7 per cent. This leads to a rise in exports and decline in imports, but it is revealed that the increase in competitiveness isn't enough to offset the decline in consumption and investment.

**Table 5.12: Elasticity of Consumption on Profit share (increase)**

| $\gamma$ | $C^\wedge$ | $X^\wedge$ | $I^\wedge$ | $h^\wedge$ | $L^\wedge$ | $x^\wedge$ | $p^\wedge$ | $k^\wedge$ |
|----------|------------|------------|------------|------------|------------|------------|------------|------------|
| -0.26    | 7.70       | 7.20       | 9.91       | -1.93      | 5.30       | 1.68       | 7.91       | 1.69       |
| -0.23    | 7.54       | 7.08       | 9.75       | -1.97      | 5.25       | 1.62       | 7.71       | 1.89       |
| -0.20    | 7.37       | 6.96       | 9.59       | -2.01      | 5.19       | 1.56       | 7.49       | 2.11       |
| -0.18    | 7.25       | 6.88       | 9.48       | -2.04      | 5.15       | 1.52       | 7.35       | 2.25       |
| -0.15    | 7.07       | 6.75       | 9.31       | -2.08      | 5.09       | 1.46       | 7.12       | 2.48       |

The  $\gamma$  can be assessed as a sensitive component even for a profit led economy like India. In the Post Keynesian mechanism, it is argued that a rise in profit share can cause a fall in the profit rate. This can be said to be a truism in the case of Indian economy as the increased elasticity of consumption on profit share is affecting output, investment and profit share in itself. Though there is an upturn in competitiveness, the effects of the same couldn't compensate for the falling investment and consumption. The economy shows a deflationary tendency with dampened productivity and employment growth.

### *Elasticity of employment on output ( $\theta$ )*

#### Decrease

The association between employment and output ( $\theta$ ) is that, a one per cent increase in output results in 0.5 per cent rise in employment. If the respective elasticity of output to employment is simulated to fall by 5, 10, 15 and 20 per cent, the growth rate of employment falls sharply by -4, -6.7, -10.6 and -13.3 per cent respectively. The corresponding elasticity also has a direct interdependence with labour productivity, which rises by 12.4, 20.6, 28.8 and 41 per cent as a result. The above effects lead to the fall in the price level towards -10, -16.6, -23.2 and -33 per cent from the base level, and this paves the way for a rise in competitiveness by 46.6, 77.7,

108.6 and 155 per cent. These lead to a fall in real wages towards -0.27, -0.27, -0.54 and -0.81, even though the system exhibits deflationary tendencies. The profit share rises by about 10.8, 18, 25 and 35.8 per cent and as a result, the investment shows a slight rise towards 1.4, 2.4, 3.4 and 4.8; but consumption declines by -0.9, -1.5, -2 and -3 per cent. But overall, the output shows a decline by about -0.2, -0.3, -0.4 and -0.6 from the base level.

**Table 5.13: Elasticity of Employment on Output (decrease)**

| $\theta$ | (1- $\theta$ ) | $L^{\wedge}$ | $x^{\wedge}$ | $p^{\wedge}$ | $k^{\wedge}$ | Real wages | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | $X^{\wedge}$ |
|----------|----------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|
| 0.50     | 0.50           | 5.52         | 1.68         | 7.91         | 1.69         | 3.69       | -1.93        | 9.91         | 7.70         | 7.20         |
| 0.47     | 0.53           | 5.30         | 1.89         | 7.12         | 2.48         | 3.68       | -1.72        | 10.05        | 7.63         | 7.18         |
| 0.45     | 0.55           | 5.15         | 2.03         | 6.60         | 3.00         | 3.68       | -1.59        | 10.15        | 7.59         | 7.17         |
| 0.42     | 0.57           | 4.93         | 2.16         | 6.08         | 3.52         | 3.67       | -1.45        | 10.25        | 7.54         | 7.16         |
| 0.40     | 0.60           | 4.78         | 2.37         | 5.29         | 4.31         | 3.66       | -1.24        | 10.39        | 7.47         | 7.15         |

When  $\theta$  is simulated to decrease, there are reverberations on employment growth, real wages, consumption and output. Though profit share shows an increasing trend, investment only rise modestly; which places the economy in a deflationary peril. And the repercussions of the above effects aren't counterbalanced by a steep rise in competitiveness.

#### Increase

If the respected elasticity of output on employment ( $\theta$ ) is simulated to rise by 5, 10, 15 and 20 per cent, the growth of employment rises by about 3.4, 6.7, 10 and 13.5 per cent respectively. As a result, the labour productivity falls by about -12.4, -20.7, -33.3 and -41 per cent and further the prices show a rise towards 10, 16.7, 26.7 and 33.5 per cent from the base level. This paves the way for the stark decline in competitiveness of -46.8, -78.2, -125.4 and -157 per cent, thereby distorting the terms of trade. But the real wages show a slight rise towards 0.21, 0.54, 0.81 and 0.81 per cent from the base level. The profit share declines by about 10.8, 18, 29 and 36.3 per cent and due to the same; investment marks a slight fall of -1.4, -2.4, -4 and -5 per cent and the consumption rises by 0.89, 1.5, 2.4 and 3 per cent respectively. And overall, the output also rises by 0.2, 0.33, 0.53 and 0.66 per cent, which implies that the sharp rise in consumption outweighs the trade distortions.

**Table 5.14 Elasticity of Employment on Output (increase)**

| $\theta$ | $(1-\theta)$ | $L^{\wedge}$ | $x^{\wedge}$ | $p^{\wedge}$ | $k^{\wedge}$ | Real wages | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | $X^{\wedge}$ |
|----------|--------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|
| 0.50     | 0.50         | 5.52         | 1.68         | 7.91         | 1.69         | 3.69       | -1.93        | 9.91         | 7.70         | 7.20         |
| 0.53     | 0.47         | 5.71         | 1.47         | 8.70         | 0.90         | 3.70       | -2.14        | 9.76         | 7.77         | 7.21         |
| 0.55     | 0.45         | 5.89         | 1.33         | 9.23         | 0.37         | 3.71       | -2.28        | 9.66         | 7.81         | 7.22         |
| 0.58     | 0.42         | 6.08         | 1.12         | 10.03        | -0.43        | 3.72       | -2.49        | 9.52         | 7.88         | 7.24         |
| 0.60     | 0.40         | 6.27         | 0.98         | 10.56        | -0.96        | 3.72       | -2.64        | 9.42         | 7.93         | 7.25         |

When  $\theta$  is simulated to increase, the positive effects on employment growth leads to a rise in real wages, consumption. The same causes inflation, which negatively affects competitiveness, profit share and investment; but these doesn't negate the positive effects on consumption, but slightly escalates the same.

#### *Increase in money wage bargaining*

##### *Increase in $w_1$*

In the model  $w_1$  is estimated to be 0.71, and is maintained that a 1 per cent increase in inflation results in an increase in money wages of 0.71 per cent. When the money wage bargaining power is increased via simulations by 5, 10, 15 and 20 percent, the growth rate of wages rises by 4.9, 12.4, 18.9 and 29 per cent from the base level. But as a result, there is a rise in price level by about 5.6, 14.2, 21.6 and 33.1 per cent, which causes a decline in competitiveness towards -26.3, -66.5, -101.2 and -155 per cent. This further distorts the profit share to -6, -15.4, -23.4 and -36 per cent, which leads to a slight decline in investment towards -0.83, -2, -3.18 and -4.8 per cent from the base level. On the contrary, consumption and output marks a slight rise by 0.5, 1.27, 2 and 3 per cent and 0.11, 0.28, 0.43 and 0.66 per cent respectively. The real wages also mirror a rise of 3.4, 8.6, 13 and 20 per cent from the base level.

**Table 5.15: Elasticity of Money Wages to Inflation (increase)**

| $w_1$ | $w^{\wedge}$ | $p^{\wedge}$ | $k^{\wedge}$ | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | $X^{\wedge}$ | Real wages |
|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| 0.71  | 11.60        | 7.91         | 1.69         | -1.93        | 9.91         | 7.70         | 7.20         | 3.69       |

|             |              |              |              |              |             |             |             |             |
|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
| <b>0.74</b> | <b>12.18</b> | <b>8.36</b>  | <b>1.24</b>  | <b>-2.05</b> | <b>9.83</b> | <b>7.74</b> | <b>7.21</b> | <b>3.82</b> |
| <b>0.78</b> | <b>13.05</b> | <b>9.03</b>  | <b>0.57</b>  | <b>-2.23</b> | <b>9.70</b> | <b>7.80</b> | <b>7.22</b> | <b>4.01</b> |
| <b>0.81</b> | <b>13.80</b> | <b>9.62</b>  | <b>-0.02</b> | <b>-2.39</b> | <b>9.59</b> | <b>7.85</b> | <b>7.23</b> | <b>4.18</b> |
| <b>0.85</b> | <b>14.97</b> | <b>10.53</b> | <b>-0.93</b> | <b>-2.63</b> | <b>9.43</b> | <b>7.93</b> | <b>7.24</b> | <b>4.44</b> |

When  $w_1$  is simulated to increase, it leads to a fall in competitiveness (due to inflation), profit share and investment. But the above effects are offset by the rise in consumption which causes the output to increase. Hence it can be argued that the increase in the bargaining power of the workers can result in the rise in the overall output even for an economy which is profit-led.

#### *Increase in $w_2$*

In the model  $w_2$  is estimated to be 1.2, and is maintained that a 1 per cent increase in output results in an increase in money wages of 1.2 per cent. When the elasticity of money wage with respect to output is increased via simulations by 5, 10, 15 and 20 per cent, the growth rate of wages rises by 8.5, 17, 25.6 and 34.2 per cent. Even though the price levels mark a sharp rise by about 9.7, 19.4, 29.2 and 39 per cent, the real wages also rise towards 6, 11.9, 17.8 and 23.8 per cent from the base level. But the competitiveness mirrors a decline of -45.5, -91, -137 and -183 per cent, which leads to a rise in imports and decline in exports in the country. The profit share drops down by about 10.5, 21, 31.7 and 42.4 per cent and as a result, investment shows a slight decline towards -1.43, -2.86, -4.3 and -5.75 from the base level. On the other hand, the consumption and real output rises by 0.87, 1.7, 2.6 and 3.5 per cent and 0.2, 0.4, 0.58 and 0.77 per cent respectively.

**Table 5.16: Elasticity of Money Wages to Output (increase)**

| <b><math>w_2</math></b> | <b><math>w^\wedge</math></b> | <b><math>p^\wedge</math></b> | <b>Real wages</b> | <b><math>k^\wedge</math></b> | <b><math>h^\wedge</math></b> | <b><math>I^\wedge</math></b> | <b><math>C^\wedge</math></b> | <b><math>X^\wedge</math></b> |
|-------------------------|------------------------------|------------------------------|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <b>1.20</b>             | <b>11.60</b>                 | <b>7.91</b>                  | <b>3.69</b>       | <b>1.69</b>                  | <b>-1.93</b>                 | <b>9.91</b>                  | <b>7.70</b>                  | <b>7.20</b>                  |
| <b>1.26</b>             | <b>12.59</b>                 | <b>8.68</b>                  | <b>3.91</b>       | <b>0.92</b>                  | <b>-2.14</b>                 | <b>9.77</b>                  | <b>7.77</b>                  | <b>7.21</b>                  |
| <b>1.32</b>             | <b>13.58</b>                 | <b>9.45</b>                  | <b>4.13</b>       | <b>0.15</b>                  | <b>-2.34</b>                 | <b>9.62</b>                  | <b>7.83</b>                  | <b>7.22</b>                  |
| <b>1.38</b>             | <b>14.58</b>                 | <b>10.23</b>                 | <b>4.35</b>       | <b>-0.63</b>                 | <b>-2.55</b>                 | <b>9.48</b>                  | <b>7.90</b>                  | <b>7.24</b>                  |
| <b>1.44</b>             | <b>15.58</b>                 | <b>11.00</b>                 | <b>4.57</b>       | <b>-1.40</b>                 | <b>-2.75</b>                 | <b>9.34</b>                  | <b>7.97</b>                  | <b>7.25</b>                  |

When  $w_2$  is simulated to increase, irrespective of the rising prices, and hence declining competitiveness, profit share and investment; the output marks an increase due to the strength in consumption.

#### *Increase in $w_3$*

In the model  $w_3$  is estimated to be -1.06, and is maintained that a 1 per cent increase in productivity results in a decline in money wages of -1.06 per cent. When the elasticity of money wage with respect to productivity is increased via simulations by 10, 20, 30 and 40 per cent, the growth rate of money wages rises by 3.6, 7.3, 10.6 and 14.3 per cent from the base level. But as a result, though the prices rise towards 4, 8.3, 12 and 16.3 per cent, the real wages marks a towards 2.5, 5, 7.4 and 10 per cent respectively. Due to the rise in price level, competitiveness declines starkly by about -19.5, -39, -56.8 and -76.4 per cent from the base level; which further leads to a rise in imports and decline in exports. The profit share and investment falls from 4.5, 9, 13 and 17.7 per cent and -0.6, -1.23, -1.78 and -2.4 per cent respectively. And consumption and output marks a slight rise of 0.37, 0.74, 1 and 1.46 per cent and 0.08, 0.17, 0.24 and 0.32 per cent from the base level.

**Table 5.17: Elasticity of Money Wages to Productivity (increase)**

| $w_3$ | $w^\wedge$ | $p^\wedge$ | Real wages | $k^\wedge$ | $h^\wedge$ | $I^\wedge$ | $C^\wedge$ | $X^\wedge$ |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|
| -1.06 | 11.60      | 7.91       | 3.69       | 1.69       | -1.93      | 9.91       | 7.70       | 7.20       |
| -0.95 | 12.03      | 8.24       | 3.79       | 1.36       | -2.02      | 9.85       | 7.73       | 7.20       |
| -0.84 | 12.45      | 8.57       | 3.88       | 1.03       | -2.11      | 9.79       | 7.76       | 7.21       |
| -0.74 | 12.84      | 8.87       | 3.97       | 0.73       | -2.19      | 9.73       | 7.78       | 7.21       |
| -0.63 | 13.26      | 9.20       | 4.06       | 0.40       | -2.28      | 9.67       | 7.81       | 7.22       |

When  $w_3$  is simulated to rise, there is only a modest increase in consumption and output. This is because of the decline in competitiveness, profit share and investment. But the effect on investment due to fall in profit share is moderate.

#### *Decrease in $h_2$*

In the model  $h_2$  is estimated to be 0.83, and is maintained that a 1 per cent increase in output results in an increase in profit share of 0.83 per cent. When the elasticity of profit share with

respect to output is declined via simulations by 5, 10, 15 and 20 per cent, the growth of profit share declines by -10.9, -19.4, -27.7 and -35.8 per cent respectively. There is a steep decline in price level by -10.3, -18.3, -26.2 and -33.4 per cent, and the investment declines by -2.7, -4.9, -7.06 and -9 percent. As a result of the fall in prices, there is an increase in competitiveness by 48.3, 86, 123 and 159 per cent, which led to the rise in exports and decline of imports. But there is a decline in consumption by about -0.6, -1.1, -1.5 and -2.04 per cent and a stupendous decline in output by -1.4, -2.5, -3.6 and -4.6 per cent from the base level.

**Table 5.18: Elasticity of Profit share to Output (decrease)**

| $h_2$       | $h^{\wedge}$ | $p^{\wedge}$ | $I^{\wedge}$ | $k^{\wedge}$ | $X^{\wedge}$ | $C^{\wedge}$ | $L^{\wedge}$ |
|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>0.83</b> | <b>-1.93</b> | <b>7.91</b>  | <b>9.91</b>  | <b>1.69</b>  | <b>7.20</b>  | <b>7.70</b>  | <b>5.52</b>  |
| <b>0.78</b> | <b>-2.14</b> | <b>7.09</b>  | <b>9.63</b>  | <b>2.51</b>  | <b>7.09</b>  | <b>7.65</b>  | <b>5.47</b>  |
| <b>0.74</b> | <b>-2.31</b> | <b>6.46</b>  | <b>9.42</b>  | <b>3.14</b>  | <b>7.01</b>  | <b>7.62</b>  | <b>5.43</b>  |
| <b>0.70</b> | <b>-2.47</b> | <b>5.83</b>  | <b>9.21</b>  | <b>3.77</b>  | <b>6.94</b>  | <b>7.58</b>  | <b>5.39</b>  |
| <b>0.66</b> | <b>-2.63</b> | <b>5.22</b>  | <b>9.00</b>  | <b>4.38</b>  | <b>6.86</b>  | <b>7.54</b>  | <b>5.35</b>  |

When  $h_2$  is declined via simulations, it negatively affects profit share and investment. And there is a fall in price level in the economy, which results in increased competitiveness. But the fall in consumption and investment leads to decreased output in the economy. The deflationary tendency in the economy is the outcome of its profit-led nature.

#### *Increase in $h_2$*

When the elasticity of profit share with respect to output is increased via simulations by 5, 10, 15 and 20 per cent, the growth of profit share increases by 9, 18, 27.5 and 37 per cent. The price level rises by 8.5, 17.17, 26 and 35 per cent, which results in a decline in competitiveness towards -39.7, -80.3, -122 and -164.7 from the base level. As profit share declines, the investment and consumption goes up by 2.3, 4.6, 7 and 9.45 per cent and 0.5, 1, 1.5 and 2 per cent respectively. But the real wages decline by -3.7, -7.5, -11.5 and -15.5 percent, though the growth of productivity rises by 2.5, 5, 7.7 and 10.4 per cent. And the output marks an increase by about 1.17, 2.37, 3.6 and 4.85 per cent from the base level.

**Table 5.19: Elasticity of Profit share to Output (increase)**

| $h_2$ | $h^{\wedge}$ | $p^{\wedge}$ | $h^{\wedge}$ | $I^{\wedge}$ | $C^{\wedge}$ | Real wages | $x^{\wedge}$ | $X^{\wedge}$ |
|-------|--------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|
| 0.83  | -1.93        | 7.91         | -1.93        | 9.91         | 7.70         | 3.69       | 1.68         | 7.20         |
| 0.87  | -1.76        | 8.58         | -1.76        | 10.13        | 7.74         | 3.55       | 1.72         | 7.28         |
| 0.91  | -1.58        | 9.27         | -1.58        | 10.37        | 7.78         | 3.41       | 1.76         | 7.37         |
| 0.95  | -1.40        | 9.97         | -1.40        | 10.60        | 7.82         | 3.27       | 1.81         | 7.46         |
| 0.99  | -1.22        | 10.69        | -1.22        | 10.85        | 7.86         | 3.12       | 1.85         | 7.55         |

When  $h_2$  is increased via simulations, the profit share, investment, consumption, productivity and output marks a rise. The price level marks an increase, but the real wages stoop down in the economy.

#### *Increase in $h_1$*

$h_1$  represents the elasticity of profit share with respect to competitiveness. A one per cent increase in competitiveness results in a 0.28 per cent rise in profit share. When  $h_1$  is simulated to increase by 10, 20, 30 and 40 per cent, the profit share rises by 1, 2.3, 3.5 and 4.5 per cent. As a result, investment rises slightly by 0.25, 0.58, 0.88 and 1.15 per cent from the base level. The prices show a slight rise of 0.94, 2.2, 3.3 and 4.3 per cent but the real wages decline by -0.4, -0.97, -1.47 and -1.9 per cent. The competitiveness declines by -4.4, -10.3, -15.5 and -20.2 per cent from the base level. The output and consumption mark a slight rise of 0.13, 0.3, 0.46 and 0.6 per cent and 0.06, 0.13, 0.2 and 0.26 per cent respectively.

**Table 5.20: Elasticity of Profit Share to Competitiveness (increase)**

| $h_1$ | $h^{\wedge}$ | $p^{\wedge}$ | Real wages | $k^{\wedge}$ | $E^{\wedge}$ | $M^{\wedge}$ | $I^{\wedge}$ | $X^{\wedge}$ | $C^{\wedge}$ |
|-------|--------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.28  | -1.93        | 7.91         | 3.69       | 1.69         | 9.89         | 12.10        | 9.91         | 7.20         | 7.70         |
| 0.30  | -1.91        | 7.99         | 3.68       | 1.61         | 9.84         | 12.15        | 9.93         | 7.21         | 7.70         |
| 0.33  | -1.89        | 8.09         | 3.66       | 1.51         | 9.79         | 12.20        | 9.97         | 7.22         | 7.71         |
| 0.36  | -1.87        | 8.17         | 3.64       | 1.43         | 9.74         | 12.26        | 10.00        | 7.23         | 7.72         |
| 0.39  | -1.85        | 8.25         | 3.62       | 1.35         | 9.70         | 12.30        | 10.02        | 7.24         | 7.72         |

An increase in  $h_1$  can result in the decline in profit share and competitiveness (which leads to a rise in imports and decline in exports) and real wages. The price level, consumption, investment and output marks a modest increase as a result of the same.

#### *Decrease in $h_1$*

When  $h_1$  is simulated to decrease by 10, 20, 30 and 40 per cent, the profit share declines by 1.6, 3.6, 5.9 and 8.6 per cent. As a result, investment falls by -0.4, -0.9, -1.5 and -2.2 per cent. The price level shows a fall of -1.6, -3.43, -5.6 and -8.16 per cent and the real wages slightly increase by 0.7, 1.5, 2.47 and 3.6 per cent. The competitiveness rises by 7.4, 16, 26 and 38.2 per cent from the base level. But the output and consumption mark a fall of -0.22, -0.47, -0.77 and -1.13 per cent and -0.1, -0.21, -0.33 and -0.49 per cent respectively.

**Table 5.21: Elasticity of Profit Share to Competitiveness (decrease)**

| $h_1$       | $h^{\wedge}$ | $p^{\wedge}$ | Real wages  | $k^{\wedge}$ | $E^{\wedge}$ | $M^{\wedge}$ | $I^{\wedge}$ | $X^{\wedge}$ | $C^{\wedge}$ |
|-------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>0.28</b> | <b>-1.93</b> | <b>7.91</b>  | <b>3.69</b> | <b>1.69</b>  | <b>9.89</b>  | <b>12.10</b> | <b>9.91</b>  | <b>7.20</b>  | <b>7.70</b>  |
| <b>0.25</b> | <b>-1.97</b> | <b>7.79</b>  | <b>3.72</b> | <b>1.81</b>  | <b>9.95</b>  | <b>12.03</b> | <b>9.87</b>  | <b>7.18</b>  | <b>7.69</b>  |
| <b>0.22</b> | <b>-2.00</b> | <b>7.64</b>  | <b>3.75</b> | <b>1.96</b>  | <b>10.03</b> | <b>11.94</b> | <b>9.82</b>  | <b>7.16</b>  | <b>7.68</b>  |
| <b>0.19</b> | <b>-2.05</b> | <b>7.47</b>  | <b>3.78</b> | <b>2.13</b>  | <b>10.12</b> | <b>11.84</b> | <b>9.76</b>  | <b>7.14</b>  | <b>7.67</b>  |
| <b>0.16</b> | <b>-2.10</b> | <b>7.27</b>  | <b>3.83</b> | <b>2.33</b>  | <b>10.23</b> | <b>11.72</b> | <b>9.69</b>  | <b>7.12</b>  | <b>7.66</b>  |

A decrease in  $h_1$  brings out profit share but improves competitiveness. And the real wage marks an increase due to the decline in price level. But the overall output declines due to the decline in consumption and investment.

#### *Decrease in $\delta_0$*

In the model,  $\delta_0$  is estimated to be 0.77, which indicates the elasticity of profit share with respect to investment. When the elasticity of profit share with respect to investment is decreased via simulations by 5, 10, 15 and 20 per cent, the growth of investment increases by 1.8, 3.5, 5.2 and 6.9 per cent. This causes the output to increase by 1, 2, 3 and 4 per cent and profit share rises by 1.3, 2.5, 3.8 and 5 per cent from the base level. The price level rises by

1.7, 3.34, 5 and 6.5 per cent, but the real wages increase by 0.3, 0.6, 0.9 and 1.2 per cent. Due to the rise in price level, the competitiveness declines by -8, -15.6, -23.2 and -30.5 per cent. The consumption also marks an increase towards 0.9, 1.7, 2.6 and 3.4 per cent from the base level.

**Table 5.22: Elasticity of Profit Share to Investment (decrease)**

| $\delta_0$ | $I^\wedge$ | $X^\wedge$ | $h^\wedge$ | $p^\wedge$ | Real wages | $k^\wedge$ | $C^\wedge$ |
|------------|------------|------------|------------|------------|------------|------------|------------|
| 0.77       | 9.91       | 7.20       | -1.93      | 7.91       | 3.69       | 1.69       | 7.70       |
| 0.73       | 10.09      | 7.27       | -1.91      | 8.04       | 3.70       | 1.56       | 7.77       |
| 0.69       | 10.26      | 7.35       | -1.88      | 8.18       | 3.72       | 1.42       | 7.84       |
| 0.65       | 10.43      | 7.42       | -1.86      | 8.30       | 3.73       | 1.30       | 7.90       |
| 0.61       | 10.60      | 7.49       | -1.84      | 8.43       | 3.74       | 1.17       | 7.96       |

*Increase in  $\delta_0$*

The elasticity of investment with respect to profit share ( $\delta_0$ ) is computed to be 0.77, which implies that a one per cent rise in profit share is associated with a 0.77 per cent increase in investment. When  $\alpha_0$  is increased via simulations by 5, 10, 15 and 20 per cent, the growth of investment declines by -1.3, -3.27, -5.2 and -7.2 per cent. As a result, the growth rate of output and profit share also falls down towards -0.8, -1.9, -3 and -4.18 per cent and 1, 2.35, 3.7 and 5.17 per cent respectively. The price level declines by -1.3, -3, -4.9 and -6.7 per cent and hence, the competitiveness rises by 6, 14.4, 22.9 and 31.7 per cent from the base level. The real wages and consumption mark a slight decline towards -0.24, -0.57, -0.91 and -1.26 and -0.7, -1.62, -2.58 and -3.57 per cent respectively.

**Table 5.23: Elasticity of Profit share to Investment (increase)**

| $\delta_0$ | $I^\wedge$ | $X^\wedge$ | $h^\wedge$ | $p^\wedge$ | $k^\wedge$ | Real wages | $C^\wedge$ |
|------------|------------|------------|------------|------------|------------|------------|------------|
| 0.77       | 9.91       | 7.20       | -1.93      | 7.91       | 1.69       | 3.69       | 7.70       |
| 0.80       | 9.77       | 7.14       | -1.95      | 7.81       | 1.79       | 3.68       | 7.65       |
| 0.84       | 9.58       | 7.06       | -1.98      | 7.67       | 1.93       | 3.67       | 7.57       |
| 0.88       | 9.39       | 6.98       | -2.01      | 7.52       | 2.08       | 3.66       | 7.50       |

|             |             |             |              |             |             |             |             |
|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| <b>0.92</b> | <b>9.20</b> | <b>6.90</b> | <b>-2.03</b> | <b>7.38</b> | <b>2.22</b> | <b>3.65</b> | <b>7.42</b> |
|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|

#### *Increase in $\delta_1$*

When the accelerator mechanism, i.e., the elasticity of investment to output is simulated to rise by 5, 10, 15 and 20 per cent, the overall investment marks an increase of 8.9, 21, 32.2 and 47.7 per cent. This causes the output to rise by 5, 12, 18.7 and 27.7 per cent from the base level. But the price level rises by 8.4, 19.7, 30.3 and 44.8 per cent, and as a result the level of competitiveness falls towards -39.3, -92.3, -142 and -210 per cent. Irrespective of the same, consumption and real wages marks a rise of 4.4, 10.4, 16 and 23.7 per cent and 1.5, 3.6, 5.6 and 8.35 per cent respectively. And the growth rate of employment rises by 3.4, 8, 12.2 and 18 per cent.

**Table 5.24: Elasticity of Investment to Output (increase)**

| $\delta_1$  | $I^\wedge$   | $X^\wedge$  | $p^\wedge$   | $k^\wedge$   | $L^\wedge$  | $C^\wedge$  | Real wages  |
|-------------|--------------|-------------|--------------|--------------|-------------|-------------|-------------|
| <b>1.10</b> | <b>9.91</b>  | <b>7.20</b> | <b>7.91</b>  | <b>1.69</b>  | <b>5.52</b> | <b>7.70</b> | <b>3.69</b> |
| <b>1.15</b> | <b>10.79</b> | <b>7.57</b> | <b>8.58</b>  | <b>1.02</b>  | <b>5.71</b> | <b>8.04</b> | <b>3.75</b> |
| <b>1.21</b> | <b>11.99</b> | <b>8.07</b> | <b>9.47</b>  | <b>0.13</b>  | <b>5.96</b> | <b>8.50</b> | <b>3.83</b> |
| <b>1.26</b> | <b>13.11</b> | <b>8.55</b> | <b>10.31</b> | <b>-0.71</b> | <b>6.19</b> | <b>8.93</b> | <b>3.90</b> |
| <b>1.32</b> | <b>14.64</b> | <b>9.19</b> | <b>11.46</b> | <b>-1.86</b> | <b>6.52</b> | <b>9.52</b> | <b>4.00</b> |

The simulations indicate that the accelerator mechanism plays a pivotal role in the enhancement of consumption, employment and real wages. But the price level marks a sizable rise with a fall in competitiveness. But there is an increase in overall output due to the pronounced strength of both investment and consumption.

## **5.5 Conclusion**

The elasticities and the share parameters were estimated and calibrated in order to analyse the growth and distribution trajectory of the Indian economy. It is asserted that the Indian economy attunes to a profit-led phase, given the scope of the study. Even in the given disposition, an autonomous increase (decrease) in the rate of profit share is resulting in a stark rise (decline) in price level, which is in coherence to the Post Keynesian framework. And the rise (decline) in autonomous wages is accompanied by a modest rise (decline) in output. And

the autonomous employment growth is also powering a much-strengthened rise in output (in comparison to the autonomous rise in wages). This unveils that, an increase in autonomous employment and wages can shepherd an increased output. Moreover, the elasticity of consumption on profit share is discerned to be a sensitive component in the case of Indian economy; an upward shock on the same fetches a drastic fall in output. The elasticity of employment on output is also a vulnerable component which augments an increase in output when given a positive boost, and a fall in output in the opposite case. The increased money wage bargaining power and the surged (simulated) elasticity of money wages with respect to output and productivity leads to an escalation in real wages, consumption and hence, output. But when the elasticity of output with respect to profit share (simulated) contracts (increases), it has an adverse (positive) impact on investment, consumption and output. Meanwhile, an increase (decrease) in the elasticity of profit share with respect to competitiveness leads to an increase (decrease) in output, but a decline (increase) in competitiveness. This goes toe and toe with the underpinnings in the ‘fallacy of composition’. The increase (simulated) in elasticity of investment to output (accelerator mechanism) has ripple effects on the growth of output, investment, consumption, employment and real wages. But when the elasticity of investment with respect to profit share is increased (simulated), the investment marks a fall due to the stark decline in output; which is the resultant of the declined consumption. Even though India accommodates a profit-led phase, the distributional mechanisms (disposition towards increased employment growth, wages, bargaining power, the strengthened money wages with respect to output) is resulting in a constructive impact on output.

The next chapter ties the thesis together and divulges into the significance of the estimated and simulated outcomes, given the socio-economic characteristics of the Indian economy.

## Chapter 6

### Summary and Conclusion

The development paradigm in the Nehruvian era (1947-63) intended to overcome resource constraints in tune with the management of effective demand in the economy. Often termed as the 'socialist phase', the state occupied the salient position in augmenting the development processes. But the growth prescriptions favoured in the first three five year plans were in the combination of 'top-down' and 'bottom up' approaches (Chakravarty, 1986). This is because the premature mechanisation and lack of congruence in prioritisation of the agricultural sector between the plans unleashed much deliberations at the time. And the distributional questions were also raised as the capital goods industries became the focal point in the second five year plan. But the state mechanism began to fall short by the mid-1960s due to the external turmoil, which gave away to huge current account deficits. This marked the end of what can be characterised as the 'moderate regulation phase' (1947-68) of the Indian economy. The period was followed by the more 'stringent regulation phase' (1969-74) (Mukherji, 2009), where the state acted as a suppressant to the activities of the private players. The regulatory policies such as the Monopolies and Restrictive Trade Practises Act (1969) and Foreign Exchange Regulation Act (1973) were reverberations of the same, and the state also took a turn and embarked towards active redistribution policies at the time. The rural development and poverty alleviation programmes were introduced, but it failed to yield the intended result. Instead, the outcome was that the economy was in doldrums by the late 1970s, caught in the perils of massive inflation and balance of payment crunch. This expedited deliberations as to whether the state mechanisms are adept in allocating resources efficiently.

With the fortification of the notion of trickle down, the Keynesian consensus waned from the international arena in the 1970s. The redistribution stances took a backseat in the forge of the trickle down policies under the presupposition that it will beget production, jobs, etc., unaccompanied by the state mechanism. The Indian economy was plunged into partial liberalisation policies from the late 1970s with a supportive tilt towards businesses, resulting in gradual embracement of the pro-business policies (see section 2.5). This led to the

acceleration of the average annual growth rate and the escalation of Total Factor Productivity (TFP) in the 1980s. But the country continued to be in peril due to the heavy external debt, and was forced into adopting neo-liberal policies in the beginning of 1990s. While there are altercations with regard to the role of the international sector (see section 2.5); it is often credited for the breakthrough from the 'Hindu rate of growth' and the strengthened growth momentum in the post 2000 period. But it has often been contemplated that the growth momentum stalled after the financial crisis of 2008-09, with the fiscal mechanisms reclaiming a substantial stance. The growth in the post 2000 period was pinpointed to be debt incentivised; with the boost in the balance of payment being the result of money parked by international corporations and private firms, in the paucity of an export surplus (see section 2.6).

The recurrent crises in the capitalist system and the deepening inequality impugned this dogma, and the altercations against the same gained limelight after the financial crisis of 2008-09. Moreover, this began to put a halt on the exhortations of 'export-led' prescriptions for developing countries by the international organisations such as International Monetary Fund (IMF) and World Bank. And many of the developing countries which embraced these were unable to revert back to their growth rate prior to the latest financial crisis. Subsequently, due to the export-led policy prescriptions, there was an ensuing stimulation to keep low wages and prices in developing nations (Pieterse, 2012). The sole concentration on supply side policy prescriptions compromised social sector spending under the guise of minimum governance and competitive capitalism. Consequently, these have also resulted in the increased divergence between wages and profits in the facade of labour flexibility (see section 3.6). This, in conjunction with the maintenance of fiscal austerity by the government in the post 2010 period has left the redistribution policies to tend to themselves. This assumes significance with the current events of the havoc created by the falling Private Final Consumption Expenditure (PFCE) and a subsequent fall in household domestic savings and capital formation (see A.2.1 and A.2.4).

The macroeconomic transitions in the world from the 1980s can be said to have profound impacts on the development trajectory of India. In India, after 1980s, the primary focus was designated for the acceleration of economic growth, with the job creation and employment growth being presumed to follow pace. Though the economic growth assumed a more sustained pace after the adoption of economic reforms, it had a job displacing effect in the country (Ghosh & Chandrasekhar, 2007). The premature deindustrialization and

premature servification had faltered the Lewisian transformation, and the country failed to provide a route for the workers to flock out of agriculture (see section 3.5.1). This has deterred the avenues for productive employment and curtailed diversification in the labour market. Moreover, almost 60-90 per cent of the labourers in the country fall under the umbrella of informal workforce, and are forced to work in precarious conditions. The emphasis towards job creation and accentuation of the domestic market, thereby expanding domestic demand didn't affirm much significance. But on the contrary, the emphasis on the same is of utmost importance especially for a consumption led economy, which is currently under the perils of waning private final consumption expenditure and job lost growth (see A.2.1 and section 3.5). And India's development challenge transcends the Bhagwati-Sen debate, where both scholars were both are in broad consensus with the argument that the growth in itself is a pre-condition for inclusive growth. These scholars differ in their debates as to whether the re-distributive policies have to be in tune with the acceleration of economic growth or whether the latter should succeed the former (see section 3.4). Instead, the notion of development can be embedded in the macroeconomic thinking; as the rethinking of the policy prescriptions in itself may enhance growth. We explore whether a re-thinking can be fruitful in the context of the Indian economy, in the event of jobless and job-lost growth (see section 3.5).

The conundrum between economic growth and income distribution has remained one of the arduous debates in the economic literature. This has garnered attention in the event of the recurrent crises in the capitalist system and worsening income inequality across the globe. From the late 1970s and 1980s, the neo-liberal capitalist system upheld the notion that the wage moderation can stimulate investments and eventually lead to higher economic growth. Hence, an alternate view of economic growth and income distribution is inevitable for the enhancement of economic growth (see section 3.7). This emanates from the certitude that wages influence aggregate demand, a relation which was negated by the neo-classical modellers. The Post Keynesian tradition upholds the view that the aggregate demand stimulation is necessary, and the return to the Kaleckian tradition lies in tracing the debates on profit and wage led regime. Our model on growth and redistribution lies in the demand stimulations in the economy through output, under the umbrella of the Keynesian and Kaldorian traditions (see section 4.6).

The empirical literature of growth and distribution worldwide has flowered in the last decade, but the studies related to Indian economy has been limited. Onaran and Galanis

(2012) has argued that Indian economy can be characterised as profit-led; though in aggregation the global economy is wage-led. But it is said to be weakly profit-led as the increased net exports only slightly offsets the low effect of consumption on profit share, while the effect of investment on profit share came out to be insignificant in the model. It is also asserted that the public investment in India has a positive relationship with private investment, indicating the effect of crowding-in (Onaran & Galanis, 2012). Dasgupta (2021) establishes that the dilution of labour laws in India can have an adverse impact on the aggregate demand in the country. It can even reduce growth rate, given the absence of other countervailing factors. It is argued that if the macroeconomic structure after the post-liberalisation period isn't challenged (bringing in capital control), the primary burden will be borne by the labour, in the form of staggering income shares (Dasgupta, 2020b).

The thesis is a dual exercise. And the dataset on Annual Survey of Industries (ASI) between the years 1981-2018 was employed for modelling purposes, which is an important source of industrial statistics on the organised manufacturing sector of the economy. The data on the growth of money wage, real wage rate (ratio of wages and number of workers), gross domestic capital formation (investment), gross value added (output), interest payments, profit share (value of output subtracted with prime costs) and labour productivity (which is measured as a ratio of gross value added and number of workers) were compiled from the database of Economic and Political Weekly Research Foundation, India Time Series (EPWRFITS). The data on inflation (based on wholesale price index) and real effective exchange rate (competitiveness) were collated from Reserve Bank of India handbook of statistics. The equations of the model are taken in growth form. Based on the autoregressive model, the investment (proxied as gross domestic capital formation) is revealed to be dependent upon profit share and output. The results obtained was that a one per cent increase in profit share and output generates an increase of 0.77 and 1.1 per cent of investment respectively. The consumption tends to be dependent upon profit share and total output; and is borrowed from the secondary literature that a one per cent rise in profit share brings down consumption to - 0.26 one percent. The exports are said to be dependent upon competitiveness and an autonomous component, which captures the variations in other global factors. It is abstracted from several secondary sources that a one per cent increase in competitiveness pushes exports by 0.53 per cent. The imports are regulated by output, competitiveness and the other autonomous factors (which can influence via the varied tastes and preferences). A one per cent increase in output augments 0.98 per cent increase in imports, whereas a one percent rise in

competitiveness leads to the decline in imports by 0.47 per cent. The government expenditure is said to be an exogenous component in the model. Since the modelling follows a Post-Keynesian structure, the prices are determined by costs, which consists of wage and output (per worker) and mark-up. The money wages are determined by inflation, output, labour productivity and an autonomous component. While one per cent increase in inflation and output engender a rise in money wages of 0.71 and 1.2 per cent respectively; the one per cent rise in labour productivity contracts money wages by about -1.06 per cent, which is appalling. The employment growth is contingent on output and an autonomous component, which represents the increase in employment due to the conducive policy prescriptions. An increase in one unit of output generates 0.5 units of employment, which is an estimate drawn from the secondary literature. The labour productivity growth is reliant on the decrement between output and employment growth and the autonomous component of employment; and the resultant is that one per cent increase in output employs a 0.5 unit per cent increase in labour productivity. The profit share is controlled by an autonomous component, competitiveness and output. And a one per cent increase in competitiveness and output is estimated to generate 0.28 and 0.83 per cent rise in profit share respectively. The competitiveness is defined to be the ratio of nominal exchange rate and domestic price level, and the exchange rate is determined exogenously in the model. The output is demand driven in the model, and the model is closed by equilibrating aggregate demand and output.

From the elasticities obtained, it has been deciphered that the Indian economy adheres to a profit-led phase (see section 5.3), given the scope of the study. And the sensitivity of the parameters were tested based on simulations. It has been established that even for an economy like India which adheres to a profit led phase, an increase in employment and wages is strengthening output. Moreover, the increased divergence between wage and profit share is resulting in a staggering increase in price level (which is an outcome of distributional conflict). But the profit share is comprehended to be a susceptible component in the economy; which has an impetuous effect on price level and hence, real wages and competitiveness.

Currently, informal sector does not come under the purview of Indian labour laws and standards, leading to loosely defined wages, wage structures and contracts. The incorporation of informal employment to the existing labour laws; and, ensuring the implementation of the same can be of major significance, and can decrease precarious employment. The output, if augmented through labour intensive employment generation can

also turn out to be quite advantageous for the country. The efforts to enhance the output via the same can stimulate consumption and investment, without much inconsistency in the price level. The investments which augments job creation and the focus on domestic economy, along with the policies in tune with the same (rather than those pertaining to export led) can go a long way. An export led growth process is indicated not to be sustainable in the economy based on the simulations run. Instead, the nourishing of domestic demand can yield in the enhancement of the level of output. Moreover, it can strengthen the accelerator mechanism in the country, ensuing the conjunction of income distribution and economic growth.

The scope of the research has been constrained by the ASI database, and the wider applicability of the study can create additional insights. There are empirical studies which investigates whether a country attunes to a profit led and wage led growth phase in the international arena. But the reckoning of socio-economic and the development trajectories of the countries can generate more perception.

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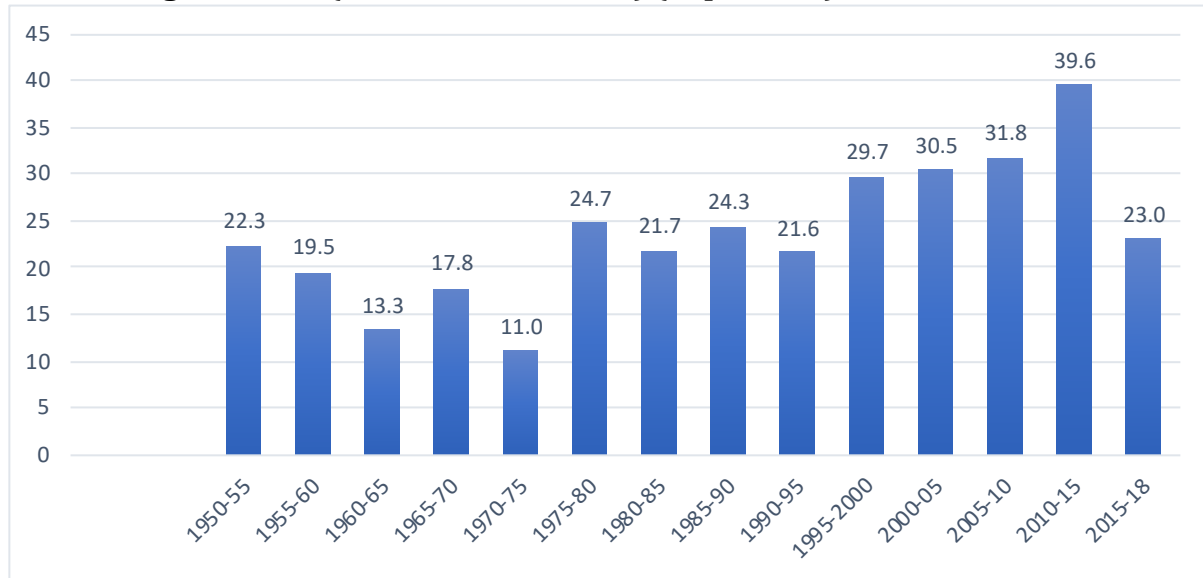
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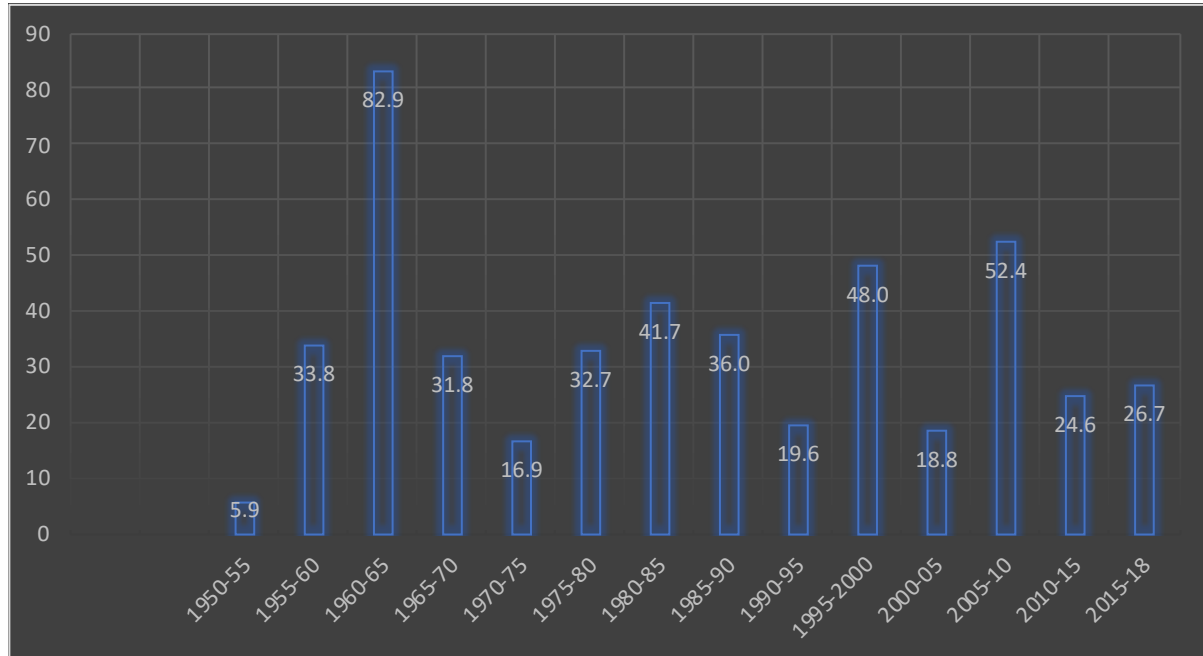
## Appendix A.2

### A.2.1 Change in PFCE (1950-55 to 2015-18) (in per cent)



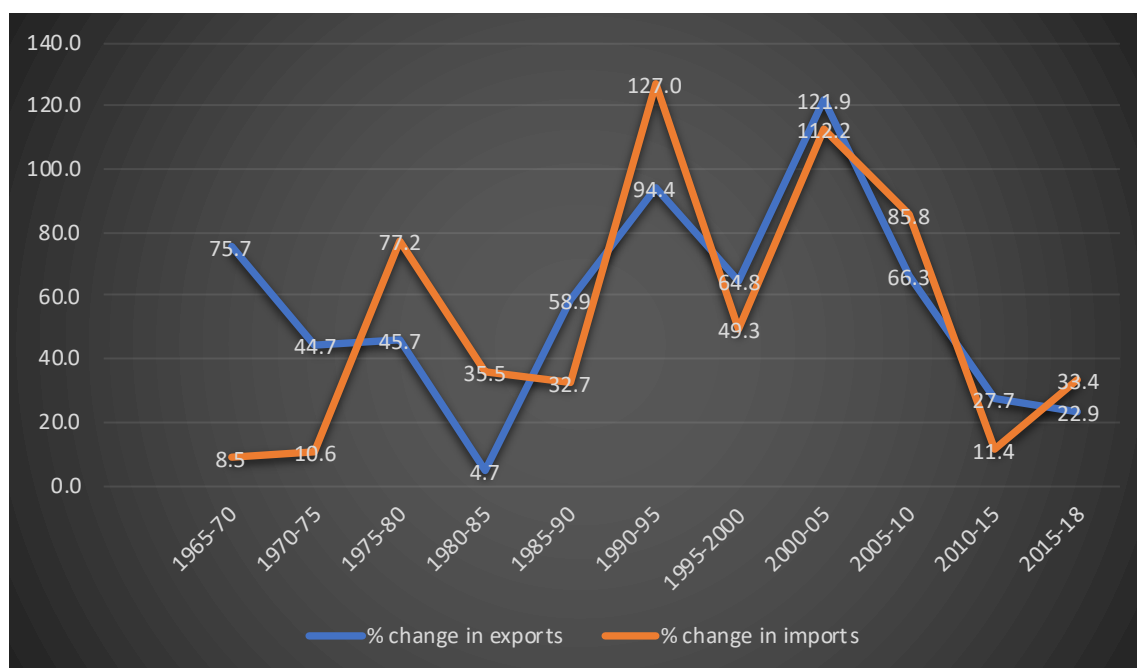
Source: Economic Outlook, CMIE

### A.2.2 Change in GFCE (1950-55 to 2015-18) (in per cent)



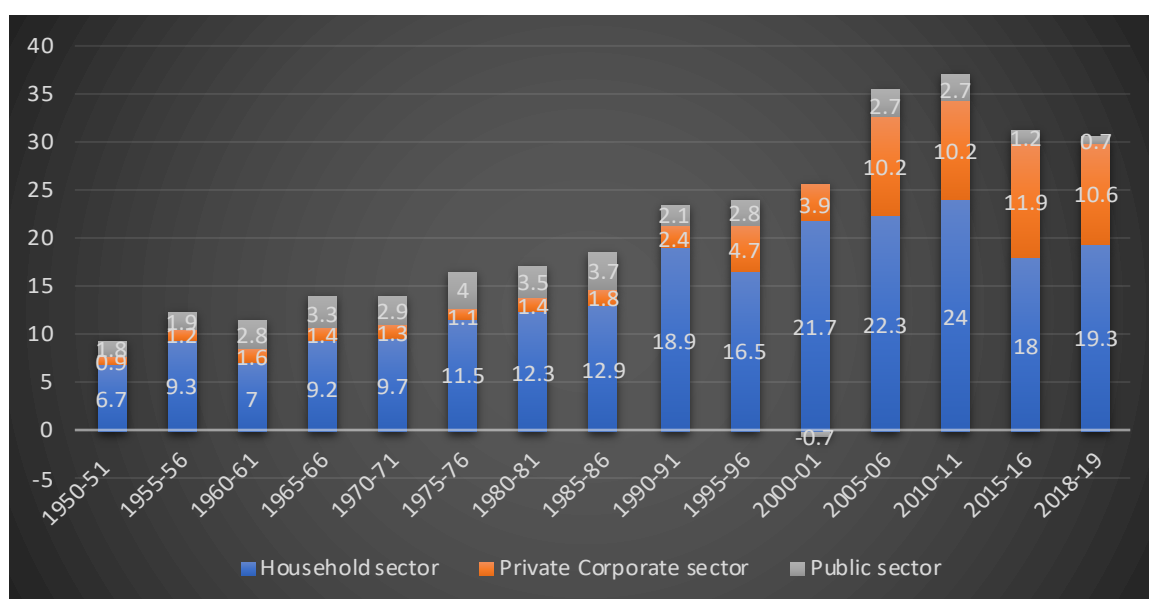
Source: Economic Outlook, CMIE

### A.2.3 Change in Exports and Imports (1965-70 to 2015-18) (in per cent)



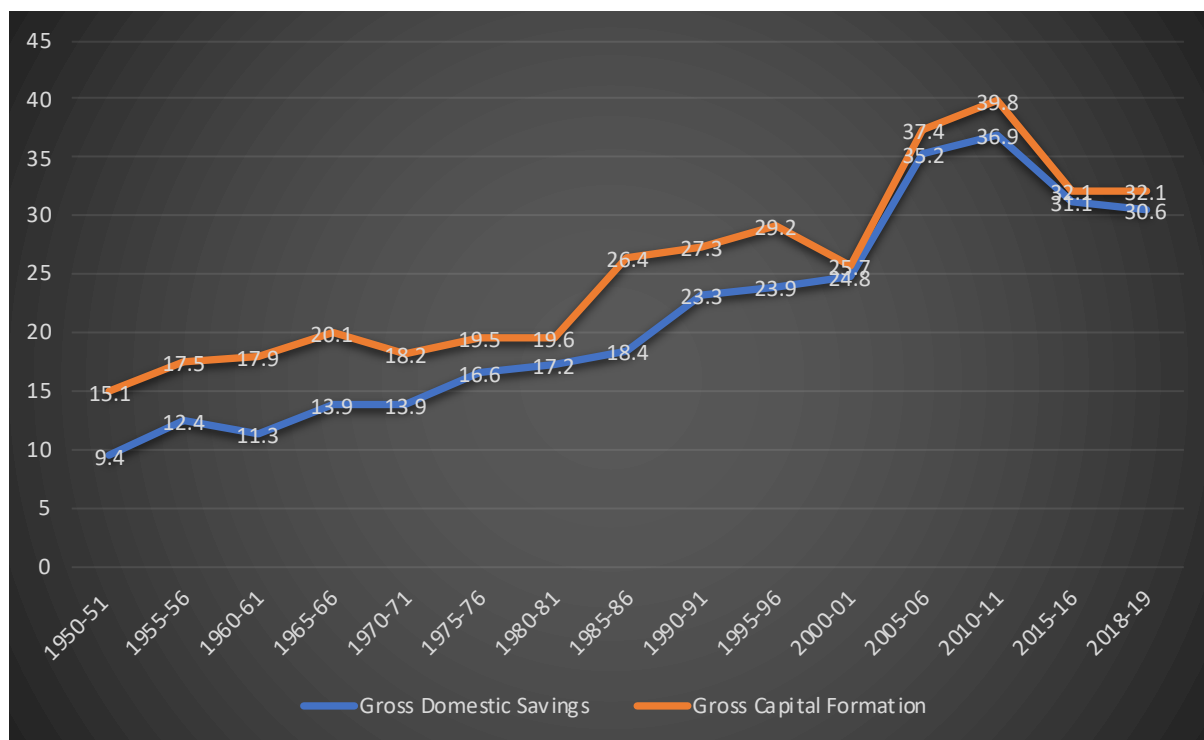
Source: Economic Outlook, CMIE

#### A.2.4 Gross Domestic Savings {GDP at current market prices (2011-12)} (in per cent)



Source: Economic Outlook, CMIE

#### A.2.5 Gross Capital Formation {GDP at current market prices (2011-12)} (in per cent)



Source: Economic Outlook, CMIE

## Appendix A.3

### A.3.1 Breakdown of GVA into Wages, Emoluments, Rent and Interest paid, Profits and Other Payments

| Year        | Real wages to workers | Other worker emoluments | Rent paid | Interest paid | Profits | Other payments | GVA |
|-------------|-----------------------|-------------------------|-----------|---------------|---------|----------------|-----|
| 1980 - 1981 | 28.49                 | 15.54                   | 1.14      | 19.80         | 15.66   | 19.37          | 100 |
| 1981 - 1982 | 26.34                 | 14.29                   | 1.01      | 19.60         | 20.36   | 18.40          | 100 |
| 1982 - 1983 | 26.90                 | 15.14                   | 1.03      | 21.29         | 17.34   | 18.30          | 100 |
| 1983 - 1984 | 25.17                 | 14.02                   | 0.96      | 19.98         | 20.31   | 19.56          | 100 |
| 1984 - 1985 | 27.09                 | 15.65                   | 1.04      | 21.40         | 12.92   | 21.90          | 100 |
| 1985 - 1986 | 26.30                 | 14.79                   | 1.21      | 22.80         | 12.91   | 22.00          | 100 |
| 1986 - 1987 | 25.99                 | 14.73                   | 1.19      | 23.47         | 13.64   | 20.98          | 100 |
| 1987 - 1988 | 25.83                 | 14.88                   | 1.30      | 24.94         | 9.50    | 23.55          | 100 |
| 1988 - 1989 | 24.65                 | 13.02                   | 1.43      | 23.21         | 14.14   | 23.56          | 100 |
| 1989 - 1990 | 22.98                 | 12.88                   | 1.42      | 23.65         | 15.85   | 23.22          | 100 |
| 1990 - 1991 | 21.42                 | 12.01                   | 1.44      | 24.18         | 18.50   | 22.46          | 100 |
| 1991 - 1992 | 20.53                 | 11.16                   | 1.80      | 28.43         | 14.56   | 23.52          | 100 |
| 1992 - 1993 | 19.65                 | 12.52                   | 1.64      | 26.41         | 16.97   | 22.82          | 100 |
| 1993 - 1994 | 16.78                 | 10.53                   | 1.73      | 22.36         | 27.27   | 21.34          | 100 |
| 1994 - 1995 | 17.31                 | 10.47                   | 1.84      | 21.06         | 29.25   | 20.06          | 100 |
| 1995 - 1996 | 17.16                 | 10.52                   | 2.38      | 22.01         | 27.02   | 20.92          | 100 |
| 1996 - 1997 | 14.37                 | 10.74                   | 2.31      | 21.61         | 22.71   | 28.27          | 100 |
| 1997 - 1998 | 15.02                 | 11.40                   | 2.11      | 23.01         | 27.47   | 20.99          | 100 |
| 1998 - 1999 | 14.29                 | 11.40                   | 2.35      | 22.85         | 27.23   | 21.88          | 100 |
| 1999 - 2000 | 13.95                 | 11.42                   | 2.40      | 23.27         | 25.10   | 23.86          | 100 |

|             |       |       |      |       |       |       |     |
|-------------|-------|-------|------|-------|-------|-------|-----|
| 2000 - 2001 | 15.51 | 12.92 | 2.29 | 23.54 | 20.02 | 25.72 | 100 |
| 2001 - 2002 | 14.97 | 12.89 | 2.05 | 23.04 | 19.04 | 28.01 | 100 |
| 2002 - 2003 | 13.85 | 11.88 | 1.77 | 17.89 | 28.85 | 25.76 | 100 |
| 2003 - 2004 | 12.30 | 11.24 | 1.68 | 13.71 | 37.28 | 23.79 | 100 |
| 2004 - 2005 | 10.86 | 9.94  | 1.47 | 10.48 | 46.70 | 20.55 | 100 |
| 2005 - 2006 | 10.33 | 9.97  | 1.45 | 9.16  | 50.58 | 18.52 | 100 |
| 2006 - 2007 | 9.62  | 9.66  | 1.39 | 8.98  | 52.46 | 17.88 | 100 |
| 2007 - 2008 | 9.23  | 9.84  | 1.36 | 9.31  | 53.83 | 16.42 | 100 |
| 2008 - 2009 | 9.78  | 11.40 | 1.60 | 11.23 | 48.58 | 17.41 | 100 |
| 2009 - 2010 | 9.89  | 11.20 | 1.72 | 10.52 | 47.75 | 18.92 | 100 |
| 2010 - 2011 | 10.38 | 11.83 | 1.64 | 10.67 | 47.28 | 18.20 | 100 |
| 2011 - 2012 | 11.05 | 12.71 | 1.79 | 13.33 | 41.88 | 19.24 | 100 |
| 2012 - 2013 | 11.01 | 12.62 | 1.63 | 13.71 | 44.11 | 16.92 | 100 |
| 2013 - 2014 | 11.88 | 13.70 | 1.43 | 14.54 | 41.27 | 17.18 | 100 |
| 2014 - 2015 | 12.06 | 14.33 | 1.47 | 14.84 | 39.52 | 17.78 | 100 |
| 2015 - 2016 | 12.25 | 14.43 | 1.39 | 14.30 | 40.30 | 17.31 | 100 |
| 2016 - 2017 | 12.68 | 14.74 | 1.44 | 13.84 | 39.42 | 17.87 | 100 |
| 2017 - 2018 | 13.14 | 15.38 | 1.46 | 12.79 | 39.28 | 17.94 | 100 |

*Source: Author's Calculations from EPWRFITS, ASI database*

### A.3.2 Labour Productivity and Earnings per Labour (over the years)

| Year           | Labour productivity | Earnings per labour |
|----------------|---------------------|---------------------|
|                |                     |                     |
| 1980 -<br>1981 | 12.80               | 5.64                |
| 1981 -<br>1982 | 14.41               | 5.85                |
| 1982 -<br>1983 | 15.97               | 6.71                |
| 1983 -<br>1984 | 18.54               | 7.27                |
| 1984 -<br>1985 | 19.42               | 8.30                |
| 1985 -<br>1986 | 20.28               | 8.33                |
| 1986 -<br>1987 | 20.29               | 8.26                |
| 1987 -<br>1988 | 21.38               | 8.70                |
| 1988 -<br>1989 | 22.09               | 8.32                |
| 1989 -<br>1990 | 25.12               | 9.01                |
| 1990 -<br>1991 | 27.25               | 9.11                |
| 1991 -<br>1992 | 24.89               | 7.89                |
| 1992 -<br>1993 | 29.96               | 9.64                |
| 1993 -<br>1994 | 31.09               | 8.49                |
| 1994 -<br>1995 | 31.71               | 8.81                |
| 1995 -<br>1996 | 42.18               | 11.67               |
| 1996 -<br>1997 | 43.77               | 10.99               |
| 1997 -<br>1998 | 54.09               | 14.29               |
| 1998 -<br>1999 | 46.77               | 12.01               |
| 1999 -<br>2000 | 50.32               | 12.77               |

|                |       |       |
|----------------|-------|-------|
| 2000 -<br>2001 | 48.13 | 13.69 |
| 2001 -<br>2002 | 46.59 | 12.98 |
| 2002 -<br>2003 | 52.21 | 13.43 |
| 2003 -<br>2004 | 52.38 | 12.33 |
| 2004 -<br>2005 | 59.10 | 12.29 |
| 2005 -<br>2006 | 59.66 | 12.11 |
| 2006 -<br>2007 | 69.05 | 13.32 |
| 2007 -<br>2008 | 72.97 | 13.92 |
| 2008 -<br>2009 | 75.65 | 16.02 |
| 2009 -<br>2010 | 75.50 | 15.92 |
| 2010 -<br>2011 | 79.05 | 17.56 |
| 2011 -<br>2012 | 85.52 | 20.32 |
| 2012 -<br>2013 | 88.89 | 21.01 |
| 2013 -<br>2014 | 89.06 | 22.78 |
| 2014 -<br>2015 | 95.78 | 25.28 |
| 2015 -<br>2016 | 98.62 | 26.31 |
| 2016 -<br>2017 | 98.34 | 26.97 |
| 2017 -<br>2018 | 97.21 | 27.72 |

*Source: Author's Calculations from EPWRFITS, ASI database*

## Appendix A.5

$$X^\wedge = c C^\wedge + i I^\wedge + g G^\wedge + \varepsilon E^\wedge - m (M^\wedge + k^\wedge)$$

$$\frac{dX^\wedge}{dh^\wedge} = c \frac{dC^\wedge}{dh^\wedge} + i \frac{dI^\wedge}{dh^\wedge} + \varepsilon \frac{dE^\wedge}{dh^\wedge} - m \frac{dM^\wedge}{dh^\wedge} - m \frac{dk^\wedge}{dh^\wedge}$$

$$E^\wedge = E_0 + \varepsilon k^\wedge$$

$$\frac{dE^\wedge}{dh^\wedge} = \varepsilon_E \frac{dk^\wedge}{dh^\wedge} = \varepsilon_E \left( \frac{-dp^\wedge}{dh^\wedge} \right) = -\varepsilon_E \frac{d}{dh^\wedge} \left( w^\wedge - x^\wedge + \frac{h}{1-h} h^\wedge \right)$$

$$I^\wedge = I_0 + \partial_0 h^\wedge + \partial_1 X^\wedge$$

$$\frac{dI^\wedge}{dh^\wedge} = \partial_0 + \partial_1 \frac{dX^\wedge}{dh^\wedge}$$

$$C^\wedge = \gamma h^\wedge + X^\wedge$$

$$\frac{dC^\wedge}{dh^\wedge} = \gamma + \frac{dX^\wedge}{dh^\wedge}$$

$$w^\wedge = w_0 + w_1 p^\wedge + w_2 X^\wedge + w_3 x^\wedge$$

$$\begin{aligned} \frac{dw^\wedge}{dh^\wedge} &= w_1 \frac{dp^\wedge}{dh^\wedge} + w_2 \frac{dX^\wedge}{dh^\wedge} + w_3 \frac{dx^\wedge}{dh^\wedge} \\ &= w_1 \frac{d}{dh^\wedge} \left( w^\wedge - x^\wedge + \frac{h}{1-h} h^\wedge \right) + w_2 \frac{dX^\wedge}{dh^\wedge} + w_3 (1-\theta) \frac{dX^\wedge}{dh^\wedge} \\ &= w_1 \left\{ \frac{dw^\wedge}{dh^\wedge} - \frac{d}{dh^\wedge} [(1-\theta)X^\wedge - L_0] + \frac{h}{1-h} \right\} + w_2 \frac{dX^\wedge}{dh^\wedge} + w_3 (1-\theta) \frac{dX^\wedge}{dh^\wedge} \\ &= w_1 \frac{dw^\wedge}{dh^\wedge} - w_1 (1-\theta) \frac{dX^\wedge}{dh^\wedge} + \frac{w_1 h}{1-h} + w_2 \frac{dX^\wedge}{dh^\wedge} + w_3 (1-\theta) \frac{dX^\wedge}{dh^\wedge} \end{aligned}$$

$$\frac{dw^\wedge}{dh^\wedge} - w_1 \frac{dw^\wedge}{dh^\wedge} = \frac{dX^\wedge}{dh^\wedge} [(1-\theta)(w_3 - w_1) + w_2] + \frac{w_1 h}{1-h}$$

$$\frac{dw^\wedge}{dh^\wedge} = \frac{\frac{dX^\wedge}{dh^\wedge} [(1-\theta)(w_3 - w_1) + w_2] + \frac{w_1 h}{1-h}}{1 - w_1}$$

$$\frac{dE^\wedge}{dh^\wedge} = -\varepsilon_E \frac{dw^\wedge}{dh^\wedge} + \varepsilon_E \frac{dx^\wedge}{dh^\wedge} - \varepsilon_E \frac{h}{1-h}$$

$$\begin{aligned} \frac{dE^\wedge}{dh^\wedge} &= -\varepsilon_E \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3 - w_1) + w_2}{1 - w_1} \right] + \frac{w_1 h}{(1-h)(1 - w_1)} \right\} + \varepsilon_E [(1-\theta) \frac{dX^\wedge}{dh^\wedge}] \\ &\quad - \frac{h}{1-h} \varepsilon_E \end{aligned}$$

$$M^\wedge = M_0 + \sigma X^\wedge - \varepsilon_E k^\wedge$$

$$\frac{dM^\wedge}{dh^\wedge} = \sigma \frac{dX^\wedge}{dh^\wedge} - \varepsilon_M \frac{dk^\wedge}{dh^\wedge}$$

$$\begin{aligned}
&= \sigma \frac{dX^\wedge}{dh^\wedge} + \varepsilon_M \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + \frac{w_1 h}{(1-h)(1-w_1)} \right\} - \varepsilon_M \left[ (1-\theta) \frac{dX^\wedge}{dh^\wedge} \right] + \frac{h}{1-h} \varepsilon_M \\
\frac{dk^\wedge}{dh^\wedge} &= - \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + \frac{w_1 h}{(1-h)(1-w_1)} \right\} + (1-\theta) \frac{dX^\wedge}{dh^\wedge} - \frac{h}{1-h} \\
\frac{dX^\wedge}{dh^\wedge} &= c \left( \gamma + \frac{dX^\wedge}{dh^\wedge} \right) + i \left( \partial_0 + \partial_1 \frac{dX^\wedge}{dh^\wedge} \right) - \varepsilon \varepsilon_E \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + \frac{w_1 h}{(1-h)(1-w_1)} \right\} + \\
&\quad \varepsilon \varepsilon_E \left[ (1-\theta) \frac{dX^\wedge}{dh^\wedge} \right] - \frac{h}{1-h} \varepsilon \varepsilon_E - m \sigma \frac{dX^\wedge}{dh^\wedge} - m \varepsilon_M \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + \right. \\
&\quad \left. \frac{w_1 h}{(1-h)(1-w_1)} \right\} + m \varepsilon_M \left[ (1-\theta) \frac{dX^\wedge}{dh^\wedge} \right] - m \varepsilon_M \frac{h}{1-h} + m \left\{ \frac{dX^\wedge}{dh^\wedge} \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + \right. \\
&\quad \left. \frac{w_1 h}{(1-h)(1-w_1)} \right\} - m (1-\theta) \frac{dX^\wedge}{dh^\wedge} + \frac{mh}{1-h} \\
\frac{dX^\wedge}{dh^\wedge} &- c \frac{dX^\wedge}{dh^\wedge} - i \partial_1 \frac{dX^\wedge}{dh^\wedge} + \varepsilon \varepsilon_E \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] \frac{dX^\wedge}{dh^\wedge} - \varepsilon \varepsilon_E (1-\theta) \frac{dX^\wedge}{dh^\wedge} \\
&\quad + m \sigma \frac{dX^\wedge}{dh^\wedge} + m \varepsilon_M \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] \frac{dX^\wedge}{dh^\wedge} - m \varepsilon_M (1-\theta) \frac{dX^\wedge}{dh^\wedge} \\
&\quad - m \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] \frac{dX^\wedge}{dh^\wedge} + m (1-\theta) \frac{dX^\wedge}{dh^\wedge} \\
&= c \gamma + i \partial_0 - \varepsilon \varepsilon_E \frac{w_1 h}{(1-h)(1-w_1)} - \frac{h}{1-h} \varepsilon \varepsilon_E \\
&\quad - m \varepsilon_M \frac{w_1 h}{(1-h)(1-w_1)} - m \varepsilon_M \frac{h}{1-h} + m \frac{w_1 h}{(1-h)(1-w_1)} + \frac{mh}{1-h} \\
\frac{dX^\wedge}{dh^\wedge} &\left[ (1-c-i \partial_1 + \varepsilon \varepsilon_E \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] - \varepsilon \varepsilon_E (1-\theta) + m \sigma \right. \\
&\quad \left. + m \varepsilon_M \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] - m \varepsilon_M (1-\theta) \right. \\
&\quad \left. - m \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] + m (1-\theta) \right] \\
&= \frac{-\varepsilon \varepsilon_E w_1 h - m \varepsilon_M w_1 h + m w_1 h}{(1-h)(1-w_1)} + \frac{-h \varepsilon \varepsilon_E - m \varepsilon_M h + mh}{(1-h)} + c \gamma + i \partial_0 \\
\frac{dX^\wedge}{dh^\wedge} &= \frac{\frac{h}{1-h} \left[ \frac{-\varepsilon \varepsilon_E w_1 - m \varepsilon_M w_1}{(1-w_1)} + (-\varepsilon \varepsilon_E - m \varepsilon_M + m) \right] + c \gamma + i \partial_0}{\left\{ \left[ \frac{(1-\theta)(w_3-w_1)+w_2}{1-w_1} \right] (\varepsilon \varepsilon_E + m \varepsilon_M - m) + (1-\theta)(-\varepsilon \varepsilon_E - m \varepsilon_M - m) + (1-c-i \partial_0 + m \sigma) \right\}}
\end{aligned}$$



Anagha Tobi &lt;anaghatobi@gmail.com&gt;

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**International Journal of Health Governance - Author update**

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**International Journal of Health Governance** <onbehalf@manuscriptcentral.com>

Mon, Oct 3, 2022 at 5:05 PM

Reply-To: ibra@zadar.net

To: srujanaboddu@gmail.com, anaghatobi@gmail.com

03-Oct-2022

Dear Author(s),

It is a pleasure to inform you that your manuscript titled Is Rising Pharma Market a New Burden? Introspecting the implications of India's Healthcare Journey from public to a private good (ijhg-07-2022-0069.R1) has passed initial screening and is now awaiting reviewer invitation.

The manuscript was submitted by Ms. Srujana Boddu with you listed as a co-author.

As you are listed as a co-author, if you have not already done so please log in to <https://mc.manuscriptcentral.com/ijhg> and check that your account details are complete and correct, these details will be used should the paper be accepted for publication.

Yours sincerely,  
Editor, International Journal of Health Governance



Anagha Tobi &lt;anaghatobi@gmail.com&gt;

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**Fwd: International Journal of Health Governance - Decision on Manuscript ID ijhg-07-2022-0069**

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**Srujana Boddu** <srujanaboddu@gmail.com>  
To: Anagha Tobi <anaghatobi@gmail.com>

Wed, Sep 14, 2022 at 2:52 PM

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From: **International Journal of Health Governance** <onbehalf@manuscriptcentral.com>

Date: Wed, 14 Sep 2022 at 2:48 PM

Subject: International Journal of Health Governance - Decision on Manuscript ID ijhg-07-2022-0069

To: &lt;srujanaboddu@gmail.com&gt;

14-Sep-2022

Dear Ms. Boddu:

**Manuscript ID ijhg-07-2022-0069** entitled "Is Rising Pharma Market a New Burden? Introspecting the implications of India's Healthcare Journey from public to a private good" which you submitted to the International Journal of Health Governance, has been reviewed. The comments of the reviewer(s) are included at the bottom of this letter.

**The reviewer(s) have recommended publication**, but also suggest some minor revisions to your manuscript.

Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript.

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Once again, thank you for submitting your manuscript to the International Journal of Health Governance and I look forward to receiving your revision.

Sincerely,  
Irina Ibragimova, PhD  
Editor, International Journal of Health Governance  
[ibra@zadar.net](mailto:ibra@zadar.net)



Department of Development Studies  
Rajiv Gandhi National Institute of Youth Development (RGNIYD)  
Ministry of Youth Affairs & Sports, Government of India  
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This is to certify that Prof./Dr./Mr./Ms.

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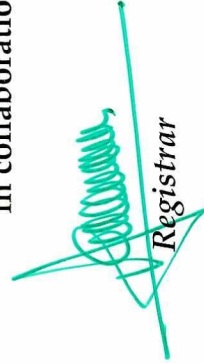
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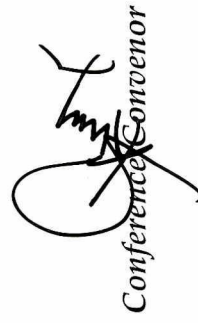
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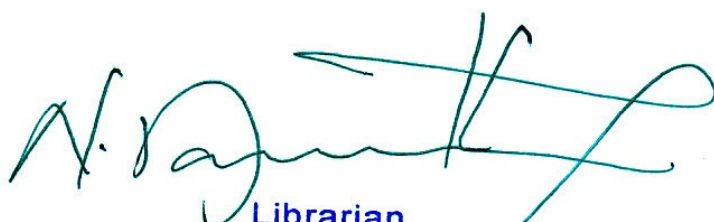
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**Prof. K.S. James**  
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by Anagha Tobi



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