

GROWTH OF CENSUS TOWNS IN INDIA: AN ECONOMIC ANALYSIS

Abstract of the Thesis

Submitted to Jadavpur University

For the Degree of

Doctor of Philosophy(Arts)

Saumyabrata Chakrabarti

Department of Economics

Jadavpur University

Kolkata-700032, India

2022

The present thesis focuses on the causes of the reclassification-based urbanization (growth of enormous CTs) in India in 2001-2011. The thesis tries to explain the enormous CT birth from different aspects. It addresses three research questions; 1) What are the city specific factors in birth of CTs; 2) What village and transport specific factors are responsible in CT birth and 3) What are the most important factors in birth of CTs.

The pattern of Indian urbanization showing a different trend with new urban growth of small and medium towns away from metropolitan dominance which is not in conformity with its previous top-heavy pattern of urbanization. It is because of job diversification away from agriculture owing to the growth of transport infrastructure, generation of agricultural surplus reinvested in non-farm activities, unplanned construction activities in suburban areas, outmigration from big cities etc. The number of CTs in India has increased from 1362 to 3894 during the decade 2001-2011 and accounted for almost 30% of urbanization as evident from Census 2011. It is significant especially in the context that during the previous decades CTs did show a marginal growth trend including the decade preceding 2001-2011. Six states like West Bengal, Kerala, Tamil Nadu, Uttar Pradesh, Maharashtra and Andhra Pradesh accounts for almost 60% of CTs in India. All these states show a huge absolute rise in the number of CTs in recent decade with West Bengal leading the list where the number of CTs grown from 254 to 780.

The thesis is divided into three core chapters: Chapter 2, 3 and 4. Chapter 1 introduces the chapter and chapter 5 concludes it. Chapter 2 applies Harris-Todaro model with urban economic features embedded in it to explain the birth of CTs. It also checks the theoretical arguments empirically using Census data of West Bengal. The theoretical model developed in the chapter allows movement of a homogeneous labour force among four sectors of the economy: rural farm

sector, rural non-farm sector, urban informal sector and urban formal sector. The model assumes that the rural non-firm sector absorbs the residual labor force which fail to find employment in the three other sectors. The urban informal sector absorbs the urban labour force which fail to find employment in the urban formal sector. The labour in the urban formal sector enjoys an institutionally fixed wage rate. The wage rate in all other sectors is market determined. The rural non-farm sector and the urban informal sector are assumed to have only self-employed people with negligible amount of locally available capital used in the production process. The urban formal sector also uses global capital as input of production. The urban area has a fixed boundary and population density. We solve for the equilibrium of the model and develop the testable hypotheses stated below. First, a rise in the formal wage rate in the city lowers rural farm employment and raises the rural non-farm employment and thereby increases the probability of developing CTs. In the short run, a rise in the formal wage although reduces the employment in urban formal sector, has an uncertain effect on the wage expected in the urban area. If it rises attracting labour to the city; the city with its defined boundary and density of population cannot accommodate labours migrating from the rural area; however, the wage rate in the rural area rises and the farm sector is forced to shed-off labour who finds job in the rural non-farm sector causing non-farm employment to expand and helping a village to transform to a CT. But if it falls then reverse migration occurs causing excess supply of labour in rural sector. If rural farm sector with limited absorption capacity in short run absorbs more labour compared to rural farm sector then the village ceases to transform to CT. If the opposite occurs CT dynamics accelerate. Second, a lowering of transport cost to the city keeps rural farm employment unchanged but increases rural non-farm employment and thereby increases probability of creation of CTs. The existing literature on urban economics tells us that as the distance from the existing urban centre

rises, transport cost for a commuter to a job located at the urban centre also rises. Thus, cities with low transport cost attracts large number of migrants to the city. But if the city is neither allowed to expand nor allowed to hold a higher density of population, the migration cannot take place. In such a situation, the number of commuters rises who live outside the city. This helps reclassification of the village nearby to the city into a CT. Third, smaller cities and the cities with lower density of population are more likely to have higher non-farm employment in the neighbouring agricultural area and therefore have higher chance of creation of CTs in their neighborhood. A fall in the population density in the city causes fall in the participation in the urban informal sector who find job in rural non-farm sector as the rural farm sector has a limited absorption capacity in the short run and the neighborhood village has a greater chance to be transformed into a CT. Last, an expansion in the boundary of the city reduces the chance of a neighboring village being transformed into a CT. Given the size of its formal sector, expansion of the city leads to an expansion of urban informal sector. The informal wage rate remaining unchanged this happens as labour relocates from the rural non-farm sector to urban informal sector, which reduces the chance of a village transforming in a CT.

The empirical part of the chapter, using Census village/town data for the districts of West Bengal, India between Census years 2001 and 2011, verifies the relative importance of the factors identified in theoretical propositions derived in the chapter in formation of the CTs. It uses Logit regression for its purpose. It turns out that the higher formal sector income in the nearby urban centres with lower extent of urban sprawl is the major factor explaining the birth of CT. 'formalization of cities' is not a significant factor explaining the birth of CTs.

Chapter 3 analyzes both the forces of agglomeration and dispersion that work because of development of transport infrastructure like highways, rail head and local roads. It looks at

interaction of each of the highways and rail infrastructure with local roads. In the analysis it not only juxtaposes the transport infrastructure variables, also controls for nearness to the city and local amenities at the villages. Second, it finds that the state and national highways located near the city increases the probability of a village turning into a CT. The closer the distance, the higher is the chance of a successful conversion. Contrary to the existing literature, in case of West Bengal, the chapter finds that although local roads have a positive impact, do not significant influence in emergence of CTs except in the cases where it complements the highways. However, the nature of complementarity is different at the districts bordering the city of Kolkata compared to what we generally observe in the state. While generally it supports the forces of dispersion from the existing cities, in the neighborhood of Kolkata it supports the forces of agglomeration. Third, the GQ project in West Bengal has a weaker role compared to the state/national highways in turning the prospective villages into CTs. Fourth, commuting is in general is not an important factor in formation of CTs in West Bengal. Fifth, in case of West Bengal, with its uneven pattern of development centered around its capital city of Kolkata, all other things remaining the same the villages had a higher chance of getting converted in a CT in the districts bordering Kolkata. The results are new in the literature and important for policy making.

The fourth chapter juxtaposes all the factors used in second chapter and third chapter together and attempts to reduce the dimensionality of the explanatory factors by use of Principal Component Analysis (PCA). The principal components are blend of all the control variables used in Chakrabarti and Mukherjee (2020, 2022). The varimax rotation of them identifies an original control variable, which has the highest correlation with the each of the extracted principal components called dominant variables. As we regress them on the dependent variable, the

conversion of 'would be CTs' to CTs, for finding out relative importance of them, we also infer which of the original variables are the most important in explanation of the formation of the CTs in West Bengal. From our analysis, it appears that the existence of railways within 5km radius of a village, high population density in nearby city and availability of electricity in a village, are the most important factors in conversion of a village to a CT. The chapter also finds the explanatory factors play out differently in the districts bordering Kolkata, the capital city of West Bengal, and the other districts. The districts bordering Kolkata are North 24 Parganas, South 24 Parganas and Haora. While the presence of highways within 5km. radius of a village plays an important role in creation of CTs for both types of districts, in the districts bordering Kolkata density of population in the nearby city/Statutory Town (ST) plays a significant role. In the districts not bordering Kolkata the CTs are created away from the nearby STs and cities. It appears, among the city specific factors, the importance of density that we find in this chapter is a new finding. It was not significant when Chakrabarti and Mukherjee (2020) analyzed the importance of city specific factors in formation of CTs in West Bengal. Similarly, when Chakrabarti and Mukherjee (2022) analyzed the transport infrastructure specific factors, nearness did not appear as a significant variable. Therefore, this is also a new finding of the chapter. We obtain the new results as we take all the three types of variables in a single framework and eliminate correlation between them. The results suggest that the forces of dispersion created from the congestion at the existing cities/STs are important in explaining the birth of CTs in West Bengal both at the districts around Kolkata and the other districts. The highways help the dispersion. In the districts outside Kolkata, commuting to the nearest city/ST is not important for formation of CTs. It highlights the process the local agglomeration in and around the villages converted in CTs. However, in the

districts bordering Kolkata, it seems the density of population in existing cities/STs plays an important role in dispersion process.

The thesis brings up several policy recommendations. The improved physical infrastructure may lead to more job creation that will check the movement of the people to urban centre in medium and long run and the pressure of population in the city will be reduced leading to more inclusive pattern of development. Secondly, if a CT is converted to ST the problem of lack of infrastructure may be overcome. Hence the conversion of CTs to STs is a necessary step to render people urban amenities. Thirdly, investment in transport infrastructure by the policymakers will be a great leap in favour of inclusive urbanization and balanced economic growth. Also the improvement of village amenities like banks, schools, electricity along with village road will help the same if properly managed.