



## The future of the future: Strategic foresight in Latin America

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### ABSTRACT

With few differences in timing, future studies in Latin America were initiated with a linear conception of reality. Orchestrated with techniques such as the Delphi, future studies were supported by mathematical principles of probability. Several countries have surpassed this stage while moving into strategic foresight. Strategic foresight analyzes the future as a multiple reality. In other words, it means thinking differently and not reading reality in a linear manner. It means accepting that there is not one future but several futures and that one question could have more than one answer.

This change has demanded a shift in mentality. The presence of the disciplines in universities is of vital importance. For example, the Technological Institute of Monterrey (Mexico) and the Universidad Externado de Colombia (Bogota) offer foresight and strategy programs at the graduate level.

This article describes how different individuals, groups, agencies and institutions in Latin America have emerged thanks to the support provided by the science and technology governmental agencies of each country. The author provides examples from different countries including Colombia, Brazil, Chile and Mexico. Currently, strategic foresight is slowly gaining recognition and acceptance as a compass for productive sectors and as a generator of competitiveness.

However, despite the contributions of strategic foresight, Latin American countries, with the exception of some of the above-mentioned countries, have struggled to take off into the future. The role of strategic foresight can become the driving force behind this awakening, if the challenge of linking global trends with local contextualization through scenarios is accepted.

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### 1. Introduction

French philosopher Gaston Berger, well known as the ‘father’ of French forecasting, pointed out that if current events reflect decisions of the past, future events will be the result of decisions of the present; [1] however, this mental attitude which enables one to prepare for the future, is not always in the mind of people and institutions. People and organizations may have a vague idea of the importance of the future which they generally define based on conceptual structures and primary management terms.

To strengthen the understanding and implementation of strategic foresight and its use in exploring the future of organizations, businesses and territories, some Latin American higher education institutions have timidly introduced future studies. In fact, only two Latin American Universities offer Programs at the Graduate level in this field: The Monterrey

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Institute of Technology in Mexico with a Master's degree program in strategic foresight,<sup>1</sup> and Externado of Colombia University, in Bogota which offers a Master's degree program on strategic thinking and foresight.<sup>2</sup> It also has a specialization program plus an MBA option with emphasis on foresight and strategy. It is estimated that between these universities more than 1000 students have graduated as professionals in Mexico, Colombia and Latin America.

Education plays a critical role in this situation. Latin American education has taught people to think in a linear form for many years. However the emergence of models such as the theory of chaos, the theory of complexity, fractal geometry, among others, has helped many to recognize the importance of strategic foresight in order to accept that the future can have different expressions.

Now, most of those who grant some importance to the future still conceive it as a single reality and only a few dare to think of it as multiple realities. By definition, foresight thinking assumes that the future is multiple; in other words, that we can imagine various images representing either evolutions or ruptures of a current situation.

It is not easy to break up the linear way of thinking and adopt a different perception of future reality. But, to not do so might mean that Latin American businesses either go back to the past or remain stuck in the present, ignoring important developments such as innovation, competitiveness and creativity.

## 2. Forecasting behavior in Latin America: strengths and weaknesses

Let us look at some examples of Latin American experiences which reflect the dichotomy of reading reality in these two different ways: linear versus multiple.

The study conducted by "*Convenio Andrés Bello*"<sup>3</sup> in 13 countries is a good example of technological foresight analysis. Using a multiple reading of the future, it also identified world technological trends and articulated them within the Latin American reality.

The same study begins by recognizing the following sectors as the most relevant for the future development of the countries [2]:

- Energy
- Environment
- Agriculture and food
- Information Technologies and communications (TICs)

The outstanding aspects of the Convenio Andres Bello study are reflected in the analysis of the scenarios which follows in Fig. 1.

In Fig. 1., the scenarios for the future are framed between two axes. The horizontal axis is the level of research in the countries, where the plus (+) sign indicates an optimal state with studies close to the frontier of knowledge. The minus (–) sign shows an incipient situation where very basic and traditional theories are used. The vertical axis shows the strengthening of productive sectors where the plus (+) sign shows the transformation of productive sectors such as information technologies, airplane manufacture, new forms of energy, and the minus (–) sign shows production in traditional sectors such as farming and agricultural, mining, fishing, and woodlands.

The future of these countries is framed within four scenarios as a result of the only four mathematical combinations possible from the plus and minus signs above.

**"The vicious circle"**. This scenario reflects the current situation: a combination of light research centered on traditional products (farming, agricultural, mining) a result of low quality education levels. These three variables: products, research and education are interrelated.

**"With foreign hand"**. Goods are produced assuming high technology but without local research. This is the case of the 'maquilas'<sup>4</sup> which use local labor and international know-how.

**"More of the same but improved"**. Goods are produced coming from natural resources with high technology which assumes sophisticated research.

**"World class"**. This scenario assumes the arrival of information technologies, new forms of energy, etc., and consequently local research in those areas.

The countries we are studying have four avenues from now into the future:

1. Go towards the 'maquila', as was initially done in Mexico;
2. Take the route of sophisticated research for its natural resources, farming, agriculture and environment as an example;
3. Explore using research and industrial products such as information technologies, energy, airplane manufacture, and robotics;
4. Remain in the vicious circle: a mediocre college education which generates mediocre research which in turn generates low quality production.

Strategic foresight has not only penetrated regional topics as stated previously, but it has explored small businesses as well. The program "Designing scenarios for your enterprise" promoted by the Bogota Chamber of Commerce [3], for small businesses, makes

<sup>1</sup> ITESM, the Instituto Tecnológico y de Estudios Superiores de Monterrey. Itesm (México) [http://www.mty.itesm.mx/dhcs/deptos/ri/maestrias/prospectiva/Plan\\_estudios.html](http://www.mty.itesm.mx/dhcs/deptos/ri/maestrias/prospectiva/Plan_estudios.html).

<sup>2</sup> Universidad Externado de Colombia. <http://portal.uexternado.edu.co/>.

<sup>3</sup> The "Convenio Andrés Bello" was formed by Argentina, Bolivia, Colombia, Cuba, Ecuador, Spain, Mexico, Panama, Paraguay, Peru, the Dominican Republic and the Bolivarian Republic of Venezuela.

<sup>4</sup> The 'maquila' is the industry that produces goods for export using foreign technology but local labor.

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