CHAPTER - 7

A Case Study of the State Level Competitiveness in India: Based on CFA Model

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ABSTRACT

The disparity of foreign direct inflows among Indian states inspires us to undertake this study to enable us to understand the competitiveness in Indian states. With rapid increment in the importance of the institutional environment, it becomes essential to understand the competitiveness of a location. The aim of this paper is to present the competitiveness by using various variables constructed using Principal Factor Analysis method. The variables taken in the study are Infrastructure, Labour Availability, Education, Taxation, IPR and Market Size. The study uses data for 17 years (2000-2016) and 36 Indian states & UT's. This case study computed using UNCTAD 2002 methodology. The index of state competitiveness is prepared to measure the competitiveness of Indian states. The aim of this paper is to understand competitiveness of Indian states in terms of macroeconomic and institutional factors. This research finds out that the factors of competitiveness can be grouped under two headings (a) Positive Factors, (b) Negative Factors. The Positive factors enable a state on the higher side of the ranking and negative indicators keeps states on the lower side. Hence, this case study presents a comparison of states accordingly.

***Keywords:** FDI; Competitiveness; Indian states; Macroeconomic and institutional indicators.*

1.0 Introduction

Competitiveness is certainly an important factor for attracting foreign investments, which is not inherited but acquired by the nations. The competitiveness of a nation depends on the capability of the firms to innovate and upgrade (Porter, 1990). Foreign investment inflow

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(FII) and Competitiveness are related to each other in two ways: first FII develops the competitiveness of the host country and second competitiveness of the host country is essential for attracting FII. With the rapid increase in the importance of the globalisation, both developing and developed countries try to improve their competitiveness in the global market.

The global competitiveness index plays an important role for the countries, in attracting FDI inflows. A country's competitiveness index shows its place in the world. The higher-ranking countries have good chances of receiving a good amount of FDI inflows. Countries are becoming competitive by focusing on various parameters such as policy reforms etc. The MNC's choice of location depends on the attractiveness of the location so that the foreign companies can exploit the resources to the best. Hence, to increase economic growth, competitiveness plays a remarkable role.

Though vast available literature has assessed competitiveness between developed and developing countries around the globe, lots of international organizations formulate index of competitiveness, such as World Bank, World Economic Forum, IMD, Business School Switzerland, Heritage Foundation, IPS (National Competitiveness Research) etc. to rank countries on a scorecard. However, definitions and measurement of competitiveness are different in all of them. Policymakers, economists and research scholars argued about the different factors of competitiveness such as macroeconomic environment, institutional environment, policy formulation, government regulations, country risk and productivity. It has become the prime concern of the governments and researchers to evaluate the competitiveness of the countries (Ketels *et al.*, 2006).

Diamond theory, that signifies different attributes of a nation, to make it competitive, which includes factor conditions, demand conditions, firm rivalry & strategy, government policy and exogenous shock. The criticism of Porter's Diamond theory comes from the management school of thought, which argues that the diamond theory ignores the role of MNC's in making a nation competitive (Dunning & Lundan, 1993).

According to Graham & Krugman (1991) competition between countries is not at the international level, countries can become competitive by maintaining the standard of living to improve productivity and quality of productivity in order to create new jobs.

In the context of the present study, it is useful to discuss the importance of the competitiveness index for all the countries, developed and developing. Together with that, a brief discussion has also been given to understand the concept, definition as well as the importance of competitiveness index around the globe. Accordingly, the first part of the paper discusses the concept and definition of the competitiveness proposed by various available studies, economist and policymakers, who have used the competitiveness index to rank the countries around the globe. The second part of the study discusses the relevant data sources, time period taken and the methodology used. The third part deeply analyses the pattern of business reforms implemented in these states and presents a detailed assessment of the ease of doing business in Indian states. In the conclusion part of study, a broad conclusion based on the analyses of the business environment and other parameters of Indian states is presented.

This case study analyze the current stage of macroeconomic and institutional indictors in the Indian states. The case study is divided into three parts: In the first part of the study is a general description of the overall macroeconomic and institutional indictors in the Indian states. Part two presents the research methodology, data used and other analysis of the study. And the third part of the study presents conclusion and a set of policy recommendations for a variety of stakeholders that will help them to understand the business environment in different states of India.

The Challenge of the case is to understand the overall Institutional environment of the Indian states such as labour market, Corruption, Education, Taxation, IPR, Market Size, Labour unrest and Political Risk.

Indian states are different from each other in many perspectives such as infrastructure, population, geographical area, institutional quality etc. so one ranking based on the national level data, doesn't sufficiently provide a

complete picture of competitiveness. Hence, state-level competitiveness ranking is required to understand the overall competitiveness of the Indian states. This case study computed using UNCTAD 2002 methodology. The index of state competitiveness is prepared to measure the competitiveness of Indian states. Following section presents the competitiveness of Indian states for 2000-2016, according to various parameters. The competitiveness ranking methodology focuses on, what matters for the foreign investors and ranks Indian states, accordingly. The more potential states are on the higher side while states with less potential for investment are on the lower side.

2.0 Concept of Competitiveness

According to IMD World Competitiveness Centre, Competitiveness is defined as a process that evaluates at different levels, such as a firm, regional and at the national level, and it moves from general perspective to the specific perspective accordingly. During the year 2014, it adds that the earnings of the people and ultimately prosperity are the major outcome of competitiveness. Buckley *et al.*, (1988) termed competitiveness as efficiency and effectiveness at the international level.

"OECD (1992) defines competitiveness as "the degree to which a nation can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens".

European competitiveness report (2000) defines it as: "the ability of an economy to provide its population with high and rising standards of living and high rates of employment on a sustainable basis".

As per the definitions mentioned above, the term competitiveness is assessed with an increase in the real income and higher standards of living, of the citizens of a country. According to Stojanovska *et al.*, (2017), the competitiveness is assessed at two levels, firm level and country level. In the present study, we consider it at state-level. The state-level competitiveness is termed as the extent of state to adopt policies reforms, improvement in business environment and rise in the

standard of living of people in the state. National Competitiveness Research, defines it as a nation's relative competitive position in the international market among nations with similar size and competitiveness.

The concept of competitiveness has been measured through various factors across different countries, yet no single definition of the term competitiveness has been accepted in a generalized form. Several studies have been done to measure the competitiveness around the globe and the factors affecting the competitiveness of different countries vary in each country and prosperity is not a short race but it is a Marathon (Porter, 1990). After arguing about lots of factors, Porter (1990) defines a new concept of competitiveness as productivity, and which is determined by the set of institutions, policies and factors.

The World Competitiveness yearbook gives the same definition with a broader perspective. There are numbers of definitions which measure competitiveness among countries since 1979. According to the World Economic Forum, "the set of institutions, policies and factors determine the level of productivity" which ultimately determines the competitiveness of the country. Others are subtly different but all generally use the word "productivity". The term competitiveness is defined as "the quality of being as good as or better than others of a comparable nature." According to available international business literature, it is found that there are significant differences in terms of competition in the world and the measurement of competitiveness is very much different across the world. (Whitley, 1994; Hall & Soskice, 2003; Lewin & Kim, 2004; Ring *et al.*, 2005; Redding, 2005).

Blomstrom (1991) and Blomstrom & Kokko (1996) strongly argues that FDI promotes the competitiveness of local firms in Mexico and Indonesia. Smarzynska (2002) confirmed the benefits of spill-over enjoyed by local suppliers in Lithuania by supplying foreign customers. The opening up of India, i.e. economic reforms have initiated an open, competitive and entrepreneurial environment in India (Kedia *et al.*, 2006).

3.0 India's Place in the Competitiveness Ranking of the World

India is a country with big market size and lots of legacies such as democracy, bureaucracy and socialism, which are needed for the development of the country. On the other hand, they create hurdles in the competitiveness of the nation. The World Economic Forum (WEF) annually ranks countries according to the competitiveness ranking which segregates countries according to the 12 pillars of competitiveness. According to WEF Competitiveness report (2017-18), India stands on 40th place, out of 139 developed and developing countries, which is a fall of one notch from the previous year, while Switzerland has been ranked at first place, followed by the United States. Table 1 shows the year-wise ranking of India according to WEF.

Table 1: India's Ranking According to the WEF

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017/18
Ranking	59/144	60/148	71/144	55/140	39/138	40/137

Source: *Global competitiveness various years' reports.*

As mentioned above that the ranking is done on the basis of 12 economic pillars, India's score improves across most pillars of competitiveness from the previous years, such as infrastructure, higher education and technological readiness, while ranking in regard to number of procedures to start a business in India, total tax rate, time to start a business in India and business costs of terrorism are liable to keep India on the lower side of the ranking.

The state-level competitiveness is becoming important these days, and the reason behind this may be the diversity in the states in terms of infrastructure, governance, market size etc. The competitiveness index may provide a comprehensive view to the global investors and to the government as well, so that the government may take appropriate decisions to improve backward states and global investment may be attracted to all the states at the even level. The competitiveness ranking

gives a benchmark to the government and policymakers, to formulate policies which lead the ranking to the higher side. According to WEF, Competitiveness Report 2017-18, India is growing as a centre of innovation, Bengaluru at (43rd), Mumbai at (95th) and Pune at (96th) place out of 100 innovation centres. These are the three main clusters which generate number of patents. (Global Competitiveness Report, 2017-18)

This study aims at examining the competitiveness pattern of Indian states. Simultaneously, it also analyses the improved business environment in Indian states, specifically an analysis of Business Research Action Plan (BRAP) of Government of India to make Indian states competitive. The framework to formulate the competitiveness index of Indian states. This study examines the competitiveness of the India for twenty-nine states and seven UTs individually.

Regional development plays an important role in India since the opening up of the economy, which expanded the FDI inflows to multiple folds. In the context of FDI inflows, Indian states are now in direct competition with each other. So, this increasing competition has given rise to the competitiveness in Indian states. Krugman (1994) supports the idea of "regional competitiveness" rather than national competitiveness because he finds regions are more comparable and hence give a clear picture of the competitiveness. The competitiveness ranking index has been constructed for twenty-nine states and seven union territories, for the period 2000-2015, by using competitiveness ranking methodology propounded by UNCTAD (2002).

4.0 Data and Methodology

Following the work of Chen (2011), in present chapter index for Indian states has been constructed by taking 44 variables, which include, infrastructure, market size, legal system, wages enforcement and intellectual property rights, labour etc. The period taken for the study is 2000-2015. After using PCA methodology we use the factors derived with less number of variables but with more underlying conceptual data. After using PCA technique the dataset has been

reduced to 12 variables. In current chapter, we would be constructing state-wise attractiveness index for FDI inflows. For doing so we would be adopting the methodology used by UNCTAD (World Investment Report, 2002). The state-level inward FDI attractiveness index is the average of the scores of the variables for each state. The score is derived by using following formula:

$$Score = \frac{(V_i - V_{min})}{V_{max} - V_{min}}$$

Where,

V_i = is the value of variable for the state i

V_{min} = is the minimum value of the variable

V_{max} = is the maximum value of the variable

According to this formula, the values of the index of states would divide Indian states with lowest and highest ranking. Following section presents the competitiveness of Indian states for 2000-2016, according to various parameters. The competitiveness ranking methodology focuses on what matters for the foreign investors and ranks Indian states, accordingly.

The more potential states are on the higher side while states with less potential for investment are on the lower side.

5.0 Analysis

5.1 Sub-national competitiveness ranking

The states are different from each other in many perspectives such as infrastructure, population, geographical area, institutional quality etc. so one ranking based on the national level data, doesn't sufficiently provide a complete picture of competitiveness. Hence, state-level competitiveness ranking is computed using UNCTAD 2002 methodology. Following section presents the results for the competitiveness of Indian states for 2000-2015, according to various parameters. The competitiveness ranking methodology focuses on what matters for the foreign investors and ranks Indian states, accordingly. The more potential states are on the higher side while states with less potential for investment are on the lower side.

5.2 Infrastructure

On the basis of infrastructure indicators, Maharashtra, Gujarat, Tamil Nadu and Delhi are the best performers. The index of state-wise infrastructure suggests the states with highest ranking in the infrastructure index. It is to be noted here that these all are the high FDI receiving states. The index has been constructed using various infrastructure indicators such as Roads, Railways, per capita Power Availability, vehicles registered and state-wise capital expenditure, etc., hence the index proves that the states with good quality of infrastructure are those states that receive the highest FDI inflows in India. After performing PCA technique it was found that Per capita power availability and vehicles registered in the states are the two variables with highest loading and we select them to further construct the weighted index.

Figure 1: Infrastructure Index for 2000-2016 in Indian States/UT's
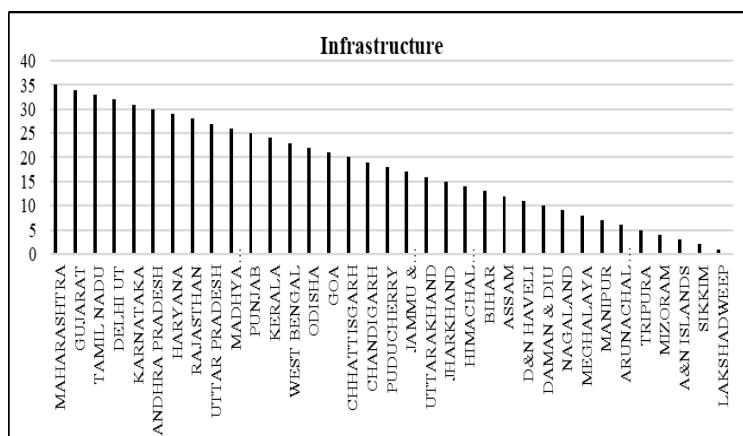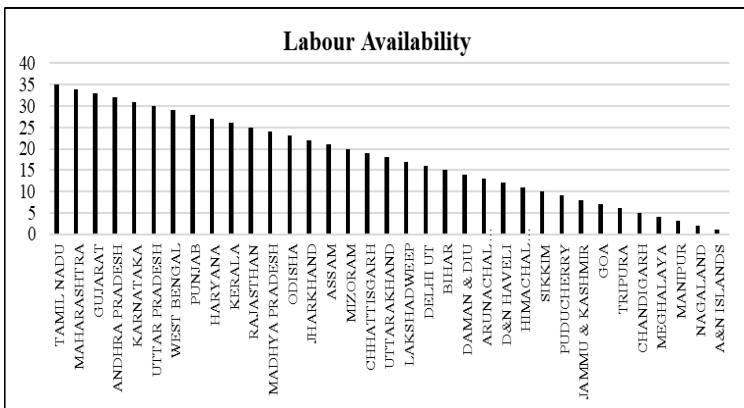

Source: Author's compilation

The ranking presented in Figure 1 for the infrastructure index in Indian states. It can be seen with the bar diagram that Bihar, along with other north eastern states and UTs are lacking states in the quality of

infrastructure. The raking provides a reason for change in the policies regarding infrastructure development in these states. The competitiveness is termed as the productivity and prosperity these days (Bris *et al.*, 2014), hence, infrastructure quality defines much about the productivity, profitability and prosperity level in a state. The top performing states in infrastructure index, Maharashtra, Gujarat, Tamil Nadu and Delhi have become power surplus states during the year 2016-17, and did not face any shortage in the power supply during the year's peak demand season in 2016-17, which provides a strong support to the index.

Following section describes competitiveness among Indian states by considering institutional indicators, which include Crime, IPR, Corruption and Political Risk. Figure 2 presents index for crime cases in Indian states

5.3 Labour availability

Figure 2: Labour Availability Index for 2000-2016 in Indian States/UT
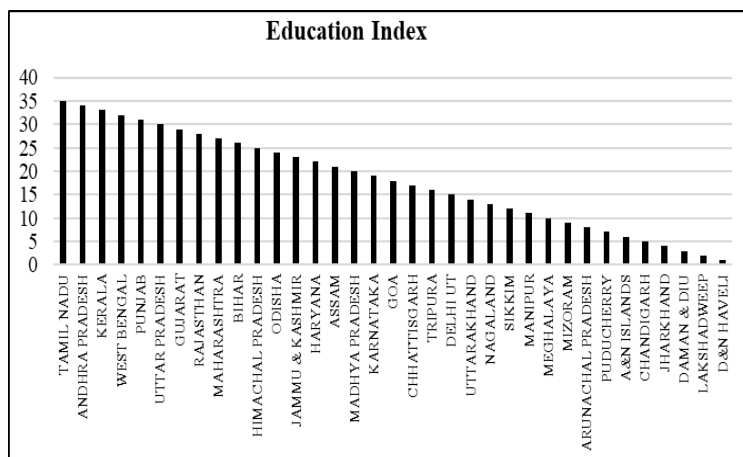

Source: Author's compilation

It can be seen from the Figure 2 that Tamil Nadu, Maharashtra, Gujarat, Andhra Pradesh and Karnataka are the states with high

ranking in labour availability index. Labour availability includes state-wise number of persons engaged in Indian states. Delhi the second highest FDI receiving state in India, comes on 19th place.

5.4 Education

According to Education Parameter, Tamil Nadu, Andhra Pradesh and Kerala are the top three states. The states are ranked according to education expenses to represent the education level in Indian states (Figure 3).

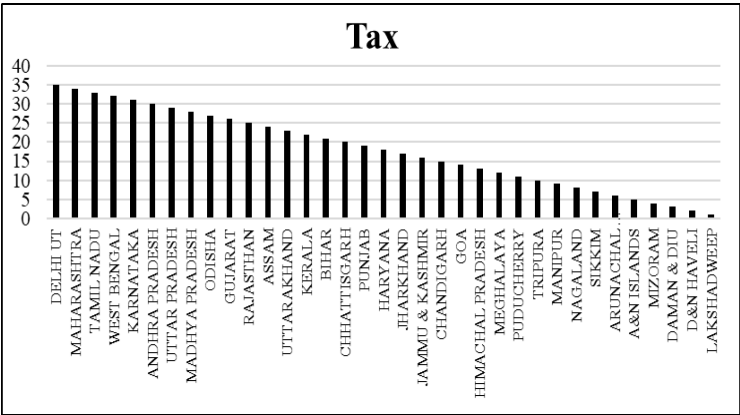**Figure 3: Education Index in Indian States/UT's**

Source: Author's compilation

5.5 Taxation

The fact that taxation has a significant impact on the FDI inflows has been found by various researchers, (Hines, 1999). The tax factor is important for Indian states, because foreign compares decided about the type of business for example a branch or a subsidiary, as it affects the profitability and cost of capital of the business. Thus, ranking of Indian states is based on three different factors to represent taxation at state level. These factors are corporate tax collected, sale tax, states-wise own tax

revenue. The taxation ranking is given in following Figure 4, by taking weighted scores of the afore-mentioned components.
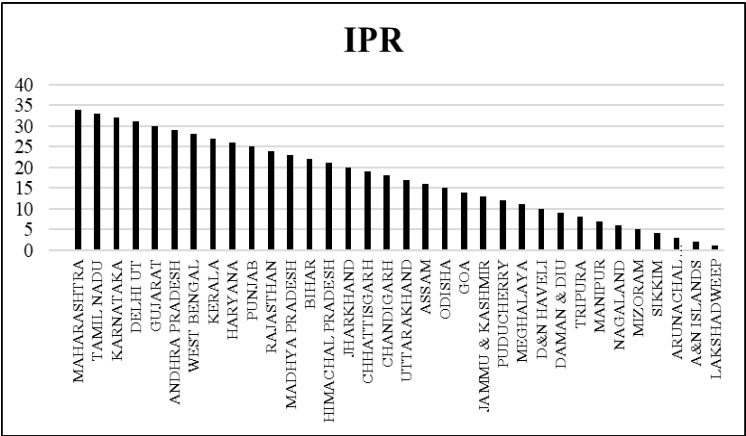
Figure 4: Taxation Index for 2000-2016 in Indian States/UT's

Source: Author's compilation

5.6 IPR

Figure 5: IPR Index in Indian States/UT's

Source: Author's compilation

It can be seen from the Figure 5 that Delhi, Maharashtra, Tamil Nadu, West Bengal and Karnataka are the top 5 states with highest ranking in the IPR index.

The north eastern states along with Daman & Diu, Dadra Nagar Haveli and Lakshadweep are on the lower side of the index. High ranking in the taxation index also signifies the highest profitability in the state.

5.7 Market size

Market size is one of the important determinants of the competitiveness, which is generally measured by GDP, Per Capita income etc. The larger the market size, more the FDI inflow, as it provides profitability and potential for sales (Chakrabarti, 2001; Noy & Vu, 2007).

However, Indian states are different from each other in terms of market size, which is here measured by GSDP (Gross State Domestic Product). The Figure 6 ranks Indian states accordingly, and concludes that Maharashtra, Uttar Pradesh, Tamil Nadu and Gujarat are the states with highest ranking among twenty-nine states and seven UT's.

Figure 6: Market Size Index for Indian States/UT's
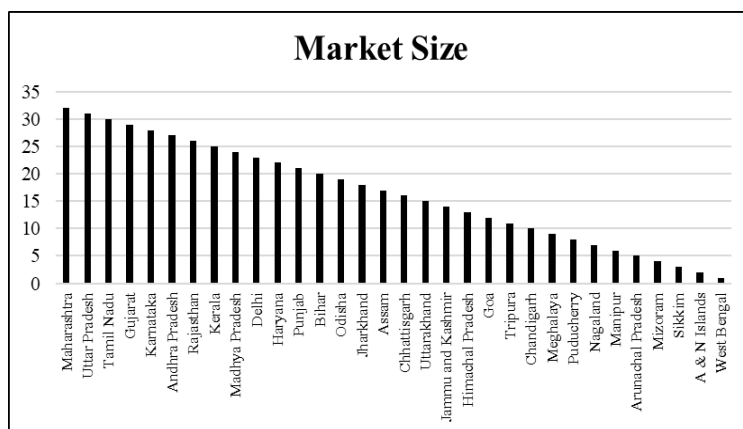
Source: Author's compilation

The above analysis presents ranking of Indian states according to different indicators such as education expenses, taxation, IPR protections and market size. It can be seen through the graphs that all the Indian states and UTs are different from each other and their ranking vary according to various indicators.

6.0 Conclusions

As competitiveness ranking decides the ranking of a country, in the present paper we computed the competitiveness ranking for Indian states. UNCTAD (2002) methodology has been used in order to analyse business environment of Indian states and UTs. The UNCTAD, reports inward FDI potential index for countries by including twelve economic variables, following that methodology in current study, the competitiveness of Indian states have been measured. Together with that we included some of the institutional variables in the analysis. Indian states are ranked according to different parameters based on infrastructure, labour availability, IPR protection etc. The strength and weakness of Indian states have been shown through the empirical analysis.

The competitiveness of Indian states is developed to assess the attractiveness and to consider the investment climate in twenty-nine Indian states and seven UTs for the period of 2000-2016. The results disclose that there is much difference in the competitiveness of Indian states (states and UTs). According to the Infrastructure index, the most attractive states are Maharashtra, Gujarat, Tamil Nadu and Delhi. Although other states are also gradually becoming the part of the competition with more liberal policies and reforms taken by respective state governments, yet above mentioned states enjoy the highest ranking in the Index.

The high (low) competitive state is not necessarily high (low) in terms of growth of the state, as the ranking measures the competitiveness in context of business environment for foreign investor only. However, the factors of competitiveness can be grouped under two headings (a) Positive Factors, (b) Negative Factors. The

Positive factors enable a state on the higher side of the ranking and negative indicators keeps states on the lower side. Hence, following a comparison of states accordingly given in Table 2, which suggests that according to infrastructure, IPR Protection and Market size, Maharashtra tops the ranking. In Market size, Uttar Pradesh is on the second place. Delhi according to the infrastructure, IPR, Taxation and education expenses is in top four states. According to corruption index, Rajasthan is on second place. The index value from highest to lowest states are presented in study we may see that only five highest ranking holder regions are considered to highly competitive. The index concludes the results that Maharashtra, Delhi (National Capital Region), Tamil Nadu and Gujarat are the four most competitive states in the country. These are the very same states that are also receiving the 70%–80% of total FDI inflows of India. Maharashtra and Delhi together achieve around half of India's FDI inflows. Apart from this it may also be concluded that north eastern states and some union territories such as Daman & Diu, Dadra Nagar Haveli, Andaman and Nicobar Islands and Lakshadweep, needs government attention as they are not performing well in any of the positive indicators which include, infrastructure, education etc.

Table 2: Top Four States in Different Indices

Infra-structure	IPR	Market Size	Labour	Taxation	Education Exp.
Maharashtra	Maharashtra	Maharashtra	Tamil Nadu	Delhi	Andhra Pradesh
Gujarat	Tamil Nadu	Uttar Pradesh	Maharashtra	Maharashtra	Gujarat
Tamil Nadu	Karnataka	Tamil Nadu	Gujarat	Tamil Nadu	Maharashtra
Delhi	Delhi	Gujarat	Andhra Pradesh	West Bengal	Delhi

Source: Author's compilation

The Indian government has made lots of policy reforms at national level in the area of FDI to ease the doing business for investors and business persons, but the major problem lies with the implementation

of these policies at state level. The governments need to take steps strategically to make Indian states competitive, to achieve and maintain the prosperity. The process should be continued beyond a single government, as said that the prosperity is not a short race, but it's a marathon, which takes decades to make a country competitive and prospered (Porter, 1990). A Lot of countries around the world are declining in the prosperity and some are improving the standard of living. A nation or a state can be competitive by the combined prosperity of businesses and the citizens, which is done, by creating an environment for the firms at local and international level in order to make them competitive. Further, by improving productive work-force participation, standard of living in a country or a state is ultimately improved.

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