Chapter 8

Convergence and Equality of Road Infrastructure: A Cross Country Analysis

Utpal Das
Katwa College, India

Ramesh Chandra Das
Katwa College, India

Kamal Ray
Katwa College, India

ABSTRACT

The development of road infrastructure works as one of the most important inputs of production and overall economic activities all around the global economics. The developed countries of the west hold the larger road lengths in both gross and per capita terms compared to the less developed and emerging countries. But it is also undeniable that the less developed emerging countries have been growing fast in this respect or rushing to catch with the developed countries. The present chapter, hence, tries to study the modes of growth and convergence of GDP per kilometer of road length across the 30 selected countries for the period of 1990-2011 by means of γ convergence and also try to estimate the cross country inequalities by means of Gini Coefficients. It observes a sign of γ convergence and the inequality are going down over time, although there are some signs of divergences in some of the short time spans.

INTRODUCTION

Physical fitness of human beings depends on their clean or unblocked artery system through which blood circulation becomes smooth in the entire body. Humans do not survive if the artery system does not allow blood to circulate and transport nutrients as per requirements. In a similar way, nation cannot grow faster unless it has a smooth and sufficient square area of road network. Road-network is supposed to be the artery system of a nation that matters much to reduce the distance factor between two points.
of a nation in particular. We often talk about the death of distance in the era of globalization and hence road-network plays an important role to reduce the troubles distance factor as well as communication; facilitate trade, transport, integration and, in turn, economic growth and development. The ratio of square area of roads to the total square area of a city of a nation is an index for improving not only the living conditions of common people but also supplements market integration. Urban people are in a well off position in normal stage compared to the people residing in rural belt in developing nations in particular. Road-web is a basic infrastructure which is directly linked to the up-graded marketing system of all types of goods and services. Newly constructed roads may persuade development in previously undeveloped areas; significantly affecting sensitivity of the lifestyles of indigenous people. The majority of poor people in the world live in rural areas and the level of public infrastructure in terms of road-facility are of low quality. Increased road capacity and better quality of pavements can reduce travel times and lower the fuel costs of vehicle used. The benefits of increasing access to the markets, jobs, education facilities, health services and reducing transport costs for both freight and passengers are pronounced. According to data on the United States, Queiroz and Gautam (1992) observed that the country accounts for 15 per cent of its Gross National Product and 84 per cent of all spending on transportation activities.

Infrastructural developments in the road network have so many positive effects upon the socio economic structure in any economy. According to the OECD Report (2002) on impact of road on regional development, the main direct user benefits are travel time, vehicle operating or fuel efficiency and safety. Travel time savings are usually regarded as the largest economic benefits of transport infrastructure investment. This is known as ‘Accessibility’. Improvement in accessibility would increase the market size for agriculture, manufacturing, tourism and/or labor sectors, leading to increased competition. Besides it has many spillover effects on the economic and social variables, likewise the effects on employment, efficiency and social inclusion. The impacts of construction, operation and maintenance of transport infrastructure on employment include both created and relocated jobs. Direct and indirect employment linked to the operation and maintenance of transport infrastructure is largely related to the level of traffic. Wider access to the market would create both new business opportunities and increased competition, leading to further increases in profitability which will again lead to increase in factor productivity and efficiency. Increased access to road network to all sections will make the inclusive social benefits that have a long term positive effect in terms of social welfare.

All weather roads are the one of the vital conditions to improve the socio economic condition of a country. According to the World Bank data, in India total road network of over 4865000 km in metal road in 2014, the second largest road network in the world just after USA with 6586610 km. At 1.48 km of roads per square kilometer of total geographical land the quantitative density of India’s road network is far higher than that of the United States (0.65), China (0.46), Brazil (0.20), Russia (0.08), Canada (0.10) and Australia (0.11).

Recent scenario reveals that backward countries are investing now a large part of their GDP upon building road network and trying to catch up developed countries in this regard. Since already established fact that road network has a positive impact upon the GDP of a country, the GDP per kilometer (KM) of road or GDP-road length ratio become a significant determinant in judging whether road is affecting GDP. The countries of the backward regions have been also growing in terms of the GDP per KM of road network and it would, in turn, help to catch up with developed nations.
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