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August 28, 2007

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

RE: RM-11361, Skype Communications Petition

Dear Ms. Dortch:

Verizon Wireless is submitting for the record the following two documents:

- Mark Lowenstein, "Comparisons Between U.S. and European Markets for Wireless Services and Devices: Myth vs. Reality (June 2007);
- The American Consumer Institute, "Comparison of Structure, Conduct and Performance: U.S. versus Europe's Wireless Markets" (August 22, 2007).

In its Petition, Skype Communications makes comparisons between U.S. and European wireless carrier practices to support its claim that imposing *Carterfone* requirements on U.S. wireless carriers would benefit consumers. These two papers demonstrate that the premise of this argument is simply wrong, and that U.S. consumers enjoy many advantages and benefits as compared to wireless consumers in European countries.

According to Mr. Lowenstein, "[W]hile European consumers may have more choices of handsets and more portable handsets, U.S. consumers have reaped the benefit of competition among carriers and technologies, resulting in lower prices, more usage, more varied voice network choices, and more robust data services."

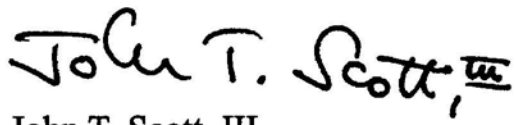
Similarly, the American Consumer Institute states that "a comparison of international statistics suggests that the U.S. wireless market, in fact, leads its European counterparts, and the U.S. wireless market, compared to Europe, appears to be more competitive and vibrant. . . . [F]urthermore, the contention that the U.S. lags the European market and needs some regulatory remedy is without empirical merit."

As the ACI concludes: "In summary, there is no evidence of market failure or that the U.S. wireless market somehow lags behind the European wireless market. In fact, if anything, basic comparisons of consumer welfare between these two markets demonstrate the opposite conclusion."

Verizon Wireless submits that attempting to impose *Carterfone* requirements on U.S. commercial mobile services based on what is available to consumers in Europe would be factually unsupportable and legally unsustainable, and would ignore the tremendous benefits that innovation in the U.S. wireless market has brought to wireless consumers, as described in these two papers. Imposing new regulation would disrupt the flourishing and innovative U.S. market and disserve U.S. wireless consumers.

Pursuant to Section 1.1206(b) of the Commission's Rules, this letter and the enclosures are being filed on the Commission's Electronic Comment Filing System.

Sincerely,



John T. Scott, III

Enclosures

# Comparisons Between U.S. and European Markets for Wireless Services and Devices:
## *Myth vs. Reality*

**Mark Lowenstein**

**July 2007**

## Executive Summary

Proponents of an "open access" regime for wireless networks in the United States have advanced several arguments claiming that the European wireless market is more open than the U.S. market and consequently is more competitive, more innovative and superior for consumers.[1]

While in some respects this argument might have been true historically, in just about every respect the U.S. wireless industry has caught up and now surpassed its European counterpart. The U.S. wireless market, for the most part: is more competitive; features lower prices; boasts more advanced 3G networks; has led in the development of advanced devices; has higher data revenues per subscriber, outside of SMS; and leads in the development of certain applications such as multimedia, location services, and Mobile TV. Below is an explanation of the reality behind the myth that the European wireless market is more advanced and better for consumers.

### Myth #1: The European Wireless Market Is Better for Consumers Because Handsets Are Unlocked and Can be Ported from Carrier to Carrier.

As an initial point, it is simply inaccurate to state that all phones in Europe are unlocked. There are variations depending on which country, which operator, whether the customer is in a pre-paid or post-paid relationship, and where the customer is in or out of contract. Moreover, handsets are not necessarily unlocked without the customer's request. Similarly, it is not a given that all wireless phones sold in the U.S are locked. Locking is not regulated in the U.S. Operator policies vary, in many cases along the same lines as European operators:

- Verizon Wireless does not lock handsets of subscribers in contracts.
- AT&T unlocks phones after the customer's completion of the contract if the handset supplier allows AT&T to do so.
- T-Mobile generally unlocks subsidized phones 90 days after purchase upon request.

It is also important to note that it is increasingly possible to purchase unlocked phones directly from third-party retailers. CompUSA, for example, sells unlocked Motorola, Samsung, and Nokia handsets. Customers can walk into a Nokia store and purchase a phone to be used on the GSM network of their choice.

Even though a universal generalization cannot be made, a greater percentage of customers have an unlocked phone in Europe than in the U.S. And phones are, in

[1] *See, e.g.*, Tim Wu, "Wireless Net Neutrality: Cellular *Carterfone* and Consumer Choice in Mobile Broadband," New America Foundation Working Paper #17 (Feb. 2007); *cf. Ex Parte* Letter from Richard S. Whitt, Google, Inc. to FCC Secretary Marlene H. Dortch, FCC WT Dkt. 06-150 (filed July 9, 2007).

general, more "portable" from one operator to another. But phone portability does not necessarily make the marketplace better for consumers in all respects.

First, wireless phone portability in Europe is more prevalent in large part due to differences in market structure – not because operators are more "open" or benevolent. In Europe, by government mandate, all wireless operators use GSM, which was developed with SIM card technology and allows for easier phone porting. A SIM card can be removed from and inserted into any GSM phone in Europe. Such phone portability is more limited in the U.S. because multiple technologies are available, based on the recognition by the FCC that competing technology choices benefit consumers by driving down prices and encouraging innovation. Thus, it is not possible to use a CDMA phone in a GSM network, or vice versa (with the exception of a select number of dual-mode devices).

Second, the United States has a much higher percentage of subscribers who are on post-pay plans with their operator. In these cases, the operator has generally subsidized the phone and the customer signs a one or two year contract. It would not make any economic sense for an operator to subsidize the phone, and then immediately allow full portability of that subsidized phone to another operator. In cases where customers buy unlocked phones from a third party retailer, they are paying the full retail price for the device.

A third structural reason for greater SIM portability in Europe is because of the high roaming rates there. If users just take their phone from one country to another, they pay roaming charges as high as $1.50 per minute. In order to avoid this, they take their SIM and sign up for service in the domestic country they are visiting. Clearly this is a reason to permit SIM portability but the process is rather inconvenient to consumers. In the United States, by contrast, the predominant rate plans from most of the major carriers include long distance and roaming.

However, in the U.S. market where phone portability is less prevalent, there are countervailing benefits. Operators sell phones that are optimized for use on their network. This applies not only to voice quality of service but also to anti-theft and fraud measures. Additionally, phones sold by an operator are equipped with software for creating an optimal user interface and accessing certain applications, such as VZ Navigator, Verizon Wireless' location-based service, mobile storefronts such as Verizon Wireless' Get it Now services, or AT&T's MediaNet. These are gateways into applications either optimized for the mobile device, or in some cases arising from a relationship between the operator and a content partner. This is similar to a subscriber's experience in Europe with Vodafone Live! or a community application such as TIM Café in Italy.

Finally, even in an environment where there is phone portability, there will be situations where operators offer some handsets that are exclusive, unique, or customized in a certain way (for example, Vodafone Live!). The ability to offer a differentiated handsets, user

interfaces, and content is a key point of competitive differentiation for operators that helps to drive down prices and spur innovation, to the benefit of consumers.

**Myth #2: The European Handset Market Is More Innovative.**

Proponents of an "open access" regime for wireless services argue that the decoupling of handsets and networks in Europe produced a market for wireless handsets that is more advanced and innovative than in the U.S. However, U.S. consumers are not disadvantaged with regard to being able to buy "the latest and greatest" wireless device.

First, European regulators mandated use of GSM. In the U.S., rather than mandate what air interface technology the operators must use, the FCC decided to allow market forces to prevail. This decision has allowed for tremendous innovation. For example, Qualcomm, a U.S. based company, developed and worked with operators to deploy CDMA technology, which in some respects is more advanced than GSM. CDMA is used by about 50% of U.S. wireless subscribers and about 20% globally. The rise of Qualcomm and the entire CDMA ecosystem has helped to assert U.S. technological leadership in the wireless sector. CDMA-based technologies are used in every 3G handset in the market today, even those in the 3GPP (GSM) track. CDMA has also given birth to dozens of new companies and employed tens of thousands of people.

Market forces also allowed the development and deployment of the iDEN technology by another U.S. based company, Motorola. The iDEN network, which was deployed by Nextel (now Sprint Nextel), offers the most advanced push-to-talk functionality in the world and is popular in certain businesses such as construction as well as state and federal government agencies.

Second, European consumers may have more choice of devices, due to the economies of scale of GSM (80% market share, globally). With more handsets, the price per handset is generally lower, and some devices might be launched outside the U.S. first since the U.S. market is only about 50% GSM subscriber share. However, U.S. consumers have access to a more diverse handset market. For example, consumers in Wal-Mart or Best Buy will find handsets using GSM, CDMA, and iDEN technologies. And, in terms of competition, device market share is more concentrated in Europe. Nokia has about a 35% market share in Europe, whereas it is about 15% here.

Network diversity has also allowed the U.S. to pioneer in the development of multi-band and multi-mode devices. Currently available are:

- "Quad-band" devices, capable of operating on U.S. and European networks at the 800/900/1800/1900 frequencies;
- Multi-mode devices, such as CDMA/GSM phones that can be used globally, as well as iDEN/GSM and iDEN/CDMA devices

Third, the U.S. has clearly kept pace in the area of handset innovation. Some leading edge devices have come out of Europe, some from Japan and South Korea, and some from the United States. In addition to greater handset diversity, as pointed out above, some of the "latest and greatest" to come out of the U.S. include:

- iPhone, made and developed by Apple in the United States and launched in this market first.
- PDA devices: Most new Blackberry, Palm, and Microsoft models are introduced here first, or are available in the U.S. exclusively. In fact, the United States has more than 50% of global Blackberry subscribers. In Europe, Nokia has dominant share of the smartphone market.
- Some of the most feature-rich 3G handsets are either only available in the U.S. or have been specially developed for the market here. Samsung, LG, and Sanyo, for example, are significant players with market leading handsets in the U.S., whereas they are smaller players in Europe. On the other hand, Nokia, which has for the most part stayed out of the CDMA business, may offer certain handsets in all-GSM Europe but not here.

The U.S. market also leads in innovation in the usability of devices. Blackberry, Treo, and iPhone devices have led the way in usability innovation. Qualcomm has developed a new user interface platform, called UI One, which is now being adopted by several carriers in Europe.

Finally, in terms of channel distribution, it is true that a higher percentage of handsets is sold through the operator channel than in Europe. But, this does not mean that U.S. consumers have insufficient choices. To the contrary, the U.S. has a vibrant third-party distribution network, with Wal-Mart, Best Buy, Circuit City, and Radio Shack playing important roles as national wireless retailers. There are countless regional chains of third-party distributors, as well as successful third-party Internet distributors such as Let's Talk and Inphonic (which went public two years ago).

**Myth #3: Europe Offers More Innovative Services and Applications to Consumers.**

The deployment of advanced 3G networks has enabled the U.S. to leapfrog Europe, in many respects, in offering advanced applications. Here in the U.S., we have two fully built out 3G networks (EVDO), whereas the buildout of UMTS in Europe is more uneven. Additionally, EVDO performance (uplink, downlink, and latency) has been shown to be superior to UMTS. This allows for a more robust market for PC-based connectivity, as well as multimedia applications. HSDPA is the UMTS upgrade that is more competitive in terms of performance to EVDO. HSDPA is in the process of being deployed by AT&T but is in much more limited deployment in Europe. Additionally, Verizon Wireless and Sprint Nextel are rolling out EVDO Rev. A, which offers superior downlink speeds and lower latency. This would put overall U.S. wireless data networks

definitively ahead of just about anywhere in Europe.

The U.S. also leads in the *diversity* of data networks, including:

- The most advanced, nationwide 3G networks (EVDO Rev. A, and HSDPA)
- Nationwide iDEN network
- The first national network being built for Mobile TV (MediaFLO)
- Announced plans for WiMax network builds, with more than $3 billion committed by Sprint and Clearwire.

The myth that Europe is ahead in data services is perpetuated by the pervasiveness and high usage of text messaging there. As a percentage of revenues, Europe has been ahead with SMS. But it is important to understand the reasons for this:

- *Higher voice pricing.* SMS is an attractive alternative to making a high priced voice call, which is especially important to the price-sensitive younger segment of the market.
- *Limited IM penetration.* In Europe, PC penetration has been historically lower and usage of PC-based instant messaging (IM) services has also been much less than in the U.S. Hence SMS has been an attractive alternative in the youth market.
- *Carrier interoperability.* Europe was ahead of the U.S. in implementing carrier interoperability. Once interoperability was introduced in the U.S. some four years ago, SMS usage took off. MMS interoperability has been in place for about a year in the U.S., and will also likely show increased usage.

Outside of SMS, data revenues of U.S. operators are equal to or higher than their European counterparts, and the difference in percentage of revenues from text messaging has narrowed significantly. In enterprise mobile e-mail, for example, the U.S. has over 50% of the world's mobile e-mail market (principally Blackberry). Additionally, due to the U.S. nationwide deployment of advanced 3G networks, the usage of laptops with wireless modems (wireless PC cards) to access services such as Verizon Wireless' Broadband Access is much more prevalent in the U.S. than in any other geographic area.

On the consumer side, the U.S. is exhibiting world leadership with respect to numerous advanced services, including mobile games, mobile search, downloadable music, video clips, and location services. Jamdat, a U.S. based company that is arguably the world leader in the development of mobile games, went public two years ago and was acquired by Electronic Arts for $680 million.

Because deployment of advanced 3G networks (EVDO and HSDPA) in the United States is ahead of Europe, U.S. consumers have access to a broader array of rich multimedia applications. Verizon Wireless' VCAST Video clips, and similar offerings from other U.S. carriers on 3G devices, showcase high quality short form content, often in partnership with the leading media and entertainment brands. There is increasing innovation in multimedia content made specifically for mobile, such as a version of the Fox Network's popular "24", and short films from companies such as Fun Little Movies and Atom Films.

Mobile TV has also made its debut recently in the United States. Qualcomm has invested more than $700 million to build the nationwide MediaFLO network on dedicated spectrum. Verizon Wireless has launched the service, called VCAST Mobile TV, to about half its footprint, with coverage to the majority of its footprint expected as the FCC clears the licenses. This is the most advanced Mobile TV network available in the world today in terms of picture quality and the overall user experience. Several other carriers, in the U.S. and worldwide, have announced plans to launch services based on the MediaFLO technology.

Finally, some have criticized operator control of content in the U.S., claiming that the European market is more "open." Today in the United States, there is a healthy mix of on-portal content (that is, accessed from an operator's "storefront" such as Get it Now) and off-portal content. Content and relationships with content providers represent one form of competitive differentiation in the wireless business today. For example, subscribers to Verizon Wireless' VCAST have access to premium content from ESPN, while AT&T subscribers have access to HBO content on their mobile phones. Then there are video clip services such as MyWaves, which work with just about any mobile device, as long as the subscriber has a data subscription. As a percentage of the total, the percentage of off-portal content accessed by consumers has been increasing in the past two years, while in Europe it has been decreasing.

**Myth #4: The U.S. Market is Not as Competitive as the European Market.**

From a consumer standpoint, the U.S. market is one of the most competitive in the world. The average U.S. consumer has a choice of some four "national" wireless carriers. There are also several strong regional operators, such as Alltel and U.S. Cellular. There are operators, such as TracFone, specializing in pre-pay services, and several nationwide MVNOs that have launched services within the past couple of years, such as AMP'D, Disney Mobile, and Helio. Hence, the average consumer has a choice of five to seven service providers in most major markets. This competitive choice is far greater than in nearly any other segment of the communications market.

The competitiveness of the market has led to voice pricing that is among the most aggressive in the world. The average carrier price per minute in the U.S. is now well below $0.07, compared to $0.22 in Europe. This has led to average monthly voice minutes of use being as much as five times higher in the U.S. than in Europe.

Data service pricing is also more aggressive here. U.S. wireless operators are now offering unlimited text messaging plans for as little as $10 per month. Services such as Broadband Access, which offers laptop users access to the Internet from cellular modems, typically cost $60 for an unlimited plan. And pricing for the recently launched iPhone features 450 voice minutes and unlimited data access for $59.99 per month. While it is difficult to make generalizations in comparing prices because in Europe they

vary significantly from one geography to another, a rule of thumb is that U.S. voice pricing is about half the average in Europe and data pricing is about one-third lower.

The high voice pricing in Europe was one of the initial catalysts for SMS — it is simply a lot cheaper to send a text message there than it is to make a voice call. The relatively high voice pricing in Europe also provides a more compelling reason for consumers to consider the alternative of handing the call over to IP, via Wi-Fi enabled phones.

In summary, while European consumers may have more choices of handsets and more portable handsets, U.S. consumers have reaped the benefit of competition among carriers and technologies, resulting in lower prices, more usage, more varied voice network choices, and more robust data services.

**Mark Lowenstein Biography**

Mark Lowenstein is a leading wireless industry analyst, commentator, and consultant. Most recently, Lowenstein was an executive at Verizon Wireless, where as Vice President of Strategy he led the company's efforts in pricing, market segmentation, and business planning.

Prior to his role at Verizon Wireless, Lowenstein was Managing Director of the consulting firm, Mobile Ecosystem, where he advised companies and C-level executives across the landscape of wireless communications on market, product, and industry strategy. Prior to founding Mobile Ecosystem, Lowenstein spent ten years at the Yankee Group, where he founded and led the company's wireless practices on a global basis.

Lowenstein has appeared as an expert witness on the wireless industry in several proceedings. He provided a statement as an expert on behalf of the major wireless carriers before the California Public Utilities Commission in its "Consumer Bill of Rights" proceeding. He has provided similar statements as an expert on the wireless industry before the Hawaii Public Utilities Commission and the Federal Communications Commission.

During the course of his fifteen year career as an industry consultant, Lowenstein has advised nearly every major player in the wireless communications industry. He has also had retainer relationships with top venture capital and private equity firms. Lowenstein was selected by Boston Mayor Thomas Menino to be part of an executive group to determine wireless strategy for the City of Boston. As one of the wireless industry's leading analysts, Lowenstein is a sought-after speaker, delivering keynote addresses at major industry and private corporate events.

Over the past 15 years, Lowenstein has published periodic newsletters and columns on the wireless industry, including the monthly "Lowenstein's Lens on Wireless," while running Mobile Ecosystem, and a monthly column for Wireless Week. Lowenstein has been an invited speaker numerous times across the United States at meetings and events hosted by industry trade associations, major wireless carriers, telecommunications infrastructure providers, accounting firms, wireless application developers, wireless CPE manufacturers, Wall Street equity research firms, and major U.S. banks. Lowenstein founded the Boston Wireless Braintrust, a group of twenty CEOs and wireless industry thought leaders who meet quarterly, on a proprietary basis, to discuss key industry issues, opportunities and challenges.

Lowenstein currently resides in Maplewood, New Jersey with his wife and two children.

# Comparison of Structure, Conduct and Performance: U.S. versus Europe's Wireless Markets

**The American Consumer Institute**
**Center for Citizen Research**
**August 22, 2007**

**For More information visit www.theamericanconsumer.org**

# Comparison of Structure, Conduct and Performance: U.S. versus Europe's Wireless Markets

## Executive Summary

There is a belief by some that the domestic wireless market lags the European market in terms of consumer choice, consumer use and competitive prices. This has created a perception that the U.S. wireless market is failing, leading to calls for increased market regulations and the adoption of an European-style wireless model. This paper examines the evidence of market failure by comparing market concentration, usage and prices in the U.S. to international markets, including Europe. This report finds:

- The U.S. wireless market offers more choice and is less concentrated than any Western country's wireless market;
- U.S. consumers use an average of 800 wireless minutes per month, while most European consumers use less that 200 minutes per month;
- U.S. wireless prices are the lowest in the world, with the exception of Hong Kong; and
- The combination of higher usage at lower prices presents compelling evidence that the overall consumer welfare derived from wireless service is higher in the U.S. than internationally.

In summary, a comparison of international statistics suggests that the U.S. wireless market, in fact, leads its European counterparts, and the U.S. wireless market, compared to Europe, appears to be more competitive and vibrant. The contention that concentration leads to higher prices, lower usage and decreasing consumer welfare does not appear to be a U.S. problem, and furthermore, the contention that the U.S. lags the European market and needs some regulatory remedy is without empirical merit.

# Comparison of Structure, Conduct and Performance: U.S. versus Europe's Wireless Markets

## Introduction

A frequent claim is that the European wireless market has more choices, more consumers, is healthier and has lower prices, compared to the U.S. wireless market. For many years, statistics from the Organisation for Economic Co-operation and Development (OECD) have shown Europe far ahead of the U.S. in terms of cellular service penetration. Suggestions that the U.S. wireless market is slower to innovate and generally lags other parts of the world have contributed to a recent FCC's decision to place additional rules upon bidders of an upcoming wireless spectrum auction. In testimony before the U.S. House of Representatives, senior counsel for Consumers Union testified that "in Europe and Asia, wireless consumers have better choices."[1] Referring to the U.S. market, this testimony states, "instead of innovating, the wireless industry has become a cozy cartel of a few dominant providers with limited device offerings."[2] All of these concerns have fueled a debate over the need to correct the U.S. wireless market, including proposals to add regulations, including the adoption of an European-style model.

If there is a problem, a healthy public policy debate is needed to address how to fix it. However, what this debate has lacked thus far is a review of empirical evidence before coming to conclusions that regulatory remedies should be considered. The purpose of this paper is to analyze whether the U.S. market actually lags Europe and, if so, the extent of the gap.

## Evaluating Market Failure

Economic theory provides guidance for regulation as a possibly remedy, but only if markets fail and the remedy addressing this market failure (e.g., government regulation) lead to net social benefits. Therefore, in this study, the contention that the U.S. lags Europe will be evaluated by comparing the wireless industry's structure, conduct and performance in search of actual market failure.

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[1] Chris Murray, "Wireless Innovation and Consumer Protection," testimony before the U.S. House of Representatives on Telecommunications and the Internet, Committee on Energy and Commerce, July 11, 2007.
[2] Ibid.

The contention that the U.S. lags Europe is supported by the following hypothesis – the U.S. market is more concentrated than the European market, leading to higher consumer prices in the U.S, and lower penetration rates in the U.S. Based on this market failure, the end result of this is that consumer welfare would be lower in the U.S., compared to Europe. This is a testable hypothesis.

**Market Structure**

Data from the OECD and FCC suggest that the U.S. wireless market is not as concentrated as markets in Europe, or elsewhere for that matter. Using data from the OECD, the table on the next page shows that the U.S. wireless market has a higher number of wireless competitors than in Europe or any other county. Therefore, according to publicly available information, the conclusion that Europe has more competitors and more choice is incorrect. This point is also supported by a Merrill Lynch report,[3] as well as several consulting reports.[4] In terms of choice among devices, CTIA reports that the U.S. offers 700 different wireless handsets compared to about 190 for the U.K.[5]

Looking at the number of wireless operators "permitted" to provide wireless broadband services, according to the table, the U.S. leads all European counties. However, what these statistics do not show is that "U.S. mobile operators have the flexibility to upgrade their networks to 3G on their existing 2G networks (cellular, PCS, SRM) spectrum,"[6] while European GSM operators must rebuild their networks. This means that the OECD figures understate the number of permitted U.S. operators, and explains how the U.S. is rolling out wireless broadband services so quickly and sometimes offering services that provide twice the speed of European wireless broadband services.[7]

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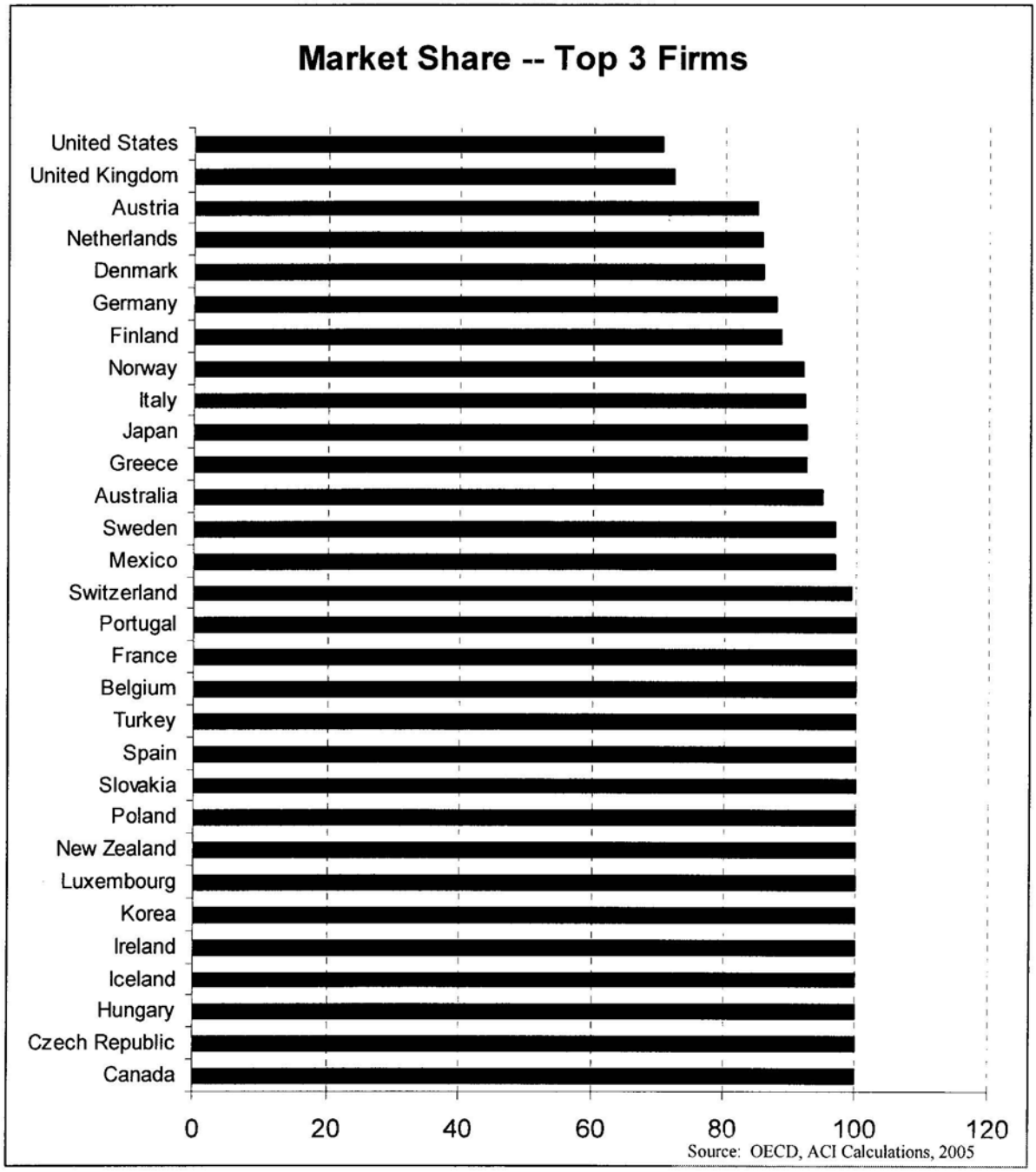
[3] Glen Campbell, et. al., "Global Wireless Matrix 1Q07: Latin Fever," Merrill Lynch, June 15, 2007, table 1.
[4] Marius Schwartz and Federico Mini, "hanging up on *Carterfone*: The Economic Case Against Access Regulation in Mobile Wireless, May 2, 2007; George S. Ford, Thomas M. Koutsky and Lawrence J. Spiwak, "Wireless Net Neutrality: From *Carterfone* to Cable Boxes," Phoenix Center for Public Policy, Bulletin No. 17, April 2007; and Mark Lowenstein, Comparisons Between U.S. and European Markets for Wireless Services and Devises: Myth vs. Reality," July 2007.
[5] CTIA ex parte communications with the FCC, WC Docket No. 07-52, July 24, 2007.
[6] OECD Communications Outlook, OECD, Table 21., p. 35, fn. 7
[7] Walter S. Mossberg, "Cingular Joins Rivals with Fast, Reliable Wireless Broadband, *Wall Street Journal*, January 19, 2006.

**Number of Wireless Operators in 2005**

| | Mobile Operators | Broadband Licenses |
|---|---|---|
| Australia | 4 | 4 |
| Austria | 4 | 4 |
| Belgium | 3 | 3 |
| Canada | 17 | 2 |
| Czech Republic | 3 | 3 |
| Denmark | 4 | 4 |
| Finland | 15 | 3 |
| France | 25 | 3 |
| Germany | 4 | 4 |
| Greece | 4 | 3 |
| Hungary | 3 | 3 |
| Iceland | 3 | 0 |
| Ireland | 4 | 3 |
| Italy | 3 | 4 |
| Japan | 17 | 12 |
| Korea | 3 | 3 |
| Luxembourg | 3 | 3 |
| Mexico | 18 | 1 |
| Netherlands | 4 | 4 |
| Norway | 3 | 3 |
| Poland | 3 | 4 |
| Portugal | 3 | 3 |
| Slovakia | 2 | 2 |
| Spain | 3 | 4 |
| Sweden | 4 | 4 |
| Switzerland | 5 | 4 |
| Turkey | 3 | 0 |
| United Kingdom | 5 | 5 |
| United States | 155 | 5+ |

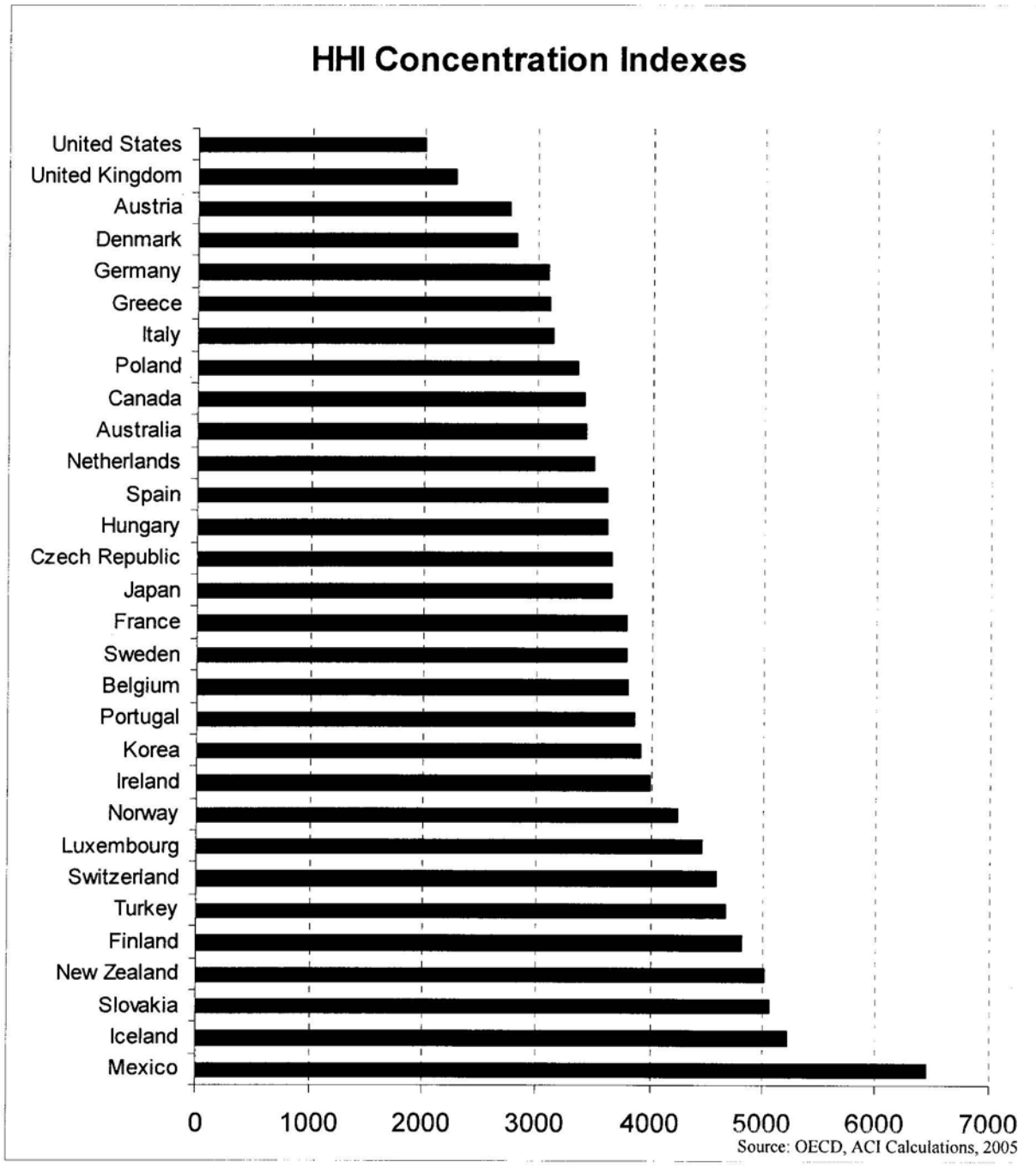
Source: OECD Communications Outlook, OECD, 2007, p. 35.

Is it possible that the U.S. market has more wireless operators, but it is dominated by only a few? Using the OECD data, the chart below graphs the market share for the top 3 wireless providers and shows that the contention that the wireless market is a "cozy cartel" is less a U.S. problem than it is a European one.



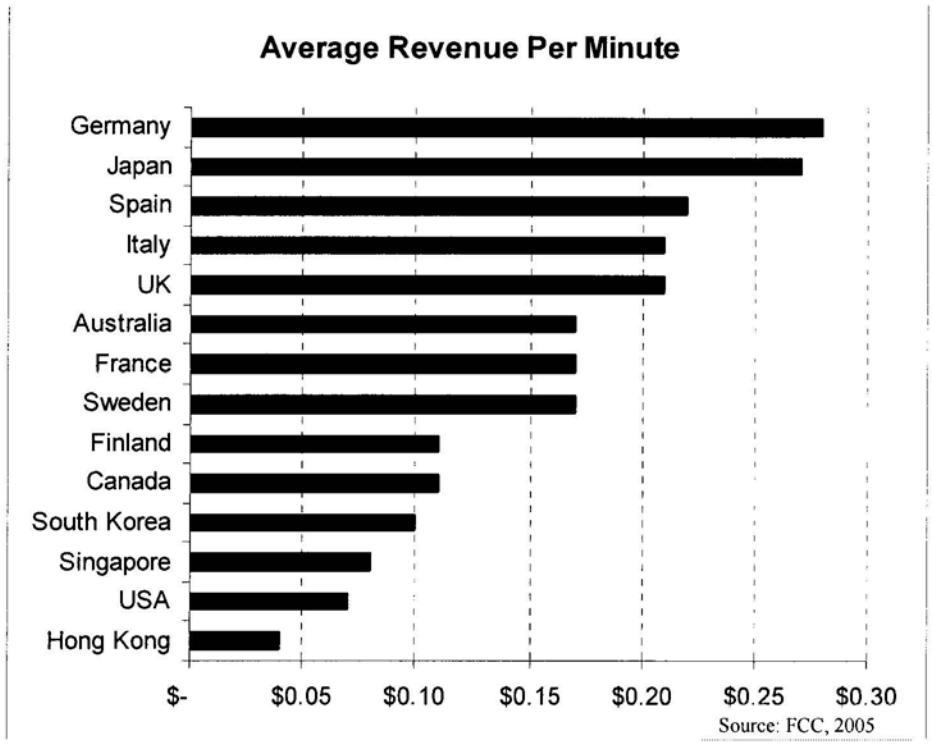

A final way to look at industry concentration is to use the measure widely accepted by the Department of Justice, Federal Trade Commission and world courts – the Herfindahl-Hirschman Index. We find that the U.S. has the lowest concentration index, when compared to all of the

OECD listed companies. In summary, the U.S. wireless market has more operators and is less concentrated than any other international market for which data are available.



**Conduct and Performance**

If the U.S. market is not as concentrated as its European counterparts, could it still operate as a "cozy cartel," effectively driving up consumer prices and restricting supply? This, too, is a testable hypothesis. FCC data show that the U.S. has the lowest rates (measured by revenue per minute) of any major developed economy with the exception of Hong Kong. To this, the FCC concludes "mobile calls continue to be significantly less expensive on a per minute basis in the United States than in Western Europe or Japan."[8] Therefore, not only is the U.S. less concentrated, but it offers more competitive prices than other countries.

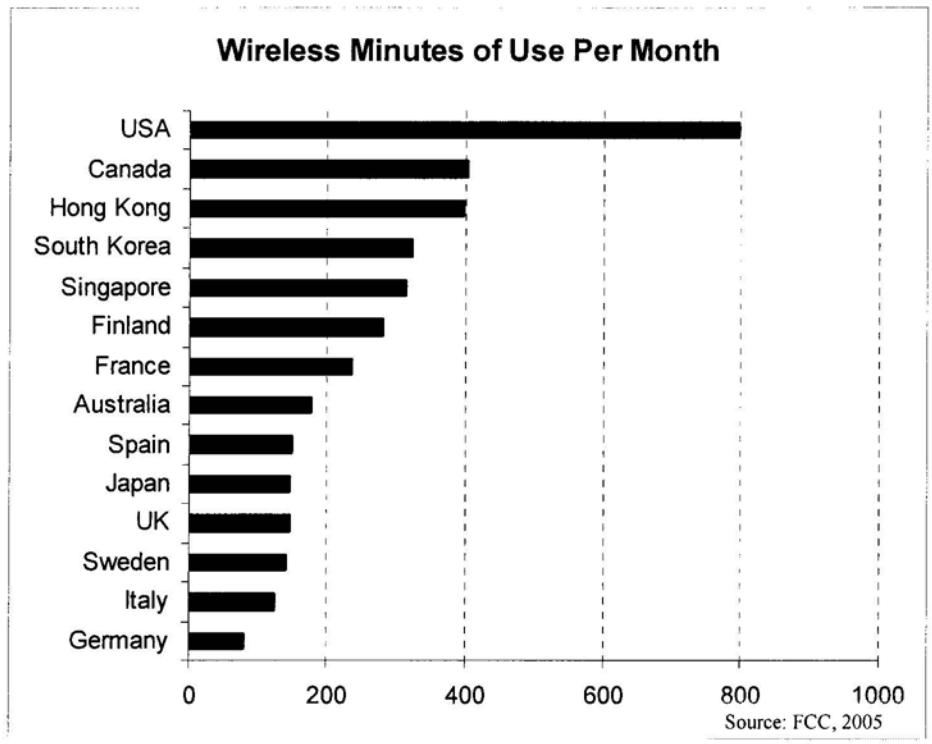



It is important to note that Europe uses a "calling party pays" system that bills customers for originating minutes, whereas, in the U.S. system, customers are billed for both originating and terminating minutes. This means that the U.S. system counts more minutes, which would affect the relative comparison of average monthly usage and price. Schwartz and Mini conducted an independent analysis of this, correcting for differences in payment system and

[8] Eleventh Wireless Report, FCC, released September 29, 2006.

found U.S. prices to be lower than all of the major European countries.[9] Their analysis also shows that U.S. prices have decreased faster as a percent or in absolute terms, compared to all major European countries.[10]

Another adverse effect of market power is restriction of supply, which leads to consumer welfare losses. However, as the chart below shows, data from the FCC once again show that the U.S. market is not a problem. In 2005, U.S. wireless consumers talked for 800 minutes per month, while consumers in some European nations average less than 200 minutes. In other words, the more concentrated European wireless markets charge consumers substantially more per minute, which, in turn, leads to lower usage by consumers.

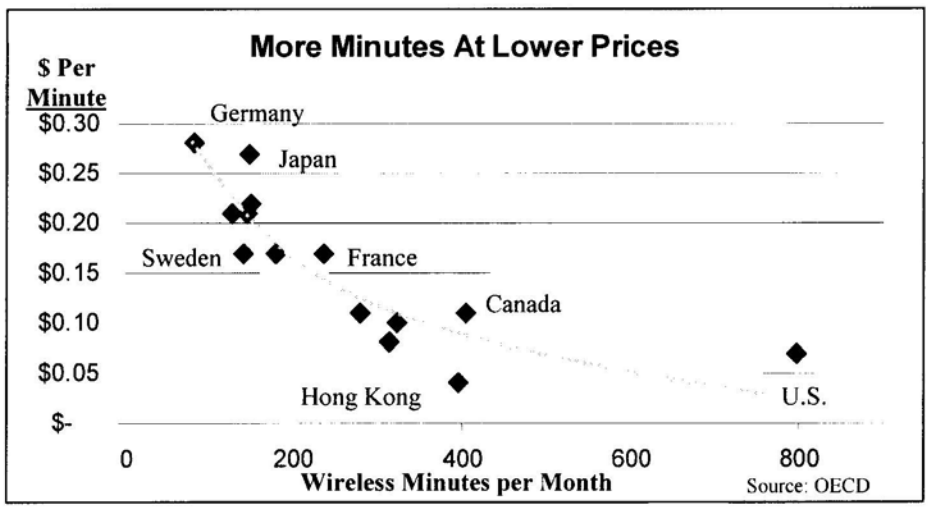



[9] Marius Schwartz and Federico Mini, "hanging up on *Carterfone*: The Economic Case Against Access Regulation in Mobile Wireless, May 2, 2007, p. 12-14. They also make a correction for the prevalence of dormant (not active) phones in European statistics.

[10] Ibid. Schwartz and Mini note a comparable decline for Spain.

These conclusions hold up even after accounting for differences in measurement between Europe and the U.S. Specifically, Schwartz and Mini show that the average U.S. consumer uses about three times more minutes per month than the average European consumer.[11]

Another comparative observation is that the relationship between usage and price appears to be negatively correlated. As depicted in the chart below, as wireless prices increase, customer minutes decrease. This means that U.S. consumer benefits (as measured by consumer welfare) from wireless services exceed their European counterparts. From these data, we conclude that market failure appears to be a European problem, not a U.S. problem.




**Caveat: Potential Problem with OECD Published Data**

This report has shown that the U.S. market has lower market concentration, more competitive prices and greater acceptance among consumers. However this finding is counter to published international data on market penetration. The problem with these international statistics is that they do not count the same things. In the U.S., wireless subscriptions primarily reflect the number of handsets in operation. However, in the Europe, the statistics reflect the number of Subscriber Identity Module (SIM) cards. Because European roaming rates are so high between countries, it is sometimes economical for consumers to have more than one SIM card per handset, in order for consumers to take advantage of lower in-country rates. As a result, one

[11] Ibid.

wireless customer may have several SIM cards and be counted multiple times in the OECD statistics. In addition, pre-paid wireless plans are more prevalent in Europe than in the U.S., and these customers tend to use wireless services much less than post-paid customers. Correction of these differences will decrease the reported European penetration rate relative to the U.S.

**Conclusion**

Calls for a regulatory remedy are not based on sound empirical evidence. The data from the OECD and FCC show that European wireless markets have higher concentration, higher prices and lower usage. From this analysis, the U.S. wireless market gives consumers more choice, offers more competitive prices and encourages more consumption. Compared to Europe, reported problems of high market concentration, high consumer prices, low usage and decreasing consumer welfare do not appear to be a U.S. problem. In summary, there is no evidence of market failure or that the U.S. wireless market somehow lags behind the European wireless market. In fact, if anything, basic comparisons of consumer welfare between these markets demonstrate the opposite conclusion.