Public Private-Partnership: Clustering of Chinese Small, Medium and Big Cities Utilities

Accepted 28th February, 2017

ABSTRACT

This research considers in detail and subject to an analysis the discovery of essential features or logical consequences of clustering. It is focused on the main promoters and constrains to the most effective procedures and seeks to identify the innovation for utility's models. It is likewise focused on the problems and challenges facing Chinese government possibly, Public Private-Partnership. The scientific explanation of this research explored the correlational statistics to clustering and identifying samples of aggregated structures that could potentially be analyzed. The scientific results proved that clustering model is a perfect framework. Positive impacts if all the three neighboring cities are connected with government cooperation was observed and the results indicated strong positive impact, greater-opportunities and economic success.

Key words: Logical consequences of clustering, neighboring cities, government cooperation, perfect framework.

INTRODUCTION

Empirical and scientific researchers argued that high ranking distribution of economic operations and resources exist in most cities and countries for instance, American Carpet Production Industry that concentrated on Dalton and Georgia. For instance, Venable (1996) argued that several equilibriums can be created if the interaction between the upstream and downstream can come to an effective aggregation. Several models have examined the concentration of environment and land occupancy systems (Brown, 2005; Evans and Kelly, 2004).

The ideology of this research is very much positive because it would give assistance to the government in the fact that, skills, experiences and expertise possessed by the private sector will be properly used. The public-private partnership (PPP) is a service between government and one or more private sectors operating through partnership with mutual benefits. The public-private partnerships are perceived to have yielded significance economic benefits by promoting economic growth and developing social infrastructures. I am of the opinion that clustering small, medium and big cities with the help of the government will yield strong collaboration among cities and there will be balance of economic growth. For many years, public-private partnership has been used to improve the efficiency of public sectors. For instance, in 2011, the European PPP Expertise Centre (EPEC) was created to fortify the capacity of public sector and operate in public-private partnership (PPP) transactions which main aims were to promote PPP shareholders, Europe members and other countries to share accumulation of knowledge and expertise.

The public-private partnership (PPP) is one of the best choices for government to increase significant quality and efficiency of public infrastructure and services in cities. Establishing the use of PPP would provide the Chinese government the means to improve the needed public infrastructures and help reduce costs and expenditures. Public private partnerships must have a legal contract that binds the government and the private sector for mutual benefits and for the provision of assets and the delivery of services which must apportion risk responsibilities. The research of Zheng et al. (2008) analyzed the relational and contractual mechanisms and reported that they are the
most complementary strategies of exchange governance of all parties framework whether the contract is interpreted as a written sign of distrust or commitment. They argued that the different development characteristics of relational and contractual mechanisms mean that their dynamic interplay does not follow consistent patterns.

For the public-private partnership (PPP) to function profoundly, the rule of law, transparency and decentralization of power is required in the framework with fiscal sustainability provided, which will in turn deliver primary public services to Chinese Government and reduce government expenditures. It is essential to choose the right organizations based on their capability to perform or produce the required production and one of the only best ways for the Chinese government to monitor the output of public-private partnership (PPP) is for the specific budget of a specific project to be outlined and made public through news on television and involve the media to give report on every section completed on the project; this will reduce any malfunctioning and provide greater transparency. If the public-private partnership is monitored only by high level officials, there will be no guarantee of transparency or the avoidance of corruption; this is as a result of corruption being the only factor holding back development in developing countries.

Good example of PPP that has functioned quite well is that of the United Nations created in 2001 by the United Nations Commission on International Trade Law (UNCITRAL) (2001). They adopted the UNCITRAL (2001) Legislative Guide to Privately Financed Infrastructure Projects (PFIP Guide), but one strong question is why does the Chinese government require public-private partnership? The significant purpose is that, organizations already have the required skills, expertise, experiences and innovation abilities and understand the methods or frameworks of producing the required productions which are very attractive elements for governments to cooperate with corporations. This type of co-operation will reduce cost of production and evade time wasting. I came up with the initiative for government in big cities to go into public-private partnership with corporations in small or medium cities so as to decentralize wealth and boost employment in small cities. Co-operation between small and medium or big cities will open access to information, sharing ideas and learning from each other with mutual benefits. My ideology generates mainly from the fact that if you amalgamate an average student with a clever student to work together, the average student will learn and mollerorate faster than studying alone.

The P3 Canada Incorporation was created in 2009 to boost economic activities and later adopted by India. What I learned from Canadian PPP is that they created a forum and annual conferences and carried out researches with their findings later discussed on the forum and annual conferences that helped reduce high risks on projects and prevailed in the availability of information. The Chinese government advancement of PPP will help boost the management of public resources.

In 1992, the British government commenced officially the program of private-financial-initiative (PFI) with the aim to promote public-private partnership. The success of public-private partnership program is possible if all projects are explained in detail and all risks well analyzed with transparency implemented in all levels of any project.

This research is carried out with three distinctive parts: the first part consisted of researching issues relating to clustering and choosing only the best instances of small, medium and big cities’ utilities. Secondly, I observed and analyzed data from Canada, India and France for better understanding of PPP innovation and thirdly, emphasized on negative impacts from past histories. I chose cluster model since it has always proven to be successful in several cases.

Explaining the project in details focusing on China

It was observed from history that if the management of the contract for PPP is mismanaged the project will not yield significant results and it will be more challenging if the monitoring is only done by the government of a municipality, as such it was proposed that both the private sector, government, society and the media should be the watchdog to all projects of PPP.

Figure 1 show step by step on how implementing cluster’s model to small, medium and big cities can function. This research is developed on the circumstance of government co-operation and the initiative which seeks to identify innovative models for public utilities between private and public sectors. Figure 2 shows small, medium and big cities with the main aim of ameliorating the efficiency of service and providing professional support.

The three municipalities Shanghai, Hangzhou and Suzhou will have a meeting and chose suitable corporation based on their projects and each city should have a corporate representation at the service level which will act as a single service with intense co-operation for a successful output. It will be more advantageous if they work on issues that are common in the three cities; it will reduce costs, procedures and limited time in carrying out projects with common issues of all the three cities. This model should be considered when there are issues of management deficiency and should be perfect because if the project in place is not huge, the smaller city with less cost can handle the project and if the project is very large all the resources of the three cities can be used and other benefits such as access to finance, enhanced professional capability and decentralization procedures achieved.

If the Chinese central government is the one who initiated the functioning of the clustering structure of cities for a specific project, then, the government will be required to assist financially or make availability for incentives for
Figure 1: Clustering model to small, medium and big cities.

Big city: Shanghai
Medium city: Hangzhou
Small city: Suzhou

Work together with one service for a specific purpose

Mutual Interests for long or short term

Specific projects

Figure 2: Illustrating advantages of PPP.

How would the Chinese government Benefit?

Reduction of malfunction
Better management of finance and fast delivery

Enhanced Regional cooperation
Exploration of commercial Opportunities

Better risks management
risks associated with projects

Melioration of Effectiveness
Expertise, innovation and experience

Enhanced investment in public infrastructure
Decentralization of development

Melioration of service
functioning and maintaining sustainability
the procedure but if the cities themselves came together to work on common issues and mutual benefits then the central government can stay out of it or support to promoter this type of initiative by lending them money if needed with specific ways and dates of when the money will be paid back. Some ideas learned from some European countries indicate that guidelines such as rules and regulations to guide the management team and the governance structure, the amplification of all projects involved in the framework for evaluating the costs and benefits of the projects for the clustering framework structure is needed.

This research illustrates the framework that staffing should be considered through a rage of projects or based on a particular requirement of certain projects while considering the exit and entry specifications with flexibility so as to encourage parties to participate. There will be a line of argument rationalizing the course of action of governance body that will identify significant constraints and profits; this conception was absorbed from previous history practiced by France and Canada and the World Bank Group (2012). This PPP can promote or have a specific effect on economic stimulant in China and other countries; in addition, it can be applied where there is an economic difficulty affecting projects and finance markets.

It will be impossible for a perfect Public-Private Partnership to function without the rule of law and the framework of democracy because the PPP must be related to fiscal sustainability. From the research carried out, PPP was considered the most perfect method for public services due to reduction of costs and availability of personnel.

LITERATURE REVIEW

There have been a lot of cluster planning that have yielded significant benefits for instance, the UrbanSim program which involves land use, transportation and urban policies that models the behavior of agents of the different level (Wadell, 2003). In 1995, the United Nations and the Senegalese government successfully implemented the PPP ideology in Senegal’s water supply by introducing the lease contract type initiative to improve the water service quality and the efficiency of water supply in Senegal. Water sanitation in Senegal was improved and many households were able to have access to quality water. This project is sustainable for both developed and developing countries but it is failing in developing countries especially in Africa due to the unspeakable corruption that has engulfed the continent.

The Senegalese experience could be applied by African governments with the help of the World Bank to monitor and implement the rule of law throughout the project so as to improve the quality of utilities in the continent. Other great PPP that has functioned well is that of the California Urban Futures Model (Landis, 1994; Zhang, 1998; Wegener, 2004).

Public-Private Partnership has proven to be a very useful tool to address global issues; countries around the world have seen the need to effectively collaborate with public and private sectors or non-governmental organizations. For instance, the World Bank, the United Nations and likewise non-state members that exist as partnership with some governments such as UNICEF and World Health Organization. Parker (2003) expressed the complexity of spatial interaction and better organizations in countries.

I am of the opinion that it will be a good idea for Chinese government to explore the initiative to go into International-organization partnership with some of the organizations earlier mentioned since they have rich experience and expertise to solve some utilities issues. It will be much more beneficial because these organizations will come into the country with fiscal support, technology transfer and new ideas, therefore, the country do not only gain from the projects but entitled to several other benefits including the promotion of cultures and creating relationship for other opportunities in the future.

This idea differs from that of Davinia (2012). She argued that, the International Organization-type privileges and immunities should be restricted to entities that are clearly established under and governed by international law and her reasons were that the term “global public-private partnership” is not a legal term of art and does not indicate the law that governs the partnership.

I am of a different perception as to the way she understands the idea or meaning of international laws, the international laws only creates path for cooperation among countries therefore, for any global public-private partnerships to operates in another nation, there must be clear goals and mutual benefits contracted to all parties involved, besides, it will be unfair if foreign companies are not protected by the international law and many international corporations will be very reluctant to cooperate with some countries if they do not feel safe with their investment or property right protection. The term is not what matters, but rather, the goals, mutual-benefits, efficiency and cooperation. The most popular type of public-private partnership is that of the British and Columbia type which strategy was to furnish low-cost infrastructure that are essential and required by the public. In 2002, the Partnerships British Columbia company was created or owned by the Province of British Columbia and governed by a board of directors that gives an account to its exclusive shareholder in which the main aim is to promote and help the enforcement of public-private partnership by working with and supporting federal-agencies for them to build-up partnerships or cooperate with the private sector.

Public Private Partnership (PPP) has also been used to promote high quality education and the quality of teachers around the world. A good example of this type of innovation is the Colombia program. In 2000, the Colombia program (Concession Schools), where the government of Colombia
handed over the management of public schools to the private sector for management based on the high quality education was provided by the private sector in the country. Another good example is the program FyA in Latin America and Spain where Jesuit controlled NGO operated part of the education system in these countries. In 1955, Venezuela’s government implemented FyA model which main aim is to improve education in poorer arena and ensure that all students attain and finish their basic studies. The government of Victoria pursued Public Private Partnership (PPP) with a framework to expand and improve infrastructure which focused on financing and building large infrastructure projects and promote innovative methods.

In the research of Barlow (2013), he argued that the experience with partnerships has been mixed; they argued that recent models of public-private partnerships do not provide successful results where private firms build and carry out maintenance; they said such framework did not meet the expectations for achieving greater efficiencies at lower costs. I disagree with their findings based on the fact that they cited only one instance, in most cases, the political system plays a vital role and such situation should be blamed on the political system not the framework, for instance, democracy has always proven to be a perfect framework for a political system; it has worked perfectly-well in many continents and countries but failed only in Africa where we cannot say that democracy is mixed but that the political system in Africa needs a potential scrutiny.

Buaba et al. (2012) analyzed that even though Public Private Partnership has successful results in many countries, there are no clear and comprehensive rules covering the use of PPPs. The rules of Public private partnership are deficient in both international and domestic levels. He continued by saying that only a few countries and international bodies have successfully implemented PPP legal framework and that most of them do not recognize the need for a special PPP rule.

METHODOLOGICAL ANALYSIS AND HYPOTHESIS

The retail cluster model

Cluster is defined as an aggregation of retailers which are geographically adjacent or located to each other. At the beginning of each round, consumers focus on their need and the distance. The higher the order the farther away from each other than commodities that has lower order in which they play a role as larger doorway for population (Christaller, 1993).

In retail cluster model, for instance, in a three layer supply chain, the production flows from the companies to the retailers and to the consumers. The money flows from the consumers to the retailers and finally to the companies. My idea is that if companies from these three cities work together money would flow evenly and development will grow evenly. The most important reason for using this model is because it gives an enclosure area for business and fosters cooperation among companies. I tested the markets using this framework in which one of the markets is of homogeneous commodities and the other complementary commodities which mean consumers will trip chain while shopping if we agree with the definition that cluster is the agglomeration of retail-merchant which are always geographically adjacent or located at the same site. The average cluster density of $\mu_z$ retailers can be invented as:

$$
\mu_z = \frac{1}{n} \sum_{i=1}^{n} \frac{c_i}{\beta_i}
$$

Where $c_i$ are the number of companies in cluster (i), $\beta_i$ are the number of venue spread by ( i) and n make up the total number of clusters.

Figure 3 shows the retail distribution patterns on a constituting separate entity venue circle. $M_1$ has seven clusters in which each has just one retailer which means the average density is equal to 1. Expressing this in my idea, if the cities at the original stage are at $M_1$ and functioning individually the average density will be very low and the output will be low. $M_2$ shows that they are three clusters (companies), one cluster has three adjacent and one location retailers, the other has two location retailers and the last has one retailer. In total, $M_3$ has two clusters (companies) with one cluster having adjacent retailer and the other six retailers. Implementing this with my idea of clustering three cities, Shanghai, Hangzhou and Suzhou are geographically adjacent to each other meaning that they are a good fit for clustering.

Figure 4 shows the pattern distribution while Figure 5 shows that there were 10 clusters and each cluster has just one retailer and when the 10 clusters emerged to 8, number of retailers increased to two and the more the clusters are emerging the more the retailers are increasing; the clusters emerged to two and the retailers increased drastically and that is why there are more retailers in cluster 2 than others. The increase in retailers’ impact results in an increase of the average density. This shows that if there are many cities working individually there will be less density, less retailers and co-operation because the more they merge the increase in retailing and the more intense the co-operation becomes (Table 1).


$$
k_c = \sum_{p=1}^{\infty} \beta_z z^s - \sum_{p=1}^{\delta} (z + X) 1/n^2
$$

Where the total expected production in a particular area ($\omega$) is $\sum_{p=1}^{\infty} \beta_z q$ and $\beta$ is the number of projects. $z_i$ is 1 ... $n$, then,
(z + X) is the expected profit per production or project, s is the total income minus expenditure. The Cluster Initiative Performance Model accounted that influence from three or more elements will come from the development of a cluster initiative which can lead to economic development. These models are estimated using different GMM estimators used by Holtz-Eakin (1988).

Table 2 shows the statistic results on the significant relationship between transaction or trade and distance; the indications show how communications and transactions are made easier by this model in column (1). It shows how profits from trade increase because of the clusters model in column (2). This framework was successfully implemented and analyzed. Samples were divided into projects influenced by capability of economic freedom and economic growth of the fiscal year of 2013 to 2015 (Table 3). For column (3), evidence of collaboration in trade policies has positive impact and the freedom of economic policies favor...
Figure 4: Clusters distribution pattern.

Figure 5: The impact of attractiveness.
Table 1: The results of the average density.

<table>
<thead>
<tr>
<th>Circles</th>
<th>Clusters</th>
<th>Retailers</th>
<th>Average density</th>
</tr>
</thead>
<tbody>
<tr>
<td>M₁</td>
<td>7</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>M₂</td>
<td>3</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>M₃</td>
<td>2</td>
<td>7</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Table 2: Statistic results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good governance</td>
<td>1.31</td>
<td>0.60</td>
<td>1</td>
<td>2</td>
<td>344</td>
</tr>
<tr>
<td>Democracy</td>
<td>0.71</td>
<td>0.06</td>
<td>0</td>
<td>3</td>
<td>344</td>
</tr>
<tr>
<td>Rule of law</td>
<td>2.01</td>
<td>0.39</td>
<td>0</td>
<td>2</td>
<td>344</td>
</tr>
<tr>
<td>Income</td>
<td>0.20</td>
<td>0.43</td>
<td>3</td>
<td>5</td>
<td>344</td>
</tr>
<tr>
<td>Collaboration</td>
<td>0.007</td>
<td>0.39</td>
<td>2</td>
<td>3</td>
<td>344</td>
</tr>
<tr>
<td>Communication</td>
<td>0.11</td>
<td>0.14</td>
<td>0</td>
<td>1</td>
<td>344</td>
</tr>
<tr>
<td>Small cities</td>
<td>0.026</td>
<td>0.11</td>
<td>1</td>
<td>2</td>
<td>344</td>
</tr>
<tr>
<td>Big cities</td>
<td>0.40</td>
<td>0.12</td>
<td>0</td>
<td>1</td>
<td>344</td>
</tr>
<tr>
<td>Medium cities</td>
<td>1.16</td>
<td>0.22</td>
<td>1.71</td>
<td>1.98</td>
<td>344</td>
</tr>
<tr>
<td>Watchdogs</td>
<td>0.41</td>
<td>0.43</td>
<td>0.4</td>
<td>0.54</td>
<td>344</td>
</tr>
<tr>
<td>Freedom of media</td>
<td>0.38</td>
<td>0.16</td>
<td>0.3</td>
<td>0.41</td>
<td>344</td>
</tr>
<tr>
<td>Corruption</td>
<td>0.44</td>
<td>0.22</td>
<td>0</td>
<td>0.03</td>
<td>344</td>
</tr>
<tr>
<td>Transparency</td>
<td>0.60</td>
<td>0.27</td>
<td>0</td>
<td>1.18</td>
<td>344</td>
</tr>
<tr>
<td>Employment</td>
<td>0.50</td>
<td>0.41</td>
<td>0.013</td>
<td>3</td>
<td>344</td>
</tr>
<tr>
<td>Freedom of movement</td>
<td>0.38</td>
<td>0.40</td>
<td>0</td>
<td>13</td>
<td>344</td>
</tr>
<tr>
<td>Economic growth</td>
<td>0.32</td>
<td>0.52</td>
<td>0</td>
<td>1</td>
<td>344</td>
</tr>
<tr>
<td>Population</td>
<td>12.4</td>
<td>13.4</td>
<td>3</td>
<td>212</td>
<td>344</td>
</tr>
<tr>
<td>Justice served</td>
<td>3.23</td>
<td>4.30</td>
<td>6.21</td>
<td>24.0</td>
<td>344</td>
</tr>
<tr>
<td>Government influence</td>
<td>7.15</td>
<td>1.52</td>
<td>3</td>
<td>17</td>
<td>344</td>
</tr>
<tr>
<td>Observation</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>344</td>
</tr>
</tbody>
</table>

Table 3: Marginalized impacts of the project.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Regularity</th>
<th>Medium value</th>
<th>Regularity</th>
<th>Medium value</th>
<th>Regularity</th>
<th>Medium value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.005***(0.081)</td>
<td>0.221****(0.032)</td>
<td>-0.162***(0.045)</td>
<td>-0.052***(0.022)</td>
<td>0.154**(0.062)</td>
<td>0.054(0.039)</td>
</tr>
<tr>
<td>2</td>
<td>-0.031(0.052)</td>
<td>-0.021(0.032)</td>
<td>-0.040(0.024)</td>
<td>-0.032(0.012)</td>
<td>0.065(0.027)</td>
<td>0.019(0.073)</td>
</tr>
<tr>
<td>3</td>
<td>1.136****(0.151)</td>
<td>0.067****(0.043)</td>
<td>0.107***(0.049)</td>
<td>0.049**(0.019)</td>
<td>0.075**(0.033)</td>
<td>0.021(0.016)</td>
</tr>
<tr>
<td>4</td>
<td>0.121(0.108)**</td>
<td>0.064****(0.032)</td>
<td>0.098****(0.076)</td>
<td>0.166***(0.031)</td>
<td>0.119(0.097)</td>
<td>0.019(0.012)</td>
</tr>
<tr>
<td>5</td>
<td>0.024(0.002)</td>
<td>0.028(0.016)</td>
<td>0.014(0.010)</td>
<td>0.015(0.006)</td>
<td>0.011(0.001)</td>
<td>0.015(0.004)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economic policies</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>0.302**(0.117)</td>
<td>0.390**(0.133)</td>
<td>2.890*(1.614)</td>
<td>-</td>
</tr>
<tr>
<td>Economic freedom</td>
<td>0.634(0.443)</td>
<td>0.389(0.282)</td>
<td>0.411(0.321)</td>
<td>-</td>
</tr>
<tr>
<td>R-square</td>
<td>0.9131</td>
<td>0.0941</td>
<td>0.0661</td>
<td>0.812</td>
</tr>
<tr>
<td>F-statistics</td>
<td></td>
<td></td>
<td>61.15</td>
<td>8.761</td>
</tr>
<tr>
<td>Total observation</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
</tbody>
</table>

Note: *** is the significant of 1%, ** significant of 5% and * significant of 0.5%.
economic growth. In column (4), it indicates evidence of greater correlation between profits and desirable management. In column (5), the impact of balance of wealth among the three cities was measured and it indicated a positive result.

CONCLUSION

The idea of clustering is to improve the effectiveness and efficiency of government performances for public works and also to diminish any malfunction in public sectors. The focus of this research was on the main promoters and constrains to the most effective procedures and it seeks to identify the innovation for utility models. Problems and challenges facing Chinese government possible Public private-partnership was the main focus and not on the positive impact or applaud the government for its good work.

The availability of finance and perfect economic risks analyzed were seen to be of ultimate potential in this framework. The main reason for clustering is for the potential realization of economic benefits and to enlarge and provide efficient services in a lower cost. The scientific results proves that clustering model is a perfect framework and it was observed that if all the three neighboring cities or more are connected with government co-operation the result will indicate strong positive impact, greater opportunities and economic success.

Historical experiment was explored so as to extract or learn from the past so as to assist the Chinese government in accomplishing decisions on whether clustering is needed and in which form?, and tried to provide guidelines on how clustering processes can be achieved to increase the opportunities for a successful outcome.

It was proposed that clustering structures should be grouped within single region or several municipalities’ small, medium and big cities. The availability of finance and perfect economic risks analyzed was deemed to be of ultimate potential. The main reason for clustering is for the potential realization of economic benefits and to enlarge and provide efficient services in a lower cost.

REFERENCES


Cite this article as:

Submit your article at http://www.academiapublishing.org/jbem