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Breaking Up Is Hard to Do: Consumer Switching Costs in the U.S. Marketplace for Wireless Telephone Service

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A. Introduction

In the U.S., it can be easier to end a marriage than to
leave a loveless relationship with [either of the two largest wireless carriers].
- *Wired* magazine, August 2006

For the vast majority of consumers, including many older consumers, the cell phone is an indispensable tool of modern life. With a cell phone, consumers have more freedom and flexibility to stay connected with family and friends, conduct business and coordinate their increasingly busy schedules. Moreover, a cell phone is a safety device in the event of an emergency. It empowers people with a sense of security and confidence that help is always nearby.

Given the essential role of wireless phone service in today's society, consumers need and deserve a marketplace that offers a choice of high quality products at stable, reasonable prices. They need and deserve a marketplace that spurs innovation and functions without fraud, deception, and unfair business practices.

With many of these objectives in mind, Congress has focused on the promotion of competition as the fundamental goal of wireless policy in the United States for the last quarter-century.[1] Indeed, with the passage of the Omnibus Budget Reconciliation Act of 1993,[2] Congress charged the Federal Communications Commission (FCC) with implementing a “regulatory structure that will promote competition in the mobile services marketplace and will thus serve the interests of consumers while also benefiting the national economy.”[3] Several years later, Congress passed the Telecommunications Act of 1996 to move *all* telecommunications markets toward competition.

In passing these two measures, Congress sought to do more than encourage competition simply for the purpose of having a competitive market. It recognized that competition is not an end in itself, but a process that can give consumers choices and promote their economic well-being:

> [Congress] is decompartmentalizing segments of the telecommunications industry, opening the floodgates of competition through deregulation, and most importantly, giving consumers choice . . . and from these choices, the benefits of competition flow to all of us as consumers—new and better technologies, new applications for existing technologies, and most importantly . . . lower consumer price.[4]

A key assumption underlying Congress’s support for competitive markets is that consumers will switch freely among service providers in response to differences in the price and quality of service. In this regard, competition that benefits wireless users depends upon the likelihood that consumers can and will switch their service provider:

> The essence of consumer sovereignty is the exercise of choice. It is by choosing some goods or some options over others that consumers satisfy their own wants

> and send their signals to the economy. It is, therefore, critical that the exercise of consumer choice be protected.[5]

The process of switching wireless service providers can be an expensive proposition that deters consumers who might otherwise consider changing to a new provider. Indeed, consumer switching costs, which economists and marketing experts generally define as the actual or perceived costs that customers associate with the process of changing from one provider or seller to another,[6] occur in many markets and for a variety of reasons. In the U.S. market for cell phone service, consumers can incur a number of different costs to switch wireless carriers. Some examples of these costs include:

- an early termination fee for canceling an existing service contract,
- the purchase price of a new cell phone because of a lack of compatibility among providers, and
- the time and effort necessary to evaluate competing cell phone service providers and their product and service options.

These and other substantial switching costs should concern policymakers because the use of switching costs as a customer retention tool contradicts key public policy objectives. Indeed, policymakers have created a regulatory framework for the wireless industry that relies heavily on competition to assure reasonable prices, maintain quality of service and generally protect consumers of cell phone service. As such, the prevalence or magnitude of consumer switching costs in the wireless marketplace and the fact that switching costs generally harm consumers by increasing prices and making markets less competitive[7] are issues that deserve serious consideration.

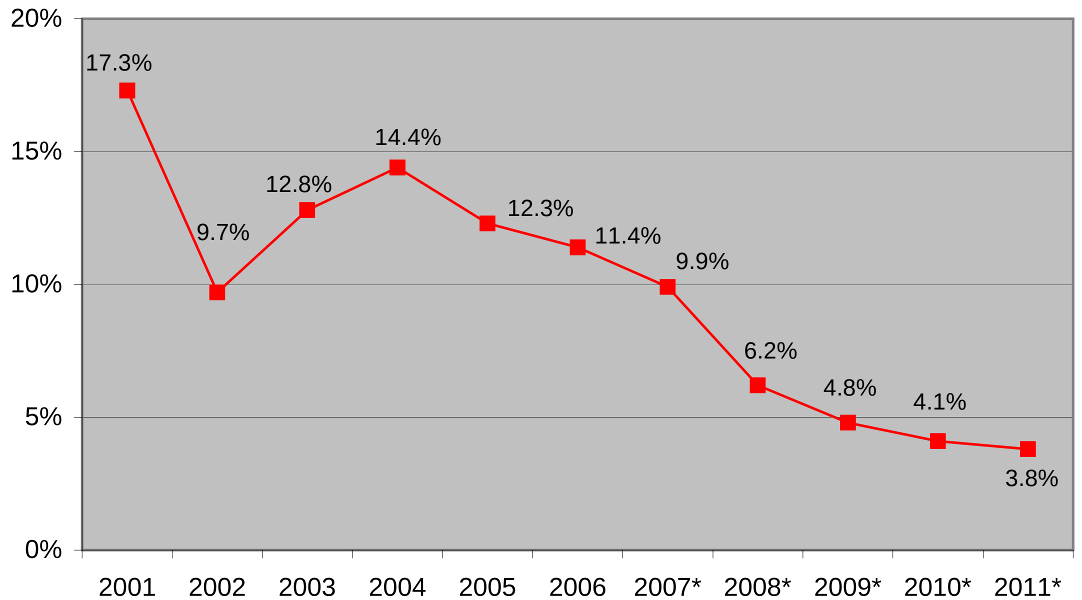
B. Customer Retention and Switching Costs

The extent to which wireless carriers actually compete to produce benefits for consumers is a vital indicator of whether the marketplace works for consumers. For carriers, however, increasing customer welfare is a means to an end, not an end in itself. As corporate entities, their ultimate objective—and legal duty—is to maximize profits for shareholders. In this regard, a critical driver of a service provider's success in a competitive environment is the ability to retain profitable customers and keep them loyal.[8] Indeed, studies of various industries, including several studies of the marketplace for wireless telecommunications services, suggest that protecting the existing customer base and preserving customer loyalty are a major source of sustainable competitive advantage.[9] Moreover, research also indicates that persistent customer defection reduces revenue and profit.[10]

Emphasis on customer retention is even more important in industries such as the wireless sector where the rate of subscriber growth has begun to slow. In these industries, securing new customers becomes more difficult and costlier in terms of marketing because there are fewer first-time buyers and the market increasingly focuses on replacement demand. In fact, at the beginning of this decade, wireless carriers in the United States were adding new customers at a dizzying rate as the wireless services market grew by more than 17 percent in 2001 to include 128.4 million subscribers.[11]

Now, however, with more than 225 million cell phone subscribers, or roughly 75 percent of the U.S. population, the pace of new subscriber additions has begun to slow (Figure 1).[12]

Figure 1: Annual Wireless Subscriber Growth Rate in the United States



Source: Datamonitor, Industry Profiles: Wireless Telecommunications Services in the United States, June 2006 and August 2007. *Estimated annual growth rate.

Drivers of Customer Retention

Numerous studies support a strong connection between satisfaction and retention—satisfied customers remain with their service providers, and dissatisfied customers leave.[13] Other research, however, finds that while customer satisfaction is an important factor in why consumers remain with their service providers, it is not the only factor.

Switching costs also cause consumers to remain with their current service provider.[14] In fact, a couple of studies find that switching costs are a better predictor of customer retention than is customer satisfaction.[15] Moreover, many studies suggest that when the cost of switching to a different service provider is low, satisfaction becomes a better indicator of whether a customer will remain loyal, and when switching costs are high, the link between customer satisfaction and retention weakens to the extent that customers may remain with their service provider even when they are dissatisfied.[16]

By increasing customer switching costs and because of various other factors, such as product complexity, that heighten consumers' perceptions of switching costs, service providers can charge higher prices and earn excess profits without losing customers to their competition. In essence, service providers use switching costs to obtain relief from the pressures of a competitive market. Without these pressures, however, service providers may lose some of their incentive to satisfy their customers.

C. Types and Examples of Switching Costs

A review of literature on consumer switching costs reveals that researchers recognize many types of real or perceived switching costs and may use different conceptual frameworks or labels to distinguish among the costs that consumers may incur to change from one provider to another.[17] In the U.S. marketplace for cell phone service, consumer switching costs arise for a variety of reasons, but they generally can be characterized as contractual costs or information costs. Table 1 provides examples and descriptions of these costs (See the appendix for more detailed information).

Table 1: Types and Examples of Switching Costs in the U.S. Marketplace for Cell Phone Service

Types of Switching Costs	Descriptions of Selected Switching Costs
Contractual Switching Costs	**Early Termination Fees**—the penalty wireless carriers charge a customer for canceling service before their service contract expires.
	Handset Replacement Costs—the cost of purchasing a new cell phone when a consumer is unable to take his or her current cell phone to another network when changing carriers.
	Loss of In-Network Pricing—the cost to a wireless user and his or her current and potential calling partners of paying higher monthly bills or making fewer and shorter calls when a wireless user's change of carriers results in the loss of "in-network" pricing (e.g., free mobile-to-mobile minutes).
	Preferred Handset Opportunity Costs—the cost of forgoing the opportunity to use a preferred handset model when the particular model is incompatible with other carriers' networks.
	Loss of Exclusive Content—the cost of forgoing a variety of content (e.g. games, ring tones, songs, and video clips) that is only available to existing customers.
	Loss of Bundled Services—the cost of giving up a feature (e.g., a single monthly bill for multiple services) or a discount on one or more bundled services when alternative providers cannot create equivalent bundles.
Informational Switching Costs	**Search and Evaluation Costs**—the time and effort costs to find and analyze information on prices, selection, and quality from different cell phone service providers.
	Uncertainty Costs—the cost of accepting the risk to switch when the consumer lacks important information about a new service provider such as the true cost of service, the level of service quality, etc.
	Set-up and Learning Costs—the time and effort cost to set up cell phone service and configure a phone and the potential cost of having to learn about the features and various nuances of a new service plan and phone.

D. Carrier Strategies for Managing and Increasing Switching Costs

Research in economics, management, and marketing reveals consistent evidence that consumer switching costs represent an important strategic tool in retaining customers and reducing competition.[18] Indeed, marketing experts encourage firms seeking to increase switching cost-based retention to focus on several, often interrelated, factors that influence consumers' perceptions of switching costs. In the U.S. marketplace for cell phone service, these factors, which are discussed below and listed in Table 2, include 1) switching and alternative experience, 2) provider heterogeneity, and 3) product and market complexity.[19]

1) Reduce Switching and Alternative Provider Experience

Switching and alternative provider experience refers to the extent to which consumers have changed providers in the past and the breadth of product-related experiences that a consumer has had with a competing service provider. Consumers who frequently switch providers are more familiar and likely more comfortable with the process of changing providers and with their ability to adapt to new providers.[20] By comparison, consumers who do not switch or switch less frequently tend to perceive greater risks and uncertainty in moving to and using a different provider. Their ties to their current provider are stronger if they have had limited or no experience with competing service providers or with the process of switching between providers.[21] In addition, switching and alternative provider experience implies that a consumer has spent less time with his or her current provider and thus is less used to using its products. Research suggests that repeated use of an incumbent provider increases the likelihood that a consumer will continue to choose that provider rather than switch to a competitor.[22]

The major wireless carriers in the United States have adopted numerous practices that reduce the switching and alternative provider experience of their existing customers:

- *Two-Year Contracts*—Each of the four national wireless carriers—AT&T Mobility (formerly Cingular Wireless), Verizon Wireless, Sprint Nextel, and T-Mobile USA—promote, emphasize, and, in many instances, require two-year service contracts for all of their monthly service plans. Three of these carriers require a two-year contract for any monthly postpaid service plan purchased online at its Web site.[23] This group includes one carrier that previously touted itself to the FCC for offering new customers rate plans with "only a one-year contract, in contrast to the two-year commitments demanded by most other carriers…"[24]

- *"Free" Phones with Long-Term Contracts*—Each of the four national wireless carriers primarily markets wireless telephone services and handsets—two separate and distinct products or services—in bundled packages. The practice of handset bundling allows carriers to hide the true cost of a handset and offer a "discount" or a "free phone" as an inducement for consumers to sign long-term contracts. In fact, carriers recoup the cost of the "free" phone through the stream of monthly

Table 2: Wireless Carrier Strategies to Manage Consumer Switching Costs		
Strategies for Managing Switching Costs	**Examples of Strategies to Manage Consumer Switching Costs in the Wireless Industry**	**Impact of Strategies on Consumers**
Reduce switching and alternative provider experience	• Promote and require 2-year service contracts.	• Ensures that most subscribers commit to a carrier for an extended period during which they have no incentive to respond to better service or terms offered by a different carrier.
	• Market handsets and service as a bundled deal that requires a long-term contract and includes a "free" phone.	• Induces consumers to sign long-term contracts based on misleading price information. • Prevents price transparency by hiding the true cost of the handset in monthly bills. • Creates an opportunity for carriers to charge higher prices.
	• Sustain handset and service contract bundles using exclusive handsets and handset-locking software.	• Stops many consumers from taking their existing handset to another carrier. • Forces many consumers to buy a new handset if they change carriers. • Limits the selection of handsets from which consumers could choose.
	• Establish brief penalty-free trial periods.	• Prevents consumers from discovering any billing or rate-related problems until after they are locked into a long-term contract. • Instills a false sense of security in consumers who want to evaluate all aspects of service.
	• Offer discounts on handset upgrades to expiring contract subscribers.	• Induces consumers to renew their contracts based on misleading price information. • Limits consumer choice.
Heighten perceptions of provider differences (provider heterogeneity)	• Make exaggerated, vague, and unsubstantiated claims of superior network quality.	• Creates confusion and uncertainty among consumers and generally limits their intentions to switch carriers.
	• Differentiate on features.	• Ensures that most handsets are complicated, feature-laden devices that are difficult to use. • Makes the purchase decision more difficult for consumers.
	• Focus on service plan details, but avoid price competition.	• Reduces consumers' ability to compare prices because carriers emphasize different details. • Hinders consumers' ability to determine the overall value of a particular service offering. • Creates an opportunity for carriers to charge higher prices.
Increase perceptions of product complexity	• Adopt complex, multidimensional pricing. • Create various categories of minutes. • Avoid unit pricing. • Use line-item charges with misleading descriptors.	• Inhibits customers from determining the true value of their cell phone service. • Reduces consumers' ability to compare prices. • Creates an opportunity for carriers to charge higher prices.

bills that a consumer pays over the duration of the contract. For cell phone subscribers, handset bundling inhibits transparency because carriers do not identify which portion of the fees they charge for service can be attributed to the handset and which can be attributed to call charges and other services. To make well-informed buying decisions, consumers need to know how much they will pay for a handset and how much they will pay for service.

- *Handset-Locking Software and Exclusive Handsets*—Wireless carriers in the United States use various types of handset-locking software to prevent customers from taking their phone to another carrier's network.[25] Handset locking can lead to significant costs for consumers, including the cost of purchasing a cell phone from the new service provider; the time necessary to select, set up, and learn to operate a new handset; and, if the new service provider or a designated agent does not offer a particular model of handset, the cost of forgoing a handset that better matches the consumer's preferences. Alternatively, consumers who seek to have their handset unlocked for use on another new carrier's network face a number of costs as well. These costs could include the time and money necessary to unlock their phone; the cost associated with having their handset's warranty invalidated, which may happen if a consumer has his or her handset unlocked; and the cost of having to pay that portion of a monthly service plan that the new carrier uses to subsidize free or reduced-price cell phones.

- *Brief Trial Periods*— Wireless carriers' "risk-free" trial periods may end *before* the customer ever receives his or her first monthly bill. In this regard, all of the national wireless carriers offer trial periods that give consumers an opportunity to experience and evaluate their service and carrier without obligating them to pay a substantial termination fee if they decide to cancel their service contract. A trial period typically expires 14, 15, or 30 days after service activation, depending on the carrier. However, none of the major national wireless carriers guarantees that customers will receive their first monthly bill before the trial period ends. Without such a guarantee, wireless subscribers run the risk of committing to a long-term contract without having the opportunity to review and assess a fundamental part of cell phone service that also happens to be a major source of confusion and frustration for many consumers. In fact, data from the Council of Better Business Bureaus show that nearly two-thirds of all cell phone complaints include billing problems.[26] In addition, the use of brief trial periods may instill a false sense of security in consumers, who may believe erroneously that a trial period gives them a full opportunity to evaluate all aspects of their service.

- *Handset Upgrade and Retention Programs*—Each national carrier has a handset upgrade policy or program through which existing customers whose contracts are about to expire are eligible to receive a special rebate or subsidy toward the purchase of a new cell phone, as long they sign a new long-term contract.[27] In addition, at least one national carrier has undertaken a "major retention and loyalty program" in which its representatives "contact customers at key points in their service tenure with targeted offers and to provide proactive rate-plan

> analysis" as incentives to sign another long-term contract.[28] This type of program limits choice because it targets subscribers before their existing contract has expired, and before any other carrier's handsets and services become a viable option. Moreover, the program relies on a time-sensitive offer that only a subscriber's current carrier, which has exclusive knowledge of when its subscribers' contracts expire, can make.

2) Heighten Perceptions of Provider Differences (Provider Heterogeneity)

Provider heterogeneity describes the degree to which consumers perceive that providers in a market differ or are not changeable. Differences among providers in an industry may include a wide variety of factors. Indeed, consumers may perceive heterogeneity between wireless carriers based on service quality, handset design, low price, network coverage, terms and conditions, reliability, and innovation, among many others factors.

Differences among providers can produce benefits for consumers such as a greater variety and a greater likelihood of finding a provider, product, or service that perfectly fulfills their needs. However, provider differences can create costs for consumers as well—including more effort required to make a choice and greater uncertainty about the choice—and may have a significant effect on competition. Numerous studies indicate that when consumers perceive more differences among providers and products in a market, they are more likely to remain with their existing provider.[29] Research also suggests that this effect intensifies in high-technology markets and in other markets where the decision-making process is generally more complex: To the extent that consumers of more complex products perceive differences among providers of these products, they perceive higher switching costs and are even more likely to remain with their existing provider.[30]

In many industries, providers strive to differentiate themselves from their competitors to reduce competitive pressures, attract and maintain a loyal customer base, and charge higher prices.[31] One way in which providers may distinguish themselves is by adding more features to their products. Research suggests that increasing the number of product features can make that product a more attractive choice for consumers.[32] Indeed, providers can gain a competitive advantage by adding more features or attributes to their products even when those features are meaningless, trivial, or provide no objective performance benefit.[33] However, studies also indicate that adding more features can make a product more difficult to use and decrease consumers' satisfaction with it.[34] This phenomenon, known as "feature fatigue,"[35] may be of some concern to providers who fear that dissatisfied consumers will switch to another provider in the future, but is less of an issue for providers in markets characterized by high switching costs and locked-in consumers.

In the U.S. cell phone service industry, largest national wireless carriers expend considerable resources to foster the perception that they are very different from each other. However, a closer look at the carriers' differentiation efforts suggests that it is difficult if not impossible for consumers to discern real differences on some of the most meaningful product attributes including service quality and the actual cost to the customer of using their cell phone service:

> ***[A]ll the major national wireless carriers have mostly or completely ignored repeated requests by the FCC to share their network coverage maps and other data and information about their quality of service and service availability.***

- *Exaggerated, Vague, and Unsubstantiated Claims of Superior Network Quality*—The major wireless carriers invest huge amounts of money in marketing and advertising to give consumers the impression that the quality of their wireless network differentiates them from their competitors.[36] Many of these carriers use very similar slogans to suggest that they provide better service quality. One carrier calls itself, "America's most reliable wireless," another claims to have "the nation's most powerful network," and a third advertises that it has "the fewest dropped calls."[37] These claims are misleading for two reasons. First, the carriers provide "little or no evidence" to substantiate their statements.[38] In fact, all the national wireless carriers have mostly or completely ignored FCC requests in 2004,[39] 2005,[40] and again in 2006[41] to submit network coverage maps and other information about their quality of service and service availability.[42] Second, the truth is that no one carrier offers superior coverage in all areas of the United States. Signal strength and levels of coverage can vary significantly from one town to the next and even one street to the next. In short, the lack of meaningful and verifiable information allows each carrier to market itself as the superior provider of network quality, which is likely to help all of these carriers reduce customer defections and preserve their current market share.

- *Proliferation of Features*—Packaging additional features and data services with basic cell phone service has become a core strategy of wireless carriers to differentiate themselves from their competitors and create new billable services. As a result, the number of extra features, services, and technologies that are included with cell phone service has increased dramatically over the years. Many cell phones now function as a camera, personal organizer, music player, and radio. The multidimensional cell phone also allows consumers to surf the Web, play video games, send e-mail and text messages, and play and record videos, among many other functions. According to one estimate, today's cell phones are capable of accessing roughly 500,000 independent features and functions, compared to cell phones in 1995, which offered about 50 different features.[43] While many of these features by themselves may be perceived as useful, a cell phone crowded with too many features can be overwhelming and difficult to use. Indeed, according to a 2006 global survey by the Forum to Advance the Mobile

Experience (FAME), the number one complaint about cell phone handsets is that they have too many functions.[44]

- *Service Plan Details Rather Than Price Competition*—The FCC contends that "[c]onsumers continue to pressure carriers to compete on price…"[45] In fact, wireless carriers differentiate themselves by various calling plan details, but avoid competition on the base price of the plans. For example, individual carriers may seek a comparative advantage by allowing subscribers to carry over unused minutes from one month to the next, extending the hours when "free night and weekend" minutes are in effect, or through plans that offer unlimited incoming calls without deductions to a subscriber's bucket of minutes. In contrast to their efforts to distinguish themselves on specific plan details, the largest national wireless carriers in the United States have essentially stopped competing on the price of their base plans, which is what accounts for the bulk of a subscriber's monthly bill. Indeed, the nation's three largest carriers no longer distinguish themselves on the basis of monthly plan prices and allotment of anytime minutes[46] and generally do not even mention the cost of monthly service in their considerable marketing efforts.[47] Marketing that focuses on free call time or other plan details complicates decision making because consumers cannot quantify the benefit in terms of their total price for service and are unable to compare the overall price of the service with other offers. It also allows the carriers to adopt pricing strategies that push subscribers to purchase their more expensive plans. In fact, one analysis of rate plan pricing over the last several years finds that carriers generally are eliminating their cheaper, lower-end plans, increasing the cost per minute of their remaining low-end plans, and decreasing the cost per minute of their most expensive plans.[48] The chief executive of T-Mobile USA also acknowledges this trend: "Over the last 12 months, prices are higher on single-line plans…You can't find a $19.99 plan now."[49]

The nation's three largest carriers no longer distinguish themselves on the basis of monthly plan prices and allotment of anytime minutes and generally do not even mention the cost of monthly service in their considerable marketing efforts.

3) Increase Perceptions of Product Complexity

Product complexity describes the extent to which consumers view a product as difficult to understand or use.[50] Consumers typically perceive a product as complex if it offers multiple options and features, requires a number of steps to use, or is associated with complicated pricing structures or other multidimensional product attributes (e.g., service quality, customer service etc.).[51] To the extent that a product has these characteristics, consumers have to devote more time and effort and generally incur greater "thinking costs" to gather, process, and compare information.[52] The greater number of decisions associated with complex products also reduces consumer effectiveness in decision making (especially older adults)[53] and inherently increases consumer uncertainty about the benefits and consequences of making a particular purchase. Past research has found that consumers in complex decision environments tend to respond to this uncertainty by choosing the status quo and remaining with their existing provider: they choose not to choose.[54]

Product complexity and consumer uncertainty abound in the cell phone industry. Surveys and reports in the media suggest that consumers have difficulty understanding and/or using many aspects of cell phone service—from pricing policies, service contracts, and monthly bills to service coverage maps and handsets.[55]

- *Complex, Multidimensional Pricing*—The major wireless carriers typically use complex pricing practices that reduce consumers' ability to evaluate prices, thereby giving carriers the opportunity to charge higher prices. Research suggests that consumers have significant difficulty evaluating price offers that: 1) consist of multiple components (e.g., $39.99 per month for 450 minutes, plus 40 cents for each additional minute) rather than a single dollar amount; 2) include odd price endings (e.g., $49 rather than $50); or 3) require the consumer to perform a calculation to determine the actual cost (e.g., calculating the total cost of an offer that includes a $29 monthly charge, plus an 8 percent fee).[56] Research also indicates that pricing formats such as these can increase consumer effort fivefold over less complicated price forms and can significantly reduce consumers' ability to accurately identify the least expensive price offer among alternatives.[57] In the wireless industry, consumers pay a substantial penalty for their confusion over pricing. In fact, as much as 50 percent of the cell phone industry's income comes from overage charges that consumers pay for exceeding the number of minutes on their monthly plans and "underage," which is the amount consumers pay for unused minutes.[58]

- *Categories of Minutes*—In the marketplace for cell phone service, not all minutes are the same; each of the major national carriers distinguishes among various categories of minutes. These may include, but are not limited to, some variation of the following:

  ⇒ anytime minutes,
  ⇒ in-network or mobile-to-mobile minutes,
  ⇒ shared minutes,
  ⇒ pre-paid minutes,
  ⇒ weeknight minutes,
  ⇒ weekend minutes,
  ⇒ overage or additional minutes,
  ⇒ roaming minutes, and
  ⇒ long-distance minutes.

The sheer number of these categories and their often less-than-intuitive names confuse many consumers.[59] To the extent that consumers do not recognize and understand the complex pricing implications of these and other categories of minutes, they run the risk of underestimating the price of their wireless service.

- *Lack of Unit Pricing*—The lack of unit pricing in the wireless industry inhibits customers from determining the true value of their cell phone service. Cost comparisons among wireless providers are made more difficult because carriers do not identify the cost per minute of each of their plans or print the average price of each minute a customer uses on the monthly bill.[60] Because consumers have difficulty in comparing prices, carriers are under less pressure to compete on price.

- *Line-Item Charges*—In recent years, wireless carriers' use of line-item surcharges has "mushroomed—in terms of the numbers of carriers imposing them, the number of charges being imposed by carriers on consumers' monthly bills, and the amount of revenue being recovered via such fees."[61] As a result, many customers do not discover the full cost of their cell phone service until they receive their monthly bills, at which time they are likely to find that the actual cost significantly exceeds what they expected to pay. According to TracFone Wireless, the average wireless consumer pays $17.75 per month above the advertised price of his or her particular monthly plan.[62]

- *Misleading Descriptors*—When consumers take a closer look at these added costs, they are likely to find line-item charges with names such as "Regulatory Charge" and "Federal Programs Cost Recovery Fee." Carriers seem to assess these charges to recover costs incurred by specific government mandates when, in reality, no regulatory authority requires carriers to do so. Confused by these misleading billing descriptions, many consumers assume that all carriers charge these exact same "government" charges. As the Federal Communications Commission has noted, "consumers may be less likely to engage in comparative shopping among service providers if they are led erroneously to believe that certain rates or charges are federally mandated amounts from which individual carriers may not deviate."[63]

E. Consumer Welfare in a Marketplace with Switching Costs

In general, significant switching costs hurt consumers by raising the average price level over time and preventing new providers from entering the market.[64] In markets with switching costs, firms recognize that customers are likely to continue purchasing from their current provider over the long term and even pay higher prices to do so because switching costs make moving to a competitor expensive. This opportunity to charge higher prices to "locked-in" customers creates a strong incentive for firms to offer introductory discounts or otherwise lower prices to encourage new customers to make an initial purchase. Indeed, firms that stray from this type of pricing are less able to offer discounts and, thus, more likely to have difficulty enticing new customers to purchase their product.

Some analysts suggest that this pricing pattern, often referred to as "bargain then rip-off" pricing, is not necessarily harmful to consumers because they may be able to get an initial benefit (e.g., a discount or subsidy) from a provider that essentially compensates them for having to pay higher prices as result of switching costs in the future[65] Such an outcome, however, is based on an overly simplistic and misleading view of markets with switching costs that is contrary to most research findings on this subject.[66] Switching costs, particularly switching costs that firms impose or exploit, generally harm consumers by increasing prices and making markets less competitive.[67]

Switching costs, particularly switching costs that firms impose or exploit, generally harm consumers by increasing prices and making markets less competitive.

F. The FCC Has Failed to Adequately Address the Detrimental Impact of Consumer Switching Costs on Competition in the U.S. Market for Wireless Telephone Service

Consumer Ability to Switch Service Providers

The Federal Communications Commission is the primary federal agency responsible for ensuring that consumers can switch freely between wireless carriers. Statements from the FCC's eleventh annual report on competition in the wireless marketplace suggest that the Commission recognizes that transaction costs—a term that, as used by the FCC, refers to both switching costs and search costs—have a significant impact on competition and consumer welfare in the market for wireless telephone service:

> Consumer behavior will be more effective in constraining market power when the transaction costs subscribers incur in choosing and switching carriers are low. Transaction costs depend on, among other factors, subscribers' access to and ability to use information, and costs and barriers to switching carriers.[68]

The annual report concludes that "[c]onsumers continue to pressure carriers to compete on price and other terms and conditions of service by freely switching providers in response to differences in the cost and quality of service."[69] The FCC cites average churn, which refers to the rate at which customers leave their wireless carrier, and the implementation of wireless local number portability as the basis for their conclusion.[70] A closer look at the reasoning behind this conclusion casts some doubt on its validity.

The FCC acknowledges deep in the report that the rate of customer switching actually declined during the study year,[71] continuing a five-year downward trend.[72] The Commission suggests the reason for this decline is that wireless carriers have improved their service quality in recent years to the extent that more customers choose to remain with their carrier.[73] The report, however, offers no quantifiable evidence to support this explanation. It also neglects to mention that in 2004, 2005 and again in 2006, the cell phone industry ranked first on the Better Business Bureau's list of the most complained about industries in the United States.[74]

Another potential explanation for the decline in rate of switching is that the prevalence or magnitude of consumer switching costs has increased to the extent that more customers are deterred from leaving their carrier. Indeed, earlier in the report, the FCC recognizes that early termination fees "are a widespread phenomenon in the marketplace." [75] Nevertheless, the section of the report entitled "Consumer Ability to Switch Service Providers" does not even mention, let alone measure or analyze, the impact that early termination fees or any other real or perceived costs may have on consumers' ability to freely switching providers.[76] Instead, the section focuses on the FCC's implementation of wireless local number portability, which as the Commission predicted in 2003, has removed an important impediment to switching wireless carriers:

In 2004, 2005 and again in 2006, the cell phone industry ranked first on the Better Business Bureau's list of the most complained about industries in the United States.

> Preventing carriers from imposing restrictions on [number portability] will benefit consumers by preventing carriers from establishing barriers to competitive switching. With customers able to switch more freely among carriers, competitive pressure will encourage carriers to compete for customers by offering lower prices and new services.[77]

However, implementing number portability alone does not prevent carriers from establishing other barriers to competitive switching. Moreover, the act of reducing some switching costs through number portability does not necessarily mean that consumer switching costs in the wireless marketplace are low or that customers are able to switch freely among carriers. As discussed above, the national wireless carriers still manage many other switching cost opportunities.

Access to Information on Wireless Services

The FCC's annual report also mentions various sources of third-party information, such as the publication, *Consumer Reports,* to suggest that consumers have sufficient readily available information to find the wireless service that best meets their needs.[78] However, even the most reputable of these sources lacks some key types of information that would help consumers to choose the most appropriate wireless carrier.

For example, no third-party information source offers detailed service quality information that is even remotely comparable to what the wireless carriers could provide using their network performance data. *Consumer Reports* only provides satisfaction ratings for 20 metropolitan areas of the United States.[79] J.D. Power and Associates compares call quality performance within six U.S. regions, each of which includes no fewer than five states and as many 16 states.[80] Unfortunately, identifying the best carrier in a large region is of limited benefit to consumers who may or may not understand that the call quality performance of every national wireless carrier often varies by street or building. As such, the best carrier in a region may not be the best carrier in any given neighborhood within that region.

Consumers have a "lower probability of finding the best cell phone carrier for their usage patterns than winning at roulette."

Only the wireless carriers collect the detailed information on network performance that is necessary to determine which carrier offers the best coverage for an individual consumer's particular needs and usage patterns. Unfortunately, the carriers do not share this information with the public in any verifiable manner. Indeed, all of the major national wireless carriers have mostly or completely ignored repeated requests by the FCC[81] to share their network coverage maps and other data and information about their quality of service and service availability. Without this important information, consumers face great odds in attempting to select the wireless carrier that provides the best coverage for their particular use pattern. In fact, consumers have a "lower probability of finding the best cell phone carrier for their usage patterns than winning at roulette.[82]

Only limited information is available about the price of cell phone service as well. Neither *Consumer Reports* nor J.D. Power and Associates makes comparisons or any distinctions among the many service plans each wireless carrier offers. Among the Web sites and other sources of third-party information on cell phone service, some have financial incentives to promote or highlight specific carriers, and some only include information about the largest wireless carriers.

Finally, the FCC identifies the wireless industry's voluntary consumer code[83] as another good source of information that was "designed to educate consumers and help them make informed choices when purchasing wireless services."[84] The report does not mention, however, that the voluntary code carries no penalties for noncompliance, other than losing the opportunity to display the industry's "seal of wireless quality/consumer information" in the carrier's marketing and advertising.[85] In addition, the code offers "no rigorous examination of the carrier's advertising campaigns and billing practices and no record of any disciplinary efforts."[86] This lack of transparency and accountability prevents anyone outside the industry from determining whether real progress has been achieved to help consumers make informed choices.

G. Conclusion

Substantial evidence suggests that the national wireless carriers strategically pursue and manage a full range of switching cost opportunities. These actions and their implications for consumers deserve significant attention and serious consideration from policymakers. Indeed, research finds that markets often become less competitive and consumers generally pay higher prices when firms impose or exploit switching costs. Practices that hinder competition in the wireless industry are particularly troublesome considering that the regulatory framework for such an essential service relies primarily on competition to assure reasonable prices and high quality service. Nevertheless, the use of switching costs as a customer retention tool is a practice that appears to occur virtually unchecked by the federal agency responsible for ensuring that consumers can switch freely between wireless carriers.

H. Policy Recommendations

In the wireless industry, where long-term contracts, handset-locking software, complex pricing structures, and consumer confusion are prevalent, cell phone users take considerable risks in switching to an alternative service provider. Competitive markets work best for consumers when they are unimpeded in their ability to switch among service providers. Therefore, policymakers should:

- Ensure all consumers have up to 20 days after the date of their first monthly service bill to void their service contract without penalty.

- Apply rules to wireless carriers to ensure that consumers have the freedom to use the handset of their choice on whichever wireless network they prefer, just as they have that basic right for their landline communication.

- Conduct a comprehensive annual study to identify and measure the existence of real or perceived consumer switching costs to assess their impact on competition and consumer welfare in the marketplace for wireless telephone service.

- Prohibit unreasonable early termination fees.

Markets with switching costs typically lead consumers to make long-term commitments to a single service provider. Because of this, consumers depend more than ever on clear, reliable, and meaningful information that is easily accessible and comparable across service providers. Therefore, policymakers should:

- Establish standards for, and publish quality of service information associated with each wireless carrier, such as dropped call rates and the number of complaints regulators receive about each wireless carrier;

- Require wireless carriers to produce accurate, verifiable coverage maps that clearly convey meaningful information about the quality of their service and provide a baseline of information across carriers so consumers can make consistent comparisons of coverage characteristics and service quality;

- Require wireless carriers to disclose the full purchase price of any handset they sell, including any amount that is collected through subscription fees;

- Require wireless carriers to begin all sales transactions by providing consumers with clear and conspicuous disclosures of all material terms and conditions of the offer;

- Prohibit wireless carriers from imposing any separate monthly line-item charges, surcharges, or other fees on customers' bills unless such charges have been expressly mandated by federal, state, or local law.

Appendix: Types and Examples of Consumer Switching Costs in the Wireless Marketplace

In the U.S. marketplace for cell phone service, consumer switching costs arise for a variety of reasons, but generally can be characterized as contractual costs or information costs.

1) Contractual Switching Costs

Contractual or artificially created switching costs are costs that arise at the discretion of a service provider.

- *Early Termination Fees*—Early termination fees are a primary example of contractual switching costs. The largest wireless service providers typically charge subscribers between $100 and $200 per telephone number for terminating a service contract before it expires (see Table 3). As such, canceling a family share plan with four phone numbers could result in $800 of early termination penalties. In addition to these penalties, consumers who purchase their cell phone services and equipment from an agent or authorized retailer rather than a wireless service provider directly may face a second cancellation fee as well. Indeed, some consumers have been subject to penalties totaling $550 per phone number, including $150 to the wireless carrier and $400 to the authorized agent.[87]

- *Handset Replacement Costs*—Consumers who switch providers typically must also discontinue using their current cell phone and select and purchase a new cell phone regardless of whether they are satisfied with their current phone. In this regard, wireless carriers create contractual costs by preventing or hindering consumers from using their handsets on a competitor's network when they switch service providers.

Table 3: Early Termination Fees: Major Wireless Service Providers, August 2007

Wireless Carrier	Early Termination Fee
AT&T Mobility/Cingular[88]	$175
Verizon Wireless[89]	$175
Sprint/Nextel[90]	$200
T-Mobile USA[91]	$200

- *Loss of In-Network Pricing*—Contractual switching costs also arise because wireless carriers use pricing practices that make communication between customers of different carriers an expensive proposition. In this regard, wireless users value a larger network because it provides opportunities to communicate with a larger set of people. Indeed, wireless users have communication opportunities that extend beyond the network of their individual carrier because carriers interconnect their networks—as Congress requires of all telecommunications carriers[92]—and essentially form one single network through which customers of any one carrier can reach customers of a different carrier. At the same time, however, the largest national carriers use pricing practices that create a financial incentive for wireless users to communicate *less* with anyone outside their carrier's network of customers. In fact, each of the three largest national carriers typically charges its customers for calls with customers of a different carrier, but offer in-network calling for "free" (i.e., subscribers who use the same wireless carrier can make and receive calls to and from each other without reducing their monthly allotment of minutes). This pricing strategy contributes to higher switching costs to the extent that wireless users believe that the loss of in-network pricing will lead to higher bills for themselves and their friends, family, and other potential calling partners and/or that family and friends will communicate with them less to avoid paying more.

- *Preferred Handset Opportunity Costs*—Consumers may incur the cost of forgoing a handset that better matches their preferences because carriers demand lengthy contracts to market and sell preferred handset models exclusively. For example, over the next five years, until 2012, the much-anticipated Apple iPhone will be available only to AT&T/Cingular subscribers.[93] Indeed, news reports indicate that the agreement between Apple and AT&T/Cingular prohibits Apple from producing a version of the iPhone that would be compatible with the technology—known as CDMA—that Verizon and Sprint use for their wireless networks and phones.[94]

- *Loss of Exclusive Content*—Switching to another wireless telephone service provider may result in the loss of various exclusive content and services, such as video clips of sporting events, broadcasts of live concerts, music ring tones, and full-length episodes from top-rated television shows. Indeed, each of the largest wireless carriers enters into exclusive arrangements with content and application providers as a means to offer consumers a better product and distinguish itself from its competitors. According to one mobile marketing consultant, "[c]reating exclusive relationships makes a ton of sense since [the wireless carriers are] all fighting the churn issue in a big way. For example, being able to text your vote for the next American Idol only by using AT&T/Cingular has been proven to retain customers."[95] From the consumer's perspective, however, these exclusive arrangements create a "fragmentation of possibilities.... [U]sers subscribing to one mobile network forfeit the content and services of all others. Users locked into one network cannot share their exclusive mobile experience with users locked into another network."[96] The emphasis on exclusive mobile content in the United States stands in contrast to the more open nature of wireless markets in some other parts of the world. For example, "[i]n Europe and Asia, application providers and equipment makers compete directly for consumers, who can use any phone and most services on any network. Innovators have no need to make different products for different networks, which lets them spread development costs further and offer more to consumers."[97]

- *Loss of Bundled Services*—Contractual switching costs may include the cost of relinquishing benefits associated with bundled services as well. For example, in switching to a new carrier, consumers who purchase both cell phone service and landline phone service from the same carrier may lose the basic convenience of a single monthly bill for both services and a single point of contact for customer service when alternative providers cannot create equivalent bundles.

2) *Informational Switching Costs*

Informational switching costs occur because consumers have to spend time and effort to search for information about a new service or provider and must learn how to set up and use their new service. This type of switching cost also involves the risk consumers undertake in changing to a new provider when they do not have sufficient information to determine whether the change will result in a positive outcome. The informational costs associated with switching cell phone service providers are potentially steep for many consumers and may include search and evaluation costs, uncertainty costs, and set-up and learning costs.

- *Search and Evaluation Costs*—Consumers may invest significant time and effort trying to find the right cell phone service provider as each of the top national competitors offers dozens of models and an extensive array of calling plans that lack a standardized format and include seemingly endless groupings of monthly service charges, anytime minutes, usage charges, rules for weeknights and weekends, and special features. In addition, the quality of network coverage and customer service may vary substantially among the national carriers.

- *Uncertainty Costs*—Consumers may be more likely to remain with their current cell phone service provider rather than sign a long-term service contract with another wireless carrier when they lack sufficient information about that competitor. They may even be willing to pay more—by not taking advantage of the opportunity to pay less with another wireless carrier—to remain with their current provider if they are uncertain about the performance or any other characteristics of the competitor, such as the quality of coverage in a specific area (at the consumer's home or work, for example), or the potential cost of monthly service in six months or a year. Most service contracts offer very little to reduce a consumer's uncertainty over the risks of switching providers. In fact, while customers who agree to a contract with a wireless carrier are bound to its terms and conditions, carriers are usually free to change the agreement at any time. In sum, any potential benefits simply may be insufficient to outweigh the perceived risks of switching to the untested or unknown carrier.

- *Set-Up and Learning Costs*—Consumers' perceptions of the time and effort required to set up their new cell phone service and configure a new phone may also affect their interest in changing service providers. For example, in addition to activating their account, consumers who switch carriers may need to take time to set up their voice mail, add names and numbers to their speed dial list, and fill out an application to use automatic bill payment services.

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