Capital Market Development: A Systemic Approach

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Abstract

At present, there is consensus on the limited development of the Capital Market (CM) in Argentina, both in terms of market capitalization in relation to GDP[2], and as compared to other Latin American economies, such as those of Chile, Brazil, and Mexico.

Despite its extensive historical performance, domestic Capital Market [3] is still at an emerging stage, and due to its failure to develop its full potential as an economic development financing source, it has remained in a relatively marginal position.

This "underdevelopment" of the domestic capital market stems from a set of economic and non-economic factors, restricting its potential as a basis for social saving, and as a source of financing to the real economy.

The purpose of this paper is to focus on certain non-economic aspects and provide a supplemental explanatory approach on the low growth of the capital market in Argentina.

I. **Complex System Perspective**.

Capital market behavior may be analyzed by applying the doctrine of complex systems, which has been introduced in economics in the last 20 years by different pro-evolutionary authors with the intention of explaining the performance and differential dynamics of productive systems.

According to this model, market behavior has certain properties and conditions that may not be *reduced* to its constituent parts and, in this sense, this approach is defined in opposition to reductionist methodologies, which explain the aggregate by conducting an individual analysis of its parts, or linear causes originating from exclusive essential factors (economic, cultural, and regulatory reductionism).

For example, the economic reductionist approach asserts that the cause for reduced Capital Market growth is mainly based on the absence of tax benefits, on the

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[2] In 2007, Argentina's ratio amounted to 22 % of its GDP, while in the case of Chile, Brazil, and Mexico it was 130%, 104%, and 45%, respectively. For reference purposes, it should be noted that in developed economies such as those of the United States and Spain, the ratio amounts to 144% and 125%. Source: IMF World Economic Outlook Database; World Federation of Exchanges (WFE).

[3] This refers to the Capital Market as a System, which includes a set of agents and institutions involved therein (Stock Exchanges and Markets, issuers, intermediaries, supervisory and regulatory entities, institutional investors, and investing public).

high risk-free interest rate determined by public debt securities, and on the absence of appropriate incentives for going public. This does not mean that certain specific economic policy instruments may not be effective to promote CM development.

From a purely regulatory point of view, the main cause might be rooted in the high cost generated by the regulatory framework and the legislation in force, while a purely "cultural" vision would point at a barely "Schumpeterian" corporate role and high risk aversion resulting from recurring macroeconomic crises, with the consequent erosion of the capital invested in stock or other financial assets.

As pointed out by Erbes, Robert and Yoguel (2007):

"*On the contrary, according to this perspective, it is considered that the system generates hidden variables that may not be identified by studying its individual parts. In this relation, describing a complex system requires not only knowing the operation of its parts but also knowing how they interrelate from a non-mechanistic perspective. Under this approach, economic systems change and evolve according to their own rules, routines, and path dependence, and to their interactions with the environment*"[4].

Under a systemic perspective, Capital Market development is related to four dimensions of interdependent *determining factors*:

1. Trust.
2. Entrepreneurial culture.
3. Learning and Innovation.
4. Regulatory and statutory framework.

According to some authors[5], the first factor –*trust*- is a driving principle on which the remaining economic and non-economic factors interacting within the capital market are built.

II. **Determining Factors**.

1. *Trust*.

The regulatory model establishes a body of laws and rules making up the formal framework of obligations and commitments, in order to guarantee full compliance with the "agreements" made by savers (investors) and issuers (underwriters), and to optimize System performance.

However, the regulatory system cannot in itself replace *trust* as a value for social cohesion and as a "guarantee" for ultimately complying with the agreements made by market players.

Trust in the fulfillment of commonly established rules and the ability to trust institutions and individuals are the essential basis for a system of shared values, on which a sound and stable financial system and the capital market are built.

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[4] Erbes, A., Robert, V. and Yoguel, G. *Sistemas complejos y desarrollo económico [Complex systems and economic development]* (2008), Instituto de Industria, Universidad Nacional de General Sarmiento, paper presented at the XII Schumpeterian Society Conference, Rio de Janeiro, July 2007.

[5] Zamagni, S.; Fukuyama; F. Putnam, R.

The essential nature of *trust* as a critical factor for capital market development is evidenced in the fact that the greatest financial and stock market crises in history were triggered by the public's loss of confidence in current policies and in the institutions' ability to tackle the crisis effectively, and/or by the perceived existence of a wide and growing gap between the value of key variables and public -subjective- expectations, notwithstanding any underlying objective economic causes.

Furthermore, trust understood as shared value and "social capital"[6] (Fukuyama, 1995) plays an essential role as a factor for attraction or rejection of social saving in relation to the financial system and the capital market. Building trust also calls for a long-term horizon, taking into account the historical and cultural determining factors involved.

In the specific case of Argentina, the process for building trust requires an efficient regulatory framework, as one that: minimizes information asymmetries, guarantees transparency and investor protection, and maximizes corporate governance quality, thus easing the balance between issue supply and investment demand both dynamically and statically. In fact, market practices agreed upon between agents and regulatory bodies, guaranteeing *transparency* and minority *investor's protection*, are basic factors for market maturity. [7]

In comparative terms, countries with a stronger focus on the financial consumer and investor protection evidence the greatest capital market growth.

As noted above, "trust" as a social value is the result of a social practice, influenced by historical and cultural factors, and it is a determining factor in capital market development.

Trust is an essential factor in the construction of an attractive environment for savings to be turned into investment through the capital market. In this sense, it is essential to adopt and strictly comply with the codes of good governance practices, business ethics, and investor protection[8].

In the Argentine context, the construction of sustainable trust conditions faces a two-fold difficulty, and thus a double challenge, both for private entities and regulatory bodies. Despite repeated macroeconomic turbulence, followed by many other stability periods, the latter have proved to be incapable of regaining trust and building consensus.

In this sense, stabilization policies have lead to short-term trust periods, though not sustainable for long enough to lead to changes in the structural conditions of Capital Market supply and demand.

This is mainly due to the fact that trust requires an extended term of low volatility (not only economic but also institutional volatility) to develop. And after several decades of inconsistent policies, in which economic and legal security was not

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[6] Fukuyama, F. Trust: *La Confianza*, Ediciones B (1998) (based on *Trust: The Social Virtues and the Creation of Prosperity*, 1995).

[7] Consider the *subprime* crisis, in which several factors gained weight, due to risk ratings and the regulatory agency's actions, thus leading to a lack of transparency and a trust crisis.

[8] For more references, see *Developing Corporative Governance Codes of Best Practices* (2005), World Bank Publications.

fully guaranteed, the process for consolidation of social consensus was affected, this being the factor of greatest impact on the foundations of trust within the social fabric.

The construction of *sustainable social trust* will require acceptance and implementation of *demanding formal practices for investor protection*[9] , as well as proper institutional balance, resulting from the interaction between regulatory bodies and the private sector.

In this regard, and citing Stefano Zamagni, further analysis should be made on the formation of social capital, which he referred to as *linking*[10], i.e., the link between the private sector (investors, issuers, stock exchanges and markets) and the public sector (regulatory entity).

[9] An essential aspect for building "long-term sustainable trust" is the existence of a legal and information framework according to the standards in effect in the most developed economies, an efficient disciplinary system, and proper qualification of the professionals involved in all process stages.

[10] Zamagni makes reference to the Professor of Public Policy at Harvard University, Robert Putnam, who identifies two different types of social capital. ***Bonding*** *capital* consists of the set of relations established among individuals belonging to the same social group, such as a family, an association, or a small community. This type of capital creates short-term trust. ***Bridging capital,*** in turn, is created when individuals belonging to different spaces establish strong relationships. According to Putnam, this type of social capital builds the widespread trust that is useful for a country's economic and social progress. Zamagni identified a third category: ***linking capital***, "*in which the civil organized society establishes a link with the institutions of a country to develop common initiatives*". According to his analysis, in Argentina, *bonding* social capital has a solid presence, since close bonds between people are generally strong, but *bridging* capital is less frequent in our society, and *linking* capital is almost non-existent, with only a few exceptions. In his opinion, "*the civil society and the political class are set apart, incapable of communicating with each other and, particularly, of developing joint actions. This is the true bottleneck that prevents Argentina from attaining full development and progress*".

2. Entrepreneurial Culture.

As explained by Hanpden-Turner and Tropenaars [11], certain non-economic factors play an essential role as driving forces for development of capitalist economies. At the macroeconomic level, static comparative advantages and abundant natural or financial resources may be favorable initial conditions; however, historical experience[12] shows that the conditions of the competitive environment, knowledge, and development of valuable associative networks are usually more effective success factors than wide initial resources.

With similar characteristics as at the microeconomic level, a business culture profile[13] refers to the leadership style, to the perspective relative to time, to formality vs. informality in relation to strategic planning, to internal rules, processes and procedures, and to a focus on association vs. non-associative individual competition. Such cultural components, whether it be in their macroeconomic dimension (amplified Porter's "diamond"), microeconomic dimension (company, value chain, networks), or sector dimension (economic sector) determine the development potential, given an amount of initial economic resources.

Now, the Argentine business community, strongly based on a family structure, is affected by two aspects limiting the business development horizon: the degree of informality[14] , on the one hand, and the availability of resources for investment in R&D, on the other.

This enterprise profile has faced difficulties to generate the required degree of formality, which would allow it to finance long-term investment in the institutional credit market. [15]

In addition to macroeconomic instability conditions, these restrictions have prevented –on the supply's side– the generation of a critical mass of issues to be offered in the market.

On the side of the demand of such instruments, the situation is also at an early stage. The diagnosis became clear in a survey carried out by the *Comisión Nacional de Valores* (Argentine Securities Commission) in 2007. The results showed that 77.5% of

[11] Hanpden-Turner, C. and Tropenaars, A. *Las siete culturas del capitalismo* [*The seven cultures of capitalism*](1995), Ed. Vergara.

[12] For more information, see Porter, M. *Las Ventajas competitivas de las naciones* [*The competitive advantages of Nations*] (1990), Ed. Vergara.

[13] *The "business community" is not a homogeneous class of individuals, because it is a conglomerate of majority and minority shareholders and executives, in which strategic long-term decisions are usually joint and, in a few cases, decision-making is concentrated on an individual that holds ownership and management rights.*

[14] "Funds usually come from an internal funding source, where the assets of owners, their family and friends are mixed in a debt market and informal property". Rol de las PYMES en el Mercado de Capitales Argentino [SMEs role in the Argentine Capital Market]. Joint Work CNV-UADE. 2008.

[15] The importance of family-owned companies is also present in other countries, for example Spain. The companies trend not to issue securities for their own financing in the market is the result of the intention to avoid losing family control, and the absence of markets designed for small companies (for example, alternative stock markets for SMEs with fewer issue requirements). *J.Segura Sánchez's comment.*

the minority investors surveyed had no knowledge about investments, while 70.3% did not know about the capital market.

This prevailing culture in the Capital Market represents a restriction for its development, and might have different causes:

- On the side of institutions: Reduced market association and connectivity, biased short-term strategies.

- On the side of supply: Lack of knowledge about the CM, absence of skilled professionals, companies with a high degree of informality, preference for full corporate control, preference for fewer information and regulatory compliance requirements.

- On the side of demand: Lack of knowledge about the CM, perceived inadequate protection, absence of arbitration channels for conflict resolution.

It should be noted that, in the case of Argentina and other Latin American markets, there is a significant concentration of financing through the Capital Market in larger companies, i.e., a reduced CM presence and its low acceptance by medium and small sized companies is the common denominator.

This phenomenon is observed in both emerging economies and more successful debt markets, such as those of Chile and Mexico: These companies have access to financing through debt placement in the Capital Market. In figures, in 2004 in Mexico, the percentage of corporate debt held by the nine major conglomerates reached 88%[16], while in the case of Chile, corporate bond issues by company size also evidence this phenomenon. The so-called mega-firms account for 93% of issues between 2000 and 2003, and the remaining 7% corresponds to large[17] firms.

3. Learning and Innovation.

In addition to trust and business culture as determining factors for capital market development, there are *learning and innovation* capabilities.

The *learning* capacity results from the combination of *absorption* and *connectivity* capacities[18]. On the other hand, the system's *absorption capacity* may be defined as "the ability to recognize, assimilate, and apply new external information" (Cohen and Levinthal, 1989)[19]. This ability is not only related to the possibility of

[16] Cemex accounts for 16%; Ford 12%; KOF 11%; Telmex 10%; America Movil 13%; Bimbo, Pemex, and GMAC 7%, respectively; and IMSA 5%.

[17] Mega firms are defined as those whose annual sales, net of VAT, exceed [US$17.2 million]; large firms sales range between [US$16.8 and 2.8 million]; medium sized firms show sales between [2.8 million] and [US$0.7 million]; small firms sales are between [U$S 0.7 million] and [U$S 68,688] and micro firms sales are below said amount. Micro firms represent around 82 percent of all firms, while small firms account for 15 percent, and medium firms for two percent. Large and mega firms combined account for only one percent of all firms. Source: Banco Mundial (2004); figures have been adapted by the author.

[18] Erbes, Robert and Yoguel, 2008

[19] Quoted by Erbes, A., Robert, V. and Yoguel, G. *Sistemas complejos y desarrollo económico[Complex systems and economic development]* (2007), Instituto de Industria, Universidad Nacional de General Sarmiento.

acquiring the knowledge existing in the environment, but it also implies the ability to identify useful knowledge and generate new knowledge. The *connectivity capacity* is associated to the system's potential to establish relationships and generate interactions with other systems, in order to enlarge its knowledge base, create additional knowledge, and increase the initial absorption capacity.

On the other hand, a higher *learning capacity* means that the system is in better conditions to make the most of the advantages derived from the interactions between the agent network and the opportunities in the external environment.

In this respect, Carlin and Mayer[20] (1998) explain how developed financial markets facilitate the so-called "equity financing" typical of innovating firms. Ireland and Israel are examples of this: highly limited economies that, through the development of industries with intangible assets and lots of R&D (Research and Development), were able to trigger national GDP in relatively short periods. This is due to the fact that, in transition economies, the *learning by doing* curve is replaced by the innovating force of technologies that exceed average productivity in the whole market from the very beginning. These thriving sectors typically involve high connectivity, which allows them to share discoveries and innovations in real time, and integrate them to the production process.

In fact, the *degree of innovation*- resulting from the two previous processes - is associated to Schumpeter's process of creative destruction, which means that the system builds new higher-value generating socio-technological approaches in a novel and effective fashion. According to this perspective, business competition is understood as a *process of creative destruction* creating variety through innovation, while also reducing it through selection mechanisms, which, in turn, depend on market institutions[21]. In this context, innovation is the result of a process of creative destruction[22] (Schumpeter, 1912), as it transforms the routines of companies and institutions through formal and informal learning.

Capital Market development is closely related to the learning and innovation capacity, as it enables creative destruction by transferring resources to young and efficient companies. This is possible because a transparent market allows overcoming the obstacles of asymmetric information, so that younger companies do not require their own corporate equity or special connections to obtain financing.

In short, the financial market acts as a balancing force distributing capital more evenly[23], which benefits small, innovating and thriving companies, particularly in need of financing in their fragile early stages and in subsequent consolidation stages.

On the other hand, and following the analysis on The Competitive Advantage of Nations, when the objective is to enable development based on innovation and learning, contexts with higher competitive demands are preferred to those with lower demands.

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[20] Carlin, W. and Mayer, C. *Finance, Investment and Growth* (1998), Journal of Financial Economics, Cambridge University.
[21] Erbes, Robert and Yoguel, 2008.
[22] Schumpeter, J. *Teoría del Desarrollo Económico* [*The theory of Economic Development*] (1912).
[23] See Levine, R. and Zervos, S. (1999) *Stock Markets, Banks And Economic Growth*, American Economic Review (OECD).

Wurgler[24] (2000) presents this view, as he states that financial development is intended to increase investment in what he calls *sunrise* industries, to the detriment of those that are more conservative and less innovative (*sunset firms*).

Thus, the process of creative destruction not only allows for the reassignment of resources from obsolete companies to new, smaller and productive ones, but it also encourages the former -through new competition-, to invest in their enhancement through new technology or organizational work changes favoring increased efficiency.

There is also a positive externality in this process that goes beyond the development of more or better companies, with a more dynamic and innovating character, and which has a really positive effect on growth. It consists in an indirect effect, insofar as it urges companies to formally organize themselves to obtain financing through the Capital Market, which, in turn, positively reinforces market transparency[25]. At the local level, there are multiple signs of this phenomenon. *Doing Business*, the annual survey carried out by the World Bank in 178 countries in order to assess the regulatory environment for entrepreneurs, established that, in this respect, Latin America is actually "falling behind other regions".

Now, the process of creative destruction precisely becomes more evident in transition economies, with a great number of entering firms. Mexico is a highly dynamic country in terms of creation of companies: many of them enter the market and expand quickly if they are successful, or fail just as quickly if unsuccessful.

The remarkable capital market development in several emerging countries (in particular Brazil, Chile, and Mexico) in the last decade evidences that if there are change processes in place within complex contexts –strongly affected by loss of trust and economic crises-, there are also really significant results in terms of recovery and development. [26]

In the case of Brazil, the stock market successfully reacted to the leadership proposed by BOVESPA in 2000-1, with a working model based on Innovation and Learning.

Within a business environment negatively affected by the Brazilian crisis of 1999, BOVESPA[27] presented certain development objectives based on a long-term strategy, with the participation and agreement of the main public and private entities. Such entities included the Ministry of Finance and the Bank of Brazil, and non-governmental organizations specialized in Corporate Governance.

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[24] Wurgler, J. (2000) *Financial Markets and the Allocation of Capital*, Journal of Financial Economics, Cambridge University.

[25] The importance of CM access also involves submitting to external discipline and scrutiny that improves efficiency and requires more transparency and conduct codes.

[26] The emergence of these markets is the consequence of significant change processes, although the expansion can be influenced by speculative fund movements. The growth in the number of public companies, and the relevance attained by the *Novo Mercado de Sao Paolo,* might indicate that this is a structural change, rather than a speculative one.

[27] BOVESPA innovation is reflected in the *comprehensive approach* adopted*,* which included: definition of medium and long-term strategic objectives, new market segmentation, information dissemination and training, technological change, and incentives to draw new companies to the *Novo Mercado.*

4. **Regulatory and Legal Framework**.

The regulatory and legal framework is the last component of the system of determining factors, which work interdependently to enable or prevent Capital Market development.

In mature economies, Capital Market development has gone hand in hand with economic development. A relevant percentage of individuals' and families' savings was invested in stock in public companies, in investment funds, or other instruments; this process gave way to the "socialization" of savings and its application to productive investment.

The regulatory and legal framework has played different roles, depending on the cultural environment in each market. In most cases, it was based on market self-regulation, while it was rarely based on the public entity's direct regulation, with various degrees of intensity.

The dynamics of financial and stock exchange crises in recent years (particularly following the *Enron* case) introduced qualitative changes in the vision of regulatory entities, minority shareholders, and the investing public in relation to the importance of the regulatory and legal framework.

The most relevant change in this regard refers to the concept of *regulatory efficiency.* The regulatory and legal framework (body of rules, codes, auditing and control instruments) has gone from being considered a negative factor for CM development, to becoming a necessary alternative[28] for restoring credibility and trust in mature markets after the *subprime* crisis.

In the case of emerging economies, where the CM went through a "late" development in relation to its relevance for economic development financing, the regulatory entity can play a *two-fold role,* depending on the business culture and the leadership degree undertaken in the process of change.

On the one hand, when market development requires reinforcing transparency, defense of minority shareholders[29], and looking after the system's financial stability, the entity's role should be to promote the implementation of measures reflecting the latest regulatory doctrine prevailing on the matter in the most advanced countries. On the other, the regulatory entity should reconcile the requirements of the private and public sectors so as to enable market formation through the participants' inclusion in the CM, both the investor and the taker of funds.

In this sense, public policy should enable a change in the perception of economic agents, since the CM is not yet positioned as a source of financial resources for companies to obtain financing; hence its reduced development.

As part of this cultural change, the policy for private and public sector financing should extend the alternatives available, in addition to the most common programs including subsidized interest rate, tax refunds, or the like, incorporating tools promoting the issue of *equity* versus debt.

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[28] Samuelson, P. *¿Por qué hace falta rescatar a Wall Street?* iEco 21/07/2008.
[29] Transparency also makes quotes less manageable, and thus protects minority investors.

III. **Conclusions.**

Reduced Capital Market development stems not only from economic factors but also -and particularly- from aspects concerning institutional trust, the cultural environment, and the regulatory and legal framework.

There is a relationship of interdependence –rather than linear causality- between the economic and non-economic dimensions, i.e., the balance in macroeconomic variables does not in itself automatically guarantee the creation of new practices in savings culture and corporate financing in relation to the CM.

Taking such interdependence into account in the performance of the Capital Market System, the solutions to drive its development should be derived from breakthrough premises -and not from those merely focused on instrumental and specific aspects-; a strategic and systemic approach is required.

The creation of new financial products, the generation and implementation of public support programs, institutional advertising, information dissemination and education programs, and transparency codes: all of these are critical aspects for CM development in both size and depth. In this regard, the role of regulatory entities is essential to afford credibility and transparency to the market.

The role of an efficient capital market is critical for effective communication between financial resources under the control of institutional investors [30] and real economy financing needs.

As previously mentioned, it is necessary to have available certain additional capacities, not "only those related to the possibility of gaining access to the knowledge existing in the environment", but those that also involve "the ability to identify useful knowledge and generate new knowledge". [31]

The *determining factors* under analysis are the basis of these differential capacities to be developed. According to Senge (1998), the required change must fulfill the characteristics of a ***learning organization.***[32]

[30] The inventory of resources available to *AFJP* (Private Pension Funds), Retirement, Life and Insurance Companies, *ART* (Occupational Risk Insurer) is in excess of $ 50 billion as of June 2008.

[31] Erbes, A., Robert, V. and Yoguel, G. *Sistemas complejos y desarrollo económico[Complex systems and economic development]* (2007), Instituto de Industria, Universidad Nacional de General Sarmiento.

[32] The CM must become a "learning organization" as defined by Peter Senge (La Quinta Disciplina, MIT, 1998). The Learning Organization has certain key elements: a) Shared Vision and Values, b) Team Learning, c) Systemic Thought.