

# **George Stigler and His Influence on the Transformation of the Chilean Economy**

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## INTRODUCTION

The systematic contribution of the University of Chicago to Chile began in the late 1950s mainly through the implementation of an agreement between its Department of Economics and the Faculty of Economic and Administrative Sciences of the Pontifical Catholic University of Chile<sup>1</sup>. This prestigious American university is known around the world for its high-quality research not only in economics, but also in other fields such as physics, sociology, education, etc.

Its influence in our country is the result of the contribution made and being made by Chilean graduates in transforming the national economy. Thus, the country went from a development model based on a closed economy, with a high level of State intervention and ongoing macroeconomic imbalances, to a development model based on an open economy, with high regard for macroeconomic balance, free and competitive markets, and the State playing a subsidiary role. In other words, a free market economy, with a strong focus on social policies oriented to the most deprived sectors of the population. As a result of this strategy, which has been systematically implemented from the mid-1970s to date, the country has made significant progress in terms of economic and social development. The per capita GDP growth rate went from 1.9% between 1961 and 1970 to 2.3% between 1981 and 1990 to 4.2% between 1991 and 2004. The merits of the strategy are attested to by the dynamism attained by our economy as the implemented reforms have matured. In this respect, it is worth mentioning that, over the same periods, the world growth rate was 3.3%, 1.2%, and 1.4% respectively. The growth attained in Chile has been due to investment increases, human capital improvement, and productivity increases promoted by the new public policies as well as consistency in the implementation of the latter<sup>2</sup>.

As I have said before<sup>3</sup>, I think that the intellectual influence of the University of Chicago and its contribution to the development of national human capital is a key factor in explaining the Chilean phenomenon. In fact, through the so-called 'Chicago Boys', this academic institution introduced a dramatic change in the professional level and qualifications

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<sup>1</sup> Larroulet and Domper M. de la L. (2004).

<sup>2</sup> Loayza and Soto (2002).

<sup>3</sup> Larroulet (2006).

of the people who have conducted the Chilean economy for more than thirty years. The impact is due to the past and present involvement of the graduates from this university in the creation of public policies and, in a more indirect way, in the promotion of graduate studies as well as training of Chilean economists in other universities as prestigious as the University of Chicago. In other words, the competition process on the market of ideas triggered by the agreement between the Catholic University and the University of Chicago has enabled a significant increase in the qualifications of experts and in the quality of the debate on economic policy in our country.

Now, the contribution of ideas by the University of Chicago is well known, especially in some areas and by some of its main scholars. Thus, its influence in the field of monetary policy and therefore on Chile's success in reducing the inflation rate through scholars such as Milton Friedman (Nobel Prize 1976) and Robert Lucas (Nobel Prize 1995) was crucial. Its influence on the efforts made in Chile to improve national human capital, especially through the training delivered by professors such as Theodore Schultz (Nobel Prize 1979) and Gary Becker (Nobel Prize 1992), has also been remarkable.

Likewise, there is no doubt concerning the contributions from scholars such as Harry Johnsons and Jacob Frenkel in the field of international trade as well as their recommendations in favor of free trade. In the field of development and public finance, the father of the 'Chicago Boys', professor Arnold Harberger, and Larry Sjaastad cannot be left behind, the same as professors Sherwin Rosen and James Heckman (Nobel Prize 2000) in the field of labor economics. Last but not least, the contribution on the principles supporting a free market economy from the influential intellectual Friedrich Von Hayek (Nobel Prize 1974), who was a professor at the University of Chicago for some time, deserves special mention.

In this work, I will analyze an area where the University of Chicago has been influential, but which is not widely known in our country. I am referring to microeconomics and especially to the role of the State in relation to open competition and market regulation, in other words, to the economic policies associated with monopolistic markets, externalities, and information asymmetries, and therefore, where economics and politics interact, as they involve the design of laws and economic institutions. This area, which I studied as part of the

Ph.D. program in Chicago by the late 1970s and early 1980s, is the one I will address in the following sections. First, I will refer to the leading professors in this field of economic science, describing their main contributions and publications. Then, I will mention the courses they taught and the main contents. Next, I will analyze if there was a “Chicago School” that had an influence in this field. Finally, I will evaluate the contribution of training in economics on the Chilean development process.

## SCHOLARS AND THEIR IDEAS

The main leader in this area, through his research and courses, was the 1982 Nobel Prize winner, George J. Stigler. This professor was a prolific author in different fields, such as economic history<sup>4</sup> and economic thinking<sup>5</sup>. However, his main contribution was in the field of economic regulation and industrial organization. Stigler published several books on these topics<sup>6</sup> and numerous articles in highly prestigious journals such as the “Journal of Political Economy” and the “Journal of Law and Economics”. His main contributions were, among others, his “Oligopoly Theory”<sup>7</sup>, where he analyzes the market conditions facilitating the collusion of firms in a given industry. His approach emphasizes that in order to understand this phenomenon “behavior is no longer something to be assumed but rather something to be deduced”. Stigler analyzes the conditions facilitating the breach of oligopolistic agreements through secret price cuts among participants. Another contribution by Stigler is his well-known article “The Economics of Information”<sup>8</sup>, where he analyzes how information and knowledge are scarce, and therefore, valuable resources. Then, as there is no perfect information in markets, consumers seek for it until they reach an optimal price, given by the level at which the marginal benefit of demanding it is the same as the marginal cost of obtaining it.

The higher the price dispersion in markets, the more the ignorance. Therefore, searching and obtaining more data will be beneficial for consumers. As a consequence, information will be tracked until its benefit is maximized.

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<sup>4</sup> Stigler (1965).

<sup>5</sup> Stigler (1982).

<sup>6</sup> Stigler (1968) and (1975).

<sup>7</sup> Stigler (1964).

<sup>8</sup> Stigler (1961).

Advertising is a method to provide consumers with information from producers. According to Stigler, advertising on prices is an efficient way of informing the market, thus largely reducing price dispersion.

Another classic contribution was his “Theory of Economic Regulation”<sup>9</sup>, where he critically analyzes the idealistic view that State regulation always leads to a better result from a social welfare perspective. Stigler shows that regulators act in pursue of an objective, which is maximization, and therefore, they will adopt public policy decisions consistent with their interests. This problem was illustrated by means of a research<sup>10</sup> where he concluded that intervention by the authority had not had the expected effect on electricity prices. Then, another explanation had to be found for their behavior. Thus, for Stigler, regulators may be ‘seized’ by the sectors under their supervision, thereby losing their capacity to promote solutions similar to the ones that would have arisen under conditions of competitive markets. In other words, there are not only “market failures”, but also “State failures”, which suggests extreme caution when dealing with regulation.

In the 1970s, Stigler was teaching a course for students at the School of Business and the Economics Institute called “Public Control of Economic Activity”. This course addressed the areas of the economy where the State is involved, such as externalities, public goods, knowledge, and information. Also, economic theories on the political process and market regulation were studied. His students were able to learn about the theoretical and empirical contributions from economists such as K. Arrow, J. Buchanan, G. Becker, and R. Coase, who would later receive the Nobel Prize.

He was a very demanding teacher in his classes and compelled students to read a large number of texts. Two years after some of the economists in my generation studied with him, we were satisfied to learn that he had received such renowned prize.

Another intellectual leader in the area of regulation and State involvement in microeconomics is the 1991 Nobel Prize winner, Ronald Coase. This professor, who used to teach at the University of Chicago’s Law School, stands out for his influence on two main

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<sup>9</sup> Stigler (1971).

<sup>10</sup> Stigler (1962).

aspects. The first is addressed in his article called “The Nature of the Firm”<sup>11</sup>, where he explains why companies exist and when it is convenient for them to grow by merging with others, either horizontally or vertically.

Coase’s explanation is based on the concept of transaction cost. The higher the costs – and therefore the more difficult the agreements and contracts between suppliers and customers –, the lower the incentives for these transactions to take place on the market and, conversely, the higher the number of transactions that will take place within a company under the former’s hierarchy and authority. Thus, mergers and other company growth formulas seek cost reductions and therefore they increase the economy’s efficiency.

However, there is no doubt that his greatest contribution is his classic article called “The Problem of Social Cost”<sup>12</sup>, where he explains that within an economy – without or with low transaction costs – externalities can be resolved by the free operation of private economic agents. On the contrary, Coase points out that only if these transaction costs are high, the market will not be able to solve externality problems and State intervention will be necessary. Thus, Coase, as well as Stigler, rigorously argued that the solution to a “market failure” was not necessarily a pigouvian tax or another State intervention, but policies reducing transaction costs and promoting problem resolution through the market.

A highly influential professor in the area until today is Sam Peltzman, who stood out not only for his picturesque clothing – as he attended classes wearing red, yellow, and green pants and jackets – but also for his contribution to the theory of regulation and its actual effects. In particular, Peltzman demonstrated that, many times, laws that were intended to protect consumers ended up by inducing other practices that were negative for them<sup>13</sup>.

Peltzman taught the Industrial Organization (E-380) and Market Regulation (E-381) courses. In these courses, he dealt with subjects such as structure, concentration, collusion, pricing policies, product quality, monopolistic competition, information economics, the theories of the firm, and many other topics, from both a theoretical and empirical perspective.

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<sup>11</sup> Coase (1937).

<sup>12</sup> Coase (1960).

<sup>13</sup> Peltzman (1978).

The different theories behind government intervention in markets were studied in the “Regulation” course; a deep economic analysis of politics was made, examining, among others, regulation and its effects on monopolistic markets, on markets associated with natural resources, or on markets impacting the environment or workers’ health.

Other influential academicians, involved in industrial organization and regulation seminars, were Peter Pashigian and Denis Carlton, both authors of texts widely used in this area of economics<sup>14</sup>.

In this review of University of Chicago professors whose contributions modeled the Industrial Organization area, I cannot fail to mention Lester Telser, one of the most brilliant minds I have ever met. He made a great contribution to the understanding of what are the entrepreneurial practices, such as price fixation for resale to retailers and advertising expenses, responding to efforts that do not imply a reduction of competition<sup>15</sup>. Finally, up to this day, Chicago Professor Richard Posner<sup>16</sup> (who is also a renowned judge) has remained an important figure due to his intellectual authority. This scholar and Harberger are the authors of classic articles on the cost of monopolies for society<sup>17</sup>.

## IS THERE A CHICAGO SCHOOL OF MICROECONOMICS?

The debate on this subject has been academically intensive. I believe that it can indeed be stated that Chicago was a school in the fields of industrial organization and the regulatory role of the State in the sense that it had an impact on the knowledge about these topics through its research and teaching. Thus, for instance, a book that had great influence on the analysis of competitive markets is Edward Chamberlin’s “The Theory of Monopolistic Competition”<sup>18</sup>. In this book, the author develops a model of how companies compete, differentiating their products through advertising – a mechanism that grants them more power over consumers and therefore extraordinary profits. This approach was criticized in Chicago by academicians such as Harold Demsetz, who wrote the article “The Nature of Equilibrium

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<sup>14</sup> Pashigian (1995) and Carlton and Perloff (1994).

<sup>15</sup> Telser (1958).

<sup>16</sup> Posner’s contributions are analyzed in more detail in the Lima and García chapter in this volume.

<sup>17</sup> Harberger (1954) and Posner (1975).

<sup>18</sup> Chamberlin (1948).

in Monopolistic Competition”<sup>19</sup>, and Lester Telser, who wrote “Advertising and Competition”<sup>20</sup>. Both emphasize the pro-competition nature of advertising, among other reasons due to its contribution to market information. The latter is supported by an article called “Chamberlin versus Chicago”<sup>21</sup>, published by Archibald in the Review of Economic Studies in 1961. In general, it can be argued that in all the areas related to the role of the State in markets – such as monopolies, externalities, information asymmetries – Chicago academicians developed theories based on solid foundations and a prediction ability that supported the existence of a “school” showing strong confidence in the role of markets. These theories were intensively taught and promoted in class. Consequently, it is not surprising that its influence on other leading universities in the world and in the field of economic policies has been significant until today<sup>22</sup>.

## ITS IMPACT IN CHILE

The contributions of the University of Chicago to microeconomic theory and the regulatory role of the State also had impacts in our country since the mid-1970s. In what follows, I will highlight some of these impacts.

### 1. THE STATE AND REGULATION

The work by Stigler, Peltzman, and others showed that, under certain conditions, State regulation has inefficient results, in which case, the best option is to allow the free operation of market forces. In fact, their theories on regulation point out that the regulated party (the company) seizes the regulator (the State agency) which, in seeking to maximize its own interests, sets prices above the equilibrium level, thereby benefiting the company being regulated and punishing consumers.

The purpose of Chilean legislation, namely that concerning pricing for natural monopolies, is to remove the possibility of State agencies being seized by stakeholders.

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<sup>19</sup> Demsetz, H (1959). Demsetz, professor at the University of California, Los Angeles, is a renowned advocator of the Chicago school. One of his main contributions is the classic article “Why Regulate Utilities”, published in 1968.

<sup>20</sup> Telser (1964).

<sup>21</sup> Archibald (1961).

<sup>22</sup> Stigler (1992).



Thus, legislation governing electricity, telecommunications, and drinking water introduces the concept of “model company” in order to reduce distortion possibilities due to information advantages on the part of the regulated company. Consequently, this “model company” operates under optimal cost and technological conditions, as a result of which the regulated company tends to be more efficient. In turn, fees are fixed according to short-term marginal costs (R. Coase’s solution for natural monopolies), and a fixed cost is charged to cover the average cost. In another area, such as banking, the regulations implemented since the mid-1980s are also intended to reduce the possibility of “seizure”, namely through a reporting obligation to the public and not only to the authority, as before, and the establishment in legislation of even rules, reducing the Superintendency of Banks’ discretionary power. In general, this approach led to the promotion of market deregulation or, when regulation was determined to be required, the need for well-designed regulations enabling replication of market competition, was promoted.

## 2. COMPETITION PROMOTION

The Chicago School also had great influence in this area. From the beginning of pro-market reforms, competition promotion was sought by reducing market entry barriers, liberalizing prices, promoting access to information, and allowing bankruptcy. A comprehensive analysis of legislation enacted or derogated since the mid-1970s shows ongoing concern for reducing or removing restrictions to free access to markets. It is worth noting that from 1973 an antitrust legislation<sup>23</sup> was enacted, which largely followed the American trend in this area. Consequently, an antitrust enforcement authority was established in order to prosecute any such behavior and special courts were created for this purpose. A reform enacted in 2003 improved this institutional framework by enhancing, among other aspects, the technical and independent nature of Free Competition Court judges<sup>24</sup>. Also important is the influence of ideas arisen from debates dealing with vertical and horizontal integration. Experts recognize that vertical integration, mergers, and other corporate practices

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<sup>23</sup> Decree Law 211 of 1973, regulating open competition.

<sup>24</sup> Law 19,911, creating the Free Competition Court.

do not necessarily respond to monopolistic interests, but rather aim to increase efficiency, thereby benefiting consumers<sup>25</sup>.

### 3. COMPETITION THROUGH INTERNATIONAL TRADE

Another area where the influence of the Chicago School has been present is the understanding of international trade as an instrument to promote competition. An open economy, especially in a small country as Chile, enables competition not only among domestic producers, but also among domestic and international producers. In this sense, there are two elements which are characteristic of the Chilean openness that reflect the ideas of the School mentioned above. The first is the flat tariff concept, i.e. all goods pay the same customs tariff, whether they are raw materials, intermediate goods, or end products. This unique feature of the Chilean experience is intended to reduce seizure risks and enhance the pro-competition nature of the customs tariff reform. The second is customs tariff establishment by law. Here, once again the aim is to curtail those stakeholders who intend to obtain special income by seizing the public authority in order to modify the customs tariff system.

### 4. DESIGN OF INSTITUTIONS AND LAWS

Another aspect of this influence is observed in the design of regulatory institutions in markets with information asymmetries, externalities, or monopolistic trends. In general, the Superintendencies regulating capital markets or the pension fund system or the institutions regulating energy, drinking water, and other utilities are agencies characterized by an obligation to disclose a significant amount of information to the public in a transparent manner, by a limited officer discretionary power, and by a high professional level. These characteristics result from a design focused on a high technical quality in these institutions' decision-making process and a low seizure risk. Likewise, despite it has been proposed, the idea of concentrating the regulatory capacity into a single Superintendency has not been accepted, since this would increase the possibility of seizure by stakeholders, and therefore,

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<sup>25</sup> This is illustrated by horizontal retail market mergers resulting in 10% selling price cuts. See Lira, Riveros, and Vergara (2005).

a certain level of competition among institutions is preferable. The purpose is to reduce the risks of a few being favored and to increase the probability of having an efficient regulation.

The Chicago approach has also contributed to the teaching of law and the design of laws as a result of the so-called economic analysis of law<sup>26</sup>. Scholars such as Richard Posner, Ronald Coase, and others have had great influence in this area. Today, a large number of the most modern law schools have incorporated texts on this topic and develop their courses based on this approach. Another example is Criminal Law and the public policy on crime prosecution, where the influence of authors such as Gary Becker<sup>27</sup> has been crucial.

## 5. MARKET CONFIDENCE

There is no question that market valuation as a mechanism through which human beings make decisions and allocate resources has been another great influence. The optimistic view of the Chicago School on how powerful and rational people are when making decisions and the skeptical view on the capacity of the State to do so have permeated Chilean economic policy for more than thirty years. It is interesting to remember that this country was a pioneer in privatizations, coming ahead of the most famous cases in the world, such as the English case, with Prime Minister Margaret Thatcher. Even more, privatizations were also deep and had a positive impact on the national economy<sup>28</sup>. This positive view of private initiative has been confirmed by its persistence over time. It is not surprising that, under the government of a center-left coalition such as the *Concertación*, new privatizations have taken place in such complex areas as drinking water utilities, which is a very scarce practice at an international level. In addition, the private sector has been involved in areas that have been traditionally managed by the State, such as port infrastructure, airport infrastructure, the penitentiary system, and the roads system. It is worth noting that, as a result of this process, the private sector invested US\$ 1.8 billion over the period 1995-2005, while the State invested US\$ 1 billion.

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<sup>26</sup> For more information on this topic, see the work by García and Lima in this volume.

<sup>27</sup> Becker (1968).

<sup>28</sup> Larroulet (1994).

## 6. IMPACT ON GROWTH

The microeconomic approach, the regulatory role of the State, the openness of different sectors to entrepreneurship, and the promotion of competition are some of the areas in which the Chicago School has had an influence in Chile through those of us who studied at this university or, in a more indirect way, through the impact of these ideas on the teaching of economics in both foreign and Chilean universities. But this contribution has also had concrete results: the country has grown at a much higher rate than before a free market economy was introduced and poverty rates have been dramatically reduced, providing better living conditions to all Chileans.

Perhaps the most direct contribution of microeconomics-oriented scholars such as the ones mentioned in this chapter is reflected in the so-called “total factor productivity” or according to Alito Harberger “cost reduction”<sup>29</sup>. In other words, the process through which companies produce goods and services in an efficient way is encouraged when there is a competitive, flexible, and business-oriented environment. As shown in the table below, productivity has been a key factor in explaining the country’s growth<sup>30</sup>.

Now, there are several factors behind this productivity increase: macroeconomic balance, political stability, international trade openness, etc. But there is no question that structural or microeconomic reforms, some of which have been highlighted in this document, have played a key role. This has been verified by the most recent research studies on domestic growth. In fact, Fuentes, Larraín, and Schmidt-Hebbel have found that, once macroeconomic stability has been achieved, microeconomic reforms are essential to increase productivity<sup>31</sup>.

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<sup>29</sup> Harberger (1998).

<sup>30</sup> Beyer and Vergara (2002).

<sup>31</sup> Fuentes, Larraín, and Schmidt-Hebbel (2006).

Period	GDP Growth	Contribution to Growth (%)		
		Productivity	Labor	Capital
1976-1980	6.8	3.7	2.3	0.8
1981-1985	-0.1	-2.2	1.2	0.9
1986-1990	6.8	2.3	2.5	2.0
1991-1995	8.7	3.7	1.5	3.5
1996-2000	4.1	0.1	0.5	3.6
1998-2001	2.4	-0.6	0.1	2.8

Source: Beyer and Vergara (2002).

## CONCLUSIONS

I cannot fail to mention here the pride felt by all of us who studied at a university with such a quality and intellectual rigor as those characterizing the University of Chicago. It was a hard and demanding period. It could not have been different if we consider that while we were studying at the Library or attending classes at the Social Science building – where the Economics Department was located – five professors who would later on receive the Nobel Prize in Economics were performing research. However, the most important thing is the favorable impact of these studies on our country: economic and social development and the ensuing example for other regions of the world, as this showed that, when the right public policies are applied in a consistent and systematic manner, countries progress.

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