

“CHIHUAHUA SIGLO XXI: LESSONS LEARNED IN A DECADE OF CLUSTER-FORMATION PROCESSES IN LATIN AMERICA”¹

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INTRODUCTION

Chihuahua Siglo XXI (Chihuahua 21st. Century) is the name of the comprehensive initiative launched by the private sector of the State of Chihuahua, Mexico, in 1990. Its purpose was to redesign Chihuahua's economy to make it highly competitive within the first 2 decades of the 21st. Century.

The project has had 5 phases, the first one (1990-1992) consisted of a comprehensive socioeconomic diagnostic of the state, done by the Instituto Tecnológico de Monterrey (Monterrey Tec) during the first two years of the project; the second phase, done by SRI International in 1993-1994, was characterized by an effort to transform Chihuahua's economy by following a cluster-formation strategy; the third, led by DRI-McGraw-Hill, was a follow-up to the second phase and lasted until 1995. From then until 1998 the local counterpart (under the name of "Chihuahua Siglo XXI Organization") took over the Project. From 1998 on, with the rise to power of a new Administration in the state, the initiative continued, although in a small scale and almost completely led by the public sector.

Chihuahua Siglo XXI's initial launching once more reflected the vision and leadership of Chihuahuan businessmen. Chihuahua outstands as a region with a very active private sector that has often acted as the dynamo of the state's development, not only economic but also social and political.

The development of the maquiladora² (in-bond) industry model in Chihuahua, which was to become the largest maquiladora-region in the world, is only one of Chihuahua Siglo XXI's antecedents in terms of entrepreneurial leadership affecting the whole socioeconomic structure of the state.

Both efforts, the creation and development of the maquiladora model in the 70's and 80's and the Chihuahua Siglo XXI Project in the 90's responded to the initiative of the private sector of the state, concerned about Chihuahua's future.

Chihuahua has a historical primary-sector tradition, being one of Mexico's largest producers of crops (oatmeal), fruit (apples) and meat and dairy. It is also a major producer of minerals, metallic and non-metallic. Being Mexico's largest State, (242,000 sq. kilometers), with a fast-growing population (during the 50's and 60's) it was almost natural that entrepreneurial leaders in Cd. Juarez and Chihuahua City came to the conclusion that the state would need to suffer a great economic transformation if it was to provide its future inhabitants with a better quality of life.

It took the recommendation of a large consulting firm, after several attempts by members of the private sector of the state, to convince the federal authorities of the advantages of allowing the installation of foreign firms along the Mexico-US border that could take advantage of the growing population in the Mexican side and the need of US firms to reduce costs by locating assembly plants in less expensive locations. Such was the birth of the maquiladora model. Over time, and thanks to the initiative and leadership of several businessmen in Chihuahua and Ciudad Juarez (city bordering El Paso, Texas) to create a large and complex industrial hub, that currently employs approximately 300,000 people.

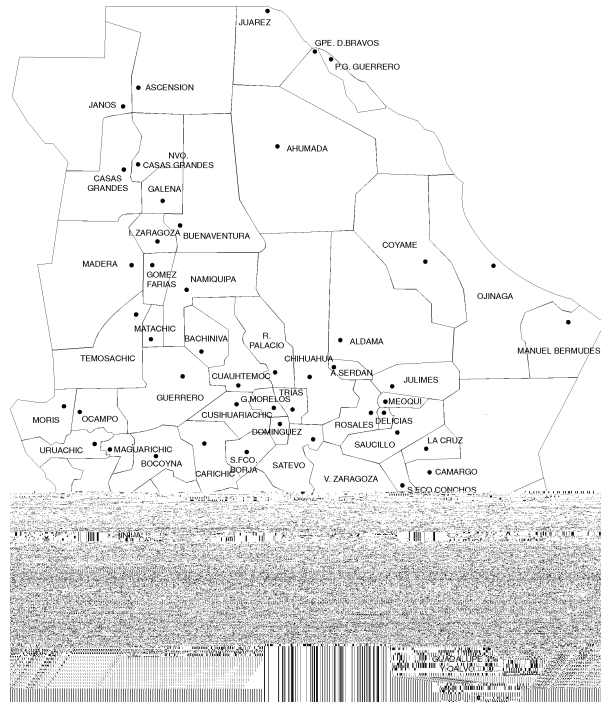
Over time the industrial activity of the State has evolved from basic assembly and classification operations (coupons and apparel) to more sophisticated operations, including higher value-added operations, such as pagers, radars and electronic boards.

² Model that originally proposed the installation of assembly plants in the Mexico-US border region. The components were to be imported and assembled in Mexico and then exported to the world markets.

Although the products assembled in Chihuahua became more complex, up to the beginning of the 90's the maquiladora model had hardly changed. The industrial plants would import components and raw materials from elsewhere in the world, and would assemble and export them to manufacturing or distribution centers in the world in the United States. It was a win-win situation. Mexico, with a lower cost-structure than the investing countries, generated employment, while the international companies saved millions of dollars in wages.

The main benefits of the model for Mexico were employment generation and monetary inflow were the main benefits of the model for the host country. At the same time, in over 20 years of existence the maquiladora model created world-class managerial expertise in the region.

Over time, the maquiladora model also created some problems for the region. First, the plants started concentrating heavily on the bordering region, creating enormous demands for infrastructure that the local authorities were not always able to meet. Second, the explosive job-generation process produced an enormous migration from the southern parts of the State and the country to Chihuahua and particularly to Ciudad Juarez. By the mid 90's both



cities concentrated 85% of the economic production and 65% of the total population of the State. Third, the main source of revenue for the cities from the maquila plants was wages, rather than the integration of local firms to the manufacturing process. Local integration has seldom been over 2% of the total value of the products produced in the State of Chihuahua by the maquiladoras.³

The huge success of the maquiladora model in creating jobs and raising the level of wealth in Chihuahua created dependency. In fact, by the mid-eighties the motto was: "it is unnecessary to promote Chihuahua anymore. Maquiladoras will come by themselves". Soon the State would pay a huge price for this belief. By the late eighties there was a notorious descent in the number of new maquiladoras established in the State. At the same time a severe drought hit the State, pressuring the primary sector, Chihuahua's alternative engine for economic growth.

THE LEADERSHIP OF THE PRIVATE SECTOR

It was in this moment when the private sector of Chihuahua decided it was time to step in again. Just as it had done 30 years before when the maquiladora model started in the State, Chihuahua's private sector saw the need to intervene. This time, it would start by ordering a comprehensive diagnostic of 17 socio-economic sectors of the State, report that was completed by Monterrey Tec in 1992, precisely the year when the economic crisis was at its highest point. The fall was so big that by 1992, according to official data, the State was able to create only 154 new jobs, out of the

³ According to data from the Secretaría de Desarrollo Industrial of Chihuahua State Government, the percentage in 2001 was 1.5%.

28,000 needed every year to meet the new labor force supply. Unemployment and underemployment combined reached levels of 22%.

“Desarrollo Economico del Estado de Chihuahua” (DESEC), a private sector organization of voluntary affiliation funded the study, with a modest contribution from the State government. The preliminary results were conclusive: Chihuahua’s economy needed some serious re-tooling. That officially marked the beginning of the Chihuahua Siglo XXI project.

At the same time and perhaps inspired by the efforts of DESEC, businessmen and academics from different parts of the State started doing studies and regional-planning processes in their regions. Particularly strong were the efforts of Ciudad Juarez, that started a process to explore possibilities for regional integration with El Paso, Texas, its sister city across the border and, months later, the efforts of the businessmen and academics from Parral, in southern Chihuahua that grouped around the “Nueva Vizcaya Project” led by the University of Chihuahua.

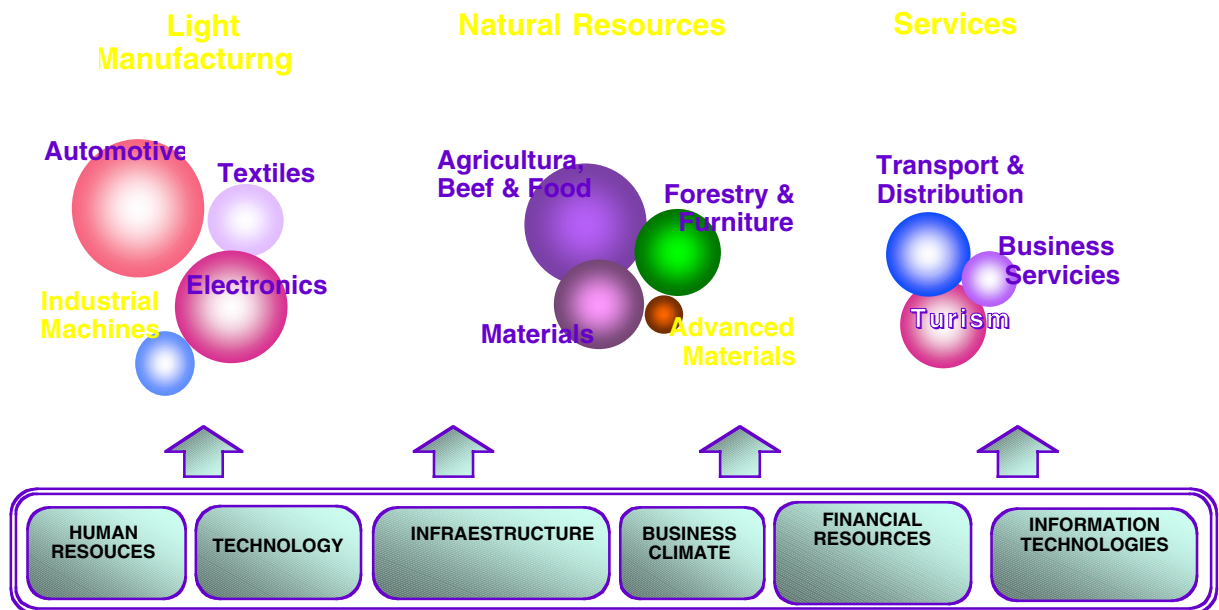
By the middle of 1992 the context was particularly complex, since the electoral process resulted in a victory for the main opposition party (PAN) which was to govern the State for the first time. In fact, that government was to be the first opposition-led government in four decades in Chihuahua. Aware of the complex political process, DESEC presented the Chihuahua Siglo XXI platform to the candidates of every major party, before the election, in order to gain political support for the initiative, regardless of the result.

By the time the governor from the rightist PAN came to power, he strongly endorsed Chihuahua Siglo XXI as the platform for economic development of the State and challenged the private sector to “work together for the benefit of the State”. He also made clear that he would only work with “a united private sector”. Therefore, DESEC, together with “Desarrollo Economico de Ciudad Juarez “(DECJ) soon made a proposal to launch a model of economic redesign for the State. The study was to be funded equally by the private sector and the State government and an international bidding process was initiated.

The contract was awarded to Stanford Research Institute⁴, in an attempt to bring further value-added to the comprehensive diagnostic made by Monterrey Tech.

⁴ Ted Lyman, current partner at Economic Competitiveness Group was director of the Project, while Salvador H. Avila, the case’s presenter and now Senior consultant for ECG on competitiveness and learning, participated as Special Projects Coordinator at the Monterrey Tech Center for International Competitiveness that was in charge of the first phase of Chihuahua Siglo XXI (the comprehensive diagnostic).

Economic Clusters in Chihuahua



The intervention of the consulting firm (SRI International) marked the beginning of the second phase of the Chihuahua Siglo XXI project and was characterized by the proposition of initiating a cluster-formation process among the economic sector of the State. Based on economic analyses of the State and taking the information provided by the diagnostic previously made, 9 clusters, grouped in 3 areas were considered relevant for the State of Chihuahua: light manufacturing, automotive, electronics and textiles and apparel; natural resources, agriculture, cattle, forestry and materials; and services, transportation and distribution, tourism and business services.⁵ These economic activities were mostly at the pre-clustering stage, with different degrees of integration respondent to their historical evolution. For instance, the light manufacturing group was much more integrated and possessed more solid vertical and horizontal chains.

Due to the maquiladora model, some companies had links to local suppliers, distributors and the many plants in the State had a well-established transportation and distribution system. On the other hand, the activities linked to the primary sector, such as agriculture, cattle and mining were in a pre-clustering stage, in which firms or individuals worked very much independently. The services group had evolved somewhat differently, with business services strongly linked to the maquiladora industry but with Tourism going its own way, unsophisticated and with little infrastructure.

⁵ Over time, 2 other clusters were added: tools and machining and advanced materials.

SOME VALUABLE LESSONS

The model of intervention proposed by the consulting team in Chihuahua was to conform the clusters following a 3-level pyramid, with the leading companies on top, the supplier organizations in the middle and the economic infrastructure on the base. Each group/cluster was organized according to its own degree of evolution and sophistication. As part of the strategy the consulting team proposed a strong component of social intervention, very strongly focused to the leadership of the clusters.

The consulting team accompanied Chihuahua's effort for a little over 2 years, with activities mainly devoted to organizing a base and launching the effort during the first year of the project and the rest in follow-up stages.

Results varied. Undoubtedly there was economic progress as a whole in Chihuahua, although it was noticeably stronger in some clusters than in others. After 6 years of intervention some of the economic sectors presented initial signs of clustering: some companies were working together by making strategic alliances and were cooperatively funding initiatives of economic infrastructure. Trust, particularly between the private and public sectors seemed to be increasingly growing in the State. A few early victories slowly paved the way for building higher levels of trust between the different actors.

One of the main lessons learned early in the project in Chihuahua (and crucial to the trust-building process) was the need to form regional clusters rather than State-wide or supra-regional ones. The social and economic stratification of the Latin-American countries often makes difficult the integration of companies in a cluster. Particularly in Latin America this understanding is crucial to make successful interventions. On many occasions the local idiosyncrasy or even the lack of basic physical infrastructure makes unreal the ambitions of advisors and consultants to form national clusters. We have seen too many efforts wasted in this intent.

THE IMPORTANCE OF FORMING STRATEGIC ALLIANCES

One of the main assets of Chihuahua Siglo XXI was the many members of the private and academic sectors who came to positions of power in the new administration. That represented not only political power for the project but also strategic support, in the form of the many initiatives that were adopted by members of the government and supported by the executive departments in the administration. Those administrative created synergy and benefited from the project, by adopting many of its initiatives and including them in their annual operative plans. On the other hand, the project also benefited by reporting many of the programs and projects that the departments had in the different regions of the State, which, in many cases, became early victories for Chihuahua Siglo XXI.

Inevitably, the Chihuahua Siglo XXI organization had a strong conceptual component and stayed at the planning and strategic level.⁶ Such was its purpose. Lacking arms and legs to implement things, it looked elsewhere for support to translate its philosophy, plans and operative programs into specific actions. The allies came mainly from 3 sources: entrepreneurs that had a specific initiative suitable of benefiting from Chihuahua Siglo XXI's umbrella; entrepreneurs that decided to champion one or

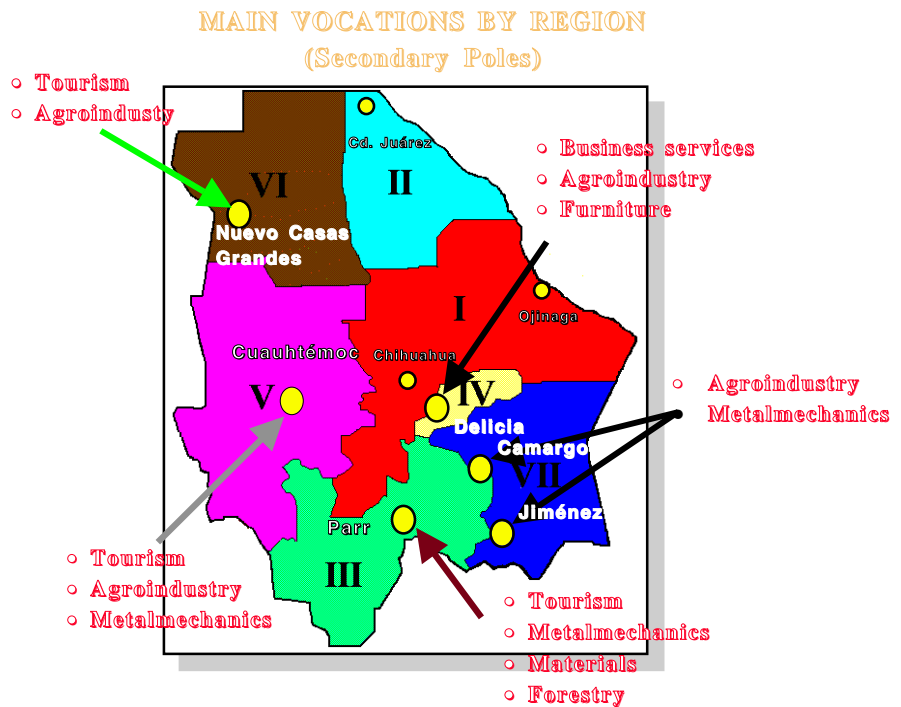
⁶ In fact that was a consequence of a strategic mistake for the Project. Chihuahua Siglo XXI strongly initiated as a project "from the top down". Only later the initiatives created by the different groups and clusters started dictating the agenda.

more of the initiatives of the project; and government agencies with vested interests in further developing the model as part of their own efforts.

One of these public units that benefited most and at the same time strongly supported the Chihuahua Siglo XXI project was the Industrial Planning and Regional Development Department, which insisted on regionalizing the initiatives launched by the project. A regionalization map of Chihuahua was developed, with 3 criteria in mind: Given its geographic extension, there was a need to regionalize the development efforts in Chihuahua. Therefore, a strategy of development poles was followed, which included not only

Ciudad Juárez and Chihuahua City, but every other major city in the State (shown in the picture). In addition, there were two other conditions considered as requisites to form an economic region: the existing communications infrastructure and the economic vocations of the regions.

Two main principles inspired the effort, to achieve sectoral equilibrium and regional equity, which were the same principles inspiring the regionalization of Chihuahua Siglo XXI. The project focused on generating initiatives of 3 types: cluster initiatives at the leading and supplier-firm level, economic infrastructure initiatives (cross-cutting) and “flagship initiatives” which were those initiatives that were considered good showcases for the project.



THE IMPORTANCE OF THE LOCAL COUNTERPARTS

One of the right decisions that Chihuahua made in the different stages of Chihuahua Siglo XXI was to form special “counterpart teams” with different objectives. For instance, at the beginning of the second phase, a counterpart team was formed and led by the people that had led the first phase done by Monterrey Tec. This particular unit was originally meant to be the depository of the technology being transferred by the consulting team. At the same time, and in order to facilitate the human processes occurring around the intervention, 2 other bodies were created, the “Consejo Directivo” (Directive Council) and the “Consejo Consultivo” (Advisory Council); the former was to coordinate the efforts made by the project and function as a decision-making body. Senior members from the private sector (from different regions of the State) and the government participated. The Advisory Council functioned as the liaison body between the regions, the clusters and the Directive Council.

Over time additional counterpart teams were also formed. Particularly important was the team in charge of advancing the methodology of the project, with the

assistance of the counter part team in charge of receiving the methodology from the consultants (now known as “Organizacion Chihuahua Siglo XXI”) and the local university, the Universidad Autonoma de Chihuahua. This effort was particularly important because it allowed Chihuahua to adapt the technology being applied to the local conditions and idiosyncrasy, while at the same time becoming the learning body for the State. The benefits of the learning process that occurred in such unit would later be reflected in the competitiveness efforts of other regions in Mexico and other countries such as Morocco, Argentina, El Salvador, Panama and Nicaragua, among others.⁷

Another right decision of Chihuahua Siglo XXI’s directive was to look for ways to institutionalize the model. Unfortunately, such decision was made late in the process as it often is the case in this kind of interventions.

THE ROLE OF DIFFERENT ACTORS

One of the big decisions that a clustering-formation process has to make refers to the level of “appropriateness” of the efforts and initiatives from all actors involved. Experience has taught us that each case is different. In some instances, the private sector is strong and aggressive and there is little need for government leadership. In some others, the initiatives die without a strong participation from the government. And there are also cases in the middle, in which private intervention exists but there is also the need for strong public intervention.

Chihuahua belongs to the third category. As in most of Latin America, public intervention was needed, in a subsidiary way in some clusters and in a more leading way in others. And, with few exceptions, there was always the need for public intervention for the development of economic infrastructure.

During its second and third phases Chihuahua Siglo XXI was housed in offices belonging to the state government, close to the Ministry of Economic Development. It did not take long before the public image of Chihuahua Siglo XXI suffered an unfavorable impact: the project was tagged as a program of the state government. That was not only inaccurate (half of the funding kept on coming from the private sector) but it was highly damaging for the project itself, both in terms of its credibility, particularly among the extended private sector and in terms of its potential survival in new administrations.

With a new gubernatorial election approaching fast, in 1996 the private sector started worrying about relocating the project. It never happened, for different reasons, which was strongly damaging for the project, especially when a governor from a different party was elected for office in 1998.

On the other hand the government counterpart also started worrying about the institutionalization of the whole model. It started concerted efforts with different groups in society to institutionalize the initiatives launched by the project, particularly the several decision-making bodies and the initiatives of economic infrastructure development created. Thus, in coordination with the private sector a comprehensive legislative effort was launched in the form of the first “Economic Promotion Law of the State of Chihuahua” that made official bodies such as the Council for the Economic Development of the state, which was to function as the highest consulting and decision-making body of the state, with the participation of both the public (presided by the governor) and also the private sector from the different regions of the state. Other bodies proposed in the law were the “Science and Technology Council of the State of

⁷ In subsequent years members of the ECG’s team and of Monterrey Tec would participate in the clustering processes of these countries.

Chihuahua” (which was signed and officially created) and the regional forums for economic development.

Unfortunately those efforts became late because they were stopped by the winning candidate who considered them “inheritances from past administrations”⁸

However, some of the initiatives were able to survive the change of administrations, “hidden” in the working plans and programs of some of the State agencies. Two of the most successful ones were the technology development program, which was aimed to strengthen the economic infrastructure of the main clusters and the program for the formation of small industrial plants in rural areas of the State, as a strategy to regionalize development.

CHIHUAHUA SIGLO XXI TODAY

Chihuahua Siglo XXI continued operations after the new government came to power, practically by demand of the different actors that participated in the process. But the project now lacked the support from the state government.

Paradoxically, the project is now operating in a very small scale, almost completely led by the public sector. However, its legacy lives in the many regional-development initiatives carried on in different parts of the world through the lessons learned that have been applied in the different regions (including other parts of Mexico and some countries in Central and South America, Africa and Eastern Europe).

Although Chihuahua Siglo XXI has not been able to achieve all of its original goals, perhaps the biggest deed of the Project is its strong impact on the societal-learning process. In recent years, other regional initiatives have emerged in Chihuahua, in a more local scale, all of them resembling in one way or another some of the strategies followed in Chihuahua Siglo XXI. In addition, different collaborative initiatives have also continued on emerging in the different sectors of the economy, some of them clearly geared towards a process of clusterization.

Just like the quote attributed to Mozart says “the most beautiful part of music is the silence”, perhaps the biggest legacy of Chihuahua Siglo XXI is how notorious is its absence. There seems to be a clear awareness among the economic actors of the state that there currently is a lack of a comprehensive development strategy for the state as a whole. Chihuahua Siglo XXI is considered a landmark in competitiveness projects in the world and will undoubtedly continue to be taken into account in future efforts to develop Chihuahua and other regions.

⁸ The Economic Promotion Law Initiative is still in Congress and is currently being re-launched by the legislature.