In the wake of Hurricane Katrina, Louisiana’s economy is shifting from one based largely on manufacturing and oil extraction and refining to a knowledge-based economy that emphasizes entrepreneurship, creativity, and the commercialization of new technologies. This new economy brings many challenges, but also many rewards for those who are successful in it. This article presents a two-part analysis of Louisiana’s prospects.

In August 2005, Hurricane Katrina dealt the low-lying regions of Louisiana and Mississippi a devastating blow. In the aftermath of one of the worst natural disasters in U.S. history, people have questioned whether Louisiana’s economy can rebound from such a catastrophe.

Even before Katrina, however, Louisiana faced a new world of competitive forces as a global economy—a knowledge-based economy that emphasizes entrepreneurship, creativity, and the commercialization of new technologies—reshaped the economic landscape. This new economy demands a highly educated workforce and close interaction between research universities and the communities and enterprises they serve. This economy demands a reexamination of the critical role played by government in providing services and infrastructure to citizens and organizations that will form a future economic base.

This changing economy begs two questions in the aftermath of Hurricane Katrina. First, how is Louisiana positioned as a player in this rapidly evolving knowledge economy? Second, in terms of attracting creative people and new capital, how do Louisiana’s critical public policies compare with those of other states and regions?

In considering these questions, this article focuses on entrepreneurship and the emerging knowledge economy and compares Louisiana’s evolving economy with the econo-
Louisiana's Performance in the New Knowledge Economy

Jody Lipford and Bruce Yandle
mies of other states in the region as well as the United States as a whole. After analyzing data on taxes, regulation, liability risk, education and other services, and government transparency and corruption, this article offers policy recommendations that would strengthen Louisiana’s economy.

Louisiana and the Evolving Knowledge Economy

Since 1960, the U.S. economy has undergone a dramatic change. Once a smokestack economy with heavy employment in manufacturing, the national economy is now knowledge-based. In a smokestack economy, workers were trained largely on the job, and their skills were good for years. In a knowledge economy, however, fewer workers are needed to produce goods, change is rapid, and knowledge is king.

Driven by globalization, this new economy calls for a better-educated workforce with higher reading and math skills. It places a premium on abstract thinking, reasoning, and communication. These new skills are replacing the earlier skill set that rewarded manual dexterity and physical strength. States and regions that specialized in activities that fit the previous skill set must now alter their strategies if they wish to compete in the emerging knowledge economy. One such state that must alter its strategy is Louisiana.

Louisiana’s Evolving Economy

The shift from manufacturing to services in the United States and Louisiana vividly illustrates the emergence of the new knowledge economy. In 1960, 21 percent of Louisiana’s non-farm labor was employed in manufacturing and 15 percent in services. For the United States that year, the shares were 30 percent in manufacturing and 22 percent in services. By 1990, Louisiana’s services sector had grown to 33 percent, while manufacturing had dropped to 12 percent. That year, the shares for the nation were 34 percent in services and 17 percent in manufacturing.

In 2007, Louisiana employment in services accounted for 41 percent of the labor force while just 9 percent was employed in manufacturing. Nationwide, services took 42 percent and manufacturing employed 11 percent of the labor force. Figure 1 shows a detailed breakdown of total non-agricultural employment in Louisiana and the United States for 2007. Two slices on each chart are extended to emphasize the relative amounts of employment in manufacturing, the old economy, and professional and business services, the proxy for the size of the knowledge economy. We will return to this key point later.

This shift from manufacturing to services has delivered higher per capita income, partly because hourly wages in the

3. Ibid.
services sector are higher than in manufacturing, and the gap is widening. While Louisiana’s per capita income has risen across several decades, it still lags behind the national average, standing at roughly 80 percent of U.S. per capita income. One reason for Louisiana’s weaker performance relates to the smaller size of Louisiana’s business and professional services sector. This sector, which is just one part of the services sector, serves as an indicator for the health of the knowledge economy and entrepreneurship activities. The larger this specialized service sector, the healthier the emerging new economy.

The Importance of the Professional and Business Services Sector

Higher income springs from a larger services sector because this sector encompasses education and health, leisure and hospitality, professional and business, and other services. As lucrative as those other subsectors might be, it is the professional and business services sector that predicts the size of and is critical to a knowledge economy. This sector encompasses fields like research, law, accounting and financial management, software design, engineering, and construction management. While Louisiana’s growing knowledge sector now accounts for 12 percent of the labor force, it is still 14 percent smaller than its national counterpart. To become a force within the nation, this sector will need to become larger than the nation’s.

Figure 2 shows the relationship between the share of workers in the professional and business services and state per capita income. Examination of the data reveals that in order to raise per capita income, professional and business services employment—that is, the knowledge economy—must expand.

5. Contrary to popular belief, this sector does not include fast food restaurants.
Expanding the Knowledge Economy

Expanding Louisiana’s (or any state’s) knowledge economy is a tall order. Part of the challenge relates to expanding the number of knowledgeable people living in the state and then getting them connected to wealth-creating activities. When compared to the adult population of the other 49 states, Louisiana’s adult population ranks 42nd in college degrees, and only Texas has a smaller share of the adults with high school diplomas. 6

States that have an exceptionally high share of high school graduates, such as Colorado, Idaho, Montana, Utah, and Wyoming, also have extraordinarily high growth in entrepreneurship and per capita gross state product (GSP). As might be expected, the share of population with bachelor’s degrees also maps closely to state per capita GSP (Figure 3).

In Figure 3, Louisiana is located along a horizontal that includes Alabama, Mississippi, Wyoming, and Nevada. Notice that Arkansas is below and to the left of Louisiana. Georgia and Texas are well above Louisiana. Those states to the left of Louisiana have about the same level of educational attainment but have not produced as much GSP per capita given their attainment. Those to the right of Louisiana have produced more GSP per capita for about the same level of educational attainment. Producing more GSP per capita can come from two forces: increasing the level of educational attainment and improving knowledge economy opportunities for the educated population in the state.

How Louisiana Ranks as a Knowledge Economy

In recent years, researchers at think tanks and universities have focused considerable attention on state activities related to building a knowledge economy and encouraging entre-

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6. Larry Swanson, “Education Matters,” Center News (Missoula, MT: O’Connor Center for the Rocky Mountain West, June/July 2007), http://www.crmw.org/newsletter/CenterJuneJuly2007NewsletterGraphic.htm. While Texas has the smallest share of the population with high school diplomas, the state ranks much higher in the college-educated share. In other words, Texas is attracting and keeping a larger share of people with bachelor’s degrees.
entrepreneurship, a vital component of the knowledge economy. Many of these institutions have developed state rankings. For example, the Milken Institute State Technology and Science Index uses a number of variables, including measures of research and development, number of scientists, venture capital, fast growth firms, and initial public offerings. The Information Technology and Innovation Foundation (ITIF), in conjunction with the Kauffman Foundation, developed a more comprehensive new-economy measure based on the average ranking of 23 variables organized to account for education, entrepreneurship, and enterprise development. Most recently, researchers at Clemson University developed a knowledge economy index for the South Carolina Research Authority (SCRA). The SCRA Knowledge Economy Index is based on statistical models that explain the variation in 2007 per capita income across the fifty states (Figure 5). The index includes three variables that account for educational attainment through graduate education, fast-growth firms located in the state, and industrial research and development. Table 1 summarizes Louisiana’s rank in these various indices.

Table 1: Comparing Three Knowledge Economy Rankings for Louisiana

<table>
<thead>
<tr>
<th>INDEX</th>
<th>YEAR</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCRA</td>
<td>2007</td>
<td>48</td>
</tr>
<tr>
<td>ITIF</td>
<td>2007</td>
<td>44</td>
</tr>
<tr>
<td>Milken</td>
<td>2002</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: SCRA, ITIF, Milken

Despite their different approaches, all three rankings place Louisiana near the bottom of the 50-state stack. Louisiana is not a knowledge-economy contender, but neither are the other states in the region. The state outline map of the SCRA Index (Figure 5) shows that Louisiana is nested in a group of states with lower knowledge-economy rankings. The challenge for Louisiana is to pull away from the pack.

Comparing Louisiana’s 2007 SCRA and ITIF rankings to those of several regional states provides a more useful picture.

Table 2: Comparing SCRA and ITIF Indices for Regional States

<table>
<thead>
<tr>
<th>STATE</th>
<th>LA</th>
<th>AL</th>
<th>AR</th>
<th>GA</th>
<th>MS</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCRA</td>
<td>48</td>
<td>44</td>
<td>49</td>
<td>18</td>
<td>46</td>
<td>25</td>
</tr>
<tr>
<td>ITIF</td>
<td>44</td>
<td>46</td>
<td>47</td>
<td>18</td>
<td>49</td>
<td>14</td>
</tr>
</tbody>
</table>

Sources: ITIF; SCRA

Georgia and Texas stand out in this six-state ranking. In both cases, education and entrepreneurship make a large difference. Making progress on any of the three fronts—education, research and development, and fast firm entry—is not easy, but education is where the state and state-corporate partnerships might make the greatest difference.

Louisiana’s relative weakness is found in all three components of the SCRA index. Louisiana ranked 49th among the states in private sector R&D; 42nd in fast-growth firms; and 46th in educated workforce. However, there is hope for Louisiana: Research by Mark Henry and David Barkley shows that Louisiana’s urban areas, particularly Baton Rouge but also New Orleans, rank competitively with other southern cities.10

Where Louisiana Ranks on Entrepreneurship

For several years, the Kauffman Foundation has produced an entrepreneurship index for the fifty states.11 The index shows the percent of the adult population that started a new firm in the year examined. Table 3 summarizes a portion of that data for the United States, Louisiana, and states in Louisiana’s region. Louisiana’s 0.44 index indicates that there were 440 new firms for every 100,000 adults in 2007. This was substantially higher than the ratio for the U.S. and a number of neighboring states.

Table 3: Ranking Entrepreneurial Strength

<table>
<thead>
<tr>
<th>YEAR(S)</th>
<th>U.S.</th>
<th>LA</th>
<th>AL</th>
<th>AR</th>
<th>GA</th>
<th>MS</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-98</td>
<td>0.29</td>
<td>0.32</td>
<td>0.23</td>
<td>0.31</td>
<td>0.31</td>
<td>0.27</td>
<td>0.30</td>
</tr>
<tr>
<td>2007</td>
<td>0.30</td>
<td>0.44</td>
<td>0.10</td>
<td>0.34</td>
<td>0.40</td>
<td>0.30</td>
<td>0.29</td>
</tr>
</tbody>
</table>

Source: Kauffman Entrepreneurship Index

Can Louisiana Become a Contender?

Our review of Louisiana’s competitive position in the evolving knowledge economy identifies several significant weaknesses. While Louisiana has a rapidly evolving economy, the state is not a contender in the knowledge economy arena as is demonstrated by the relative size of the professional and business services sector, its weak ability to attract and keep college-educated people, and the state’s low rating in each of the three composite knowledge economy indices. There are bright spots within the overall picture, however, in Louisiana’s metro areas and surging entrepreneurship activity. These data suggest that a strong knowledge economy is emerging in urban areas, but the supply of knowledgeable people will limit the pace of progress.

Public Policy And Economic Competitiveness

As Thomas Friedman points out, unprecedented resource mobility characterizes the 21st century economy.12 Capital crosses international borders with ease. Labor migrates with fewer and fewer obstacles, and technology spills across all artificial barriers. Lines drawn on maps no longer mean what they once did, and if these realities apply to international resource movement, they apply all the more to U.S. states.

In this fluid economy, public policies that minimize the burden on the private sector and produce valued public goods attract resources and technology and enable a state’s

current resources to thrive and prosper. Public policies that overly burden the private sector and fail to produce valued public goods discourage the in-migration of resources and technology as well as their development. This section evaluates how Louisiana’s public policies measure up in this new economy and whether they encourage the accumulation of the increasingly mobile resources and technology that fuel economic growth.

Taxes, Regulation, and Corruption: The Role of Institutions

It is commonly said that death and taxes are life’s two inevitabilities. Businesses today might add regulation, corruption, and liability to this list. To determine if Louisiana provides a healthy business climate, it is necessary to consider Louisiana’s tax and regulatory structures and whether its political and legal climates give appropriate incentives to entrepreneurs.

Taxes

Louisiana’s tax structure does affect Louisiana’s entrepreneurial rank. While Louisiana’s marginal tax rates are lower than those of most states and in line with those in the region, Louisiana ranks poorly in terms of its sales tax burden (sales taxes paid per $1,000 of personal income), because it permits localities to charge high sales taxes despite low resident incomes statewide. To improve state competitiveness and encourage the formation of new businesses, Louisiana should lower its local option sales taxes, exempt sales taxes on business-to-business transactions for manufacturing equipment, utilities, and farm machinery (as most states do), or cut the marginal income tax rates faced by corporations and individuals.

Regulation

Like taxes, regulation can take resources from businesses and influence resource allocation. Unlike taxes, quantifying regulations is problematic, but it is possible to obtain a reasonable evaluation of a state’s regulatory system by examining some key regulations important to business decision makers; specifically, property rights, labor markets, and business regulations.

The security of private property is the foundation of a capitalist economy. When private property rights are secure, businesses invest with the confidence that their investments and earnings are safe. Without secure property rights, businesses are reluctant to invest and will seek locales that promise greater security. Measured by the willingness of a government to take private property for private use, property rights in Louisiana are relatively secure.

Secure property rights are essential to attracting capital, but flexible labor markets also help by lowering costs for businesses and ensuring that labor moves to its most highly valued uses. Louisiana’s labor markets are relatively free and competitive. The state has no minimum wage law, and workers are free to join or not join unions.

The source of Louisiana’s trouble in its regulatory regime is business regulation. Business regulations can be critical to attracting new businesses, especially the small businesses and entrepreneurs that are such an important part of the 21st century economy. One indicator, the Small Business Survival Index, ranks Louisiana 31st among the states. This ranking, mediocre nationally and poor regionally, is in part due to a significant number of health-care mandates and a lack of a regulatory flexibility statutes.

Corruption and Legal Liability Risk

However, what really holds Louisiana back in the new economy is rampant corruption and a skewed legal liability system. A corrupt and legally risky business environment discourages business formation and slows economic growth.

13. It is important to note here that public sector resource constraints affect policy choices and their implementation.
Businesses facing corruption and potential liability risk must alter their business practices to deal with these threats. Distrust, uncertainty, and unfairness are not favorable business settings.

Quantifying corruption and legal system risk is admittedly difficult. However, the Better Government Association (BGA) assesses state laws that “promote integrity” on the basis of transparency, accountability, and limits. Transparency measures the openness of government operations through the adequacy of freedom of information laws. Accountability assesses the penalties for violating statutory limitations and restrictions on campaign contributions, gifts, or honoraria.\(^\text{18}\)

Taking a different approach, Corporate Crime Reporter calculates a corruption rate for each state by tallying the number of public corruption convictions per 100,000 people between 1993 and 2002.\(^\text{19}\) While these measures do not perfectly assess corruption or the laws that seek to prevent it, Louisiana’s ratings are not favorable in either case. As shown in Table 4, the Integrity Index of the BGA ranks Louisiana a poor 46th, and the Corporate Crime Reporter’s corruption index ranks Louisiana as the 3rd most corrupt state. Other states in the region also rank poorly, but this is cold comfort for a population that seeks to be a strong knowledge-economy contender.

**Table 4: Integrity and Corruption: Comparative Analysis**

<table>
<thead>
<tr>
<th>STATE</th>
<th>LA</th>
<th>AL</th>
<th>AR</th>
<th>GA</th>
<th>MS</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGA Integrity Rank</td>
<td>46th</td>
<td>47th</td>
<td>31st</td>
<td>26th</td>
<td>33rd</td>
<td>9th</td>
</tr>
<tr>
<td>Corruption Rate (Rank)</td>
<td>7.05 (3rd)</td>
<td>3.67 (15th)</td>
<td>1.32 (42nd)</td>
<td>2.76 (23rd)</td>
<td>7.48 (1st)</td>
<td>2.41 (29th)</td>
</tr>
</tbody>
</table>

Note: The Better Government Association gives high rankings to states with the best laws, while Corporate Crime Reporter gives high rankings to states with the most corruption.


Louisiana fares no better in an examination of liability risk. In an attempt to “explore how reasonable and balanced the tort liability system [of a state] is perceived to be by U.S. business,” the U.S. Chamber of Commerce surveyed senior attorneys of companies with at least $100 million in annual revenues. These attorneys were asked to rate the following criteria: overall treatment of tort and contract litigation, having and enforcing meaningful venue requirements, treatment of class action suits and mass consolidation suits, punitive damages, timeliness of summary judgment/dismissal, discovery, scientific and technical evidence, non-economic damages, judges’ impartiality and competence, and juries’ predictability and fairness.\(^\text{20}\)

According to this survey, Louisiana has the 49th worst tort liability system in the United States, ranking in the bottom three of all categories. Its largest city, New Orleans, is ranked as the 9th “least fair and reasonable jurisdiction in the nation.” Hedonic damages, a lack of reliance on credible science and experts, and a proliferation of asbestos lawsuits warn businesses that Louisiana’s legal environment is hostile to them.\(^\text{21}\) What is particularly disturbing is that 64 percent of survey respondents said the litigation environment was either “very likely” or “somewhat likely” to affect important business decisions, including where to locate or do business.\(^\text{22}\) The poor rankings of neighboring states—Georgia at 28, Arkansas at 34, Texas at 41, Alabama at 47, and Mississippi at 48—should again be cold comfort to Louisiana. If Louisiana wishes to attract businesses and spur economic growth, it must substantially reduce both its systemic corruption and legal liability risk.

**Public Services**

Though taxes, regulation, corruption, and liability risk are important, they are not the only factors that determine a state’s economic competitiveness. Public services are also important to business. We focus on two vital functions: law and order and education.

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\(^{21}\) U.S. Chamber of Commerce, *Lawsuit Climate*. Hedonic damages compensate for “the loss of enjoyment of life.”

\(^{22}\) Ibid, 6.
Law and Order

Dating back to Adam Smith, the maintenance of law and order has been recognized as an essential function of sound government, and this function remains relevant whether an economy produces “old” or “new” goods and services. Neither businesses nor their employees want to locate where lawlessness threatens their property or persons. Louisiana’s crime rates, 9th for violent crime and 20th for property crime in the United States, are clearly too high and are a strong disincentive to new businesses and their prospective employees.23

Education

Education is a critical element in the emerging knowledge economy. Is Louisiana’s education system positioning its workers well for the challenges of this economy? The answer is a resounding “no.”

While Louisiana is generous in its support of higher education, the state of its K-12 programs is lamentable. The following table presents comparative proficiency percentages for Louisiana and the nation as measured by the U.S. Department of Education.

Table 5: State Achievement, National Assessment of Educational Progress Scores, 2007

<table>
<thead>
<tr>
<th></th>
<th>LOUISIANA AVERAGE</th>
<th>LOUISIANA RANK</th>
<th>NATIONAL AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Graders: Reading, Percent Proficient</td>
<td>20.4</td>
<td>49</td>
<td>31.7</td>
</tr>
<tr>
<td>4th Graders: Math, Percent Proficient</td>
<td>24.4</td>
<td>49</td>
<td>38.6</td>
</tr>
<tr>
<td>8th Graders: Reading, Percent Proficient</td>
<td>19.4</td>
<td>48</td>
<td>29.2</td>
</tr>
<tr>
<td>8th Graders: Math, Percent Proficient</td>
<td>19.0</td>
<td>46</td>
<td>31.0</td>
</tr>
</tbody>
</table>


These low-proficiency percentages do not bode well for a state seeking to be a contender in the new economy and facing national and global competition. Graduation rates tell a similar story.

Table 6: High School Graduation Rates, Class of 2004: Comparative Analysis

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>LA</th>
<th>AL</th>
<th>AR</th>
<th>GA</th>
<th>MS</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduation Rate / (Rank)</td>
<td>69.9</td>
<td>61.4</td>
<td>59.0</td>
<td>72.2</td>
<td>56.1</td>
<td>62.1</td>
<td>67.3</td>
</tr>
</tbody>
</table>

Note: Rankings are for public high schools and are modified from the original source by omitting the District of Columbia.


Louisiana’s poor educational performance suggests that more than public policy is the problem, particularly because relative to other states, Louisiana does not underfund its education system, especially in light of its national rank.

Table 7: Louisiana’s Education Spending, 2005

<table>
<thead>
<tr>
<th></th>
<th>LOUISIANA AVERAGE</th>
<th>LOUISIANA RANK</th>
<th>NATIONAL AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Pupil Expenditures</td>
<td>$8,582</td>
<td>29</td>
<td>$8,973</td>
</tr>
<tr>
<td>Percent of Students Funded At or Above the U.S. Average</td>
<td>36.7</td>
<td>26</td>
<td>46.1</td>
</tr>
</tbody>
</table>


Whatever the source of the problem, Louisiana must remedy this severe problem if the state is to gain competitive ground.

Public Policy: Its Possibilities and Limitations

Louisiana’s public policies that influence its place in the new economy of the 21st century are neither all good nor

all bad. But being good or average will not make Louisiana a
to

Thriving in the new economy requires government to

all bad. But being good or average will not make Louisiana a
knowledge-economy leader.

Thriving in the new economy requires government to
perform some very traditional functions, such as law and
order, and Louisiana needs substantial improvement. In par-
ticular, rates of violent and property crime are too high, and
Louisiana must root out systemic corruption and reform its
tort liability system.

Thriving in the new economy also requires a skilled, edu-
cated workforce. Louisiana does well in providing college
and university students with opportunity, but this opportu-
nity is not reaching K–12 students. Despite funding that is in
line with national averages, K–12 students perform poorly.
Louisiana must find a way to improve their performances.

Louisiana: Its Current Position and Future Potential

The aftermath of Hurricane Katrina awoke Louisiana not
only to the devastating consequences of a natural disaster,
but also to the realities of an underperforming economy.
There are bright spots, including innovative metropolitan areas and a thriving entrepreneurial sector, yet overall,
Louisiana's economy lags that of the nation and many regional states. Per capita income is low, the professional and
business service sector is underrepresented in the employ-
ment mix, and educational attainment is sub-par. Louisiana
can improve its economic fortunes. However, improvement
will require the state to embrace fully the knowledge eco-
nomy of the 21st century, a step the state as a whole has not
taken despite the progress in its metropolitan areas. To attr-
act new businesses and bright workers, and to ensure that
current businesses and talented workers not only stay in the
state, but also thrive, Louisiana should:

1. Create a more hospitable tax environment by
cutting local option sales taxes and sales taxes
on certain business-to-business transactions.

2. Create a more hospitable regulatory environ-
ment by reducing health care mandates and
increasing overall regulatory flexibility.

3. Create a more hospitable legal environment
by passing and enforcing statutes that root out
systemic corruption. Revamp the state's legal
system, which the private business sector per-
ceives as unbalanced and unfair, to reduce tort
liability risk.

4. Reduce the rates of violent and property crimes.

5. Strive to raise educational performance in gra-
des K–12.

Changing public policy is not easy, but the consequen-
tes of contentment with the status quo can be devastating.
By adopting changes now, Louisiana can attract and retain
the resources it needs and develop the flexibility required to
meet the economic challenges of the years to come.

Jody Lipford is a professor of economics and business administration at Presbyterian College, Clinton, South Carolina. His articles have appeared in such journals as the Journal of Economic Behavior and Organization, Independent Review, and the European Journal of Law and Economics. Dr. Lipford's research focuses on public finance, public choice, and property rights.

Bruce Yandle is the dean emeritus of the Clemson College of Business and Behavioral Sciences and a distinguished adjunct professor for the Mercatus Center at George Mason University. The author or co-author of numerous books, including Taking the Environment Seriously, The Political Limits of Environmental Regulation, Environmental Use and the Market, Land Rights, The Economics of Environmental Quality, and Common Sense and Common Law for the Environment, Dr. Yandle is a member of the South Carolina State Board of Economic Advisors.
