Inclusion gains in markets for scarce products

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Abstract

Microeconomic models of equilibrium are not real descriptions of reality. Even more so in markets where scarcity is a growing source of concern. The pricing mechanism in these cases is not only misleading but can lead to more scarcity and disorganization of markets for products dependent on natural resources. The inclusion gains concept defined and discussed in this paper, the new criteria it highlights for defining the frontier between firm and market transactions and the consequent restructuring of markets for scarce products might be therefore a step in the right direction, both theoretically and in practice. Inclusion gains can replace or complement the transaction costs notion to understand and ameliorate both the internal as well as the external (market) organization of firms.

Keywords: scarcity, inclusion gains, transaction costs, pricing mechanisms, reorganization of markets

1. The problem: scarce natural resources and non-equilibrium markets

Many years ago, in an academic debate, a colleague reacted to a statement I made about scarcity, with a challenging question: what would be the concept or my concept of scarcity? I hesitated and did not answer.

I have returned to this question many times during the following years and I now believe that the reason for my hesitation is that, as Bertrand Russell (1905) once pointed out, there are concepts so fundamental to sciences that they should not be defined (because definitions cannot encompass all the complexity of the phenomena) but, instead, their forms of manifestation should be described.

I believe that scarcity is one of these concepts that shall not be defined, especially nowadays. Such concept is fundamental to many social sciences as law, economics and sociology. In a world where different natural resources face an increasing natural limitation and do not seem to have any foreseeable substitutes (imagine the case of drinking water or breathable air for example), the constant and growing insufficiency of those "goods" leads to an also growing inefficiency of markets regarding the sustainable supply of such goods to most parts of the users.

There is an additional reason for concern. "Those goods" tend to be an increasing concept encompassing constantly more and new types of goods. Since natural resources are raw materials

for almost all existing products, the more scarcity there is regarding natural resources, the trend is that such characteristic shall spread out to many other manufactured products to a point that scarce products can turn out to be the rule rather than the exception.

For such a reality, a definition of scarcity is both obvious and insufficient. Much more relevant are the forms and consequences of its existence, which can be identified by means of two elements or characteristics of markets for scarce products in modern societies: (i) the much greater difficulty to reach market equilibrium, (ii) the less significant role in the medium and long terms of pricing mechanism as a relevant tool for the organization and functioning of these markets.

Regarding the first element, it can be said that not only market equilibrium cannot be obtained but rather there is a growing depart of the demand and cost curves from any possible convergence point. The needs of a growing population for those goods raises the demand curves while the increasing exhaustion of the goods makes the offer curves increasingly lower.

The market tends clearly to an "adverse selection" by which the more market transactions are attempted, the larger the difference between supplier's and user's expectations will be. After the first round of negotiations, in which a scarce product is offered at a non-equilibrium price (at least for most users), the natural (and market "rational") attitude of the supplier of that "rare good" will be to raise the price of his valuable product to his next customer. On the other hand, the growing number of people "entering" the market with "subprime" economic capabilities puts them further and further away from any possible participation in market transactions until we

reach a market situation in which there will be no market equilibrium at all or such market will be qualified as a “market for essential products from nature” accessible only by the “super-rich”. These two possible situations are depicted in figures 1 and 2 bellow.

Figure 1 - Non-equilibrium

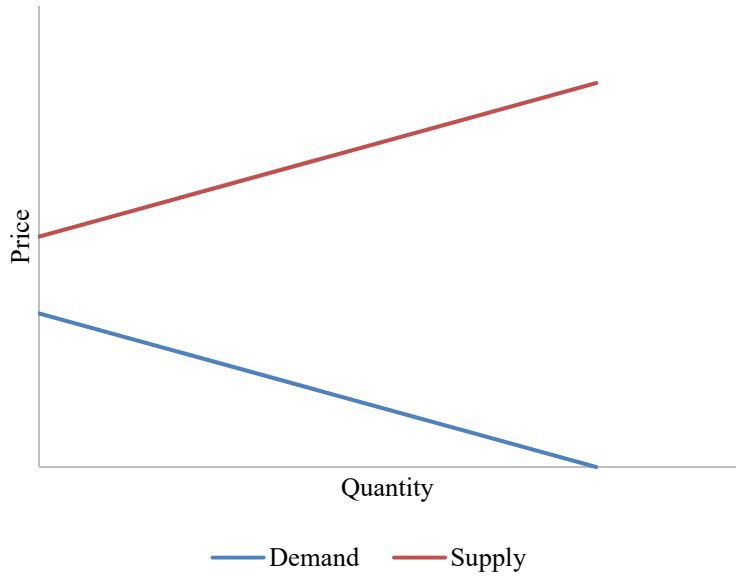
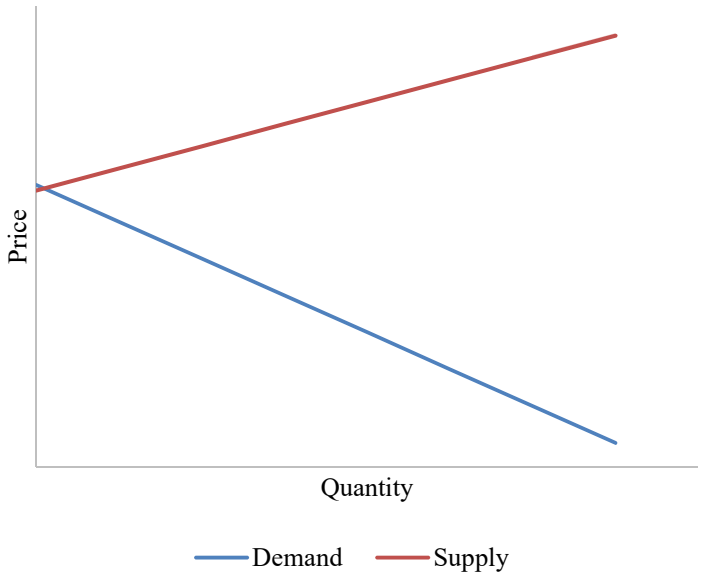


Figure 2 - "Super-rich only" equilibrium



2. Failure of the pricing mechanism

The second characteristic, the failure of the price mechanism, is a consequence of the first one. It is nonetheless important to describe it since from it we can derive relevant normative suggestions to address the problems of such “markets”.

Note that the price criterion was considered a key element for transmitting information and guiding choices on the market in a very specific historical moment, i.e. the times when stimulus was needed to boost exchanges and expand trade.

Nothing was more natural, therefore, than to choose an index that was capable of relating directly individual utility to individual wealth, i.e. price. That is because (the classical) market is

only an instrument for transmission of information (with all known imperfections) as long as it simplifies absolutely the needs and objectives of individuals participating in the market, reducing them to personal utility.

And that is perhaps the most unexplored failure of all economic constructions (classical and neoclassical) on the theory of markets. It is the absence of critical reflection on the price as a factor for economic intermediation.

As an information intermediary, price is a rather poor element. It allows for a hyper-simplification of information, basically restricting the information that is exchanged in the market to availability of the transaction by the selling agent and the need of the buyer agent.

The reference to "transaction availability" by the selling agent is intentional. Indeed, it is not correct to believe that price is a good conveyer of information about relative scarcity. On one hand, this information is often concentrated in one or a few economic agents. Indeed, monopolization or oligopolisation of markets has long since ceased to be a failure or systemic exception, becoming the rule of market organization (Salomão Filho, 2015). Antitrust and regulatory systems have shown themselves completely incapable of containing the march towards monopolisation and oligopolisation of markets. Thus, the price reflects much more the willingness to sell by the producer/sellers than a reliable criterion for relative scarcity. Consequently, it allows manipulations and abuses as almost a rule of conduct derived from the free will of agents with dominant power.

But this is not the only criticism that can be addressed to the price mechanism. Many goods, due to their intrinsic characteristics, do not lend themselves to an assessment of relative scarcity. Relative scarcity is not a type of data that can be taken into account for all goods, given the essentiality of some goods and their need/possibility of sharing. Therefore, for products for which no equilibrium can be reached, prices are actually only signals of the existence of almost insurmountable asymmetries of bargaining power between the purchasing and the selling side and in some cases, signals the growing absolute unavailability (absolute scarcity) of the natural resource needed for the production of the good.

Therefore, it is necessary to imagine another element for transmitting information that enables consumers' choice to become more informed and, at the same time, avoid the abuse/manipulation of information by the seller.

This indicates the need for creating and nurturing a new and different kind of market, a market that would allow evaluation of elements other than merely price and relative utility of products. The same way that price was instrumental to trade, the most significant socio-economic objective since the end of the Middle Ages, it is necessary to determine what other dominant social and economic objectives the modern world imposes. Or rather, to discover them, as they will not be pursued or produced naturally.

Just as it was necessary to introduce negotiable instruments in the Middle Ages to give impetus to trade, restrained and limited by medieval geographical and political restrictions, different structural impulses are necessary to overcome the current fetish about equilibrium in markets and

price relevance as a market mechanism. To reorganize markets, what seems to be necessary is not economic creativity, but structural change in legal institutions to organize exchanges and economic transactions based on a basket of economic goals and not only the binomial utility/price.

In my opinion, as will be explained in the following section, these structural changes or the restructuring of such markets needs different kinds of tools, all of them based on new concepts regarding both the functioning of firms and markets. If equilibrium cannot as a rule be reached through standard market transactions alone, then economic incentives for growth and development must come either from changes within the firms or from the restructuring of markets. For both purposes the inclusion gains concept that will be introduced seems very helpful.

3. Inclusion gains

When Ronald Coase wrote "The nature of the firm" (1937) he was living in abundant world where prices and costs seemed to be an obvious driver of the Smithian invisible hand. This is why the reduction of transaction costs was, at the time (and still is), an elegant and powerful explanation for both the existence and the size of firms.

Although the transaction cost idea is a powerful justification for the existence and size of the firm, there seems to be more relevant justifications for the surplus gains of the firm and,

consequently, for its development and success. Rather than transaction costs, these justifications should consider what I shall from this point on call “inclusion gains”.

The surplus and efficiency gains that make modern firms so powerful and relevant to economic actors are not only and may not even mainly a result of the reduction of transaction costs. In an economy based on technology, size and net effects and therefore all more frequently, increasing returns of scale, transaction costs might be not relevant enough to justify the enormous power and relevance of firm. Gains come from including and organizing factors of production and not mainly from saving or eliminating costs.

Some simple historical examples can help illustrate this point.

The first one has to do with the appearance of the modern corporation itself. Both in their protohistory with the East India Companies in the XVII and XVIII century and in their development in the XIXth and XXth centuries, the main element for the aggregation of capital that helped finance and put forward both the Mercantilistic Era and the Second Industrial Revolution was the individual shareholders interest inclusion in the companies’ interest, which was not anymore solely the one of the Crown (for the East Indian Companies) or the founder (controlling shareholder or shareholder group) but also that of the included class of “shareholders”. The relevant element for their development and their enormous impact on the economies at the time was not that, instead of borrowing money from lenders, the companies spared transaction costs and submitted this group (of shareholders) to a hierarchical system

internal to the company.[1] This could be a helpful element for its economic success but not the ultimate justification for its existence and for the changes they brought to the previous ways of organizing economic activity.

What was relevant was that by including new groups, the definition of firms´ interest changed in an innovative way to comply with these interests. And through this group "cooperative" new definition of the firm's interest, new types of efficiencies were produced.

This is what happened in the history of the modern corporation with the inclusion of the individual or minority shareholder´s interest, the justification for many of the most important changes in corporate organization that followed. The various revolts of shareholders against the non-distribution of profits that contributed to the disappearance of the East India Companies are a historical demonstration of this assertion (Brenner, 2003). After such conflicts, company law discipline of the modern corporation had to, more a more, in a slow process of development, recognize fundamental rights to individual shareholders (as the rights to dividends and others). This was a driving force in the development of the accountability of management to shareholders, that it is still nowadays one of the most important elements for the limitation of agency costs and production of pro-shareholders, pro-market efficiency gains by corporations. Therefore not the spared costs of market transactions and the gains of firms' hierarchies but mainly the gains of including shareholder's interests in the company's agenda and thus transforming the definition of the firm's interest to include this new group was the driving force for the entrepreneurial development that followed.

[1] In Coase´s theory, the replacement of markets by internal firms' hierarchies is the main element leading to the transaction cost savings that are at the very nature of the firm.

The same can be said in the second part the 20th Century regarding worker's relations with the firm. Imagine the relationship with workers, one that generates lots of transaction costs (actually one of the main examples chosen by Coase to justify the transaction cost saving profile of the firm[2]). The fact that companies are regulated by a specific labor legal relationship with the firm or that they are left to market contracts might have affected the size of the firms but has not affected very much firm's efficiency, behavior or impact in the economy. Firms have adopted and are still adopting the so-called outsourcing of the worker force (i.e. choosing to deal with groups of workers through market contracts), demonstrating that the sparing of market transaction costs was not necessarily instrumental to firm´s development in what concerns labor relations. Again, here the comparison between managerial costs (costs of organizing these transactions under firm hierarchy) and market transaction costs of worker relations with the firm is relevant but not necessarily the driving mechanism for firm's development and impact on development.

The situations in which the relationship with workers has been completely modified and their interest included in company decision making process have been much more telling. This is an historical movement initiated in the 20th Century that gained speed and strength in the second part of the 20th Century. Labor law appears then as an instrument to reduce conflict and induce some kind of concern with workers' interest in the firms. Of course, with different degrees of inclusion or success. One good example of real inclusion is German coparticipation law, for long

[2] See Coase (1937, p. 392): "*It is obviously of more importance in the case of services – labour – than it is in the case of the buying of commodities*".

regarded with suspicion and that now is much more generally regarded as one of the powerful elements for German's economic development in the last decades (The Economist, Jul 8th 2017).

The fact that workers interests were included, i.e. considered part of the firms interests and goals to the point (in the German Case) of allowing them coparticipation on almost equal terms with shareholders in the firm's decision-making process and the opposite, i.e. the fact that workers came to see firms' objectives as their own, created reciprocal incentives and gains to the firms. Actually, such inclusion created incentives for firms to decide for long-term investments (that would be profitable but also protect jobs) and face crisis periods due to the gains in the reciprocal trust that was created between firms and workers (since workers accepted lower or no salary increases) (Michel, 1991).

Again, here the gains created by the existence of the firms are not limited to the fact that the disputes with workers are not anymore a matter of market transactions but, instead, related to the fact that their interests were included and considered part of the firms' own interest. Therefore, the Coasian transaction cost notion has to be replaced, or put in another way, replenished with the notion of inclusion gains. What makes firms more efficient and relevant to the development (both the firm itself and of the economy) is the inclusion of stakeholders interest.

The central point is that even if it is true that the changes in the internal hierarchy of firms was the source of costs savings, it is also true that the more societies and companies evolved, the less such hierarchies could stay "non-democratic" (or non-inclusive). Actually, the more and more companies evolved and wanted to develop, the more they had to acknowledge that other

stakeholders' interests had to be included and considered in the definition of the firms' goals and interests. This driving force led to inclusion gains, such as efficiency gains derived from the fact that the firms and its managers had to take into account the interests of other stakeholders. Inclusion gains have meant better definition of goals, sustainability and, in the long run, less conflicts in the firm. In the case of the conflicts in the East Indian companies about fundamental shareholders´ rights to dividends in the 17th and 18th centuries, the conflict between labor and shareholders in the 20th Century Germany, the solutions that were found to reduce them, and the gains in productivity and accountability they led to, are relevant demonstrations of the importance of inclusion gains.

For sure, inclusion gains as transaction costs are not a one dimensional phenomenon. Hence, there can be different levels of inclusion gains. There can also be different instruments to create inclusion gains. It has not always been the case and it will not always be the case that totally inclusive experiments were tried and or possible. In some cases, hard fought shareholders indemnification battles had to happen in order for more concern of their interest to exist. In global economic law the consideration of these interests varies from country to country and region to region. But these differences correspond frequently also to differences in the economic development of countries, which is also a relevant demonstration of inclusion gains existence and importance to economic activity and development.[3] The same can be said for worker's relations with the firm. The 20th Century is a turning point in the regard of theirs interest through labor law and through "inclusive experiments" (as the German One) also with different levels of development in countries or regions being consequent to different levels of inclusion and

[3] In capital markets recent institutional experiments showed that the inclusion of minority shareholders interest proved helpful both to companies and to the development of capital markets themselves – see footnote 8.

pacification of interests. The more labor or corporate law were able to include interests and avoid conflict, the more economic development followed.

If it has been so with minority shareholders interest in the 18th and 19th century, it has been the case with workers interest in the 20th century, the same process will have to happen regarding the environmental interests in the 21st century. They are the "next interest on the run", the new source of inclusion gains able to generate development to the firms and the economic system. Actually, the only real and sustainable source of gains in a scarcity plagued economic system.

In the case of scarce natural goods markets, inclusion gains can turn out to be the most relevant source of economic surplus for firms, since market equilibrium mechanism is not available (see above sections I and II).

There is also a different reasons to connect scarcity and inclusion. There seems to be some degree of a historical causal relationship between them. The inclusion moves mentioned above were all influenced by some kind of scarcity (although may be not the absolute one we are referring to in this paper). Scarcity of capital necessary for the Second Industrial Revolution in the XIXth Century led to the inclusion of shareholders. Scarcity of non-organized workers (not part of Labor Unions) and the need to consider their interest and avoid social unrest led to labor legislation especially in the second part of the 20th Century as well as some successful experiments of workers participation in firm´s decision making process.[4]

[4] Obviously we do not intend to say there was scarcity of workers in the XXth Century. What happened after world war II was that the extensive unionization of worker led to difficulties in finding non-union organized workers. The following frequent strikes for increased salaries and more recognition of rights were an important cause of labor law

As seen above, the world in the 21st Century is about to face a much deeper scarcity problem with natural resources. Nothing more natural than to conclude that since market relations will not frequently lead to equilibrium regarding these goods (see item I above), progress and firm surpluses will depend a lot on inclusion gains of interested groups.

Of course, it is not easy to determine how to include the interested groups. Whereas shareholders were distinguished by a specific economic character, i.e. the availability of savings to invest and workers were distinguished by the availability and capabilities in labor, the same is not necessarily true for environmental interest. There are both community interests that are affected by the use of the good (imagine the communities that depend on the water of a river used by a firm to its production) and immense and non-definable groups of people affected by global warming effects on scarcity of agricultural land, water, food, clean energy, etc. So, a lot of the inclusion gain's effect will depend on the development of more sophisticated representation mechanisms that allow these groups to be represented and included. It is not the purpose of this paper to discuss the forms of representation but just to state its relevance and economic impact. They can range from impact assessment mechanisms both in communities and in the environment as a relevant and obligatory tool for management decision making to the direct participation of the groups involved (that can include NGO representatives, environmental experts and community representatives) in the firm´s decision making process.

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introduction and reform in the XX Century and directly responsible for the introduction of German coparticipation laws in the 60s.

The economic impact can be huge. The potential for the inclusion gains is obvious. With less and less market equilibrium available for these goods, firms will have to be increasingly a source of a moving equilibrium.[5] This equilibrium shall be however a product of corporate democracy (inclusion of interests) and not corporate hierarchies.

Actually, the hope is that the description of the inclusion gains can highlight an important difference of (and critique to) the concept of authority and hierarchy in the firm as a source of gains (or of savings in transaction costs). To understand development jumps of firms and countries' economies, it was necessary to recognize that a relevant difference between firms and market operation is that the former is based on cooperation and teamwork (Alchian and Demsetz, 1972). But for cooperation to happen, interests have to be aligned and reciprocally relevant.

Therefore, internal inclusion of interest, as the historical examples have shown, either through the recognition of shareholders fundamental rights, workers participation on decision making or affected communities' impact assessment as an element for firms decision, is relevant for the production of economic surplus by firms. Therefore, in the modern economy, corporate democracy rather than hierarchy seems to be the main source of gains and development. A deeper study of their forms of creation and introduction in the firms can throw light in the possibilities of redefining boundaries between markets and firms[6].

[5] "Theory of moving equilibrium" is an expression used by Coase (1937, p. 405). The difference here is that contrary to Coase, it is seen as a consequence of the inclusion gains produced rather than the transaction costs spared and as product of corporate democracy rather than hierarchy. It is true that inclusion gains and corporate democracy moments were probably specific and not that frequent in corporate development history. But they were both more transformative and rewarding in terms of economic development.

[6] Although this section was dedicated to firms' organization, it is clear that redefinition of market boundaries cannot be limited to them but rather include many other forms of "organizations" as for instance self-governing bodies and participatory civil societies institutions devised by Ostrom (1990) to discipline and organize production of CPRs.

4. Restructured markets for consumer products

It is important to state that the discussion about inclusion gains and forms of representation of interest inside the firm as an instrument for the creation of economic surplus does not imply that markets can be eliminated. Similarly to what happens with the transaction costs concept, they simply help to highlight and clarify and may be move to some extent the frontiers between both (firms and markets).

However, the two concepts (transaction costs and inclusion gains) differ completely regarding the impact they have on understanding or implementing structural changes in markets for scarce products. New market devices (that will be discussed below) can hardly be understood under the lenses of costs, either transaction costs or management costs. The creation of the new indexes (one of the suggestions bellow) will entail extra costs, either managerial or transactional. However, when regarded as a device to take into account different consumers' interest and allow more equilibrium trends in the markets, they can be considered as both an important consequence and a source of inclusion gains, even from the point of view of subjects (the consumers) that neoclassical economics considers to have diverging interests from those of the producers.

Having said that, let's turn to the question of how to discipline a whole series of spot transactions that have to be done in the markets under conditions of scarcity. Imagine for example the most

obvious case of the very relationship between firms and consumers. The problem is that in a world where natural resources are scarce, a larger and larger amount of consumer products that depend for their production on natural resources can be subject to growing scarcity (although not structural scarcity as explained above for natural resources themselves, for which equilibrium is not the rule and price instrument less useful). However, as will be explained in further detail below, for transactions to happen even in markets for products with some degree of scarcity, market transactions need to be restructured. New markets need to be created, based on more complete information sharing with consumers and new indexes.

It is necessary, at first, to distinguish two types of situations: (i) those in which it is possible to admit the coexistence of different indexes to intermediate economic relations and (ii) those where this is not possible. In other words, situations where a consumer is given the choice of the index that will base his purchase decisions and situations where this is not possible.

Among the latter are those where the choice and presence of different indexes generate distortions that affect relevant objectives of social interest. Suppose, for example, the choice of education or health care institutions based only on price indexes. Obviously, the essentiality of the good involved prevents this type of restriction. Simply eliminating the price criteria and basing the choice on the quality criteria is, not surprisingly, frequently the most successful solution in these areas. That is why some of the countries that boast the best rates in the two areas base the provision of these services on public or non-profit institutions that do not charge for the service. The “market” continues to exist. What happens is that it is no longer based on

price but on quality indexes. Note that choice and alternatives continue to exist. What disappears is the price/utility index, being replaced by a quality index.

The first situation is more delicate. The coexistence of various indexes is often difficult given the enormous power of attraction of the price criteria. The price criterion is not relevant only because it represents a (conventional) utility index for a product. Its greatest importance is to represent, *rather*, an index of residual economic availability to the individual. That is, the choice of price criteria is natural, not so much because it represents a real utility index for the consumer, but rather because not spending too much (i.e. choosing the product with a better price) represents greater residual availability of resources (and, therefore of economic well-being) to the consumer.

Thus, the use of the price criteria is natural (even if as a rule in the current economic system, manipulated and dominated by a few sellers) just because of its importance as a "residual welfare index". The central problem is that, precisely because of its very little utility as a criterion for verification of scarcity, price already is and will increasingly be of little use as an element capable of ensuring long-term economic flows.

Classical economics and its faith in the price as a perfect information conveyer is the product of an economy of abundance. The price is only a regulator of supply and demand, if these can vary over time. A persistent upward movement of the prices to refrain demand is of no use if the good is of high importance to the consumer (highly essential), nor can it influence the supply if the sources of raw materials for their production are scarce. On the other hand, moves to lower the

price are of little use. They cannot expand consumption if it is already at the maximum possible level, given the scarcity of the raw material (see supra n. II and graphs).

In this framework, price movements become increasingly the product of pure market domination or speculation (phenomenon frequently linked) and cannot lead to a rebalancing of supply and demand.

Two movements are then needed. First, it is necessary to ensure that the actual price, which will always continue to be an important benchmark for the consumer in "market relations" (given its importance as an index of residual welfare) is more representative of supply and demand and less determined by speculative movements or by the exercise of power by those who hold a higher level of information than others. We need to imagine, therefore, creative institutional instruments, which eliminate price dispersion resulting from concentration of information in the economy.

But this is not all. It is also imperative to create and foster new comparative indexes for products, capable of dealing with the issue of scarcity. This type of index must address two basic problems: (i) it must be able to transmit data on the consumer's residual welfare, which as seen above, is one of the main factors leading to the predominance of today's price criteria for consumer choice. That is, the consumer must understand what welfare results from consumption of this product. Secondly (ii) the index must be able to convey clear and simplified information to the consumer about the scarcity of the product and the natural resources necessary for their production. Only this way can it be a useful element for stimulating economic flows in the

medium and long-term, since only then consumer's will have a true and fair notion of the scarcity (both actual and residual) involved in the consumption of the product.

The difficult following question is how to design such an index.

There are various possible measures, which may be useful to the consumer. One is something we can call "social efficiency of the product": its form of production (with respect to labor rules) and compliance with environmental standards can be evaluated and checked. Transformed into one or more indexes prepared by qualified institutions and necessarily disseminated would help immensely consumer's choice.

This is not the place to discuss the form and content of these indexes, but only to suggest some general features. They should be able to provide a positive *screening* of product qualities, highlighting greater "social efficiency". This *screening* or valuation of qualities has proven extremely useful when used in markets.[7] In the case of goods, it would allow creating a culture in the consumer and producer for the respect for social and environmental values. Clearly, this is something that takes time and it would not be possible to simply replace the price standard for

[7] The most well-known case is that of the jobs market. It was shown by Spence how effective mechanisms of signaling positive characteristics and information can be to reach informational equilibrium (see Spence, 1973). But other experiments, less well known and applicable to other markets, are also telling. The basic idea of "Novo Mercado" (New Market) created by self-regulation in early 2000s in the Brazilian Stock Exchange Market was precisely to introduce differentiated and higher standards for corporate governance practices, which would allow investors to choose the most interesting combinations of financial soundness and legal guarantees, i.e. "another market" was created or "another possible choice" consisting precisely in the choice of companies with better corporate governance. The creation of the Novo Mercado and the index was the way found to "signal" such qualities to the market. The effect of creating this new market was a relevant differentiation in price between companies included in the index and those that were not (with continuous and sustained higher prices to the former), showing the potential for creating and institutionalizing other types of choices – see in this respect Salomão Filho (2001, p. 68 et seq.). Although created in a specific environment such as capital markets, the insight of creating a market based on choice criteria other than merely price and its success is a demonstration that alternative choice criteria (as social or environmental impact indexes) can be offered in other markets and other products with positive screening results.

new criteria (precisely because of the importance of price as a measure of residual welfare). But as positive experiences in other markets show, positive market screening can be quite effective to expand information and eliminate distortions.

Obviously, for the introduction of such index (es) to be possible, it is necessary to face two major problems. In the first place, the question of how to provide sufficient transparency to such an index or indexes so that they can be understood by the consumer and used as a selection criterion. The good news is that there are highly successful *screening* precedents, or valuing of qualities, which suggests that the problem of transparency and access to information can be overcome with institutional creativity and that it is possible to create or modify markets based on valuing of positive qualities and not solely on price (see footnote 7).

The second problem, as serious as the first, is the willingness to use the index. As seen above, the price criterion is natural, historically intuitive and is an important measure of residual utility. But that is not all. As recent experiments help to demonstrate, market participation encourages greed, decreasing moral attachment of individuals (Falk and Szech, 2013). Thus, individual declarations of attachment to the environment or revulsion to slavery, for example, are often overlooked in the market, when it comes to paying a lower price. This means that an alternative index or indexes which intend to introduce moral elements other than merely effective and residual utility (price) run the risk of having limited use. In fact, interaction itself caused by the market helps disseminate information about behavior patterns (individualistic and profit-oriented) prevalent in society. This is why in the mentioned experiment, restricted moral standards were in the comparison between individuals seeking profit in the market, which leads one to believe that

when there is a comparison with non-individualistic patterns, the results can be even more impressive (or depressive). That is, market interaction itself produces less moral attachment. But that is not all. The same empirical findings show that the greater the number of interactions, the lower the moral standards (see Falk and Szech, 2013, p. 709). Therefore, the probability that social or environmental impact indexes simply will not be considered widely by consumers is very high.

There are two tools that can minimize this risk. First, it is necessary that the indexes and their fluctuations are published and widely disseminated. It is also necessary that the result of economic flows (market) after the introduction of the indexes be known. The first effect of this publication is awareness, that is, understanding by consumers of the effective *trade-offs* existing (or not) between the economic factor (price) and the social factor (social or environmental index). The fact that there are alternative products with better environmental and social standards and these products are not consumed, can be, if well publicized, an effective tool for awareness and moral pressure on consumers for the use of such indexes as an instrument of choice. That is, if it is true that the market creates incentives for individualistic patterns of behavior, it is necessary to create equally widespread institutional elements to face and (possibly) revert this trend. An expected result is that in the medium term all or at least many of those able to replace price or take in account for their choice a social or environmental impact index will do so. The (low) price criterion as the main decision making element for consumers would then be restricted to that type of consumer or user who simply is not in an economic situation to *trade off* price for social or environmental improvements (assuming of course that such indexes will always point in opposite directions to prices, which is not necessarily true).

On the other hand, the comparison between price indexes and social and environmental ones can also have an effect on the supply side. If it is observed that a particular firm or product line has a consistently inverse relationship between price and social or environmental indicators, it is possible to imagine compensatory measures such as even a fiscal surcharge, with the amount of the tax being used to create a fund and allocated specifically for improvement of the social and environmental elements which were targeted through the social and environmental indexes. That is, knowledge of the discrepancy between indexes can serve to stimulate measures for the decrease of that discrepancy. This effect on supply side can be particularly important in basic staple products, in which the effects on the demand side are smaller (since a considerable part of the population, particularly in countries with high inequality, shall not be able to pay a potentially higher price for products with high social or environmental value, no matter how great the moral concern with such issues).

All suggested instruments, some viable others may be still utophical (may be until the next (s) major environmental global disaster (s)) have an important feature in common. Since there is no trust that natural economic equilibrium will arise, institutional elements are created to include new interests in market transactions, either through changes in the demand side (more information, better choice) or through incentives to the supply side to come closer to consumer's interest regarding price and social-environmental quality of the products. They are then a way of trying to reach a "moving equilibrium" regarding scarce natural goods through market mechanisms. Here it is not the firm that is changing to seek inclusion gains but the market itself

is adapting to try and obtain these gains through the approximation of firms and consumers interests regarding scarce natural goods.

5. Conclusion: neo-structural instruments as alternatives for market organization

The conclusion of this paper points in the direction of a possibly more positive and incremental relationship between law and economics.

As sustained by literature about the topic, this relationship must run both ways (Calabresi, 2016). Economic reasoning can help understand the consequences of the application of legal instruments, but also legal reasoning shall be capable of criticizing and correcting shortcomings of traditional economic thought. Especially when focusing on structural elements, legal reasoning can offer real alternatives to criticize and discipline market functioning (Salomão Filho, 2011).

Microeconomic models of equilibrium are not real descriptions of reality. Much less in markets where scarcity is a growing source of concern. Legal thought, as long as it is willing to present structural alternatives for the operation of markets, can be of real help. The inclusion gains concept, the institutional and legal inventiveness it requires to be effective and the new criteria it highlights for defining the frontier between firm and market transactions might be therefore steps in the right direction, both theoretically and in practice.

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