“CONSUMER DEFENSELESSNESS LAW”:
EMPIRICAL EVIDENCE THAT PRICE STRUCTURE INFORMATION
ASYMMETRY REALLY MATTERS IN SHOPPING DECISION-MAKING

PLAMEN DIMITROV
Bulgarian Psychological Society
Sofia, Bulgaria
e-mail: pldimitrov@hotmail.com

Abstract. This paper investigates the claim that shopping decision-making and behavior are strongly
influenced by the price structure information provided to the consumers. The author argues that it is
driven to a large extent by asymmetries in price structure information between customer/consumer
and producers/traders. In a series of laboratory experiments with regular, or “price structure non-
informative” and “price structure information enriched” price tags of different fast moving products
(food, drinks, clothes), it is confirmed that when price structure information asymmetry was low,
shoppers tended to change their intended purchase behavior selecting products with smaller excess
profit-making capacity for producers and traders, and spending less. All subjects who had access to
“price structure information enriched” price tags expressed their strong conviction that they allow
them more rational choice and better protection of their consumer rights. Given the fact that price
structure information asymmetry is generally promoted by the current trade secret protection policies,
the General Law of Consumer Defenselessness is postulated. Implications for the applied social
psychological study of consumer behavior, consumer rights protection and economic policy are
discussed in the context of the current global economic crisis.

INTRODUCTION

In economics and contract theory, information asymmetry deals with the study of decisions in
transactions where one party has more or better economic information about products and
services than the other. This creates an imbalance of power in market (buyer-seller)
exchanges which can sometimes cause the transactions to go awry. Examples of this problem
are adverse selection and moral hazard. Most commonly, information asymmetries are studied
in the context of principal-agent and shopping decision-making problems. In 2001, the Nobel
Prize in Economics was awarded to George Akerlof, Michael Spence, and Joseph E.
Stiglitz "for their analyses of markets with asymmetric information.” (Nobel Foundation,
2001).

Information asymmetry models assume that at least one party to a transaction has relevant
economic information whereas the other(s) do not. Some asymmetric information models can
also be used in situations where at least one party can enforce, or effectively retaliate for
breaches of, certain parts of an agreement whereas the other(s) cannot. In adverse
selection models, the ignorant party lacks information while negotiating an agreed
understanding of / or contract to the transaction, whereas in moral hazard the ignorant party
lacks information about performance of the agreed-upon transaction or lacks the ability to
retaliate for a breach of the agreement. An example of adverse selection is when people who
are high risk are more likely to buy insurance, because the insurance company cannot
effectively discriminate against them, usually due to lack of information about the particular
individual's risk but also sometimes by force of law or other constraints. An example of moral
hazard is when people are more likely to behave recklessly after becoming insured, either
because the insurer cannot observe this behavior or cannot effectively retaliate against it, for
example by failing to renew the insurance. A classic paper on adverse selection is George Akerlof's "The Market for Lemons" (Akerlof, 1970). It discusses two primary solutions to this problem, signaling and screening. Michael Spence (1973) originally proposed the idea of signaling. He proposed that in a situation with information asymmetry, it is possible for people to signal their type, thus believably transferring information to the other party and resolving the asymmetry. This idea was originally studied in the context of looking for a job. An employer is interested in hiring a new employee who is skilled in learning. Of course, all prospective employees will claim to be skilled at learning, but only they know if they really are. This is an information asymmetry. Spence proposes, for example, that going to college can function as a credible signal of an ability to learn. Assuming that people who are skilled in learning can finish college more easily than people who are unskilled, then by finishing college the skilled people signal their skill to prospective employers. No matter how much or how little they may have learned in college, finishing functions as a signal of their capacity for learning. Joseph E. Stiglitz (Nobel Foundation, 2001) pioneered the theory of screening. In this way the underinformed party can induce the other party to reveal their information. They can provide a menu of choices in such a way that the choice depends on the private information of the other party. Examples of situations where the seller usually has better information than the buyer are numerous but include used-car salespeople, mortgage brokers and loan originators, stockbrokers, realtors, real estate agents, utilities, telecommunication subscribed servives and life insurance transactions. Examples of situations where the buyer usually has better economic information than the seller include estate sales as specified in a last will and testament, or sales of old art pieces without prior professional assessment of their value. This situation was first described by Kenneth J. Arrow (1963) in an article on health care in 1963. George Akerlof in The Market for Lemons notices that, in such a market, the average value of the commodity tends to go down, even for those of perfectly good quality. Because of information asymmetry, unscrupulous sellers can "spoof" items (like food, drinks, clothes, software or computer games, utilities) and defraud the buyer. As a result, many people not willing to risk getting ripped off will avoid certain types of purchases, or will not spend as much for a given item. It is even possible for the market to decay to the point of nonexistence.

Although information asymmetry has recently been noted to be on the decline with the rise of the internet and consumer protection movements, which allow ignorant users to acquire hitherto unavailable economic information about products and services such as the costs of competing insurance policies, the costs of ineffective and excessive advertising, or the price of used cars, it is still heavily applied to daily micro-marketing, human resource and personnel economics regarding incentive schemes when the employer cannot continually observe worker effort. Since the seminal contributions of Akerlof, Spence, and Stiglitz, the pervasive effects of information asymmetry in markets have been documented and studied in numerous contexts. In particular, a substantial portion of research in the field of accounting can be framed in terms of information asymmetry, since accounting involves the transmission of enterprise's information from those who have it to those who need it for decision-making. Likewise, financial economists apply information asymmetry in studies of differentially informed financial market participants (insiders, stock analysts, investors, etc) (See the references for more sources).

Economic information asymmetry is the key building block of revenue management for producers and traders (sellers). Would-be customers and consumers have far less indication of manufacturing value of products, future sales rates, products price structures and availability than do the product and service providers. Even with the relatively transparent pricing on
various consumer-friendly websites, customers and consumers do not know the extent of demand and economic features for their desired itineraries reflected in the final consumer price structure. For most consumers nowadays buyer-seller information asymmetry is a growing problem from consumer rights protection perspective despite electronic modes of free global communications.

The present research investigates this phenomenon from micro-market economic behavior perspective of daily individual shopping decision-making and behaviour. We first make an attempt to identify the “defective” (information asymmetric) structures of regular price tags in supermarkets and outcomes of buyer-seller information asymmetry at point of purchase, and then examine the underlying structures of injustice and consumer rights violations that buyer-seller economic information asymmetry implies (given the policy-justified protection of “trade secrets”) from a distributive justice point of view.

Although distributive justice focuses on an universal mission of distributing burdens and benefits among all market stakeholders, a complementary consumer rights protection system, corrective regulation justice, would be needed to rectify specific injustices inherent in individual market exchanges. Accordingly, in case the tested research hypothesis is confirmed it would be leading us to a proposal of buyer–seller information asymmetry reduction protocol based on both distributive and corrective justice principles so that the risks and causes of consumer harm inherent in buyer-seller economic information asymmetry would be progressively reduced.

METHODOLOGY

Participants
This study’s data were collected with a sample of 1200 working urban Bulgarian citizens (60% - women, 40% - men) from 5 larger cities in Bulgaria (Sofia, Plovdiv, Varna, Bourgas, and Rousse). The mean age among participants was 36.12 years (SD= 12.6). The quasi-experimental laboratory test sessions were a part of participation in different occupational and management skills training programs in the period of 2004 to 2009.

Quasi-experimental Design
Economic information asymmetry. A laboratory quasi-experimental test of a simulated shopping decision-making was designed with two groups of consumers/customers of fast-moving products (food, drinks, and clothes). All participants had to make a decision how to spend wisely their household weekly budget for the products (food, drinks, and clothes) available in the experimental supermarket (101 products enlisted). Randomly, participants were assigned to a control group (50% of participants) and to an experimental group (50% of participants). The control group received a list of the regular supermarket price tags for all available 101 products. This regular list was considered “price structure non-informative” and provided the regular supermarket information for each item price. The experimental group received a list of the same 101 items with “price structure information enriched” price tags. It included the production value (manufacturing and delivery costs) of each item, advertising costs estimate, sales point profit estimate and the final consumer prices for each product in the list.

Shopping behavior and Perceived consumer rights protection scale. All participants were instructed to “spend their weekly budget wisely” using the provided lists of 101 available
products. Each participant kept exhaustive personal record of all items selected, quantities “ordered”, and money spent after the shopping decisions were finalized. In addition, participant were asked at the end of the experiment to make a general rating on 1-item Perceived Consumer Right Protection Scale, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The scale consisted of a single item: ‘‘I feel that my consumer rights in this shopping visit to the supermarket are well observed’’.

RESULTS

Descriptive statistics were computed and compared among the main variables to test the research hypotheses.

TABLE 1. MEANS COMPARISONS – EXPERIMENTAL VS. CONTROL GROUP

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>EXPERIMENTAL GROUP</th>
<th>CONTROL GROUP</th>
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<tbody>
<tr>
<td></td>
<td>Means, (SD)</td>
<td>Means, (SD)</td>
</tr>
<tr>
<td>Average Budget Spent (BGN leva)</td>
<td>276.90 (43.55)</td>
<td>330.55 (21.5)**</td>
</tr>
<tr>
<td>Perceived Consumer Rights Protection Score</td>
<td>5.82 (2.12)**</td>
<td>3.28 (3.0)</td>
</tr>
<tr>
<td>Selected Products’ Excess Profit-Making for Producers and Traders</td>
<td>Informed 75.30 (52.45)</td>
<td>Not Informed 141.2 (95.4)**</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>600</td>
<td>600</td>
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**Means significantly higher (p<.001)

The participants in the experimental group (using the “price structure information enriched” price tags) spent significantly less of their weekly budget (p<.001) deciding to buy smaller quantities and less products. In average they “spent” 53-54 leva/per shopping visit less than participants in the control groups who used the standard supermarket price tags. In addition, participants from the experimental group who were exposed to lower economic information asymmetry made shopping decisions which allowed significantly less opportunities for excess profit-making by producers, advertisers and traders. They did select less items with high advertising costs and sales margin potential for 92% (in average), when given the information about these price structure components. For participants from the control group such information was not available and the buyer-seller information asymmetry produced significantly higher (almost double) profits for advertisers and sellers. There is a significantly higher average score for the Perceived Consumer Rights Protection Scale in the experimental group (p<.001) who experienced experimentally reduced information asymmetry while making their shopping decisions.

DISCUSSION

All research hypotheses were confirmed – consumers facing economic information asymmetry of the regular supermarket price tags list are generally less protected, spend more, make less rational shopping decisions, paying more for excessive advertising costs and sales margins. In general terms, without additional economic information on their price tags they are practically twice more defenseless in comparison to price structure informed sellers and those customers/consumers who experience low information asymmetry in the moment of their daily shopping decision-making. That is a good reason to formulate a General
Consumer Defenselessness Law based on the empirical research findings reviewed in the context of the current policy-justified unilateral protection of “trade secrets” of producers and sellers) from a distributive justice point of view.

This study investigates just the basic effects of economic information asymmetry on the daily shopping decision-making at micro-marketing level. The findings indicate the presence of clear negative relationship between information asymmetry and consumer rights protection and consumer/customer rational choice. More specifically, the results indicate that a higher level for economic information asymmetry in everyday supermarket environment was associated with a higher level of shopping behavior irrationality and higher risk for consumer defenselessness for a representative Bulgarian sample of urban working adults.

Having evaluated and experimented with a number of indicators of rational shopping behavior, we have adopted a quasi-experimental laboratory approach using information from controlled experiment setting, not real market operation. Our empirical results do seem to be broadly consistent with the research model predictions and our conceptual analysis. This lends support to both our assumption that customers/consumers in low information asymmetry are generally better protected, act rationally towards their self-interest, feel more confident that their consumer rights are observed, and consider their shopping behavior as more rational. Our empirical findings suggest also that high information asymmetry in buyer-seller relationships is a significant economic policy problem. There is clear evidence to support the development of a proposal of buyer - seller information asymmetry reduction protocol based on both distributive and corrective justice principles of fair market economy so that the risks and causes of consumer harm inherent in buyer-seller economic information asymmetry. Therefore, further consumer protection policy measures could potentially benefit a significant proportion of consumers/customers, particularly those interested in optimal spending, rational and informed shopping behavior, and lower economic information asymmetry in daily market transactions in the context of current economic crisis and austerity consumption/spending climate.

In general, the General Law of Consumer Defenselessness in daily information asymmetry market situations affects all age groups and all income groups. As a result, reduced level of information asymmetry can be considered a factor, even a major factor, in creating and sustaining higher consumer confidence, particularly among low-income, old age customers and consumers who are informed and concerned about their consumer rights protection. Finally, our empirical results tend to confirm the finding by other studies of the pervasive effects of information asymmetry in markets.

REFERENCES:
