

# Poverty Penalty: A Market-Based Review

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## Abstract

The poverty penalty is the price that the poor pay more than the rich to obtain the same or similar goods. To be consistent with the way this concept is presented in the author who originally deals with it (Caplovitz) and in the author who originally calls it (Prahalad), the understanding of means "similar" concerns a quality standard imposed on the consumer as a condition of its functioning in society. The sociological relationships that determine this pattern, shape, through the institutions participating in the market, the economic ecosystem (so called by Prahalad). In view of this, the fight against that penalty is of questionable success in the absence of interventions to treat the sociological bases from which it is generated, which, in turn, implies that the measurements that lend themselves to identifying the penalty of poverty, need to include the effects of those sociological determinants, in the absence of which, they are useful as an exploratory data analysis, which only suggests the existence of the poverty penalty but does not actually verify it. In order to be consistent with the pioneering authors in the treatment of the penalization of poverty, the concept needs to be understood in the context of markets, or market-based. In this sense, related concepts are presented in the literature, such as "catastrophic expenses", "out-of-pocket" expenses, "uncompensated expenses", "consumer detriment" and "double jeopardy". Taken together as market-based, these concepts point to two different ways of interpreting the penalization of poverty.

## Index terms—

## 1 Introduction

he definition of the penalization of poverty as a greater expense of the poor than of the rich with the same or similar goods is presented with words similar to those originally by Prahalad (2005) [2], but it can also be inferred with the same meaning from reading Caplovitz (1963), Goodman (1968), or Unreuther (1973), among the first authors to address the same theme, from similar perspectives. Mendoza (2011), in turn, deals with it in relation to the market, highlighting the role that it occupies as a place where the penalization of poverty takes place [3], based on what he reinterprets as "forms of exclusion and marginalization faced by the poor within the context of the market system" [4]. Alsace et al (2012, p. 22), finally, attributes the penalization of poverty to the market, or in their words, "quite naturally, without any particular ill will on the part of the actors in the commercial sector, the market sometimes penalizes the poor."

This article is based on the view that the penalization of poverty stems from the market context. From this, depending on whether markets are considered in a related way or not, the poverty penalty concept is treated from two different perspectives.

To this end, it is argued that some concepts can be gathered under the name of poverty penalty, like Mendoza (2011), who considers so-called "catastrophic expenses" as such. In the latter, we include the concepts of "out-of-pocket" and "uncompensated" expenses. We also defend that the concepts of "consumer detriment" and "double jeopardy" be understood as poverty penalty.

The concepts of "out-of-pocket" and "uncompensated expenses", which are, under the name of catastrophic expenditures, require an analysis of the relationship between different markets to define them. The two previous ones, in turn, are treated in the literature on each independent market.

The part of the literature that derives the poverty penalty concept from isolated markets, aims to explain how the poor are penalized in each one and, perhaps from the understanding of the market mechanisms of this punishment, point out ways of reducing or solving the penalty dealt with. This is not to say that works along these lines dispense with the application of the poverty penalty concept in a more comprehensive manner. For example, Aplovitz (1963) considers that the fight against the penalization of poverty would be part of a greater fight against poverty [5], while Prahalad (2005), defends the dissemination of combating the penalization of poverty, in the markets where it is detected, as an economic development project.

The part of the literature identified with catastrophic expenditures deals with the penalization of poverty not based on each market in isolation, but on the relationship between some of them. Thus, this literature expands the relativity characterizing the concept, making the comparison between poor and rich involve more than one market. Among these different markets, one is always considered to be of more necessary goods than the other(s), so this line of analysis anchors the poverty penalty in a market in relation to which the (s) other(s) analyzed imputes damages to the poor.

As each of these two approaches serves different objectives, the poverty penalty concept receives contributions from both.

By bringing together different concepts under the same name -of penalization of poverty -and systematizing them according to the way they treat what brings them together -that is, the market -this article tries to contribute to the expansion of the meaning of the concept of poverty penalty. As a result, in the respective problematic contexts and different objectives with which the concept is constructed, the operational potential of the concept is delimited and, in line with each aspect, the alternative ways of measuring it.

The discussion about the penalization of poverty has only recently been established and disseminated. It was driven by the initiatives of the Inter-American Bank (IDB) and the United States Agency for International Development (USAID). On June 12, 2006, the IDB launches the Building Opportunity for the Majority initiative, based on the poverty penalty concept. This initiative would increasingly guide IDB lending. Less than a year later, on May 25, 2007, USAID's Voluntary Foreign Aid Advisory Committee advises that projects adopt approaches based on the poverty penalty concept.

It is understood that the contribution given in this article is still small, given how much the theoretical treatment of the concept will advance and, consequently, the application of the concept.

## 2 II. Penalization of Poverty: What does

it Mean and What Instruments can be used to Identify it?

### 3 a) Presentation

The poverty penalty concept is described, for the first time, in Prahalad (2005) and is the difference in costs between the poor and rich payments for the same or similar goods.

From the analysis of the way the concept is presented in Prahalad (2005), it is possible not only to identify the essential components of its most widespread version, but also characteristics from which we can gather other aspects and related concepts, which support and deepen the meaning of the concept and were presented by authors who preceded or are after Prahalad (2005). To do both, we will first deal with the concept as it is presented in Prahalad (2005) and then with related aspects and concepts dispersed in the literature.

### 4 b) Delimitation of the original concept

After considering that the different ways of fighting poverty, such as those experienced in India for 45 years since its independence from Great Britain, have not given significant results, Prahalad (2005) proposes a new approach. In it, the development of inclusive and oriented markets for the poor would both provide them with better and cheaper products, as well as guarantee them respect and dignity.

Predominant around the world and, mainly, in developing countries, the first approach, called by the cited author as traditional, is characterized by the use of fiscal instruments, by taxing higher incomes to redistribute it as subsidies to the poor, or through large infrastructure projects or even in the form of public spending on education and health. In this approach, small and large companies, as well as the rest of society and even the poor, are not involved in the fight against poverty, because the dominant logic between them, based on the assumption that "the poor have no purchasing power and therefore do not represent a viable market" (Prahalad, 2005, 4th paragraph, p. 10), would lead them to reject the market that is the focus of the fight against poverty, or, in the words of the cited author "[m]arket-based solutions cannot lead to poverty reduction" (Prahalad, 2005, last paragraph, p. 9).

Described only once, but illustrated with several comparisons between the prices paid in the Dharavi slum outside Mumbai, India and in the high-income B. Desai Road neighborhood of Mumbai, the poverty penalty concept is presented as evidence of the existence of markets for the poor, which makes it possible to identify the author's work as belonging to the alternative approach to the traditional one, which he calls "market-based" [6].

Despite being briefly presented and illustrated, the poverty penalty concept plays a central role in the author's contribution to the "market-based" approach, as it manifests the problems that the author focuses on and for which he offers solutions. The following passage illustrates what has been said in this paragraph and in the previous one (respectively the description of the concept and the problems that cause it): "These cost disparities between BOP consumers and the rich in the same economy can be explained only by the fact that the poverty penalty at the BOP is a result of inefficiencies in access to distribution and the role of the local intermediaries. These problems can easily be cured if the organized private sector decides to serve the BOP. The organized sector brings with it the scale, scope of operations, and management know-how that can lead to efficiencies for itself and its potential consumers". ??Prahalad, 2005, p. 12) From the quote above it is possible to identify a first characteristic of the penalization of poverty. Their configuration is given according to the characterization of the problems that cause them in each place, that is, it is spatially determined. This space has, in Prahalad, a double character. It is geographic, as high costs occur in different physical areas than where low costs are observed, but it is also a market space. To the market characteristics that occur in a geographic area, the author assigns the name of economic ecosystem. The economic ecosystem is made up of companies of different sizes and shapes, both legal and non-legal, as well as non-governmental organizations. The interaction between those civil and governmental organizations also makes up the economic ecosystem, which, depending on technology, institutional and legal basis, takes place in a particular way.

"We use the concept of the ecosystem because each constituent in the system has a role to play. They are dependent on each other. The system adapts and evolves and can be resilient and flexible", ??Prahalad, 2005, p. 65) His proposal is to promote, or in his words, build, economic ecosystems that exploit the market potential and entrepreneurial capacity of the poor, with the help of large companies and the government, which he says as follows:

"I believe that the debate must shift towards building market-based ecosystems for broad based wealth creation. Only then can we tap into the vast, dormant, and trapped resources, purchasing power, and entrepreneurial drive at the BOP. This will allow for new growth opportunities for the large corporations and a better quality of life for those at the BOP". ??Prahalad, 2005, p. 66) From this characteristic we obtain another, which is not explicit in the work of Prahalad (2005) with which the definition of the poverty penalty gains in meaning. When the poor pay higher prices than the nonpoor for similar products, the poor are penalized by the economic ecosystem, and changes in that ecosystem can end poverty.

"The ecosystem can provide the tools for the poor and the disadvantaged to be seamlessly connected with the rest of the world in a mutually beneficial and non-exploitative way. It provides them with skills and opportunities that are often denied by the informal sector". ??Prahalad, 2005, p. 69) In the sections that follow the previous quote, the author deals, respectively, with reducing inequities in contracts and building governance among the poor. The latter would result in the fight against corruption. Such concerns reveal what for the author characterizes a market in which the poor pay more than the rich for the same things, or the economic ecosystem in which the poverty penalty is generated. These markets, considered by him to be underdeveloped, as they use inferior technology to that available in the production of goods and apply worse conditions of access to goods (manifested in more severe contractual conditions, including greater restrictions on credit and higher credit costs), offer products of worse quality, or at more expensive prices, as in the example given by the author of the company ITC's International Business Division, in India: "[t]he real sources of inefficiency are the price and quality distortions caused by the agents' stranglehold on the market". ??Prahalad, 2005, p. 229). This bottleneck in the market, in conditions that are not of mutual benefit, or are abusive, as mentioned above, from the perspective of the poor -actual or potential consumers, which they are -characterize the economic ecosystem of the penalization of poverty, so that the market understood in it represents the composition of fundamental sociological forces, which depress the quality and increase the price relatively. This leads us to the broad concept of the poverty penalty, which comes to mean the penalization of the poor by the markets, manifested through a higher price relative to quality, or greater costs than benefits, than those assumed by the rich, in the acquisition of similar goods.

Thus, although the fight against the poverty penalty involves market conditions directly, it requires fighting the sociological conditions that lead to poverty, in what the author calls development. In his words, "[W]e must recognize that the conversion of the BOP into an active market is essentially a developmental activity. It is not about serving an existing market more efficiently" ??Prahalad, 2005, p. xiii) The social development resulting from the change, in the economic ecosystem, of the market inefficiency conditions that perpetuate poverty, would depend, according to the author, on the aspirations to social ascension, or, in the author's words, "[m]ore important, social transformation is about the number of people who believe they can aspire to a middleclass lifestyle. It is the growing evidence of opportunity, role models, and real signals of change that allow people to change their aspirations". ??Prahalad, 2005, p. 109) Understanding and confronting the penalization of poverty would depend, therefore, in Prahalad (2005) on the knowledge of the particularities of the economic ecosystem that make up each market, which he develops throughout his book.

This confrontation for Prahalad (2005) has the potential to end poverty itself, which is said by the cited author: "Given bold and responsible leadership from the private sector and civil society organizations, I have no doubt that the elimination of poverty and deprivation is possible by 2020. We can build a humane and just Society".

## 5 C) CONTEXTUALIZATION OF THE CONCEPT IN THE LITERATURE AND EXPANSION OF ITS MEANING I. THE ORIGIN OF THE MEANING OF POVERTY PENALTY AND ITS TREATMENT FROM THE PERSPECTIVE OF EACH MARKET SEPARATELY

Prahalad, 2005, p.119) From this it can be understood that the author's approach is not only market-based, but also market-oriented.

The epistemological reference of the penalization of poverty, in the case of Prahalad (2005), is the discussion of market-based and market-oriented development, but it could be, for example, meeting needs, or a discussion about well-being.

Another important aspect of the poverty penalty concept is its measurement. In Prahalad (2005), the penalty of poverty is measured in the form of a proportion between the price paid in two economic ecosystems. Repeating one of the examples given by the Dharavi slum would be 53 times higher than that paid in the wealthy B. Desai Road (formerly Warden Road), in same year.

This measurement refers to the need for measurement standards and units, as well as defining against which they are measured.

In the example given, the proportion is a measure that makes comparable the differences between the prices paid by the poor and the rich between different pairs of similar goods. Stated in this way, the penalty of poverty is useful for Prahalad (2005) to demonstrate the viability of markets for the poor in terms of the revenue potential it represents for companies, since it uses the ratio between the price paid by the poor and the rich, as an indicator of the premium over the prices paid by the latter. From the unfolding of this proposition, the cited author bases his proposal of development based on markets aimed at the poor.

This allows us to understand that the measurement and indicator of the poverty penalty used depends on the objective of the work. Thus, when comparisons are to be made, the concept must be measured and indicated in the same way, and the works compared must have the same objectives.

If, however, the proportion as a unit of measurement of the poverty penalty serves as a sufficient indicator for the objective of Prahalad (2005), it also reveals a number of issues that are important for the concept of the poverty penalty.

In the form of proportion, the penalty does not allow considering price variations that penalize the poor. The dilution, or increase in the penalty if measured in per capita terms, is another question that remains open with the proportion as an indicator of the poverty penalty, as well as the role of other expenses in obtaining the good, in addition to price, as well as the penalty being measured by proportion, does not reflect how much the expenditure represents in relation to the budget.

Another order of problem stems from the very way in which in Prahalad (2005), markets are considered separately.

Involving more than one market at the same time, poverty penalty concept would raise questions about reallocation of resources, or the impact it would have on the budget. There would also be a need to rethink the concept, to treat it, perhaps, as a net effect of the different penalties and benefits resulting from the comparisons of different markets.

Thus, although Prahalad (2005) has given a name to the market's penalization of poverty, not only is the measurement he uses limited by the objective of his work, but also the meaning of the term he named is.

We will open the perspective to consider different works by Prahalad (2005), from now on, that contribute with other aspects, concepts and ways of measuring the poverty penalty. This will be done from the main characterizing aspects of the concept, within each approach that involves it.

Therefore, we review the characterizing aspects of the poverty penalty, which, in light of the limitations of the concept as presented in Prahalad (2005), will be used as criteria to identify contributions in the sense of what was said above.

In order for poverty to be penalized, it must first be distinguished between two groups of consumers, namely: the poor and the non-poor, or rich. Then, similar products in the consumption of both must be taken for analysis and the market must be segmented between poor and rich, while different economic ecosystems, generally located in different geographic spaces. Next, the penalization of the poor due to that segmentation must be verified, in the form of worse conditions in the acquisition of the same compared goods and this must be expressed monetarily, or measured in relation to expenditures, although its measurements can be transformed into proportions, or other units of measurement to indicate the occurrence of poverty penalty.

### 5 c) Contextualization of the concept in the literature and expansion of its meaning i. The origin of the meaning of poverty penalty and its treatment from the perspective of each market separately

There is a certain consensus in the literature that the poverty penalty concept has its origins in the work of Caplovitz (1963). In fact, the term does not appear once in Caplovitz (1963), because it was only defined, as we saw later, in Prahalad (2005). What probably justifies that consensus is that Caplovitz's own work can be understood as being around the penalization of poverty, as is the case with the content of the definition of the poverty penalty, which appears in the title of that work and is sometimes textually described in the body of the text, such as the following passage:

"the poor credit potential of most low-income families combined with their lack of shopping sophistication

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often results in the irony that they pay much more for a given quality of durables than consumers in higher income brackets. This does not mean that they spend more, although even this may sometimes be the case, but that they obtain considerably less value for their dollar". ??Caplovitz, 1963, p. 81) This passage also presents an important aspect for the understanding and evolution of the concept of poverty penalty already discussed above, that is, a quality parameter in relation to which the superiority of the prices paid by the poor, or costbenefit, is identified. In addition to this aspect, others also reveal the precedence of ??aplovitz (1963) As for Prahalad (2005), the centrality of the market system, or the market-based analysis for the poverty penalty concept, is present in ??aplovitz (1963). In the same way, it is from the specificity of the market for the poor that ??aplovitz (1963) discusses the penalties for the poor, treating, therefore, pioneering these issues and in this sequence.

The existence of private markets for the poor can be seen in the following quote:

"In sum, a fairly intricate system of sales-and-credit has evolved in response to the distinctive situation of the lowincome consumer and the local merchant. It is a system heavily slanted in the direction of a traditional economy in which informal, personalties play a major part in the transaction. At the same time it is connected to impersonal bureaucratic agencies through the instrument of the installment contract. Should the informal system break down, credit companies, courts of law, and agencies of law enforcement come to play a part". ??Caplovitz, 1963, p. 29-30) The poverty penalty as a penalization of the poor by the market, highlighted by Dalsace et al (2012), in turn, can be seen in the following passage:

"The problem of low-income consumers stems from the same set of forces that have created that special system of sales-and-credit [...] catering to their wants. Any program of action must therefore take into account the conditions that have brought this system into being. [...] this marketing system is in many respects a deviant one, in which unethical and illegal practices abound. Nevertheless, it can persist because it fulfills social function that are presently not fulfilled by more legitimate institutions". (Dalsace et al, p. 179-180) Like Prahalad (2005), Caplovitz (1963) deals with the penalization of the poor by the market by analyzing each market separately, like the durable goods market, which is his object of analysis.

"This book examines such consumer practices among lowincome families in New York City. It describes the major durables they own, how they went about getting them, and the difficulties they encountered along this way. It also tells how these families are buffeted by high-powered advertising, exploitative salesmen, and debt entanglement." ??Caplovitz, 1963, p. 2) The similarities described above serve to indicate that, although the term penalization of poverty was not named by ??aplovitz (1963), there are enough elements in his work to consider him not only a pioneer in terms of that definition, but, mainly, the one that inaugurates a market-based, single-market and personalized approach to poverty for the poor, which also penalizes them.

The differences between the treatment given to the concept by ??aplovitz (1963) in relation to Prahalad (2005), in turn, help to identify the potential for development of the concept, as well as the limitations that are imposed on its use.

In terms of measurement, while in Prahalad (2005) the proportion between the prices paid by the poor and the rich indicates the poverty penalty, Caplovitz lists all the prices paid by the various ways he considers the poverty penalty in his interviews.

Although not directly measuring the poverty penalty, by relating insolvency to the necessary expenditures on health, food and clothing, as part of his task in describing the consumption of the poor, ??aplovitz (1963) ends up pointing to what will later become a line of research and will contribute to the poverty penalty concept, called catastrophic expenditures. Measurements in this sense are found in Table ??.15 of that book and an example that summarizes it, in the words of the aforementioned author, is the following: "the proportion of families who have had to put off medical care is generally quite small, but still is more than twice as large in the insolvent group." ??Caplovitz, 1963, p. 130) The concept of penalization of poverty also receives in ??aplovitz (1963) a broad foundation in terms of its justification, and clear delimitation, as to what is proposed, or potentiality of the results of its application. The solution to poverty given in Prahalad (2005) by transforming the market characteristics, or the characteristics of the economic ecosystem, is justified in ??aplovitz (1963), based on the sociological determinants from which the economic ecosystem originates. In your words, "[C]onsumption in our society, as in many others, is more than a matter of getting and having material conveniences. Equally important, Americans in all walks of life are trained to consume in order to win the respect of others and to maintain their self-respect. These social pressures to consume are perhaps inevitable in a society characterized by a rising standard of living. Compounding the force of a rising standard of living is the fact that most low-income families (many of which belong to minority racial and ethnic groups) have little opportunity to base their selfrespect and the respect granted them by others on occupational, educational, or other accomplishments. And this poverty of opportunity may only reinforce the significance of consumption in that pattern which we have called 'compensatory consumption'". ??Caplovitz, 1963, p. 180-181) This compensatory consumption, however, would not be a way to solve the problem of poverty. In this sense, just like Prahalad (2005), who sees combating the penalization of poverty in the form of social transformation of the economic ecosystem as sufficient to solve the sociological problems that determine poverty, ??aplovitz (1963) considers any solution to the consumer problem, even as a compensation, as something limited, if poverty is not eradicated, or in his words: "Until society can find ways of raising their educational level, improving their occupational opportunities, increasing their income, and reducing the discrimination against them -in short, until poverty itself is eradicated -only limited solutions to their problems as consumers can be found". ??Caplovitz, 1963, p. 192) Since it was inaugurated by ??aplovitz

## 5 C) CONTEXTUALIZATION OF THE CONCEPT IN THE LITERATURE AND EXPANSION OF ITS MEANING I. THE ORIGIN OF THE MEANING OF POVERTY PENALTY AND ITS TREATMENT FROM THE PERSPECTIVE OF EACH MARKET SEPARATELY

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(1963), until Prahalad (2005), at least 8 articles in scientific journals were written with the expression "the poor pay more" in the title [7], under the same approach characterized by the analysis of each market separately -of what the latter author would call the term "poverty penalty".

Contributions in this line of analysis have multiplied from the work of Prahalad (2005), especially after June 12, 2006, when the Inter-American Development Bank (IDB) launched the Building Opportunity for the Majority initiative, based on the concept of poverty penalty. This initiative would increasingly guide IDB lending.

Another great incentive to increase the discussion on the penalization of poverty came less than a year later, when on May 25, 2007, the Advisory Committee on Voluntary Foreign Aid of the United States Agency for International Development (USAID) guided that the projects adopt approaches based on the poverty penalty concept.

Many technical publications and not just peer-reviewed scientific articles have been published since then. Considering, however, only peer-reviewed scientific articles, in a search carried out in the CAPES database, five articles were found with the term "the poor pay more" as part of the title and five articles with the term "poverty penalty" were found published in a more recent period, equivalent to almost a third of the period between the publications of Aplovitz (1963) and Prahalad (2005) and after the latter.

These publications, different from those of Aplovitz (1963) and Prahalad (2005), but of the same line of analysis as these (considering each market separately), contributed to the poverty penalty concept.

ii. Completing the concept and focusing on the issues that concern them Among the works prior to Prahalad (2005) and the IDB and USAID initiatives mentioned above, Williams (1977), based on what has already been indicated as being said by Aplovitz (1963) distinguishes between two problems that together form what was defined earlier in this article as the poverty penalty concept. In your words, "This book is about one of the rents in the threadbare coat that covers poverty: the fact that our systems -in private commerce, in the creation of wealth, even in the provision of public services -often seem to conspire to visit a further disadvantage on poor people. Not only do they have less money to spend than richer ones, they also get worse value for their money (or for money spent on them)". Williams: 1977, p. 1) This double penalty, called by the National Consumer Council "consumer detriment", can also be understood, more broadly, under the term "double jeopardy", which involves several issues, including those not directly linked to poverty. Both terms appear in scientific publications.

In line with the concept hitherto seen as a broad penalization of poverty -which associates the higher price paid by the poor with a worse quality of similar goods consumed by the rich -the idea of "consumer detriment", or "double jeopardy" reveals a central aspect of the concept of the penalty of poverty not addressed so far, that is, the fact that the poor have less money to spend on goods for which they will also suffer the poverty penalty. The precedence of those two concepts in relation to the poverty penalty and the way in which they contain it requires that, in order for them to be understood under the same concept -as proposed here, the penalization of poverty -this concept now means what those first ones represent. Williams (1977) also highlights the possible determinants of the penalization of poverty, some of which are found in the literature, classifying them.

Such classification allows, at the same time, to differentiate and treat separately the ways in which the penalty of poverty presents itself, from its determinants. Mendoza (2011), for example, makes this distinction in the excerpt reproduced below.

"Conceptualising the poverty penalty in this way offers a more nuanced interpretation of both the subtle (eg quality and price-related poverty penalties) as well as more direct (eg non-access, non-usage and catastrophic spending burdens) forms of exclusion and marginalization faced by the poor within the context of the market system. The literature offers a number of potential explanations for the poverty penalty, and this paper discusses several which seem especially salient for developing countries: (a) factors related to size and store effects; and (b) factors related to market failures, notably imperfect information, missing markets and switching costs". Mendoza, 2011, p. 2) Since Williams (1997), other classifications have been published in scientific works. Each classifies the penalty of poverty, sometimes in terms of its forms, sometimes in terms of its causes. They are made according to the objective of each work, so that each classification is different from the others and, alone, do not cover all aspects, characteristics, or even causes and forms of the concept. They, however, have the merit of systematizing the contents of the state of the art related to the criteria with which the concept is classified.

In this sense, in line with the market-based characteristic of the poverty penalty concept raised in this article, Hirsch (2019) interprets the poverty penalty concept -which he calls, as Prahalad (2005) does, the poverty premium -from the as follows: "The premium is not a single phenomenon, but the interaction of a variety of factors, both in the ways in which services are supplied and the position of low income households as consumers". Hirsch, 2019, p. 34).

From this perspective, which we can understand as merely from the market, Hirsch (2019) classifies the poverty fine into four types and causes.

As for the type, the poverty penalty can be understood from what Hirsch (2019) says, in the following ways: a. Higher prices paid by the poor; b. Higher payouts due to lower quantities purchased; c. Higher prices paid for the way the transaction is carried out; d. Paying higher interest rates, or indebtedness.

As for the causes of poverty penalty, Hirsch (2019), interpreting Europe Economics and the New Policy Institute (2010), classifies them into two main groups, each with four causes and another group that results from the combination of the initials, to which that author associates three more causes. This is how the causes of the poverty penalty are classified, according to Hirsch (2019): Other authors classify the penalization of poverty in

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relation to the market, according to the ways in which it manifests itself and/or according to its determinants. Dalsace et al (2012), for example, classify the determinants of poverty penalty as follows:

"The paper sheds light on the various underlying mechanisms that contribute to the creation of the poverty penalty. These 'undesirable side-effects' of the market are of five types:

? An unfavorable cost structure ? An unfavorable price structure ? The law of supply and demand ? A lack of equipment or an unfavorable risk profile

? Insufficient objectivity to deal with scarce, imperfect or missing information". ??Dalsace et al, 2012, p. 22) From the same market perspective, Davies, Finney & Hartfree (2016, p. 5), classify the determinants of poverty penalty as follows: "Demand-side factors which reflect low-income households' preferences, needs and circumstances such as having constrained finances, the need for close budgeting control, low usage and risk aversion to actions that might upset tight budgeting control.

Supply-side factors which reflect how markets shape the choices available to consumers and impose additional costs on them. They include higher prices that reflect the additional cost of supplying low-income consumers, specific market failures where products do not meet the needs of low-income groups and general market practices where uncompetitive or unfair practices hit low-income consumers hardest.

Compounding factors that do not sit clearly on either the demand or the supply side, but mediate or compound the relationship between them, such as financial and digital exclusion and geography".

Based on this classification of determinants, these same authors also classify the forms of poverty penalty into eight groups, in which they list 29 types.

Among the forms and causes presented in the various classifications, some have gained prominence in the literature. This is the case of the so-called store and size effects. Related to the first one, a so-called distance effect is involved. Kunreuther (1972), based on Alcay and Klevorick (1971), defines store and size effects. The first inversely relates the size of the store to the price of the same merchandise. The second inversely relates the package size of the same commodity to its price. In the author's words:

"The store effect refers to price differentials between stores for the same-sized item. If the price per ounce for any given package size varies inversely with the size of store, then individuals who shop in chains would pay less for identical items than those who patronize smaller grocers. The size effect refers to differences in price per ounce for various sizes of a particular branded item within any given store". ??Kunreuther, 1972, p. 661) This author attributes the store effect to the distance between the buyer and the supplier and the size effect to consumption habits and storage costs. In your words: "The store effect provides a measure of the importance of a consumer's location and his mobility on purchasing decisions. (...)

The size effect measures the role which budget, storage constraints and costs of holding inventory play in purchasing decisions. (...) Low consumption rates will discourage large size purchases due to the cost of holding inventory". ??Kunreuther, 1972, p. 661)

## 6 d) Measurement and identification instruments

More dependent on the objective of the work than classification, the indication and measurement of the poverty penalty also takes place in different ways. Likewise, the measures used to indicate the aspects discussed in the different ways of classifying it.

We saw above that ??aplovitz (1963) measures in money the superior expenditures made by the poor for the same goods purchased by the rich and in a (greater) proportion the insolvent families who stopped paying for medical care. We have also seen that Prahalad (2005) measures the proportion that the price paid by the poor is greater than that paid by the rich for the same good. In addition to these forms, the example cited by Dalsace (2012) is representative of those most common in the specialized literature.

The 2011 report by the Paris office of the Boston Consulting Group, cited by Dalsace (2012), presents the penalty of measured in terms of the percentage of price paid more by the poor family, for expenses that occupy larger portions of their budgets, except food and transport [8] . Following the example of what was discussed about the classification of the penalty of poverty, the report cited by Dalsace (2012) also points out, for each type of expenditure, the possible cause of that penalty.

As it only involves price, measurements such as those of the Boston Consulting Group hide possible effects of other variables involved in poverty penalty, in the broad sense of the concept, as discussed above, in addition to, in the example given, the market-based origin of the measurement is not clear, although the latter does not detract from the measurement made. Quality, the reference for price in the broad concept of that penalty, as well as the characteristics of the sociological context of each economic ecosystem, are hidden, or inaccessible, when the poverty penalty is measured only in terms of prices. In the case of quality, mainly, this was a criterion very clearly present in the basic understandings of the concept in ??aplovitz (1963) and Prahalad (2005). There is no problem in starting to indicate the fine of poverty, only in terms of prices, but the quality variable with reference to which these are compared between the poor and the rich is a criterion for the origin of the concept. Thus, in order to identify the possibility of poverty penalty, one can consider what almost all the papers on the subject do, which is to deal with the difference between the prices paid by the poor and the non-poor for a similar commodity, but to verify its existence or not, it is necessary to have at least one quality parameter common to the goods being compared, although the ideal would be to compare the sociological parameters that influence the compared consumptions, such as the utilities for each consumer involved in the comparison.

## 6 D) MEASUREMENT AND IDENTIFICATION INSTRUMENTS

There are works, however, that approach the measurement of the poverty penalty in its broad sense and, thus, can be used to identify it in all aspects that need to be addressed in the fight against it. Attanasio & Frayne (2006), for example, test the existence of a poverty penalty controlled by the size effect and, for that purpose, consider the market as the environment of its origin, in terms of what their equations represent and do so as a function of price, quality, and package and distance effects. Three component aspects of the broad concept of the poverty penalty are therefore covered as well as two themes related to that concept.

The authors' treatises assume that quality can be indicated by income level, which does not explain the sociological determinants of poverty penalty, which shape the economic ecosystem where poverty penalty takes place.

It is imagined that the model of Attanasio & Frayne (2006)  $u_{it} = \alpha + \beta_1 p_{it} + \beta_2 q_{it} + \beta_3 d_{it} + \epsilon_{it}$  (1)

Where  $p_{it}$  is the price paid in cluster  $i$ ,  $q_{it}$  is the quality measure,  $\epsilon_{it}$  represents the measurement error and  $u_{it}$  is the unobservable utility value to be maximized by the consumer for a good. These authors rewrite equation (1) as follows  $\ln u_{it} = \alpha + \ln p_{it} + \beta_2 q_{it} + \beta_3 d_{it} + \ln \epsilon_{it}$

Where  $\alpha$  is an autonomous and exogenous determinant, different from the main effects considered; the terms  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  capture the demand for quality, being  $\beta_1$  a vector of taste shifters and quantities.

Then, a price schedule equation, determined by the supply side, is represented  $\ln p_{it} = \gamma + \delta_1 q_{it} + \delta_2 d_{it} + \epsilon_{it}$

Where  $\delta_1$ ,  $\delta_2$  includes effects of costs and retail competitiveness and the coefficient of  $q_{it}$  is expected to be negative, to show the size effect. It should be noted that cost and competitiveness effects are institutional components that shape the poverty penalty concept in its broad sense, as discussed above.

Although equation (2) is not the demand curve, nor is equation (3) the supply curve, and in fact they were written to represent the possibilities of different price scales due to the size effect, when combining them, through a common variable, as those authors do later, we can interpret the market equilibrium curve under these conditions as the result of this.

From the substitution of (3) in (2) Attanasio & Frayne (2006) arrive at the equation that can be understood as the one that represents the market equilibrium for different price levels

The mentioned authors take the equation (4) as a reference for their analysis. From the equations that make up this adaptation, they estimate, by at least squares method, the effects of some of those that for us can be understood as the conceptual components of the poverty penalty. Thus, equation (4) is used to measure the poverty penalty, controlled for the quantity effect.

With data from 11,497 households interviewed about the "Familias Acción" Program, in 122 municipalities in rural Colombia, from June to October 2002, the authors run their equations and from its conclusions we highlight the following as a teaching piece of measurements made from the poverty penalty as discussed in this article: controlled for quality, the coefficient that indicates the quantity effect increases, relative to when the control is not performed, but remains negative and significant. From this it can be inferred that the quantity effect is affected by quality standards, so that for a given "level" of quality, poverty is penalized for buying smaller quantities of similar goods.

Considering that this result was obtained for a basket of food (rice, carrots and beans) and that the same result was only confirmed individually for rice, one can think that the way it was applied, the test can actually serve to the verification of the presence or absence of the penalty of poverty.

The theoretical framework of Attanasio & Frayne (2006) can serve to test the poverty penalty not only in terms of the quantity effect, but if controlled for price and institutional characteristics, if the equations are combined in the equilibrium condition through not the price, but quantity, for example. public foundation responsible, among other things, for the access and dissemination of scientific production, which includes publications from a large part of the world. The query was performed with access to all content of peer-reviewed journals that had the exact term in the title. [8] The methodology of the cited group is also presented by Dalsace (2012).

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Attanasio & Frayne (2006), based on Deaton's (1988, 1997) theoretical framework generalized by Crawford et al (2003) write the following equation

Figure 1:



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Figure 2:



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