



QSI CONSULTING
Market Solutions • Litigation Support

TECHNICAL DOCUMENTATION

Document Number: 052704A

TAXATION IMPACT ON PAYPHONE SERVICES IN THE STATE OF KENTUCKY

AN ECONOMIC SUPPRESSION ANALYSIS

Prepared by: Michael Starkey
Olesya Denney, Ph.D.
Patrick Phipps

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INDUSTRY IS IN DECLINE	3
WIRELESS SUBSTITUTION.....	7
CUSTOMERS OF PAYPHONE SERVICES	8
THE EFFECT OF THE TAX.....	12
<i>Demand Side</i>	<i>12</i>
<i>Supply Side.....</i>	<i>15</i>
<i>Future Tax Revenues.....</i>	<i>17</i>

EXECUTIVE SUMMARY

Purpose

The purpose of this analysis is to identify the impact on Kentucky pay telephone services of a sales tax imposed on coin payphone calls. We have been informed that the Kentucky taxing authority currently interprets Kentucky tax statutes in such a way that subjects *coin box* revenues (revenues derived from coin calls made from payphones) to the 6% state sales tax. It is also our understanding that different payphone providers interpret the existing tax laws differently, with some payphone providers paying the sales tax and others not paying the sales tax. We are also aware of a Communications Excise Tax proposal before the 2004 Kentucky General Assembly that would have the effect of increasing this tax from the current 6% level to 7.6%. The sales tax on payphone revenues is in addition to the 6% sales tax that independent payphone providers pay for the underlying wholesale payphone access lines that they lease from their local exchange carrier. We have been asked to identify the impact this taxation policy may have on pay telephone providers in the State of Kentucky and Kentucky citizens who rely most heavily on public communications facilities.

Conclusions

Our analysis indicates that applying sales tax requirements to payphone coin box will likely have significant adverse consequences for the Kentucky payphone industry that has already been operating in a declining market and the Kentucky residents that rely on public payphone facilities as their primary access to the public telecommunications network. This additional tax burden would likely cause the availability of payphone service to drop to unacceptably low levels in relation to their primary competitors – providers of wireless telephone service. The excise tax currently proposed before the Kentucky General Assembly would exacerbate these problems. Moreover, since low-income customers are less likely to have access to wireless telephone services, the additional tax burden will disproportionately affect low-income Kentucky residents by raising the rates they pay in accessing the public telecommunications network.

It is likely that this tax will further decrease the availability of payphone service to low income citizens in two specific ways:

- (1) If the tax is passed through to the consumers, an increase in price above the current price of fifty cents will make it necessary for payphone callers to have an additional coin compared to the two quarters that would previously have sufficed, and the economic, as well as the convenience, implications of that change will undoubtedly suppress the demand (calling volumes).
- (2) With the demand suppression resulting from the increase in price and reduced convenience of the coin payment, the payphone providers themselves are apt to reduce the number of payphones they maintain and/or, find themselves in additional business difficulties with the potential to exit the market entirely. If the

tax is not passed through to the price, payphone providers – operating in the already declining market – are even more likely to abandon some of their payphones or withdraw from the market because of the increase in costs.

As such, the Kentucky taxation policy will impact both the demand and supply characteristics of a public communications marketplace already experiencing severe financial distress.

We also believe that, as a result of the market problems discussed above, the taxation policy might have exactly the opposite intended effect: a reduction, rather than an increase, in total tax revenues. Applying the tax to payphones will reduce demand for payphone calls and payphone lines – demand that is already shrinking at an alarming rate – causing additional payphones to be removed. As additional payphones are disconnected, the tax revenue generated from payphones will necessarily decrease. This domino effect will lead to a shrinking and uncertain tax revenue stream from payphones, while harming the less fortunate Kentucky residents through a reduced availability of payphone services.

Finally, this tax will have important ancillary effects on payphone providers and their ability to recover dial-around compensation revenues from long distance carriers – moneys that payphone providers receive from long-distance companies for coinless long distance calls made from their payphones, and a critical source of revenue for the industry. This would have an immediate detrimental impact on the pay telephone industry and would almost certainly result in decreased public communications opportunities for Kentucky's citizens.

ANALYSIS

INDUSTRY IS IN DECLINE

The objectives of Section 276 of the Federal Telecommunications Act of 1996 are to “promote competition among payphone service providers” and “promote the widespread deployment of payphone services to the benefit of the general public.”¹ Despite these objectives, payphones have been disappearing from Kentucky (and the nation as a whole) at an alarming rate as the competition from wireless services has reduced the demand for payphone services. There are many examples of payphone providers “pulling the plug” on payphones. In Kentucky, BellSouth announced its withdrawal from the payphone business as of March 31, 2004,² where it has been operating its 3400 payphones. Similarly, BellSouth is divesting all of its 143,000 payphones throughout the BellSouth region.³ Prompted by BellSouth’s decision, the Kentucky Public Service Commission opened a case⁴ to investigate the need of public interest payphones. Many commenters in this ongoing case, which included various local exchange carriers, communities and public interest groups noted that demand for payphone service significantly decreased due to the availability of wireless service.⁵ Further, a number of the incumbent local exchange companies (who are required by Kentucky law⁶ to provide at least one payphone in each of their exchanges) indicated that their payphone business has been operating at a loss⁷ and that they intend to exit the market or will exit if the statutory requirement to provide one payphone in each exchange is removed.⁸ The Kentucky PSC Spokesperson Andrew Melnykovich expressed a similar view in connection to BellSouth’s decision to exit the payphone business:

"Pay phones have been sort of a dying business for some time now...The rise of the cell phone ... has really put a dent in the demand for pay phones. ...They are just not as profitable as they once were."⁹

The data presented below illustrate this point.

¹ Section 276(b)(1) of the Telecommunications Act of 1996.

² KPSC case No. 2003-00261 *Order* dated December 24, 2003.

³ *BellSouth To Drop Payphones At 3400 Locations in Kentucky*, Louisville Courier Journal. By Bill Wolfe, January 3, 2004.

⁴ Kentucky PSC Case No. 2003-00492.

⁵ Kentucky PSC Case No. 2003-00492, Response of BellSouth (May 6, 2004), Response of South Central Rural Telephone (February 6, 2004), Response of West Kentucky Rural Telephone Cooperative (January 16, 2004), Response of Logan Telephone Cooperative (February 2, 2004).

⁶ 807 KAR 5:061, Section 11.

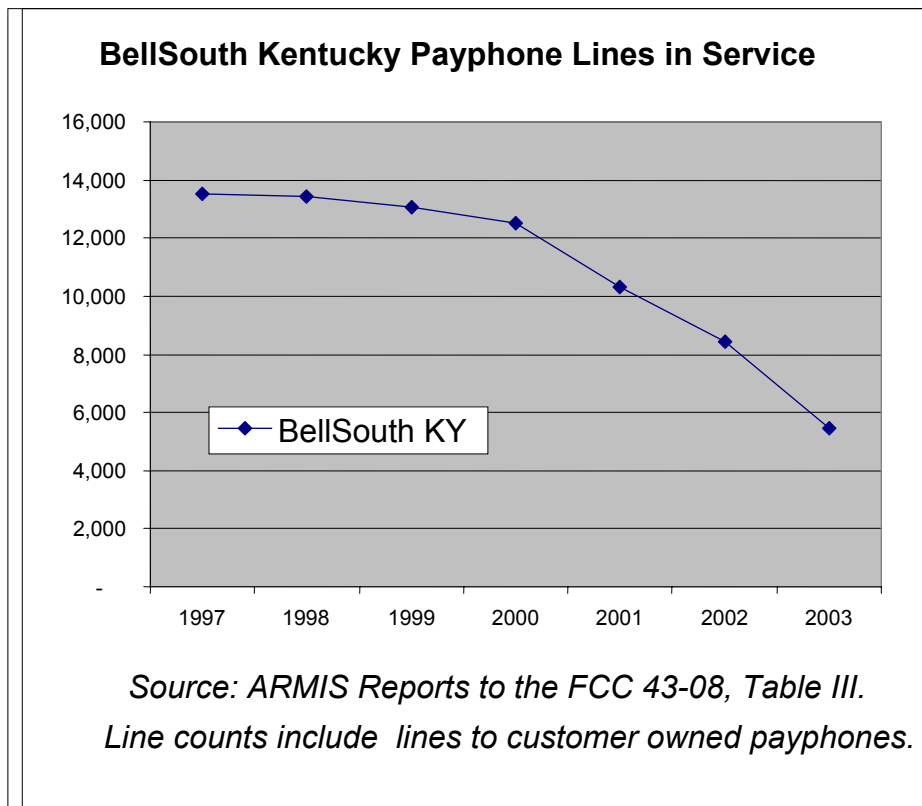
⁷ Kentucky PSC Case No. 2003-00492, Response of Brandenburg Telephone Company (January 26, 2004), Response of South Central Rural Telephone (February 6, 2004).

⁸ Kentucky PSC Case No. 2003-00492, Response of Duo County Telephone (January 29, 2004), Response of North Central Telephone Cooperative (February 6, 2004).

⁹ *BellSouth To Drop Payphones at 3400 Locations In Kentucky*, The Louisville Journal-Courier. By Bill Wolfe, January 3, 2004.

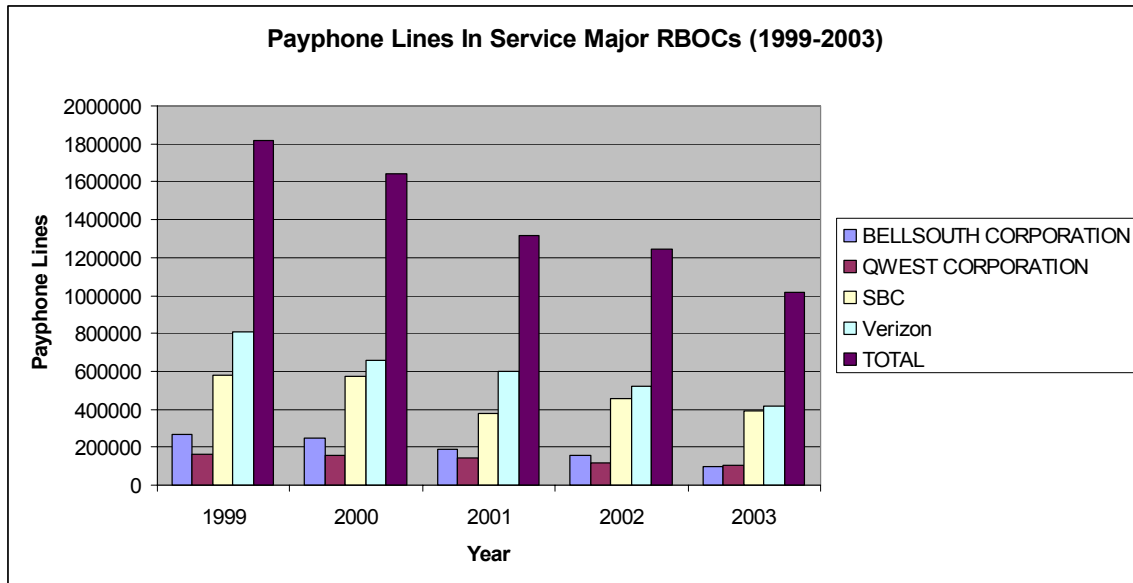
Payphone Lines

Payphone lines are declining sharply nationwide and in Kentucky.¹⁰ The following two charts illustrate this decline.¹¹ Comparison of these two charts reveals an important trend: payphone lines are disappearing in Kentucky at a *faster* rate than the national average. Specifically, Kentucky payphone lines have decreased by 58.33% (14.13% higher than the national average during the past five years), with payphone lines decreasing in Kentucky by 35.7% between 2002 and 2003 alone (17.1% higher than the national average during this same time period).



¹⁰ “Payphone lines” refers to the access lines that connect pay telephones to the public telecommunications network. Payphone lines include lines utilized by incumbents to provide their own payphone services, as well as lines purchased from the incumbent by independent payphone providers to provide competing payphone services.

¹¹ Payphone lines in the territories of the major Regional Bell Operating Companies (RBOCs) – BellSouth, Qwest, SBC and Verizon – are being used as a proxy for nationwide payphone lines. The data source is ARMIS reports to the FCC, report 43-08, table III.



Payphone Revenues On The Decline

A further indication that the industry is in decline is the revenue statistics: between 1999 and 2002 (where 2002 is the last year for which the data are available), payphone gross revenues fell by an astounding 47.2%, with the decline being 23.3% between 2001 and 2002 alone.¹² This decline, illustrated in the graph below, continued during the years of economic growth (1999-2000) that were accompanied by growth in the number of payphone providers,¹³ and occurred despite an increase in local payphone rates¹⁴ and an improved mechanism of dial around compensation.¹⁵ This trend is consistent with information gathered in Kentucky PSC Case No. 2003-00492, which shows that some payphone providers are operating at a significant loss¹⁶ and have characterized payphones as an “economic drain.”¹⁷

¹² FCC Trends Report released on May 6, 2004, Table 15.4

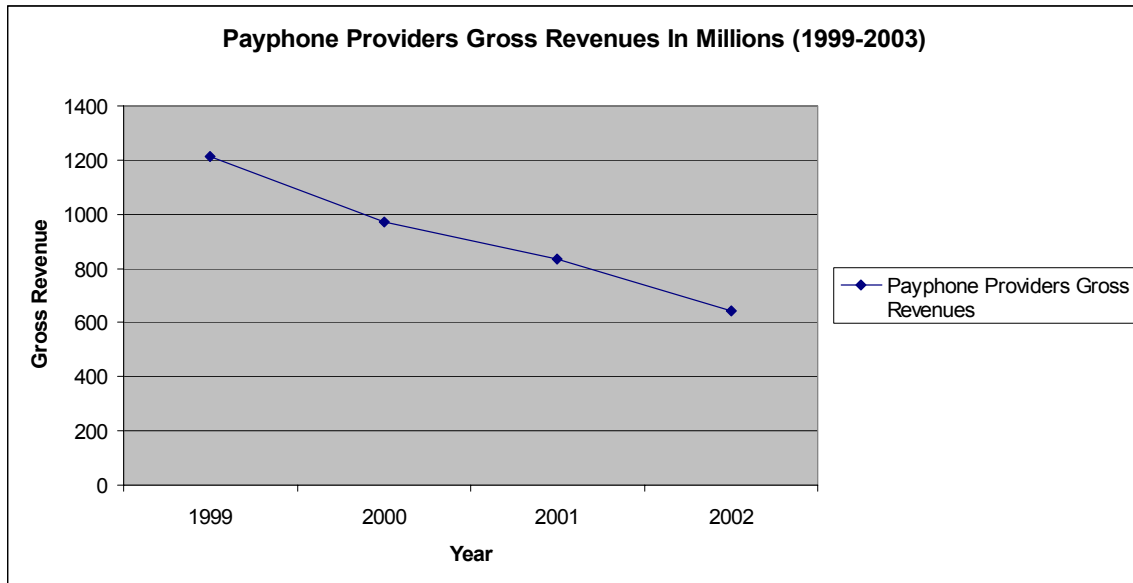
¹³ The number of payphone providers increased in 2001, as reported in the FCC Trends Report released on May 6, 2004, Table 15.3.

¹⁴ For example, Verizon and SBC increased their coin payphone rate from \$0.35 to \$0.50 in September of 2001 and July of 2001, respectively.

¹⁵ See, FCC Third Report and Order, and Order on Reconsideration of the Second Report and Order, CC Docket 96-128, February 4, 1999.

¹⁶ Kentucky PSC Case No. 2003-00492, Response of Brandenburg Telephone Company submitted on January 26, 2004.

¹⁷ Kentucky PSC Case No. 2003-00492, Response of South Central Rural Telephone Cooperative submitted on February 6, 2004.



Monthly Call Volume

The data also indicate that monthly call volumes for payphones are decreasing as well. Though the detailed statistics on call volumes are not available to the public, the FCC periodically estimates average call volumes per *marginal payphone location*¹⁸ for the purposes of determining payphone toll compensation – moneys that long-distance companies pay to payphone companies for coinless (*dial around*) calls that their customers make from the payphones. Recently, the FCC instituted a proceeding to review dial-around compensation rates in response to a petition by the American Public Communications Council. In that petition the Council cited a dramatic reduction in the volume of payphone calling, which implies that a higher compensation amount needs to be collected from each call. The FCC agreed that there is a need to review compensation rates because calling volumes might be decreasing and noted:

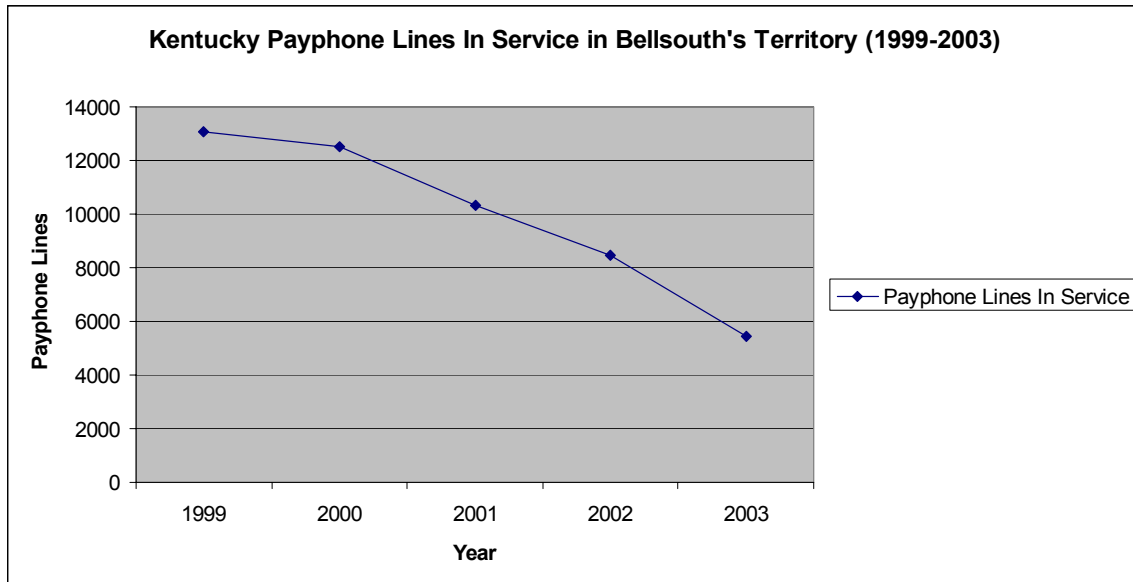
Here, there appears to be no dispute that industry conditions have changed significantly. Payphone usage and deployment are decreasing as the use of wireless services increases.¹⁹

¹⁸ A marginal payphone is one in which the payphone provider just breaks even, in the sense that it does not make “economic profit.” The payphone provider does, however, make a normal rate of return from a marginal location and therefore does generate a modest “accounting profit.”

¹⁹ The FCC Order and Notice of Proposed Rulemaking, In the Matter of Request to Update Default Compensation Rate for Dial-Around Calls from Payphones, WC Docket No. 03-225, RM No. 10568 (October 31, 2003) at 18.

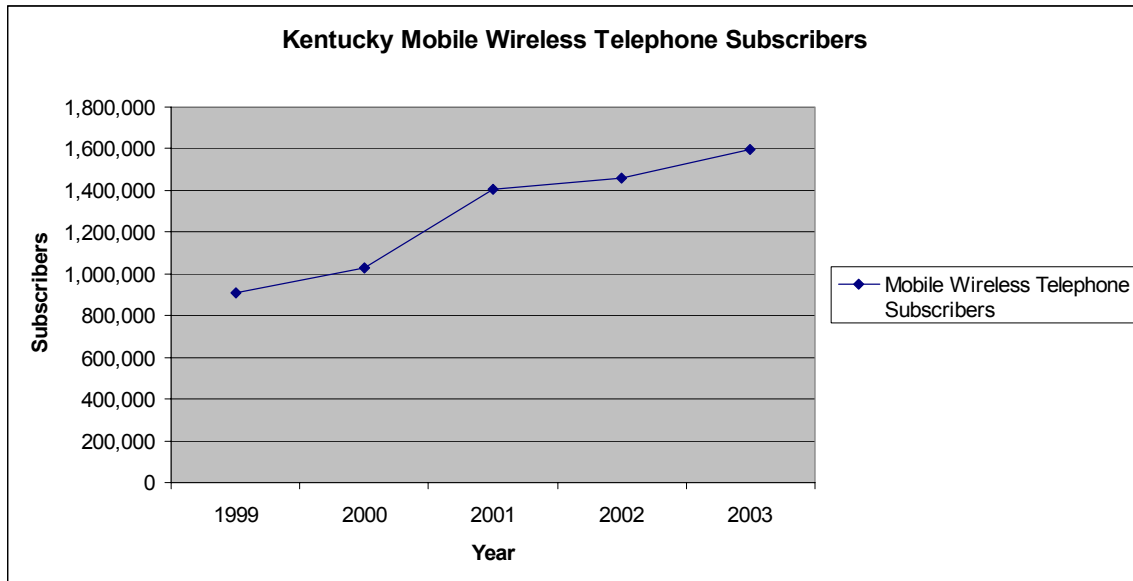
WIRELESS SUBSTITUTION

Wireless technology has largely been responsible for the decline in the payphone industry. In recent years, wireless telephone subscribership has shown a dramatic increase, while payphone services have correspondingly experienced a sharp decline. This substitution of payphone services for wireless services has had a dramatic impact on payphone services in Kentucky. According to the data, wireless telephone subscribership in Kentucky has increased by 75%, while payphone lines in BellSouth's Kentucky territory have declined by 58%.²⁰ This relationship is depicted in the two graphs that follow, and is confirmed by a more formal statistical measure – the correlation coefficient. The calculated correlation coefficient between these two data sets is minus 0.93,²¹ indicating a very strong negative relationship between Kentucky wireless subscribers and Kentucky payphone lines in service in BellSouth's territory.



²⁰ Sources: FCC Trends Data, Table 11.2 and FCC ARMIS Report 43-08.

²¹ Correlation coefficient is a statistic that measures a degree of linear relationship between two sets of data. It can take values between -1 and 1. Values close to zero indicate weak relationship; values close to one indicate strong positive relationship. Values close to minus one indicate strong negative relationship, meaning that high values of the one variable tend to be associated with low values of the other variable and vice versa.



It is important to note that the numbers in the above graphs do not capture the *qualitative shift* in payphone demand that happened because of the widespread adoption of wireless services. In other words, the wireless industry effectively deprived payphone businesses of their high and mid-end customers, thereby shifting the customer base for payphone services to mostly low income customers or other customers with low ability to pay, such as people in distress. This qualitative shift means that the payphone demand becomes *increasingly sensitive to price changes*.

CUSTOMERS OF PAYPHONE SERVICES

Payphones are vital to the public safety, health, and welfare of Kentucky residents, and provide access to the public telecommunications network and access to social services for low-income residents.²² For instance, payphones provide access to emergency 9-1-1 services free of charge and are routinely used in emergency situations. In addition, while payphone usage is in decline, payphones still provide a critical communications function – basic access to the public telecommunications network – for many Kentucky residents that do not have a phone in their homes or wireless access. For example, despite the availability of programs such as Lifeline that provide credits on the phone bills of low-income customers, 15.3% of Kentucky low-income households and 5.8% of total households in Kentucky still lack residential telephone service.²³ For these Kentucky residents, payphones are the only means of accessing basic communications services,

²² See 47 U.S.C. § 276(b)(2). See also Comments of the Kentucky Payphone Association, City of Winchester, Kentucky League of Cities and Metro Human Needs Alliance, Inc. in Kentucky PSC Case No. 2003-00492.

²³ Source: [Telephone Penetration By Income By State](#). FCC Industry Analysis and Technology Division, Wireline Competition Bureau, Table 3, February 2004.

accessing social services, and keeping in touch with family and friends. The Kentucky Public Service Commission recognized the important social purpose of the payphone in its payphone deregulation order:

The Commission is aware that payphones in low income and remote areas serve an important public interest, because in many cases they are the only means by which residents can reach emergency services, potential employers, public welfare agencies and family. Therefore, it is vitally interested in ensuring that adequate numbers of public interest payphones are available throughout Kentucky even where, under market conditions, no supplier of service is willing to place a phone.²⁴

Further, despite the deregulation of the payphone industry, the Kentucky administrative law continues to dictate that Local Exchange Providers offer at least one payphone in each telephone exchange (807 KAR 5:061, Section 11).

Low-Income Residents Are Less Likely To Have Residential Telephone Service

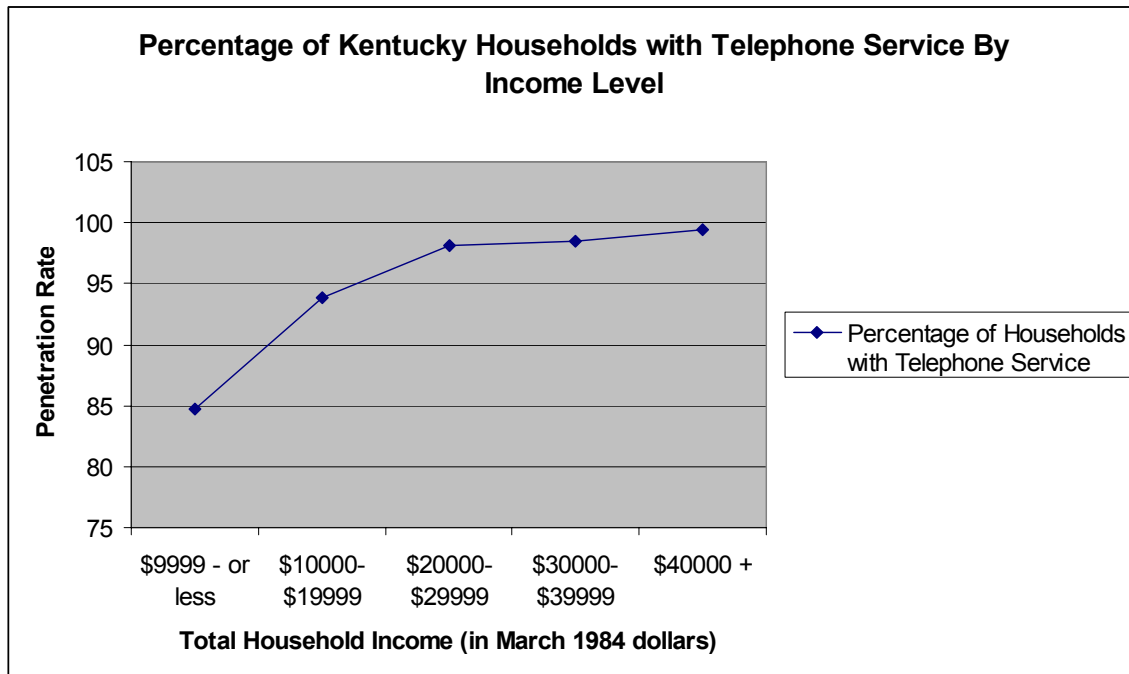
Low-income residents have a lower rate of telephone penetration than residents in higher income brackets. According to telephone penetration data for Kentucky (shown below), telephone penetration rates for low-income households in Kentucky have consistently been lower than the average across all households, with the most recent data showing a gap of 9.6 percentage points between penetration rates for Kentucky low-income households and all households. While it appears that the Telecommunication Act of 1996 was successful in increasing telephone penetration rates for all households, the most recent data (March 2003) shows that the telephone penetration rate for low-income customers actually *declined* in the last reporting period by 3.1%. Although this decline could be caused by the sample variance within the telephone penetration study, it is also possible that tighter economic conditions force some low-income household to disconnect their local residential phone service and seek alternative affordable communications means.

²⁴ Kentucky PSC Case No. 361, *Order* entered on January 5, 1999.

Telephone Penetration Rates in Kentucky²⁵

Date	Low-Income Households	All Households	Difference <i>percentage points</i>
Mar-84	72.10%	87.10%	15%
Mar-97	87.70%	93.10%	5.40%
Mar-03	84.60%	94.20%	9.60%

The data also show that there is a positive relationship between households that have telephone service and income level. The following graph displays Kentucky income data and the associated percentage of households with telephone service for the year 2003.²⁶ This graph shows that as household income increases, the percentage of households with telephone service also increases.

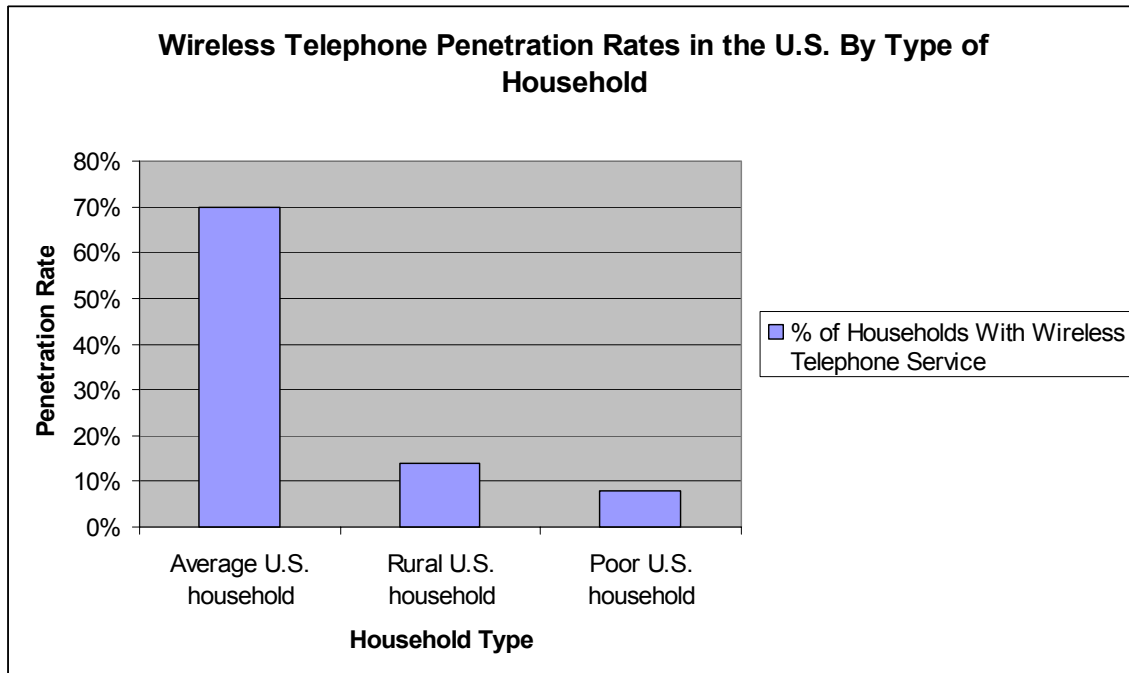


²⁵ Source: Telephone Penetration By Income By State. FCC Industry Analysis and Technology Division, Wireline Competition Bureau, Table 3, February 2004.

²⁶ Source: Telephone Penetration By Income By State. FCC Industry Analysis and Technology Division, Wireline Competition Bureau, Table 4, February 2004.

Low-Income Residents Are Less Likely To Have Wireless Telephone Service

Not only are low-income customers less likely to have basic residential telephone service, they are also much less likely to have wireless telephone service. For instance, about 70% of United States households have cellular phones.²⁷ In contrast, only 14% of rural households in the United States and 7.8% of poor households in the nation have cellular phone service.²⁸ Thus, the average household is approximately ten times more likely to have cellular phone service than a poor household. This relationship is illustrated in the following graph:



Furthermore, according to the American Public Communications Council, payphone disconnect rates in minority zip codes are double the average.²⁹ Taken together, the above data show that the customers who are most likely to have no access to residential wireline services are least likely to have wireless access to the public telecommunications network.

Low-Income Residents Will Be Disproportionately Affected By the Tax

The above presented statistics show that low-income customers do not enjoy the same level of access to residential telephone service or wireless service that the average citizen

²⁷ [Orlando Sentinel](#), January 13, 2004.

²⁸ www.APCC.net

²⁹ www.apcc.net

enjoys, and, as a result, low-income customers rely more heavily on the availability of payphone services. A tax increase applied to payphone calls will disproportionately affect low-income residents – those residents that can least afford it. In addition, because the State of Kentucky has a higher percentage of poor residents than the national average, a tax that disproportionately affects low-income customers will affect a larger number of customers in Kentucky than the average state. The U.S. Census data shows that Kentucky exceeds the national average poverty rates, with 13.1% of Kentucky residents living in poverty, compared to the national average of 11.7%.³⁰ Census data also show that when states are ranked by median family income, Kentucky ranks 42nd in the nation. Since low-income customers rely more heavily on payphone services than customers in higher income brackets, it is very likely that Kentucky has a higher than national average number of residents that rely on payphone service for their basic communications needs. Therefore, Kentucky residents will be hit harder by a tax that affects payphone calls than the average state.

THE EFFECT OF THE TAX

Demand Side

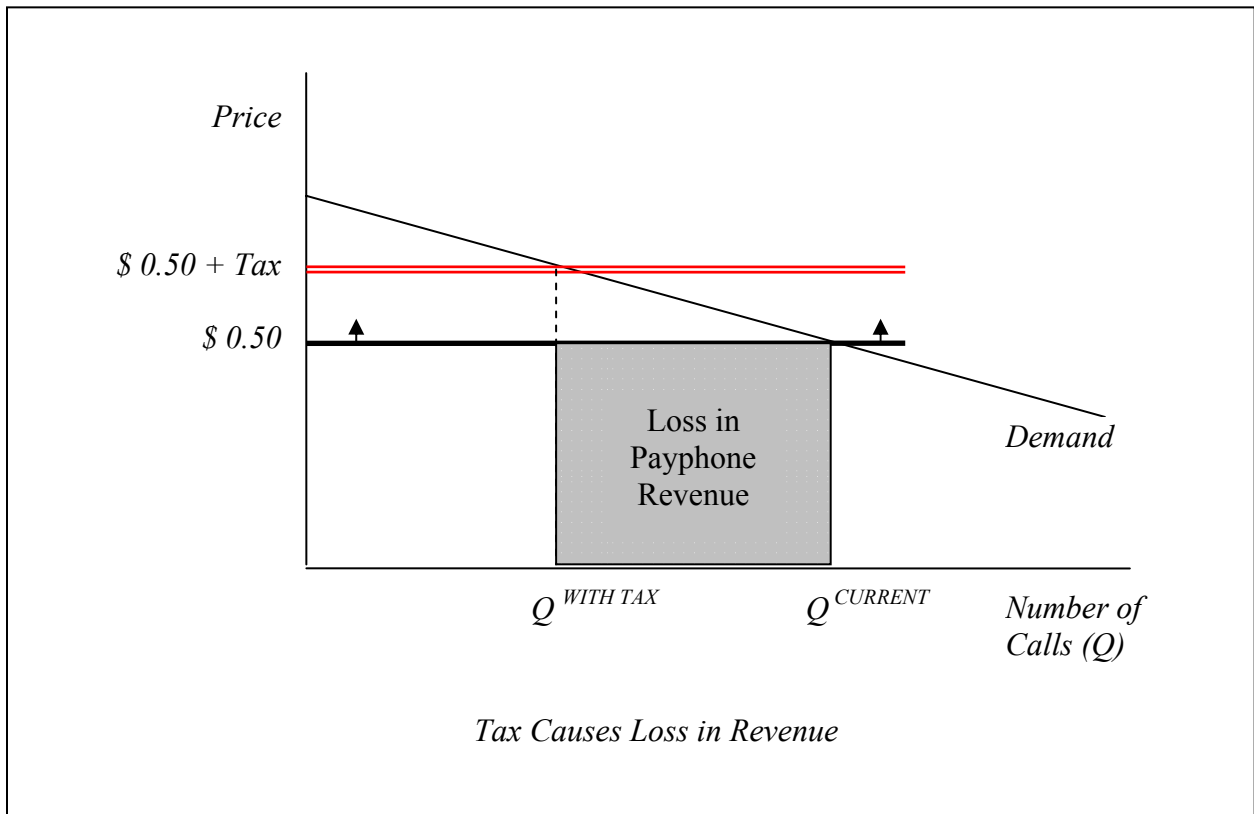
The Kentucky taxing authority is attempting to levy the 6% sales tax on pay telephone “coin box” revenues in addition to the tax that independent payphone providers already pay for leasing the wholesale access line from their incumbent local exchange carrier. Applying this tax as described would force payphone providers to either: (1) pass through the tax to customers through an increase in price, or (2) absorb the tax through decreased profit margins and not increase price. We already explained that the payphone industry has been in decline, and the major cause for this decline is the decrease in demand due to wireless services that makes the payphone business less profitable. Therefore, absorbing the tax in their cost is not an option for payphone providers, and would accelerate the exit of providers from the industry. As will be demonstrated below, however, it is not practicable or economically feasible for payphone providers to pass through this tax to customers.

Economic Impact of Tax on Coin Calls

Economic theory dictates that a price increase will necessarily lead to a decrease in the quantity of calls. This is illustrated in the graph below, in which the demand for calls at the current price (demonstrated by the intersection of the demand curve and the black supply curve) is greater than the quantity demanded once the tax is applied (demonstrated by the intersection of the demand curve and the red supply curve). Accordingly, a price increase for payphone calls caused by a pass through of the tax will lead to a reduction in the calling volumes, which, in turn, will lead to a reduction in overall payphone revenues

³⁰ Census Bureau’s Poverty in the United States: 2002, Table 4 “Percent of People In Poverty By State.”
<http://www.census.gov/hhes/www/income.html>

(represented by the gray box). Thus, even if payphone providers could pass through the tax to its payphone customers, payphone revenues will decrease as a result.



Pass-Through Of Coin Tax Not Feasible Due to Functional Implications

There are numerous reasons why a pass-through of this tax to payphone end-users is not feasible. First, a pass-through of this tax to coin calls would create a serious hardship for payphone users. Generally, payphone call rates are \$0.50 per call, which can be purchased with two quarters. Applying a 6% tax to this rate would cause coin calls to increase by \$0.03 to \$0.53. As such, with the tax applied, payphone callers would be required to have additional coins to place a payphone call. Different denominations of coins would also be required since payphones do not provide change. Accordingly, whereas a payphone customer can currently purchase a payphone call with two quarters, if the tax were applied, a payphone call would require at least one additional coin, of lesser denomination. While this functional implication may seem relatively basic, having the correct coins is an issue that has traditionally affected demand for payphone calls,³¹

³¹ *Telecoms usage amongst low income groups, and identification of any issues specifically related to ethnicity*, Ofitel Qualitative Research, March 2003.
<http://www.ofcom.org.uk/static/archive/oftel/publications/research/2003/ethnicity0403.htm>

and which is unique to payphones. In other words, payphone customers must pay for their usage at the time they place their call, as opposed to residential telephone customers and cellular customers who are billed for their phone usage at the end of a billing cycle. Simply put, this tax would suppress demand for payphone calls due to the simple fact that it is less probable that payphone customers would have sufficient/correct coinage to place a payphone call.

In addition, passing through the tax would generate confusion for payphone customers. While there is not a standard rate for payphone calls, most payphone providers across the country have charged \$0.50 per call for quite some time.³² Accordingly, when payphone customers use a payphone to place a local call, they expect the call to cost \$0.50. If payphone providers passed this tax through to payphone customers, causing the price of a coin call to increase, these expectations would not be met. As a result, payphone customers, at least at the outset of the price increase, may be forced to curtail their payphone usage since they may not allocate in advance a sufficient amount of coins to place a call (since \$0.50 has been the prevailing rate for a payphone call). Considering the existing downward trend in payphone call volume, and that payphone providers' ability to recover their costs is sensitive to payphone call volume, the confusion caused by the price increase could have a detrimental impact on payphone providers, at least in the short run.

Payphone Compensation

To fully appreciate the impact of assessing a tax on payphone services, it is important to understand the two basic ways in which payphone providers are compensated for payphone usage. First, payphone providers collect end-user revenue (e.g., \$0.50 per call) when customers use the payphone to place a local coin call. Second, payphone providers collect dial around compensation from long distance carriers when customers place coinless (calling card) calls from their payphones. Dial around compensation is a critical revenue stream for payphone providers, and the rate for dial around compensation is set by the FCC.

The FCC establishes a single nationwide per call rate for dial-around compensation by spreading the assumed total monthly cost of a hypothetical payphone over the assumed amount of monthly calls.³³ The current rate was calculated based on the assumption of 439 payphone calls per month, which was calculated from the available nation-wide data. Since the FCC's calculation assumes a certain amount of monthly calls, it is sensitive to monthly call volumes. Stated differently, as calling volumes decreases, the cost per call increases, thereby requiring the dial around compensation also to increase if payphone providers are to remain whole. As explained above, monthly call volume has been decreasing over time and is estimated to currently be far lower than the volume the FCC

³² SBC, Qwest and Verizon all charge \$0.50 for a payphone call.

³³ FCC Third Report and Order, and Order on Reconsideration of the Second Report and Order, CC Docket 96-128, February 4, 1999.

assumed when setting the current dial around compensation rate. As such, the current dial around compensation rate is likely not fully compensatory to payphone providers.³⁴ Further, because this rate is set at a national level, Kentucky payphone providers might not be able to collect the tax from its coinless calls. Although the FCC is currently investigating the need to increase the dial around compensation rate, as explained below, the Kentucky tax policy would create challenges for Kentucky payphone providers when attempting to recover dial around payphone compensation.

Supply Side

Payphone revenue is not the only mechanism through which payphone providers are affected by the tax. This tax also applies to the phone line that payphone providers lease from incumbent local exchange carriers, thereby increasing the cost associated with the payphone service. Clearly, a tax to the wholesale access line only exacerbates the economic difficulties facing payphone providers. We already mentioned a concept of marginal payphone locations, which are payphones that have barely enough monthly calls to make them economically viable. A survey conducted by the American Public Communications Council shows that out of 410 payphones, 108 were marginal payphone locations (26.3%),³⁵ indicating that there is a considerable amount of “at risk” payphones. When the sales tax is applied, the “marginal threshold” (or the minimum amount of monthly calls for a payphone to be economically viable) would increase in Kentucky. In other words, these “at risk” payphones would require an *increase* in monthly calls in order to remain economically viable when the tax is applied.

On the supply side, when the 6% sales tax is applied to the payphone line rate of BellSouth in Kentucky (\$21.70),³⁶ the price of a payphone line increases by \$1.30 (from \$21.70 to \$23.00). At \$0.50 of revenue per call, this tax would require at the very least an additional 2.6 calls per month for Kentucky “at risk” payphones to remain economically viable (which is a conservative estimate considering that a portion of the revenue obtained for these additional calls would be required to recover other payphone costs).³⁷ Since payphone usage is *decreasing* instead of *increasing*, the tax would result in additional payphones being abandoned in Kentucky, as costs would increase above the revenue generated by the payphone. If the tax impact on the demand side (i.e., reduced payphone usage due to the payphone rate increase) is included, even more payphones would lose money. For instance, if we assume that a payphone receives \$96 in coin box revenue per month and pays the BellSouth payphone access line rate of \$21.70, the tax

³⁴It is estimated that payphone providers already lose \$300 million per year because long-distance carriers do not compensate them for dial around traffic and there is no auditing process available to ensure full compensation (www.apcc.net).

³⁵ Comments of the American Public Communications Council in Docket WC Docket No. 03-225, January 7, 2004 at 20.

³⁶ PSC KY Tariff 2A, twelfth revised page 8, effective July 1, 2003.

³⁷ For instance, the Kentucky Payphone Association states that 911 costs have increased by 300% over the past few years (KPA Comments in Kentucky Case No. 2003-00492, p. 13).

increase to the payphone provider would be \$7.06.³⁸ This would require, at a minimum, an additional 14.12 calls per month at \$0.50 per call in order for the payphone provider to be able to continue to provide service without losing money. However, as we explained above, with the price increase, calling volumes are likely to fall, or at least cannot increase, absent some exogenous events such as a failure of wireless service (which is highly unlikely). Considering the current trend showing monthly call volumes decreasing at a rapid rate, Kentucky payphone providers would simply not be able to achieve an *increase* in call volumes to compensate for the tax impact on the access line and/or coin calls. As a result, additional payphones would be removed from service.

As additional payphones are removed from service, the per-unit expenses (e.g., maintenance expenses) attributable to the remainder of the payphones will increase. As costs rise, so does the marginal threshold, and, in turn, additional payphones are removed from service. It is important to note that payphones that are removed from service would generate absolutely *no tax revenue* and deprive customers of essential telecommunications access in the process.

Finally, the sales tax applied to the wholesale access line and coin calls will thwart Kentucky payphone providers' ability to be fully compensated for dial around traffic. This holds true whether the payphone provider is able to pass-through the tax increase or whether the payphone provider is forced to "eat" the tax. As explained in the FCC's Notice of Proposed Rulemaking on Dial Around Compensation, the current dial around compensation is based on an average monthly cost of \$101.29 divided by 439 calls per month. This results in a dial around compensation rate of \$0.231 per call.³⁹ Now, assume that the 6% sales tax is applied to coin calls and the wholesale access line. If the tax is passed through to payphone customers, demand for payphone calls will necessarily decrease, as price increases. If we assume that this would result in twenty less payphone calls per month, Kentucky payphone providers would need to collect, at a minimum, \$0.242 in dial around compensation to be made whole.⁴⁰ However, since the dial around compensation rate is established by the FCC, Kentucky payphone providers would not have the ability to increase the dial around compensation rate they receive, and as a result would not be fully compensated for dial around traffic. Likewise, if the payphone provider absorbs the tax in its costs, additional payphones would be removed from service as the revenue stream from marginal payphones becomes negative, and per-payphone expenses increase for remaining payphones.

Sales Tax Is Not Technology-Neutral

When compared to its primary substitutes (residential telephone and wireless services), payphone service is not well suited to deal with this tax. For instance, residential service

³⁸ [(\$21.70*6%) + (\$96*6%)]

³⁹ Note: the actual dial around compensation rate is \$0.24. The FCC added \$0.009 to compensate payphone providers for interest. *See*, FCC NPRM on Dial Around Compensation (10/31/03), ¶12.

⁴⁰ [101.29/(439-10)]

and even wireless providers are able to draw universal service funding to support their high-cost areas. On the demand side, residential customers also receive financial assistance for installation and operation of a home telephone (Lifeline and Link-Up Assistance). In this way, residential wireline and wireless services have an advantage over payphone providers when responding to a tax increase. Furthermore, it is becoming increasingly popular for residential and wireless services to be provided in packages, where a customer gets a defined amount of calling (and in some instances, unlimited calling) for a flat monthly fee. There is no such offer available to payphone customers who must pay for every call at the time of purchase. As such, a 6% tax on residential telephone service and wireless services will likely have a smaller impact on customer calling patterns than a 6% tax added to payphone calls. For these reasons, the impact of the tax would not be technology-neutral and would disproportionately impact payphone providers. In other words, this tax will provide distorted signals to the telecommunications market, thereby accelerating the substitution of payphone usage for alternative telecommunications services due to a tax regime that burdens the payphone industry more than its substitutes.

Future Tax Revenues

As we already illustrated graphically above, a tax that is passed through on a price necessarily reduces the total amount of payphone calls and causes a loss of total payphone revenues. This result is due to the fact that customer demand changes in reverse to price. For the same reason, an increase in the tax rate, as the one currently before the Kentucky General Assembly, can actually generate *lower* total tax revenue than the tax revenue generated by the current, lower tax rate.

The following graph illustrates this scenario. On this graph, the tax rate is passed through to the consumers through an additive to the price. The thick black horizontal line depicts coin call price at the original tax rate (such as the current sales tax of 6 %). The red horizontal line depicts the price at the new tax rate (such as 7.6 % currently proposed for an excise tax at the Kentucky General Assembly). Intersections of the demand line and the price lines determine the calling volumes at the original and the new tax rates. The color filled rectangular areas reflect the tax revenues:

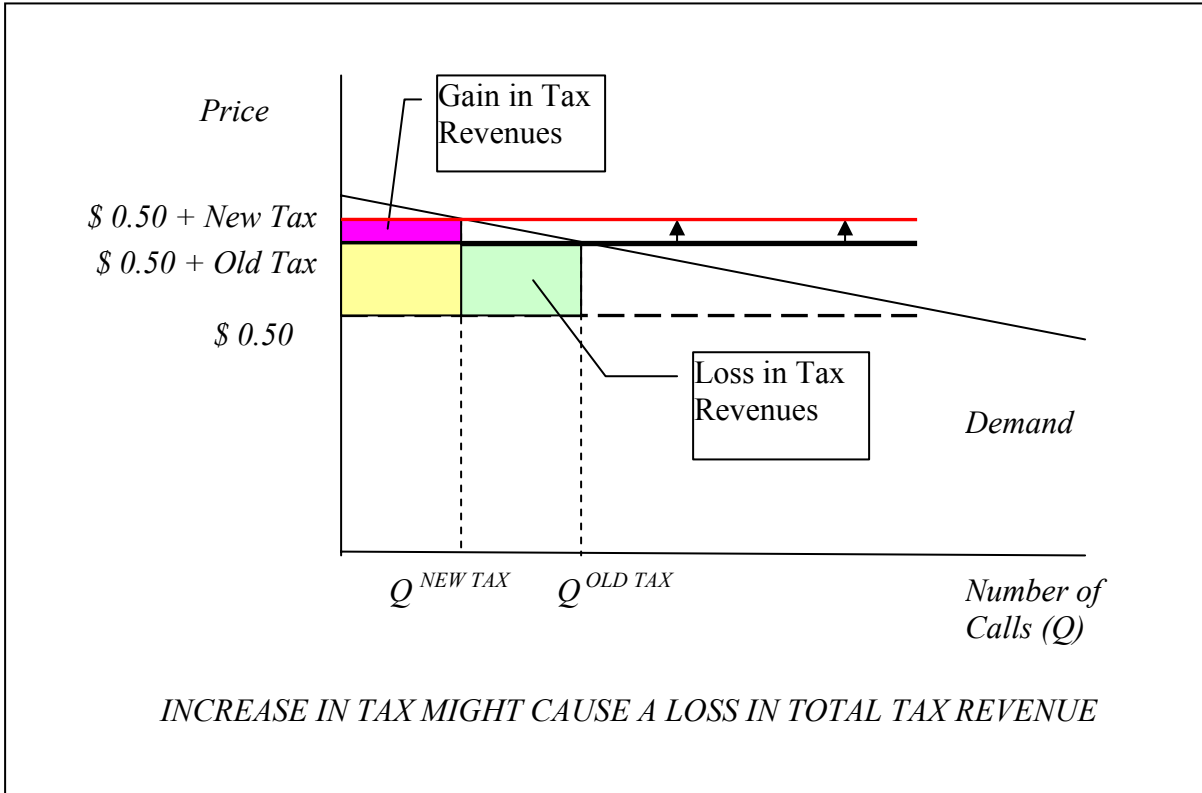
Current Total Tax Revenues = Yellow Area + Green Area

New Total Tax Revenues = Yellow Area + Magenta Area

Change in Total Tax Revenues at New Tax = Magenta Area – Green Area

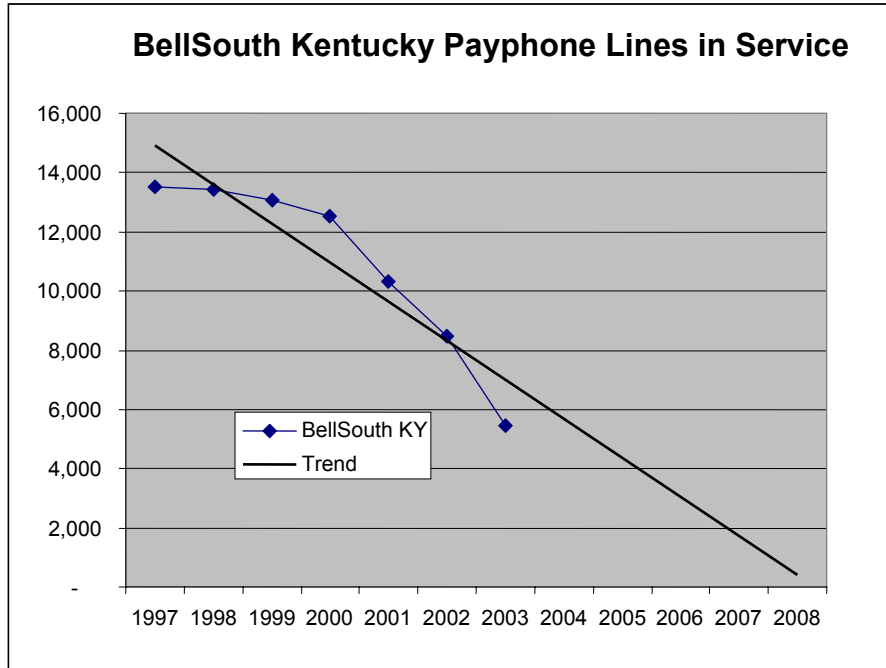
On this graph the magenta area (a gain in revenues due to a higher tax rate) is clearly smaller than the green area (a loss in revenue due to the decrease in calling volumes), which means that the net effect of a higher tax is a *reduction* in total tax revenues collected by the state. This result is driven by two conditions: 1) the demand curve is relatively flat, meaning that calling volumes are sensitive to changes in price, and 2) calling volumes at the original tax are already low compared to the decrease in demand

that the higher tax causes. As we already explained above, both conditions are consistent with the current state of Kentucky payphone industry. We further illustrate our point with the following trend analysis.



The following chart illustrates the current decline in payphone lines in Kentucky by fitting a linear trend to the observed line count data (that we already presented above) and forecasting from this trend the payphone line counts over the next five years.⁴¹

⁴¹ The trend was generated with Microsoft Excel *trend* function that is based on a linear regression. Source for the data: ARMIS reports 43-08, table III.



The graph shows that over the next five years, the decreasing trend of payphone lines in Kentucky will continue. Although this is a somewhat simplistic analysis, it is likely to capture the current developments in the industry and might represent an “optimistic” forecast because, as the data show, the decline appears to accelerate in the recent years. Note that after 2008, based on the current downward trend, Kentucky payphone lines would be non-existent. According to the current trend, applying the sales tax to payphones would provide an ever-decreasing, unstable level of tax revenue. For example, between December 2002 and December 2003, the payphone lines in service in BellSouth’s territory in Kentucky declined by 35.7%. If we apply, for illustration purposes, the tax revenue of \$1.30 per line (calculated above) to the number of payphone lines in service as of December 2003 (5437), the state would collect roughly \$7,068 ($\1.30×5437) per month, or \$84,817 in the year 2003.⁴² However, the rate of decline in payphone lines would cause this level of revenue to sharply drop over time. For example, if we apply the 35.7% decline rate as an annual figure to calculate 2004 tax revenue from payphone lines, the annual tax revenue to be collected in 2004 would be only \$54,538 ($\$1.30 \times 3496 \times 12$) – a reduction of 35.7% from year one. Over two years, this reduction would amount to a cumulative reduction of 58.7% of the original tax revenue in year one.

It is important to note that this rate of decline reflects the “status quo.” In other words, this trend does not capture the adverse effects of additional payphone providers being forced to pay the 6% sales tax or the potential tax increase resulting from the proposed

⁴² Note: this calculation is for illustration purposes only and does not attempt to estimate the actual tax revenue that would be expected by applying the sales tax to payphone services.

7.6% excise tax. Each of these factors would suppress payphone usage further and cause additional payphones to be retired from service, and, which in turn, would cause the trend line to decline more sharply. Other factors could further accelerate this decline, such as BellSouth's recent decision to exit the payphone market in Kentucky and possible relaxation of the statutory requirement on local exchange providers to supply at least one payphone in each telephone exchange (807 KAR 5:061, Section 11).