

**MANUFACTURING EMPLOYMENT GROWTH IN INDIA SINCE THE 2000s:
FIRM SIZE, FLEXIBILITY, AND INFORMALITY**

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by

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in fulfilment of the requirements of the degree of Doctor of Philosophy
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DEDICATION

To the workers of the world

CERTIFICATE

This is to certify that the thesis titled **“Manufacturing Employment Growth in India since the 2000s: Firm Size, Flexibility, and Informality”**, being submitted by **Ms. Angarika Rakshit** to the Indian Institute of Technology Delhi for the award of the degree of Doctor of Philosophy, is a record of original bona-fide research carried out by her under my supervision. In my opinion, the thesis has reached the standards fulfilling the requirements for submission relating to the degree.

The results contained in the thesis have not been submitted, in part or full, to any other institute or university for award of any degree or diploma.

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Abstract

The central objective of this doctoral thesis is to understand some of the crucial changes that characterized the Indian manufacturing sector since the 2000s. Historically, the manufacturing sector has played an important role in the structural transformation of newly industrializing economies by absorbing excess labor released from agriculture primarily due to its high inter-sectoral linkages and employment elasticity of output. The Indian experience, however, has been an aberration from this with an almost stagnant manufacturing sector despite declining employment absorption capacity of agriculture. Much of the excess labor therefore, has been either absorbed in low-end services like construction or has contributed to persisting underemployment in agriculture.

Therefore, in case of India, the absence of a fast-growing manufacturing sector has been a stumbling block in the growth of employment outside agriculture. As a result, meaningful employment creation, continues to be one of India's key macroeconomic challenges. Through the 1980s and 1990s total employment in the organized manufacturing sector hovered around 6 to 8 million. Two important features that have been associated with such a stagnant manufacturing sector for several decades has been the lack of middle-sized firms which can deliver both output and employment growth, and the predominance of the less productive informal sector in total manufacturing employment. More recently, there has also been increased focus on the inflexible nature of Indian labor laws in hindering employment growth in the organized manufacturing sector.

However, from the mid-2000s, particularly from 2004-05, employment growth in the organized manufacturing sector started reviving and employment continued to grow steadily for seven consecutive years till 2011-12. This phase of employment growth overlaps partially with the high growth phase of the Indian economy from 2003-04 to 2008-09. In this context, this dissertation explores three distinct yet related aspects of the Indian manufacturing sector – changing size structure of firms, relative importance of labor market flexibility and investment in generating employment, and the possibilities of structural transformation of the informal sector through growth in its formal sector counterpart. Each of these aspects correspond to one core chapter of the thesis. All analysis is based on enterprise level data from two major sources – The Annual Survey of Industries for the formal sector and the National Sample Survey of Unincorporated Non-Agricultural Enterprises (Excluding Construction) for the informal sector.

The first chapter introduces the thesis. Chapter two analyses the changing patterns of firm size and employment growth in Indian manufacturing since 2000. With this empirical exercise it revisits the theoretical debates on the “missing middle” in India and attempts to re-evaluate it in the current context. Distribution of employment in the manufacturing sector of India was identified with a “missing middle” in the 1970s, that is, large proportion of employment was concentrated in very small and very large firms. Dualism in capitalist manufacturing with large productivity and wage gaps was recognized as one major reason for stagnation of the manufacturing sector. This in turn was a hindrance to the process of absorbing excess labor from agriculture and thereby facilitating a smooth structural transformation of the economy. But, with the share of employment in the large factories declining throughout the 1990s, there is no consensus on whether “missing middle” continues to be a problematic feature of the Indian manufacturing sector. Using data from the 6th Economic Census of 2013, Annual Survey of Industries (2000-01, 2005-06, 2010-11, 2014-15) and the National Sample Survey for four rounds (56th, 62nd, 67th, 73rd), this chapter examines how the revival of manufacturing employment growth changed the firm size structure of the capitalist segment of Indian manufacturing. It shows that starting from the mid-2000s there is a reinforcement of the bimodal distribution with most of the employment growth taking place in large factories. The rise of big factory-based capital-intensive industries and the declining share of more evenly distributed labor-intensive industries are partly responsible for this, although the large-firm driven employment growth has been a universal trend across industries. However, more interestingly, despite employment growth in this period being driven by large firms which are generally characterized by high wages and productivity, the labor share of income in organized manufacturing remained fairly low. Workers’ real wages declined in the large firms resulting in narrowing wage gap between small and large firms as opposed to diverging wages associated with bimodal distributions.

The third chapter of the thesis addresses the relative importance of labor market flexibility and rate of investment in manufacturing employment growth. Most mainstream research in the recent past have attributed the stunted growth of Indian Manufacturing to the country’s rigid labor laws. However, the organized manufacturing sector in India which had performed quite poorly for decades, saw a near doubling of its workforce in the first fifteen years of the 21st century. This recent phase of employment growth has, therefore, raised two important questions - exactly how restrictive are the Indian labor laws and are there other factors, besides labor market flexibility, that determine employment growth in the Indian manufacturing sector? An interesting feature of the growth in manufacturing

employment from the mid-2000s was that it was accompanied by high rates of investment. Using a fixed effects panel regression model with two independent variables -- “inflexibility” in the labor market and rate of investment -- this chapter attempts to understand their relative importance in explaining employment growth in the organized manufacturing sector in India. The results indicate that the labor laws which supposedly induce rigidity in the Indian labor market (Employment Protection Legislations, to be precise) do not have any significant adverse impact on employment growth on their own. Rate of investment, on the other hand, is a much more important and consistent determinant of employment growth in the organized manufacturing sector. Moreover, in most cases, for any given level of rate of investment, its positive effect on employment growth is not adversely affected with reduced flexibility. It also shows that a possible mechanism through which high rates of investment led to employment growth in organized manufacturing is through expansion of the existing capacity.

The fourth chapter of the thesis evaluates the possibilities of transformation of the informal sector through faster growth in the formal sector. This is particularly relevant because the share of the informal sector in both manufacturing employment and output declined between 2000 and 2015, indicating some possible structural transformation of the Indian manufacturing sector. The empirical exercise in this chapter is situated in the backdrop of the informal sector debates that went on in the 1970s and 1980s and gave rise to two broad views regarding the role of the informal sector. While one view considered the informal sector to a feature of pre-capitalist economies having a benign relationship with the formal sector and potential for autonomous growth, the other viewed the informal sector as being subordinated to and exploited by the formal capitalist core. In this context, this chapter first examines if the phenomenon of formalization of the informal sector observed at the aggregate, is also observed across industries and States. It then examines how such formalization has taken place between 2000 and 2015 through three possible channels. These are – autonomous growth and transformation of informal sector enterprises, structural transformation of the manufacturing workforce and strengthened subcontracting linkages between the formal and informal sectors.

The findings indicate that there are diverging patterns of formal and informal sector growth at the disaggregated level of industry-state groups. Moreover, an expanding formal sector and contracting informal sector is not resulting from either growth of informal sector enterprises autonomously or through strengthened subcontracting linkages between the formal and informal sectors. Instead, it is

primarily a structural transformation of the workforce from the subsistence segment to the capitalist segment of Indian manufacturing.

In chapter five, the thesis concludes that employment growth in organized manufacturing sector in the mid-2000s has been primarily large firm driven accompanied by fall in workers real wages in these large firms. This employment growth has not been either due to a move towards labor-saving technology or rising relative importance of labor-intensive industries. It is also not driven by increased flexibility in the labor market through legal provisions. Instead, this employment growth is explained by rising investment associated with capacity expansion. Such investment-led growth in the organized manufacturing sector was unable to structurally transform manufacturing enterprises from informal to formal sectors. However, with rise in employment growth in the formal sector, there has been transformation of a part of the workforce from the informal to formal sectors.

सार

इस डॉक्टरेट थीसिस का मुख्य उद्देश्य 2000 के दशक के बाद से भारतीय विनिर्माण क्षेत्र की कुछ महत्वपूर्ण परिवर्तनों को समझना है। ऐतिहासिक रूप से, विनिर्माण क्षेत्र ने मुख्य रूप से अपने उच्च अंतर-क्षेत्रीय संबंधों और उत्पादन की रोजगार लोच के कारण कृषि से विमुक्त अतिरिक्त श्रम को अवशोषित करके नई औद्योगिकीकृत अर्थव्यवस्थाओं के संरचनात्मक परिवर्तन में महत्वपूर्ण भूमिका निभाई है। हालाँकि भारतीय अनुभव इससे अलग रहा है, क्यों की कृषि की रोजगार अवशोषण क्षमता में गिरावट के बावजूद यहाँ विनिर्माण क्षेत्र लगभग स्थिर रहा है। इसलिए, अधिकांश अतिरिक्त श्रम या तो निर्माण जैसी निम्न-स्तरीय सेवाओं में अवशोषित कर लिया गया है या कृषि में अल्प-रोजगार को बनाए रखने में योगदान दिया है।

इसलिए, भारत के मामले में, तेजी से बढ़ते विनिर्माण क्षेत्र की अनुपस्थिति कृषि के बाहर रोजगार की वृद्धि और सार्थक रोजगार सृजन में एक बाधा रही है, जो भारत की प्रमुख व्यापक आर्थिक चुनौतियों में से एक बनी हुई है। 1980 और 1990 के दशक के दौरान संगठित विनिर्माण क्षेत्र में कुल रोजगार 60 से 80 लाख के आसपास था। कई दशकों से इस तरह के स्थिर विनिर्माण क्षेत्र से जुड़ी दो महत्वपूर्ण विशेषताएँ हैं मध्यम आकार की व्यवसाय-प्रतिष्ठान की कमी, जो उत्पादन और रोजगार वृद्धि दोनों प्रदान कर सकती हैं और कुल विनिर्माण रोजगार में कम उत्पादक अनौपचारिक क्षेत्र की प्रधानता। हाल ही में, संगठित विनिर्माण क्षेत्र में रोजगार वृद्धि में बाधा डालने में भारतीय श्रम कानूनों की अनम्य प्रकृति के भूमिका पर भी ध्यान केंद्रित किया गया है।

हालाँकि, 2000 के दशक के मध्य से, विशेष कर 2004-05 से, संगठित विनिर्माण क्षेत्र में रोजगार वृद्धि फिर से शुरू हुई और 2011-12 तक लगातार सात वर्षों तक रोजगार में लगातार वृद्धि जारी रही। रोजगार वृद्धि का यह चरण 2003-054 से 2008-09 तक भारतीय अर्थव्यवस्था के उच्च विकास चरण के साथ आंशिक रूप से अधिव्यापन होता है। इस संदर्भ में, यह शोध प्रबंध भारतीय विनिर्माण क्षेत्र के तीन अलग-अलग लेकिन संबंधित पहलुओं की पड़ताल करता है - व्यवसाय-प्रतिष्ठान की बदलती आकार संरचना, रोजगार पैदा करने में श्रम बाजार के लचीलेपन और निवेश का सापेक्ष महत्व तथा इसके औपचारिक विकास के माध्यम से अनौपचारिक क्षेत्र के संरचनात्मक परिवर्तन की संभावनाएँ। इनमें से प्रत्येक पहलू थीसिस के एक मुख्य अध्याय से मेल खाता है। सभी विश्लेषण दो प्रमुख स्रोतों से उद्यम स्तर के डेटा पर आधारित हैं - औपचारिक

क्षेत्र के लिए उद्योगों का वार्षिक सर्वेक्षण और अनौपचारिक क्षेत्र के लिए अनिगमित गैर-कृषि उद्यमों (निर्माण को छोड़कर) का राष्ट्रीय नमूना सर्वेक्षण।

पहला अध्याय थीसिस का परिचय देता है। अध्याय दो भारतीय विनिर्माण में व्यवसाय-प्रतिष्ठान के आकार और रोजगार वृद्धि के बदलते पैटर्न का विश्लेषण करता है। इस प्रयोगसिद्ध अभ्यास के साथ यह भारत में "लापता मध्य" की सैद्धांतिक बहस पर फिर से गौर करता है और वर्तमान संदर्भ में इसका पुनर्मूल्यांकन करने का प्रयास करता है। भारत के विनिर्माण क्षेत्र में रोजगार के वितरण की पहचान 1970 के दशक में एक "लापता मध्य" के रूप में की गई थी, अर्थात्, रोजगार का बड़ा हिस्सा बहुत छोटे और बहुत बड़े प्रतिष्ठानों में केंद्रित था। बड़े पैमाने पर उत्पादकता और वेतन अंतर के साथ पूंजीवादी विनिर्माण में द्वैतवाद को विनिर्माण क्षेत्र के ठहराव का एक प्रमुख कारण माना गया। यह कृषि से अतिरिक्त श्रम को अवशोषित करने और इस प्रकार अर्थव्यवस्था के सुचारू संरचनात्मक परिवर्तन को सुविधाजनक बनाने की प्रक्रिया में बाधा था। लेकिन, 1990 के दशक में बड़े कारखानों में रोजगार की हिस्सेदारी में गिरावट के कारण, इस बात पर कोई सहमति नहीं है कि क्या "लापता मध्य" भारतीय विनिर्माण क्षेत्र की एक समस्याग्रस्त विशेषता बनी हुई है। चार वर्षों (2000-01, 2005-06, 2010-11, 2015-16) के लिए उद्योगों के वार्षिक सर्वेक्षण और राष्ट्रीय नमूना सर्वेक्षण के डेटा का उपयोग करते हुए, यह अध्याय जांच करता है कि विनिर्माण रोजगार वृद्धि के पुनरुद्धार ने पूंजीवादी खंड में प्रतिष्ठान के आकार की संरचना को कैसे बदल दिया। इससे पता चलता है कि 2000 के दशक के मध्य से द्विमॉडल वितरण का सुदृढीकरण हुआ है जहां अधिकांश रोजगार वृद्धि बड़े कारखानों में हुई है। बड़े कारखाने-आधारित पूंजी-सघन उद्योगों का उदय और अधिक समान रूप से वितरित श्रम-गहन उद्योगों की घटती हिस्सेदारी इसके लिए आंशिक रूप से जिम्मेदार है, हालांकि बड़ी प्रतिष्ठानों द्वारा संचालित रोजगार वृद्धि सभी उद्योगों में एक सार्वभौमिक प्रवृत्ति रही है। हालांकि, अधिक दिलचस्प बात यह है कि इस अवधि में बड़ी कंपनियों द्वारा रोजगार वृद्धि के बावजूद, जो आम तौर पर उच्च मजदूरी और उत्पादकता की विशेषता होती है, संगठित विनिर्माण में आय का श्रम हिस्सा काफी कम रहा। बड़ी प्रतिष्ठानों में श्रमिकों की वास्तविक मजदूरी में गिरावट आई, जिसके परिणामस्वरूप छोटी और बड़ी कंपनियों के बीच वेतन अंतर कम हो गया, जबकि द्वि-मॉडल वितरण से जुड़ी मजदूरी में अंतर कम हो गया।

थीसिस का तीसरा अध्याय विनिर्माण रोजगार वृद्धि में श्रम बाजार से जूरे लचीलेपन के महत्व को संबोधित करता है। हाल के दिनों में अधिकांश मुख्यधारा के शोधों ने भारतीय विनिर्माण की अवरुद्ध वृद्धि के लिए देश के कठोर श्रम कानूनों को जिम्मेदार ठहराया है। हालांकि, भारत में संगठित विनिर्माण क्षेत्र, जिसने दशकों

तक काफी खराब प्रदर्शन किया था, 21वीं सदी के पहले पंद्रह वर्षों में इसके कार्यबल में लगभग दोगुनी वृद्धि देखी गई। इसलिए, रोजगार वृद्धि के ये नया चरण ने दो महत्वपूर्ण प्रश्न उठाए हैं - वास्तव में भारतीय श्रम कानून कितने प्रतिबंधात्मक हैं और क्या श्रम बाजार लचीलेपन के अलावा अन्य कारक हैं, जो भारतीय विनिर्माण क्षेत्र में रोजगार वृद्धि निर्धारित करते हैं? 2000 के दशक के मध्य से विनिर्माण रोजगार में वृद्धि की एक दिलचस्प विशेषता यह थी कि इसके साथ निवेश की उच्च दर भी थी। दो स्वतंत्र चर - श्रम बाजार में "नम्यता" और निवेश की दर के साथ एक निश्चित प्रभाव पैराल प्रतिगमन मॉडल का उपयोग करते हुए, यह अध्याय भारत में संगठित विनिर्माण क्षेत्र में रोजगार वृद्धि को समझाने में उनके सापेक्ष महत्व को समझने का प्रयास करता है। नतीजे बताते हैं कि श्रम कानून, जो कथित तौर पर भारतीय श्रम बाजार (रोजगार संरक्षण कानून, सटीक रूप से) में कठोरता पैदा करते हैं, उनका रोजगार वृद्धि पर कोई महत्वपूर्ण प्रतिकूल प्रभाव नहीं पड़ता है। दूसरी ओर, निवेश की दर, संगठित विनिर्माण क्षेत्र में रोजगार वृद्धि का एक अधिक महत्वपूर्ण और सुसंगत निर्धारक है। इसके अलावा, ज्यादातर मामलों में, निवेश की दर के किसी भी स्तर के लिए, लचीलेपन में कमी के साथ रोजगार वृद्धि पर इसका सकारात्मक प्रभाव प्रतिकूल रूप से प्रभावित नहीं होता है। इससे यह भी पता चलता है कि एक संभावित तंत्र जिसके माध्यम से निवेश की उच्च दर के कारण संगठित विनिर्माण में रोजगार वृद्धि हुई, मौजूदा क्षमता का विस्तार है।

थीसिस का चौथा अध्याय औपचारिक क्षेत्र में तेज विकास के माध्यम से अनौपचारिक क्षेत्र के परिवर्तन की संभावनाओं का मूल्यांकन करता है। यह विशेष रूप से प्रासंगिक है क्योंकि 2000 और 2015 के बीच विनिर्माण रोजगार और उत्पादन दोनों में अनौपचारिक क्षेत्र की हिस्सेदारी में गिरावट आई है, जो भारतीय विनिर्माण क्षेत्र के संभावित संरचनात्मक परिवर्तन का संकेत देता है। इस अध्याय में प्रयोगसिद्ध अभ्यास 1970 और 1980 के दशक में चली अनौपचारिक क्षेत्र की बहस की पृष्ठभूमि में स्थित है। यह बहस अनौपचारिक क्षेत्र की भूमिका के संबंध में दो व्यापक विचारों को जन्म दिया था। जबकि एक दृष्टिकोण ने अनौपचारिक क्षेत्र को पूर्व-पूंजीवादी अर्थव्यवस्थाओं की एक विशेषता माना, जिसका औपचारिक क्षेत्र के साथ सौम्य संबंध और स्वायत्त विकास की संभावना थी, दूसरे ने अनौपचारिक क्षेत्र को औपचारिक पूंजीवादी कोर के अधीन और शोषण के रूप में देखा। इस संदर्भ में, यह अध्याय पहले इस बात की जांच करता है कि क्या कुल मिलाकर अनौपचारिक क्षेत्र के औपचारिकीकरण की घटना उद्योगों और राज्यों में भी देखी जाती है। इसके बाद यह जांच की गई कि 2000 और 2015 के बीच ऐसी औपचारिकता कैसे हुई और औपचारिकता के तीन संभावित चैनलों का मूल्यांकन किया गया। ये हैं - अनौपचारिक क्षेत्र के उद्यमों का स्वायत्त विकास और परिवर्तन,

विनिर्माण कार्यबल का संरचनात्मक परिवर्तन और औपचारिक और अनौपचारिक क्षेत्रों के बीच मजबूत उपठेकेदारी संबंध।

निष्कर्षों से संकेत मिलता है कि उद्योग-राज्य समूहों के अलग-अलग स्तर पर औपचारिक और अनौपचारिक क्षेत्र के विकास के अलग-अलग पैटर्न हैं। इसके अलावा, एक विस्तारित औपचारिक क्षेत्र और संबंधित अनौपचारिक क्षेत्र या तो अनौपचारिक क्षेत्र के उद्यमों की स्वायत्तता से वृद्धि या इन क्षेत्रों के बीच मजबूत उपठेकेदारी संबंधों के परिणामस्वरूप नहीं है। इसके बजाय, यह मुख्य रूप से कार्यबल का निर्वाह खंड से भारतीय विनिर्माण के पूंजीवादी खंड में एक संरचनात्मक परिवर्तन है।

अध्याय पांच में, थीसिस का निष्कर्ष है कि 2000 के दशक के मध्य में संगठित विनिर्माण क्षेत्र में रोजगार वृद्धि मुख्य रूप से बड़े प्रतिष्ठानों द्वारा संचालित रही है, साथ ही इन बड़े प्रतिष्ठानों में श्रमिकों की वास्तविक मजदूरी में गिरावट आई है। यह रोजगार वृद्धि या तो श्रम-बचत प्रौद्योगिकी की ओर बढ़ने या श्रम-गहन उद्योगों के बढ़ते सापेक्ष महत्व के कारण नहीं है। यह कानूनी प्रावधानों के माध्यम से श्रम बाजार में बढ़े लचीलेपन से भी प्रेरित नहीं है। इसके बजाय, इस रोजगार वृद्धि को क्षमता विस्तार से जुड़े बढ़ते निवेश द्वारा समझाया गया है। संगठित विनिर्माण क्षेत्र में इस तरह की निवेश-आधारित वृद्धि विनिर्माण उद्यमों को अनौपचारिक से औपचारिक क्षेत्रों में संरचनात्मक रूप से बदलने में असमर्थ थी। लेकिन यह कुछ हद तक विनिर्माण कार्यबल को बदलने में सक्षम थी।

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