## Consumer Problems with Prepaid Telephone Cards

Prepaid telephone cards are a convenient way to make telephone calls, especially international calls; however, consumers have many complaints about the cards. Consumers specifically complain that accurate, reliable information is often not available. A study using 236 cards found that consumers' complaints are justified. Cost per minute is much higher than the consumer is led to believe and information from customer service is often not available.

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## Nature of the Problem

The use of prepaid telephone cards is prevalent in the United States, especially for travelers and immigrants, who find the cards an alternative to having traditional land-line international telephone service. The US prepaid phone card industry has grown from having an estimated $\$ 1$ billion in sales in 1996 to an estimated $\$ 4$ billion annually in 2004 (Vartanian, Ledig, Ansell, \& Whittemore, 1996; Atlantic-ACM, 2004). The growth in the product is linked to deregulation of the telephone industry and changes in technology. Technological advances have made fiber optics easily accessible, and there is now more fiber optic cable than necessary to meet current demand. Deregulation of the telephone industry has allowed primary telephone carriers to sell their excess capacity to other phone service providers (Kasserman, Mayo \& Flynn, 1990). In order to become a prepaid telephone card provider, one need only purchase minutes (excess capacity) from a telephone service provider, have a computer, specific software, and a printer (Baumol \& Sidak, 1994). It is possible to run a telephone company from one's home. The result is that there are estimated to be over 500 prepaid phone companies in the United States according to Howard Segermark, Executive Director of the International Prepaid Communications Association (IPCA) (H. Segermark, personal communication, March 29, 2003).

Despite the potential benefits, consumers are often confused about, and ultimately dissatisfied with, prepaid telephone cards (Marlowe \& Atiles, 2003). Specific problems for consumers stem from information search. Consumers desire a card that gives them the most minutes per dollar for the city they wish to call. However, information about cost per minute is often not available at the point-of-sale, and when available, not dependable because of hidden charges and undisclosed expiration dates that may be assessed by the provider. Furthermore, rates are subject to change without notice.

Information disclosure is complex, because costs vary for reasons ranging from location called to whether the call is placed from a pay phone or to a cell phone. Companies use minutes rounding by charging in whole minute increments. For example, three minute rounding would result in all calls up to three minutes being charged as three minutes. Calls between three to six minutes would be treated as six minutes (Just Phone Cards, 2004).

Companies typically deduct minutes as a way of assessing a variety of fees. A listing of some of the typical fees, along with a description of each fee is given in Table 1. There are no standardized names for these fees. For example, "maintenance fee," "service fee," and "tax" may be the same thing. A "communication fee" and a "post-call fee" may be the same kind of fee.

Table 1

| Fee: Assessed By Deducting Minutes From The Card | Description ${ }^{\text {a }}$ | Information From Customer Service Representatives About Fees ${ }^{\text {b }}$ |
| :---: | :---: | :---: |
| Connection fee | Fee assessed when a call is connected, also called a first-minute surcharge. | Range of amount of fees quoted was from zero to 99\$ per call. |
| Tax | A tax assessed by the phone card provider; it may be a monthly tax or one-time tax. | Slightly over $1 / 2(56 \%)$ of the operators said that cards charged a tax. One operator stated that there was a $15 \$$ tax on the $1^{\text {st }}$ call. |
| Maintenance fee | A fee assessed in a variety of ways, such as when the card is first used, at the end of a call, and/or periodically every month, two weeks or every week. | " $59 \$$ for the first use plus $59 \$$ per week" <br> "49¢ every two weeks" <br> "maintenance fee of 95¢ every one or two days" <br> "There is a $1^{\text {st }}$ time use charge that changes every day." |
| Pay-phone surcharge | A surcharge required by the FCC; however, the amount charged by the prepaid card provider may be more than required by the FCC. | Range of amount of surcharges quoted was from zero to $99 \$$ per call; 6 operators said there was no charge. |
| Communication fee | Fee charged at the end of a call; may be up to $25 \%$ of the phone call's cost. |  |
| Long talking fee | A fee assessed if a customer talks more than 20 minutes; may be up to 24 ¢ for every minute used. | "154 for every 25 minutes talked" |
| Hang-up fee | Fee assessed when the minutes left on the card are insufficient for a 1 minute call, given other fees that will be assessed. |  |
| Service fee ${ }^{\text {c }}$ | Most likely a maintenance fee called a service fee. | "A service fee of $15 \$$ per day." <br> "Service fee of 99\$ applied the $1^{\text {st }}$ day and every two weeks." |
| Fee to call a cellphone ${ }^{\text {c }}$ | Extra charge when a call is to a cell phone number. | Amount varies depending on city called. $61 \%$ of operators said the fee applies. |
| Minutes rounding | Fraction of an increment are billed as 1 minute (industry standard), 3 minutes (common) or more. | Range of minutes rounded was from 1 to 8 minutes. For 8 minute rounding, calls between 0-8 minutes are billed as 8 minutes; calls between 8-16 minutes are billed as 16 minutes. |

a Information obtained from Just Phone Cards (2004)
b Comments collected from survey of customer service representatives in the study reported in this paper.
c Fees often charged, but not listed on the Just Phone Cards (2004) website.
The third column in Table 1 provides statements that were made by customer service representatives contacted as part of the investigation reported in this paper. Fees charged are often not listed on the telephone cards. Consumers may call the customer service number printed on a card to ask about fees; however, information may not be available from customer service. When customer service representatives do not have the answers, it is impossible for consumers to know precisely what fees are charged and the amount of the charges.

Maintenance fees are often not explained clearly, with wording such as "maintenance fees may apply." Some prepaid telephone providers charge a tax or a service fee, both of which appear to be assessed in the same way as a maintenance fee. Many maintenance fees have a first charge use that could easily be confused with a connection charge. Connection fees are more likely to be disclosed than maintenance fees. However, disclosure may be misleading. For example, cards may advertise that they do not charge a connection fee while they have another fee that assesses a charge per call. Figure 1 is a copy of a card that states "NO CONNECT FEES" but the fine print states that there is a "post call fee." A post call fee, or disconnect fee, has the same effect on a consumer as a connection fee because a fee is charged for each call. It is possible for consumers to have no minutes left when they want to use a card for a second or third time if there are extensive hidden charges.

Figure 1


## Service Information

By using this Card, you agree to the following: Rates and fees vary and are subject to change. Rates are higher for international cellular, Alaska and Hawaii termination. Higher rates apply to calls originated from Alaska, Hawaii, Canada, Puerto Rico, and US Virgin Islands. Calls are billed in three min. increments. A post call fee applies after each call, as low as one cent, and not to exceed two dollars, depending upon country called. All calls made from a payphone are subject to a $79 \$$ charge. $49 ¢$ semi-monthly charge applies after first day. Advertised and announced minutes are based on perminute rates, before fees and surcharges are applied. Calls to directory assistance incur $\$ 1.50$ charge (max. duration 3 mins.). Locus is not responsible for lost, stolen or unauthorized use of PIN. This car has no value, is non-refundable. This card expires 180 days after the date of first use. Network service provider's liability shall be limited to an amount equal to the value of this Card. In no event will the provider be liable for punitive, special, indirect, reliance, incidental or consequential damages. The exclusive remedy for all disputes against the provider arising out of purchase or use of Card, except for matters taken to small claims court, is arbitration by a single arbitrator under the Consumer Arbitration Rules of the AAA. Disputes against the provider will not be heard by a jury or in a court and may not be made part of a class action. Network services provided by Locus Telecommunications, Inc.

A qualitative study of 47 Latino immigrants’ experiences in an urban market in Georgia found that $78.7 \%$ of the immigrants complained about prepaid telephone cards (Marlowe \& Atiles, 2003). Two specific complaints were that consumers did not receive the number of minutes they expected and that customer service personnel could not be reached during available hours and when reached they sometimes could not answer consumers' questions.

Immigrants or ethnic users are estimated to make up about one-half or more of the consumer market for the cards; hence cards are available in many languages (Iacussa, 2002). However, consumers complain that though they buy a card with information printed on the card in Spanish, the customer service representative does not speak Spanish (Marlowe \& Atiles, 2003). Hence, information may not be available for the consumer who is not fluent in English. Both the Federal Communications Commission (FCC) and the Federal Trade Commission (FTC) have published information in both English and Spanish providing guidance for consumers of prepaid telephone cards, but it is likely that many consumers are not aware of such publications (FCC, 2004; FCC, n.d.; FTC, 1997).

The problem appears to be that consumers cannot make efficient choices when purchasing prepaid telephone cards because accurate information is not available prior to purchase of the product. The purpose of this study is to investigate the information problems associated with prepaid telephone cards and to calculate the actual cost of using the cards.

## Theoretical Considerations

Traditional economic theory assumes that consumers have perfect information and that competition benefits consumers. Many of the factors necessary for perfect competition are present with the market for prepaid phone cards. There exists homogeneity of products, easy entry into and exit from the market, and many buyers and sellers. However, there is not perfect information. Thus, it is useful to turn to the economics of information theory.

Stigler's (1961) economics of information theory focuses on consumer search for information prior to purchase, with special attention to price dispersion. While prepaid phone cards may be sold at standard prices (e.g. $\$ 5$ or $\$ 10$ ), the cost per minute varies widely which results in a wide dispersion of actual costs. Stigler states "price dispersion is ... a manifestation of ignorance in the market." (p. 214). Many consumers of prepaid phone cards are travelers or recent immigrants and are unfamiliar with the local market. Stigler also states, "An increase in the number of buyers has an uncertain effect upon the dispersion of asking prices. The sheer increase in numbers will lead to an increase in the number of dealers, and ceteris paribus, to a larger range of asking prices." (p. 219). Areas experiencing an increase in the number of immigrants create markets with an increasing number of consumers demanding prepaid phone cards. The increased demand coupled with increased supply provides a situation of instability of supply and demand that leads to greater dispersion of prices (Stigler, p. 220).

When there is a market with a wide dispersion of prices, consumers will search more extensively for information to determine the product with the lowest price given a level of quality. However, with the market for prepaid phone cards, the desired information on cost per minute is often not available so extensive search is not fruitful. Thus, consumers must purchase a variety of cards and obtain information from experience with the product. Nelson (1970) discusses the limitations of information search when dealing with experience goods, goods for which information is not available until after purchase. The cost of getting information with experience goods includes the purchase price of the product. Prepaid phone cards are relatively inexpensive; however, for many consumers they are repeat purchases so that over time money spent on phone cards is significant. Thus, consumers have an incentive to try various brands and gather information through experience. Many consumers also collect information by asking their friends who have experience with the product, an important source of information with experience goods according to Nelson (p. 316). However, consumers complain that the cost per minute can change, even with the same brand, making it difficult for consumers to utilize information from prior searches. Stigler finds that "if asking prices are uncorrelated in successive time periods, the savings from search will pertain only to that period..." (p. 218).

Darby and Karni (1973) extended the works of Stigler and Nelson by focusing on credence goods, which are products or services (such as automobile repairs) for which the consumer can never get necessary information. When consumers cannot evaluate information or when they will not be long-term consumers of a product, they are more likely to be a victim of fraud. The market for prepaid phone cards may include both these problems. Furthermore, when information obtained (from search and from experience) changes frequently, then the product may have credence qualities.

Some information is available prior to purchase, such as information given on the card in Figure 1. Some cards state a specific country on the card or actually state a country in the title of the card, such as Mexico Mega Call; see Figure 2. These kinds of cards generally offer an attractive rate if used to call the specified country, though the card may also be used to call other countries. Sometimes a local access number is listed, as well as an 800 number. A call is typically cheaper if one uses the local access number. Neither card in Figures 1 and 2 gives a local access number.

Figure 2


When information is not available at the point-of-sale but is available from customer service, prepaid telephone cards could be considered an experience good. In these cases, consumers can obtain information on charges and minutes available on cards as a result of using cards. By using cards from different companies, consumers can assess which cards are the most economical. This strategy increases consumers' search costs in that many cards must be purchased in order to collect information.

However, a problem with prepaid phone cards occurs when information is not available or is incorrect. Consumers complain that rates and fees appear to change without notice, so that learning from experience is invalid and consumers have to continually engage in information search. Overall, the market is very fluid; sellers change often, the product changes, and consumers do not know what to expect.

## Research Study

The preceding section illuminates some of the elements of the information problem. Both the theoretical framework and previous research indicates that there are problems, especially with the Latino immigrant population (Hernández, 2003). In order to investigate the dimension of the problem, we undertook a study to examine problems associated with prepaid telephone cards. Georgia is a state where there is a growing Latino immigrant population, and where there is minimal consumer protection (US Census Bureau, 2000). The Georgia statute is the Georgia Fair Business Practices Act and states, "Unfair or deceptive practices in consumer transactions unlawful: examples ... (2) Causing actual confusion or actual misunderstanding as to the source, sponsorship, approval, or certification of goods or services." (GA. ST. § 10-1-393, 1975). Thus, we investigated problems Latino immigrants in Georgia might have.

## Research Methodology

Researchers purchased 250 prepaid telephone cards in various locations in one Georgia metropolitan area. Because immigrants in the area are more likely to purchase cards in small denominations, all cards in the study were either $\$ 5$ or $\$ 10$, except for those with special prices. ${ }^{3}$ Seventy-one different brands of cards were purchased. The final sample consists of 236 cards, because some of the 250 cards were unusable. ${ }^{4}$

Data were collected from January until May 2004 using 236 prepaid telephone cards. There were two primary goals of the research: 1) to assess information obtained from calling the customer service number and 2) to find out the true costs of the cards, expressed as cost per minute. Researchers designed a survey instrument that included a section with questions to be asked of customer service representatives and a section where data collectors recorded information when placing telephone calls.

Twenty data collectors were recruited from a Hispanic Student Association and had to meet four criteria: 1) be fluent in both English and Spanish; 2) have someone to call in a Spanish-speaking country; 3) attend two training sessions; and 4) complete survey forms for each card. The volunteer data collectors were not paid but were able to make phone calls to their families and friends with the cards provided by the researchers.

Data collectors were assigned cards and were instructed to call the customer service number to ask the questions that were on the survey form. They were instructed to make three attempts to contact customer service and to hold for at least five minutes if put on hold. Customer service representatives were asked questions such as: 1) How many minutes do I have available to call (city name)? 2) How does the company count the minutes? Does it round up at 1 minute, 2 minutes, or more? 3) Will I be charged a connection fee? If yes, 4) how much is the connection fee?

Each data collector was instructed to place calls with each card but to talk no more than one-half of the minutes available for the first call. A second call was made to the same city one week later. This method was used to determine if additional fees or minutes rounding were a problem. The card was to be used until all minutes had expired; however, the same city had to be called each time. Calls were made to cities in Mexico, Colombia, Argentina, Peru, Spain, Uruguay, Guatemala, and Nicaragua. A copy of the instrument is in the Appendix.

## Findings

Information from customer service. For two-thirds of the cards, it was possible to reach a customer service representative; see Table 2. The customer service representative answered on the first attempt for about one-half of the cards. A customer service person was not available for one-third of the cards. Reasons for not talking with a customer service person were that the line was busy, the consumer was put on hold for more than five minutes, no one answered or there was only a taped message.

Table 2
Information from Customer Service

| Category | Number of cards |
| :--- | :--- |
| Attempts To Talk To Customer Service Representative |  |
| Yes, talked to a representative | 157 |
| No, did not talk to a representative | 79 |
| $1^{\text {st }}$ attempt was all that was needed to reach the operator | 116 |
| $2^{\text {nd }}$ attempt was all that was needed to reach the operator | 33 |
| $3^{\text {rd }}$ attempt made (for 8 cards, a representative answered on the 3 ${ }^{\text {rd }}$ attempt) | 66 |
| 4 or more attempts (some collectors tried more than 3 times to reach a customer service |  |
| representative) | 21 |
| Other Problems With Customer Service | 66 |
| Line was busy | 112 |
| Put on hold (data collectors were required to hold for 5 minutes) | 79 |
| No answer | 29 |
| Only received a taped message |  |
| Minutes Rounding (Minutes Rounded To.. Increments.) | 54 |
| 1 | 4 |
| 2 | 37 |
| 3 | 3 |
| 4 | 4 |
| 5 | 8 |
| 6,7 or 8 | 8 |
| Total | $110^{\text {a }}$ |
| Connection Fee | 26 |
| Yes | 121 |
| No | $147^{\text {b }}$ |
| Total | $72^{\text {c }}$ |
| Other Fees |  |
| Various fees mentioned |  |

${ }^{\text {a }} \quad$ Information on minutes rounding was not available from 47 of the operators reached.
b Information not available from 10 of the operators reached.
c Only 72 of the operators reached gave an answer to the question about other fees
Approximately one-half of the cards had customer service persons available 24 hours a day. Talking to the customer service person did not mean that the data collectors were able to obtain answers to all questions on the survey. For many of the cards, the customer service person was not able to answer some questions.

Customer service persons were asked if minute rounding was used. Only $70 \%$ (110 of 157) of the customer service representatives were able to answer this question. Of the 110 cards for which information was available, $49 \%$ had one minute rounding. Three minute rounding was used for $34 \%$ of the cards. Fourteen percent of the cards used higher minute rounding increments, some as high as eight minutes. Eight minute rounding would mean that eight minutes were deducted even if the customer talked only one minute. This results in a large number of minutes being deducted from the customer's available minutes. The IPCA industry guidelines state that one minute rounding should be used unless otherwise stated (International Prepaid Communications Association, 2000).

Ninety-four percent of the representatives reached answered the question about a connection fee and $82 \%$ of them stated that there was no connection fee with the card. When asked about other fees, several representatives stated that there was an initial fee. An initial fee sounds like a connection fee, though it may only be assessed once; whereas a connection fee could be charged for each call. Of the 26 cards that charged a connection fee, only 19 of the customer
service persons could give the amount of the fee. The most typical connection fee quoted was 25 cents, but fees ranged from eight cents to 99 cents.

Customer service representatives were asked if there were extra charges for calling from a pay phone. Most (94\%) of the customer service representative contacted answered the question and $96 \%$ of them said that there was an extra charge. Six persons stated that there was no charge from a pay phone; however, the FCC requires a surcharge whenever calls are placed from a pay phone (Just Phone Cards, 2004). The amount of the fee charged if calling from a pay phone varied greatly and was not available for many of the cards. Customer service representatives for 85 cards said there would be a higher charge assessed if the calls were placed to a cell phone number, but the amount would depend on many things and could not be quoted. With 12 of the cards, the customer service person said that the caller would be charged even if calls were not connected. For another 26 of the cards, the customer service person said that whether the caller would be charged when a call was not connected would "depend on a variety of factors." According to the IPCA, it is a violation of federal telecom statutes to charge a customer if a call is not connected (H. Segermark, personal communication, September, 2004).

Only 46\% (72 of 157) of the customer service representatives contacted were able to answer the question asking if there were other fees; the information provided about other fees was often not clear and incomplete. For example, one representative stated that a "service charge of 49 to 99 cents would be applied the first day and every two weeks." Often the representative did not know the amount of the fee in question. The most common other fee was a maintenance fee. There appears to be no standard maintenance fee and the charges vary by amount and period. It appears that many of the customer service representatives do not have information on other fees, their information is incomplete, or perhaps that they do want to share the information with consumers. Refer to Table 1 for examples of information from customer service representatives.

Information from using the cards. Information on countries called and the number of calls made is provided in Table 3.

Table 3
Information From Using The Cards

|  | Category |
| :--- | :--- |
| Country Called | Number of Cards |
| Mexico | 104 |
| Colombia | 55 |
| Argentina | 40 |
| Peru | 23 |
| Other | 14 |
| Total | 236 |
| Number Of Calls Made With A Card |  |
| 1 | 67 |
| 2 | 98 |
| 3 | 35 |
| 4 | 23 |
| 5 | 5 |
| $6-12$ | 8 |
| Total | 236 |

Table 4 provides descriptive statistics of the variables used in calculating expected and actual cost per minute for the cards.

Table 4
Means And Standard Deviation For Selected Variables

| Variable | $\mathrm{N}^{\mathrm{a}}$ | Mean | Standard <br> Deviation | Minimum | Maximum $^{\mathrm{b}}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Days used | 234 | 14.18 | 13.08 | 1 | 100 |
| Initial \# of available minutes | 233 | 88.86 | 71.05 | 5 | 487 |
| Actual \# of minutes used | 234 | 47.98 | 38.63 | 1 | 314 |
| Expected average cost per minute | 234 | $\$ 0.15$ | 0.20 | 0.01 | 1.43 |
| Actual average cost per minute | 234 | $\$ 0.28$ | 0.52 | 0.02 | 5.00 |

a For 2 cards, information was available from customer service but it was not possible to place calls with the card. For one card, the initial number of minutes was not given.
b One card had 487 initial available minutes and was used to make 12 calls.
The researchers defined the expected cost of a card in the following manner:

$$
\mathrm{EC}=\mathrm{P}_{\mathrm{x}} / \mathrm{m}_{\mathrm{a}}
$$

Where: $\quad E C=$ expected cost, $P_{x}=$ the price paid for the card, and $m_{a}=$ the initial number of minutes stated as available.

When a customer uses the card, he/she calls the access number given on the card and hears a statement that gives the number of minutes available. This number of minutes given when the customer first used the card was defined to be the initial number of available minutes. The price of the card was the price paid for the card. The actual cost of the card was defined as:

$$
\mathrm{AC}=\mathrm{P}_{\mathrm{x}} / \mathrm{m}_{\mathrm{u}}
$$

Where: $\quad A C=$ actual cost, $\mathrm{P}_{\mathrm{x}}=$ the price paid for the card, and $\mathrm{m}_{\mathrm{u}}=$ the total number of minutes actually used in making calls with the card.

When a call was placed, the data collector wrote down the date and the time that the call began in hours, minutes and seconds and then the time the call ended. All cards were used until the minutes expired. The researchers computed the total number of minutes actually used from the times given for all the calls placed with each card, including those calls where a message was left on an answering machine.

Unfortunately, it was not possible to know which specific fees had been assessed. Most data collectors made two calls with each card; see Table 3. One data collector was able to make 12 calls to Buenos Aires, Argentina with one of the cards, confirming that in some cases prepaid phone cards are an inexpensive way to make international calls. However, for $28 \%$ ( 67 of 236) of the cards, the data collector was not able to talk even one-half of the initial available time before the time ran out for the first call. This situation could occur if the consumer was given incorrect information as to how many minutes were available or if there were hidden fees or excessive minutes rounding (Just Phone Cards, 2004).

Based on the cost of the card and the stated initial minutes available, the expected cost of the cards on average was 15 cents per minute. However, the actual average cost was 28 cents per minute; refer to Table 4. These findings indicate that the cards cost approximately $87 \%$ more on average than the caller expected. The most likely reason for this drastic difference is that excessive minutes rounding and various fees resulted in minutes deducted.

## Limitations

The market for prepaid telephone cards is complex; there are many different companies providing different brands of prepaid phone cards. Most cards can be used to call any country but may provide lower rates to a specified country. We did not have the resources to design a study that would allow us to tailor specific-country cards to the countries that the data collectors were calling. For example, using the Mexico Mega Call card (Figure 1) to call Colombia rather than Mexico might have resulted in a higher cost per minute. On the other hand, consumers are not
always able to find a card that offers special rates for the country they wish to call; thus, the study undertaken was realistic for consumers in those instances. It was not possible to identify the specific hidden charges, because many cards had more than one kind of fee, and the amount of the fee was often unavailable from the customer service person.

Given the level of resources, it was impossible to obtain information that would have shed more light on the variations in cost. With only 20 data collectors, we were not able to standardize the number of days that elapsed between each call that was made, thus maintenance fees would vary. Because we wanted to mimic cards often purchased by Latino immigrants, only small denomination cards were purchased. It is possible that cards sold in higher denominations (e.g. $\$ 20$ or higher) may have a lower cost per minute, especially cards sold through the Internet. Finally, a few cards had a local access phone number as well as an 800 number. For consistency, data collectors were instructed to use the 800 numbers in all cases. Generally, if a consumer uses the local access number, the cost per minute is lower than using the 800 number.

## Discussion and Conclusions

Primary telephone carriers sell excess fiber optic capacity to prepaid telephone card providers. Thus, the market is a fluid one where there is ease of entry and exit of prepaid phone card providers. Prepaid telephone cards are convenient and often cheaper than placing international calls from a traditional long distance service. Most of the demand for the cards is estimated to come from consumers who are traveling or from immigrants new to a community. The market for prepaid telephone cards is expected to increase; therefore it is important that consumer problems with the cards be addressed.

Though most cards are sold in similar denominations such as $\$ 5$ or $\$ 10$, the relevant price is the cost per minute. However, the actual cost per minute is difficult to assess and the market is one where consumers have imperfect information. Information search prior to purchase yields little relevant information about unit price.

The market for prepaid telephone cards is one that exhibits the problems that Stigler (1961) posits in his economics of information theory. The lack of pre-purchase information translates into ignorance in the market and what results is a wide dispersion of actual prices. This is documented in Table 4 where actual cost per minute ranged from $\$ 0.02$ to $\$ 5.00$.

Stigler (1961) notes that if prices change in successive time periods, information gathered from search is limited to one point in time. Changing prices in successive time periods is a complaint that consumers have expressed. This study of prepaid telephone cards was not longitudinal and we cannot verify if prices change frequently with some cards. If prices do not change frequently with specific brands, then consumers would be able to gain information by using the cards and this information could be used for subsequent purchases, and telephone cards would be an experience good as defined by Nelson (1970). Anecdotal evidence indicates that consumers do attempt to get information from their own experiences using the cards and from asking friends about their experiences. It is possible that with continuous entry and exit of phone card providers, prices fluctuate often. Sellers may change prices in an effort to identify equilibrium price. Another speculation is that sellers offer low prices in the beginning to encourage loyalty to the brand and then raise prices later.

Purchasing prepaid phone cards requires vigilance and experience on the part of consumers in order to assess which cards give more for the money. Given the appeal of the cards, it makes little sense why companies withhold information. Providers of the cards may believe that they earn more by constantly changing terms and by charging hidden fees. If consumer demand is relatively inelastic, providers may have little incentive to provide information. Providers may believe that consumers of the cards are temporary, as is the case with travelers passing through or shortterm immigrants, and will not be return customers.

Prepaid telephone cards should not have the characteristics of typical credence goods, because relevant information could be available through experience if not available prior to purchase. However, if information gathered through experience does not remain valid, consumers will have information problems associated with credence goods. Darby and Karni (1973) note that consumer fraud often occurs in this situation.

Government protection often exists for credence goods. For example, drugs have to be approved by the Food and Drug Administration, and medical doctors have to be licensed to practice. Some states have enacted consumer protection statutes requiring disclosure of information for prepaid telephone cards. The study reported here documents that there are information problems with prepaid phone cards in Georgia. Regulation may be the answer, but it is possible that consumers in states with strict regulation also have problems with prepaid telephone cards. A future multi-
state project would be useful in that it could reveal whether consumer problems with prepaid phone cards vary by level of regulation.

Prepaid telephone cards are a subset of stored value cards. This study documents problems with prepaid phone cards; however, maintenance fees are also common with other types of stored value cards, such as gift cards. "Because of the relatively small monetary amounts involved in SVC [stored value cards] commerce for each consumer, transaction costs make it infeasible to develop legal rules through case-by-case litigation." (Budnitz, 1997, p.1). Budnitz states that uniform legal standards should be developed to cover stored value cards; however more research needs to be done on stored value cards so as to define specific consumer problems. Research with various types of stored value cards might reveal problems similar to the problems consumers have with prepaid telephone cards.

## Appendix

## SURVEY FORM:

CARD: (Internal \# $\qquad$ _)

## PART I - INFORMATION FROM CUSTOMER SERVICE

BEFORE USING THE PREPAID PHONE CARD (You need to have this form, two pencils and a watch or clock that denotes seconds as well as minutes)

## STATE THE COUNTRY AND CITY YOU WILL BE CALLING:

$\qquad$

NOTE: You are trying to get information from the Customer Service operator. If no one answers, you should call again later. You should try no more than 3 times to reach the operator. If you are put on hold, wait not more than five minutes. Your goal is to talk to a person not just listen to voice messages. Note in the last column any other information, such as: the operator was rude, the connection was bad, I was cut off, etc.

Call the customer service number in Spanish:1st attempt
2nd attempt
3rd attempt

Ask the operator, speaking in Spanish to a Spanish-speaking operator (if you cannot reach a Spanishspeaking operator try an English speaking operator \& note in the margin on the form that you had to use an English-speaking operator):

|  | QUESTION | YES | NO |  |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Did you get a busy <br> signal or a repeated <br> message? |  |  | OTHER |
| 2 | Were you put you on <br> hold? |  |  |  |
| 3 | IF answer above is <br> yes, how long? <br> (number of minutes) |  |  |  |
| 4 | Is an operator <br> available 24 h., seven <br> days a week? |  |  |  |
| 5 | Do you expect rates to <br> change within the next <br> two weeks or so? |  |  |  |
| 6 | How many minutes do <br> I have available to call <br> my specific target <br> city? |  |  |  |


|  | QUESTION | YES | NO | OTHER |
| :---: | :---: | :---: | :---: | :---: |
| 7 | How does the company count the minutes? Does it round up the minutes at 1 min ., 2 min ., 3 min, or more? |  |  |  |
| 8 | Will I be charged a connection fee if I call from home? |  |  |  |
| 9 | IF answer above is yes, ASK: How much will I be charged as connection fee? |  |  |  |
| 10 | Will I be charged differently if I use the card from a paidphone? |  |  |  |
| 11 | IF answer above is yes, ASK: How many minutes will I have available to call my target city from a paid phone? |  |  |  |
| 12 | Will I be charged differently if I call a cell-phone? |  |  |  |
| 13 | IF answer above is yes, ASK: How many minutes will I have available to call a cellphone? |  |  |  |
| 14 | Will I be charged if my call does not get connected? |  |  |  |
| 15 | Will the charges be different at different days of the week? |  |  |  |
| 16 | IF answer above is yes ASK What are the different rates for different days (weekendsweekdays)? |  |  |  |
| 17 | Will the charges be different at different times of the day? |  |  |  |


|  | QUESTION | YES | NO | OTHER |
| :---: | :---: | :---: | :---: | :---: |
| 18 | IF answer was yes ASK: What are the different rates for different times of the day (at 9 am- 5 pm and before after those times). |  |  |  |
| 19 | Are there any other fees? |  |  |  |
| 20 | Are the taxes included in the fees? |  |  |  |

## PART II - PLACING THE CALLS

## General Instructions:

$\checkmark \quad$ You are expected to talk to a person at least twice with this card. The second call should be placed 2 weeks after the first.
$\checkmark$ For the first call, talk no more than half of the minutes that you were told you have available.
$\checkmark \quad$ If you leave a message on an answer machine record the information as you do for a call. However try again during the same week (you may call a different person in the same city).
$\checkmark \quad$ BEFORE USING THE PREPAID PHONE CARD (You need to have this form, two pencils and a watch or clock that denotes seconds as well as minutes).

STATE THE COUNTRY AND CITY YOU WILL BE CALLING: $\qquad$

## 1. First Call:

A. Call the Spanish-speaking toll free access number and follow instructions.
B. Write down the amount of money that this card has available: $\qquad$
C. Write down the time the machine says you have available: $\qquad$ (hours/ minutes)
D. Do you understand clearly what the machine says?YESNO
E. As soon as the call is connected, observe your watch and write down:

MONTH: $\qquad$ DAY: $\qquad$

TIME THE CALL STARTS: $\qquad$ (hours, minutes, seconds and AM/PM)
F. Did you leave a message on answering machine?
G. Did you have a conversation?YESNOYESNO

REMEMBER talk no more than half of the minutes that you were told you have available.
H. Do you get voice notification that your time was near to expire?YESNO If YES, write down the time when the voice notification appeared? $\qquad$ In which language does the voice notification appear?
I. As soon as the call ends, observe your watch and write down:

TIME THE CALL ENDS: $\qquad$ (hours, minutes, seconds and AM/PM)

## 2. Second Call:

A. Call the Spanish-speaking toll free access number and follow instructions.
B. Write down the amount of money that this card has available: $\qquad$
C. Write down the time the machine says you have available: $\qquad$ (hours/ minutes)
D. Do you understand clearly what the machine says?YESNO
E. As soon as the call is connected, observe your watch and write down:

MONTH: $\qquad$ DAY: $\qquad$
TIME THE CALL STARTS: $\qquad$ (hours, minutes, seconds and AM/PM)
F. Did you leave a message on answering machine?YES
G. Did you have a conversation?YES$\square \mathrm{NO}$

## REMEMBER talk no more than half of the minutes that you were told you have available.

H. Do you get voice notification that your time was near to expire?
If YES, write down the time when the voice notification appeared?
YES NO

In which language does the voice notification appear?
$\qquad$
s soon as the call ends, observe your watch and write down:
TIME THE CALL ENDS: $\qquad$ (hours, minutes, seconds and AM/PM)

## 3. Third Call:

A. Call the Spanish-speaking toll free access number and follow instructions.
B. Write down the amount of money that this card has available: $\qquad$
C. Write down the time the machine says you have available: $\qquad$ (hours/ minutes)
D. Do you understand clearly what the machine says?YESNO
E. As soon as the call is connected, observe your watch and write down:

MONTH: $\qquad$ DAY: $\qquad$

TIME THE CALL STARTS: $\qquad$ (hours, minutes, seconds and AM/PM)
F. Did you leave a message on answering machine?YESNO
G. Did you have a conversation?YESNO

REMEMBER talk no more than half of the minutes that you were told you have available.
H. Do you get voice notification that your time was near to expire?YES $\square \mathrm{N}$ If YES, write down the time when the voice notification appeared? $\qquad$ In which language does the voice notification appear?
I. As soon as the call ends, observe your watch and write down:

TIME THE CALL ENDS: $\qquad$ (hours, minutes, seconds and AM/PM)

## 4. Fourth Call:

A. Call the Spanish-speaking toll free access number and follow instructions.
B. Write down the amount of money that this card has available: $\qquad$
C. Write down the time the machine says you have available: $\qquad$ (hours/ minutes)
D. Do you understand clearly what the machine says?YESNO
E. As soon as the call is connected, observe your watch and write down:

MONTH: $\qquad$ DAY: $\qquad$

TIME THE CALL STARTS: $\qquad$ (hours, minutes, seconds and AM/PM)
F. Did you leave a message on answering machine?YESNO
G. Did you have a conversation?YESNO

## REMEMBER talk no more than half of the minutes that you were told you have available.

H. Do you get voice notification that your time was near to expire?YESNO If YES, write down the time when the voice notification appeared? $\qquad$ In which language does the voice notification appear?
I. As soon as the call ends, observe your watch and write down:

TIME THE CALL ENDS: $\qquad$ (hours, minutes, seconds and AM/PM)

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## Endnotes

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    ${ }^{3}$ Outlets such as Wal-Mart negotiate special prices with a company such as AT\&T and then sell a $\$ 5$ card for $\$ 4.72$ for example.
    ${ }^{4}$ In some cases, no contact could be made using the access numbers given on the cards. In one case, a data collector called two different cities. Several cards were eliminated because information was given in units rather than minutes and the researchers were unable to find out the conversion factor from the customer service person.

