LABOUR MARKET POLARIZATION AND POPULISM IN EMERGING MARKETS – THE CASE OF INDIA

Thesis

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ABSTRACT

In recent years, the global political landscape has witnessed a conspicuous upsurge in the tide of populism. Labour market polarization aka job polarization, a key driver in developed countries, has garnered considerable attention, while emerging markets like India remain relatively unexamined. This thesis provides a preliminary examination of the coexistence of job polarization and populism in India, an important emerging market. Chapter 1 being an introduction, descriptive analysis reveals their concurrent presence over recent years, drawing from a comprehensive literature review in chapter 2, economic data analysis in chapter 3 demonstrating polarization of the Indian labour market, and political developments assessment in chapter 4 highlighting the rise of populism in the Indian political landscape. As populism continues to sculpt the contours of global politics and job polarization exerts its pronounced influence on labor markets, the imperative of comprehending their interrelationship grows increasingly pertinent. Through its clarion call for expanded scholarly exploration in emerging markets, notably India, this work lays the cornerstone for profound investigations in the future.

Keywords: technological change; labour market polarization; populism; India

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ABBREVIATIONS

- AAP Aam Aadmi Party AfD – Alternative for Germany AI – Artificial Intelligence AIADMK – All India Anna Dravida Munnetra Kazhagam AIT – Aryan Invasion Theory AR – Augmented Reality BJP – Bharatiya Janata Party BJS – Bharatiya Jana Sangh CAA – Citizen Amendment Act CM – Chief Minister COVID-19 - Coronavirus Pandemic 2019 DMK – Dravida Munnetra Kazhagam ELFS – European Labour Force Survey EU – European Union FICCI – Federation of Indian Chambers of Commerce and Industry FLFPR – Female Labour Force Participation Rate GDP – Gross Domestic Product GFC - Great Financial Crises (2007-2009) GNP - Gross National Product HDFC – Housing Development Finance Corporation HDI – Human Development Index IAC – India Against Corruption ICICI - Industrial Credit and Investment Corporation of India ICT – Information and Communication Technology ILO – International Labour Organization IMF – International Monetary Fund IoT – Internet of Things ISI - Import Substitution Industrialization IT – Information Technology JAM – Just About Managing KLEMS - Capital, Labour, Energy, Material and Services LFPR – Labour Force Participation Rate LMP – Labour Market Polarization
- M.G.R. M.G. Ramachandran

MENA – Middle East/North Africa

MIT – Massachusetts Institute of Technology

MNC – Multi National Corporation

NAFTA – North-American Free Trade Agreement

NASSCOM - National Association of Software and Service Companies

NCO - National Classification of Occupations

NDA – National Democratic Alliance

NSSO – National Sample Survey Office

O*NET – Occupational Information Network

OECD – Organization for Economic Co-operation and Development

PASOK – Panhellenic Socialist Movement

PLFS – Periodic Labour Force Survey

PM – Prime Minister

RBTC – Routine-Biased Technological Change

RSS – Rashtriya Swayamsevak Sangh

SBTC – Skill-Biased Technological Change

SC – Scheduled Castes

SILF – South Indian Liberal Federation

SOC – Standard Occupation Classification

ST – Scheduled Tribes

TFP – Total Factor Productivity

TV – Television

U.S. - United States

UPA – United Progressive Alliance

VR - Virtual Reality

WTO – World Trade Organization

WWII – World War 2

CHAPTER 1

INTRODUCTION

In 1928 a lecture was delivered at the Political Economy Club at Cambridge by one of the most influential economists of the 20th century, John Maynard Keynes. Two years later when the world was still coping with the shock of the Great Depression, Keynes penned down his lecture into an essay and published it in *The Nation* and *Athenaeum*. The essay was titled "Economic Possibilities for our Grandchildren." It took a long view on what the world would look like a century hence. In the essay Keynes asserted that "we are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come – namely, technological unemployment."

1.1 TECHNOLOGICAL UNEMPLOYMENT

Technological unemployment had existed and been widely discussed since the first industrial revolution, more than a century before Keynes popularized the term. During the first industrial revolution, as farm work got replaced by factory work, employment became dependent on the means of production that only a few possess. Thus, this brought about drastic socio-economic changes in society. Workers' jobs got displaced by technological advancements. The advent of the second industrial revolution in the late 19th and 20th centuries spurred growth and expansion of industries, especially those of the energy sector. As new production lines spread across the landscape, skills which did not exist previously sprung up. The arrival of computers & ICT in the late twentieth century marked the third industrial revolution or the digital revolution. Once again skills which did not exist priorly became the norm. Though these revolutions disrupted the labour market of those times drastically in the short-term, looking back one would agree that these were "only temporary phases of maladjustment" as Keynes noted in his essay. In the long-term there wasn't a negative impact on jobs as along with new skills, new jobs sprung up in the markets. We can conclude that subsequent waves of technological change weren't skill-saving, rather skill-using. But what about the upcoming fourth industrial revolution?

The fourth industrial revolution is advancing upon the foundations laid by the third, characterizing unprecedented technological developments which are eroding the distinctions among the physical, digital, and biological domains. Relative to its predecessors in the series of industrial revolutions, the fourth industrial revolution is not advancing in a linear but exponential rate. Artificial intelligence (AI), advanced automation like digital fabrication, and their amalgamation with biological sciences is changing value systems. Furthermore, radical developments and crosscuttings in industrial technologies such as additive manufacturing, robotics, computational designing, 3D printing, materials engineering, augmented reality and synthetic biology are transforming economies, industries, and individuals. The fourth industrial revolution and data transfers in systems including A.I., additive manufacturing, IoT, A.R & V.R., blockchain, cloud computing, etc. We are experiencing and will continue to experience

societal transformation across the globe as incentives and norms of economic life established by these technological transformations dictate how we interact amongst human beings. We will encounter tremendous boost in efficiency, productivity, income levels, and thus the quality of our lives, but we might also encounter greater inequality, especially in our labour markets. For instance, an ILO study suggests that inequality increased as digitalization costs contracted (due to technological development) in conjunction with job destruction rate (see Figure 1). As automation supplants labour, the cleavage between returns to capital & labour might expand. On the other hand, like the previous technological revolutions, new skills and jobs will also be created. Whether on average these technologies will substitute or complement labour is food for thought.

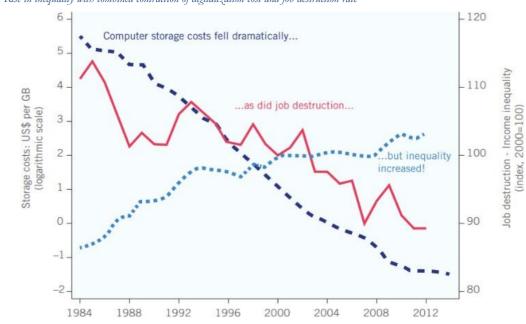


Figure 1. Rise in inequality with combined contraction of digitalization cost and job destruction rate

Source: ILO 2018

Note: Job destruction rate is a weighted average of Australia, Belgium, Canada, Denmark, France, Greece, Ireland, Italy, Japan, Luxembourg, Netberlands, Sweden, United Kingdom, and United States.

1.2 JOB POLARIZATION

Thus, the dominant view in popular discourse that equilibrium can be achieved through market adjustment and treating technology as an external factor has run out of steam. Disequilibrium paths offered by neo-Schumpeterian and neo-Keynesian outfits are largely at play nowadays as concern over Keynes' technological unemployment is growing once again. Though this time the discourse centers around a term what economists call Labour Market Polarization (LMP) (*aka* Job Polarization). It has been one of the most studied topics in the field of labour economics in recent times. Simply put, LMP occurs when middle-skilled jobs recede while those of high-and low-skilled increase. A range of factors define the skill levels, including wages, educational qualifications, and the nature of tasks involved. In all cases, LMP has been deemed valid. A baseline projection by the International Labour Organization (ILO) indicates that the risk of an expanded LMP is poised to increase in the forthcoming years (see Figure 2).

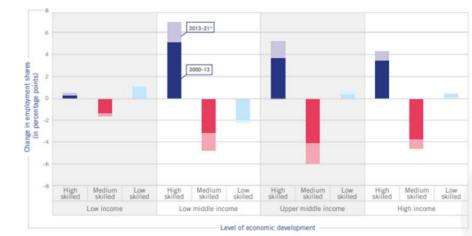


Figure 2. LMP around the world



Note: Shifts in employment distribution, measured in percentage points. Forecasts after 2016.

But what are the driving forces behind such occupational change? There are several hypotheses, but the prominent ones are those of (a) technological change, and (b) globalization.

1.3 SKILL-BIASED TECHNOLOGICAL CHANGE

During the 1980s and 1990s, skill-biased technological change (SBTC) theory suggested that technological advancements favored skilled labour, i.e., technological change in production systems demanded for skilled workers as they were equipped with the know-how of new technologies. Though SBTC hypothesis fared well in explaining the trends of that time, its validity in the academic community at the present time is very limited, since it implies a consistent transition of employment from low-skilled to high-skilled positions. In contrast the LMP theory currently established involves "hollowing out" of the labour market.

1.4 ROUTINE-BIASED TECHNOLOGICAL CHANGE

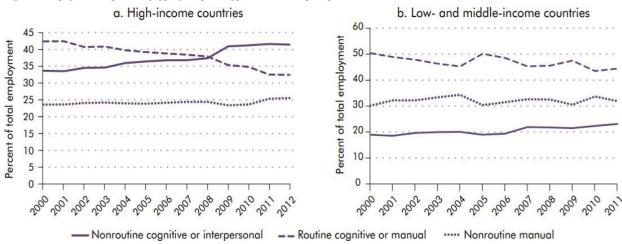
Thus, SBTC was succeeded by routine-biased technological change (RBTC). Proposed by Autor, Levy, and Murnane (2003), RBTC centers on the specific job tasks carried out within each occupation. The hypothesis contends that technology takes over those occupations where human labour is committed to "routine tasks," which are majorly concentrated among middle-skilled workers. High- & low-skilled occupations usually comprise of non-routine tasks and thus are relatively safe from being taken over by automation technologies (see Table 1). As a consequence, employment growth is witnessed to be incremental in high- & low-skilled occupations, while those of middleskilled are disappearing (see Figure 3). Hence, RBTC is in congruence with LMP.

Type of occupation (by skills intensity)	Expected impact on	
	Employment	Earnings
Nonroutine cognitive	Positive	Positive
Routine cognitive and manual	Negative	Negative
Nonroutine manual	Positive	Negative

Table 1. Anticipated effects of technological change on employment and earnings

Source: based on Autor (2014)

Figure 3. Employment composition by type of occupation type based on skill prerequisites, 2000-12



Source: World Development Report 2016

Note: Data are simple cross-country averages. The categorization of job roles based on their skill prerequisites aligns with Autor's 2014 framework, capturing the predomin ant skill sets utilized within each occupation.

1.5 GLOBALIZATION

There is a view that globalization (viz-a-viz international trade & offshoring) also plays a significant role in the changing occupational structures. Unlike the 1980s & 1990s when the concern was a take-off of manufacturing to emerging markets, today offshoring of services to rapidly growing countries like India & China is a major source of concern to industrialized countries, where technological disruption of labour markets is already spreading anxiousness. Post-cold war, with the fall of socialism in Eastern Europe, advances in supply chains & ICT, economic integration with increased liberalization, all lead to exponential increment in global trade. Thus, jobs in those sectors which produced tradable goods & services were impacted.

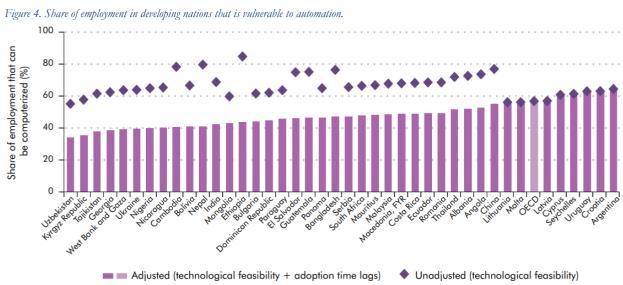
The idea that free trade is advantageous is among the longstanding tenets of contemporary economics. Most of the time we go about with free trade being self-evidently gainful. But what about the costs and pains which come with it? Petia Topalova, during her time in MIT pursuing PhD wrote an important paper which irked trade economists so much so that she was "forced to seek a career outside academia." The paper was premised on the trade liberalization in India in 1991, when the country opened its economy after forty years of the government controlling the "commanding heights of the economy." The paper flew in the face of more than half a century of economic theory – the Stolper-Samuelson Theorem. The theorem which is considered one of the central pillars of international trade theory was challenged. The implications of the Stolper-Samuelson theorem are – global trade should lead to a rise in GNP across all nations, resulting in reduced inequality in less affluent

countries, though it may potentially increase in wealthier ones. But Topalova's paper revealed something inconceivable – areas of India which were more exposed to trade exhibited slower rate of poverty reduction. Based on her paper, Autor, Dorn & Hanson (2013) probed into trade effects on jobs in the US economy. They constructed an index that quantified the extent to which U.S. commuting zones were exposed to Chinese import competition. A commuting zone comprises multiple adjacent counties where individuals can travel to work. Their findings revealed that the zones which were exposed to import competition from China encountered increased unemployment rates and reduced wages. When this result was aggregated to the national economy, it was determined that import competition contributed to a 25% reduction in manufacturing employment from 1990 to 2007. This experience was also shared by other developed economies like Germany & Spain.

1.6 JOB POLARIZATION IN DEVELOPED & DEVELOPING COUNTRIES

Though both technological change and globalization, along with other factors, are considered major causes for changing occupational structure of employment, this thesis, like the general academia, focuses on technological change and its consequences for labour markets. This does not imply that technological change is unquestionably the dominant factor behind LMP. Picking the primary factor comes with its own identification issues but technological change, especially RBTC is considered the de facto one as it strikes middle-skilled workers, compared to globalization which primarily hit the low-skilled workers. Indication of LMP in developed economies is heavily documented. Using ELFS database, Goos et al. (2009) pointed out the polarization of European labour market over the period 1993-2006. Subsequently, Frey and Osborne (2013) caused a significant stir in the academic community when they asserted that 47% of jobs in the U.S. faced the risk of automation. In a similar vein, the OECD estimated that 46% of the workforce in its member countries held positions with comparable levels of vulnerability. Numerous empirical studies have confirmed the presence of LMP in various regions, including the U.S. (Acemoglu 1999; Acemoglu and Autor 2011 & Autor and Dorn 2013), the U.K. (Goos and Manning 2007, Salvatori 2018, Montresor 2019), Portugal (Fonseca et al. 2018), and throughout European countries (Goos et al. 2009; Michaels, Natraj & Van Reenen 2014).

With the exception of advanced economies, it's noticeable that there is a limited body of literature addressing LMP. Nevertheless, though studies focused on emerging markets are in a nascent stage, there are deepening evidence for confirmation of LMP in those markets. As stated in a World Bank publication titled "Digital Dividends," it is projected that a significant portion of jobs in emerging markets, approximately twothirds, may become susceptible to automation in the forthcoming decades (see Figure 4). According to the same report, it is indicated that labor markets are experiencing polarization in both advanced and emerging economies (see Figure 5). Additionally, in developing countries, there has been a decrease of 0.39 percentage points in routine employment since 1995. As highlighted by Fleisher et al. (2018), middle-skilled workers in China are transitioning into low-skilled positions or opting for self-employment. Helmy (2015) found increasing evidence for LMP in Egypt for the period 2000-2009. Further literature on LMP for the case of emerging markets are discussed in the next section, but for now it is well- underlined that LMP is observed in emerging markets. But what are its consequences? Political Economists have carved the implications of LMP into two slices. The first segment encompasses demand for a resolute welfare state. As jobs get automated leading to heightened unemployment rates, demand for better social policies especially those of redistribution will increase. Whereas the second segment relates to social status as automation, like in the case of China (Fleisher et al. 2018), pushes middle-skilled workers into lower rungs of the occupational structure. This decline in perceived status thus leads to adjustments in the dynamics of political supply and demand. In present, this adjustment is the rise of populism in the last few decades (see Figure 6). In this thesis the focus would be on the second segment, i.e., adjustments in political space, but it is imperative to start with an important question – what is populism?



Source: World Development Report 2016

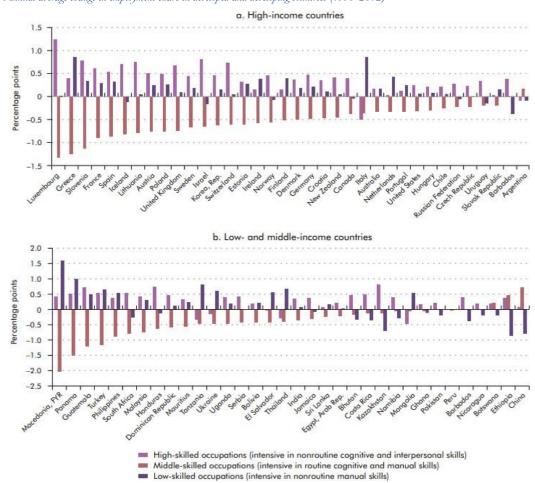


Figure 5. Annual average change in employment share in developed and developing countries (1995-2012)

Sources: World Development Report 2016

Note: High-skilled occupations include legislators, senior officials and managers, professionals, and technicians and associate professionals. Middle-skilled occupations comprise clerks, craft, and related trades workers, plant and machine operators and assemblers. Low-skilled occupations refer to service and sales workers and elementary occupations.

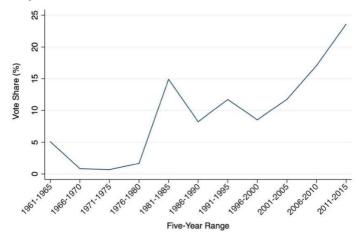


Figure 6. Support for populist political parties across nations

Source: Dani Rodrik (2018)

1.7 POPULISM

In 1954, sociologist Edward Shils introduced the term "populism" to characterize the anti-elite sentiments within American society at the time. In 1967, during a conference on populism conducted at the London School of Economics and Political Science, the participants were unable to establish a definitive and unchanging definition of the term. In the field of traditional economics, the initial attempt to define populism was made in 1991 by Dornbusch and Edwards in their study titled "The Macroeconomics of Populism in Latin America." They interpret it as an "approach to economics that emphasizes growth and income redistribution and deemphasized the risks of inflation and deficit finance, external constraints and the reaction of economic agents to aggressive non-market policies." The study, as the title suggests, was focused on Latin America, and centered on "left-wing populism" of the 1970s and 1980s. Indeed, populism was sort of forged in Latin America. While the phrase gained widespread popularity in the latter part of the 20th century, Latin American nations had already exhibited populist inclinations several decades prior. Examples include the instances of Getúlio Vargas in Brazil and Juan Perón in Argentina. While populism originated from the left end of the political spectrum, the current surge of populism is associated with the right and does not prioritize economic redistribution. Hence, populism again became a loose label, casually thrown around without a strict definition, but embracing a broad array of political movements characterized by their opposition to established institutions and resistance to diverse perspectives, opposition to globalization, representation of masses against the "elites," and an inclination (not always) towards

authoritarianism. Human beings develop intuitions at incredibly early stages of life, and among these intuitions is one of tribalism. Our societies collectively develop distrust among each other. In fact, populism is a systematic way of practicing politics by manipulating these basic moral intuitions. Jan-Werner Müller, a political science professor at Princeton University, posits that populism fundamentally involves the moralization of politics in an especially negative manner — to divide global political space into "us" versus "them." "Us" would entail elements of virtuosity and "them" would entail vice characteristics, and in right-wing populism, "them" are usually the elites, immigrants, or some ethnic minority groups. Having established the fundamentals of LMP and populism, let us discuss the linkages between them.

1.8 JOB POLARIZATION & POPULISM

The current alteration in political systems, i.e., increasing support for the right side of the political spectrum is linked to changing occupational structure of employment. Polarization of labour markets has undermined public trust in political establishment and increased space for anti-establishment parties to crop up. As a result of RBTC and its impact on income distribution, there is an elevated level of distrust among middleskilled workers. This is due to the diminishing prospects within middle-skilled routine occupations, compounded by the limited availability of more appealing alternatives. This significant group of workers holds electoral relevance, and their vulnerability to social status erosion could potentially reshape electoral outcomes. As discontent and insecurity increase, so does the call for social conservatism within the political arena. Furthermore, if one examines the economic underpinnings that contribute to the expanding influence of right-wing populist parties, there is a discernible pattern of a gradual shift in relative societal standing, resulting in heightened insecurity and a perception of diminished control (Gest et al. 2017, De Vries et al. 2018). For instance, Gidron & Hall (2017) presented the correlation between subjective social status and support for populist right-wing parties among typical voters in Denmark. As anticipated, individuals who perceive a decline in their social status are more inclined to endorse right-wing populist parties (see Figure 7). Hence, it is not solely those adversely affected by LMP who gravitate toward the right end of the political spectrum, but also those apprehensive about their future prospects and economic well-being. The "gilet jaune" movement in France serves as a case in point.

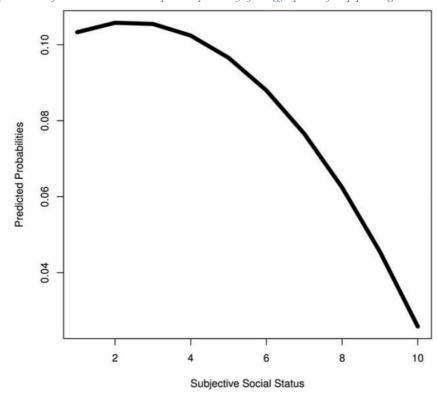


Figure 7. Relationship between subjective social status and the predicted probability of voting for parties of the populist right

Source: Gidron & Hall (2017)

It seems fitting to be highlighted that LMP with its disruptive consequences is not the only factor rather one of the main factors leading to the rise of populism. The GFC, globalization, immigration, identity politics, social media and more recently the accelerated digitalization during COVID-19 induced lockdowns are also noted to be sharing the sentence.

Having established the linkages between LMP and populism, it is imperative to note that there is adequate literature on their association in the case of developed economies, but in the case of emerging markets it is very limited. The primary aim of this thesis is to ameliorate the latter situation. As follows, skill distribution in India, an important emerging market is to be studied and on the basis of that one can determine if labour market there is getting polarized. After, LMP is observed (as increasing literature suggests), change in the country's political inclination is to be examined by observing changes in voting patterns in the country's electoral practices. Thus, this thesis is a correlation study on LMP in an emerging market—India, and deepening populist trends in its political environment. Before moving forward let us review scholarly sources that provide an overview of previous works on LMP & voting behavior.

CHAPTER 2

LITERATURE REVIEW

As mentioned earlier, there are numerous studies which confirm labour market polarization in the developed world, for instance the studies based on the labour markets of U.S. (Acemoglu and Autor (2011), Autor and Dorn (2013) and Autor (2014)), and Western Europe (Goos, Manning and Salomons (2014)).

Even though studies focusing on emerging markets are limited in this subject, there is increasing confirmation that job polarization is being observed in these countries, though at a slower pace compared to developed economies. This assertion is substantiated by the World Development Report 2016, titled "Digital Dividends" by the World Bank. It reveals that, since 1995, routine employment has been decreasing at an annual rate of 0.39 percentage points in developing countries, whereas in developed economies, the decline has been more pronounced at 0.59 percentage points per year.

Automation of products & processes requires significant investments. This is not profitable in countries where labour cost is low. Though such technological investments become viable as incomes increase. Moreover, the arrival of Internet & mobile phones has invited gig economy. Nevertheless, as automation increases in industrialized countries, labour markets will get disrupted in emerging economies as certain tasks get re-shored back to industrialized countries. Development prospects for countries has improved as ICT has flourished. Unlike earlier phases of development that primarily hinged on the expansion of the manufacturing sector, contemporary development is increasingly shaped by the growing significance of the services sector. As services increase, they will mitigate the adverse effects of manufacturing jobs re-shored to developed economies.

The impact of Information and Communication Technology (ICT) on labor markets has been investigated in the context of Latin America (Almeida et al., 2017; Lacovone and Pereira Lopez, 2018) and Africa (Hjort and Poulsen, 2019). Their combined findings substantiate the expected impact, indicating an increased demand for highskilled occupations. Almeida et al. (2017) examined the association between digital technology adoption and employment in Brazil, revealing a reduction in local job opportunities in Brazil's labor markets between 1996 and 2006, particularly affecting workers engaged in routine tasks. Lacovone and Pereira Lopez (2018) explored ICT adoption in Mexico, finding an augmented demand for high-skilled labor compared to low-skilled labor.

Hjort and Poulsen (2019) studied the impact of rapid internet adoption in a sample of 12 African countries, showing robust and positive effects on employment, primarily driven by increased employment in high-skilled occupations. Lo Bello et al. (2019) explored the relationship between ICT adoption and employment rates, discovering that countries with a higher concentration of occupations involving routine tasks experienced lower employment growth rates. Specifically, a ten-percentage point increase in internet penetration corresponded to a 2-percentage point reduction in employment rate growth in countries with a relatively higher presence of routine labor. Regarding a more specific technology, such as robots, the results vary. The expected relationship is observed in the case of China (Giuntella and Wang, 2019) and Latin American countries (Brambilla et al., 2021) but not in a broader panel of countries (de Vries et al., 2020). Giuntella and Wang (2019) investigated robot adoption in China and observed a substantial and adverse impact of robot exposure on jobs and wages, notably affecting low-skilled male workers and concentrated in cities with a larger industrial sector. Similarly, Brambilla et al. (2021) explored robot adoption in Argentina, Brazil, and Mexico, revealing a decline in employment in industries exposed to robot adoption, particularly in the middle of the wage distribution. Their findings also highlighted significant increases in unemployment, informality, poverty, and inequality.

In a study spanning 37 countries from 2005 to 2015, de Vries et al. (2020) pointed out that industries with faster robot growth shifted demand from moderately educated workers to highly educated workers in high-income countries but not in emerging market and transition economies. Consequently, while labor market outcomes can be associated with the adoption of digital technologies (considered a precursor to automation), the labor impact of robot adoption is less consistent.

Helmy (2015) examined the Egyptian labor market from 2000 to 2009 and identified suggestive evidence of job polarization. Ge et al. (2021) used census data from China and found that the share of employment in routine manual occupations decreased by 25 percentage points from 1990 to 2015. Maloney and Molina (2019) also discovered signs of incipient polarization in Mexico and Brazil. In contrast, Firpo et al. (2021) detected evidence of wage polarization in Brazil but not in terms of employment. On

the contrary, Fleisher et al. (2018) demonstrated that middle-skilled jobs are increasingly transitioning into unskilled and self-employment categories in China, aligning with the Routine-Biased Technological Change (RBTC) hypothesis.

When it comes to India, the country at study here, several academics and institutions have carried out studies on technology's impact on the Indian labour market (ILO 2018, NASSCOM 2017, Chapman and Sonne 2018 and more). They argue that the lion's share of Indian labour market is largely involved in informal sector and is not majorly influenced by technological change, whereas formal employment will experience changes as manufacturing and services sectors witness a reduction in routine job opportunities (Kapoor 2016). Some have argued that technological advancements will bring advantages to the informal sector, leading to increased income and improved working conditions (Ilavarasan 2017). However, these studies did not take a comprehensive view of the Indian labour market and carried out analysis factoring in only or a few particular industries.

The World Bank reports that approximately 69% of jobs in India are at risk due to Industry 4.0 technologies. This is backed up by a study conducted by Teamlease Services which predicts about 52 to 69 per cent routine jobs to be at risk from nextgen technologies. According to a survey conducted by Job Buzz, 70 per cent of Indian workers believe that automation will lead to job loss, whereas 20 per cent believe that technology will enhance their daily tasks. FICCI also predicts loss in routine, middle skill occupations and subsequent elevation in high skill jobs (Mehta 2018).

Having established that technological change disrupts labour markets and thus instigates tectonic shifts in the economy, which in turn gives rise to winners and losers

in the backdrop of productivity boost, the immediate implication to be noted is that of political inclination of the "losers" towards populist parties. The lack of certainty in economic stability results in reduced confidence in political institutions (Guiso et al. 2017, Algan et al. 2017). Populist parties, especially right-wing nationalist parties become safe harbor in such times of economic insecurity as they offer a promise of reclaiming control from global forces of change and restoring harmonious times (Kurer 2020, Gest et al. 2018, Colantone and Stanig 2018, Gidron and Hall 2017). Protection of workers from these forces has been noticed to be an essential means for populists to pull the electorate, apart from the nationalism rhetoric. Though, the force mostly dealt with has apparently been that of globalization (Swank and Betz 2003, Colantone and Stanig 2018, Kriesi et al. 2006). According to di Tella and Rodrik (2019) one possible explanation to this is that protectionism, which is antithetical to globalization, has become the de-facto policy tool to counter all types of labour market shocks. The term had largely been associated with left- wing parties but has now become an essential component of the "winning formula" for right-wing populist parties as protectionist policies accompanied by tax cuts appeal to the middle- and high-classes, whereas nationalism and conservatism appeal to the middle- and lowclasses. Thus, blue-collar workers, whose jobs are likely to get automated, got captivated by the right-wing populist rhetoric (Oskarson and Demker 2015, Ballard-Rosa et al. 2022) leaving left-wing parties troubled as they carry the concern of egalitarianism.

More evidences are required by the academic community on the repercussions of technological change on voting behavior, though there are interesting inputs for the same. Similar to the research conducted by Autor, Dorn & Hanson (2013), Frey et al. (2018) found that voters in U.S. regions most impacted by workplace automation showed growing support for the Republican party's populist candidate, Donald Trump, during the 2016 U.S. Presidential election. Similarly, in Sweden, people whose jobs are susceptible to be automated were increasingly supporting Sweden Democrats in local elections (Dal Bó et al. 2018). In the European level, Im et al. (2019) demonstrated that at-risk automation workers inclined towards right-wing populist parties. As mentioned earlier, literature on political impact of technological change on voting behavior in emerging markets is close to none, and in the specific case of India this would be the first study on such topic. The primary aim of this thesis is to fill this striking gap by studying technological change in an emerging market like India and the subsequent change in voting behavior, majorly towards populists.

CHAPTER 3

LABOUR MARKET POLARIZATION IN INDIA

"The problem is not whether machines think, but whether men do" B.F. Skinner

3.1 THE INDIAN ECONOMY

India is a pivotal emerging market on the global stage. The "world's largest democracy," with its robust economic growth, technological advancements, and mounting geopolitical importance, India has emerged as a significant player in the global arena and currently the fifth largest economy in the world, poised to climb to the third spot overtaking Germany and Japan by the end of this decade. The large and growing market, coupled with its economic potential, demographic advantages, and digital transformation, which will be discussed down the line, makes the country an intriguing and dynamic emerging market to study. However, it's important to approach the Indian market with a deep understanding of its complexities and nuances to comprehend its functioning cogently. Hence, before we begin our principal study, let us have an overview of the Indian economy with special emphasis on its labour market. The economic history of republican India is a tale of transformation, marked by various policy shifts, challenges and achievements. The post-independence era was influenced by the colonial experiences of the past and the leaders' exposure to Fabian Socialism, and thus was characterized by Nehruvian Socialism (1947-1960), in which the state dominated key industries controlling several strategic sectors such as steel, coal and telecommunications. Policies were centered on attaining self-sufficiency, hence tended towards protectionism, aggressively exercising import substitution industrialization (ISI), i.e., replacing foreign imports with domestic production. Attention was directed towards reducing economic disparities through land reforms and building a strong welfare state. The "Five-Year Plans" headed by the government resembled central planning in the erstwhile Soviet Union.

From 1960 onwards, Dirigisme was full-fledged in which state control on the economy tightened and continued to be so till the late 1980s. This period is labelled the "License" Raj," in which businesses were required to obtain licenses and permits to operate, which was a cumbersome process and hindered economic growth. Industries were hit with incompetency and the economy stagnated. This prolonged till the late 1980s, when the country was facing a severe balance of payments crisis, with dwindling foreign exchange reserves. This exhorted the government to initiate a series of economic reforms in 1991 which were aimed to liberalize the economy, curtailing state control, welcoming foreign investments and promoting private sector participation. This episode in Indian history is termed the "Liberalization" which became the turning point in the country's growth story. Coinciding with the peak of globalization, GDP grew rapidly as did people's living standards. India swiftly emerged as one of the world's fastest-growing major economies, boasting an average annual GDP growth rate of 7-8%. Investments in infrastructure, including transportation, energy and telecommunications surged, while the IT boom in the early 2000s positioned India as a global hub for software services, generating employment. Apart from Liberalization, the country's burgeoning population has been a driving force behind its economic growth. With a population size of 1.4 billion (and growing) India recently surpassed China as the most populous country on Earth. Furthermore, over half of India's population is younger than 25, and more than 65% are below the age of 35. India stands as one of the world's most youthful nations with a median age of 29, thus benefiting from a demographic dividend.

India's labour market is a complex and dynamic ecosystem that plays an important role in the country's economic development. With a population exceeding 1.4 billion people and a diverse range of skills and expertise, India's labour force is one of the largest and most diverse in the world. Approximately 90% of India's workforce is involved in the informal sector, including agriculture, small-scale manufacturing and services. This sector is often characterized by flexibility but lacks job security and other benefits which the formal sector enjoys which includes industries like IT, pharmaceuticals, finance and manufacturing. The labour market is undergoing a significant transformation due to technology adoption. To illustrate, automobile manufacturers in India such as Ford, Tata Motors, Hyundai, Honda, and Suzuki are progressively substituting human labor with robots. A prominent textile company, Raymond, based in India, has adopted this trend by replacing nearly ten thousand employees with robots within a span of just two years. This transition to automation is not limited to the manufacturing sector; even in the banking sector, robots have found their place. For instance, Canara Bank has deployed robots in their Bengaluru office to assist in various daily work routines. HDFC and ICICI have started using chatbots to assist their customers replacing customer care professionals. In health sector, chains like Apollo, Max and Fortis are planning to use surgical robots. While this threatens some traditional jobs, it also creates opportunities in emerging sectors such as IT, e-commerce and AI. For instance, increasing demand of automated systems for crop management is gradually replacing the need for manual labour, reducing the demand for agricultural labour. The losers in this instance are observed to be shifting to occupations which have emerged of late, majorly the gig economy, which offers flexible work arrangements through platforms like Uber, Zomato and other delivery and professional services.

Despite its demographic advantage, the country faces challenges related to unemployment. India's growth story, with all its achievements was also characterized by "jobless growth," as the country has been facing unemployment crisis for decades, due to limited development of the manufacturing sector. But as the situation aggravated with unemployment rate shooting off multiple times, the term "job-loss growth" is in popular rounds. The country struggles to create enough jobs to accommodate its growing workforce. This issue is notably distressing among the youth, leading to potential for social unrest. Additionally, individuals are working in jobs that do not utilize their skills and qualifications completely, and thus are underemployed. This situation is likely to get worse with the onset of industry 4.0 technologies. Technological advancement has widened the gap between the skills demanded by employers and those possessed by the workforce. Bridging this skills gap is crucial for India's future economic competitiveness. Additionally, a significant wage gap has been observed between different sectors and regions, exacerbating income inequality.

Recognizing these shortcomings, the incumbent government has launched various initiatives such as *Skill India*, placing importance on skill development, and *Make in India* which promotes domestic manufacturing, hence boosting job creation in industries like electronics, textiles, and automobiles. These initiatives aim to enhance employability and promote entrepreneurship. The government has also invigorated the start-up ecosystem, particularly in technology and e-commerce sectors.

Having flipped through the brief summary of the Indian economy and its labour market, let us glance over the trade liberalization of 1991 once again. Liberalization reached its pinnacle in the 1990s when tariffs on imports were significantly reduced. As previously mentioned, the Stolper-Samuelson Theorem suggests that economic liberalization would lead to an increase in the demand for and returns to the abundant factor of production in less developed economies. In the case of India, this would primarily involve unskilled labor. But studies have revealed that post-liberalization in less developed economies, increasing imports of capital goods can result in a heightened demand for skilled workers, primarily due to the concept of capital-skill complementarity, hence boosting returns to high skilled workers. Against this background, it'd be worth exploring if LMP has touched India.

3.2 SUPPLY AND DEMAND OF LABOUR

India's growth story did not follow the classical development path, i.e., shifting from agrarian economy to a manufacturing-based and then followed by services sector led economy. The nation's economy took a jump from an agriculture-based economy directly to a service-driven growth pattern, all without stretching the manufacturing base. Moreover, employment elasticity to output dropped from 0.05 to 0.03, which means, with each 10 per cent rise in GDP, only a 3 per cent increment in employment is observed (ILO 2015). Drastic changes in the nature and mood of the Indian economy also brought about changes in the employment structure of its labour market. The industry-specific development of agriculture (primary), manufacturing (secondary), and services (tertiary) for the elongated time-period of 1950 to 2016 is exhibited in figure 8.

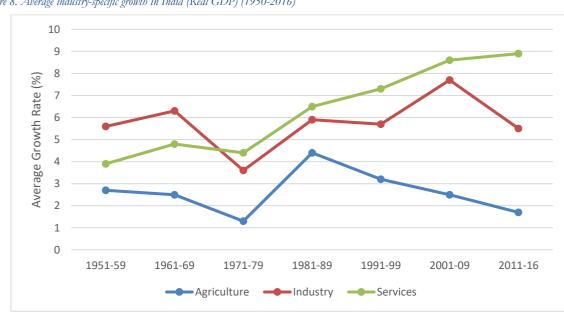
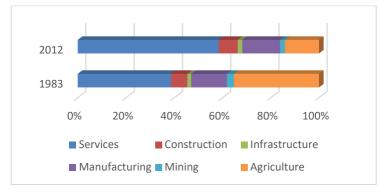


Figure 8. Average industry-specific growth in India (Real GDP) (1950-2016)

Source: Sarkar (2017)

Note: Calculations are based on Central Statistical Organization Data

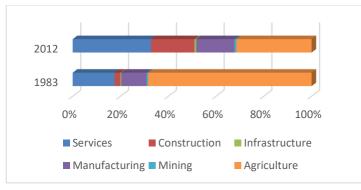
The growth rates of the primary and tertiary sectors are roughly diametrically opposite of each other. Though services saw a steady and profound increment, agriculture's share of GDP plummeted. The secondary sector witnessed unprecedented growth rates in the decade following the liberalization but cooled down post-great recession. In figures 9 & 10, Vashisht and Dubey (2018) show that the economy met with enormous shifts in sectoral contribution to GDP from 1983 to 2011, and these shifts in sectoral contribution to GDP induced shifts in sectoral contribution to employment. The time period 1983 to 2011 is imperative to the study, as structural reforms to make way for Liberalization were introduced in early 1980s, which further boosted automation in workplaces.

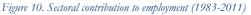




Source: Vashisht and Dubey (2018)

Note: Infrastructure consists of occupations under electricity, water and gas supply industries. All calculations are based on NSSO and NAC data.





Note: Infrastructure consists of occupations under electricity, water and gas supply industries. All calculations are based on NSSO and NAC data.

Source: Vashisht and Dubey (2018)

As we can see, in 1983, agriculture's share in total employment was 68 per cent, but squeezed down to 48 per cent by 2011. Concurrently, services' employment share grew from less than 18 percent to nearly encompassing a quarter of the employed workforce, while manufacturing's contribution to total employment marked up slightly from 10.6 per cent to 12.2 per cent. Notably, construction which saw the maximum surge, surged from 2.4 per cent in 1983 to 13.8 per cent by 2011. As manufacturing and services sectors largely employ skilled workers, their prominence in the evolving employment structure of the Indian economy highlights the increasing calls for skilled manpower.

In 1983, the Indian labour market saw the participation of 286 million workers. Over the years, supply of labour increased considerably to 420 million by 2011. Table 2 shows that quantitative increase corresponded with qualitative improvement, as the proportion of non-literate workers in the overall workforce had a free fall from 60 per cent in 1983 to 31 per cent by 2011. Simultaneously, there was an 8-percentage point increase in the number of primary-educated workers and 5 percentage point increase in the secondary-educated workers. Admirable change has been noticed in the share of tertiary educated workers as their share grew from a mere 2.3 per cent in 1983 to 16.3 per cent in 2011. Further information on the occupational structure of the labour market will be discussed later. Before the ball starts rolling on the central research question of the thesis, it is imperative to understand the theoretical foundation on which the phenomenon of labour market polarization stands. Kindly look at Appendix for the same.

Table 2. Education profile of Indian labour market (1983-2011)

	1983-8	34	2011-12		
	No. in Million	% Share	No. in Million	% Share	
Not Literate	167.11	58.33	129.07	30.7	
Literate Without Formal Schooling	5.98	2.09	2.01	0.48	
Below Primary	26.5	9.25	43.84	10.43	
Primary	36.02	12.57	56.05	13.33	
Middle	25.48	8.9	69.16	16.45	
Secondary	18.57	6.49	49.64	11.81	
Above Secondary	6.79	2.37	70.66	16.31	
Higher Secondary			27.75	6.6	
Diploma/Certificate Course			5.95	1.41	
Graduate			26.88	6.39	
Postgraduate and Above			10.08	2.4	
Total	286.487		420.42		

Source: Vashisht and Dubey (2018)

Note: All calculations are based on NSSO Data, Various Rounds

3.3 LMP IN INDIA: EMPIRICAL EVIDENCE

The shifting employment structure of the Indian labour market raises some important questions. Has this shift in the labour market occurred due to technological change and has it led to LMP through RBTC? If yes, what is the nature of such polarization in the context of an emerging market like India?

While industry-specific studies such as Unni and Rani (2004) and Berman et al. (2005) have indicated that heightened need for specialized workforce since the 1990s were because of SBTC and increased output, nevertheless as RBTC started gaining prominence, heightened interest has been noticed regarding relative demand for workers based not only on their skill-type but also on the type of activities carried out by them (routine/non-routine, manual/cognitive).

Sarkar and Perez (2023) in a European Commission's Joint Research Centre's working

paper analyze employment growth in India for the time period 2012-2020. They gathered required annual datasets from PLFS (2019-2020) and NSSO's Employment and Unemployment Survey (2011-2012), and utilized them in examining employment change pattern in the Indian labour market during the last decade. After filtering off small jobs, 226 jobs of the labour market were acknowledged. Subsequently, employment change pattern was observed after classifying occupations based on taskcontent categories by grouping 2-digit NCO 2004 occupations into four task-content categories (routine manual, routine cognitive, non-routine manual, non-routine cognitive) after adopting Routine Task Intensity Index calculated using O*NET database (Table 3). Rather than conducting the exercise solely on a national-level, it was broken down into rural and urban areas as both their labour markets work differently, for instance 60% of rural workers are employed in agriculture while only 5% of employees in urban areas are employed in this industry. A majority of urban workers find employment in trade and manufacturing.

According to the classification in Table 3, non-routine manual occupations consist of occupations which require manual dexterity but do not have a standard procedure, like personal service workers, models, etc., and these occupations had a share of nearly 1/5th of India's total employment in 2012. Whereas, routine manual occupations which require manual dexterity but also consist of standardized procedural activities, like machine operators, assemblers, construction workers, etc., had a humongous share of 63.3 per cent in total employment. Next, routine cognitive occupations like office clerks, customer service workers, etc., which require cognitive skills like book-keeping, inter-personal skills, communication skills and so on, but also need to follow a

Non-Routine Manual (19.5% of total employment in 2019-2020)

- 51 Personal and Protective Service Work
- 52 Models, Sales Persons and Demonstrators
- 71 Extraction and Building Trades Work
- 83 Drivers and Mobile-Plant Operators
- 91 Sales and Services Elementary Operations

Routine Manual (63.29% of total employment in 2019-2020)

- 61 Market Oriented Skilled Agricultural Workers
- 62 Subsistence Agricultural and Fishery Workers
- 72 Metal, Machinery and Related Trades
- 81 Stationary Plant and Related Operators
- 82 Machine Operators and Assemblers
- 92 Agricultural, Fishery and Related Labour
- 93 Mining, Construction, Manufacturing and Transport Labour

Routine Cognitive (7% of total employment in 2019-2020)

- 74 Other Craft and Related Trades Work
- 42 Customer Services Clerks
- 73 Precision, Handicraft, Printing
- 41 Office Clerk

Non-Routine Cognitive (10% of total employment in 2019-2020)

- 11 Legislators and Senior Officials
- 12 Corporate Managers
- 13 General Managers
- 21 Physical, Mathematical and Engineering Professionals
- 22 Life Science and Health Professionals
- 23 Teaching Professionals
- 24 Other Professionals
- 31 Physical and Engineering Science Associate Professionals
- 32 Life Science and Health Associate Professionals
- 33 Teaching Associtae Professionals
- 34 Other Associate Professionals

Source: Sarkar and Perez (2023)

Note: Based on Autor and Dorn (2013) and Goos, Manning and Solomons (2016), occupations are gathered from NCO 2004. Occupations in agriculture are included in routine manual category.

standardized work method, accounted for 7 per cent of total employment. Lastly, nonroutine cognitive occupations, which consist of high skill occupations like legislators and senior officials, managers, teaching professional, etc., and require cognitive skills like interpretation, analyzation, providing direction, etc., but do not follow any repetitive method, accounted for 10 per cent of the total employment. Figure 11 illustrates the difference in employment shares across the above-mentioned four taskcontent categories for 2012 and 2020 in rural and urban India. Non-routine manual and cognitive occupations in urban India have the highest shares of in total employment, whereas the routine manual occupations (including in agriculture) reign supreme in rural India. Nevertheless, we can clearly see routine occupations in both rural and urban India descending down, while non-routine occupations climbing up in the employment share ladder.

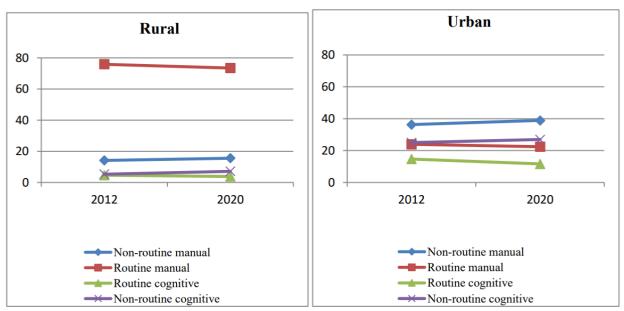
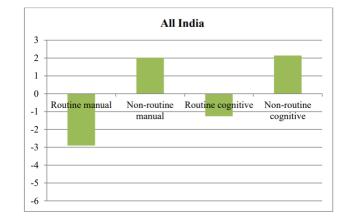


Figure 11. Employment share (in %) based on task-content of occupations in 2012 & 2020

Source: Sarkar and Perez (2023)

Note: All calculations are based on Employment and Unemployment Survey (2011-12), NSSO and PLFS (2019-20)

Figures 12 & 13 illustrate the changes in employment share pertaining to task-based categories in the national level and rural-urban level respectively. They back up the above-mentioned observation, i.e., increasing share of non-routine task-content occupations and decreasing share of routine task content occupations, in both the national level and rural-urban level. The difference observed in between rural and urban scenarios is that in the former employment creation is biased towards nonroutine cognitive occupations while in the latter it is biased towards non-routine manual occupations. Nevertheless, it is deemed normal as in the beginning of the period non-routine manual occupations were more prevalent in rural areas compared to urban areas, and non-routine cognitive occupations were higher in urban areas in comparison to rural areas. The study confirms to existing literature on LMP as routine task-content occupations which are considered to be majorly accumulated in the set of middle skilled occupations are declining in India, indicating the existence of LMP in India.

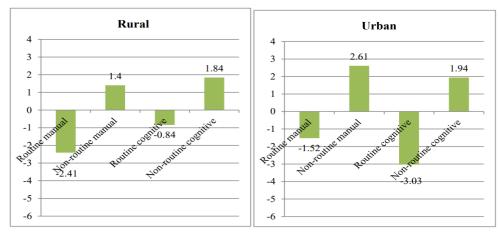




Note: All calculations are based on Employment and Unemployment Survey (2011-12), NSSO and PLFS (2019-20)

Source: Sarkar and Perez (2023)





Source: Sarkar and Perez (2023) Note: All calculations are based on Employment and Unemployment Survey (2011-12), NSSO and PLFS (2019-20)

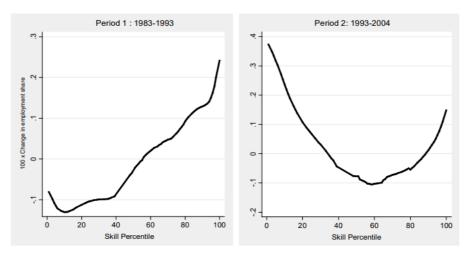
In a previous paper, Sarkar (2017) surveyed 287 occupations for the time period 1983-2011 in urban India by utilizing disaggregated data on employment from NSSO. As indicated earlier, this timeframe enables us to scrutinize the outcomes before, right after and some years following the Liberalization. To classify the occupations, the average earnings of each specific job in 1983 is scrutinized and ranked, ranging from the least skilled to the most skilled. Additionally, the broad categories are classified into routine/non-routine; and manual/cognitive (see Table 4). Next, skill percentiles (quintiles) are devised in which each percentile consists of 1 percentage (20 percentage) of the employed workers in urban India of 1983. Thereafter, regression was carried out to study the variations in wages and employment share for the periods: 1983-93, 1993-04 and 2004-11. The study confirmed LMP in urban India post-liberalization. Figures 14 & 15 illustrate alterations in employment distribution across different skill percentiles and quintiles during the three specific periods. Employment share in the top quintile increased for all the three periods. The second lowest and the middle quintiles experienced exponential decrease all throughout, whereas the lowest quintile

Table 4. Classification of task-based occupation categories

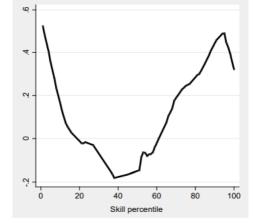
Task-based categories	Broad NCO 1968	Specific tasks		
Non-routine manual				
	5-Service Workers 9-Elementary Occupations	Non-methodical, flexible use of brain, eyes, hands and legs		
Routine manual				
	7-Production and related workers, transport workers 8-Plant and Machine Operators and Assemblers	Repetitive works which involve systematic physical movement, use of fingers and hands		
Routine cognitive				
	3- Clerical and related	Calculating, bookkeeping, correcting texts/data, and		
	4-Sales workers	measuring following a well- defined method		
Non-routine cognitive				
-	0-1- Professional, technical and related 2-Administrative, executive and managerial	Analysing, interpreting, thinking creatively, guiding, directing, establishing relationship		

Source: Sarkar (2017)

Figure 14. Change in employment share by occupational skill percentile

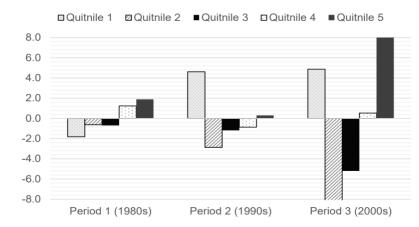


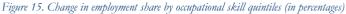
Period 3: 2004 to 2011



Source: Sarkar (2017)

Note: All calculations are based on NSS Employment and Unemployment Survey





Source: Sarkar (2017)

Note: All calculations are based on NSS Employment and Unemployment Survey

dipped in the 1980s but bounced back rapidly in the 1990s and 2000s. As we can see, the 1980s exhibit labour market upgrading while the post-liberalization decades of 1990s and 2000s experienced LMP. Having identified evidences of labour market upgrading in the pre-liberalization period and labour market polarization postliberalization, alterations in the distribution of employment share within urban India across routine/non-routine and manual/cognitive categories were examined. The results are plotted in figures 16 & 17. Evidently, the employment shares of both the routine groups dipped sharply, from having a combined share of more than 50 per cent in the early 1980s to less than 40 per cent by 2011. This is in line with the previously mentioned World Development Report (2016) which estimated a decline of 7.8 per cent in routine jobs in India for the timeframe 1995-2012. Whereas, the nonroutine groups showed an upward trend in the 1983-2011 period with non-routine cognitive jobs experiencing a tremendous change in employment share. Significant decline in the share of employment of routine occupations is an evident signal of the labour market getting polarized in the last decades. However, it should be noted that

non-routine manual occupations didn't experience the huge shift as its cognitive counterpart did. On the other hand, it actually dipped from mid-2000s onwards. Though, this may be because non-routine manual occupations already had the highest employment share for a long period. It started surging post-liberalization as the newly opened up economy demanded low-skilled labour but as the inertial push of the liberalization subsided and as services sector boomed in the mid-2000s, their share in

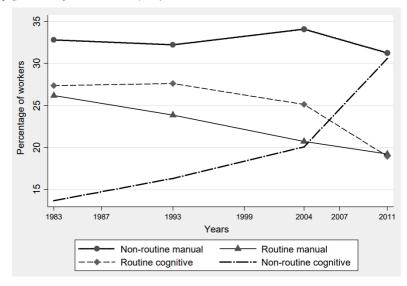


Figure 16. Task-based employment share from 1983-2011 (in %)

Source: Sarkar (2017)

Note: All calculations are based on NSS Employment and Unemployment Survey

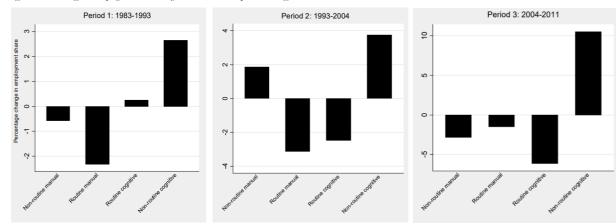


Figure 17. Change in employment share by task-based occupation categories

Source: Sarkar (2017)

Note: All calculations are based on NSS Employment and Unemployment Survey

the employment structure started plummeting. But are these changes in employment share a result of shift in employment structure or the shift in industrial structure of the economy? Table 5 suggests that LMP in the economy can be attributed the shift in occupational structure.

Table 5. Shift-share analysis

Categories	Period 1	Period 2	Period 3 (2004-2011)	
-	(1983-1993)	(1993-2004)		
Non-routine manual				
Total change	-0.63	1.94	-2.82	
Industry change	2.30	0.05	2.62	
Occupational change	-2.93	1.89	-5.44	
Routine manual				
Total change	-2.31	-3.14	-1.51	
Industry change	-2.19	-0.75	-0.52	
Occupational change	-0.12	-2.40	-0.99	
Routine cognitive				
Total change	0.28	-2.53	-6.17	
Industry change	0.29	2.24	-1.94	
Occupational change	-0.01	-4.77	-4.22	
Non-routine cognitive				
Total change	2.66	3.74	10.50	
Industry change	-0.40	-1.54	-0.15	
Occupational change	3.06	5.27	10.65	

Source: Sarkar (2017)

Note: All calculations are based on NSS Employment and Unemployment Survey

However, decline in the proportion of routine manual occupations can be linked to a shift in industrial dynamics. Jobs in routine manual category is largely supplied by the manufacturing sector in which production related work declined while the share of jobs under operatives and assembly line workers remained resistant (figure 18). This is backed up by literature which elucidates destruction of employment largely due to the introduction of automation in the manufacturing sector during the 1980s and 1990s. Nagraj, 2004 observed a of 15 per cent fall in routine employment in the manufacturing sector of India and noted increasing demand for non-routine low skilled manual work in service to manufacturing involving security, cleaning,

transportation, etc. Vashisht, 2017 backs this up by showing that the adoption of technology has increased the call for specialized workers at the cost of intermediary skills in the manufacturing sector, suggesting that technological adoption has led to decreased routine activities in the manufacturing sector in India. In the case of routine cognitive, the fall was catalyzed by the reduction in clerical occupations in the postliberalization period.

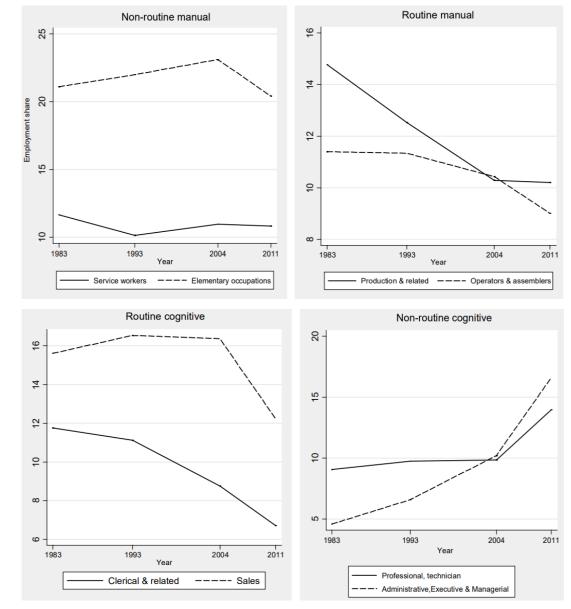


Figure 18. Change in employment share (in %) of occupations under each task-based category

Note: All calculations are based on NSS Employment and Unemployment Survey

Source: Sarkar (2017)

Apart from change in the employment share, wage change is also a discernible aspect of LMP. Figure 19 displays the log real daily wages of both sexes employed for a minimum of 5 days per week at the 10th, 50th and 90th percentiles of wage distribution. This encompasses salaried and casual wage earners in urban India from 1983 to 2011. One can clearly see the acute rise in real daily wages of both the 90th percentile and the 10th percentile factions, which constitute the high skilled and low skilled workers respectively, whereas the 50th percentile emblematizing the middle skilled workers lags behind, even showing a decline in real wages during early 2000s.

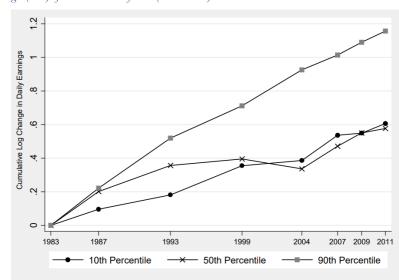


Figure 19. Log real daily wages (in ₹) of urban male and female (1983-2011)

Source: Sarkar (2017)

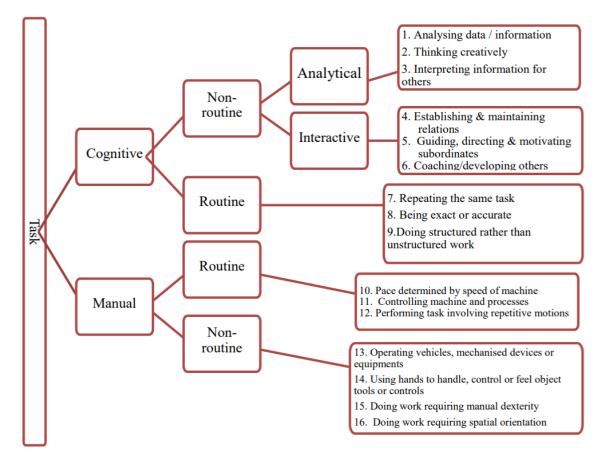
Note: All calculations are based on NSS Employment and Unemployment Survey. Real daily wages are calculated using industrial workers' CPI taking 1982 as base year.

Thus, wage inequality in urban India is primarily characterized by widening wage gap between the high skilled (wealthy) and middle skilled (middle class) workers. This aligns with the Stolper-Samuelson theorem as previously mentioned, and also backed up by literature. Kijima (2006) illustrates urban India's wage inequality dating back to the 1980s and links it with skill premium associated with technological advancements. Chamarbagwala (2006), also confirms the relationship between surging calls for specialized workers and the rising wage gap.

With this crucial study, which highlights that in urban India, in 1990s and 2000s, employment and wage increased for high skilled and low skilled labour, however the middle skilled lagged behind, while also elucidating the decline in routine jobs, Sarkar provides adequate evidence for RBTC induced LMP in the Indian economy.

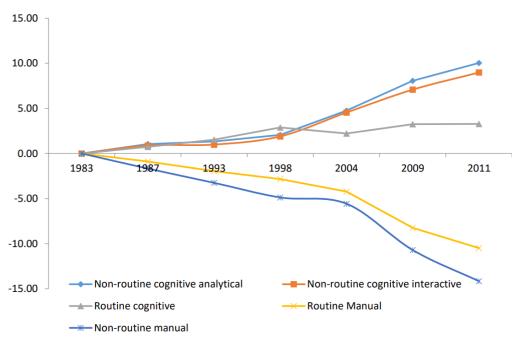
Another study (Vashisht & Dubey, 2018) is in harmony with the above-mentioned conclusions. They inspected India's transformation in task-content of jobs for similar time-period of 1983 to 2011. The data was gathered from the O-Net 2003 database which provides measured information on various task content categories which are then tabulated in line with Standard Occupation Classification (SOC), following which the data is made comparable with Indian data. Corresponding to standard literature, employment figures were gathered from NSSO's Employment and Unemployment Surveys. Instead of the four task content categories commonly used, they used five task content categories: routine manual, routine cognitive, non-routine manual, nonroutine cognitive analytical and non-routine cognitive interactive (see figure 20). Figure 21 affirms the alterations in occupational task-content in the last decades. Confirming to major academia, non-routine cognitive occupations experienced an upward trend in India. The push increased from 1998, when liberalization policies began to show effects. On the other hand, manual task contents, both routine and non-routine, experienced immense fall from 1983 to 2011. Surprisingly, the non-routine manual category fell more than its routine counterpart. Also, slight increment in the case of

Figure 20. Categories of task-content in occupations



Source: Vashisht and Dubey (2018) Note: Arrangement is based on Acemoglu and Autor (2011)





Source: Vashisht and Dubey (2018)

routine cognitive task content was another surprise, though most of the surge it experienced was pre-1998 and since then it has been quite constant, majorly carried by agriculture and services sectors which demanded routine cognitive tasks.

As previously shown, Indian labour market has gone through considerable change in the employment structure. Vashisht and Dubey (2018) shed light on how these structural changes influence task content through the shift share decomposition method, which allows us to identify the sources of particular economic changes. It is given by,

$$\Delta T_{jt} = \sum_{s} (\Delta E_{st} \gamma_{st}^{*}) + \sum_{s} (\Delta \gamma_{st} E_{s}^{*}) + \sum_{s} (\Delta E_{st} \Delta \gamma_{st})$$
⁽¹⁾

Here, E is sectoral share of employment,

 γ is task content,

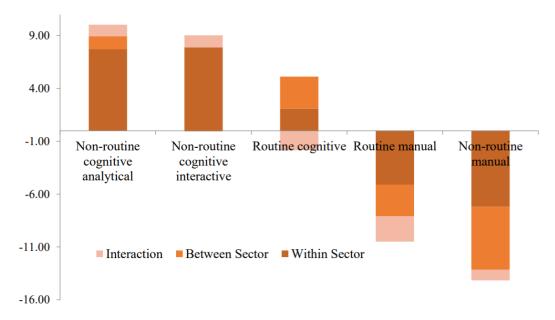
s denotes sector,

t is for time, and

* stands for initial value.

In the equation, the first term in the RHS denotes the between sector effect, the second term denotes the within sector effect and the third term denotes between these two effects. Changes in the five task-based categories are decomposed into the above three effects (figure 22).

Figure 22. Decomposition of task-based categories (1983-2011)



Source: Vashisht and Dubey (2018)

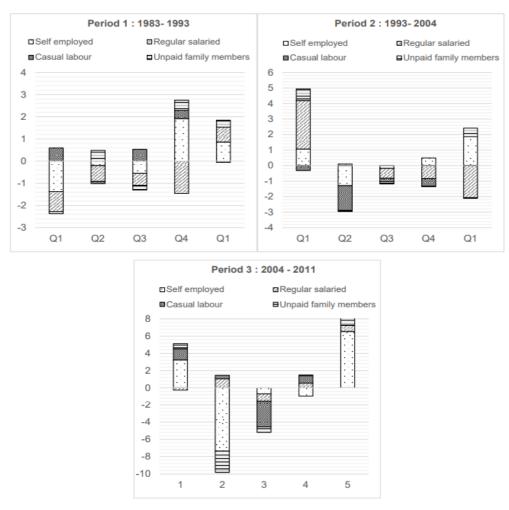
It is deducted that change in employment structure didn't bring about much change in non-routine cognitive task-based categories, as more than 3/4th of change in workload concentration of non-routine cognitive analytical category is characterized by within sector change, whereas for non-routine cognitive interactive task-based category, within-sector change attributes to nearly 90 per cent of change. Change in employment structure (between sector effect) influenced about 12 per cent of change while the interaction among within and between sectors attributed to 11 per cent change in the case of non-routine cognitive analytical task-based category. With regards to non-routine cognitive interactive task-based category rest of the changes are proceeding from interaction amongst within and between sectors. In this case, the influence of change in employment structure is apparently negligible. Nevertheless, it is deemed influential in the case of the remaining three task-based category.

Consistent with literature, Vashisht and Dubey (2018) establish that the non-routine cognitive occupations have experienced surge in India majorly due to technological change, while manual jobs show a relative decline. However, routine cognitive jobs have not dipped. Also, manual task-content occupations are found to be steered by shift in employment structure.

The crux of the argument is empirical observation into occupation and task-based analysis in the Indian labour market suggests that the country has indeed experienced LMP in recent decades as high and low skilled occupations squeeze the scope for medium skilled occupations. Occurrence of wage polarization also backs this up as real daily wages of high and low skilled occupations met with a raise while that of middle skilled occupations declined. Having established this, there remain some unanswered questions whose answers are crucial to truly understand the nature of LMP in the Indian labour market. Why do routine occupations endure even though the labour market has encountered increasing polarization? Also, what roles do non-technological factors play in the nature of task-based categories? The two avant-garde works discussed above will lead us to the required answers.

3.4 IMPERATIVES OF NON-TECHNOLOGICAL FACTORS

Sarkar (2017) broke down the changes in employment share by employment type, illustrated in figure 23, and deduced that when it comes to the highest and the lowest quintiles mentioned earlier, their growth post-liberalization can be primarily attributed to the rise in self-employment within both quintiles. It consists of shop assistants, caterers, drivers, cleaners, moderate clothing designers, makeup artists, etc., in the bottom quintile, while managers, graphic designers, legal service providers, consultants, digital marketing experts, etc., add into the highest quintile. It is highly likely for the growth in the MSME sector since mid-noughties to be liable for the surge in self-employed managers (Mehrotra et al. 2014). A more detailed analysis of changes in employment reveals a substantial increase in the employment share within the informal sector as a significant cause for the observed LMP (Figure 24). Thus, the observed polarization is led by informality-driven demand for labour.

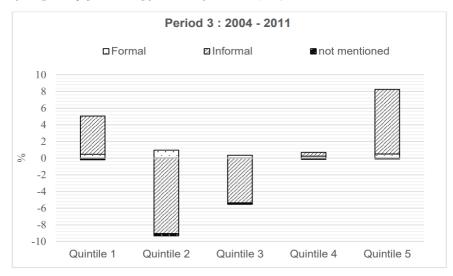






Note: All calculations are based on NSS Employment and Unemployment Survey. Formal and informal sector data is available post-1999.

Figure 24. Breakdown of changes in employment share by formal and informal sector (in %)



Source: Sarkar (2017) Note: All calculations are based on NSS Employment and Unemployment Survey. Formal and informal sector data is available post-1999.

Apparently, alterations in occupational task-contents in the Indian labour market is not wholly attributed to structural changes, as both the non-routine categories are only slightly influenced by change in employment structure and largely pushed by within sector effect (figure 22), which is defined by shift in workforce availibility (supply side) and shift in technological adoption (demand side). The task content categories were put in regression on these supply and demand sides in a temporal cross-sectional analysis. The regression equation is given by,

$$Y_{it} = \alpha + \beta_1 H_{it} + \beta_2 M_{it} + \beta_3 T_{it} + \tau_i + \epsilon_{it}$$
⁽²⁾

Here, Y is the task content,

H is the portion of labour force with tertiary education,

M is the portion of labour force with secondary education,

T represents technology proxy,

 τ denotes sector specific fixed effect,

 ϵ denotes to random disturbance term,

i represents a random *i*th sector,

t stands for time

The technology proxy employed is that of total factor productivity (TFP), for which sector wise data was gathered from KLEMS India database. Sectoral data for workers with tertiary and secondary education is gathered from NSSO database. The outcome obtained after applying regression is given by table 6. The odd columns represent change in education and the even columns represent technological change. One can see upskilling is in blend with non-routine cognitive analytical task-based category, nevertheless TFP in column 2 overshadows the significance of it, indicating the increase in non-routine cognitive analytical task content in jobs is primarily influenced by technological change rather than educational factors. The results are similar for non-routine cognitive interactive task-content category. A strong association exists between upskilling and the shift in non-routine interactive task category, but after bringing in TFP in picture, technological change again outweighs the impact brought by education. Moving on to column 5 & 6, one can notice that increment in supply of secondary educated workers influences change in routine cognitive task-based category, however, this effect amounts to only about 14 per cent of the overall transformation in the routine cognitive task-based category as it primarily impelled by structural changes in employment. Columns 7-10 cumulatively suggest the increment in supply of tertiary and secondary educated workers is inversely related with

alterations in routine & non-routine manual task-based categories. However, influence of technological change is negligible and thus manual task-based categories whether routine or non-routine, are headed by upskilling. Whereas, for non-routine cognitive task-based categories, tailwinds are coming from technological change.

	Non-routine Cognitive Analytical		Non-routine Cognitive Interactive		Routine Cognitive		Routine Manual		Non-routine Manual Physical	
	1	2	3	4	5	6	7	8	9	10
High Education Share	0.029* (.003)	0.004 (.005)	0.029* (.004)	0.005 (.006)	0.002 (.003)	0.001 (.004)	042* (.004)	041* (.006)	049* (.005)	053* (.006)
Medium Education Share	-0.007 (.011)	0.004 (.003)	-0.007 (.012)	0.003 (.002)	.009*** (.004)	.009** (.002)	037* (.005)	038* (.004)	053* (.002)	052* (.003)
Total Factor Productivity		.013* (.002)		.012* (.003)		.000 (.00)		001 (.002)		-0.001 (.003)
No. of Observations	42	42	42	42	42	42	42	42	42	42
Within R Square	0.35	0.62	0.30	0.55	0.02	0.02	.56	.57	0.57	0.58

Table 6. Regression: shifts in task-content based categories, technological change and education

Source: Vashisht and Dubey (2018)

Note: Calculation is based on Driscoll Kraay standard error. Parenthesis contains standard error.

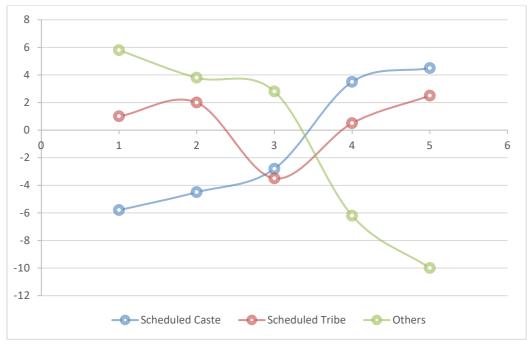
* significant at 1% level

** significant at 5% level

*** significant at 10% level

Interestingly, Vashisht and Dubey (2018) delved into task content of occupations factoring in the social cleavages in the Indian society (figure 25). This allows us to understand the significance of socio-economic inequalities of the Indian society on task content of occupations. Evidently, occupations in which historically advantaged groups, denoted as others, are concentrated, primarily consist of increasing cognitive task content. On the other hand, historically disadvantaged groups like Scheduled Castes (SCs) are largely concentrated in occupations with increasing manual task-

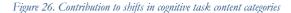


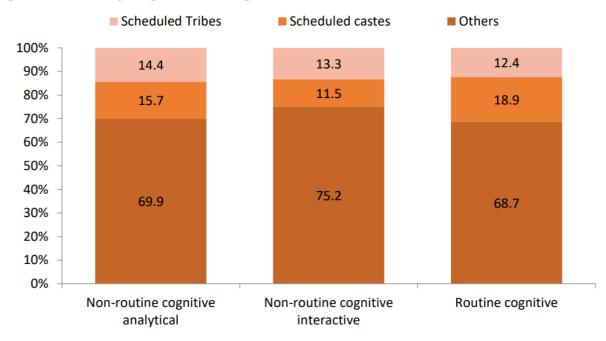


Source: Vashisht and Dubey (2018)

content. However, the shifting task-content of occupations might steer the historically disadvantaged communities into tricky waters, as demand for manual occupations fall. Marked up presence in cognitive occupations can save the day, and it is observed that change in the task-based categories has been pushed equally by all social groups. However, when individual task-based categories are considered, the share of the social groups vary. Figure 26 shows the share of distinct social classes in steering the three task-content categories which exhibited a surge, i.e., the cognitive task-content categories. As the share of SCs and STs (Scheduled Tribes) in total population of India is around 16.8 per cent and 8.6 per cent respectively, the per capita contributions of the two historically disadvantaged groups, individually and cumulatively, are conveniently placed. This might as well be because of affirmative action in India, namely *reservation*, which under the constitution allows union and state governments to set reserved quotas/seats for socially disadvantaged groups to lift their participation in

Note: Here, 1 - Non-routine cognitive analytical, 2 - Non-routine cognitive interactive, 3 - Routine cognitive, 4 - Routine manual, 5 - Non-routine manual

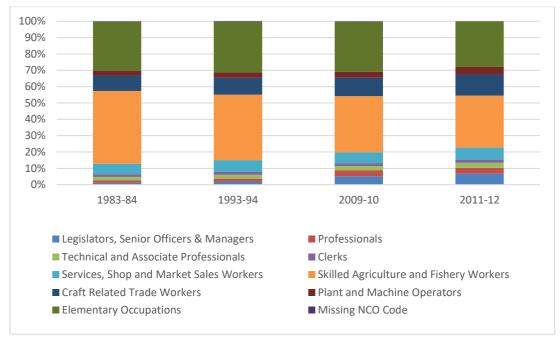




Source: Vashisht & Dubey (2018)

education, employment and decision-making. We have observed, there is an increasing demand for non-routine cognitive occupations but not a diminishing but a stable demand for routine cognitive occupations, which is contrasting to pure LMP phenomena. To understand such development, it is crucial to comprehend the link between education and type of employment, and thus explore the evolving occupational structure of employment, depicted in figure 27, which illustrates the call for varied skill proficiencies. One can observe a comprehensive change in favor of highly specialized workers. The share of managers, professionals and technical associates has increased to a large extent, from 4.8 per cent in 1983 to 13.4 per cent in 2011. Amongst these high skilled workers, the share of managers has experienced the most significant surge, which rose from 1.1 per cent in 1983 to 6.8 percent in 2011. The growth of the proportion of highly qualified personnel squeezed the share of low skilled workers who are largely employed in agriculture sector. Agriculture and fishery

Figure 27. Occupational Structure of Employment



Source: Vashisht and Dubey (2018) Note: All calculations are based on NSS unit level data.

workers' share in the total employment dipped sharply from 44 per cent in 1983 to below 32 percent by 2011. Occupations such as clerks, machine operators and craft workers increased marginally but didn't grew as much as the higher skilled occupations did. Share of elementary occupations, which consist of routine manual tasks, dropped to 27.8 per cent in 2011 from 29.8 per cent in 1983.

As share of agriculture in employment declined, the workers who left this sector are observed to be migrating to construction and low skill manufacturing & services occupations. This is due to high skill service export growth which has turn created demand for construction, complementary consumer goods, and to a lesser degree, capital goods. Kocchar et al (2006) highlight that nearly two-thirds of recent job opportunities in manufacturing were taken up by without lower secondary education. Post-education success can be provided to the masses by a raise in high skill manufacturing and services occupations, but limited intake in high-end services flushed out employees with higher secondary and college education into taking up employment in low skill occupations. This accounts for the enduring nature of routine jobs, yet also upholds LMP.

Even though there are some ifs-and-buts, empirical evidences have allowed us to establish that LMP has showed up in India. Now, as it is fundamental that existence of LMP produces "losers," most of whom tend to be, as evidence suggests, middle skilled workers, their relative economic decline would cause discontent and insecurity, and subsequently demand a political resolution. As discussed in chapter 1, literature suggests that demand of such political resolution usually consists of populist measures, especially those inclined to social conservatism. Against this background, it'd be worth exploring if the predicted political resolution of populism accompanies the recent phenomenon of LMP in India.

CHAPTER 4

POPULISM IN INDIA

"There are no institutions, only the people exist." Andreas G. Papandreou

4.1 POPULISM: GENERAL PERSPECTIVE

Literature suggests populism to be an important political consequence of LMP. As we have established the existence of LMP in India, it is crucial to understand the evolution of populism in the country. However, before we explore such imperatives, let us understand the phenomenon of populism as a whole.

During the mid-1970s, Greece appeared to attain a semblance of stability after enduring prolonged political upheaval as a new constitution was introduced and the authorities found paths to enter European institutions. However, a political party— PASOK, came to power in 1981 and its "charismatic" leader Andreas Georgiou Papandreou castigated the new constitution and blamed the authorities of committing "national betrayal." He pledged to lead with the well-being of the "common people" as his foremost priority. In many democratic nations, similar charismatic leaders have emerged who vilify their political opponents, degrade established institutions, and claim to be representing the masses' "common will." Many a times, the critics of such leaders call them "authoritarian" and "fascist," and also accuse them of manipulating the masses' emotions to strengthen their vote-bank. Even if such style of politics seems unethical, it is technically democratic, and is known as populism. The expression has existed for an extended period, tracing its origins back to the ancient Latin term "populus," denoting "people." It has been used in reference to a number of political movements, many of which would seem counterintuitive in nature. This political concept stands among the most frequently employed yet inadequately comprehended ideas in contemporary politics, and has been characterized as "a classic example of a stretched concept, pulled out of shape by overuse and misuse." Nevertheless, with all the distinct references, there are some tick-boxes which seem to get filled up most of the times, and consolidate to form the understanding of "modern populism." It is this kind of populism which will be heavily discussed and unraveled going forward.

To understand the origin of the modern form of the term "populism," we need to go back to the late 19th century. The decades following the American civil war envisaged massive growth, with the population doubling from 1860-1890. Steel and coal production exploded as the U.S. Army battled Native Americans to expand the country's borders till the western coast. With a population of nearly 62 million people to feed, farming seemed to be a lucrative field. The progress in technology has simplified the cultivation and harvesting of crops. But many farmers didn't possess the capital needed to invest in those technologies, and thus took hefty loans from eastern banks, but then crop prices fell and the country was hit with drought, leaving the farmers bankrupt. At the same time, privately-owned railway monopolies drove up transportation costs, but the government provided minimal assistance, declining to dismantle monopolies and offering scant relief to alleviate the hardship. Subsequently, farmers joined forces and initiated self-advocacy efforts. During the May of 1891, a farmers' alliance in Kansas introduced the term "populist," meaning of the people, with respect to their movement. This movement gave birth to the populist party *aka* the people's party, in an unlikely coalition comprising farmers and union leaders. They targeted the "elites" of the east, and advocated for the acknowledgement of labour unions, overseeing of the railroad industry, implementation of progressive income tax, etc. Despite being considered radical for their era, the party successfully acquired influence and secured a position on the national stage.

Later, in the aftermath of WWII, totalitarian ideologies were looked down upon, and government systems like liberal democracy, which prioritized individual and social rights were adopted. Liberal democracies acknowledge the presence of crosscutting divisions in society, fostering conflicts that necessitate factions to actively strive to find commonality amid these distinctions. Also, rule of law is found essential to protect the rights of individuals. Over the course of time, nations which adopted liberal democratic systems realized stability but like any form of government, cannot solve all problems of the society, like the rise in immigration, or terrorism and so on. The widening inequality and the failure of people in power to address it is imperative to observe. In some cases, rampant political corruption added fuel to the fire and public trust was damaged. Moreover, as our economies got globalized, our governance model for most part, remains national, hence incapable of addressing those globalized problems. This leads to frustration and anger, and thus the general populace often gravitates towards leaders who are willing to challenge established institutions and transform their wants into tangible realities. At first thought this seems like democracy in action as the masses, when felt underrepresented, put electoral democracy in practice to ameliorate their situation, however, it turns out, assertive modern populists go onto subverting democracy. Populists recognize and affirm their individual identity as the embodiment of "will of the people," and justify all of their actions as "common will," prioritize those interests over established institutions which provide individual liberties to those very "people." They argue those institutions are managed by selfinterested governing minority or the "elites," aiming to exert control over the broad populace of upright common individuals. Hence, populists tend to believe and also in the process make the masses believe that these institutional systems are fundamentally broken and thus discourage consensus between the "elites" and the "people." Where liberal democracy provides utmost importance to the constitution, independent judiciary and free press, populists denigrate any institution that opposes the purported "common will."

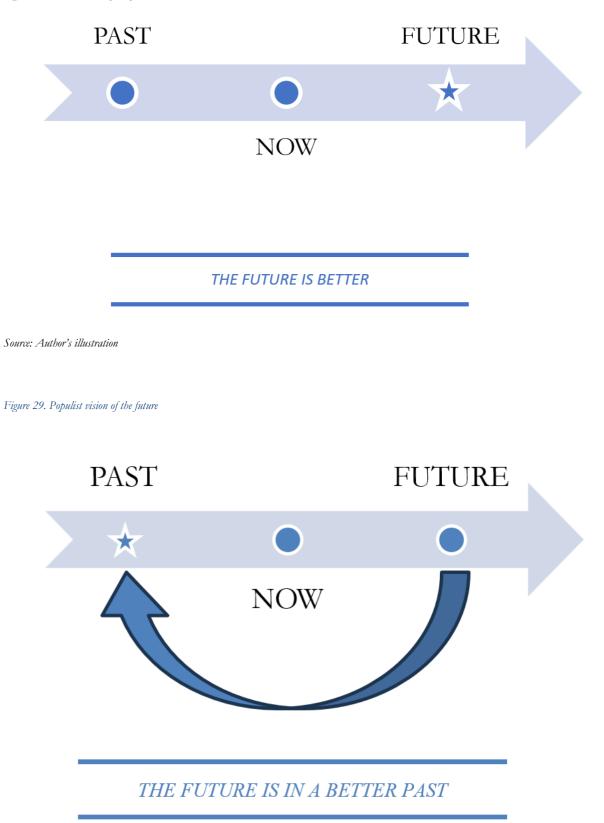
In contrast to most '-isms,' populism does not align with the traditional left, right, or center ideologies. Whether it is the late radical socialist Hugo Chavez in Venezuela or the far-right nationalist Marine Le Pen in France, the common thread lies in their approach to political conduct. Even though populism is a global phenomenon, leaders of the phenomena share similar characteristics — they're charismatic figures who align themselves as the personification of the *volonté générale* or the "will of the people," and tend to make extravagant promises to the people, while crafting a narrative that portrays adversaries as individuals betraying and subverting the nation's interests. They employ crises, either exploiting existing ones or fabricating them, as a pretext for advocating rebellion. Utilizing provocative language, they seek to startle the established

order and establish their connection with the common people. Yet, their grand pledges to disrupt societal norms propel them swiftly into clashes with democratic safeguards, notably the judiciary and media mentioned earlier, designed to restrict governmental powers. Whether they genuinely hold their convictions or strategically capitalize on opportunities, the dynamics unleashed by them profoundly destabilizes liberal democratic systems and these alterations have the potential to endure far beyond their tenure in office.

Another interesting characteristic of populists is the vision they highlight they'll give to the people. To understand this, we need to understand their narrative, of which there are three key aspects which essentially highlight, at the level of communication, the differences between mainstream politicians, especially those of the liberal order, and populists. The classic liberal narrative entails the idea that the future will always be better than the present and the past (see Figure 28). Populists, on the other hand, believe the future is the return to an idealized past (see Figure 29). It is a nostalgic vision. They make the masses believe they have lost something of value, and promise to give it back to them.

This can be observed in the 2016 presidential campaign of Donald Trump in the United States. slogan "Make America Great Again," with the word *again* being the operational word here. What Trump tried to sell to the masses is the idea that the United States, which had been the unipolar superpower of the world since the end of the cold war, but waning in recent times with a changing global order particularly defined by multipolarity, would be revived if he comes to power. In France, right-wing populist Marine La Pen of the National Rally Party, famously declared that only her

Figure 28. Liberal vision of the future

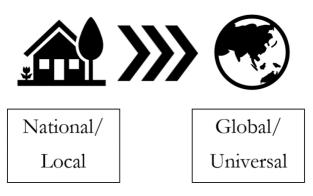


Source: Author's illustration

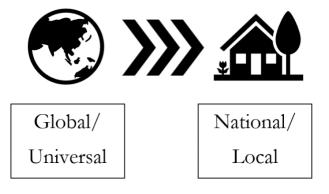
party possesses the fundamental strategies aimed at restoring to France essential elements of sovereignty, including control over its national budget and borders, with the objective of bolstering its ability to navigate the challenges of a globalized world. The second distinction between liberals and populists is evident in their perspectives on the world. The classic liberal idea guides the masses to broaden their vision to larger understanding of universal values and principles, and thus the movement is of an opening up to the world (Figure 30 (a)). Whereas, the movement of the populists is exactly the opposite— it's a closing down to the world (Figure 30 (b)). It involves reawakening of cultural and traditional experiences of value systems, while also exercising protectionism sometimes.

Figure 30. World vision of liberals and populists

(a) Liberal vision of the world



(b) Populist vision of the world



Source: Author's illustration

The third difference between the two factions is that of their vision of the society. The narrative of the liberals is that of inclusiveness. Everyone can join into the vision and become a part of it. Their vision can be loosely explained by the term "We." Whereas, the populists' vision of the society can be understood by the exclusive phrase "Us vs Them." Again, here "us" represents the virtuous people and the populist who "represents" those people. "Them" in left-wing populism usually represents the social elites, wealthy capitalists, monopolists, oligarchs, etc., whereas in right-wing populism "them" usually represents the political elites, minorities, immigrants, etc. Hence, the animosity is either against "up there" or against "out there." Whereas "us" is always culturally or ethnically homogenous. The populists' view delegitimizes everyone who's not of the same opinion, and who's not part of how the populist defines "the people." In view of this, populism can go anti-democratic.

4.2 POPULISM: CAUSAL FACTORS

Having understood the crux of what populism generally means, let us move ahead and explore the causal factors, especially of the contemporary form of populism, which has largely inclined to the right-side of the political spectrum, and other technicalities relating to the subject. A thorough analysis hinges on understanding the intricate interplay between economic and cultural developments, elucidating how these dynamics converge to cultivate support for populism.

Literature has noted the stresses between democracy and capitalism since long (Streeck 2011, Piketty 2014). The former embodies "one man, one vote" while the later stands

for "one cent, one vote." Joseph Schumpeter famously noted that the distributional effects of a dynamic system like that of capitalism can cause "creative destruction," and the subsequent decline in economic prospect can shake support for democracy. Yet, in the years following WWII, democracy and capitalism were tied into a strenuous marriage, by putting progressive tax systems and social welfare policies into practice. This was done in order to provide the world with a system, namely democratic capitalism, which prioritized liberty over equality. It was noted that democracy would provide the masses political freedom while capitalism would provide economic freedom, thus the system was also characterized by the term "embedded liberalism." It is not to say that egalitarian concerns were completely withdrawn, but the view was-equality will follow liberty by self. Milton Friedman, one of the architects of modern neoliberalism, famously observed that "a society that aims for equality before liberty will end up with neither of them. But a society which aims for liberty over equality will end up with enough amounts of both." However, Friedman also noted that capitalism (economic freedom) can do fine without democracy (political freedom). This rings bells to the contemporary times, as capitalism has obtained the status of civic religion, expanding omnivorously, while democracy is in peril. Streeck (2011) and Hopkin and Blyth (2018) note that before the New Deal, enacted by the then U.S. President Franklin D. Roosevelt in response to the calamity of the Great Depression, began to falter in the late 1960s and '70s, alongside the post-war economic regime of Keynesianism, it was believed that capitalism should be managed by a strong state. The neoliberal order that followed it dictated that the state should be constrained by free markets. However, each order began to break down when its traditional ways of

solving problems didn't seem to work. The stagflation shock of the late 1970s meant Keynesianism had to be replaced with a new economic regime, i.e., Neoliberalism, which again failed, culminating into the GFC. These regimes pulled the strings of the political order of their times, hence with their fall the respective political orders also fell. The neoliberal order, has yet, not been replaced by a new economic regime, due to the tremendous power capital has accumulated in the last decades and persistent interventions of globally important central banks. However, the political order tied to the neoliberal regime got replaced with a reactionary political force labeled as, populism.

However, one needs to ask why the reaction has taken the form it has, in both developing and developed countries. Currently, most, but not all, populist movements are inclined towards the right-wing. These underline the cultural cleavage — national, ethnic or religious identity of the "people" against the "other" group which poses a threat to the people's "common will." For instance, in Europe, populists have demonized immigrants, especially from the MENA region, but also the bureaucrats sitting in Brussels. Left-wing populism emphasizes on the economic cleavage of the society, pointing fingers at wealthy groups as the "others" who push the people off the power levers to satisfy their own self-interests. As discussed earlier, modern populism shares its roots from this variety, which originated in the New World. Even now, most of the left-wing populist movements can be found in Latin America, while only a few others are scattered in the rest of the world. To understand as to what explains the dominance of right-wing populism in rest of the world, one needs to understand the demand and supply side factors of populism. Technically speaking,

populism can be explained by both demand side factor, that is based in the needs of the citizens, and supply side factor, that is based in the failures of governments. The demand side factors are seen as bottom-up explanations, whereas the supply side factors are seen as top-down explanations. Economic insecurity drives consensus to populist policies, as economic factors like, deindustrialization, economic liberalization, etc., form a 'left-behind' precariat with declining job security and heightened inequality. On the supply side, populist parties hit it big when incumbent parties find it hard to address crises, including that of economic insecurity. Rodrik (2018) elucidates that the populists channel these insecurities of the masses in a particular programmatic direction through narratives that provide meaning and explanation to them. These narratives resonate with the people who later exercise political mobilization. With influx of immigrants or relative increase in the population of the minorities, which are currently observed in present times, it becomes relatively easier to mobilize the "people" along national, ethnical, cultural and religious lines. Later, economic anxieties can be channeled into opposition to these groups. Minorities can be portrayed as threat to the native culture, or immigrants can be presented as competing for jobs and reducing public resources available for the natives. Indeed, the present recessionary fear coupled with that of immigration eroding welfare state benefits, has been a major support for far-right parties in the west (Hatton 2016). Promises of redistribution have become less appealing as governments face fiscal constraints, especially since the GFC. Even, perceived competition with immigrants for benefits like public housing has been noted to fuel right-wing populism (Cavaille et al. 2017). The implication of this explanation is that even though the underlying discontent is economic in nature, the political manifestations are predominantly cultural. What may look like a xenophobic backlash may well be directed by economic anxieties. Moreover, the convergence between mainstream left and right parties in terms of welfare state policies, has weakened the connection between the left- parties and the general working class (Hall and Evans 2019). Labour unions, which proved to be an important link between the left- parties and the working-class masses have been decimated under the neoliberal regime. Kitschelt (2012) observes this to be crucial as to why the "losers" of structural changes turned towards right-wing populist parties, ditching their left- counterparts. When it comes to the many causal factors of modern populism, we have already observed some of them — consequences of the GFC, the influx of immigrants, increasing population of minorities, economic insecurities and so on. Moving on we will discuss the more important factors of globalization, and then technological change. It is imperative to understand that all these factors are not independent of each other, but actually complement and reinforce one another.

4.3 GLOBALIZATION AND POPULISM

Considering how trade and global financial integration work, the contentious nature of globalization would not be stupefying. Models of trade and distribution basically trace out effects of price changes on the economic prospects of people. There is one implication of the Stolper-Samuelson theorem, discussed earlier, which is imperative. In a competitive market, as long as the production of importable goods is carried out locally, i.e., ruling out complete specialization, there will always be one factor of production that would be rendered worse off by trade liberalization. It is not a special case that trade liberalization creates losers, as numerous models substantiate this, including those where labour is immobile. Rodrik (2018) highlights that redistribution is the flip side of the gains from trade, and that the ratio of redistribution to gains from trade rises as the liberalization tackles progressively lower barriers. Thus, in a globalized world, trade becomes more associated with redistribution and less about growth, and therefore globalization becomes politically more important as it also becomes more contentious. The case of Autor, Dorn and Hanson (2013) discussed in chapter 1 forms excellent empirical evidence for this. China entered WTO in 2001 (facilitated by U.S.) and a result the volume of trade in between China and U.S. increased tremendously, as U.S. tariff on Chinese imports were not changed. In their study, Autor et al., took the time period 1990-2007 to observe relative changes before and after China's entry into the WTO, and their unit of analysis is the commuting zone, which has been discussed earlier. They found that, compared with a commuting zone with at the 25th percentile of exposure to Chinese import growth, a commuting zone in the 75th percentile had a fall of 4.5 per cent in the number of manufacturing workers and a larger decline of 0.8 percentage point in mean log weekly earnings. Additionally, overall employment and LFPR were impacted, and this impact did not dissipate even after a decade (Autor et al. 2016). A similar study, Hakobyan et al. (2016), focusing on the time period 1990-2000 finds that the effect of NAFTA on workers in U.S. was actually moderate but some people suffered substantial decline in wages. Places affected by tariff reductions saw sluggish growth in wages, and the effect was greatest for the low- and middle-skilled workers. Thus, the trade aspect of globalization tends to create losers, who, as discussed earlier, get appropriated by the populist narratives. This was seen in Donald Trump's 2016 presidential campaign, in which he promised to reduce trade deficits with China, and when elected, he launched a trade "war" with China, to please the "losers." The question which follows is that if successive U.S. administrations effectively redistributed the gains from trade to compensate the losers, can this populist cry had been avoided? The answer to this lies across the Atlantic. European political economy expounds that such reparations work best when they are embedded in the country's social policies, and not when a trade shock hits in. This also explains the relative difference in factors leading to populist backlashes in the U.S. and Europe.

We have established that trade causes wage and employment losses in sections of society but more so than other factors, including technological change which would be discussed further, why do populists take comfort in taking up trade in their planned rhetoric? One, it is convenient for them to throw up their hands and point fingers at foreigners to evade worrying questions. Second, perceived unfairness leads people to empathize with workers who have incurred employment or wage loss due to unjust practices existing in international trade practices. For instance, when inflation soars in the domestic economy, it is convenient for the authorities to point fingers at surging global rates or international oil cartels. Or, when the economy is not doing very well, it is easier to attribute it as an adversary nation's geopolitical attack. Many a times, populists also manufacture international frictions to divert the masses' attention from domestic economic decline, for instance, the 2020-21 China-India border skirmishes.

of all kinds. It opened up new markets for entrepreneurs and MNCs. However, it also widened cleavages in the society and caused towering financial crises. But it wasn't the only phenomenon which changed societies and made a bunch of its members worse-off. As discussed earlier in length, technological change played quantitatively greater role in widening inequality and lay-offs. Yet, technology evaded the antipathy which globalization got associated with. A plethora of populist movements are associated with globalization, for instance, the Five-Star Movement in Italy, Donald Trump's presidency, Brexit, and the establishment of parties like AfD in Germany, Podemos in Spain and Syriza in Greece. Becker et al. (2016) noted that immigration played a huge role in Brexit, whereas Colantone et al. (2018) observed that places with increased penetration of Chinese imports majorly voted to leave the E.U. Regarding the U.S. presidential election of 2016, Autor et al. (2016) detected political polarization in regions affected by the China trade shock.

4.4 TECHNOLOGICAL CHANGE AND POPULISM

Technological progress revolutionizes the landscape of employment. Based on the nature of the work, technology has the potential to supplement and enhance day-today tasks of workers, but it also tends to replace the workers from the work floor. As observed in the previous chapter, employees positioned within the intermediate range of the skill distribution, whose work activities are particularly routine in nature, are adversely affected by automation and technological change. As, the middle-skilled workers form a large and politically relevant section of society, the unprecedented economic strain they face due to technological shock has considerable political implications. Some people argue that the present apprehension in relation to technology taking over jobs of the masses is unwarranted and equate it with the luddite paranoia of early 19th century. According to them, in due course of time, new technologies emanating from the fourth industrial revolution *aka* Industry 4.0 will create new jobs, and the masses only need to upskill or reskill themselves to enter the newly transformed labour market, as observed in previous industrial revolutions. On the other hand, some rebut such optimism as normalcy bias, and contend that history is irrelevant as the pace of technological change and the pace with which it is affecting people's occupations is unprecedented. Taking leave off of these two extremes, one needs to understand that at least in the short term, technological changes affect the labour markets of today, and no matter towards which extreme the future inclines in the long-term, such structural changes glide into politics of the day.

Automation and A.I. are effectively rendering existing skillsets redundant and perhaps the leading drivers of changes in employment structure, more so than international trade. Hence, they factor into the rise of inequality and LMP, as noted in the previous chapter, and substantiated by existing literature (Goos et al. 2014, Autor 2011). Still, we find it relatively rare to see the adverse effects of technological change in our political discourse. This is because, structural changes due to technology are slow and quiet in nature (Kurer and Gallego, 2019), and the solutions to the adverse effects of technology are not that simple, as the empirical identification of the impacts caused by technological change are difficult to capture. Secondly, quick policy reactions would be unrewarding as they would stall growth and development. Thirdly, and most importantly, as discussed above, it is more convenient and also electorally beneficial for the politicians to blame the lesser relevant factors like globalization, immigration, etc. Even though the adverse effects of technological change are not brought up in political discourse, exploring its relationship with electoral politics helps us in understanding the political nature of our time. It needs to be stressed that the contemporary changes in political structure of today is linked to the changes in employment structure, namely LMP, caused by technological change. In the previous section, we established that low skilled workers are worse off due to trade liberalization (Rodrik 2018). However, in their famous paper, Autor et al. (2003) discovered that technological advancements are quite influential in getting routine occupations automated. These routine occupations are primarily filled by middle skilled workers, hence making this group susceptible to automation. The two poles of low- and high skilled workers are relatively safe from automation replacing their jobs, as their occupations are comparatively non-routine in nature. Thus, as seen earlier, RBTC leads to LMP. This is of crucial importance. Routine occupations filled up by middle skilled workers provide mid-level wages and a comfortably descent standard of living. RBTC induced LMP would put the collective ascent of these workers in jeopardy. As upskilling is relatively hard, they're pushed to take up low skilled jobs, which decrease their relative earnings, but also expose them to precarious working conditions. Thus, political backlash becomes highly likely, as social status, a huge element of which is entailed in a person's occupation saw a relative decline. As noted by Kurer and Palier (2019), "routine workers form a huge, electorally relevant group with the capacity to actively voice dissatisfaction in the political arena. A lower middle class no longer protected from the vagaries of economic modernization and in fear of losing its acquired position in society is a potential electoral game changer." In the political space, the middle skilled workers, who hold in routine occupations, carrying their economic and social insecurities are observed to demand social conservatism (Im et al. 2019). This strengthens the right-wing political parties, especially the right-wing populists to take the "losers" into their fold. As the emphasis on social conservatism within the populists' position is more conspicuous than that of mainstream politicians, most losers of automation get absorbed by the right-wing populist parties (Burgoon et al. 2018). De Vries et al. (2018) backs this by highlighting that tumbling social identity caused by relative economic decline fosters the "losers" to vote for political parties with populist tendencies. Whereas, Gest et al. (2017) underline societal pessimism and nostalgia as important factors creating increased space for right-wing populism. It is to be noted that one doesn't need to slide into poverty, rather a shift in relative societal position reflecting economic insecurity and loss of control is enough to provide support to populist propositions. For instance, Theresa May, during her term as the PM of the U.K., promised to help the "JAMs" — just about managing, which happen to be ordinary hardworking working-class households with at least one person with a job, but not job-security, and are not often topped up by welfare support.

Be that as it may, the observed political backlash is not a conscious revolt against automation (Kurer and Pallier 2019). Also, technological change should not be perceived as the only source which is quietly mobilizing support for populist parties, but one of the leading sources.

4.5 POPULISM: THE INDIAN EXPERIENCE

Populism in India is a dynamic and multifaceted political phenomenon which has left an indelible mark on the nation's democratic landscape. Rooted in the diverse tapestry of India's socioeconomic and political complexities, populism has emerged as a powerful force, often transcending traditional party lines. It embodies the promise of championing the voice of the people, concurrently challenging the established political elite and advocating for a broad spectrum of causes from anti-corruption to economic welfare to social justice and regional identity. In this section, we will explore India's ever-evolving populist movements and delve into their impact on the nation's social fabric, political discourse and policies.

The populist wave has swamped the entire world, with its core principles predisposed to jeopardize liberal democracy. As global power shifts to the east and the world becomes more and more multipolar, the rise of populism in Asian democracies cannot be underestimated, especially in India, as the country emerges to become a global power. The salience of populism in, the world's largest democracy — India, is higher than ever, given that the nation is ruled by a beau ideal of a populist leader — Prime Minister Narendra Modi, of the most influential populist party ever to emerge on the Indian political landscape — the Bharatiya Janata Party (BJP), which also happens to be the largest political party of the world, in terms of membership. However, to understand the contemporary form if populism in India, we need to understand the historical experiences of the nation in the context of populism and in the process also realize the rise and cause of this political force.

India has a long history of populist regimes and rhetoric in its political landscape, which has played an influential role in mobilizing the masses in mainstream politics. The first wave of populism in modern history of the nation is linked to its de facto "father of the nation" - Mohandas Karamchand Gandhi. The wave emanated as a reaction to the British colonial rule. Representing the masses with his clothing, appearance and communication style, Gandhi became a charismatic leader, who amassed popular support of the people while following a personalized style of politics, and rallied the masses against the colonial establishment of the time, serving as the head of the Indian National Congress (hereafter Congress) party. Hence, in the preindependence period, the Congress was a populist party whose policies were closely linked with nationalism. However, as it employed focus on a democratic nationbuilding, led by the first PM Jawaharlal Nehru in the post-independence period, the party's populist characteristics faded, and active political participation eluded the masses. However, after Nehru passed away, his daughter Indira Gandhi led the party and the country under a populist regime. This second wave of populism can be associated with left-wing populism as Ms. Gandhi leaned towards socialism, and thus portrayed herself as a pro-people leader fighting the capitalist and political elites. She nationalized major banks and industrial sectors, running the Garibi Hatao campaign which entails eradication of poverty and inequality. However, from 1975 till '77 she brought in the darkest phase of Indian democracy — the Emergency. She famously declared a state of emergency across the country following a series of events that included legal challenges to her election and the subsequent protest by the opposition. Under her authoritarian regime, political power became highly centralized alongside the promotion of the slogan — "Indira is India," and press freedom was highly suppressed. Basic freedoms, including the right to free speech was curtailed. However, there were pockets of resistance and protest, with sizable challenge posed at Indira-led Congress party by Jayaprakash Narayan, who led a student movement from the state of Bihar. This was followed by dissent from emerging parties in the northern Hindibelt. Thus, once again, the masses, especially the lower and middle strata of the society actively participated in the political discourse.

The rise of the BJP in the last decade, bolstered by Narendra Modi's ascent into the upper echelons of India's political landscape marks the third wave of populism in India. In fact, the "Modi wave" largely defines the third wave of populism. This is the contemporary form of populism in India which will be discussed at length going forward.

When the Emergency was revoked in 1977, elections were announced. Under the guidance of Jayaprakash Narayan, the Janata Party was founded by amalgamating the political parties which were largely active in opposing the Emergency. The party was voted into power in the '77 election becoming the first non-Congress party to form a government at the centre. A key player in the alliance was the Bharatiya Jana Sangh (BJS), a significant right-wing nationalist political party and the political counterpart of a Hindu nationalist volunteer organization—Rashtriya Swayamsevak Sangh (RSS) which was established in 1925. The RSS is the precursor to a substantial network of organizations collectively known as the *Sangh Parivar*. All the organizations under this umbrella term are committed to the Hindu nationalist or *Hindutva* ideology, expounded by Vinayak Damodar Savarkar and other thinkers as "cultural nationalism" for the

united Hindu people. The idea proposed that the Hindus, with all their divisions, were a distinct people with a glorious past, but eventually became victims of colonial establishments of "foreign elites," comprising of Muslim invaders and later the British (McDonnell and Cabrera, 2018). Here, Hindus are not to be considered as a religious community, rather a cultural community consisting of all the people who consider the Indian land as their holy land. Muslims and Christians belonging to India are excluded from this cultural fold as they find their holy lands outside of the Indian subcontinent. Carrying this ideology, the RSS began as a reactionary movement against the perceived pan-Islamism spreading among the Muslim minority, throughout the period in which communal violence against Hindus was surging. The guiding aspiration of the organization is to re-affirm the grandiosity of the Hindu civilization (Ammassari 2018). After Gandhi was assassinated by Nathuram Godse, a former member of the RSS, the organization was prohibited. This isolation from political discourse led to the formation of the BJS in 1951. The Janata Party of which the BJS was a part, was shortlived amid internal conflicts. The coalition split in 1979 leading to the fall of the government. However, the BJS with its other affiliates and like-minded parties reconstituted itself as the Bharatiya Janata Party (BJP).

During its formative years, the BJP sought to rebrand itself and broaden its appeal. Hindu-Muslim communal riots in the 1980s offered a distinctive opportunity for the BJP to engage voters by embracing even more assertive Hindutva stances. It spearheaded the Ayodhya movement, centered on the construction of a temple dedicated to the Hindu God Rama at the location where the Babri Mosque in Ayodhya once stood. This movement had a profound impact in the BJP's rise to power in the later years. It quickly became a national party and overshadowed the Congress by defeating them in the 1999 general elections, forming a coalition government — NDA (National Democratic Alliance). Heath (1999) notes that the party came to power by rejecting secularism which was observable in its anti-Muslim rhetoric. However, in 2004, the party lost power to the Congress-led coalition — UPA (United Progressive Alliance), which held its power for another decade. Nonetheless, the UPA's failure to deliver solutions to structural problems like unemployment, inequality and soaring inflation, coupled with allegations of corruption and high-profile scandals fueled anti-incumbency sentiments in the masses. In the previous section, we have noticed how conditions like these open up breeding ground for populist sentiments to resonate with the masses. Thus, the BJP, with its populist appeal and a strong charismatic figure of Narendra Modi, gained the support of approximately one-third of the Indian populace (Jha 2017) and made an outstanding electoral comeback in 2014.

We have noticed that once they come to power populists become skeptical and distrustful of non-elected institutions like the media and the judiciary, which keep the power structures in check. Since coming to power in 2014, PM Modi has not given a single open press conference, however he has given some interviews to journalists who have pledged allegiance to him. In those rare interviews, one would notice glory bestowed upon him by the journalists while pressing questions regarding sociopolitical or socioeconomic concerns are largely avoided. However, as a populist who needs to personally stay connected with the masses, Modi hosts *Mann ki Baat*, a once in a month radio program in which he addresses the nation and shares his thoughts on various topics. Some developments and decisions, in reference to appointment of judges and

the handling of certain high-profile cases have sparked discussions about the independent functioning of the judiciary. However, it is hard to point that the Modi administration has led to the weakening of the judiciary or strained its relationship with the executive, which is commonly found in populist regimes.

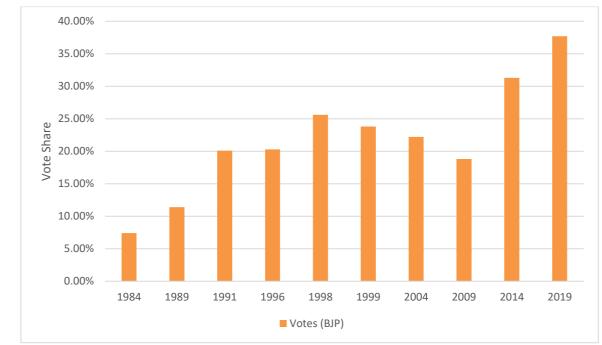
Ammassari (2018) observes, in its formative years, BJP was nationalist, but not populist. It is only in the post-liberalization years that the populist tendencies started to develop, and by 2014, it became "a textbook populist party." This can be observed in the slow, but in recent times, clearly defined characterization of the "people." The ban on cow slaughter would allow us to understand this characterization. BJP expresses that the protection of the cow is integral to the Indian culture. However, only Hindus consider it as holy and refrain from eating it. The minorities do not hold such beliefs. By bringing in such policies, the party clearly indicates its inclination towards a particular section of the society — the Hindus. As simply put by a member of the BJP National Executive, Seshadri Chari, regarding the ban on cow slaughter if the majority of the population has certain beliefs, everyone should respect and follow it. This highlights a populist trait that once the "people" are defined, whosoever is outside of that definition is excluded, and the "people" get what they want irrespective of the dilution of minority rights. BJP's idea of "One Nation, One People and One Culture" highlights another basic tenet of populism — the "people" are a homogeneous entity. Similar to the definition of the "people," Ammassari (2018) observes that the definition of the "elites" was insignificant in the initial days of the party. However, post-liberalization, the party increasingly charged at the political elites, especially the Gandhis who lead the Congress. The Gandhis are repeatedly termed "nonIndian," pointing to their senior-member Sonia Gandhi's Italian descent. Hence, they are considered not of the "people" (McDonnell and Cabrera 2018). BJP called out the political parties who were largely led by powerful political families, blaming their "dynastic rule" for the country's ruination. For instance, pointing to the Gandhi family's helm of affairs in the Congress, Sambit Patra, a member of the BJP central committee strongly put it out — "for the BJP, it is the party which is the family. While for Congress, it is the family which is the party." Congress is increasingly portrayed as a self-serving party infected by rampant corruption, which while incorporating nepotism and practicing dynastic policies, is insensitive to the problems of the common people. Post-26/11, the BJP charged at the Congress calling them weak and unable to protect the sovereignty of the nation. Even Manmohan Singh, the PM during UPA's rule was denounced to be following the orders of senior party leaders, i.e., the Gandhis, and not heeding to the concerns of the common people. All this suggests that a narrative was set with clearly defined "elites" working against the "common will" and interests of the "people." As associated with the right-wing, the BJP's concept of the "others" is again in line with that of the right-wing populist understanding, i.e., minorities, immigrants and the left conglomerate. The *Hindutva* ideology espoused by the BJP dictates that Hindus are the true sons of the nation as they belong to and follow the native religion and culture of the land. Buddhism, Jainism and Sikhism, though in minority, are also considered to be in the Hindu fold as these religions are also native to the Indian subcontinent and many a times considered offshoots of Hinduism. However, the ideology maintains that Islam and Christianity are ideologically alien to the land and unfit to be stitched with the social fabric of the "Hindu land." Islam in particular is seen with a leery eye, often perceived in historical contexts, like centuries old Islamic invasions, followed by destruction of temples and forced conversions. The giving away of land during Partition to the Muslim nationalists who formed Pakistan, followed by constant tensions between the two countries adds fuel to this thought. Christians are also perceived to be conducting forced conversions among the Hindu population. Inflaming this thought structure among the masses, the BJP introduces itself as the "savior of the people," which will reinstate the glorious days of the past. This is consistent with the populist vision of the future (see figure 29). Moreover, the BJP is also observed to be increasingly mentioning about the illegal immigration pouring from neighboring Myanmar and Bangladesh. The "infiltrators" are accused of altering the demographic status quo, draining the resources of the country, and also of espousing anti-national sentiments. In December 2019, Citizen Amendment Act (CAA) was passed by the parliament, which provides Indian citizenship to certain religious minority groups who have fled persecution in neighboring countries of Afghanistan, Pakistan and Bangladesh. Muslims were not included in those religious minority groups. The government expressed that being a majority in these three countries, Muslims can't face persecution there. However, Muslim communities like Hazaras and Ahmadis have faced persecution in those countries. The successful implementation of CAA proves to be the fulfilling of one ideological notion into reality for the Modi regime, that Muslims cannot be equal citizens in India. Left-wing intellectuals including professors and student groups are repeatedly accused of supporting Naxalites — far-left radical communists who pose a security threat to the nation. Also, the Congress is shown to be consistently supporting such intellectuals.

In the final days of the 2019 general elections, in which Modi secured a second consecutive term with a landslide victory, he colloquially referred to prominent leaders of the Congress, along with left-leaning intellectuals and journalists, as the "Khan Market gang," as these individuals who for a long time used to wield influence in shaping public discourse, used to frequent one of Delhi's poshest localities, the Khan Market. It was a jibe in reference to Delhi's social and political elites who for long did not heed to "people's concerns," all the while having their lavish meetings collated to dominate the political discourse, and thus were "taking the power out of people's hands."

Thus, the BJP's views on the "people," the "elite" and the "others," are found to be in compliance with contemporary literature on right-wing populism. The party led by their charismatic leader, Modi, sees the patriotic Hindus as the virtuous people of India who are threatened by the rich political elites including the *Gandhis*' Congress party and others including Muslims and the left-wing conglomerate. Now, let us observe the party's performance in recent elections and contemplate the rise of *Hindutva* populism on India's political landscape. Figure 31 shows the BJP's performance in the general elections from 1984 till 2019.

In 1984, elections were held after the assassination of the then PM Indira Gandhi. It was the first time that the BJP contested in the general elections after its formation in 1980. The party's showing was poor as it was still in its formative years. The BJP managed to win only two seats. However, the late 1980s and early 1990s were a turning point for the party as the party embraced the *Ram Janmabhoomi* movement, advocating for the construction of the Ram Temple at the disputed site in Ayodhya. This issue

Figure 31. BJP's performance in General Elections (1984-2019)



Source: Author's illustration by means of data gathered from Election Commission of India (ECI) database.

significantly boosted its popularity. This was the first time the party made use of a populist rhetoric at a large scale. We can clearly see how the party's mobilization strategy using religious cleavages improved their performance in the next general elections. In 1991, BJP became the principal opposition party marking a significant increase in the parliament with 120 seats. Five years later the party emerged has the single largest party and formed a government for the first time, however, it was short-lived due to the lack of a majority. Nevertheless, in the 1998 and 1999 elections, the party came back to power leading the NDA. Even though the party led a stable government exhibiting good governance, it lost the following 2004 elections to the Congress-led UPA majorly due to bad campaigning. Another imperative of NDA's rule from 1999-2000 is that the regime didn't exhibit the populist tendencies which kept it popular amongst the masses, and this followed for more than a decade as the UPA secured a second term in 2009. However, in 2014, under the leadership of the

"strongman" figure of Narendra Modi, and the party's *Hindutva* populism the BJP-led NDA secured a decisive victory. The NDA swept to power again in the 2019 elections, with the alliance securing 353 seats. The BJP itself secured a towering 303 seats out of them becoming the single largest party in the parliament. It was a historic sweep decimating the UPA opposition and marking the first back-to-back majority achieved by any party other than the Congress. An imperative of the above observation of BJP's electoral journey is that, since the party turned to moderation in its political conduct after forming a government in 1999, the party had been going downhills, at least in vote-share terms. However, since it took off its cloak to mobilize mass support by means of *Hindutva* populism in the early years of the last decade, the party had been doing well both in national and state assembly elections. One should notice, the BJP's reassembling of populist rhetoric coincides with the occurrence of LMP in India which is glaringly noticeable from the early years of the last decade.

Be that as it may, populism in India has historically been seen in the economic rather than political lens. In the Indian context, it is characterized as the "indiscriminate use of public resources to give goods away to voters" (Chakrabarti and Bandyopadhyay 2020). This style of conducting politics has garnered tainted reputation. Concessions by way of "freebies" distribution to appease the crowds has led populists to govern their electorate in an imprudent manner, jeopardizing the long-term fiscal stability of the country. At first glance, it would seem this is to be associated with left-wing populism, however that is not the case. This kind of populism has also been heavily practiced by center-right parties in India. Moreover, this doesn't mean that the definitions given to populism in contemporary literature cannot be applied in these cases. What separates this kind of populism is the fact that along with the usual populist rhetoric of "people," "elite" and "others," concessions and freebies are added to the package to attract more voters. Hence, this type of populism can be called "Welfare Populism," which has never been practiced at the national level and largely been practiced in certain states or regions of the country with distinct political landscapes. Thus, it is also known as "Regional Populism." Though there are many examples of political parties and leaders who have employed this style of politics, this chapter will confine itself to the most prominent figures.

This takes us to the "poster boy" of populism in India — the "Dravidian Populism" of the southern state of Tamil Nadu. However, before we move onto the style of populism exercised in the state, we need to understand the ideology of Dravidianism which has amassed the political landscape of the state for more than a century. The Dravidian Movement began in 1916 when Needhi Katchi (Justice Party) aka South Indian Liberal Federation (SILF) was established by three leaders of the anti-Brahmin movement. Interestingly, only one of those three founders was a Tamilian. The movement was a backlash against the social inequities that surfaced in the society, characterized by a deeply institutionalized prejudice that favored the upper-caste Brahmins. When E.V. Ramasamy, an influential social reformer, took over the helm of the Justice Party in 1939, he renamed it as Dravidar Kazhagam (Party of the Dravidians). Ramasamy used the party as a vehicle for a broader social movement the "Self-Respect Movement," which was premised on eradicating the caste system, and in the process, Ramasamy stood against Hinduism as according to him it is religion which creates divisions in the society via the caste system. Around the same time, the

controversial theory — Aryan Invasion Theory (AIT) was popularized, which proposes that Indo-European speaking groups referred to as "Aryans" migrated into the Indian subcontinent, possibly through the Eurasian Steppes and displaced the preexisting Dravidian population. The theory was proposed to understand the preexisting genetic and linguistic differences between the northern (Aryan) and the southern (Dravidian) populations of the subcontinent, and the origins of the Vedic period in which the Hindu culture was born. Though the theory is still in research, it was picked up by Ramasamy and his followers. According to them — the Aryans are the "outsiders," who not only invaded the Dravidian lands, but also the minds of the Dravidian "people" via Hinduism, which has its roots in the Vedic regions of the north. Also, the brahmins, who were temple priests, were termed as Aryans who brought Hinduism and with it the caste system and Sanskrit language to subjugate the Dravidians, whose languages belong to a different linguistic family with Tamil being the primary one.

Thus, Dravidianism is an ethno-political ideology which forms the basis for regional populism to develop. Post-independence in 1949, Ramasamy's party had an internal split, with C.N. Annadurai *aka* Anna (Big Brother) leaving the party to form the DMK — *Dravida Munnetra Kazhagam* (Dravidian Progressive Federation). The split happened because of disputes regarding the party's future post-Ramasamy and the Congress' role at the center post-British rule. Where Ramasamy was an ideologue who rejected engagement with a political party with north-Indian interests, Annadurai was pragmatic who welcomed engagement as the way forward. In 1965, DMK led a successful anti-Hindi agitation, which revealed its populist tendencies for the first time.

The Tamil "people" were agitated to see and oppose the Hindi-speaking political "elites" of the north for trying to impose the Hindi language on them. As Lakshman (2022) puts it — "Their success was measured by the ousting of the Congress party from power in 1967, an act that has echoed through the corridors of power at the Chennai Secretariat for well over 50 years." With the passing away of Annadurai in 1969, the chair of the Chief Minister (CM) of the state passed over to M. Karunanidhi, who was a screenwriter in the Tamil film industry. By this time, cinema had become a propaganda tool and a platform for political messaging for the DMK, with the party having M.G. Ramachandran (M.G.R.), a movie star and a close aide of Karunanidhi, on their side. Though cinema had been used as a propaganda tool since long, rarely in the world has any film industry become so influential and closely knit with politics as the Tamil film industry. Since M.G.R., cinema in Tamil Nadu didn't just remain entertainment, but a tool for politics to find its script, and the masses, their heroes. What better mode can exist for populism to establish itself with the masses — A heroic "savior" leading the "people" to victory against the "elite" and "evil" villain supported by the "others." When Karunanidhi took over the top-chair, M.G.R. was made the party treasurer, however, their friendship began straining as both men had leadership ambitions and the party couldn't have accommodated both. M.G.R. broke away from the party 1972 and formed a rival one, AIADMK - All India Anna Dravida Munnetra Kazhagam (All India Anna Dravidian Progressive Federation). Five years later, in 1977, the party swept to power defeating the DMK, largely due to the massively "popular" and "charismatic" figure of M.G.R. who had obtained the status of a cult, majorly due to his movies, in which he's projected as the "man of the people" and a "real" Tamilian who "fights for the downtrodden." M.G.R. took oath as the CM, a chair he held till his death in 1987. However, before he passed away, maintaining his figure of the "savior of the people" M.G.R. started massive welfare programs ushering a shift in the philosophical base of the Dravidian movement (Lakshman 2022), which is based upon a populist model. The shift led to the introduction of welfare populism. M.G.R. became a pioneer in implementing broad-based welfare programs like catalyzing the mid-day meal scheme which incentivized poor families to send their children to school as free nutritious meal was provided to the children along with free education. This improved the nutrition and education figures of the state. Till now, the state's nutrition expenditure remains sustained because of the development it experienced through this program, so much so that the Supreme Court made other states to emulate the policy and international development organizations like the World Bank helped extend its scope. Similar effective policies which led to betterment in HDI were implemented like subsidized food distribution and various schemes related to healthcare and school enrolment. Beginning from general social welfare programs, welfare populism in the state later expanded to provision of concessions and freebies like free TVs, bicycles, other household appliances to even laptops. Such provisions are increasingly observed to be carried out during election periods, hence considered a paternalistic model of populism. However, even such provision is noticed to have pushed development in the state, and to understand that, we need to understand the terms "merit freebies" and "non-merit freebies." A merit freebie can be defined as a commodity or service that is believed to have positive externalities and under a market-driven economy is under-consumed without government intervention. One such freebie which at first sight seems absurd is the giving away of free TVs by the DMK's Karunanidhi in 2006 to the masses in Tamil Nadu. Rural women in the state, many of whom come from poor and conservative families have little exposure to information out of their villages, the state and the country. Jensen and Oster (2007) evaluated the impact of TVs on them and found drastic changes in their behavior and attitude. They became aware of gender equality, domestic violence, female infanticide, etc., with the content they were consuming on TVs. Female autonomy and girls' enrolment in schools were found to be increased and preference for a son decreased post-TV distribution. Similar freebies distributed by both the DMK and the AIADMK governments like bicycles, school books, bags, laptops and free bus tickets are found to have benefited the society at large. Graduate enrolment rate of the state stands at 49 per cent well-above the national average of 29 per cent. FLFPR stands at 38 per cent which is double the national average and in between 2012 and 2018, the state's per capita income is found to have increased by over 90 per cent while the national average stands at 38 per cent. However, not all freebies tend to benefit the society. A "non-merit freebie" is a commodity or service which is provided with good intentions but ends up being detrimental to the society at large. For instance, the government of Tamil Nadu provides free electricity for agriculture to farmers. The notion is that with the capital saved from electricity bill, the farmers will invest in better technology, buy better fertilizers and in the process increase the quality and quantity of the yield. However, the state never obtained the intended results. It is found that the farmers didn't invest the excess capital due to less education and lack of information regarding technology. Moreover, it is found that the farmers use the electricity even when it is not required.

For instance, leaving the pump sets on. Thus, free electricity for the farmers has actually been detrimental to the society at large.

Apart from the scope of a freebie distribution failing to deliver the intended outcome, what's more worrisome is the state's finances. The Dravidian populist parties, which undertook the exercise of freebie distribution to garner votes, didn't use their party's capital. Instead, they use public capital to devise and implement such schemes during election periods, and thus there is always a risk of runaway public expenditures capsizing the state's budget, especially without boosting the revenue base. Indeed, it is observed that the "freebie culture" has deteriorated the fiscal health of the state in the long run (Table 7).

Year	RD	RR	RD/RR
1988	-282.92	3,374.82	-8.38
1989	-274.17	3,763.04	-7.29
1990	-479.22	4,730.79	-10.13
1991	-522.15	5,087.89	-10.85
1992	-1,903.86	6,775.66	-28.1
1993	-1,526.2	7,016.33	-21.75
1994	-691.86	8,066.15	-8.58
1995	-415.55	9,219.4	-4.51
1996	-311.32	10,599.3	-2.94
1997	-1,103.6	11,961.3	-9.23
1998	-1,363.9	13 <mark>,</mark> 587	-10.04
1999	-3,436.57	14,260.8	-24.1
2000	-4,400.3	16,327.5	-26.95
2001	-2,738.94	18,818	-14.55
2002	-4,850.96	20,836.7	-23.28
2003	-1,566.24	23,705.7	-6.6
2004	-703.34	28,541.5	-2.47

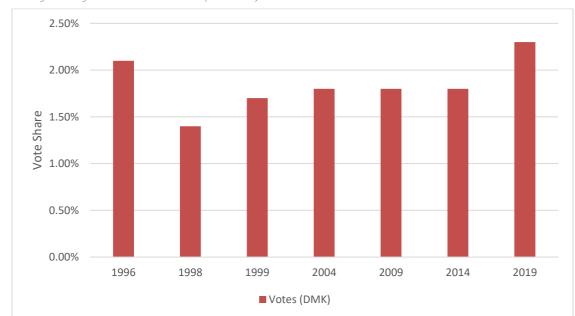
Table 7. Revenue Deficit (RD) & Revenue Receipt (RR) of Tamil Nadu (1988-2004)

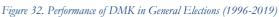
Source: Lakshman (2011)

Apart from the economic consequences, the fact that the people of Tamil Nadu have become dependent on the freebie culture which has swamped the state for decades, reveals the Faustian bargain they have entered with the populist parties of the Dravidian ideology. The high values exuded by the leaders of the early Dravidian movement gave the masses a period of renaissance eventually inculcating the demand for such legacies to progress. Even after M.G.R.'s death such demands in the postliberalization period have metastasized into a compelling inclination for populist leaders who rule with an iron fist, build a larger-than-life image and a cult around their families, all while exacting substantial cost on the state by engaging in grand larceny and unbridled pillaging of Tamil Nadu's resources by employing strong-arm tactics and corporate wrongdoing.

Since, both the populist parties DMK and AIADMK have exchanged power in Tamil Nadu since Annadurai ousted the Congress out of power in 1967, it'd be futile to look at their performance in the state assembly elections to observe their populist outcome. However, recent developments in the politics of the land might help us in that effort. Since the passing of the stalwarts of their parties, populists Karunanidhi and Jayalalithaa of the DMK and the AIADMK respectively, it became observable that the fire of populism sparked by the early Dravidian movement leaders is still burning. After Jayalalithaa passed away in 2016, E.K. Palaniswami became the CM after internal struggles within the party. He remained in the chair for four years till the next state assembly elections. His governance was noted to be highly exceptional, however because he was not a populist leader, especially in a state which has always been ruled by populists, he was ousted in the next assembly elections, as the masses chose DMK.'s M.K. Stalin, a populist to lead them.

Though both the regional populist parties are strictly focused on state politics, their performance in the general elections give us some insights into the popularity they gained since the post-liberalization period when structural changes in the economy took place, including LMP. Since the passing of M.G.R., the populist tendencies of both the parties faded till 2006, when Karunanidhi gave a new heading to welfare populism in 2006. Figures 32 & 33 show us the performance of DMK and AIADMK in general elections respectively, for the period 1996-2019.





Source: Author's illustration by means of data gathered from ECI database

Even though the DMK's vote share fell from in the 1998 elections, majorly due to the BJP's rise, the party is increasingly doing well since the turn of the century as welfare populism revived with a stronger push from Karunanidhi. One can notice a big change from 2014 to 2019. This may be attributed to the passing away of the two stalwarts and ascendance of M.K. Stalin, DMK's current populist leader. On the other hand, the AIADMK's performance has been increasingly improving, however, it had some setbacks like losing of power to DMK in 2006 and thus less vote share in 2009, and a stark dip from 2014 to 2019, majorly due to the passing away of their populist leader — Jayalalithaa.

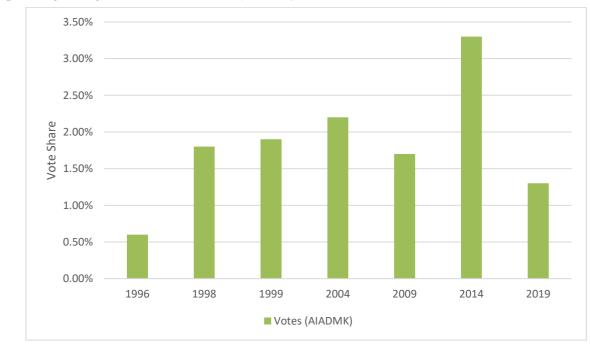


Figure 33. Performance of ALADMK in General Elections (1996-2019)

Source: Author's illustration by means of data gathered from ECI database

Taking inspiration from the Dravidian parties and their style of conducting politics viz. welfare populism, many parties established themselves on the Indian political map. One of them, though fundamentally distinct is the *Aam Aadmi Party* (AAP). The party by its name itself creates an implicit contrast between the "people" and the "elites," as *Aam Aadmi* literally means the "common man." Upon closer examination of the Indian encounter with populism, it becomes evident that India has given rise to two distinct streams of populist politics (Subhash 2022). The first stream was led by Congress, the regional parties like DMK, AIADMK and presently the BJP, which we have discussed. The second stream, which is a relatively new kind of populism developed after the Anna Andolan aka India Against Corruption (IAC) movement against political corruption. The AAP emerged out of this movement in 2012 under the leadership of Arvind Kejriwal, a protégé of Anna Hazare who led the IAC movement "for the people." What makes the AAP different from other populist parties is that even though it was against the establishment of the time, i.e., the UPA, it focused on a developmental agenda like corruption deviating from the social cleavage model of electoral mobilization. It has inclusivity and pragmaticism in its approach. Indian politics has always been dominated by social cleavages like caste, religion, language, etc., however for the first time a party viz. AAP mobilized support by pitching on issues of governance. The party contested the 2013 Delhi elections, and astonishingly formed the government. It was the first time in the history of Indian politics that a novel political party contested in an election with corruption as a political agenda (Subhash 2022).

To better understand the distinctiveness of the AAP, we need to understand it as a populist party defined by the Argentine post-Marxist political theorist Ernesto Laclau, in the book *On Populist Reason*. Laclau emphasizes the role of antagonisms, or social conflict, in the formation of populist parties. He posits that at certain historical moments, multiple antagonisms are at play, which might not necessarily be linked to class consciousness. However, these antagonisms necessitate the masses to assume a new identity. Laclau introduces the term "empty signifier" *aka* "floating signifier" which are interpreted as symbols that lack fixed meaning. When people identify

themselves with such empty signifiers, populist leaders put in use such signifiers to mobilize and unite people by allowing them to project their own desires and grievances onto these symbols. Thus, rather than by means of a revolutionary movement, the demands are pressed through a populist movement, as the various social demands and grievances coalesce into a collective identity and this identity is often constructed in opposition to a perceived common enemy. Another imperative of this is that an empty signifier doesn't necessarily be an ideology, however an ideology can make its way through the vehicle of populism. The populist mobilization, he argues, is driven by the "logic of equivalence" which is derived from the above-mentioned collective identity or a "common umbrella." Demands distinctive in nature like education, healthcare, electricity, water, etc., which would earlier reach the state independently, now acquire a collective expression and broad relevance. However, when the state fails to fulfill those demands for long, this identity which forms gets railed against the common enemy. The AAP utilized the empty signifier of a new identity of the Aam Aadmi or the "common man" who would no longer be a passive observer and subsequently a victim of the corrupt political "elite," who symbolizes the common enemy corruption. By identifying the victim as the *Aam Aadmi*, the AAP taps into class divide without activating class politics. Laclau's "empty signifier" or "floating signifier" is evident in the case of the AAP as after all who's the Aam Aadm? The idea of a Aam Aadmi floats — it could be a poor manual laborer, or a nine-to-five office worker, or even a rich factory owner. Hence, the AAP enjoys support from all classes of people. Also, because it largely doesn't play into existing social cleavages like caste, religion or political inclination, the party is able to mobilize support of people from all walks of life. However, this also happens to be the reason as to why the party hasn't been able to become a national party. It is essential for any party to define its political and economic ideological positioning as well as views on foreign policy to establish itself on the national stage, something the AAP has failed to do so since its establishment a decade ago.

The AAP's establishment and emergence in the Indian political landscape is in itself a reaction to the structural changes post-liberalization, including that of LMP which, as discussed in chapter three, started developing at the turn of the new century and became visible in the early years of the last decade. The regional party's electoral success is limited to its dedicated regions of Delhi and Punjab. Figure 34 shows the party's performance in Delhi assembly elections since its establishment.

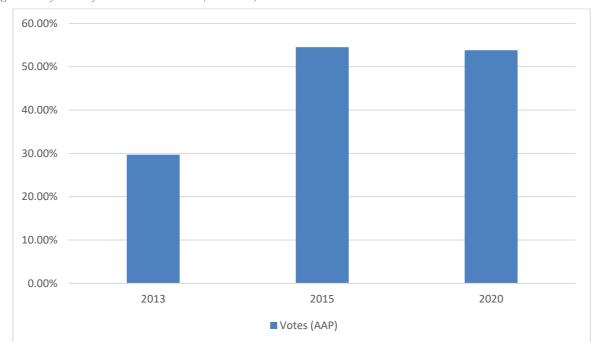


Figure 34. Performance of AAP in Delhi Elections (2013-2020)

Source: Author's illustration by means of data gathered from ECI database.

The party made its political debut in the 2013 Delhi assembly elections, in which it performed exceptionally well, winning 28 out of 70 seats. Their leader, Arvind Kejriwal, a self-proclaimed "savior of the people" from the "evil" forces of the "corrupt elite," became the CM, however, he resigned after 49 days in office, citing difficulties in passing the Jan Lokpal bill (anti-corruption bill). In the next elections in 2015, the party secured a landslide victory, winning 67 out of 70 seats, and amassing a significant increase in its vote share. This time their government lasted a full fiveyear term, and secured a resounding victory in 2020 assembly elections as well, winning 62 out of 70 seats. In 2017, the party contested in the Punjab assembly elections with high expectations and aimed to make a significant impact on the state's politics. The party performed well in, emerging as the principal opposition party. It won 20 out of the 117 seats, securing the second-largest number of seats in the state. While the AAP did not win enough seats to form the government, its performance marked a substantial breakthrough for the party, and it became the primary opposition to the Congress, which won a majority and formed the government. AAP's strong performance in Punjab was seen as a sign of its growing appeal in states beyond Delhi. However, in the next Punjab assembly elections of 2022, the tables turned as the party, emulating its populist appeal against the Congress in Delhi, swept 92 out of the total 117 seats, subsequently wiping out the Congress which managed to secure only 18 seats.

CONCLUSION

In recent years, the global political landscape has witnessed a surge in populism, a complex and multifaceted phenomenon that has garnered extensive scholarly attention. Since, the definition of populism is very fluid, this thesis has defined the populist appeals as ones predicated on opposition to established institutions, representation of the "common people" against the "elites" and an inclination towards authoritarianism. Further, three key differences have been highlighted between populist leaders and those of the liberal order in their vision and approach to political conduct-vision of the future, vision of the world and vision of the society, as these are what differentiates the former from the latter, and not the political inclination. Moving on, causal factors have been pointed out, underlining the roles of globalization and technological change. However, major spotlight has been given to technological change, especially routine-biased technological change (RBTC), which highlights that technological advancements in employing machines and computers to carry out routine activities drive middle-skilled workers out of jobs, who predominantly occupy routine occupations. Thus, RBTC leads to labour market polarization (LMP)-the transformation of labor markets resulting in the growth of high and low-skilled jobs at the expense of middle-skilled positions. The thesis has highlighted how the academia has identified this polarization of the labour market as a critical driver of recent populist surge. However, academic exploration of the relationship between LMP and populism has been primarily confined to the context of the advanced economies of the west, leaving a noticeable gap in understanding the dynamics of these interrelated phenomena in emerging markets. By exclusively studying advanced economies of the west, there's a risk of missing important patterns and trends that may be emerging in other regions. Ignoring cultural, political and institutional structure variations of these regions may lead to an oversimplified or skewed understanding of the relationship between LMP and populism. A holistic understanding of the global landscape requires examining a diverse range of countries. Also, insights gained from western-centric research may lack practical relevance for policymakers in non-western countries. Policy responses to the challenges posed by LMP and populism should be informed by a thorough understanding of the unique circumstances of each region.

This master's thesis undertakes an effort to address this void in the academic literature by providing a comprehensive examination of the coexistence of LMP and populism within the Indian political economy. It expands the geographical scope beyond the western context to counteract potential biases and enriches the overall body of knowledge. India proves to be an excellent country to study as the country is experiencing dynamic changes in its political economy. The country has witnessed the rise of populism in recent decades concurrently with the western advanced economies and also getting industrialized in an unprecedented rate. India's prominence in the global technology sector makes it an interesting case study for understanding the impact of technological advancements on LMP. Investigating how technology influences employment patterns in emerging markets can yield insights with broader implications. The country's unique cultural context also adds a layer of complexity to the analysis. Investigating how cultural factors influence the relationship between LMP and populism provides insights into the diverse ways in which economic changes intersect with societal values and beliefs. The study employs a descriptive analysis approach, incorporating a meticulous review of existing academic literature, an analysis of relevant economic data, and a discerning evaluation of political developments in India over recent years. Keeping the first and the second chapters as introductory, the third chapter focuses on the changes in employment structure in the Indian labour market viz. LMP. Providing a comprehensive view of the Indian economy and subsequently the Indian labour market, the chapter provides empirical evidences which suggest that polarization of the Indian labour market has indeed taken place. The findings of Sarkar (2017) and Sarkar & Perez (2023) have been used to demonstrate that employment growth in India is biased against the middle-skilled jobs during the study periods of 1983-2011 & 2011-2019 respectively. These studies along with that of Vashisht & Dubey (2018) have been used to highlight the occurrence of RBTC in India during the above-mentioned study periods with reduction in the employment share of routine task intensive occupations along with a growth in employment in nonroutine task intensive occupations (both manual and cognitive) in both rural and urban India. The occurrence of RBTC basically implies the occurrence of LMP. Further, the thesis also highlights the role of non-technological factors of LMP in the Indian context. The breakdown of the changes in employment share by employment type and formal-informal dynamics by Sarkar (2017) has been exhibited to conclude that the observed polarization is led by informality-driven demand for labour. Also, rise in nonroutine occupations has been demonstrated to be highly linked to technological change using the Total Factor Productivity (TFP) study in Vashisht & Dubey (2018). The study has also been used to highlight the significance of socio-economic inequalities of the Indian society viz. the caste-system, on task content of occupations. In the fourth chapter, a contemporaneous rise of populism in India is demonstrated. Initially, it deals with the general perspectives regarding populism, including the causal factors. Later, changes in leadership arrangement in the Indian political landscape viz. populism is discussed, with special emphasis on the aggressive ascent of Hindutva, Dravidian and Welfare modes of populism. The rise of Hindutva populism has been corroborated with historical context and the dominating performances of the Bharatiya Janata Party (BJP) in recent national elections. Similar demonstration for the Dravidian and Welfare modes of populism have been carried out by elucidating the recent successful performances of the Dravidian parties and the welfare-driven Aam Aadmi Party (AAP). The findings of chapters 3 & 4 conclusively demonstrate that both LMP and populism have indeed manifested within the Indian socio-political landscape. One has to notice that both of them have accentuated in the Indian political economy since the Liberalization of 1991, when the country opened up its market. In examining the intricate dynamics between those two in the context of India, this thesis has ventured into unexplored territory, shedding light on the coexistence of these phenomena in a developing non-western nation. While causation remains a complex web requiring further investigation, the thesis successfully demonstrates a simultaneous emergence of these two phenomena in the Indian political economy and the Indian experience underscores the universality of the challenges put forward by the confluence of the two phenomena.

The thesis encourages academia to broaden its research focus to encompass emerging

markets like India, and sets the stage for deeper investigations and policy-informed analyses in the future. Acknowledging the limitations of this study, particularly the absence of a direct causal link between LMP and populism, opens avenues for future research. The intricacies of India's diverse and dynamic economy warrant a more granular examination, incorporating advanced methodologies to unravel the causal mechanisms at play. Additionally, exploring the role of cultural, historical, and institutional factors in shaping populist narratives in the Indian context presents an exciting avenue for future scholars. As India navigates the complexities of economic transformation and political evolution, policymakers must be attuned to the intertwined nature of LMP and populism. Strategies for inclusive economic growth, skill development, and social cohesion become imperative to mitigate the adverse effects of these global trends. In conclusion, this thesis has embarked on a curious exploration of the nexus between LMP and populism in India. While causation remains elusive, the observed confluence demands further scholarly attention. By expanding our understanding of these phenomena beyond western boundaries, this thesis contributes to the broader discourse on global economic and political shifts, urging continued investigation into the nuanced dynamics of developing nations.

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APPENDIX

THEORETICAL FRAMEWORK TO UNDERSTAND LMP

Before the ball starts rolling on the central research question of the thesis, let us understand the theoretical foundation on which the phenomenon of labour market polarization stands. A quest for such understanding will lead one to the canonical production function, which entails the relationship between the quantities of productive factors utilized and the subsequent quantity of output extracted in a production process. The general formula for production function is:

$$Q = Tf(L, K) \tag{1}$$

Here, Q is the output quantity,

T is the factor augmenting technology,

L is the operating labour, and

K is the capital invested in the production process.

Now, let's assume the production technique employed in this process be t, defined by parameters x_t and y_t , such that if a technique takes a high value for x, it has to take a low value for y. Thus, the new production function would be given by:

$$Q = Tf(x_t L, y_t K)$$
⁽²⁾

In this context, f represents a function with an elasticity of substitution between productive factors (inputs) that is below 1. The function exhibits constant returns to scale in L and K, along with positive marginal output that decreases as more input is utilized.

In this setup, the identity and the role of a factor are assumed one and the same. Furthermore, each factor's role is kept distinct and static, while their interactions remain tightly constrained. However, in reality the tasks performed by labour and capital are converging and can swap places. Thus, the "static" task-allocation of the productive factors forms the stumbling block in interpreting LMP within the canonical production function framework. Instead, the framework should be set in a manner where the factors and the tasks performed by them act in accordance with the shifting technological and economic aspects. Hence, the focus shifts to the "task- approach" as given by Acemoglu & Autor (2011) which removes the aforementioned distinct and static nature of roles of productive factors and brings in a flow in their behavior which is dependent on changing environment. Within this methodology, the basic components of production are defined as "job tasks" and the assignment of these tasks to the productive factors is carried out by considering comparative advantage. Also, task is to be differentiated from skill, which were treated as similar in the canonical production function. Given that there is fluidity in tasks assigned to labour and capital, the division of labour would then depend upon the aforementioned technological and

economic aspects. Availability of technology or technological change which will improve the production efficiency will mark the technological aspect to determine substitutability or complementarity of capital (K) over labour (L), while comparative advantage will drive the economic aspect.

Consider in a closed economy, a particular good is to be produced by synthesis of specific tasks represented by unit interval [0,1]. In this context, the technology employed functions as a constant elasticity of substitution aggregator. Thus, the final good Q is given as:

$$Q = \left[\int_{0}^{1} q(i)^{\frac{y-1}{y}} di\right]^{\frac{y}{y-1}}$$
(3)

In this scenario, q(i) represents the production level of task i and y denotes the elasticity of substitution between the tasks.

Now, let's deal with an instrumental cleavage within the productive factor of labour, i.e., skill-level. Three categories of labour exist—namely, low skilled, medium skilled and high skilled workers—who supply L, M and H units of labour respectively, such that at any given moment, $I \subset [0,1]$ denotes the set of potentially feasible tasks. Let Trepresent the factor augmenting technology, with T_L , T_M and T_H denoting the low, medium and high skill factor-augmenting technological changes, respectively. The parameter α represents the comparative advantage of skill across tasks. Consequently, $\alpha_L(i)$, $\alpha_M(i)$ and $\alpha_H(i)$ signify the respective productivities of low, medium and high skilled workers in performing task *i*. The variables l(i), m(i) and h(i) denote the number of workers allocated to task i for low, medium and high skilled categories, respectively. Additionally, $\alpha_K(i)$ represents the task productivity of capital, and k(i) indicates the amount of capital allocated to the task i.

Now, the production function for each of the available tasks can be given by:

$$q(i) = T_L \alpha_L(i)l(i) + T_M \alpha_M(i)m(i) + T_H \alpha_H(i)h(i) + T_K \alpha_K(i)k(i)$$

Even though the tasks can be undertaken by the productive factors individually, i.e., the three ranks of labour and capital, task-allocation will then depend on the aspect of comparative advantage as factored in by the α terms: $\alpha_L(i)/\alpha_M(i)$ and $\alpha_M(i)/\alpha_H(i)$ are strictly decreasing. This suggests that higher dices correspond to more intricate tasks, where high skilled workers are more productive than middle skilled workers, and middle skilled workers are productive than low skilled workers. Now let's set $\alpha_K = 0$, such that labour supplies all the work. Factor market clearing requires:

$$\int_{0}^{1} l(i)di \leq L, \quad \int_{0}^{1} m(i)di \leq M \quad \text{and} \quad \int_{0}^{1} h(i)di \leq H.$$
⁽⁵⁾

Applying comparative advantage, we would observe a segregation of the continuum of tasks at equilibrium. Low skilled workers supply the least complex set of tasks, where $0 \le i \le I_L$. Middle skilled workers contribute to an intermediate set of tasks, covering the range $0 \le i \le I_M$. High skilled workers are responsible for a more advanced set of tasks, $0 \le i \le I_H$. In a competitive labour market, each skill has a particular price, for instance, each low skilled worker will receive wage W_L . Correspondingly, each middle skilled worker will receive wage W_M and each high skilled worker will earn wage W_H . Given that each task is viable for execution by any skill group, the no arbitrage condition would govern the allocation of tasks. To illustrate, the cost associated with performing marginal tasks I_L should be equivalent in equilibrium, whether carried out by low or middle skilled workers. Similarly, the cost linked to executing the marginal task I_H must be equated in equilibrium between middle and high skilled workers. However, for tasks $i < I_L$, $I_L < i < I_H$, and $i > I_H$ workers of the corresponding skill groups possess a comparative advantage. In such instances, there will exist I_L^* and I_H^* that satisfy the law of one price, the no arbitrage condition, and the market clearing condition in equation (5).

Most important aspect of the model laid out is that it highlights the changes in skill supply and also changes in wage distribution. The segregation of skills into low, middle and high provides flow in wage attributes. In the canonical model, the actual income of both skilled and unskilled labour consistently rise with advancements in factor augmenting technology, but this is not the case in endogenous allocation of workers. For instance, a rise in T_H can lead to reduction in the wages of middle skilled workers (Acemoglu & Autor 2011). This is because the heightened productivity of high skilled workers may draw certain tasks that were previously handled by middle skilled workers, influencing their wage levels. Thus, I_H shifts down while I_L doesn't fluctuate much as the delegation of low skill tasks to middle skilled workers would not be lucrative, thus, squeezing the work profile of middle skilled workers. Moreover, this framework allows us to examine capital's (emblematizing machines) displacement effect on workers. Focusing on this replacement of labour with capital, let us consider a spectrum of tasks $[I', I''] \subset [I_L, I_H]$ for which $\alpha_K(i)$ rises such that the tasks are

performed by machines rather than labour, especially middle skilled workers. Then for all $i \notin [I', I'']$, $\alpha_K(i) = 0$. Such technological change has the capacity to give rise to LMP as workers relinquish their comparative advantage in carrying out routine tasks, which is predominantly carried out by middle skilled workers. This displacement of middle skilled workers will shift task boundaries. If high skilled workers exercise a stronger comparative advantage over middle skilled workers, then the upper boundary will shift. Similarly, if low skilled workers exercise a weak comparative advantage, then the tasks will be reallocated to displaced middle skilled workers. Thus, LMP is delineated.