

# CITY CLUSTER ECONOMIC DEVELOPMENT - CCED


EXPERIENCE OF CITY CLUSTER ECONOMIC DEVELOPMENT  
IN  
SRI LANKA  
COLOMBO METROPOLITAN REGION

NATIONAL PARTNER - SEVANATHA Urban Resource Centre

## SRI LANKA

**Salient Features :**

- Total area of the Country - 65,610 sq. km.
- The maximum distance from
  - North to South - 432 km.
- The greatest width from
  - West to East - 224 km
- Highest Elevation - 2,524 m (8,281 ft.)
- Total Population Growth Rate - 1.3%
- Average Literacy Rate - 90.8%
- Employment
  - Agriculture - 32.7
  - Industry - 26.3
  - Services - 41



**Climate :**

- Low Country – min 24.40 C – max 31.70 C
- Hill Country - min 17.10 C – max 26.30 C
- Annual Rain Fall (Ave) – 2,020 mm
- No. of Rainy Days - 99

**Gross Domestic Products (GDP) :**

	1990	2000	2004	2005	2006	2007	2008(a)
<b>GDP</b>	6.4	6.0	5.4	6.2	7.7	6.8	6.0
• Agriculture	8.5	1.8	0.0	1.8	6.3	3.4	7.5
• Industry	7.8	7.5	5.4	8.0	8.1	7.6	5.9
• Services	4.2	7.0	6.7	6.4	7.7	7.1	5.6

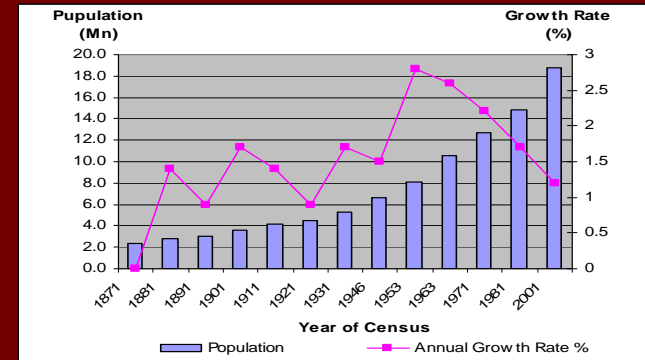
# Urban Planning & Economic Development Policies

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## Urbanization & Economic Development

- Total population of the country has been estimated at 20.2 Mn. in 2008; an increase of 1.0% compared with 0.6% growth in 2007.
- Districts namely; Colombo, Kandy, Gampaha, Ratnapura, Kurunegala, Badulla and Galle contributed 50% to the overall growth out of 25 districts.
- These major cities mostly located in the Western Region (WR) of the country contributed to a higher urbanization process.
- The WR of the country has increased its population from 3.9 Mn. in 1981 to 5.4 Mn. in 2001 and it would be over 5 Mn. within next decade.

- By the year 2030, the total population of the country would be 23 – 25 Mn.
- The following graph shows the increasing pattern of Population Growth in Sri Lanka



Source: Urbanization in Sri Lanka – Dept of Census & Statistics

- The WR covers only 6% of the total land area of the 65,000 sq.km of the country.
- But this region has accommodated nearly 25% of the entire population resulting high rate of urbanization.
- Sri Lanka has recognized urban development as a essential component of strategy for regional development, both short & long term physical development contributing to the growth of National Economy.
- However, the urbanization in Sri Lanka has not been guided by proper planning, resulting urban sprawl and concentration of population to a section that is to the WR of the country.
- Physical planners and economic planners as well accept today that the importance of urban conglomeration and clustered city development as a strategy for economic and social infrastructure development rather developing mono centric cities.

**This has been promoted by increase reliance of national economy on international market sources which require attributes that are generally found in clustered cities.**

**It was also notice with urbanization the formal sector also has growth in urban areas particularly centering Colombo.**

## Development Issues Associated with Economic and Planning Issues

As per the economic strategies of the government expects a GDP growth rate of 8% p.a. The WR Megapolis Plan has suggested to achieve 53.6 of contribution to the GDP from Colombo based economic activities.

This plan envisages accelerated growth rate rather than spreading through out the country.

- Under the 10 year Horizon Plan and Re-awakening of North & East, no. of infrastructure projects have been identified utilizing Rs.200 Bn. to improve infrastructure facilities in order to accelerate the economic development of the country.
- The present economic policy of the government has integrated the positive attributes of free market economy with domestic aspiration in order to ensure balance and modern approach where domestic enterprises to be supported while encouraging foreign investments.
- The last year Board of Investment of Sri Lanka (BOI) recorded US\$885 Mn. FDI.

## Provincial Share of GDP and Per Capita Income (2006)

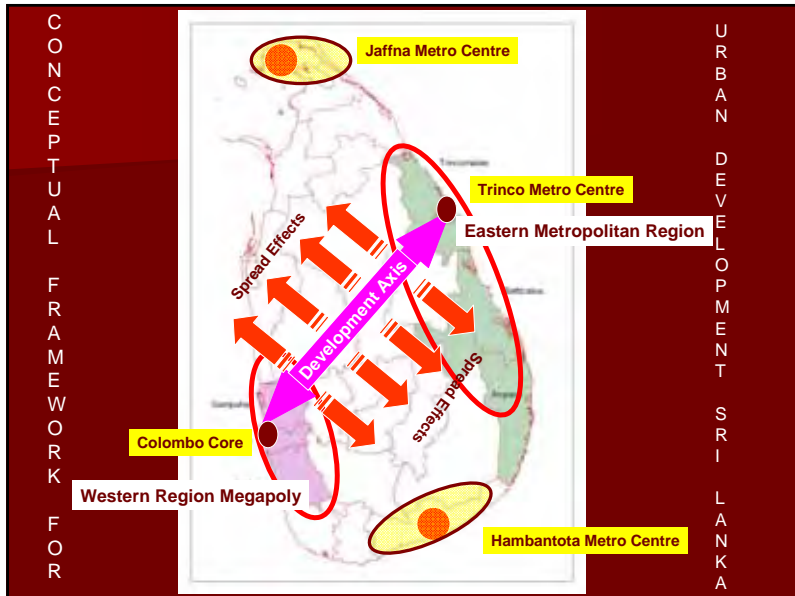
Province	GDP Share %	Per Capita Income (RS.)
Western	50.1	222,598
Southern	9.3	97,377
Sabaragamuwa	6.2	82,575
Central	8.8	85,833
Uva	4.6	92,615
Eastern	4.7	75,364
North Western	9.3	103,792
North Eastern	4.1	88,333
Northern	2.9	64,185

Source : Annual Report 2007 - Central Bank of Sri Lanka

## Regional Disparities in Development



- The disparity is measured in terms of insufficient services and economic development.
- Social indicators such as access to health facilities, education attainment, housing facilities & other basic infrastructure facilities

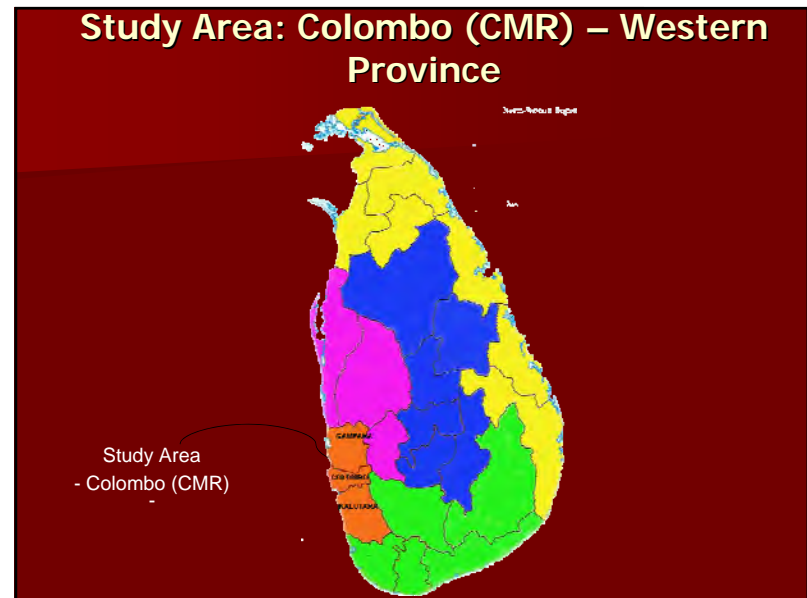


**SRI LANKA IN 2030**

**National Spatial Structure Plan 2006**

A settlement pattern that integrates urban & rural development through a network of cities & towns is an important factor in decreasing regional disparities. Metro Cities & Metropolitan regions will provide a variety of higher order urban services and employment opportunities. The availability of a range of employment, educational, community & cultural opportunities in the regional areas will enable the Metro Cities to act as an alternative to Colombo. This approach enables more people, including those living in the rural areas, to access a range of urban services & opportunities. Properly Planned settlement pattern also provides a focus for infrastructure provision & investment in the regional areas of the country.

**Identification of Key Industries**



## Industry Clusters ⇒ How to Select ?

- Size
- Growth
- Exports
- Critical Mass (eg over x number of firms)
- Spatial Concentration
- Not dominated by a very large firm
- Ability to corporate/compete
- Product ⇒ Homogeneity/sustainability
- Promotability

## Identification of Key Industries

### Techniques Used

- ☞ Location Quotient Analysis
  - ☞ Basic Sector Employment
  - ☞ Shift share Analysis
  - ☞ Sector Estimates of GDP
- Employment Data  
(1997-2006)

## Competitiveness of Sri Lankan Cities

The objective of studying the competitiveness of Sri Lankan cities is to examine factors that may be fostering industrial agglomeration or clusters which allow for improved competitiveness and sustainable development.

## Methodology

- Several countries have developed survey instruments and assess the importance of drivers of competitiveness in underpinning the development of cities in the Asian region.
- The understanding of these drivers aids the preparation and implementation of plans, action and initiatives which help to support local economic development.
- A sample survey was carried out in 14 selected cities in Sri Lanka: namely, Colombo, Gampaha, Kalutara, Galle, Dambulla, Nuwara Eliya, Ratnapura, Ampara, Kurunegala, Matara, Anuradhapura, Hambantota, Trincomalee and Kandy.



- The assessment of city competitiveness involves collecting of data on six primary drivers of economic development. These drivers are;
  - **Cost of Doing Business,**
  - **Dynamics of Local Economy,**
  - **Human Resources**
  - **Training,**
  - **Infrastructure,**
  - **Responsiveness of Government to Business Needs and Quality of Life.**
  
- The assessment involves primarily qualitative analysis, using secondary information and interviews with informed experts to rank the competitiveness of 36 indicators contributing to competitiveness in the 14 cities in the study. From each city, entrepreneurs were selected randomly who possess knowledge and personal experience on those key drivers referred in the survey format.
  
- A rank (scoring) system ranging from 0-5 was used to assess the relative competitiveness of each indicator or attribute. A score of 5 is the strongest measure of competitiveness, indicating high international standing.

## Results & Discussion

Competitive Index Scores of Selected Cities by Key Drivers

Key Drivers	City													
	Colombo	Gampaha	Kalutara	Galle	Dambulla	Nuwara Eliya	Ratnapura	Ampara	Kurunegala	Matara	Anuradhapura	Hambantota	Trincomalee	Kandy
Cost of Doing Business	0.92	0.99	0.95	0.83	1.03	0.88	0.84	0.87	0.66	0.88	0.81	0.93	0.92	0.65
Dynamism of Local Economy	2.30	2.10	2.02	1.75	1.42	1.02	1.23	1.70	1.80	1.15	1.20	1.55	0.90	1.38
Human Resources & Training	1.10	1.20	0.98	1.02	0.90	0.90	1.04	0.72	0.78	0.86	1.02	0.94	0.70	0.84
Infrastructure	1.06	1.07	0.91	0.75	0.85	0.94	0.91	0.65	0.87	0.86	0.84	0.74	0.74	0.88
Responsiveness of LGUs to Business Needs	0.98	0.57	0.62	0.41	0.52	1.00	0.61	0.70	0.45	0.67	0.39	0.40	0.24	0.32
Quality of Life	1.15	0.86	0.94	0.85	0.88	0.84	0.92	0.80	0.76	0.87	0.98	0.65	0.58	0.89
Index Score	7.51	6.79	6.42	5.61	5.60	5.58	5.55	5.44	5.32	5.29	5.24	5.21	4.08	4.96

- The three cities namely; Colombo, Gampaha and Kalutara located within the Colombo Metropolitan Region are the top performing cities recording a score of 7.51, 6.79 and 6.42 respectively in terms of overall competitiveness out of the selected 14 cities.
  
- This was followed by Galle, Dambulla, Nuwara Eliya, Ratnapura, Ampara, Kurunegala, Matara, Anuradhapura, Hambantota, Trincomalee and Kandy.
  
- The major competitive advantages (strengths) and weaknesses of each city given below.
  
- The study suggests that the competitiveness of different urban locations within the country varies greatly and economic activity tends to concentrate where integration into global economy is easiest, such as in Colombo and Gampaha cities.

- The cities in the most developed Western Region became the top performers in the ranking. This indicates the attractiveness of these cities for investment compared to the cities in the Eastern and Southern Regions.
- It is also revealed that best performing cities in the western region are poor in certain aspects such as; high level of Corruption, poor local government administration, and environment pollution.

### Strengths and Weaknesses Revealed in Respect of Each City

City	Strengths (competitive advantages)	Weaknesses
Colombo	<ul style="list-style-type: none"> <li>•Already developed as the commercial city with adequate infrastructure facilities.</li> <li>•Better business dynamism and HR skills with a higher standard in quality of life.</li> </ul>	<ul style="list-style-type: none"> <li>•Corruption, poor local gov. administration.</li> <li>•Environment pollution.</li> </ul>
Gampaha	<ul style="list-style-type: none"> <li>•Better than Colombo city in some aspect such as corruption.</li> <li>•Access to banking facilities is similar to Colombo and manpower availability is quite strong.</li> <li>•Adequate infrastructure road network and environmental facilities.</li> </ul>	<ul style="list-style-type: none"> <li>•Poor responsiveness to the business needs by LGUs.</li> </ul>
Kalutara	<ul style="list-style-type: none"> <li>•Generally good in all aspects. Better access to rural banks.</li> <li>•Manpower availability is strong.</li> </ul>	<ul style="list-style-type: none"> <li>•Poor LGU administration.</li> </ul>
Galle	<ul style="list-style-type: none"> <li>•Good business growth and dynamism</li> <li>•Strong manpower availability</li> <li>•Port should be developed to required commercial standard.</li> </ul>	<ul style="list-style-type: none"> <li>•Poor LGU administration</li> </ul>
Dambulla	<ul style="list-style-type: none"> <li>•Developed as an economic centre, less corruption, good business growth and manpower availability</li> </ul>	<ul style="list-style-type: none"> <li>•LGU management needs improvement</li> <li>•Poor water services</li> <li>•Long distance to Colombo</li> </ul>

Nuwara Eliya	<ul style="list-style-type: none"> <li>•The Local gov. unit appears to be quite efficient and acts responsibly. Achieved top in 'responsiveness of government to business needs'. City mayor's commitment appears to be very strong.</li> </ul>	<ul style="list-style-type: none"> <li>•Long distance to Colombo</li> <li>•Inadequate access to banks</li> <li>•Difficulties in retention of skilled manpower.</li> </ul>
Ratnapura	<ul style="list-style-type: none"> <li>•Average performances in almost all drivers.</li> <li>•Availability of manpower.</li> </ul>	<ul style="list-style-type: none"> <li>•Poor city administration</li> </ul>
Ampara	<ul style="list-style-type: none"> <li>•Being a remote city performance have been comparatively good.</li> <li>•Businesses are developing and doing well in paddy cultivation.</li> <li>•Good access to rural banks</li> </ul>	<ul style="list-style-type: none"> <li>•Dearth of manpower</li> <li>•Very poor transport facilities and road network</li> <li>•Lack of infrastructure is a key issue.</li> </ul>
Kurunegala	<ul style="list-style-type: none"> <li>•Access to finance to rural banks is good.</li> </ul>	<ul style="list-style-type: none"> <li>•Performances are below the average in most of the key drivers</li> <li>•Poor HR and management skills</li> </ul>
Matara	<ul style="list-style-type: none"> <li>•Average performances in almost all drivers</li> </ul>	<ul style="list-style-type: none"> <li>•Poor business performance and HR.</li> </ul>
Anuradhapura	<ul style="list-style-type: none"> <li>•Rich in archeological sites and famous as a tourist attraction.</li> <li>•Adequate manpower availability.</li> </ul>	<ul style="list-style-type: none"> <li>•Poor local gov. admin. which does not take interest to improve the city as the tourist destination.</li> <li>•Lack of infrastructure</li> </ul>
Hambantota	<ul style="list-style-type: none"> <li>•Fastly developing city, with new infrastructure projects coming up. Adequate manpower.</li> <li>•Good LGU administration</li> </ul>	<ul style="list-style-type: none"> <li>•Long distance to Colombo and</li> <li>•Poor infrastructure at present.</li> </ul>
Trincomalee	<ul style="list-style-type: none"> <li>•Availability of a natural harbour and famous as a tourist destination</li> <li>•Could be easily developed as tourist/fisheries hub</li> </ul>	<ul style="list-style-type: none"> <li>•Extremely poor performance in all key drivers</li> <li>•Lack of infrastructure</li> <li>•Dearth of skills and</li> <li>•Long Distance to Colombo</li> </ul>
Kandy	<ul style="list-style-type: none"> <li>•Well known as a world heritage city</li> <li>•A tourist attraction</li> </ul>	<ul style="list-style-type: none"> <li>•Traffic congestion</li> <li>•Corruption and poor LGU administration.</li> <li>•Performed below the average in almost all key drivers.</li> </ul>

### CCD Study of the CMR (Capital City Profile)

The Western Province with a land area of 369,420 hectares is one of the nine provinces of Sri Lanka. The entire Western Province is regarded as the Colombo Metropolitan Region (CMR). It is the largest urbanized region of the Country. The CMR is linked with other regions by the existing road network as well as railway network. In the national context, CMR holds most of the nationally important functions such as administration, commercial, industrial, educational, health and infrastructure facilities.



- The existing land use pattern of CMR shows that the agriculture sector remains as the dominant land user. However a contiguous urban belt is formed along the western coast encircling Colombo as the major urban agglomeration in the country spreading towards north and south. The agricultural land around existing urban centres is gradually converted into residential and other mixed uses.
- The share of GDP in CMR recorded 50.1% in 2006 with a per capital income of Rs.222,598. The major industrial locations in the CMR are Katunayake, Biyagama, Ingiriya, Avissawella, Peliyagoda, Panadura, Mirigama, Wathupitiwala and Malwatte.
- The high population concentration in the CMR gives a relatively high density of 1,456 per sq.km. compared with the national average density of 342 per sq.km. Within the region the variation is quite significant ranging from 165 persons to 12,673 persons per sq.km.

## Major Issues

- more in-migration to urban areas with an expectation of better life
- **disparities of income and wealth, within urban centres in CMR**
- deteriorating urban environment- pollution of water bodies, increase frequency and intensity of flooding, ad hoc waste disposal
- **depleting of natural resources which are not being properly conserved leading to land use conflicts**
- Rapid increase of informal sector and underserved settlements thereby creating social problems
- **employment structure is not being appropriately changed to suit with the trends of globalization**
- problems of sanitation, transport and housing still continued to be the dominant issues in the city life of CMR
- **increasing urban poverty**
- Weak governance (lack of law enforcement, managerial deficiency in infrastructure facilities)
- **increasing land values resulting other problems such as increasing housing back log, retarded investment etc**
- lack of infrastructure facilities which should be proportionately increased with rapid urbanization
- **lack of Political commitments to drastic changes and implementation of physical plans**

## Sector Industry Competitiveness

- The basic intent of undertaking sector industry analysis is two fold;
- to identify important structural changes which may have accounted in the CMR economy over the last decade and thereby to identify the key drivers of the CMR economy. (ie. Analysis of sector industry profiles)
- to investigate the competitiveness of sector industries in the CMR economy with a view to identify the strengths and weaknesses of different competitiveness attributes. (ie. multi-sector analysis)

## Analysis of Sector Industry Profiles

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- Identification of the concentration of industry sectors and to understand the sectors that have achieved competitiveness and its contribution to the economy requires analysis of industry data using mathematical tools. The tools used in the study include; Location Quotient (LQ) analysis, shift-share analysis and sector estimates of GDP. Each tool reveals different aspects of the various industries being analyzed and provides some basis for cluster evaluation.

- This study examines the period from 1997 to 2006, and compares CMR with Sri Lanka as a whole. In calculating LO & Shift Share Analysis, secondary data on employment were obtained from different sources.√1
- The study reveals that the total national employment has increased from 5.6 mn in 1997 to 7.1 mn in 2006. The total employment in CMR has increased from 1.7 mn in 1997 to 2.3 mn in 2006.

### Location Quotient Analysis

- The Location Quotient (LQ) is simply a measure of the concentration of an industry in a local economy such as Colombo Metropolitan Region (CMR), relative to the concentration of that industry in a larger economy such as Sri Lanka.

- In 2006, the CMR had more concentration of employees in several industry sectors than the national average. Such "export" industries with high LQ values (above 1.5) and large number of employment (above 17,000) include; Textile & Apparel, Financial, Insurance and Real Estate, Chemical & Chemical Products, Basic Metals, Publishing & Printing.

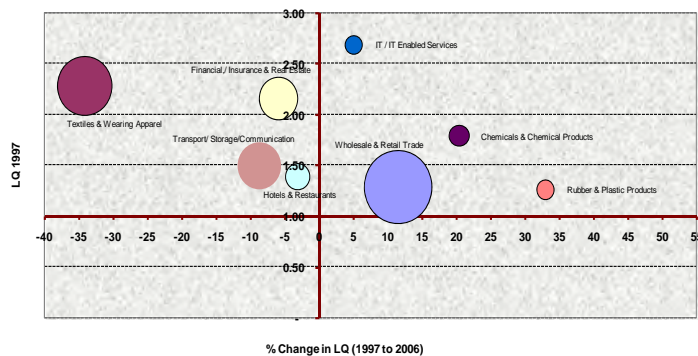
### The LO Bubble Graph

- The LO Bubble graph shown below demonstrates the change in industry concentration (ie. LQ) from 1997 to 2006 (X axis) against the industry concentration in 1997 (Y – axis). The size of the "bubble" is an indicator of the size of employment in that industry sector. The LQ-bubble graph clearly separates industry sectors into four quadrants, namely; upper-right, lower-right, upper-left and lower-left.

## LQ Bubble Graph - CMR

The "LO-Bubble Graph" - separates industries in to four quadrants.

The size of the 'bubble' - indicates the size of employment in that industry sector



### Industry sectors in CMR classified by Gaining, Sustaining and Losing Competitive Advantage

- The industry sectors in CMR can be broadly classified as (a) gaining competitive advantage, (b) sustaining competitive advantage or (c) losing competitive advantage. These industry sectors can be further divided into those with LQs. (a) greater than 1, (b) less than 1 (See Table 5.1).

- Table : Industry Sectors in CMR classified by the behaviour of competitive advantage

Industry Sectors		
Gaining Competitive Advantage	Sustaining Competitive Advantage	Loosing Competitive Advantage
Location Quotient >1		
Tobacco product [1.38] Paper & Paper products [3.04] Publishing & Printing [2.81] Chemicals & Chemical products [2.16] Rubber & Plastic products [1.67] Basic metal [2.92] Fabricated metal products [2.31] Electrical, machinery & apparatus [3.03] Transport Equipment [3.04] Wholesale & Retail trade [1.44] IT & IT enabled services [2.83]	Hotels & Restaurants [1.35] Financial, Insurance & Real Estate [2.03] Education [1.02] Health & Social work [1.52]	Textile & Apparel [1.77] Communication equipment & apparatus [1.63] Construction [1.21] Transport, Storage & Communication [1.40]
Location Quotient <1		
Motor Vehicle & Trailers [0.66]	Agriculture, Forestry & Fishing [0.25] Food & Beverages [0.57]	Machinery & Equipment [0.78]

### Multi-Sector Analysis

- The Multi-Sector Analysis (MSA) is a tool used to conduct investigations into the competitiveness of sector industries in the regional economies. From this analysis, the strengths and weaknesses of different competitiveness attributes can also be assessed. MSA involves a qualitative assessment and is based on Experts knowledge about the economy.
- The most competitive industry sectors (with over 0.6 index value) in the CMR are; Textile & Apparel (0.68), Financial, Insurance and Real Estate (0.66), IT Enabled Services (0.65), Hotels & Restaurants (0.64), Transport and Communication (0.62) and Rubber & Plastic Products (0.59). The relative strengths of the 25 competitiveness attributes are shown in

### MSA - Strengths of Competitiveness Attributes (CMR)

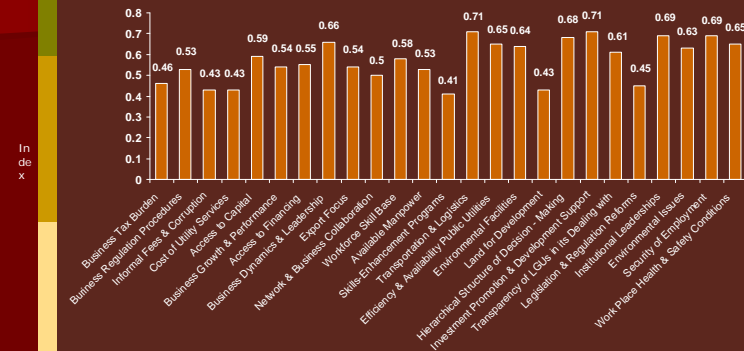


Figure 5.4 : MSA – Strengths of Competitiveness Attributes (CMR)

- The most competitive attributes or strengths (with over 0.65 index value) in the CMR are transportation & logistics (0.71), Investment promotion and development support (0.71), Security of Employment ((0.69), Institutional Leaderships (0.69), Business Dynamics & Leadership (0.66), Efficiency & Availability Public Utilities (0.65) and Work Place Health & Safety Conditions (0.65).
- The least competitive attributes (weaknesses) with an Index Score of below 0.53 includes; Skill Enhancement Programs (0.41), Cost of Utility Services (0.43), Informal Fees & Corruption (0.43), Land for Development (0.43), Legislation and regulation reforms (0.45), Business Tax Burden (0.46), Business Regulation Procedures (0.53), and Available Manpower (0.53). These are considered as major weaknesses in the CMR economy which warrants attention to rectify the situation. The policy reform initiatives are needed to improve these rankings and thereby to make the CMR Economy more competitive.

### Development of Spatial Industry Clusters in CMR

- This section attempts to highlight the methods used to identify the presence of industry clusters that shows the potential to drive the future economic development of the CMR economy and the spatial distribution of these key industry sectors within the CMR.

#### Identification of key industry sectors

- The objective here is to identify the presence of key “export” industry sectors that would have a significant role to play in shaping the future CMR economy.
- Based on the tools used in Section 5.2 above, (ie. LQ, and Multi-Sector analysis) and the share of GDP, it may be possible to carve out the key industry sectors using one or more of the following criteria;
  - (a) High level of concentration (ie. High LQ value of above 1.25 indicating “export” nature)
  - (b) Growth in concentration (ie. Showing a positive growth in LQ during the last decade as shown in the 1st quadrant of the LQ-Bubble Graph). These sectors are regarded as “Gaining Competitive Advantage” or at least “Sustaining Competitive Advantage”.
  - (c) Larger contribution to the GDP

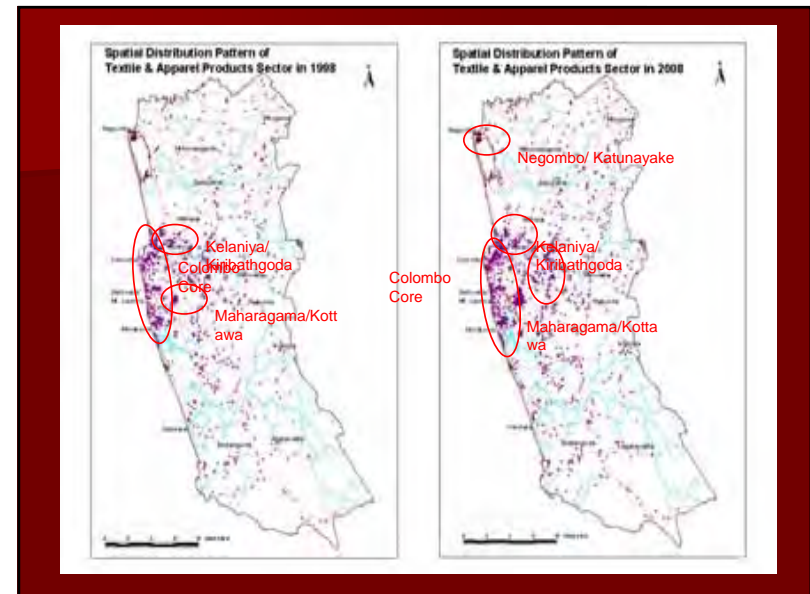
- (d) Growth in share of GDP
- (e) High level of competitiveness (ie. Industry sectors with a high index score of more than 0.5 as per the multi-sector analysis).
- (f) High level of employment
- (g) Other factors such as countries natural beauty (eg: tourism sector), constraints of temporary nature (eg: on-going ethnic issue which is nearing completion).

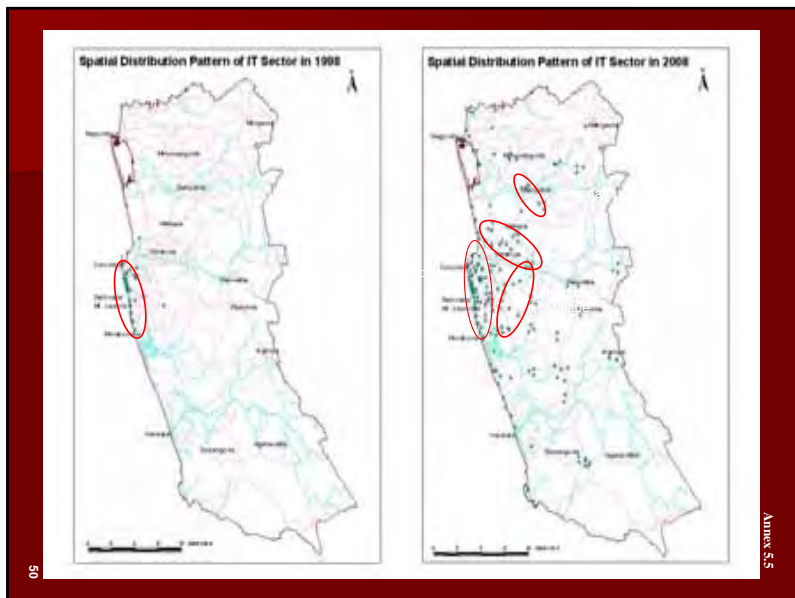
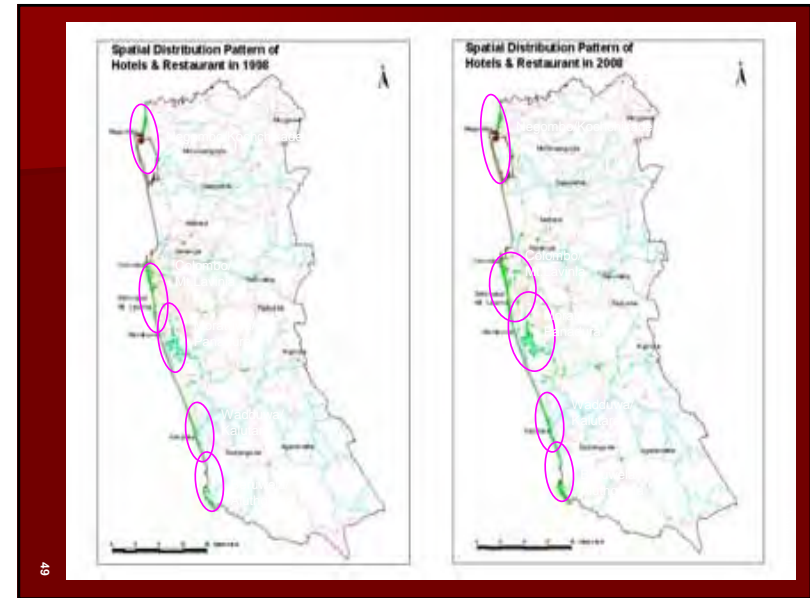
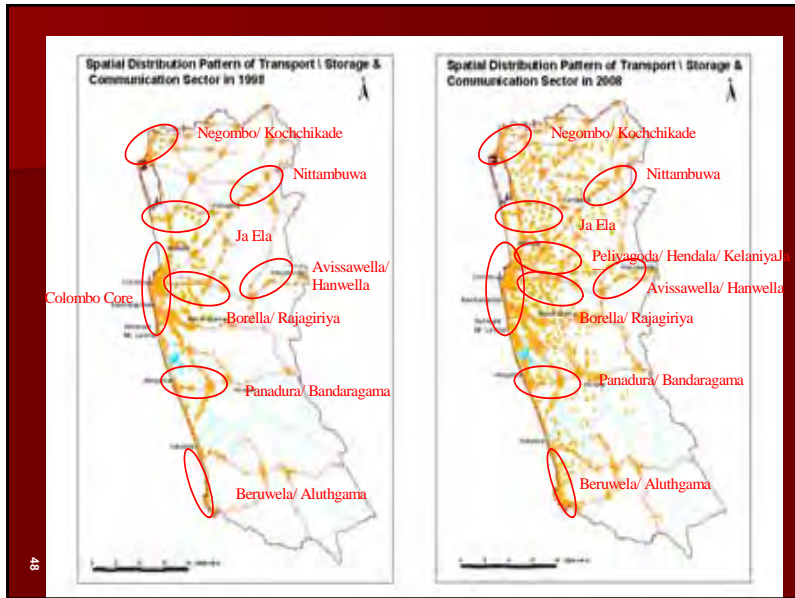
- The following Table indicates the performance of the most potential industry sectors in the CMR.
- The Table suggests that the following six industry sectors can be regarded as the key drivers which have the potential to develop into competitive clusters in the CMR i.e. Financial and Insurance, Transport (mainly Shipping, Aviation & Logistics), Hotel & Leisure industry, IT and IT enabled services (including Education), Textile & Apparel, and Rubber Products.

Industry Sector	LO Value (2006) (Ind. Concentration)	Competitive Advantage (Bubble Graph) (1997 to 2006)			Regional Competitiveness (Regional share in shift- share analysis (97-06)	Net job growth (Shift-share analysis) '97-06	Estimated share of GDP in CMR (2006)	Growth in share of GDP in CMR (1997 - 2006) (%)	Emp. In 2006 (size of the Bubble Graph) (No.)	Ind. competitiveness (most competitive status based on IISA) (Index score)
		Gaining	Sustaining	Loosing						
Wholesale & Retail	1.4	11%		0	55,611	192,207	13.7	77%	437,603 (19%)	0.59
Construction	1.2			(-13%)	(-19,327)	21,119	2.0	(-42%)	156,457 (7%)	0.52
Rubber & Plastic Products	1.7	33%			7,807	10,810	0.5	(-26%)	29,116 (1%)	0.62
Finance/Insurance & Real Estate	2.0			(-6%)	(-4,900)	79,965	5.0	316%	143,193 (6%)	0.68
Hotels & Restaurants	1.4		(-3%)		(-206)	19,516	0.2	(-80%)	55,416	0.66
Transport, Storage & Comm.	1.4			(-9%)	(-11,745)	52,081	7.4	121%	177,980 (8%)	0.63
IT & IT enabled Services	2.8	5%			2,072	25,534	0.2	509%	27,934 (1%)	0.66
Education			(-1%)		1,631	3,354	1.2	(-66%)	90,202	N/A
Textile & Apparel Rubber Products	1.8			(-29%)	(-108,906)	4,326	5.7	30%	282,881 (13%)	0.70
TOTAL (CMR)					(-69,311)	525,110	51.0	12.6%	2,263,368 (100%)	

### Spatial Mapping & Industry Clusters

Sector	Most appropriate locations	
	1998	2008
(1) Financial, Insurance & Real Estate	Colombo, Kiribathgoda	Colombo, Nugegoda, Kiribathgoda, Gampaha, Negombo, Horana, Kalutara
(1) Transport, Storage & Communication	Colombo, Rajagiriya, Avissawella, Ja-ela, Nittambuwa, Negombo, Aluthgama, Beruwala	Colombo, Rajagiriya, Avissawella, Ja-ela, Nittambuwa, Negombo, Aluthgama, Beruwala
(1) Hotel & Restaurants	Coastal belt	Coastal belt
(1) IT & IT enabled services	Colombo	Colombo, Malabe, Kiribathgoda, Gampaha
(1) Textile & Apparel	Colombo, Kelaniya, Kiribathgoda, Maharagama, Kottawa	Colombo, Kelaniya, Kiribathgoda, Maharagama, Kottawa, Negombo, Katunayake
(1) Rubber Products	Colombo, Kelaniya, Horana, Hanwella	Colombo, Kelaniya, Avissawella, Hanwella, Kirindiwela, Horana



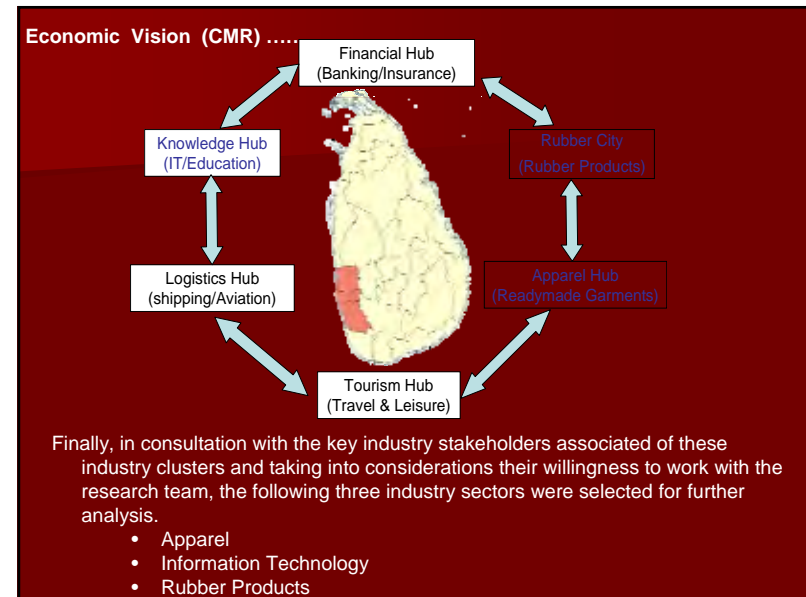


## Identification of Clusters for Research

- The section 5 identified the most competitive industry sectors which could offer the highest potential to support export development (both domestically and internationally), employment growth and has the ability to drive the overall development (economy) of the Colombo Metropolitan Region.
- The factors considered in the identification of competitive industry sectors include; employment (size, growth, concentration) number of firms, spatial concentration, contribution to GDP, ability to compete and corporate, product homogeneity/sustainability and promotability.
- Techniques used in this regard are Location Quotient Analysis, Shift Share Analysis and Sector Estimates of GDP (Table)
- Maps were prepared to show the spatial distribution of some of the key sector industries which form core elements of a cluster.

Industry Sector	Employment			% Share of GDP (2006)	
	Total Number (2006)	Concentration (2006)	Change in Concentration (1997-2006)	Sri Lanka	CMR
IT/IT Enabled Services	27,934	2.8	+ (5%)	0.4	0.2
Financial/Insurance/Real Estate	143,193	2.0	- (6%)	8.6	5.0
Apparel/Textile	282,881	1.8	- (29%)	7.4	5.7
Transport/Storage/Communication	177,980	1.4	- (9%)	12.8	7.4
Rubber Products	29,116	1.7	+ (33%)	0.7	0.5
Hotels & Leisure	55,416	1.4	- (3%)	0.3	0.2

Based on the above findings, the economic vision for CMR was conceptualized where the CMR to become a knowledge hub, logistic hub, tourism hub, financial hub, apparel hub and a rubber city



### Analysis of Industry Clusters

- This section presents a detailed analysis of the structure and operation of most competitive industry clusters what could drive the CMR economy forward.

### Method of Approach to Analyzing Selected Industry Clusters

- A series of discussions were held with the key stakeholders in the selected cluster for analysis. The process commenced by approaching key sector industry associations, industry champions and interested supply chain industries, to explain the CCD project and gain support for involvement in the cluster analysis process.

### Analyzing the Competitiveness of Industry Clusters

- The technique proposed for CCD for this activity uses a semi-qualitative method to evaluate the relative strengths of competitiveness attributes under the framework of the Porter's Diamond Model. The approach, used by the research team involves listing of 39 attributes which are critical to the competitiveness and development of an industry or business cluster under the five elements of the Porter Model.
- A scoring system using a scale of 0-5 was used to assess the strength of each attribute. A score of 5 for example, would indicate that the competitiveness of the attributes was very high, suggesting a strong internationally competitive position for the cluster.

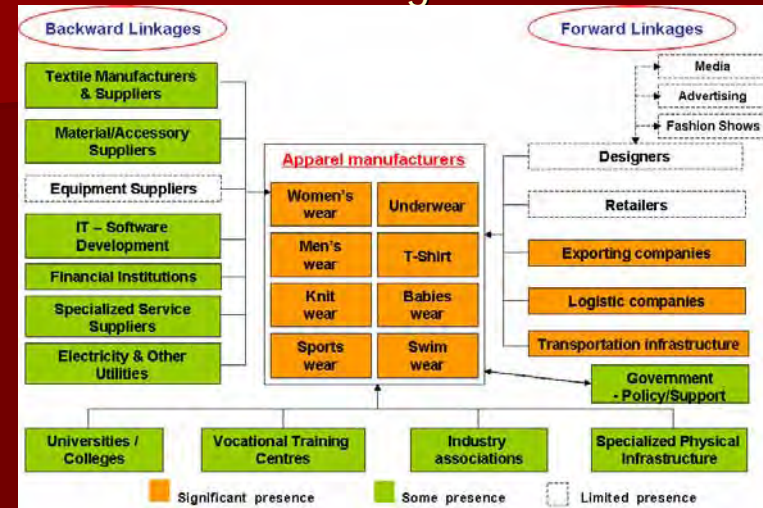
## Apparel Cluster Analysis

### Economic importance of Apparel Cluster

- Sri Lanka's No.1 foreign exchange earner -USD 3.2 bn which represents 46% of the country's total export earnings
- 300,000 direct employment - provides direct employment for over 300,000 (33% of manufacturing sector employment) and indirect employment for over one million people.
- Realized investment exceeds USD 700 mn - exceed USD 700 mn as at end 2007 of which the enterprises located within the CMR account for USD 280 mn
- Substantial contribution to GDP - the contribution to national GDP from the apparel sector enterprises operating in the CMR is estimated around 5.7% in 2007.

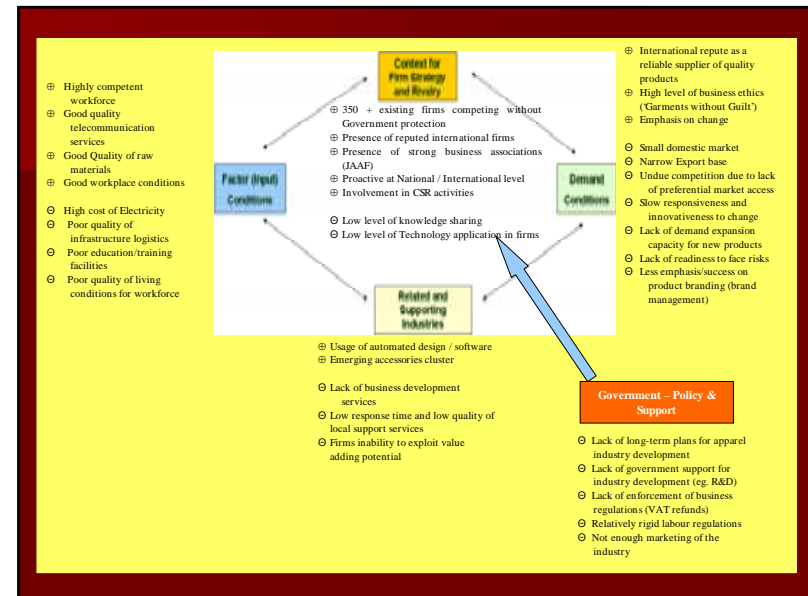
The CMR represents a world class apparel manufacturing base exporting mainly to USA and EU. The apparel cluster in CMR has "significant presence" of apparel manufacturing units engaged in core industries backed by a proactive industry association which represents all key stakeholders (ie. Joint Apparel Association Forum-JAAF) and a good network of transportation infrastructure supported by export and logistic companies. CMR has "some presence" in textile manufacturing and producing garment accessories such as buttons, elastics, labels and packaging materials. However, CMR has only "limited presence" in designing and retail marketing.

## Linkages



## Analyzing the competitiveness of Apparel Cluster

- The cluster is positioned in the right market including high-end products, but in the wrong activities, low value-add activities such as Cut-and-Made. Thus, it participates in only 10% of the value chain. The challenge is to shift into high value added activities such as design (20%) and marketing and sales (50%).
- Cluster strengths include a trained workforce, good supporting clusters, and close and preferential access to the EU market; weaknesses include the low level of branding and marketing.
- There is significant entrepreneurial activity in the small but fast-growing sector, but moving the whole cluster in this direction will require higher levels of coordination between educational institutions, firms and government.



## Priority Action

- 1. Improve Business Environment** - As a priority, the government should act immediately on easing the costs of doing business. This is an area which progress can be achieved more easily, as significant improvements do not require a long period of time. However, whereas improvements can be made swiftly, political will is nevertheless crucial.
- 2. Improve Infrastructure** : Significant progress can be done by focusing on reducing electricity costs and stimulating investments in telecom. Specifically, the government should deregulate the electricity sector and provide incentives to investors in the telecom industry. Also needs to focus on improving effluent disposal facilities.
- 3. Develop preferential Market Access to USA, EU, India**  
Government efforts are needed to get better market access to compete with neighbouring countries.
- 4. Shift for high value addition**  
Shifts from a "Cut-and-Made" production to a higher value added services, such as "Full Package Order" where manufacture is responding for everything from sourcing material to packaging. A Sri Lankan designer house and product branding will be key areas for concentration.
- 5. Development of a "Apparel City"**  
With the above improvements in mind, development of a 'Apparel City' is recommended with following features.
 

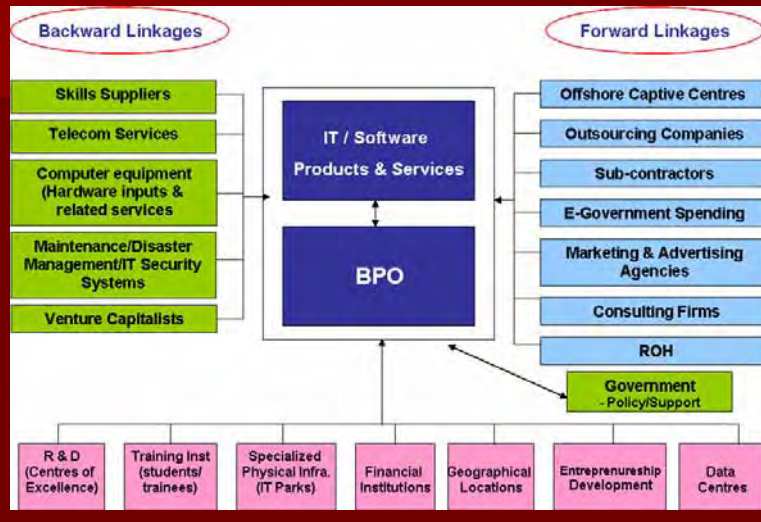
- Design & Pattern Making	- Fabric Suppliers
- Accessory / Material Suppliers	- Garment Manufacturers
- Equipment & Spare Part Suppliers	- Specialized Service Suppliers
- Fashion Shows	- Exhibitions
- Conferences	- Business Meetings

## IT Cluster Analysis

### Industry Highlights

- **Key sector with highest potential for future development that reached the highest LQ value of 2.8 among the selected sectors and a positive five per cent change in LQ from 1996 to 2006.**
- **Among the Top 50 Global outsourcing destinations by AT Kearney and ranked among Top 20 emerging Cities by Global Services Magazine.**
- **High quality talent pool for establishing high-in-demand niche competency centers out of competition for even larger global services.**
- **There are over 300 IT and BPO companies that operate in Sri Lanka, mostly small and medium companies and few large global players such as HSBC, WNS Global Services, Aviva, Microsoft, Motorola, Industrial & Financial Systems (IFS), Amba Research, RR Donnelley, Quattro, Virtusa, eCollge, Valista, Millennium Information. Earnings from exports of IT-BPO sector have shown a steady upward trend during the past decade, and the 2006 IT-BPO exports have reached an estimated \$ 275 million. The industry has set a target of \$ 1bn in export revenue from IT-BPO sector by 2012.**
- **Presently the sector claims for 30,000 and would create 1 million direct and indirect jobs by 2010. Most of the indirect jobs will be created in different sectors such as construction, hospitality, retail and transport.**

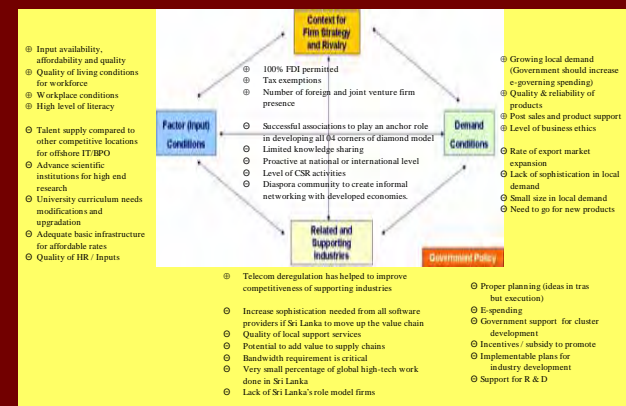
## Linkages



## Analyzing competitiveness of IT cluster

The key characteristics that emerged when evaluating are (1) Strong factor condition in human talent, (2) Strong Context for Firm Strategy & Rivalry, (3) Emerging Related & Supporting industries to help cluster improvement, (4) Weak domestic demand. Each of these diamond

forces have been explored in detail below.



## Priority Action

- Increase supply and quality of cluster specific human talent**  
The government and private sector need to work together to further enrich and expand the existing educational program in IT and to develop technical capabilities.
- Affordable cost of Infrastructure Services**  
The bandwidth requirement and telecom costs are critical for the cluster. Sri Lanka's monopoly on some key areas of the telecommunication industry remains a source of frustration, that translate into higher costs, inefficient provision of services and less competition.
- Creating an efficient institution and implementation mechanism**  
All development programmes should be integrated under one umbrella organization focusing industry requirements. A culture of IT technology adoption needs to take off.
- Establishing strong business linkages**  
Sri Lanka's IT sector is still too fragmented into various specializations without a clear pattern emerging yet form it. There are large numbers of companies specializing in a wide spectrum of activities. Formal and informal networks are essential to develop the industry and the associate and to have informal linkage with Diaspora community in developed economy. With the above improvement in mind development of an IT park is recommended with following features.
 

<b>Capital</b>	-	Public / Private / Donor Funding
<b>People</b>	-	Linkage Universities / R&D Institutions
<b>Infrastructure</b>	-	Good physical infrastructure is critical
<b>Having the right product-</b>	-	Focus on products and services when the country has a competitive edge.
<b>Government Support</b>	-	In addition to the traditional role as regulators and facilitators, need to be one step ahead ..... as an investor

## Rubber Cluster Analysis

### Economic importance of Rubber Products Cluster in CMR

- **Over 100 manufacturing units**  
More than 90% of Sri Lanka's total rubber product manufacturing units are in the CMR. There are over 100 rubber products manufacturing units located in the CMR of which 39 units (projects) operate under the purview of Board of Investment (BOI) Law. These 39 projects account for over 85% of Sri Lanka's total rubber product exports.
- **Exports over USD 600 mn**  
In 2007, Sri Lanka has exported USD 693 mn worth of rubber exports of which manufactured rubber products account for nearly USD 600 mn. The 39 BOI sector projects operating in CMR has recorded over USD 500 mn exports in 2007. Sri Lanka is the "World's Number One" exporter of solid tyres to the international market with a market share of 25% in 2007. *Loadstar* is the global market leader in solid tyres and enjoys more than 20% of the global market, while *Dipped Products Limited* is the world's fourth largest industrial glove manufacturer. Multinational corporations such as *Ansell* and *Trelleborg* operates their regional manufacturing plants in Sri Lanka. *Ansell Lanka Limited* makes and sells latex-based products, such as surgical gloves, and *Trelleborg Lanka Limited* produces solid tyres for exports. Companies such as Richard Peiris, Associated Motorways, DSI Group and Ceat-Kelani, concentrate mainly on the local market producing tyres, floor mats, hoses, toys and many household items.

### Easy access to Natural Rubber – the basic raw material

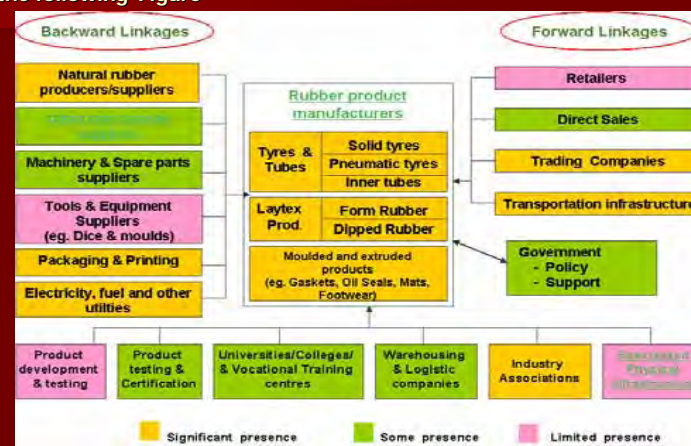
Sri Lanka is a net exporter of natural rubber. In 2007, Sri Lanka produced 120,000 MT of natural rubber of which only 60% was converted into value-added rubber products mainly for export markets. The country has embarked on a major project to expand its rubber plantation extent by another 40,000 ha during the next 5-years.

### Direct employment for over 30,000

The rubber product manufacturing sector provides direct employment for approximately 30,000 living in the CMR of which the BOI sector enterprises operating in CMR provide employment for 16,000. The estimated indirect employment in this sector in CMR accounts for nearly 50,000. This mainly includes those who are employed in the plantations sector, logistics both inbound and outbound, packaging, printing, marketing and sales.

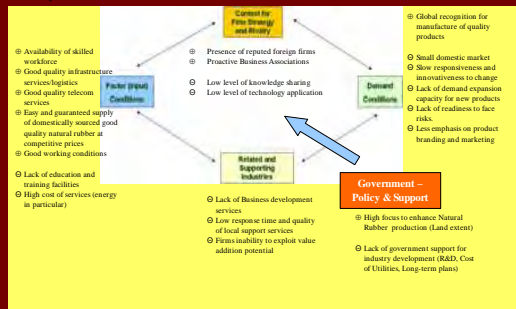
## Rubber Cluster Mapping

Rubber cluster map which identifies the core industries and its support industries together with its competitiveness capacity needs is shown in the following Figure



Sri Lanka has shown “significant presence” in the value chain as a;

- good raw material (NR) base
- world class product manufacture in solid tyres and latex products and
- good logistics provider related to exporting of finished products to international markets.
- At the same time, Sri Lanka has shown “some presence” in activities such as domestic marketing.
- Analyzing competitiveness of Rubber cluster



## Priority Actions

- 1. Developing an Innovative Culture**  
This has a serious impact on product, processes as well as services. Need to introduce awareness programs on knowledge sharing and new technology development. Needs to carry out development activities designed to promote expansion and modernization of rubber industry.
- 2. Infrastructure Development**  
Issue on poor infrastructure including high energy costs, lack of warehousing facilities/effluent treatment facilities are to be addressed through encouraging use of alternative energy supplies and also by sharing resources in a coordinating manner.
- 3. Enhancing R&D and Educational/Training System**  
Research and Development has to be encouraged by attracting investment to this area. Focus should be on investing on a Rubber Technology Campus and Staff Training Centre with adequate facilities for prototype testing.
- 4. Improve Business Environment**  
In addition to facing the global competition, the industry has to grow despite the old dated government policies, high taxation and lack of proper support from the government. The government should take immediate remedial measures to simplify business rules and regulations and thereby improving doing business environment of the industry.

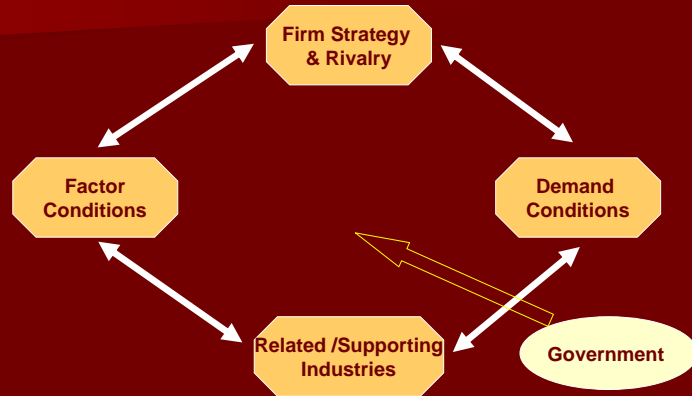
With the above improvements in mind, development of a ‘Rubber City’ is recommended with following features:

- Manufacturing Units (few)
- Product development & Testing Centre
- CAD/CAM/CAE (Mould/Dice) Centre
- Procurement Centre
- Dry Rubber Compounding Centre
- Latex Compounding Centre
- Warehousing – Raw materials
- Warehousing – Finished goods
- Central workshops
- Effluent treatment plant
- Gama Eradication Plant
- Power Generation/Water Supply Units
- Rubber Technology Campus
- Staff Training Centre
- Information Centre & Library
- International Communication Centre

## Urban Planning & Economic Development Policies

- The competitiveness of different urban locations within a country varies greatly.
- Economics activity tends to concentrate where integration into the global economy is easiest where there is access to technology, international capital markets, globally integrated value chains of production and distribution, communication and information based industries.
- Moreover, economic globalization is changing the relative competitiveness and growth prospects of different urban locations.
- Accordingly, it has become utmost important to understand the competitiveness of different cities with a view to make such cities more competitive.
- The Urban Development Authority could develop the Colombo Metropolitan Region based on the findings of this study future cities within the CMR and other regions of the country as well.

## Porters Diamond Model – Competitiveness Elements



## Diamond Analysis

### Factor (Input) - Conditions

Labour	
1. Availability of Skilled Labour	
2. Management Skills	
3. Efficiency and Productivity of Labour	
4. Education and Training facilities	
Infrastructure	
5. Quality of Infrastructure Services (logistics)	
6. Quality of Infrastructure Services (utilities)	
7. Affordability of Services	
8. Quality of Telecommunication Services	
Resources	
9. Proximity to raw material	
10. Affordability of local raw materials vis imports	
11. Quality of raw materials	
Environment	
12. Quality of living conditions for workforce	
13. Workplace conditions	

## Diamond Analysis

### Demand (Market) - Conditions

Markets	
14. Rate of domestic markets expansion	
15. Rate of export markets expansion	
New Products	
16. Demand expansion capacity for new products	
17. Responsiveness and innovativeness to change	
Environment	
18. Quality & reliability of products	
19. Post sales and product support	
20. Level of business ethics	
21. Readiness to face risk	

## Colombo Metropolitan Region

- The Western Province known as Colombo Metropolitan Region -CMR (consists of Colombo, Gampaha and Kalutara Districts) is one of the nine provinces of Sri Lanka is having 369,420 hectares of land, is the largest urbanized region of the Country. Land Extent (369,420 ha)
- The topography of the region is mostly flat with few rocky knolls in the eastern border. Agriculture is the dominant land use of the three districts where coconut and rubber is presently have a major threat from the expanding physical development activities for residential and industrial development.
- The urban population is approximately 3.85 Mn which is about 74.2% of the total population of the Western Region. Density of Population is 1,405 per sq.km)
- The proposals for the development of the region initiated from the Colombo Master Plan Project in 1976 and thereafter reviewed under the Colombo Metropolitan Regional Structure Plan in 1998 and Western Region Megapolis Master Plan in 2004.
- The successive plans realized the spatial dispersion pattern is not the answer for growing urbanization so that new plans stressed the necessity of introducing the approach of clustered Cities development.
- 34 Urban Centres are located within the CMR
- Share of the GDP -50.1 %
- Major Industrial Locations (Katunayake, Biyagama, Ingiriya, Avissawella, Peliyagoda, Panadura, Mirigama, Wathupitiwala, Malwatte) and No of Employees in major enterprises apprx.127,000

THANK YOU