FORESIGHT

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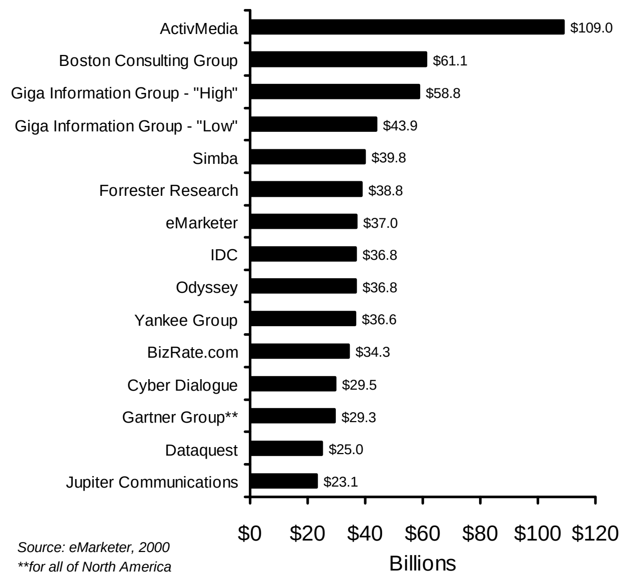
Revenue Implications Grow As More Kentuckians Shop Online

By Michael T. Childress

The number of Americans making online purchases in 2000 jumped to 34 percent from 24 percent in 1999, according to a survey by the Conference Board and NFO Research.[1] Nearly 80 percent of Internet users shopped online for gifts during the 2000 holiday season, up from about 70 percent in 1999 according to Pricewaterhouse-Coopers.[2] Moreover, 74 percent of online shoppers actually purchased gifts online during the 2000 holiday season, compared to 67 percent in 1999.[3] According to eMarketer, the average U.S. Internet buyer purchased $627 worth of goods online in 2000, an increase from $500 in 1999.[4] As a result of more Americans spending more money online, total consumer online shopping revenues for 2000 are estimated by various sources to range from $23.1 billion to $109 billion (see Figure 1). By comparison, in 1999 these estimates ranged from $3.9 billion to $36 billion.

FIGURE 1
Comparative Estimates: U.S. Consumer Online Shopping Revenues for 2000



Source: eMarketer, 2000
***for all of North America*

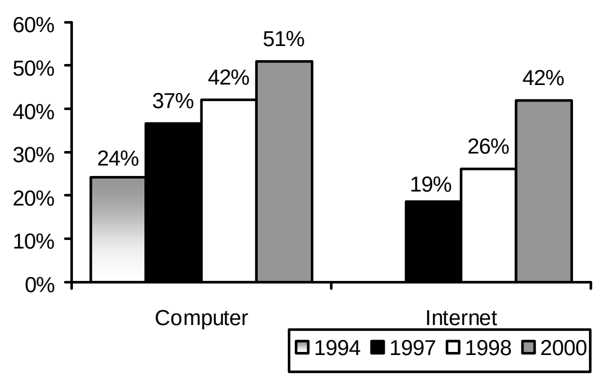
Mr. Childress is the Executive Director of the Kentucky Long-Term Policy Research Center.

We present data in this article about online buyers in Kentucky and explore factors that may help explain the probability of knowledge of the use tax and willingness to pay it. Consumers are obligated to pay sales or use tax on the products they purchase over the Internet, but it is widely believed that few do. Therefore, the number of Kentuckians making online purchases has implications for the state budget as revenue is lost due to unpaid use taxes.

Levels of Computer and Internet Access

In this section we examine Internet access and usage, a necessary precondition for making an online purchase. A number of studies by the U.S. Department of Commerce's National Telecommunications & Information Administration (NTIA) have found that Americans are becoming increasingly interconnected in the wired community.[5] As illustrated in Figure 2, the percentage of U.S.

FIGURE 2
Percent of U.S. Households with a Computer and Internet Access



Source: U.S. Dept. of Commerce

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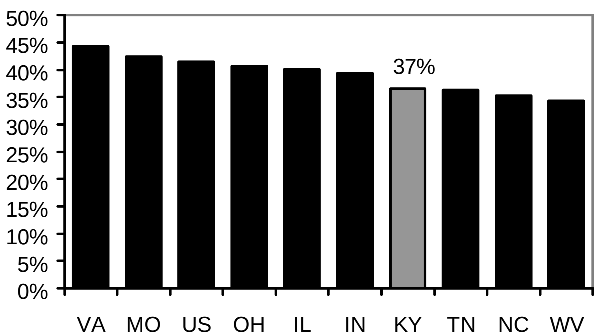
households with computers and Internet access increased rapidly from 1994 to 2000.[6]

Kentucky is competitive with neighboring states with respect to the percentage of households with Internet access (Figure 3). According to Census estimates, 37 percent of Kentucky households used the Internet in 2000, compared to about 42 percent nationally.

FIGURE 3
Estimated Percent of Households Using the Internet in 2000, Selected States



Source: U.S. Department of Commerce, Economics and Statistics Administration, National Telecommunications and Information Administration

Three statewide surveys conducted for the Kentucky Long-Term Policy Research Center by the University of Kentucky Survey Research Center find that, like most Americans, citizens of the Commonwealth are moving rapidly into the Information Age.[7] In 1996, we found that about 26 percent of adults in Kentucky had used the Internet. In 1998, rates of Internet access had increased to 42 percent. And in 2000 we find that an estimated 63 percent of surveyed Kentucky adults have accessed the Internet in the past year.[8] Five years ago, we found that younger people and more educated people were the most likely to have used the Internet. While that remains true today, Internet use has soared at all age and education levels. Moreover, regional disparities in Internet use are beginning to narrow.[9]

Currently, the data suggest that Kentuckians are accessing the Internet at rates just below the national average. However, as Internet access and usage in Kentucky increase, Kentuckians will likely become more fully integrated into the digital economy. In the sections below, we present survey data about online purchasers in Kentucky and explore the factors that may help explain the probability of knowledge of the use tax and willingness to pay it.

Who Is Purchasing Online?

An estimated 32 percent of Kentucky adults said "Yes" when asked if they have ever made a purchase over the Internet.[10] This is just below the U.S. estimate of 34 percent.[11] This represents a remarkable increase in the number of Kentuckians making online purchases. In 1999 we estimated the percentage about 18 percent.[12]

Who are these cybershoppers? In 1999 we reported that a Kentuckian shopping on the web is most likely a college-educated male, earning at least $50,000 annually, and living in the urban triangle.[13] Table 1 shows how rapidly online buying has permeated virtually all socioeconomic and demo-

TABLE 1
Have you ever purchased a product over the Internet?*
(Percent Answering Yes, by Demographic Category)

GENDER	Spring 1999	Fall 2000
Female	14	31
Male	23	34
REGION		
Western Kentucky	18	22
South Central	13	22
Eastern Kentucky	12	28
Urban Triangle	23	41
EDUCATION		
High School or less	11	15
Some College or Vocational School	17	42
Bachelor's Degree or Higher	35	56
INCOME		
Under $20,000	5	10
$20,000 to $50,000	23	33
$50,000 or Higher	33	51
AGE		
Under 30	25	49
Between 30 and 49	22	49
Between 50 and 69	11	40
70 and Older	6	2

Note: All percentages are unweighted averages.
**This is the wording of the question used in the 1999 survey. See footnote 10 for the exact wording of the question used in 2000.*
Source: Kentucky Long-Term Policy Research Center and UK Survey Research Center

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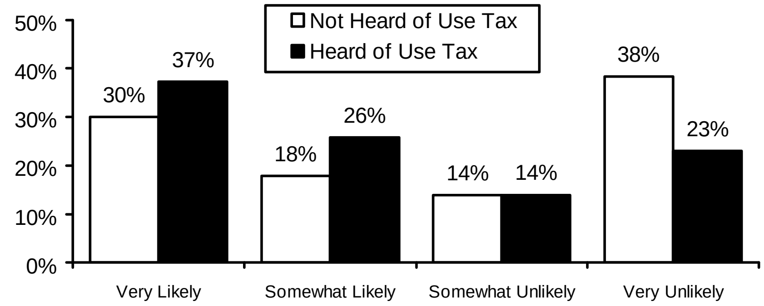
graphic categories. For example, the 2000 data show that women are just as likely as men to make online purchases; urban triangle residents are still more likely to make online purchases, but the other regions are rapidly gaining ground; and almost all education, income, and age categories experienced a double digit increase in the percentage of individuals who indicated they have made an online purchase.

FIGURE 4
Likelihood One Would Pay the Use Tax by Whether One Had Previously Heard of It



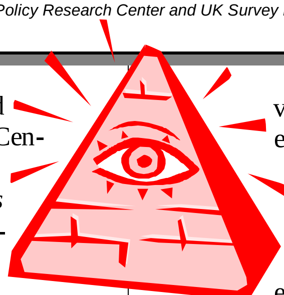
Source: Kentucky Long-Term Policy Research Center and UK Survey Research

Who Knows About the Use Tax and Who Pays It?

Because consumers are expected to spend more and more money online in the future, our understanding of who knows about the use tax and who pays it may become increasingly important to state budgets. The following questions were asked on the University of Kentucky Survey Research Center's spring 1999 and fall 2000 surveys:

⇒ *If you make Internet or catalogue purchases from out-of-state companies, Kentucky law requires that you pay Kentucky sales tax. If the company does not collect Kentucky sales tax, it is your responsibility to report the purchase on your state income tax form and pay the 6 percent tax. This is called the use tax. Have you heard of this law?* (Yes or No)

⇒ *If you were to make Internet or catalogue purchases from out-of-state companies that did not collect Kentucky sales tax, how likely is it that you would report those purchases on your state income tax form?* (Very Likely, Somewhat Likely, Somewhat Unlikely, Very Unlikely).



In 1999 we reported that only 37 percent of Kentuckians say that they have heard of the use tax,[14] and by fall 2000 the percentage had inched up to around 40 percent,[15] not a statistically significant difference. And when asked in the 2000 survey to give the likelihood of actually reporting the use tax, we find that 32 percent said "very likely," 20 percent replied "somewhat likely," 14 percent said "somewhat unlikely," 31 percent replied "very unlikely," and 3 percent said that they did not file state income tax.[16]

These survey results show that about 52 percent indicated that they are either very or somewhat likely to pay the use tax. However, these individuals are probably overly optimistic about their likelihood of paying the use tax. A study by the U.S. Advisory Commission on Intergovernmental Relations, for example, estimates that 16.5 percent of use taxes are actually paid, and a report by Ernst & Young assumes that only "4 percent of taxable business-to-consumer e-commerce sales result in sales and use tax payments."[17]

Nevertheless, it would seem that additional efforts to educate the public about the use tax might result in a higher compliance rate. First, six out of ten Kentucky adults do not know about the requirement to pay the use tax. Obviously, individuals won't pay a tax that they do not know about. Second, as Figure 4 illustrates, individuals who say they have heard about the use tax are more likely to say they will pay it. For example, of those individuals who say they are very likely to pay the use tax, 37 percent have also heard of the use tax, where 30 percent have not. Conversely, those who say that they are very *un*likely to pay the use tax have less familiarity with the tax.

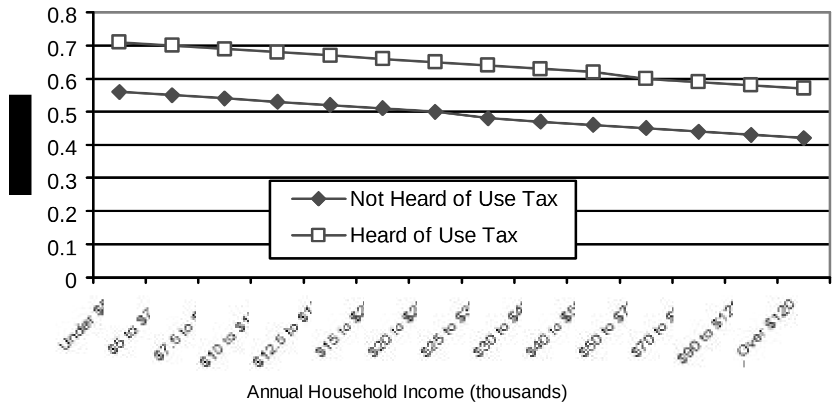
We used a statistical model to estimate the effect of a series of variables on the probability that an individual would report being very or somewhat likely to pay the use tax. For example, are individuals in urban Kentucky more or less likely than those living in rural areas to pay the use tax? Are individuals in households with higher income levels more or less likely to indicate a willingness to pay the tax? And what effect do education, gender, and age have on their expressed willingness to comply with the use tax law? This kind of analysis enables us to estimate the effect of any one variable, like income level, on the probability of an individual's expressed willingness to comply with the use tax requirement, while holding all other variables constant. For example, the model enables us to take two individuals living in an urban area with the same gender, age, and education and estimate the effect of income level on the probability of complying with the use tax law.[18]

Figure 5 illustrates two of the more interesting results of the statistical analysis. First, individuals who had previously heard of the use tax have a higher probability of reporting that they are either very or somewhat likely to pay the use tax (while holding all other variables constant).[19] Second, as an individual's income increases, the probability they would indicate a willingness to comply with the use tax law *decreases*.[20]

Implications for the State Budget

Internet commerce has received so much attention from the media and from policymakers that many people probably believe the Internet has surpassed more traditional forms of mail-order purchases, but that is not the case. According to the National Mail Order Association, U.S. consumer mail order sales were worth $185 billion in 1998, with Internet sales accounting for about $5.6 billion, about 3 percent of the total for consumer mail order sales.[21] Indeed, it

FIGURE 5
Estimated Relationship Between Income and Probability of Being Very or Somewhat Likely to Pay the Use Tax by Familiarity with the Tax



is conventional wisdom that the bulk of lost revenue *currently* is due not to Internet sales but to mail-order sales. However, concern in Kentucky and across the country about lost sales and use tax revenue is not prompted by the size of the problem today, but rather by the potential size of the problem a few years from now.

Estimates vary considerably, but they all suggest that the value of Internet sales will be considerably higher in a few years (see Table 2). For example, according to IDC, a technology market analysis company, online (business-to-consumer) sales in the U.S. are expected to generate over $75 billion by 2003 compared to expected revenue of $24 billion in 1999.[22] And this estimate is on the low end (but not the *lowest*) compared to what other market research firms have forecasted. Another technology market research firm, eMarketer, has forecasted that "revenues from online consumer retail shopping are projected to grow to $125.6 billion by 2004, representing an increase of 240 percent from the $37 billion projected by year-end 2000."[23] This projection represents a "middle of the road" assessment. On the high end (but certainly *not* the highest of available forecasts), the Giga Information Group, an e-business advisor, projects that "United States business-to-consumer (B2C) sales over the Internet will grow from an estimated $25 billion in 1999 to $152 billion in 2002 and extend that forecast to $233 billion in 2004."[24] As a result of these kinds of forecasts, there is widespread belief, if not fear, that while lost revenue may constitute a small percentage of the general fund today, it could be considerably larger in the future. We have estimated the amount of lost sales and use tax from consumer Internet purchases by generating three alternative scenarios (low, moderate, and high-use tax losses) that take into account the range of factors listed below:

TABLE 2
Projected U.S. Business-to-Consumer Internet Sales
(billions)

Year	IDC (Low)	eMarketer (Moderate)	GIGA*** (High)
1999	$24.2	$18.6	$25.0
2000	$36.8	$37.0	$51.3*
2001	$46.4*	$54.2*	$97.9*
2002	$58.4*	$79.4*	$144.4
2003	$75.0	$100.0	$182.9*
2004	$94.5**	$125.6	$221.4

Interpolated **Extrapolated * The GIGA projections shown are 95 percent of the values reported here to reflect U.S. sales only.*

⇒ *Projected U.S. B2C Internet sales.* We used the three projections listed in Table 2.

⇒ *Kentucky's lower retail consumer expenditures (relative to the U.S. average).* Retail sales per household in Kentucky were 92.6 percent of the national average in 1997.[25]

⇒ *Kentucky's lower Internet purchasing rate (compared to the U.S. average).* An estimated 32 percent of Kentucky adults have made an Internet purchase, compared to 34 percent of Americans.

⇒ *Substitution effect.* A lot of the business-to-consumer Internet sales should not be counted as *new* sales because they would have taken place as telephone or catalog sales in the absence of the Internet. A study conducted by Ernst & Young assumes that 20 percent of online sales would have taken place in the absence of the Internet and they caution that this is probably a low estimate.[26] In our "high" scenario then, we count only 80 percent of projected sales. We decided to double the percentage in our "low" estimate and use the average of the two for our "moderate" estimate.

⇒ *Taxability.* Not all products and services purchased online are taxable. Our "high" scenario estimate of 42 percent comes from Goolsbee, an economist at the University of Chicago.[27] The "low" scenario estimate from the Ernst & Young report[28] and the "moderate" scenario estimate is the midpoint between the other two estimates.

⇒ *Use Tax Consumer Compliance Rate.* Estimates vary on the percentage of use tax that is remitted to states. In the "high" scenario we assume a 4 percent compliance rate,[29] in the "moderate" scenario we assume a 16.5 percent compliance rate,[30] and in the "low" scenario we assume a 52 percent compliance rate.[31]

We present a summary of our assumptions in generating the scenarios in Table 3:[32]

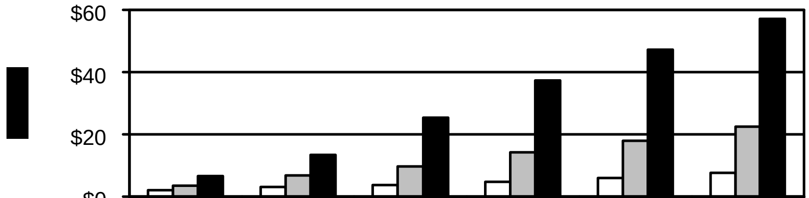
TABLE 3
Summary of Assumptions Used to Generate Three Scenarios of Sales and Use Tax Losses in Kentucky

Factor	"Low" Losses	"Moderate" Losses	"High" Losses
Internet Sales Projections	IDC	eMarketer	GIGA
KY Retail Expenditures as a percentage of US	92.6%	92.6%	92.6%
KY Internet Purchasing Rate as a percentage of US	94%	97%	100%
Substitution Factor	60%	70%	80%
Percentage Taxable	37%	39.5%	42%
Compliance Rate	52%	16.5%	4%

Source: Kentucky Long-Term Policy Research Center

Figure 6 shows the estimated lost sales and use tax from Internet consumer purchases from 1999 to 2004 based on three scenarios that reflect a range of estimates for the factors listed in Table 3. Projected annual losses range from $7.6 million to $57 million by 2004. And these amounts range from 0.3 percent to 2 percent of Kentucky's projected sales tax revenue in 2004. While the percentages seem small, the actual dollar losses are not. For example, the estimated cumulative losses from 1999 to 2004 are $27 million for the low estimate, $74 million for the middle estimate, and $187 million for the high.

FIGURE 6
Estimates of Lost Sales and Use Tax Revenue from Consumer Internet Purchases in KY



	1999	2000	2001	2002	2003	2004
Low	$2.0	$3.0	$3.7	$4.7	$6.0	$7.6
Moderate	$3.4	$6.7	$9.7	$14.3	$17.9	$22.5
High	$6.5	$13.3	$25.3	$37.3	$47.2	$57.1

Source: Kentucky Long-Term Policy Research Center

Conclusion

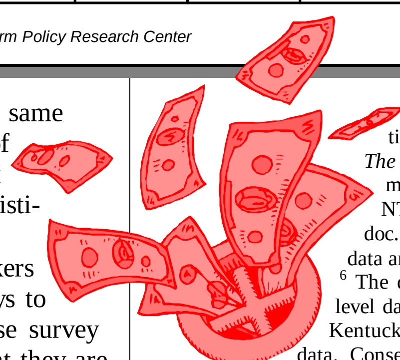
Kentucky consumers will likely be making an increasing percentage of their expenditures on the Internet in the future. This is evidenced by the increase in online shoppers from 18 percent in spring 1999 to 32 percent in fall 2000. Yet, the percentage of Kentuckians who indicated some awareness of the use tax remained essentially unchanged over the same time period. In 1999 an estimated 37 percent of Kentucky adults said they had heard of the use tax and by 2000 the estimate was 40 percent–a statistically *in*significant difference.

As more Kentuckians shop online, policymakers will be challenged to develop new and better ways to increase the use tax compliance rate. While these survey results show that over half of Kentuckians say that they are very or somewhat likely to pay their use tax, other research suggests that no more than 16 or 17 percent of the use tax owed nationally is actually paid.[33]

Educating consumers about the use tax could be a good first step. A significant percentage, about 60 percent, does not even know about the requirement to pay the use tax. And our analysis shows that consumers who have heard about the use tax have a much higher probability of indicating they are either very or somewhat likely to comply with the use tax requirement.

The growth of online commerce could have serious implications for the state budget, resulting in several million dollars of unpaid use tax. However, the Streamlined Sales Tax Project and the Uniform Sales and Use Tax Administration Act represent attempts to simplify sales and use tax collection laws across the country and will likely lead to increased collection of these taxes by retailers.[34] Nonetheless, some analysts have cautioned that Internet-based tax-compliance systems will not be in broad use for years.

Consequently, if online purchases continue to increase while use tax compliance remains low, the sales and use tax base will gradually erode. Other sources of revenue will have to be found or state expenditures will have to be adjusted accordingly. Also, the use tax is regressive, since individuals with higher incomes appear to be more likely to shop online and less likely to comply with the use tax requirement. Thus, the results presented in this article suggest that tax reform might be in Kentucky's future.



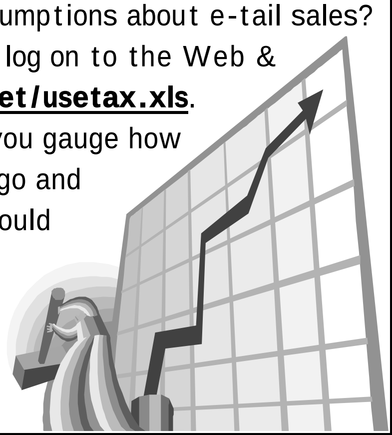
Notes

[1] Lori Enos, "Report: More U.S. Households Shopping Online," *E-Commerce Times* 9 Nov. 2000, 5 Jan. 2001 <http://www.ecommercetimes.com/news/articles2000/001109-4.shtml>.
[2] "Holiday 2000 Successful for Online Consumers; Despite Gloomy Dot Com Market, Consumers Are Upbeat," *Business Wire, Inc.* 22 Jan. 2001, 22 Jan. 2001 <http://www.nexis.com>.
[3] "Holiday 2000 …."
[4] "New eCommerce B2C Report: Consumer eCommerce Sales Will Reach $37 Billion by Year-End 2000, to Top $100 Billion by 2003," *Business Wire, Inc.* 26 April 2000, 5 Jan. 2001 <http://www.nexis.com>.
[5] National Telecommunications and Information Administration (NTIA), *Falling Through The Net: Defining the Digital Divide* (U.S. Department of Commerce, Washington, D.C., 1999) NTIA Web site, 2 Dec. 1999 <http://www.ntia.doc.gov/ntiahome/fttn99/contents.html>. The 2000 data are from *Falling Through the Net.*
[6] The data presented from the NTIA are household-level data. The data presented from the University of Kentucky Survey Research Center are individual-level data. Consequently, the two sources of data cannot be compared.
[7] Michal Smith-Mello, Michael T. Childress, Amy Watts, and John F. Watkins, *Challenges for the New Century* (Frankfort: Kentucky Long-Term Policy Research Center, 2000) 53-65. These estimates are based on survey data collected by the University of Kentucky Survey Research Center.
[8] Smith-Mello, Childress, Watts, and Watkins 60.
[9] Smith-Mello, Childress, Watts, and Watkins.
[10] The survey asked, "Have you ever purchased any products or services from any organization online through the World Wide Web? [If yes, was it products, services, or both?]." The survey was conducted by the University of Kentucky Survey Research Center. Households were selected using random-digit dialing, a procedure giving every residential telephone line in Kentucky an equal probability of being called. Calls were made from October 28 until November 21, 2000. The sample includes noninstitutionalized Kentuckians 18 years of age or older. There were 859 completed interviews. The margin of error is approximately ±3.3 percentage points at the 95 percent confidence level.
[11] Enos.
[12] Michael T. Childress, Robert W. Cox, Merl M. Hackbart, Charles W. Martie, Kevin O'Neil and Peter Schirmer, *Collecting Taxes in the Cyberage* (Frankfort: Kentucky Long-Term Policy Research Center, 1999) 13.
[13] Using a logistic regression model, we find statistically significant relationships between the probability of buying something online and education (alpha = .05), income (.05), gender (.10), age (.05), and urban location (.05).
[14] Sample size = 630.

[15] Sample size = 850.
[16] Sample size = 819.
[17] Robert J. Cline and Thomas S. Neubig, "The Sky Is Not Falling: Why State and Local Revenues Were Not Significantly Impacted by the Internet in 1998," (Ernst & Young Economics Consulting and Quantitative Analysis, 1999) 7. The U.S. Advisory Commission on Intergovernmental Relations reports a higher rate of 16.5 percent in *Taxation of Interstate Mail Order Sales: 1994 Revenue Estimates.*
[18] We used a cumulative logit model for ordinal responses. Technical information about the model is available from the author by request.
[19] Chi-Square is equal to 17.9 (Pr > ChiSq = <.0001).
[20] Chi-Square is equal to 3.15 (Pr > ChiSq = .0761).
[21] National Mail Order Association, "1998 Mail Order Sales Results," 31 Jan. 2001 <http://www.nmoa.com/Library/1998sale.htm>. The National Mail Order Association includes Internet sales as mail order sales.
[22] iWord, "World Wide Web: The Global Internet Opportunity Unfolds," March 2000, 30 Jan. 2001 <http://www.iword.com/iword51/iword51.html>.
[23] "New eCommerce B2C Report Reveals Consumer e-Commerce Sales Will Reach $126 Billion by 2004, an Increase of 240% from $37 Billion in 2000," *Business Wire, Inc.* 31 Oct. 2000, 5 Jan. 2001 <http://www.nexis.com>.
[24] "Giga Information Group Predicts Strong B2C E-Commerce Growth Despite Dot Com Shakeout," News Release 18 July 2000, 30 Jan. 2001 <http://www.gigaweb.com/Content/Adhoc/RAH-072000-00018.html>. According to Andrew Bartels, Senior Research Analyst for Electronic Commerce, Giga Information Group, these are actually worldwide sales estimates for U.S. companies, but over 95 percent of the sales are/will be to Americans (e-mail to the author, 30 Jan. 2001).
[25] U.S. Census Bureau, "Retail Sales, by Type of Store and State: 1996 and 1997," Table No. 1294, *Statistical Abstract of the United States: 1999* (Washington: U.S. Department of Commerce, 1999) 778.
[26] Cline and Neubig 8.
[27] Austan Goolsbee and Jonathan Zittrain, "Evaluating the Costs and Benefits of Taxing Internet Commerce," *National Tax Journal,* Sept 1999, University of Chicago Web <http://gsbwww.uchicago.edu/fac/austan.goolsbee/research/jzntj.pdf> 21 July 1999.
[28] Cline and Neubig 7.
[29] Cline and Neubig 7.
[30] The U.S. Advisory Commission on Intergovernmental Relations, *Taxation of Interstate Mail Order Sales: 1994 Revenue Estimate.*
[31] This is based on the University of Kentucky Survey Research Center data indicating that 52 percent of Kentuckians said they are either very or somewhat likely to pay the use tax.
[32] Refer to Michael T. Childress, et al., *Collecting Taxes in the Cyberage,* Appendix B, for a more detailed description of how these estimates are generated.
[33] The U.S. Advisory Commission on Intergovernmental Relations reports a rate of 16.5 percent in *Taxation of Interstate Mail Order Sales: 1994 Revenue Estimates.*
[34] Information on this initiative can be found on the Internet at <http://www.streamlinedsalestax.org>, <http://www.ncsl.org>, and <http://www.nga.org>.

Run your own numbers . . .

Don't trust our assumptions about e-tail sales? Try your own! Just log on to the Web & go to **www.kltprc.net/usetax.xls**. Our model will let you gauge how high Net sales will go and how low revenues could dip– based on your own assumptions. So go ahead, do the numbers!



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Conference Explores New Economy, Coming Challenges

By Michal Smith-Mello

The seventh annual conference of the Kentucky Long-Term Policy Research Center, which featured partnerships with Kentucky Leaders for the New Century and Kentucky Educational Television (KET), drew more than 350 people to the new Northern Kentucky Convention Center in Covington. Focused on the state's position in the New Economy and challenges the Commonwealth will likely face in the 21st century, the conference featured a best-selling author and Internet prognosticator; provocative panel discussions; timely predictions about the federal budget from a nationally recognized Urban Institute economist; the live taping of two compelling KET programs; and the presentation of the 2000 Vic Hellard Jr. Award to one of Kentucky's most esteemed and accomplished journalists.

Author and Net prognosticator Chuck Martin addresses the "Kentucky and the New Economy" audience.

Kentucky Leaders for the New Century, an organization of the next generation of Kentucky leaders, sponsored the first day of the conference. The half-day, Nov. 13, 2000, session, "Kentucky and the New Economy," was co-chaired by Kevin Canafax of Fidelity Investments and Anne Maxfield of the Roth Partnership. Maxfield told those on hand for the well-attended session that its principal goal was to impart a better understanding of the imperative of Kentucky's engagement in the New Economy and its importance to the state's economic advancement. Coincidentally, this nascent group of emerging state leaders is the brainchild of this year's Vic Hellard Jr. Award winner, veteran journalist, publisher, television host, Al Smith.

Rep. Susan Westrom, Lexington, and Sen. Jack Westwood, Erlanger, participate in a panel discussion of the implications of an aging population.

The Kentucky Long-Term Policy Research Center followed with its seventh annual conference, a full-day session dedicated to some of the issues that are likely to dominate Kentucky's public agenda in the early years of the 21st century. Center Executive Director Michael T. Childress launched the day's program with a presentation on major trends influencing the state's future, discussing the economy's weaknesses and strengths, the inequities that continue to persist, and the monumental challenge of an aging population that lies on the immediate horizon.

The morning session of the conference concluded with KET's taping of a historic panel of distinguished Kentuckians who were challenged to offer advice to an incoming, fictional governor. *Kentucky Tonight's* Bill Goodman led the lively and provocative discussion that followed.

Over lunch, Urban Institute economist Dr. Eugene Steuerle offered his own knowledgeable perspective on the future in his keynote address, tracing the contour of trends in the federal budget and their likely effects on future state and local spending. The afternoon featured panel discussions of the implications of Kentucky's aging population; ways of leveraging higher postsecondary enrollments and improved educational outcomes; and keys to building an entrepreneurial economy.

Martin Takes Audience to the "Net Future"

With support from Fidelity Investments, Ashland Inc., and Delta Airlines, Kentucky Leaders for the New Century brought nationally known journalist and cyberbusiness forecaster Chuck Martin to the conference as their featured speaker. A former editor-in-chief of the largest computer magazine in the world, Martin is the author of the *New York Times* best-seller, *The Digital Estate*, and, more recently, *Net Future*, which is being used in some of the nation's leading business schools as a textbook on the New Economy. Martin is also CEO of the Net Future Institute, a global group of CEOs focused on the Internet and its changing role in our economy.

Martin outlined some of the trends that can be expected to influence the way business is conducted here and around the globe and the effects it will have on each of us as consumers, workers, and users of technology. Martin pointed to Amazon.com, "the poster child of the Internet," as an illustration of the fundamental changes underway. Amazon's elusive profitability, Martin suggested, is not what's at issue. "The reality is Amazon is not about selling books. Amazon is really about changing how people buy and that's what we're going through here. We're going through a change in how people actually behave …."

Among the trends Martin charted:

The Cyber Economy goes Main Street. As the physical and online worlds become integrated, it's no longer a matter of moving from bricks and mortar to clicks and mortar, Martin told the large audience for his presentation. Instead, businesses are integrating the two, synchronizing operations to provide timely support for sales and communications conducted in an electronic environment and augment those made on Main Street. Increasingly, the locations of physical infrastructure like retail outlets, service centers, and the Amazon.com distribution centers located in and planned for Kentucky, are linchpins in the success of the fast-paced, customer-oriented world of e-commerce.

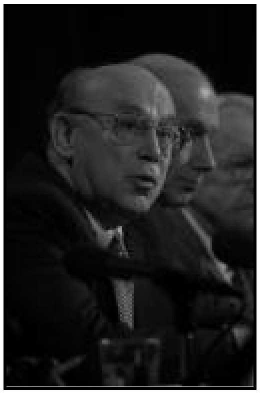
The ascendance of the wired workforce. Forget résumés, says Martin. Jobs, but more importantly, opportunities are a click away for wired workers. Empowered with all the information it wants anytime it wants it, the wired workforce, rather than organizations, will create jobs identifying and meeting the immediate and increasingly specialized needs of customers.

Instead of the once predicted elimination of the proverbial "middle man" or what has come to be called "disintermediation," Martin says a reversal is well underway. Today, new and expanded opportunities for the insertion of entrepreneurs into the "network value chain" are emerging.

The customer becomes data. Information about your travels, your personal tastes, your buying history and more will be compiled and used increasingly to offer goods and services and leverage sales.

Already in the works, ever smaller and cheaper microchips will soon free more and more of our time, Martin says, as they are embedded in such mundane things as milk cartons that electronically monitor supplies. From preparing our grocery lists to tracking baggage for airlines, technology will do more things humans now do, raising the skills bar even higher and eliminating more low-skill jobs.

For those who see Kentucky trailing other states in regard to its e-commerce position, Martin offered a welcome perspective. "The good new is, … you are change agents … you can make things go a different direction. … There's no reason you can't put your state wherever you really want it to be. The issue is … where do you want it to be, and then it's just a matter of how you get there because most states aren't doing it. They aren't thinking about it. … There's no reason that you can't position your state really way ahead, pretty much of the pack, because it's a zero sum game right now; it's who really does it."



Ashland Inc. CEO Paul Chellgren added business acumen to the KET panel.

KET Programs Featured

The November 13, half-day session was capped off by a live broadcast from the conference center of "Kentucky Tonight," KET's Monday night public affairs talk show hosted by Bill Goodman. A panel of experts on entrepreneurship and e-commerce assessed the economic terrain, discussed various strategies for countering the state's so-far weak showing in the New Economy, and discussed ways of leveraging more high-technology opportunities for the state.

Courier-Journal columnist Betty Bayé looks on as attorney and former state representative John Berry comments.

During a late morning session of the Center's conference on Tuesday, November 14, KET's Bill Goodman, host of *Kentucky Tonight,* led a panel of 12 eminent Kentuckians through a series of questions about the state's future. The panel was asked to offer words of advice to a hypothetical incoming governor. What followed was a compelling 90 minutes of challenging, visionary, and sometimes conflicting perspectives on the state's status and its future needs. The program was aired on KET in late 2000.

Panelists included former Kentucky Supreme Court Justice and General Assembly member, Walter Baker; *Courier-Journal* columnist Betty Bayé; former member of the Kentucky General Assembly, attorney and advocate for burley tobacco growers, John Berry, Jr.; Ashland Inc. Chairman and CEO Paul Chellgren; Council on Postsecondary Education President Gordon Davies; former Governor and U.S. Senator Wendell Ford; Kentucky Council of Churches Executive Director Nancy Jo Kemper; Kentucky Science and Technology Corporation President Kris Kimel; State Historian James Klotter; Kentucky League of Cities Executive Director Sylvia Lovely; University of Kentucky History Professor and Director of African-American Studies and Research, Gerald Smith; and founder and former director of Berea's New Opportunity School for Women, Jane Stephenson.

Steuerle on the Fiscal Future

The Kentucky Long-Term Policy Research Center's keynote lunch speaker, Louisville native Dr. C. Eugene Steuerle, a Senior Fellow with the highly respected Washington, D.C.-based Urban Institute, turned the conference audience's attention to the less exciting but critically important arena of public sector funding and spending and the forces that are likely to impinge upon them. Dr. Steuerle has conducted extensive research on budget and tax policy, Social Security, charitable sector issues, health care, and welfare reform.

Dr. Steuerle's remarks focused on trends in federal expenditures and their potential future impact on state and local governments over the long term. As the Baby Boomer generation ages, it is expected to place unprecedented demand on federal programs which comprise the lion's share of the federal budget, including Social Security, Medicare, and Medicaid. All of these programs are predicted to experience shortfalls in the near term. In turn, opportunities for the federal financing that once helped states and localities make improvements to their physical and human infrastructure will become more limited.

In spite of forecasts of a rising budget surplus that are expected to finance federal tax cuts, Dr. Steuerle's predictions suggested little reason for comfort over the long term. "There will be extraordinary pressure upon states and localities to self-finance what they want to do in the near future," Dr. Steuerle observed.

Dr. Steuerle is the author of a weekly column, "Economic Perspective," eight books, more than 125 reports and articles, 500 columns, and 45 congressional testimonies or reports. He chairs a technical panel advising Social Security on its methods and assumptions for fiscal projections. Prior to joining the Urban Institute, he served with the Reagan administration. He discussed the future of Social Security and explored some of the ways that state governments and the nonprofit sector may be affected by future changes.

Economist C. Eugene Steuerle observed that more costs may shift to state and local governments in his keynote address.

Al Smith Honored with 4th Annual Hellard Award

The fourth annual Vic Hellard Jr. Award was presented to veteran journalist Al Smith at the Center's annual 2000 conference in Covington. A former newspaper publisher, editor, and reporter, Smith is one of the state's most engaging and enduring media personalities. As host of Kentucky Educational Television's longest-running program, *Comment on Kentucky*, now in its 26th year on the air, Smith's formidable grasp of public policy and the rich history of his adopted home state have made him familiar across the state.

Given in recognition of contributions to the future of the Commonwealth, Smith's life and work exemplify such commitment. Most recently, he was instrumental in forming Kentucky Leaders for the New Century, an effort to identify some of the state's most promising young leaders and engage them in actively working for the betterment of the state.

In addition to his many contributions to the civic life of the Commonwealth, Smith served in Washington as federal cochairman of the Appalachian Regional Commission under Presidents Carter and Reagan. For 25 years, he served as chairman or vice chairman of the Shakertown Roundtable, a public policy forum held annually at historic Pleasant Hill in central Kentucky. He is a past chairman of the Kentucky Arts Commission, a former president of the Kentucky Press Association, one of the founding directors and a chairman of Leadership Kentucky, and a cofounder and first chairman of the Kentucky Oral History Commission, which celebrates its 25th anniversary this month. As a member of the Prichard Committee for Educational Excellence, Smith chaired a Governor's Council on Educational Reform and served as vice chair of the Council on Higher Education in the 1980s. He was on the founding boards of the Governor's Scholars Program and of Forward in the Fifth, a program for better schools in eastern Kentucky. He is a former trustee of Berea College, a former member of the University of Kentucky (UK) Hospital Council of Supervisors, and has served as an adjunct instructor at UK in the political science department and the Appalachian Studies Center. He holds honorary degrees from three Kentucky schools.

In addition to his work in television and radio, Smith was in the newspaper business for over 50 years as a reporter, editor, and publisher. As an editor and publisher of weekly newspapers, Smith was active in community and state educational and economic development programs. Most recently, his elegant prose appears in *Our Kentucky*, a history of the state published by the University of Kentucky Press.

"Through his radio, print, and television work, he constantly engages the public in a dialogue about what it is to be a Kentuckian and American in today's changing world," observed state historian, Dr. James Klotter. "His 'Comment on Kentucky' is as close to a statewide program as any around. Moreover, he conducts that program and himself with dignity and humor, and always shows his commitment to the things that make us better."

Smith lived in Russellville for 22 years and in London, Kentucky, for six years. A native of Florida, he grew up in Tennessee, served in World War II, attended Vanderbilt and Tulane universities and worked on New Orleans daily papers for 10 years before coming to Kentucky in 1958. He and his wife Martha Helen, formerly of Hopkinsville, have three grown children.

"Comment on Kentucky" host, Al Smith, accepts the fourth annual Vic Hellard Jr. Award for service in the interest of the Commonwealth's future.

Criteria for the Hellard Award include the demonstration of long-term vision and innovation, championship of the equality and dignity of every person, efforts to enhance the processes of a democratic society, and an approach to work distinguished by commitment, caring, generosity, and humor. Hellard was beloved for his playful wit, which was often embellished with theatrical flourishes.

"In Al Smith, we have the embodiment of all these values," observed Kentucky Long-Term Policy Research Center Board Chair Dan Hall, a Vice President at the University of Louisville. "Few have celebrated and challenged this state as Al Smith has, and we are all the better for it." **b**

Scanning Kentucky

Emerging trends and issues that may affect the Commonwealth's future

Literacy Efforts Getting Big Boost

While U.S. businesses and industry scour the country for workers to keep it and the economy rolling and the economic returns to education continue to rise, children are still making choices that could seal their economic fates. From Kentucky's Appalachian hills to the inner cities of its major cities, children, like those from impoverished stretches across the South, are still dropping out of school. The vast majority quickly discover they are only equipped for only the most menial jobs.

To tackle the illiteracy associated with undereducation, according to *The New York Times*, Congress and the Clinton administration increased aid to state literacy projects by nearly 50 percent, to $150 million, in three years under a federal-state program called Even Start. At the same time, Kentucky has taken aggressive steps to combat illiteracy. At the recommendation of Gov. Paul Patton, who observes that Kentucky has the nation's lowest percentage of high school graduates, the General Assembly has doubled expenditures on literacy programs to $34 million over two years.

Across eastern Kentucky, government agencies, foundations, and charities have opened storefront learning centers to coax people to study for the General Education Development test (GED). Kentucky is also tightening enforcement of the law requiring students to stay in school until age 16, and supporting counseling efforts designed to discourage students from dropping out.

Implications for Kentucky. In a word, they could be profound. Comprehensive efforts to revamp adult education programs and reduce dropout rates go to the heart of Kentucky's enduring problems with undereducation. In time, they could raise the state's educational status, help transform its economy, and expand prosperity to more of those individuals who are being left behind. Given a measure of success in such programs, adult learners also will leave their own education legacies, not just telling but showing those on whom they have the strongest influence–their children–that education indeed pays.

Coal Could Be on the Comeback Trail

Coal was knocked on its heels nearly 20 years ago by strict environmental regulations and the collapse of oil and gas prices. Many mines failed, but the biggest ones held their ground. Forced to cut costs, they consolidated their holdings, boarded up money-losing mines, and upgraded their technology. Now, *Business Week* recently reported, even though coal is a pariah in environmental circles, its prospects are rebounding. High gas and oil prices are making low-cost coal increasingly attractive, even with the added cost of cutting emissions.

Necessity is forcing the issue. Never in U.S. history has there been more demand for coal–simply because of the overwhelming hunger for electricity. Two years ago, the U.S. Energy Department projected that by 2020, the nation would need an additional 300 gigawatts of generating capacity, roughly equal to the nation's current capacity. In fact, demand for power has grown at nearly double the rate that the DOE expected, by an average of 2.1 percent for the past two years, spiking to 4.6 percent for the year to date.

The implications are obvious: the nation will face serious electric shortages over the next decade. California's recent post-deregulation experience with spiking costs and power shortages may be a harbinger of things to come across the nation. The scenario is bad news for consumers, but electricity shortages mean rising demand for fuel to generate electricity and for relatively cheap coal in particular.

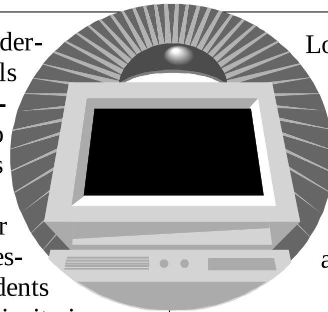
Implications for Kentucky. Kentucky's coal-producing regions have seen their economic fortunes decline precipitously since the boom of the 1970s. Thousands of high-wage coal-mining jobs have simply disappeared from our state. More recently, the declining accessibility of coal reserves here has posed a threat to the remaining jobs and the communities that are, in part, sustained by them. However, the rising demand for energy may provide the economic incentive needed to spur technological advances that will permit these reserves to be mined and remove more, if not all, of the environmental consequences of burning coal.

Quite unexpectedly, boom times could return to regions of the state for a time. However, comprehensive, long-term solutions to the economic problems of Kentucky's coal-producing regions are unlikely to be found in a resurgence of the coal industry alone. Ultimately, coal reserves will be depleted, mining jobs will disappear, and the problems of undereducation and anemic entrepreneurship will remain. Diverse, entrepreneurial economies and rising levels of education remain the best hopes for every region of the state, regardless of its natural resource base.

Value of Technology in Classrooms Questioned

Elementary school teachers who use technology in their classrooms have questioned the assertions of a recent report calling for a "time-out" for computers in classrooms with young children. Information technology, they report, makes their students more eager to learn. But a recent *New York*

Times on the Web report says a new study underwritten by the Alliance for Childhood, "Fools Gold: A Critical Look at Computers in Childhood," observes that not enough research into the impact of computers on developing minds and bodies has been done.



Two veteran teachers who now train their colleagues to integrate technology into their lessons counter that today's computer-literate students are learning more than when technology was in its infancy. A technology staff development trainer for the Lamar Consolidated Independent School District in Rosenberg, Texas, says computers inject enthusiasm that she did not see when students pulled out their textbooks year after year. Though they acknowledge beneficial uses for computers in elementary schools, the study's authors say more research is needed before technology becomes the centerpiece of classroom learning. A key to the use of information technology in classrooms, the teachers who use it successfully suggest, is how well teachers are trained to integrate it into instruction.

Implications for Kentucky. This study, as well as the experiences of trained teachers like those cited in this article, illustrates the enduring importance of basing continual improvement efforts upon the best available data and research. From the impact of computers on student comprehension to training teachers to use information technology effectively to enhance learning, knowledge is still the highest power. The more we know about what works, the better equipped we will be to make it work.

Development Trending to Regional, Collaborative Focus

Kentucky is confronted with the ever-growing national and international trend towards regionalism, according to a recent editorial by syndicated columnist Neal R. Pierce in *The Courier-Journal*. A regional structure of community and government, he observes, tends to be more organic in form, merging a single, shared regional workforce, industry, and environment. Economic regions, he predicts, will replace cities and states as the driving force of the 21st century economy. To be successful, a region first should identify its most important economic cluster and concentrate on developing a strategy to attract and retain top talent and venture capital to that area.

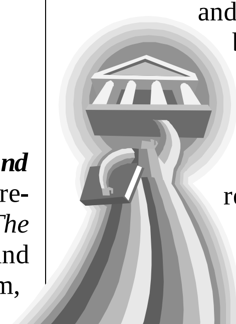
Louisville, Pierce notes, has done well at this task, bolstering and expanding its already strong bases in distribution, health care, and biomedical research, and the information technology sectors. Next, a region needs to cultivate an atmosphere attractive to industry and also to its workforce. Qualities such as good primary and secondary education, revitalized downtown areas, and controlled urban expansion provide an attractive package to illuminate a region's benefits and attract industry, and enable growth in the region. Louisville has made many strides toward becoming the powerful nucleus of a region, fostering cooperation among the surrounding counties and southern Indiana to enhance economic development efforts. The area has already seen mergers of city and county agencies, such as schools, purchasing, planning, libraries, sewer and water service.

Implications for Kentucky. As Pierce observes, economic development has increasingly taken on a regional focus that maximizes strengths and expands the reach of those benefits which come from successful locations and expansions. Gov. Patton and the General Assembly have recognized the importance of regional development, fashioning initiatives aimed at identifying clusters and concentrating efforts on regional centers that can ultimately have a radiating impact.

At the local level where the real work of development takes place, public officials and interested citizens from all walks of life must recognize that cooperation and collaboration are key to success. Economic successes and failures do not begin or end at the city limit or the county line.

Kentucky Higher Education in Middle of the Pack

Kentucky's higher education system is like an average but struggling student, with one B on its report card amid C's and D's, *The Courier-Journal* recently reported based on an analysis from the first state-by-state report card for higher education. The report, "Measuring Up 2000," was released in December 2000 by the National Center for Public Policy and Higher Education. As reported by *The Courier-Journal*, Kentucky scored well on the affordability of higher education, but it received poor marks for having a relatively low number of residents who get education or training beyond high school and for a relatively low level of economic and social benefits received from education. Kentucky also received a "C" on its preparation of students for college. However, Kentucky scored better than most other Southern states.



The report card, which does not include a final overall letter grade for each state, indicates Kentucky was in the middle of the pack compared with the rest of the country. No states received all A's, but some did very well. Massachusetts received four A's, while Kansas, New Jersey and Wisconsin received all A's and B's. A few states received F's in certain categories. Kentucky's grades on key indicators might improve in future years because of the 1997 higher-education reform law, which included the $230 million "Bucks for Brains" program to foster research, the report said. The report card, "Measuring Up 2000," is the first attempt to assess states' performance in higher education. The national center, an independent, nonprofit policy and research organization based in San Jose, California, spent more than two years gathering and analyzing data for the report card.

Implications for Kentucky. These marks for our postsecondary education system came as little surprise to the policymakers seeking to improve it on a number of fronts. At the elementary and secondary levels, we are now a decade into statewide school reform aimed at reversing nearly a century of undereducation and underachievement. At the state and the university levels, policymakers are working to elevate the status of our institutions. The Council on Postsecondary Education also has set ambitious goals for college enrollment and graduation rates, and the state's universities continue their quest for research dollars and for new ways of unleashing the economic potential of university research for the good of the state as a whole. While much work is left to be done, the difficult journey to lifting our economic and educational status is clearly well underway.

More Americans Insured in 2000

After rising relentlessly for 11 years, the number of Americans without health insurance declined in 1999 to 42.6 million, a reduction of 1.7 million from 1998, the Census Bureau reports. *The New York Times* reported that the proportion of Americans without insurance also declined for the first time since 1987, to 15.5 percent in 1999, from 16.3 percent in 1998. The robust economy and an expansion of government programs contributed to the decline, economists and health policy experts said. With the unemployment rate at 4.1 percent, a 30-year low, many employers have found that they must offer health insurance to attract and retain workers. In addition, low-income people are receiving coverage from government programs created or expanded in recent years. The number of people with health insurance through their employers rose last year by 3.4 million, to 172 million, a change that accounted for 85 percent of the increase in the number of people with health insurance. For children, as for the population as a whole, coverage increased last year. The number of uninsured children declined to 10 million last year, from 11.1 million in 1998. The proportion of children without coverage declined as well, to 13.9 percent from 15.4 percent. Recent studies, however, have found rapid increases in the cost of employer-paid health coverage, which could make it difficult to sustain the growth in the number of people covered by the plans.

Implications for Kentucky. The Commonwealth is a step of ahead of the nation as a whole with a somewhat lower uninsured population estimated at 14.5 percent for the three-year, 1997-1999 period, compared to 16.0 for the nation. Those states that have made the most aggressive efforts to lower the uninsured population through Medicaid expansions, however, enjoy the lowest uninsured rates.

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