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POSSIBILITIES FOR DEVELOPMENT BY LOCAL GOVERNMENT WITH PARTNERSHIP OF GLOBAL CAPITAL: A CONCEPT FOR BENCHMARKING THE SUSTAINABLE-MEGACITY

Bilal Ahmed¹

ABSTRACT

The model of economic development, in general faces the dilemma of resource scarceness and the manageability of required output from limitation of resources would be challenging task for policymakers. Therefore, development of megacity which could franchise the demands of economic development is an important element. Hence, we reached on this conclusion that, sustainable megacity is the essential ingredient of economic development. This paper addresses the role of local government in coordination with provincial and federal government for the development of sustainable megacities by utilizing the assistance of global-capital. We tried to address degree specific 132 indicators to construct the benchmark for megacity which could describe the sustainability level of megacity that how and by which process the same transaction is possible or implementable.

Key Words: Local Government, Sustainable Megacity, Global Capital, Economic Development

INTRODUCTION

The model of economic development in post-colonial under developing countries, in general faces the problem of deficiency of resources and on the other hand the lack of proper service sector which can sustain the professional and the administrative challenges posed by the corresponding model of economic progress is also an important aspect of under-developed-third-world Lutz et al. (2008) and Onigbinde (2003)

The modern model of development needs the active economic and political participation within global business. Keeping above in consideration, the same model urgently prioritize the importance for the development of economic hub therefore, policymakers frequently develop the megacity

¹Ph.D Research Fellow, Department of Economics, University of Karachi, Pakistan: E-mail: <u>bilaleconomist@hotmail.com</u>

which could franchise the ultimate demand of economic development under the condition of Modern-Nation-State² structure United-Nations (1998) and Perlman (2006)

Globalization dictates the arrangement of resource allocation while financial globalization has changed the patterns of investment this enforce the authorities to compose the model of development by sharing resources especially assistance of global-financial-capital. Whereas, simultaneous functionality to these priorities, accelerates the prescribed economic activism for an organized "economic-hub" as "megacity" that can accomplish the demands of modern economic model Brueknee (1990) and Williamson (2007)

Every economic hub wouldn't hold the status of megacity while it would have the greater probability for the conversion into same. The development of megacity as economic hub is a process of development by in-itself and it would further provides the means and assistance to whole economic model for a given Nation-State progress. The role of government within same economic objective is not ignorable although, stake of government is primary and preliminary in nature. United-Nations (1998) and Dervis, Kemal (2005)

The model of globalization leads the process of localization it allows the movement of capital and goods from upstream to downstream and vice-versa national as well as internationally. The same model needs the participation of common-mass from its home and street to federal level, this of course facilitate the demands of same model to participate in eco-political system and strengthen the flow of economic transaction Stiglitz (2006), The framework of local government addresses the participation of common individual and a city to contribute in expansion of infrastructure in addition of municipal services. The local government of economic hub would suppose to contribute in development of megacities beside the municipal services, with wisdom of city the local government in coordination of provincial and federal government could prove the transaction of megacities; Dervis (2005)

Development of megacities leads the development of mega-infrastructure for this purpose authorities needs the mega volume of capital beside the regular municipal services because the role of local government in globalized economic model is to provide the assistance in multiplication of investment and capital formation from individual to state. Therefore, construction of megacity is subject to the supply of capital and emerging economies in general wouldn't be able to fulfill the gap which required for the construction. Kaminsky (2004) and Perlman (2006)

Hence, Scarceness of capital with logic and wisdom of globalization allows the authorities to utilize the assistance of global capital for development of megacities. And, local government in coordination with provincial and federal government could make the plan for the conversion of

² The EU countries are the examples.

economic hub into megacity. As there would be sequence of legal and administrative obligation in exercise of same action nevertheless it would be in favor of overall economic development of state Cross (2001) and Brueknee (1990).

Hence, model for the development of megacity by the local government would need to address the couple of responsibilities, the municipal services by the financing of local government and development of mega-infrastructure by consortium of national and international creditors with support of provincial and federal government. The exercise of "grant-consortium" for financing the emerging needs of megacity would support the model of development on long-term. And, the investment of same grant consortium would need to address the six areas that is traffic, disaster, security, environment, energy and socioeconomics adjustment while municipal services are supplementary.

Keeping above in consideration the objective of this paper is to address the idea of "sustainablemegacity" that can support the needs of growth and to present, how we could measure the degree of sustainability of megacity. We have tried to address the process of sustainable megacity that how it could be possible with the help of global capital.

LITERATURE REVIEW

Wisner et al (2004) concluded that even though the megacity remains the centre of economic-hub but majority of the population falls at informal urban settlements and this is the ultimate challenge for policymaker while the World Bank (2000) reported that development of megacities is the positive phenomena for globalized economic model and it provides the assistance in accelerating the social as well as economic progress.

The increasing urbanization and targets of growth are the most important jobs of authorities and high density would produce the critical social and economic crisis Cohen (2006). It has been described by the Hall and Pfeiffer (2001) and (UNFPA 2007) that the era after 2000 would be the era of urbanization and it would produce the more megacities throughout world. Hence Amekudzi et al. (2007), Rose (2009) concluded that by the 2030, two out of three people will live in urban areas, especially in the mega-regions and rush in cities would create the distortion in society. Meanwhile the Afsar, R. (2000) concluded that the balance of rural urban population is subject to the economic opportunity and degree of earning therefore megacities would remain the host of immigrant.

In developed countries second half of the 19th century remains the era of urbanization due to many reasons mainly due to economic development and currently in Europe 70 to 75 percent of the population lives in urban areas UNFPA (2007) and UNPD (2006) while, the development of megacities and urbanization are interlinked and it could only be undertake by the long-term land

strategies of sustainable urban management Kraas (2007) and normally in megacities informal economy caused the many issues to implement the state policy for development Daniels (2004)

The institutionalization and integration of society would produce the worthy support in implementation of political and economic development Pierre & Peters (2000) whereas, the European Union is the example of such institutionalized arrangement Van Kersbergen & Verbeek (2004) while megacities or global cities due to economic reasons may need to interlink with each other and this would called the network society Taylor et al. (2002)

The implementation of governance by using the model of centralized strategies would be pretty complex therefore, effective governance may subject to the decentralization and participation of local individual in development strategies Magel and Wehrmann (2001) while the good governance for megacity would be difficult job for especially when millions of peoples are living at one surface in tens of municipalities. The same issue could only be resolvable by macro-level with same frequency while empowerment of local communities would be able to address the same gap Economist (2005) and the social measurement and assistance of local organization including local government could provide the good way to safeguard the megacities especially governance issues Cross (2001)

Bednar (2004), concluded that the functional economic integration would provide the assistance for the political integration and this institutional progression would helps the policymakers to construct the long-term development polices in coordination with federalist designing while Dahbour (2006) argued that international economics and political system intervene the state authority and it would need to restrict the same act. Hence Eckersley (2007) argued that the cosmopolitan society could produce the contradictive will and action especially in process of democratization and this contradiction could prevail from ground to top. Therefore Kahler & Lake (2003) reached on this conclusion that the multilevel political arrangement would be fit for cosmopolitan premise that why Held (1995) argued that the cosmopolitan societies would produce the element of inequalities and intolerance and, implementation of universal rights by the state at equality would be tuff job.

There is a hidden positive correlation of megacity with natural disaster or calamity while covering the risk factor by the utilizing insurance would be not be as much as effective Munich Re (2004) and the sustainable development is the basic condition for combating governance and disaster risk while poverty reduction along with UN Millennium Development Goals is the supplementary elements UNFPA (2007) the Disaster Risk Management is the key to deal with physical, social and economic risk for megacities, while the risk is the collective set of population, services, environment and socioeconomic indicators. Britton (2004) and Fernandez (2004)

Molina and Molina (2004) and Perlman (2004) argued that the air and density pollution in megacities has been converted into a significant anxiety while Kraas (2007) concluded the

environmental problems are the most leading challenges of megacities it needs to address the socioeconomics and environmental obligations from local to global level. The rapid urbanization and development preferences could produce the manmade disasters. Qureshi (2010) concluded that the large cities would have series of problem mainly environmental due to over burden of population. Therefore, BMBF (2004) reported that, megacities holds the massive concentration of peoples and consume immense resources which cause to produce waste and sewage and the just two percent of the earth surface which consist of megacities utilizes the 75 percent of resources.

The unequal distribution of resources, corruption and fragile institutional control, urban violence, air and transport problems and poorness of water supply along-with sanitation are the crucial problems of megacities Gilbert(1996) and UN Habitat (2006a) and by the 2035 mostly megacities would be center of poverty Ravallion (2001) hence the informal urbanization produces the slum and poverty Angotti (2006). Whereas the expansion of physical development of megacities normally regret the principles of sustainable development and major share of megacities fall into poor plan and doubtful legal position usually it produce the informal and illegal housing Rutsch (2001)

Carbonell and Raro (2005), concluded that the mega-regions are recently addressed by the planning issues in nature although the real issue is fare implementation. Whereas the Cervero(1991) and (Giuliano, 2004) concluded that due to land shortage in megacities especially in the city center transportation could craft the congestion whereas, the impact of same by alternative method would offer the comforts similarly Davis (2004a and 2004b) reported that the megacities would be the attraction for the people and humanity would live in poor urban area while this matter would accelerates the social evils.

Megacity and Sustainable-Megacity [Refer to Flow Chart]

The city which has been occupied by at least ten-million³ peoples would be called megacity while, we are more concerned to address the sustainable-megacity because construction of megacity is easy whereas, the possibility and assurance of sustainable-megacity is quite complex, difficult and challenging because, a megacity⁴ may need to proof traffic, disaster, security, environment, energy and socioeconomics adjustment beside the municipal utilities therefore, the sustainability of megacity is subject to the degree of these sector⁵. [Refer to list of indicators]

Legal Reforms and Coordination [Refer to Flow Chart]

The concept of sustainable-megacity needs the huge development of physical infrastructure therefore, it needs series of legal reforms for few reasons 1) we believe that, the transaction of

³ How Big Can Cities Get?" *New Scientist Magazine*, 17 June 2006, page 41.

⁴ Birkmann (2006) proposed few indicators to analysis the megacity.

⁵ Many of the European cities are somehow sustainable but they aren't megacity.

megacity to sustainable megacity could only be possible with the close coordination of local government because it possess the wisdom of city and it could do many jobs beside municipal activism. Plus, local government could motivate and stimulate the common individuals to support and contribute in same transaction therefore, legal role of local government may need to enhance. 2) We have further suppose that, this transaction is the big deal and only local government couldn't make the difference hence, close coordination and support required by provincial and federal government or distribution of power and portfolio for development may need to address properly. And, there would be no any confusion in channel of responsibilities and reporting. This would create smoothness and greater coordination in process of sustainable-megacity. 3) As, the same transaction need the enormous capital therefore, policymakers needs to add/remove every obstacle especially legal which could strike the interest of same transaction because the consistent inflow of capital is fundamental requirement particularly when state hasn't capital and it is arranging from global-resource. 4) And, associated legal reforms which are connecting to these legal amendments.

Despite legal reforms, Implementation of sustainable megacity needs the stronger coordination among each stakeholder, the degree of general will would determine the level of coordination or policymakers may need to perform an accelerated role to develop the general will in favor of same model and advocate each individual and institution to support and participate in development process. Hence, participation of common grassroots could only be possible by adopting the decentralization policies. Finally, it would be the job of policymakers to remove every obstacle from the path otherwise whole exercise would be useless⁶.

Formation of Capital-Consortium [Refer to flow chart]

This means to arrange the capital for possibility of sustainable-megacity while federal government in coordination with provincial and local government may need to confirm the assurance, guarantee and confidence behind capital from 1) local and national level 2) Trade partners 3) Regional partners 4)Friends and supporters and, 5)International Financial Institutions and Donors.

The authorities may need to installed proper reforms in economy which could especially support the needs of financial-globalization plus producing maximum utilization of local and national resources. The arrangement for funds is difficult job therefore policymakers would need to deliver their superlative possible role of leadership-cum-entrepreneurship. Hence, formation of consortium would be the essential demand for dealing with same business.

Implementation of Public Private Partnership [Refer to flow chart]

It's established fact that the interest of global-capital is subject to the rate of profitability, greater probability of expansion and its sustainability would attract the investors to deposit financial and physical capital into market. This, is in further stage is linked with the backup of political support and normally free market economy with liberal democratic framework is the ideal attraction to

⁶ The Development of many European, American, Arabs and ASEANS cites are example.

magnetize the capital. Whereas, there are several complication and risk factors are involved to implement the ideal shape of same model.

On the other hand, the host state for capital would never desire for flight of capital due to any reason(s) especially those issues which are linked with the formation of free market moreover, government would additionally desire to monitor and guide the capital due to series of factor. And, this phenomenon would hit the incoming speed of capital into economy.

As, we assumed the development process of megacity via financial support of global-capital Therefore, it may need to adopt here the model of Public-Private-Partnership, this would not hit the interest of investors and it would support the government to facilitate its objective of field supervision. Whereas, it would further enhance the rate of participation by local individuals in development process which is major instrument to promote development ideology. Consequently, policymakers must invest on six-essential-sectors⁷ to meet the criteria for sustainable-megacity rest of municipal services.

Traffic Management [Refer to Indicator List]

The traffic congestion is the common problem in megacities therefore, there is the need to sustain the traffic management because the effective mobility would enhance the standard of living Giuliano (2004) and it would support the process of development. The construction of few overhead bridges wouldn't satisfy the needs of sustainable trafficking although it needs the proper investment on traffic management which would be disaster proof, environmental friendly and security proof. The Idea behind this is to protect and facilitate the individual to state and environment. Therefore, we have produced and identified the 25 Indicators to meet the criteria same;

Disaster Management [Refer to Indicator List]

Any disaster in megacity could produce the mega demises and financial loss while, mostly megacities are at sea or any place which has the threats of natural disaster Fernandez (2004). The manmade disaster is also linked with the same issues. Therefore, this sector is not ignorable because global warming and changing climate situation is now serious threats to this planet and from our perspective it is equal threat for the whole world hence 15 indicators has been constructed to address the needs for the sustainable disaster management.

⁷ Please review the list of 132 indicators in Appendix, we are recommending the same sectors for development while, arrangement and level of preference is subject to city situation. Therefore, this study has gap in same area due to larger scope of indicators.

Security Management [Refer to Indicator List]

Almost every megacity facing the security threats especially after nine eleven, the terror attacks and extremism is continuously using violence approach as well in normal circumstances when millions of peoples live at one city with different identities and race in addition to existence of socioeconomic imbalance would produce the security crunch. Therefore, policymaker may need to address the security issues in couple of direction first internally which is local crime or city security threats and second would be externally, this link to crime of outsider national as well as across the border hence⁸, we have composed 17 Indicators which could reflect the ideas for the sustainable security management.

Environment Management [Refer to Indicator List]

Megacities due to massive population has couple of environmental threats first, the manageability of waste by domestic, industrial and commercial side which could effects the air, water and land secondly the external effects which linked to global climate change Perlman (2004). As, sustainable development is closely associates with environmental issues therefore, policymakers may need to deliver their best the same sector in construction of sustainable environmental management for this we have presented the 24 indicators.

Energy Management [Refer to Indicator List]

The megacity couldn't be executable without the proper supply of energy, because the cycle of development and production is fully depended to the level of energy. What we mean for sustainable energy management that it should be environment friendly, easier to produce and consistent supply to meet the development targets therefore, we have formed the 15 Indicators to address the same issue.

Socioeconomics Adjustment [Refer to Indicator List]

Beside every sector the socioeconomic adjustment is the key sector to address appropriately because mostly problems of megacity are significantly associated with the socioeconomic issues Cervero (1991) and Angotti (2006). While urbanization, continuous incoming of immigrant, unjust distribution of resource and political injection makes the situation more problematic and disappointing therefore, policymakers may need to address the socioeconomic sector for this reason we have identified the 32 indicators.

Municipal Services [Refer to Indicator List]

Within modern economic development the significance for the municipal services are equally important because relief of economic development could be transferable via municipal services of local government to common individual. As, the role of municipal services in modern urbanization

⁸ While, recently both internal and external threats are found closely interlinked in several megacities;

and of course in process of sustainable megacity would be exceptionally important for this reasons we have marked few of the indicators for the improvement and investment.

GAP OF STANDARD MEASUREMENT IN INDICATORS

The explained indictors are in degree forms and there are gaps in indicator measuring due to several reasons 1) every megacity has its now dynamics so few indictors would be change 2) scope of limitation of same research is narrow 3) the indicators exits in seven different direction therefore, it may need to address by wisdom of empirical calculation 4) the unit of every indicators is different or most of the indictor may need to define their new empirical units 5) verity and diversification of indicators may need to establish the required benchmark before empirical modeling and finally 6) mostly indicators are interlinked therefore correlation may need to define on same scale and units. While, experts of concern sectors could enhance or modify the list of indicators for further improvement in benchmarking the megacity.

CONCLUSION

Within current global modernized era, sustainable-megacity is the essential element for economic development therefore sustainable economic development could not be possible without the possibility of sustainable-megacity. Thus, we need to address the issues of rapid urbanization which causes the construction of megacity. The conventional development of megacity wouldn't be consistent due to many reasons and it is the time to adopt the complete package for development which could satisfy the needs of sustainability moreover, it could pass the relief to grassroots.

By applying model of sustainable-megacity, we could address the benchmark for megacity /non-megacity while, we could identify the areas of investment and improvement toward sustainable approach.

In relative term the cities in Europe are more sustainable due to immense political and economic stability plus density is moderately low whereas, model of EU has greater Public Private Partnership which could be example for other region especially in concern with local and provincial government.

The role of local government in development of sustainable-megacity could be very important because it could transfer the roots of development to grassroots although the same transaction could not be possible without implementing the legal and administrative reforms it would systematically demand the decentralization and participation of common individual. Finally, policymakers may need to arrange the funds for development using virtuous leadership and professional entrepreneurship because sustainability of megacity is essential factor else it would be burden and centre of problems for economy and society.

LIST OF INDICATORS (DEGREE SPECIFIC)

1. Traffic Management

- 1. Degree of public transport (Mass Transit or Subway Trains or Metro buses)
- 2. Degree of traffic policing.
- 3. Degree of awareness of traffic principle.
- 4. Degree of implementation of traffic principle.
- 5. Degree of number of accident.
- 6. Degree of corruption in transport associate department
- 7. Degree of multiple travelling modes (road, on water, in water and in air)
- 8. Degree of computerization of Traffic record and quick electronic investigation of driving license.
- 9. Degree of time saving fast routes for traffic.
- 10. Degree of traffic situation in rush hours.
- 11. Degree of traffic situation in Heavy Raining
- 12. Degree of Electronic and online controlling of traffic.
- 13. Degree of, available passenger's seats by public transport.
- 14. Degree to reducing the rising trend of personal vehicle holding.
- 15. Degree of vehicle parking.
- 16. Degree of roads networking, interchanges overheads bridges and nonstop corridors.
- 17. Degree for creating new lands for traffic flow especially in busy areas.
- 18. Degree of, disaster and risk free traffic transmission.
- 19. Degree of, how fast interlinking of megacity with sister concern cities.
- 20. Degree of, special adjustment program for heavy duty and cargo transportation.
- 21. Degree of, Taxes & Duties for Traffic Management.
- 22. Degree of environment friendly trafficking.
- 23. Degree of Ports (Air, Sea and Dry)
- 24. Degree of General level driving approach by the peoples
- 25. Degree of city infrastructure with respect to traffic management.

2. Disaster Management

- 1. Degree of heavy rain absorber system.
- 2. Degree of high speed wind absorber system.
- 3. Degree of cyclone protection system.
- 4. Degree of earth quick protection system (especially in high-rise building)
- 5. Degree of fire fighting system.
- 6. Degree of equipment and physical capital for Disaster Management.
- 7. Degree of sound alarming system.
- 8. Degree of weather and disaster forecasting system.
- 9. Degree of rescue and rehabilitation.

- 10. Degree of how much respond by the state in any disaster.
- 11. Degree of, how minimum time required to responding the disaster by state and by individual.
- 12. Degree of awareness in local individuals to deal with any disaster.
- 13. Degree of actively respond by the state to deal with disaster.
- 14. Degree to manage the manmade disaster including war.
- 15. Degree of city infrastructure (building, roads parks etc) with respect to disaster rehabilitation.

3. Security Management

- 1. Degree of Metro policing or City policing including community policing.
- 2. Degree of, Units of Special Forces.
- 3. Degree of how much efficient is the police department.
- 4. Degree of Equipment and physical capital for security management.
- 5. Degree of online or Electronic controlling by CCTV.
- 6. Degree of explosion controlling system.
- 7. Degree of Data-basing of each individual living, entering or existing in megacity.
- 8. Degree of, scanning of electronic communication.
- 9. Degree of, scanning of road communication.
- 10. Degree of, Scanning of ports communication.
- 11. Degree of, media participation in security management.
- 12. Degree of public awareness for security management.
- 13. Degree of community participation in security management.
- 14. Degree of, Religious participation in security management.
- 15. Degree of crime-rate including street crime.
- 16. Degree of participation with national and international security agencies.
- 17. Degree of city infrastructure with respect to security support

4. Environment Management

- 1. Degree of RIO Declaration 1992 and Kyoto Protocol
- 2. Degree of volume of waste material
- 3. Degree of volume of treatment of waste material
- 4. Degree of, Implementation of solid waste recycling
- 5. Degree of manageability of waste material (in-house)
- 6. Degree of, Treatment of waste water.
- Degree of Plantation and Forestation (number of trees equal to number of megacity population plus number of trees equal to number of vehicles plus number of trees equal to number of electricity and methane gas users plus number of trees equal to relative proportion of pollution by industrial units).

- 8. Degree of green land or planted land in megacity (at least 20 to 50 percent of land must be green)
- 9. Degree of availability of volume of water for common individual
- 10. Degree of tap water for drinking purpose
- 11. Degree of, average water consumption rate by individual, household and specific area.
- 12. Degree of, average water consumption rate by business user including industrial user.
- 13. Degree of air pollution.
- 14. Degree of water pollution.
- 15. Degree of land pollution.
- 16. Degree of Sewerage and sanitation.
- 17. Degree of, green house gases.
- 18. Degree of environment friendly fueling usage.
- 19. Degree of functioning of environment enemy energy producing system (coal and fossil fuel).
- 20. Degree of local individual's participation and awareness for protecting the environment.
- 21. Degree of Environment Specific Development Plan (abolishing the negative externalities)
- 22. Degree to deal with global challenges of global warming
- 23. Degree of city infrastructure with respect to environmental support
- 24. Degree of environmental research (city, national and international level)

5. Energy Management

- 1. Linking of RIO Declaration 1992 and Kyoto Protocol (27 Articles)
- 2. Degree of Environment friendly energy producing methods (like solar and wind).
- 3. Degree of Implementation for energy saving polices by government.
- 4. Degree of common-public participation in energy saving.
- 5. Degree of, adjustment mechanism for rising demand of energy.
- 6. Degree of compatibility for model of development with energy needs.
- 7. Degree of, how much energy producing by solid waste.
- 8. Degree of, energy consumption rate by domestic users.
- 9. Degree of, energy consumption rate by business users.
- 10. Degree of, per capita energy consumption rate by the population of megacity.
- 11. Degree of, self power generation by common-mess (environment friendly)
- 12. Degree of, self power generation by business users including industrial units. (environment friendly)
- 13. Degree of fuel consumption (oil and gasoline)
- 14. Degree of availability of fuel consumption at city level and national
- 15. Degree of Energy producing and saving research

6. Socioeconomic Adjustment

- 1. Degree of aggregate cosmopolitanization.
- 2. Degree of multiculturalism (cultural, religious, ethnic, race etc...).
- 3. Degree of political harmony.
- 4. Degree of housing adjustment for inhabitant of megacity.
- 5. Degree of development of sister concern cities. (for controlling the immigrant)
- 6. Degree of population growth rate
- 7. Degree of slum areas/below poverty line.
- 8. Degree of small business opportunity.
- 9. Degree of Arts and cultural impact.
- 10. Degree of social values and its impacts.
- 11. Degree of tolerance in social interaction.
- 12. Degree of Health
- 13. Degree of Education (schooling to universities).
- 14. Degree of woman participation.
- 15. Degree of minorities' participation.
- 16. Degree of media participation
- 17. Degree of civil society participation.
- 18. Degree of legal/judiciary system.
- 19. Degree to, how much effectively social conflict could be resolve-able.
- 20. Degree of holding the megacity wisdom and research.
- 21. Degree of will to participate in global economic development model.
- 22. Degree of megacity GDP
- 23. Degree of megacity GNP
- 24. Degree of megacity financial depth.
- 25. Degree of per capita income of the each inhabitant
- 26. Degree of investment in megacity
- 27. Degree of unfair distribution of resources.
- 28. Degree of unemployment.
- 29. Degree of poverty.
- 30. Degree of local microeconomics market
- 31. Degree of facing economic crunch.
- 32. Degree of social sciences research (city, national and international)

7. Municipal Utilities and other

- 1. Degree of Water supply.
- 2. Degree of Sewerage and Sanitation.
- 3. Degree of Housekeeping.
- 4. Degree of other Linked Utilities (Registration life, death, marriage etc).

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Matrix of Correlation									
Sectors	Traffic Manage ment	Disaster Manage ment	Security Manage ment	Environ ment Manage ment	Energy Manage ment	Socioecon omic Adjustme nt	Munici pal Utilitie s		
Traffic									
Managem									
ent									
Disaster									
Managem									
ent									
Security									
Managem									
ent									
Environm									
ent									
Managem									
ent				_		_			
Energy									
Managem									
ent									
Socioecon									
Adjustme									
Aujustine									
Municipal									
Utilitios									
Ounties									

Closely Interlinked	
Above Average Interlinked	
Averagely Interlinked	

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