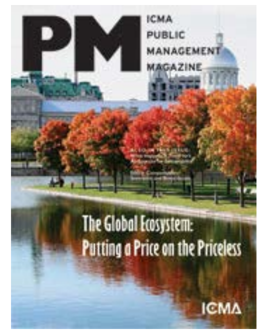
JULY 2009 · VOLUME 91 · NUMBER 6



Putting Mother Nature on the Payroll: Natural Services and Economics

Many people believe that nature's value cannot be put into dollars and cents. That is, they value the natural world for its own sake, regardless of what services or benefits it provides for humans. Yet this notion is fundamentally at odds with the economic system we've created. So how do we reconcile our economy with ecology?

David Suzuki, Vancouver, B.C., Canada, and Dave Robert Taylor, Tsawwassen, B.C., Canada.

READ ARTICLE

Features

Green Friday: One City's Success with a Four-Day Workweek*

How one city successfully implemented a four-day workweek.

Charles McClendon and Pier Simeri, Avondale, Arizona.

READ ARTICLE

Aspire to Be an Administrator: Views from Those Who've Been There*

Canadian administrators provide insight into their career choice.

Franklin Wu, Clarington, Ontario, Canada.

READ ARTICLE

A Manager's Precarious Exercise with a Sports Complex*

A manager's report on how to maintain professionalism.

Toby Dougherty, Hays, Kansas.

READ ARTICLE

Advancing Sustainability: What Happens If There Isn't an Appetite for It?*

Sustainability needs to be a theme in local managerial life.

Michael Willis, Surrey, United Kingdom.

READ ARTICLE

PM plus ONLINE EXTRA

PM's Web Site This Month Features This Exclusive Article

Globalizing Local Economies: Making It Happen Through Local Action

Although the existence of regional partnerships is considered a key factor to successful regional economies, there is less clarity on exactly what these regional partnerships and the resulting knowledge networks look like, and on what role the participants play in them. One of the most accepted views is that innovation increasingly hinges on university-industry-government partnerships, the so-called triple helix.

Rebecca Steffenson and James Banovetz.

READ ARTICLE

Departments

Ethics

Compensation, Severance, and Bonus Issues: Are We on Main Street or Wall Street?

On Retirement

Make Going Green a Priority Today

Profile

Tom Homan, Delaware, Ohio

FYI*

Avoiding Death by PowerPoint

Sacramento County and City Partner on Auto Sales Tax

Does Your Local Government Use Solar PV Panels on Its Buildings (see Active Living department in the May issue)?

- Yes
- No
- Don't Know

View Results | vote

*

ICMA
INTERNATIONAL CITY/COUNTY MANAGEMENT ASSOCIATION
777 North Capitol Street NE, Suite 500, Washington, DC 20002-4201 800-745-8780/202-962-3680 fax 202-962-3500

--->

JULY 2009 · VOLUME 91 · NUMBER 6

COVER STORY

Putting Mother Nature on the Payroll: Natural Services and Economics

by David Suzuki and Dave Robert Taylor

This article features copy from ***The Big Picture***, a book written by David Suzuki and Dave Robert Taylor, published in April 2009. Dr. Suzuki will be a keynote presenter at ICMA's 2009 Annual Conference in Montréal, Canada, on September 14.

You get what you pay for. It's one of those old, well-worn clichés that stays with us over the decades because of the simple fact that it's true. If you always look for the cheapest way to do something, regardless of other factors, quality will inevitably suffer.

Yet despite every businessperson, politician, and economist on the planet being able to recite this old saw by heart, that's not the way we've been treating Mother Nature. In fact, we've been stiffing her for a long, long time.

It turns out that in the mad rush to create a global economy, we forgot one thing—the globe. This spinning orb we live on happens to provide the base materials for everything that our ingenious human minds can create. Even more important, the Earth's natural systems create the necessary conditions for life on the planet to exist at all. They keep the air clean, the water fresh, and the soils fertile.

You'd think that if we valued these things, we'd have some way of accounting for them. But we don't. Mother Nature has been incredibly generous, offering these services for free. For our part, we've accepted them gladly and without question. In fact, we predicated our entire economy around the notion that these services have no quantifiable value and will continue to be provided indefinitely.

As this [book] explores, we don't have that luxury anymore. Our knowledge of Earth's systems and services may be imperfect, but we know that many of our actions are damaging them. The planet can provide only so many resources and absorb so much of our waste. After that, things start to break down. And breaking down they are.

Nowhere is this more obvious than with global warming. Exhaust gases such as carbon dioxide from the tailpipes of our cars, the chimneys of our homes, and the smokestacks of our industries are building up in the atmosphere, enhancing the Earth's natural greenhouse effect and trapping more heat near the planet's surface, like a blanket.

But this extra heat and energy doesn't make things all warm and cozy. Because the atmosphere is a system, it's more like throwing random weights on a precariously balanced load, unbalancing the system, and disrupting a climate that's otherwise been relatively stable.

Dealing with this problem will be expensive. Very expensive. And the longer we wait to fix it, the more expensive it will be to deal with later on. That's why it's so important to come up with a way of valuing our atmosphere—such as a carbon tax—immediately. While it would be nice to be able to simply say that nature's services, like providing fresh water and a stable climate, are priceless (they do, after all, keep us alive), our society is ruled by the almighty dollar. The sad fact is, unless we are able to put a price on these services, we will continue to squander them.

Does this mean that we must assign dollar values to all of our experiences in nature? How much is inspiration worth? What is the value of knowing there are wild places left in the world? Of knowing that our closest cousins, the great apes, still inhabit our Earth? Of being able to honestly say that we have been responsible stewards of the only planet known to harbor life in the universe?

A free-market economist might say that these things are worth exactly what people are willing to pay for them. But the tragedy of the commons is that most people don't even know what natural services are, let alone how their actions are damaging them. And even if people do, they want to be quite sure that their neighbors are also paying their fair share for services that benefit us all. This is why government policy is critical to create a level playing field where those who pollute and damage nature's services pay more than those who do not.

As fair as that may seem, powerful people and industries want to maintain the status quo, arguing that taxing them will hurt their bottom lines and weaken the economy. They're right, of course, unless you factor in the value of our natural services—which is the whole point. Welcome to Earth, the only planet we have. The services she provides are valuable. And someone, somewhere, has to pick up the check.

Putting a Price Tag on Nature

Many people believe that nature's value cannot be put into dollars and cents. That is, they value the natural world for its own sake, regardless of what services or benefits it provides for humans. Yet this notion is fundamentally at odds with the economic system we've created.

We live in a world increasingly dominated by a global economy, where it is assumed that everything of value has a price tag attached. If something can't be quantified and sold, it is considered worthless. The CEO of a forest company once told me, "A tree has no value until it is cut down. Then it adds value to the economy."

So how do we reconcile our economy with ecology? The Earth provides us with essential natural services like air and water purification and climate stability, but these aren't part of our economy because we've always assumed such things are free.

But natural services are only free when the ecosystems that maintain them are healthy. Today, with our growing population and increasing demands on ecosystems, we're degrading them more and more. Unfortunately, remedial activities and products like air filters, bottled water, eye drops, and other things we need to combat degraded services all add to the gross domestic product (GDP), which economists equate to progress. Something is terribly wrong with our economic system when poor environmental health and reduced quality of life are actually good for the economy!

But what if we did put a price tag on things like clean air and water? If we assigned a monetary value to natural systems and functions, would we be more inclined to conserve them? This idea was pretty radical when it was first seriously proposed in 2000 by an international group of ecologists writing in ***Science***.

The group argued that humanity will continue to degrade natural systems until we realize that the costs to repair or replace them are enormous. So we must find a way to put a dollar value on all ecosystem assets, including natural resources such as fish or timber, life-support processes such as water purification and pollination, and life-enriching conditions such as beauty and recreation.

Most of these assets, with the exception of natural resources, we already exploit but do not trade in the marketplace because they are difficult to price. But this is changing.

In 1997, for example, New York City officials decided to begin buying land around watersheds and let the forest and soil organisms filter water instead of building a massive new filtration plant. It wasn't that city planners were closet environmentalists trying to preserve nature. The economics just made sense. Protecting a service that nature provided for free was far cheaper than engineering a Band-Aid solution to clean up the water afterwards.

Until recently, this kind of potential to use natural services rather than technology to solve problems has been largely overlooked, even though natural approaches may provide greater benefits to communities such as lower costs, reduced flooding and soil erosion, and aesthetic benefits.

In Canada and the U.S., forests are primarily valued for the timber they provide. But this leads to conflicts. For instance, a report from the Canadian Department of Fisheries and Oceans found that logging roads in the province of British Columbia continue to devastate fish-bearing streams, even though legislation is supposed to protect them.

In fact, these forests provide many services, including habitat for plants and animals, recreation, and others that, if assigned a monetary value, could completely change the way we use them. In Australia, the New South Wales Department of Primary Industries promotes the future of forests as being tied to ecosystem services, with timber considered simply one of the many products and services that intact forests can provide to human beings.

As just one species out of perhaps 15 million, the notion of assigning value to everything on Earth solely for its utility to humans may seem like an act of incredible hubris. But the harsh reality of today's world is that money talks and economies are a central preoccupation. At the very least, assigning monetary value to ecosystem services may force us to take a hard look at all that nature provides. Maybe then we'll stop taking it for granted.

Conserving Nature Is Like Money in the Bank

Ask folks what they value about nature and most would probably be quick to mention aesthetic and spiritual properties like beauty, serenity, and peace. We hold these values dear to our hearts because they resonate with strong emotional ties. But there are other, more pragmatic, reasons to value nature—reasons even a hard-headed economist can't deny.

We've lost touch with the fact that everything we have depends on nature. Without the rest of nature propping us up, we could not survive—a fact so obvious that it seems silly to point it out. The problem is, we don't behave as though this were obvious. We behave as though the economy is completely separate from the world in which we live. Industrialized society is geared entirely towards output—how many Wiis, SUVs, and cans of Pepsi we can create, sell, and consume. What aren't factored into the equation: the natural services needed to support this output. Why? Because nature's services are considered free.

And in a standard economic sense, they are free. Nature is the source of clean air, water, and fertile soil with no strings attached. However, with over six billion of us now shuffling up to nature's buffet, the "all you can eat" sign will have to come down soon or those at the back of the line—the next generation—will be left with nothing but Jell-O salad.

Efforts to quantify the value of nature's services have been met with suspicion by some economists. In 1997, an international team of researchers headed by ecological economist Robert Costanza came up with an estimated annual average of about US$33 trillion—roughly twice the size of the annual GDPs of all the countries in the world, and virtually none of it accounted for in the marketplace. Their paper, published in *Nature*, was the first of its kind. But it only looked at the overall monetary value of natural services. It didn't answer the question of what effect human activities are having on nature's "net worth."

So, in 2002, a group of researchers attempted to tackle this question. The results were shocking. Their analysis, presented in *Science*, showed that simply in terms of dollar value, conserving natural areas is actually 100 times more profitable than exploiting them.

The researchers looked at five real examples—logging in Malaysia, small-scale agriculture in Cameroon, mangrove swamp conversion for shrimp farming in Thailand, drainage of marshlands for agriculture in Canada, and the destruction of coral reefs by dynamite fishing in the Philippines. In each case, the economic value of the conversion activity—such as the sales of the end product and jobs created—was far less than the value of the services provided by intact natural habitats nearby (things like sustainable, low-impact logging, flood protection, sustainable hunting and fishing, and provision of clean water).

In total, the researchers estimated that world-wide loss of natural habitat costs humanity some US$250 billion every year. And because the conversion is permanent, those losses continue every year into the future, in addition to next year's losses.

Such outrageous costs immediately raise the question: if these practices are so uneconomical, why hasn't someone stopped them? The answer is that the savings associated with conserving nature are spread throughout society, whereas the profits earned from exploiting natural resources are immediate and benefit a narrow group of individuals. Many current government subsidies and tax incentives also support such practices. In fact, researchers estimate that these subsidies add up to between US$950 billion and US$1,950 billion every year.

Our global economic system has been constructed under the premise that natural services are free. We can't afford that luxury anymore. We have created a deeply flawed system, but we can still change it. With new knowledge of the extent to which we are mortgaging humanity's future by subsidizing narrow economic interests, conventional views on economic development must be reconsidered and reconstructed to make ecological conservation a priority. We must put the economy in synch with the natural world that made it possible.

From *The Big Picture*, by David Suzuki and Dave Robert Taylor, co-published in 2009 by Greystone Books and the David Suzuki Foundation. Reprinted with permission of the publisher.

David Suzuki, Ph.D., cofounder of the David Suzuki Foundation, is a scientist, environmentalist, broadcaster, and author, Vancouver, B.C., Canada. Dave Robert Taylor is a writer and journalist and president of Tipping Point Communications, Tsawwassen, B.C., Canada.

JULY 2009 · VOLUME 91 · NUMBER 6

DEPARTMENTS

Ethics

Compensation, Severance, and Bonus Issues: Are We on Main Street or Wall Street?

SCENARIO NO. 1:

The city manager landed a new position with another community. The feelings of appreciation for all that he had done for the community during his 15-year tenure evaporated quickly when it was disclosed that his take-away compensation was nearly two times his annual salary. The final payout was for his unused vacation days, sick leave, executive pay, and other accrued benefits.

All the items had been duly laid out in an employment agreement negotiated when he was initially hired. No doubt the city's tight budget in the economic downturn, higher unemployment among the residents, and news of the recent excesses of Wall Street contributed to turning the spotlight on this situation.

ADVICE:

Comparisons with Wall Street compensation levels are not fair as the compensation provided to public service executives is nowhere near what managers in the higher levels of the private sector earn. Those who dedicate their careers to public service have no expectation of earning such amounts. Lack of transparency, perceptions of greed, and questions about whose interests are being served can, however, play out on both Wall and Main streets.

The interests of the local government manager and the employing jurisdiction are separate and sometimes in conflict when the terms and conditions of employment are being negotiated. ICMA members have a responsibility to be reasonable, fair, and clear about what is being requested. Elected officials have an obligation to seek advice, from either internal resources or a third party, as they cost out compensation requests. This is one instance where a member's duty to the public's interest and duty to his or her own interest are not identical.

One challenge, of course, is that the governing body in place at the end of the agreement may not be the one that carried out the initial negotiations. Other unforeseen factors can make those initial negotiations now seem unwise. After an employment agreement is negotiated, however, both parties have an ethical obligation to comply with the terms of the agreement. The public we serve will judge whether there was true value for the service provided.

SCENARIO NO. 2:

The county manager's employment agreement states that she will receive an annual bonus as part of the county's compensation program. In the early years of her tenure, the county commission was supportive of her efforts, and the bonus amount was decided in a private conversation with the board chair. The county manager never asked for formal approval as the board chair told her that he was authorized to represent the wishes of the full commission.

Years went by and the process remained the same. When an entirely new group of commissioners was elected, commissioners were stunned to learn that the manager had received the largest bonus available every year of her tenure without formal approval by the commission.

ADVICE:

If the compensation standard, metric, or amount is not spelled out clearly in the employment agreement, always seek and obtain approval of the governing body before accepting a bonus or other compensation. Don't take a bonus that you have determined on your own or one that has not been formally approved.

SCENARIO NO. 3:

During the most recent election cycle, one candidate ran on a platform of reducing government waste and improving services. His strategy for accomplishing this goal? Replace the city manager! The candidate won the election and appeared to have a majority on the council.

The manager had negotiated a modest severance in his initial agreement. The council president who lost his bid for reelection to this candidate strongly suspected the manager would be terminated after the new council took office, and he approached the manager with a proposal to increase his severance. The manager wondered whether a severance increase under these conditions would be ethical.

ADVICE:

Perceptions that we are feeding at the public trough are harmful to the profession. Even if the outgoing governing body agrees to change the severance provisions, will it appear to the public that it's just another golden parachute (albeit a small one) to the outgoing manager?

The best time to negotiate a reasonable severance provision that will provide some financial security for you and your family is at the beginning of employment or during a normal contract renegotiation. Members are encouraged to use the ICMA Model Employment Agreement, which can be downloaded from the career resource center at jobs.icma.org.

Have you encountered an interesting challenge while negotiating compensation or benefits or collecting them? Please feel free to share your experience with ICMA by sending me an email at mperego@icma.org. All stories or comments will be considered confidential unless otherwise noted.

—Martha Perego, ICMA-CM
ICMA Ethics Director
Washington, D.C.
mperego@icma.org

Ethics advice is a popular service provided to ICMA members. The ICMA Executive Board members who serve on the Committee on Professional Conduct review the inquiries and advice published in PM magazine. ICMA members who have questions about their obligations under the ICMA Code of Ethics are encouraged to call Martha Perego at 202/962-3668.

JULY 2009 · VOLUME 91 · NUMBER 6

DEPARTMENTS

On Retirement

Make Going Green a Priority Today

Helping public employers and their employees build retirement security is ICMA-RC's top priority. Providing ways for them to do it while protecting the environment comes in a close second.

According to the U.S. Environmental Protection Agency, Americans use 85 million tons of paper each year—a consumption rate estimated at six times the world average. It's disconcerting, however, to find that only about 28 percent of our paper waste is recycled.

To do our part, we at ICMA-RC are committed to going green with a focus on reducing paper use. We encourage all local and state government employers to visit www.icmarc.org/paperless to learn more about our new Go Paperless campaign. The campaign is an effort to promote environment-friendly e-communications for printed items such as statements, newsletters, and brochures.

In addition to caring for the environment, going green is another way to focus on saving for retirement. Over a lifetime, if only one person cut down on paper consumption, an entire forest could potentially be saved. Likewise, every dollar saved today is one step closer to a secure retirement tomorrow.

Every green action adds up to a greener world—in more ways than one. So we encourage you to go online today to learn more about how this eco-friendly campaign can benefit you and your employees.

—ICMA-RC
Washington, D.C.
www.icmarc.org

This article is intended for educational purposes only and is not to be construed or relied upon as investment advice. The ICMA Retirement Corporation does not offer specific tax or legal advice and shall not have any liability for any consequences that arise from reliance on this material. It is recommended that you consult with your personal financial adviser prior to implementing any new tax or retirement strategy. Vantagepoint securities are sold by prospectus only, and the prospectus should be consulted before investing any money. Vantagepoint securities are distributed by ICMA RC Services, LLC, a broker dealer affiliate of ICMA-RC, member NASD/SIPC. ICMA Retirement Corporation, 777 North Capitol Street, N.E., Washington, D.C. 20002-4240; 1-800/669-7400; www.icmarc.org. AC: 0508-2156.

INTERNATIONAL CITY/COUNTY MANAGEMENT ASSOCIATION

777 North Capitol Street NE, Suite 500, Washington, DC 20002-4201 800-745-8780/202-962-3680 fax 202-962-3500

JULY 2009 · VOLUME 91 · NUMBER 6

DEPARTMENTS

Profile

Homan Serves 10th Year at Delaware's Helm

Tom Homan, ICMA-CM, is city manager of Delaware, Ohio.

Delaware, Ohio, City Manager Tom Homan completed 10 years of leading the city in February. Homan, 51, who grew up in East Lansing, Michigan, said he didn't even know where Delaware was when he initially applied for the city manager position. Upon reading the description of the community, he suspected the location would be a perfect place to relocate and to raise his children.

His three children were ages 7, 3, and 7 months respectively when Homan accepted the city manager position and moved to Delaware, a town on its way to record-breaking growth. "It's been a great place to raise a family," said Homan, whose children Robert, John, and Sarah now attend Hayes High School, Dempsey Middle School, and Smith Elementary.

"That's been a wonderful aspect of the position," Homan continued. "Loving the community I live in. It's been a very good fit professionally. My family and I have come to really love the community."

While the city experienced rapid growth during much of Homan's tenure, he said he doesn't think—when the growth returns—that it will return to the accelerated pace that saw the need to issue a moratorium years ago. The city population grew from 25,000 in 1999 to more than 34,000 today, a 36 percent increase. At the same time, more than 3,700 additional housing units were added.

With growth-related revenue dropping off, including impact and capacity fees, Homan said it will be vital to continue to monitor the current economic base by retaining the businesses already in Delaware. In the first quarter, the city is holding its own financially, Homan said. The finance department continues to keep a watchful eye on revenues and expenditures.

In 2007, the city completed the largest capital project in its history, when the $26 million wastewater treatment plant was brought online. Also under Homan's leadership, Delaware is working to bring 21st century technology with a fiber-optic network for economic development opportunities.

Homan became Delaware's seventh city manager in February 1999 after previously holding manger positions in

Connecticut and New York. "Tom has provided clear direction and strong leadership," Mayor Windell Wheeler said. "During his tenure, Delaware has become a leader in population growth, income, and educational achievement."

Recently, Homan was recognized for his year of service (2007–08) as president of the Ohio City/County Manager's Association. Homan has been a board member of the organization since 2003.

"The last 10 years have gone by quickly," said Homan, adding that if city council will have him, he would stay for the next 10 years. As city manager, Homan oversees the operations of the city that includes a municipal airport and water and wastewater utility, a workforce of 280, and an operating budget of about $40 million.

"The experience has been incredibly rewarding and challenging," Homan said. "Credit for any success starts with our citizens and staff, who share a commitment to make Delaware an even better community in which to live and work."

In the next 10 years, Homan said the community will see the new training and community center, a partnership with the Central Ohio YMCA and the Ohio National Guard; a rehabilitated water plant; new road connections; and expanded fire and EMS service.

The "twin challenges" exist in Delaware, Homan said. Delaware is not only a community that grows, but with its rich history has a host of aging facilities. "It makes it a challenge, but keeps it interesting and fun," Homan said.

An income tax levy passed in 2008 will pay to build a community recreation center and make improvements to existing sports fields. In 2007, the city used grant monies and impact fees to add to its bike path network and updated its 30-year-old swimming pool.

Public safety also has been a priority for the city manager. More police officers than ever are on Delaware streets after a 25 percent increase over the past decade. A second fire station has been opened as well.

"Tom understands and values public safety's importance and advocates for continued training at all levels in each department," city police chief Russ Martin said.

Homan also contributes regionally. He is chairman of the Mid-Ohio Regional Planning Commission's regional policy roundtable. He is a credentialed manager and member of the International City/County Management Association, and past president of the Ohio City/County Management Association.

Delaware City Manager Tom Homan offers this advice to a city manager in his or her first chief executive position:

- Keep an open mind.
- Be flexible.
- Work closely with city council.
- Keep city council informed of what's going on in the community.
- Minimize surprises.
- Be willing to adapt to change.
- Respect the decisions of city council.
- Answer the phone, keep your door open, and be responsive.
- Never view yourself as insulated from the community.

Homan is a graduate of Michigan State University's James Madison College and New York University's Wagner School of Public Service, where he received his master degree in public administration. Homan is the seventh Delaware city manager. The others are Robert Mott, 1954–56; Roger W. Stilwell, June 1956–60; Donald Mackley, 1960–70; Robert F. Walker, 1970–82; Jewel Scott, 1983–89; and Frank Ciarochi, 1989–98.

—Melissa Mackey
Staff Writer
The Delaware Gazette
mmackey@delgazette.com

Reprinted with permission from the March 2, 2009, issue of ***The Delaware Gazette***, Delaware, Ohio.

--->

JULY 2009 · VOLUME 91 · NUMBER 6

PM *PLUS*

Globalizing Local Economies: Making It Happen Through Local Action

by Rebecca Steffenson and James Banovetz

This article, adapted from the second in a series of Policy Profiles, discusses how local governments can position themselves to prosper from globalization and presents results from a 2008 study entitled "Assessing Global Competitiveness: A Look at Chicago," which was completed under the auspices of Northern Illinois University's Center for Governmental Studies, DeKalb, Illinois.

In today's world, globalization is a fact of life. It has already had a major impact on the American economy. Some impacts, such as new markets and the influx of new technologies and products, have produced more jobs and profits. Other impacts, including the loss of manufacturing jobs overseas, have created hardships.

There can be no question that individual communities have been severely hurt by globalization. But globalization has provided the American economy, as a whole, with a number of significant economic advantages, including a 12 percent return on every dollar sent abroad in relocated business operations.[1]

While it is clear that the American economy as a whole benefits from globalization, it is also clear that individual regions of the U.S. may be differently affected, and sometimes adversely affected, by the forces of globalization. The Chicago metropolitan region, for example, currently has more than 50 percent of its growth driven by the global economy, yet it is not competing as effectively as it should be in that economy.[2]

Why Isn't the Chicago Metropolitan Region Competing Effectively?

Although the Chicago metro region has made a relatively successful transition to the global economy, it still faces a number of competitive challenges. One major challenge stems from the fact that neither the Chicago metro region nor the state of Illinois ranks among the nation's most successful areas as a center for innovation.

Indeed, as a competitive innovation economy, Illinois has been ranked no higher than 24th among the nation's 50 states as measured by comparative levels of high-tech and science/engineering jobs, venture capital, patents per worker, and industry investment in research and development.[3] Chicago falls well behind such national innovation leaders as Silicon Valley, Boston, Seattle, and Denver, and it is even outranked by such other Midwestern cities as Minneapolis, Pittsburg, St. Louis, Detroit, and Grand Rapids, Michigan.[4] Chicago does not even register as a "spike" on the world map of the most successful technology centers.[5]

Although the state of Illinois and the Chicago metro region have all of the necessary components to be a leading center for innovation, including the presence of several world-class universities, neither has achieved that status. Tooling up to improve its innovation competitiveness will require an effort, not only on the part of state and regional authorities but also by local governments—counties, cities, and villages—throughout the state and region. Local economic development efforts will be more successful if local officials make a concerted effort to understand the global economy and how their individual communities can best position themselves to compete successfully in it.

What Makes Local Places Competitive in the Global Economy?

The global economy has become a knowledge economy. In other words, the global economy has become a place where the ability to be innovative—to be able to create new ideas, thoughts, processes, and products—is translated into economic value and wealth.

In today's world, the greatest economic advantage belongs to knowledge based firms that proactively enter into collaborative relationships with other firms having similar interests, and where ideas and resources can be shared. The most competitive places in the global economy are regions that can attract and retain clusters of knowledge intensive business activities. Examples of such activities are listed in Table 1.

While it is true that there are indications that the Chicago metro region has become globally connected and integrated—it has a high volume of trade, substantial direct foreign investment, and an impressive level of immigration into and out of the region—these factors, by themselves, do not indicate economic competitiveness in the ever quickening global economic race. A whole host of new indicators of global competitiveness have been developed over the past decade to measure the capacity of regions to compete in the global knowledge economy.

Table 2 describes what today's competitive regions and communities look like. Appendix A lists the indicators used today to measure a region's global competitiveness.

Such measures indicate that economic competitiveness in the new global economy depends more on the quality rather than the quantity of economic opportunities. There are even indications that income growth rather than job growth is the primary motivation driving economic competitiveness.[6] Economic development success today is measured, less by the number of new jobs created, and more by the creation and retention of value-added, high-wage jobs and overall income growth.

Table 1. Knowledge Occupations in the Global Economy.

There are many different knowledge occupations. Here are examples of the kinds of occupations that make up the category:

- Executive Management
- Finance
- Computers, Electronics
- Information Management
- Architecture and Engineering
- Research and Development
- Marketing
- Human Resource Management
- Executive Search
- Office and Administrative Support
- Law

Table 2. What Competitive Places Look Like.

- Are rich in ideas and talent.
- Attract educated people.
- Have physical and cultural amenities to attract knowledge workers.
- Have flexible organizations and individuals with the ability to learn and adapt.
- Are anchored by bold partnerships among business, government, and the nonprofit sector.

Source: State of the New Economy

Why Are Knowledge and Innovation More Important in the Global Economy?

In today's dynamic and ever-changing world, business competition is increasingly based on knowledge. Knowledge and skill are the source for new ideas both for the products to be made and for the processes that make them. Firms that can best as-semble knowledge teams are in the best position to be competitive.

In the past, individual firms drew on their own internal research and development departments for the new ideas that kept them competitive. But two trends have made that concept increasingly obsolete.

First, the kinds and variety of knowledge that are needed have become too costly to maintain within individual firms.[7] Second, innovations in technology have brought down the costs of long-distance collaboration, making it possible and even cost effective to turn to specialized consulting companies for research and development assistance.

On larger research and development (R & D) projects, the work can be outsourced to a number of such firms, working in collaboration with each other, to produce the ideas needed to increase productivity and profitability.[8]

As a result, most competitive firms today are restructuring their research and development efforts, from in-house work to outsourced effort, to take advantage of cost, capability, and contextual knowledge—the so-called "3C's" of a global collaboration strategy.[9] Not only are they are taking advantage of low-cost, highly skilled labor forces in a global marketplace, but they are also saving money by investing less in training and developing internal talent.

What Role Is There for Communities in the Global Economy?

Globalization, including global shifts toward knowledge intensive industries, does not necessarily undercut the importance of local communities and of regional economic development. If applicable knowledge is available locally, globally based firms are likely to recognize and access it, and locally based firms will attempt to use it before they look elsewhere.[10] Furthermore, many business problems require what has come to be known as "contextual knowledge" (knowledge that a particular firm has by virtue of its location). The need for such knowledge strongly reinforces the idea that geographic location—or place—still matters.

The importance of firms having particular expertise because of their geographical location is recognized by many students of globalization patterns.[11] It is always easier and more profitable to build active networks of collaborating firms that are located geographically close to each other than it is to develop such networks among firms that are widely dispersed around the globe. The prevailing logic is that firms benefit from participation in local industry clusters by gaining easier access to ideas, talent, and capital.

What Does This Mean for Regions and Local Governments?

It means that, in today's business world, even the largest firms need working relationships with many smaller firms. It also means that the traditional factors determining "best location"—access to raw materials and shipping facilities—is less important than it has been. Indeed, access to raw materials and shipping facilities is irrelevant to newly emerging firms that specialize in the knowledge economy by working in collaboration with other businesses around the world to produce ideas regarding product and process innovations.

In addition to the availability of access to contextual knowledge noted above, what is important in determining office locations today is (1) access to state of the art electronic communication technology and, to a lesser extent, passenger air transportation facilities; and (2) community-based lifestyle amenities (see Appendix A).

Furthermore, it means that today there is no such thing as a bad geographic location for business development: business development can occur wherever there is an environment that meets workforce needs for jobs, connectivity to the rest of the world, and lifestyle amenities (see Table 3).

It means, in short, that any region or locality can compete in the global economy.

Table 3. The Real Meaning of Globalization.

In the 21st century, the issue is not "What will globalization do to me?" Rather, it is "how can I get work and investment to flow to me?" Nations, regions, and people who figure out the answer to this question will prosper. Source: National Council on Competitiveness

Table 4. Pieces of the Puzzle.

The global economic development challenge is one of linking:

- Economic Development
- Workforce Development
- Community Development

How Can Regions and Communities Maximize the Benefits of Globalization?

Maximizing the benefits of globalization requires, first and foremost, a thorough understanding of the needs and demands of global economic development forces, and, second, a proactive approach to building on the existing local economy's resources in ways that will make those resources more attractive to global forces. It means linking the pieces of the puzzle set forth in Table 4.

Any strategy to benefit from globalization must start with an understanding of how local industries relate to the global economy and how well the region or locality is positioned to attract new firms and more talent. A number of tools, such as business surveys and industry cluster analyses, can be tailored to help local economic develop-ment authorities understand how to target their development efforts more effectively.

Learning from those who are already doing helps local authorities understand what roles they can most profitably play in addressing existing issues, marketing local selling points, and developing new strategies for "going global."

Local officials, too, need to understand the benefits of organizing locally to connect globally. This means taking full advantage of local, regional, national, and international networks, and often linking local and regional policy arenas that once operated independently. By understanding the scope and scale of existing networks in the vicinity, local governments can attract businesses that, by connecting with local resources, can both improve the local economy and help their region acquire the resources it needs to compete globally.

Economic development authorities around the world are trying to tap into new strategies to maximize the economic potential of local places in the global economy. They are attempting to modify their policies related to immigration, education, tax and regulation, R & D investment, and transportation with the needs of global competitiveness in mind.

Local officials must also learn how to tailor their community, economic, and workforce development strategies so that they will attract global talent and foreign investment. New education and training programs can help local residents cope with the structural shifts brought by global competition. Coordinated human services programs can address the needs of new at-risk populations. And, community development can be adjusted to serve diversifying populations and ensure the social integration of new immigrants.

What Else Can Local Governments Do?

Local governments that invest in and successfully market the full range of physical, digital, and human capital assets sought by foreign and domestic businesses have an advantage over those that do not. This means that the governments should move beyond traditional development strategies driven by site selection and focus on their assets, which have the potential to add higher value to the economy.

One suggestion is to use what is called cluster-based strategies. These are strategies promoting economic development by seeking to attract a cluster of similar or related industries that can benefit from proximity to each other. Another suggestion, called tech-based development, emphasizes bolstering innovative (knowledge) industries through targeted business development and technology commercialization projects.

To minimize the possibility that industries once attracted to a community might later leave, communities are urged to base their attraction strategies on "smart incentives." These are incentives that motivate new firms to invest back into the local economy through collaborative support training, innovative infrastructure investments, and targeted cluster developments.

Finally, local development leaders must recognize that globalization has also created a new and more intensive demand for collaboration between agencies, not only globally, but also within the local area. Competitive communities are those that connect and collaborate. Local development leaders have a crucial role to play in encouraging communication between firms, civic communities, and service providers, locally and globally, to insure that obstacles to future competitiveness are removed and opportunities to capitalize on the benefits of globalization are maximized.

How Can Communities Help Build Clusters of Knowledge-Based Firms?

This is a good question because networked regional business clusters are widely believed to be a key component in the development of highly effective regional economies.[12] Current "best practice" beliefs in this area hold that communities can best achieve this goal by partnering with other governments and local universities in an effort to help firms mobilize the necessary resources, including technology, financial investments, and human capital, required to transfer ideas into innovative commercial ventures.

In the most successful high-technology and knowledge-intensive business clusters, collaborative regional partnerships, including local communities, regional agencies, and local universities, are designed to support firms, connect them to the resources they need, and facilitate knowledge transfers from public institutions and universities.

Although the existence of such regional partnerships is considered a key factor to successful regional economies,[13] there is less clarity on exactly what these regional partnerships and the resulting knowledge networks look like, and on what role the participants play in them. One of the most accepted views is that innovation increasingly hinges on university-industry government partnerships, the so-called triple helix.

What Role Do Universities Play in Such Partnerships?

The role of area universities in the triple helix is twofold: (1) to create new knowledge and (2) to diffuse it to the private sector in ways that contribute to economic growth.[14]

An entrepreneurial university is one that takes a proactive stance in putting knowledge to use by helping develop incubators or science parks and human capital development programs.

Scholars have also identified a new type of university that is even more entrenched in regional economic and social development. They argue that the engaged university is one that is not only entrepreneurial in technology development, but that is also adaptive and responsive to the needs of the region and in regional social and civic structures.[15] Such engaged universities play a role in regional develop-ment by establishing programs, building institutions, and facilitating networks that are tailored to the needs of the regions they serve.[16] Table 5 summarizes the range of activities universities pursue both to create and diffuse knowledge.

It is important to note, however, that the strength of a university as a knowledge center does not necessarily correlate with its ability to contribute to regional innovation processes. Universities that are leaders in knowledge generation are not always ef-fective as partners in regional development. The mismatch between knowledge creation and regional impact is demonstrated by Johns Hopkins University which, despite being one of the most heavily funded research centers by the U.S. government, has failed to transform Baltimore into a high-technology center.[17]

The impact of universities on regional development, then, is less a factor of their stature as a research center than it is a function of:

- How a particular university is organized to engage in knowledge transfer activities.[19]
- The structure of the regional partnership.
- The capacity of local industry to absorb knowledge produced by universities,[20] including the local concentration of high-knowledge local employment, the densities of the collaborative knowledge networks, and the frequency of the interaction between firms in the region.

Universities alone cannot transform the region’s innovation capability and knowledge economy, but they can and should play a role in regional economic development. The rising costs of creating new knowledge and the organizational mismatch between industry and university research processes has resulted in gaps in the innovation process that must be filled by public agencies. Fortunately or unfortunately, therefore, government intervention is increasingly necessary.

What Role Do Governments Play in Such Partnerships?

The national and state governments have an important function to perform in closing these gaps by stepping beyond traditional regulatory functions and assuming new roles as public entrepreneurs, venture capitalists, and network brokers. While governments are increasingly expected to drive innovation by compensating for financial failures, poor information, and conflicting industry-academic cultures, their most important role is to influence business environments through policy choices. Governments can intervene in markets to promote high-technology niches by generating resources and providing incentives to generate university-industry government relations.[21]

Thus governments can be viewed as both funders and facilitators of university knowledge creation and diffusion.

Table 5. The Distinction Between Creating and Diffusing Knowledge.

Knowledge Creation:
Investing in new research centers.
Attracting academic "stars" to the faculty.
Developing interdisciplinary curricula, critical thinking, and problem solving.
Using alternative forms of scholarship and service that apply to decisions regarding tenure, promotion in academic rank, and financial rewards for professional staff research centers.
Offering technical assistance to firms.

Knowledge Diffusion/Transfer: Writing academic articles.
Securing new patents.
Selling technology licenses.
Spinning off such models for use elsewhere.
Developing incubators, accelerators, and research parks.
Organizing collaborative industry.
Providing education and training programs.[18]
Huggins, Johnson, and Steffenson (2008)

But What Role Can Local and Regional Governments Play in Such Partnerships?

Local and regional governments can provide resources and incentives to generate and encourage university-industry government relations. Most importantly, however, local and regional governments can take leadership roles in creating networking structures through which potential regional partners can foster cooperation, collective learning, and social cohesion.[22] Since university knowledge flows are more likely to occur where faculty and industry have existing relationships, efforts by local and regional agencies to bring faculty and industry together in mutually beneficial contexts can be critical to a globally focused regional development effort.

Local and regional governments can also:

- Provide potential partners with information to facilitate inter and intra regional cooperation.
- Conduct industry analysis to identify market gaps and benchmarking studies to monitor progress.
- Undertake technology audits.
- Create technology stock databases; and help design and promote regional marketing programs.

In short, local and regional governments can work together to offer leadership in the creation of public-private technology networks and partnerships. In Illinois, this includes Joint Venture Silicon, the Illinois Technology Transfer and Commercialization Center Program (I-TEC), the Knowledge Circle of Amsterdam, and the London Technol-ogy Network. "The role of (governments) is to weld these components together and lubricate the process."[23]

What Does This Mean for the Chicago Metropolitan Region?

Although the Chicago region has all of the necessary components required to take off as an innovation economy, it has failed to launch.

In order to stay competitive, the region's economic development authorities will need to focus on the quality rather than the quantity of investment. Workforce development must be tailored to meet the shifting needs of industry and the quickly diversifying population. Since effective regional partnerships and technology networks are essential in the global economy, the Chicago region will have to address the challenge of developing regional cohesion out of its existing, highly fragmented local government structure.

But critical to this effort is also the need to bring the region's universities into the effort to enhance Chicago's competitive posture in the global economy.

[1]See the listing of globalization's economic advantages for the U.S. set forth in Table 4 of the first Profile in this series entitled "Globalizing Local Economies: The Chicago Region's Record to Date," Vol. 8, No. 2, November 2008, at page 3. This publication can be found on the Web at http://www.cgsniu.org/portfolio/policy_profiles/index.html.
[2]See "Globalizing Local Economies," op.cit. pp. 3–6.
[3]See 2007 State New Economy Index published by the Kaufman Foundation. Available at

www.kaufman.org/Details.aspx?id=196.
[4]See World Competitiveness Index (2006, 2005, 2004), Huggins and Associates, United Kingdom.
[5]These spikes, which include Silicon Valley, Boston, Austin, Raleigh, and Seattle in the U.S., represent competitive centers of talent, ideas, and investment. See Silicon Valley Index 2007 published by the Joint Venture Silicon Valley network and available at http://www.jointventure.org/publications/index/2007%200index/The%20of%Silicon%20 Valley.pdf.
[6]See 2007 State New Economy Index cited in endnote # 3
[7]Research in new energy technologies, for instance, is too complex and expensive to be undertaken on a large scale by individual, competitive firms. In recent years, research on more fuel efficient automobiles has also proven to be more expensive than any of the nation's three auto manufacturing firms could afford on their own.
[8]Figure 8 in "Globalizing Local Economies" op. cit., p. 6 describes one such large project, the creation of the new Boeing 787 Dreamliner aircraft that involved more than 50 partnering firms from 130 different geographic locations working together for more than four years.
[9]Alan MacCormack, Theodore Forbath, Peter Brooks, Patrick Kalaher, Innovation through Global Collaboration: A New Source of Competitive Collaboration, Harvard Business School Working Paper 07-079 (2007). Available at www.hbs.edu/research/pdf/07-079.pdf.
[10]Kingsley, G., and Malecki, E. J., "Networking for Competitiveness," Small Business.
[11]Castells, M. and Hall, P., Technopoles of the World: The Making of the Twenty-First Century Industrial Complexes, London:Routledge (1994); Storper, M. The Regional World: Territorial Development in a Global Economy, New York:Guildford Press (1995); Saxenian, A. Regional Advantage: Culture and Competition in Silicon Valley and Route 128, Cambridge, MA:Harvard University Press (1994); Porter, M. "Clusters and Competition: New Agendas for Companies, Governments, and Institutions" in Porter, M. (ed.) On Competition, Boston: HBS Press (1998); Cooke, P., Heidenreich, M., and Braczyk, H., Regional Innovation Systems: The Role of Governance in a Globalised World, London:Routledge, (2004); Rutten, R., Boekma, F., and Kuijpers, E., "HEIs, Regions, and the Knowledge-Based Economy," in Rutten, et.al., (eds.) Economic Geography of Higher Education: Knowledge Infrastructure and Learning Regions, London:Routledge (2003).
[12]See the citations listed in footnote # 10.
[13]Saxenian, 1994; Storper, 1997; Bathelt, et. al., 2004.
[14]Etzkowitz, H., "Innovation in Innovation: The Triple Helix of University-Industry-Government Relations," Social Science Information, 42:293–337 (2006); Etzkowitz, H., "The New Visible Hand: An Assisted Linear Model of Science and Innovation Policy," Science and Public Policy, 33:310–320 (2006); Etzkowitz, H. and Zhou, C., "Triple Helix Twins: Innovation and Sustainability," Science and Public Policy, 33:77–83 (2006); and Gunasekara, C. "The Generative and Developmental Roles of Universities in Regional Innovation Systems,: Science and Policy, 33:115–128 (2006).
[15]Chatterton, P. and Goddard, J. B., "The Response of Higher Education Institutions to Regional Needs," The European Journal of Education, 35:475–496 (2000).
[16]Gusasekara, 2006 (See footnote No. 14).
[17]Feldman, M. P., and Desrochers P, "Research Universities and Local Economic Development: Lessons from the History of the Johns Hopkins University," Industry and Innovation 10:5–24 (2004).
[18]Robert Huggins, Andrew Johnston, and Rebecca Steffenson, Universities, Knowleldge Networks, and Regional Policy, Cambridge Journal of Regions, Economy, and Society (2008) 1(2):321–340; doi:10.1093/cires/rsn013
[19]This variable is a function of such variables as the clarity of a university's vision and strategic planning provisions, the emphasis and manner of organization of technology transfer activities, and the university's openness towards industry collaboration. See Markman, G., Phan, P., Balkin, D., and Gianiodis, P. "Innovation Speed: Transsferring University Technology to Market," Research Policy 34:1058–1075 (2005); Debackere K. and Veugelers, R., "The Role of Academic Technology Transfer Organizations in Improving Industry Science Links," Research Policy, 34:321–342 (2005); Lockett , A., Wright, M., and Franklin, S., "Technology Transfer and Universities' Spin-Out Strategies," Business Economics, 20:185–200 (2003); and Mansfield, E., "Academic Research Underlying Industrial Innovations: Sources, Characteristics, and Financing," The Review of Economics and Statistics," 77:55–65 (1995); and Glasson, "The Widening Local and Regional Development Impacts of the Modern Universities – A Tale of Two Cities and North-South Perspectives," Local Economy, 18:21–37 (2003).
[20]Cohen, W. M., Florida, R., and Randazzese, L. P., "Industry and the Academy: Uneasy Partners in the Cause of Technological Advance," in Noll, R. (eds,) Challenges to Research Universities, Washington, D.C.: Brookings Press (1998). See also Cohen, W. M. and Levinthal, D.A., "Absorptive Capacity: A New Perspective on Learning and Innovation," Administrative Science Quarterly, 35:128–152 (1990).
[21]Etzkowitz, H. and Leydesdorff, L., "The Dynamics of Innovation: From National Systems and "Mode 2" to a Triple Helix of University-Industry-Government Relations," Research Policy 29:109–123 (2000); and Michilli, M., Deliverable 2–2 "Benchmarking Indicators," European Commission Project, Optimal Practices, Development Policies, and Predictive Models for Regions in an Enlarged EU, http://www.innovatingregions.org/download/014643 OMEN Del 2.2%20Benchmarking%20Indicators.pdf.
[22]Tura, T., and Harmaakorpi, V., "Social Capital in Building Regional Social Innovation Capacity," Regional Studies, Taylor and Francis Journals 39(8):1111–1125 (2005); and Landabasco M. and Mouton, B., ""Towards a Different Regional Innovation Policy: Eight Years of European Experience through the European Regional Development Fund Innovative Actions" in van Geenhuizen, M., Gibson, D. V., and Heitor, M. V., (eds), Regional Development and Conditions for Innovation in the Network Society, Layfayette, IN: Purdue University Press (2005).
[23]

Geiger R. and Creso, S., "Beyond Technology Transfer: U.S. State Policies to Harness University Research for Economic Development," Minvera 43(1):1–21 (2005).

Rebecca Steffenson, Ph.D., is a specialist in global governance, international institutions, and regional economic integration. She has held research and teaching positions at DePaul University, Chicago; Queen's University, Belfast; the University of Glasgow; and the European University Institute, San Domenico di Firenze, Italy. She is currently at Northern Illinois University working with the Center for Governmental Studies and the Department of Political Science.

James M. Banovetz, Ph.D., is senior research scholar, Northern Illinois University's Center for Governmental Studies, DeKalb, Illinois (jbanovetz@niu.edu). He is an honorary member of the International City/County Management Association and a fellow of the National Academy of Public Administration.

Appendix A: Indicators of regional competitiveness

Globally competitive knowledge economies are measured by:

– Concentration of employment in knowledge intensive industries, worker productivity, and unemployment rates.
– Workforce talent and per capita education spending.
– Digital connectivity.
– Innovation capacity (R & D spending, technology start-ups and spinoffs, patents, and commercialization rates).
– Entrepreneurial culture, including venture capital for start-ups.
– Quality of life measures such as commuting times, cultural amenities, housing prices, and schools.
– Efficient regulatory and business enabling mechanisms such as Es-Gov practices.
– Exports in higher value added manufacturing and service industries.
– Foreign direct investment in higher paying knowledge industries.

Specific measures of these indicators are listed below:

– Human capital concentration of employment in knowledge intensive industries, worker productivity, unemployment rates.
– Workforce talent levels of educational attainment, per capita education spending, quality and quantity of training programs and levels of industry participation, and collaboration with universities and community colleges.
– Digital connectivity internet access rates, computers in schools, numbers of broadband competitors, number of commercial internet domain names (".com").
– Innovation capacity government R & D investment, academic institutional research programs and numbers of graduate students, tech startups and spin offs, patents and commercialization rates, formal knowledge transfer channels and effective university industry linkages, job placement ands training programs for highly skills science and engineering graduates.
– Entrepreneurial culture venture capital for start-ups, accepted risk taking cultures, and management processes that encourage employee participation.
– Quality of life commuting times, cultural amenities, housing prices, schools.
– Regulatory methods, e-Gov practices, and regional collaboration on everything from marketing to regional planning of infrastructure and land use.
– Connectivity numbers of both intra and inter-regional networks of firms, universities, and public agencies; and by the presence of leadership which can, for example, act as lobbies for national funding and policy directions.
– Export focus volume and value in higher value added manufacturing and service industries.
– Foreign investment especially in higher paying knowledge industries and through Greenfield Investment in new establishments which leads to new employment.