THE IMAGINATION AGE

America’s Fourth Wave of Economic Progress
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The William J. O’Neil Center for Global Markets and Freedom was founded in 2008 with an initial grant from William J. O’Neil, a 1955 SMU business school graduate, and his wife Fay C. O’Neil. Its broad mission is the study of why some economies prosper and others do poorly, focusing on two critical issues for the 21st Century economic environment—globalization and economic freedom. The center’s programs promote understanding of how capitalism works among the general public, policy makers, business managers and the next generation of business leaders. To these ends, the O’Neil Center teaches SMU Cox students, conducts economic research, publishes economic reports, sponsors conferences and educates the public through the media and speeches.

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A Message from the Dean

When I took over as dean at SMU Cox earlier this year, so many of the building blocks of a great business school were already in place—a top-notch faculty, a dedicated staff, great students, a solid reputation, support from businesses and the local community. For that I feel extremely fortunate to be at The Cox School today.

The assets I inherited include 15 donor-funded centers and institutes dedicated to research and student development in such fields as entrepreneurship, energy, real estate and finance. The O’Neil Center for Global Markets and Freedom studies why economies succeed or fail, taking an empirical approach with measures of economic freedom. Here’s a less formal way to look at it—the O’Neil Center knows capitalism.

These researchers see our economy as an evolving organism, constantly innovating and adapting but generally moving in the direction of material progress. This idea permeates the essay that starts on the next page. “The Imagination Age,” written by O’Neil Center founding director W. Michael Cox and co-author Richard Alm, tells us that today’s unsettling times reflect the economy’s transformation to a new age that requires new skills and offers new opportunities.

The essay couldn’t be more timely. Its insights are relevant to questions a lot of us have been asking: What’s happening to the jobs and incomes that support American families? Why do so many people in this wealthy country seem so worried about their futures and their children’s futures? Have we lost our way?

Cox and Alm are reassuring without being Pollyannas. They acknowledge the job losses and other stresses that come when economies shift from one age to the next. They urge us not to forget the past—that the arrival of new ages has always brought pain and progress. Many of us live well today because past generations endured the turmoil of transition from agriculture to industry and from industry to the Information Age.

I urge you to keep reading after the essay. The Year in Review that starts on Page 16 chronicles these activities and accomplishments for the 2016-17 academic year. Our students, the university and the Dallas community benefit from the O’Neil Center’s efforts to help all of us better appreciate how capitalism works.

Matthew B. Myers
Dean, Cox School of Business
Traditional jobs are disappearing at an alarming rate, raising fears about American living standards, not just today but in the future. Growing gaps in wealth and income jab at the nation’s fault lines—rich versus poor, white collar versus blue collar, new economy versus old, big cities versus rural areas, coastal versus the Heartland.

Job losses and increasing inequality have many Americans asking whether U.S. capitalism—for generations the source of wealth and progress—is still working the way it should. Erosion of faith in our economic system leads to calls for bigger government in the form of restrictions on immigration and international trade, higher taxes on the wealthy and additional benefits for beleaguered working families.

Fixes like these will slow economic growth and add to the burdens on struggling Americans—so they shouldn’t be adopted without a full vetting of our current economic situation. What if our free-enterprise system isn’t really broken?

An alternative explanation for our collective angst views labor markets’ turmoil and the soaring riches among upper-income earners as signs of capitalism churning forward, just as it has in the past, creating the foundation for progress and a more prosperous future.

The American economy is in the throes of an epic transformation. One economic age is passing. Another is emerging. We call it the Imagination Age for reasons that will become clear in the pages that follow. It’s a new story and an old one. The country went from the Agrarian Age to the Industrial Age in the 19th Century, from the Industrial Age to the Information Age in the 20th Century.

Past age shifts brought turmoil and hardships for many Americans unprepared for the upheavals—but for society as a whole the payoff made the pain worthwhile. Each new age delivered progress by leaps and bounds. Americans’ living standards—still the envy of the world—wouldn’t be what they are today if not for the economy’s past progressions.

The lessons are clear: Embracing the shift to the Imagination Age will make America better off; rejecting it will impede the march forward, setting the country on a path toward economic decline. Making the right choice will require a better understanding of the orderly process of how economies progress by jumping from one age to the next.

The Imagination Age has already begun in the United States, with little fanfare. Its changes will ripple through the economy, impacting the way we work, what we consume and so much more. Making the most of the new age will require enduring the short-term disruptions in our daily lives, adapting to seize the opportunities of a mutating economy and, perhaps most of all, refusing to lose faith in American capitalism.
Through the Ages

The United States began as a primarily agricultural economy. In 1800, more than nine of 10 Americans depended on farming for their livelihoods, growing food to feed their families or trade for a small bundle of household goods produced by local artisans.

The Agrarian Age arose several millennia before Europeans stumbled onto what would become North America. During all this time, farming dominated and progress was glacial—a settler in the Ohio Valley in the early 1800s lived pretty much like an Egyptian under the reign of the pharaohs.

Agriculture’s staid and steady life might have gone on forever if not for the Industrial Revolution, which began in England and migrated to the United States. After the U.S. Civil War, a spurt of innovations came in rapid succession—telephones, light bulbs, electric motors, internal combustion engines, automobiles, airplanes and the assembly line.

The Industrial Age delivered more material progress in a decade than the world had known since nomadic bands settled into farming. Between 1870 and 1929, real U.S. per capita income nearly tripled from $3,422 to $9,656. The country achieved the gains despite frequent financial panics and recessions.

By the 1950s, the United States stood as the world’s industrial colossus, but the technologies that would eclipse the age were already seeping into the economy. Over the next two decades, computers and related innovations would shove the United States forward into its next phase of economic development—the Information Age.

The new order, like the one that preceded it, gave birth to new industries, particularly after the commercialization of the microprocessor, the tiny chip that makes all modern electronics possible. The first successful product was the electronic calculator, introduced by Dallas-based Texas Instruments in 1972. As chips grew more powerful and versatile, the Information Age gave us personal computers, cell phones, VCRs and other products. By 2000, per capita income had risen to $49,551 a year.

The 200 year-plus sweep of American economic history shows a relentless transition. Agriculture’s share of private-sector employment fell to 45 percent in 1950, then continued downward to below 10 percent in the early 1960s. Today, just 2 percent of Americans farm—but they’re enormously productive, feeding 320 million people at home and exporting food to the rest of the world.

At first, farmers laying down their plows found employment in the factories of the burgeoning Industrial Age. The ranks of goods producers—those in manufacturing, mining and construction—rose steadily from 27
percent of private jobs in 1870 to a peak above 37 percent in the early 1950s (see Exhibit 1).

Since then, U.S. goods production has continued to rise, hitting record levels in 2016, but the number of blue-collar jobs has declined decade by decade. By 2016, the share of workers making tangible products fell below 16 percent, largely because of automation—machines doing what humans once did.

Information Age technologies thinned factory employment, but they created new industries to employ engineers, programmers, IT gurus, technicians and office workers. Economists classify these jobs as services, a sprawling sector that includes highly paid white-collar professionals and low-paid workers in personal services. Today, more than eight in 10 Americans work in services.

Most of the Imagination Age’s employment will fall into the services category, so the sector will continue to expand. Americans won’t be going back to the farms and factories in any significant numbers. Technologies just don’t favor long-established employment patterns shifting into reverse.

Transitions from one age to another are drawn out and never complete. The economic activities of earlier ages won’t disappear as we move into the Imagination Age. They will remain in forms altered to suit new economic realities. Americans will still farm—tilling the soil in GPS-enabled tractors, not behind Agrarian Age yokes of oxen. They will still produce a dizzying array of goods—with computer-aided controls and robots, not with Industrial Age hand tools and assembly lines.

**Pain Amid Progress**

Economist Joseph Schumpeter saw capitalism as a cauldron of perpetual change, driven by the entrepreneur’s quest for profit in new, better and cheaper ways to produce goods and services to meet society’s needs and wants. Gains for consumers come at the expense of workers...
and companies idled because of dwindling demand for products that went out of favor.

Schumpeter coined an immortal phrase that captures the two sides of the capitalist method of progress—“creative destruction.” Well-functioning market economies undergo routine renewal, but age shift brings creative destruction in great bursts as innovations roll through the economy. Job losses and bankruptcies come faster. Fortunes are made faster—and they’re bigger, tilting the income distribution toward the rich.

The arrival of a new economic age makes the normal anxieties of job loss and shrinking paychecks more urgent and widespread, seeping into the mood and politics of the times. A vivid historical example involves the fallout from the rapid spread of railroads after the Civil War.

As tracks pushed west and south, once-local markets became national, and producers gained access to new customers and new raw materials. New suppliers gave consumers a wider array of choices, with higher quality and lower prices. Many businesses couldn’t survive the new competition, jettisoning unemployed workers who roamed the country wondering what went wrong (see Box 1, next page).

The arrival of the Information Age no doubt contributed to America’s struggles of the 1970s, when a stagnating economy combined with the specter of deindustrialization and low-wage foreign competition, with Japan in the role that China now plays. History now repeats itself. Today’s anxieties and uncertainties are due in part to the fledgling Imagination Age.

The transition from one age to the next accelerates the downside of creative destruction—so why put up with it? There’s one very good reason: It’s the time-tested path to progress.

“New ages spring from technological change. Market economies routinely invent and innovate, but epic transitions occur with the fortuitous arrival of the right technologies at the right time.”

Countries that still depend primarily on agriculture share the planet with others, like the United States, that have already begun to move on from the Information Age. The mix allows us to verify the link between age shift and better living standards.

Economies with the largest share of their workforces in agriculture are the poorest (see Exhibit 2, top panel, page 7). Moving labor from farm to factory raises per capita income—but only up to about $30,000 a year (middle). Climbing further up the income ladder requires countries to shed goods-producing jobs and make a transition into services, the hallmark of the Information Age (bottom).

The journey from agriculture to services unfolds in a coherent pattern. The path is a one-way street—countries grow richer only by going from agriculture to industry to services. Seeking to preserve existing farming or industrial sectors will sacrifice potential gains in per capita income.

Once Expensive, Now Cheap

In medieval Florence, Leonardo Da Vinci made clever sketches of flying machines and war wagons. Thomas Edison, patron saint of the Industrial Age, saw further than anyone else in the 19th century. Modern times have given us visionaries like Bill Gates, Jeff Bezos, Mark Zuckerberg and Elon Musk.

Leonardo, Edison and the others remind us that human beings have always had the innate ability to scheme, dream and look beyond. So why did the Imagination Age arrive so recently? The answer lies in the economic fundamentals of why economies shift from one age to the next.

New ages spring from technological change. Market economies routinely invent and innovate, but epic transitions occur with the fortuitous arrival of the right technologies at the right time.

At any point in history, a key scarce resource limits basic living standards. Some binding constraint keeps the resource in short supply and expensive, and societies can’t rise until a breakthrough technology comes along. What was once scarce and costly becomes plentiful and cheap. As it spreads, the technology gradually lifts the binding constraint.

Age-shifting technologies don’t strike like lightning bolts out of the blue. They emerge from a long, cumulative process that starts with simple human curiosity. Experimenting yields knowledge, the spark for the inventions and innovations. New ages arrive once the technology to lift a binding constraint achieves critical mass. Progress lurches forward.

Food was the scarce resource among the primitive peoples who roamed the landscape in hunting and gathering bands. Almost all human activity centered on simply finding the nourishment needed to stay alive.

The advent of agriculture gave humans a more reliable food supply, allowing nomads to settle down and reap the gains of specialization. Living standards rose, but food remained in short supply and expensive because production depended

Continued on page 7

O’Neil Center 2016-17 Annual Report
A Disruptive Technology’s Pains and Gains

They were unemployed, angry and frustrated. They felt ignored, and many had lost hope. And they began to march over the American landscape, more than 40 industrial armies of able-bodied but idle men bound for Washington, D.C., to demand that Congress provide jobs and relief.

Charles T. Kelly and 2,000 followers set out of San Francisco, traveling by railroad, boat and foot. Lewis C. Fry set out from Los Angeles with 600 marchers. Jacob S. Coxey commanded what became the most famous army, which started from Ohio with just 100 men.

The year was 1894. Yet another depression—the third in two decades—had driven U.S. unemployment up to 18.4 percent, with higher spikes in some places. Most marchers just wanted jobs, but the socialists, anarchists and trade unionists among them railed against a capitalist system that they said cost so many Americans their livelihoods.

The industrial armies of the 1890s were the political expression of a disgruntled working class caught up in the first transformation to a new economic age. When agriculture dominated, the U.S. economy was largely local or regional. Ships and wagons delivered products from long distances, but most goods and services were produced close to where they were consumed.

Industrial Age technologies began to knit the fragmented markets together, creating a national market for the first time. Railroad building exploded in the decades after the Civil War, with American capitalism mobilizing huge amounts of financing and creating industries to produce steel rails and rolling stock.

In 1870, the United States had 52,922 miles of track, mostly in the Northeast and Midwest (see first map). Just one line went to California. Texas wasn’t connected to the national system, its railroads going only a hundred miles or so from Houston. Two decades later, the nation had 163,597 miles of track, with a half-dozen transcontinental routes. Rail lines going north, east and west connected Texas to the rest of the nation (see second map).

The fast-spreading railroads brought nationwide competition. Companies could ship clothing from New England, lumber from the Northwest and beef from Texas to consumers all over the country. Local producers lost markets to lower-priced goods from afar, and many of them went out of business, costing workers their jobs and prompting the industrial armies’ marches.

Labor unrest occurred before and after the industrial armies of 1894, but this episode illustrates just how unsettling new economic ages can be. In the end, Coxey’s Army and the other marchers didn’t accomplish their goals. Their numbers dwindled as they approached the capital, partly because of hostility from local communities, law enforcement officers and the railroads. Few members of Congress met with the unemployed workers camped in Washington, and the demands for public works jobs and relief never received a hearing.

The downturn of the 1890s eventually abated, and the economy recovered. By 1900, the nation’s unemployment rate had fallen to 5 percent as the industrialization spurred growth and employment in new factories. The new Industrial Age gave the workers what they wanted—jobs.
on the sinews of humans and animals. Farmers clawing at the soil with hoes or oxen pulling a plow could only produce enough food and fiber to support a meager standard of living.

The binding constraint of limited power stayed in place for tens of thousands of years, only relieved in the 1800s with innovations in machine power—first steam, then electricity, then fossil fuels. The new power sources spurred productivity in agriculture, and fewer farmers could produce society’s food supply.

Freeing the economy from the limits of muscle power made food abundant and cheap, setting up the shift to the next stage of economic progress—the Industrial Age. Early in the new epoch, power was scarce and expensive. In time, resourceful and clever entrepreneurs drove down the cost of power, releasing a cascade of innovation throughout the economy.

The falling cost of power ignited a transportation revolution that spurred the movement of goods and people on steamships, railroads, cars, trucks and airplanes. Torrents of consumer goods flowed from Industrial Age factories, making a better life more affordable. Over various time periods, real prices fell more than 99 percent for electricity, 98 percent for color TVs, 97 percent for air travel, 95 percent for clothes dryers, 89 percent for air-conditioners and 74 percent for automobiles.

The Industrial Age required large-scale enterprises for mass production. The age encountered its binding constraint in storing, processing and transmitting the increasingly large amounts of information needed to organize and control the economy’s surging productive capacity and physical wealth.

Huge, slow-witted computers emerged in the 1940s, mostly for government work. Three decades later, the microchip ignited
“Information became a commodity, relatively cheap to process, store and transmit. After just a few decades, the end of the Information Age was at hand.”

a private-sector information revolution, the start of the process of relieving the Industrial Age’s binding restraint.

The Information Age moved forward on a predictable trajectory. Following the dictates of Moore’s Law, computers became more powerful in a brief time span, allowing them to handle larger and more complex tasks. Like food and factory goods in earlier eras, information became progressively cheaper. The cost of computing power, for example, has plunged 99.9 percent since 1984.

Powerful, inexpensive computer chips led to more sophisticated software as well as cell phones, DVD players and many other new products. Among them was the Internet, which entered the economy in the early 1990s. As it grew, with more users online and faster transmission speeds, information became a commodity, relatively cheap to gather, process, store and transmit.

After just a few decades, the end of the Information Age was at hand. The economy was ready for America’s fourth wave of economic progress. If the Imagination Age has a binding constraint, it may be finding sanctuary, a place to think and imagine that’s free from the noise and interruptions of a plugged-in and online world.

Age Shift at Work

Transitions from one economic age to another send great Schumpeterian gales through nearly all aspects of economic life. The skills, talents and characteristics that have dominated at successive stages of economic evolution provide a good example.

In the Agrarian Age, the great bulk of the labor force used muscle power for plowing, planting, picking, hauling, harvesting and other tasks (see Exhibit 3). The limitations of muscle power are obvious—humans and domesticated animals are costly to feed. They tire and get sick. The spread of tractors, trucks, reapers and other powered farm machinery devalued the effort of even the strongest workers.

The Industrial Age turned farmers into factory workers. Physical strength was no longer enough. Pulling the levers and pushing the buttons that controlled the machinery and equipment demanded manual dexterity and motor skills. Americans began to work with their hands not their backs.

The Industrial Age needed to keep track of physical inputs and output. It required workers to inventory things, count things, measure things and check boxes on forms—all tasks requiring formulaic intelligence, the lowest wattage of brainpower. Pencil-pushing clerks with green eyeshades were just as important to industry as the factory hands.

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Information Age computers grew cheaper and more powerful, and they proved better than humans at guiding the repetitive motions of the assembly line and the rote work of counting and tracking. Automation devalued manual dexterity/motor skills and formulaic intelligence, and factory workers found jobs harder to find and raises difficult to earn.

The economy’s ballast swung toward higher-order mental activities. More and more people found jobs that employed analytic reasoning. Computers did the calculating—but human beings were still needed to program the software and interpret the data.

Algorithms are allowing computers to take on more analytic tasks. For example, companies use programs to verify credit-card use against purchasing patterns, approve mortgages on-line, suggest what shoppers should buy and even fly airplanes.

In the Imagination Age, work will evolve yet again, pushing to the fore the more advanced human attributes—those still beyond the scope of modern machines.

Employers will seek people with imagination, of course. Silicon Valley firms famously invite workers to let their minds wander. For many others, the new age will involve imagining all they can be. They will strike out on their own, chasing entrepreneurial or artistic dreams and inventing their own futures.

The Imagination Age has a nice ring to it, but it’s just shorthand for a panoply of qualities that are basic to the ways people think and interact with one another. Some of these are innate, others are learned at an early age, so we all possess them to some degree.

The Imagination Age will highly value creativity, imagination’s more active and practical cousin. Originality, curiosity, independence, the willingness to take risks, open-mindedness, the joy of intrinsic rewards—these are the substance of imagination and creativity.

The Information Age’s icon was the programmer hunched over a keyboard, working alone. By contrast, imagination and creativity are collaborative exercises,
**The Way We Work**

The journey from the Agrarian Age to the Imagination Age brought an evolution from muscle power to brain power. Today, many jobs still require skills associated with earlier ages, but samples of average annual wages for 2016 show pay levels are highest among occupations that use the higher-order human attributes that will flourish in the Imagination Age.

### Muscle Power

- Garbage collectors: $36,690
- Fishing workers: $31,440
- Groundskeepers: $29,170
- Material movers and loaders: $27,570
- Agricultural workers: $25,570

### Manual Dexterity / Motor Skills

- Tool and die makers: $51,610
- Construction equipment operators: $49,810
- Lathe operators: $39,630
- Butchers: $31,740
- Sewing machine operators: $25,830

### Formulaic Intelligence

- Librarians: $59,870
- Real estate appraisers: $58,030
- Tax preparers: $45,340
- Secretaries and typists: $40,330
- Bookkeepers: $40,220

### Analytic Reasoning

- Actuaries: $110,090
- Electronic engineers: $100,770
- Financial analysts: $103,050
- Computer programmers: $82,690
- Insurance underwriters: $75,360

### Imagination / Creativity

- Software designers and engineers: $110,590
- Art directors: $101,170
- Producers and directors: $93,840
- Architects: $84,470
- Fashion designers: $76,480

### People Skills / Emotional Intelligence

- Psychiatrists: $200,220
- Marketing and sales managers: $139,880
- Lawyers: $138,350
- Human resources managers: $120,210
- Financial services salespersons: $102,390

### Integrity / Reputation

- Anesthesiologists: $269,600
- Physicians and surgeons: $252,910
- Chief executives: $194,350
- Airline pilots and flight engineers: $152,770
- Architectural engineers: $134,730

### EXHIBIT 3

**Imagination Age**

**Information Age**

**Industrial Age**

**Agrarian Age**
“We move down a conceptual list of needs and wants. The grand progressions have been from goods to services, from necessities to luxuries, from the tangible to the intangible.”

choruses rather than solos, so people skills and emotional intelligence emerge as assets in the Imagination Age.

Together, these qualities recognize the importance of working with others, empathizing with them, actively listening, communicating effectively and leading by example. It also helps to have a sense of humor. Many of us learn these traits growing up, but even adults can hone them with training and practice.

Working closely with others puts the whole person on display, so individual traits will contribute to success. Winning the trust of others takes integrity, a commitment to telling the truth, making good on commitments and doing what what's right. Integrity contributes to a good reputation. How others perceive us—our image, our brand—doesn’t just depend on how we interact with people around us. Today, strangers can quickly form opinions based on how we present ourselves on social media.

The economy will always mix jobs of all economic ages, but prospects are dwindling for workers who rely on muscle power, manual dexterity and formulaic intelligence. Groundskeepers wield their muscle power for an average of less than $30,000 a year (return to Exhibit 3). The manual dexterity to skillfully operate a sewing machine commands even less—an average of just $25,830 a year.

Workers with factory and office skills are easiest to replace by machines, so they’ve borne the brunt of technology-related job cuts. Word-processing software, for example, reduced employment for typists by 83 percent over two decades. Storing information in bits and bytes cut the need for file clerks by 50 percent.

As technology takes aim at more jobs, Americans are asking what’s left for human beings to do. It’s clear that the occupations associated with Imagination Age attributes will offer better opportunities and pay. For example, the economy employs 143 percent more designers than it did two decades ago. On average, art directors earn more than $100,000 a year.

The new age isn’t about getting paid to daydream. Success will depend on blending the traditional virtues of hard work and discipline with the higher-order human qualities favored in the Imagination Age. These characteristics complement but don’t replace education and expertise. To fall back on an industrial metaphor, workers still have to know the nuts and bolts of their jobs.

Age Shift at Home

Human needs and wants are insatiable; the means to satisfy them are finite. We can’t have everything we want, and households’ choices over time show they consume by moving down a conceptual list of needs and wants. The grand progressions have been from goods to services, from necessities to luxuries, from the tangible to the intangible (see Exhibit 4).

Agrarian Age families didn’t consume much beyond food, a few items of clothing and rudimentary shelter. Prospects improved in the Industrial Age, where Americans took economic progress primarily in tangible goods—at first, more food and clothing, home furnishings and a few creature comforts.

In time, rising real incomes gave families the wherewithal to buy a radio and then a television, toys and games, a car for the family, a washer and dryer, maybe a boat or recreational vehicle for the weekends. Today, households collectively have more automobiles and TVs than family members.

The Information Age started with all that and more, but it wasn’t long before the new age enriched households with a succession of electronic marvels—computers, digital cameras, VCRs and then DVRs, cell phones then smart phones.

Households continued buying goods as they grew richer, but their spending shifted toward services—entertainment, health care, overseas travel, maids and gardeners, salon pampering and help with daily life from accountants, financial advisers, lawyers and other professionals.

We don’t live by GDP alone. Simply having more goods and services didn’t satisfy all our needs and wants. We sought better quality, with added features (cars and computers), greater durability (tires), added comfort (shoes) or better designs (coffee makers) and superior performance (high-definition televisions). The same old thing grows tiresome and we don’t always want what everyone else does, so we demanded more variety, expecting markets to cater to a wide range of tastes and preferences.

Rising productivity meant each hour of work commanded more goods and services, higher quality and greater variety—but we still weren’t satisfied. We cut our working hours, enhancing our lives with increased leisure, the free time to relax or enjoy family, friends,
The Way We Consume
Moving from one age to the next raises per capita incomes, and households progressively allocate smaller shares of their spending to basic goods like food, clothing and shelter. They move further down a conceptual list of needs and wants, expanding consumption to include more everyday conveniences and luxuries (left). Within broad categories, higher incomes also allow consumers to spend more on bigger, better and fancier products (right).

<table>
<thead>
<tr>
<th>Needs and Wants</th>
<th>Basics to Luxuries</th>
<th>Bigger and Better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>In 1901, the average family spent three-quarters of its income on food, clothing and shelter. Today, it’s less than 30 percent.</td>
<td>We can afford to pay others to cook for us. Food bought away from home rose from less than 14 percent in 1930 to 44 percent today.</td>
</tr>
<tr>
<td>Clothing</td>
<td>Eighty percent of households owned radios by 1940, stoves and refrigerators by 1950 and microwave ovens by 1980.</td>
<td>Once, the ice man had to come every few days. Now, web-enabled refrigerators to tell us when we’re running low on milk.</td>
</tr>
<tr>
<td>Shelter</td>
<td>Before 1920, a few rich households had cars. Ownership jumped past 60 percent a decade later, paused in the 1930s, then hit 90 percent in 1980.</td>
<td>Cars keep getting better. New models are likely to have air-conditioning, anti-lock brakes, navigation systems, power windows and seats.</td>
</tr>
<tr>
<td>Furniture</td>
<td>Shorter workweeks increase time available for fun. Per capita recreational expenditures more than quadrupled since 1970.</td>
<td>Today, most households have flat-screen color TVs and access to hundreds of channels on cable and streaming services.</td>
</tr>
<tr>
<td>Utilities</td>
<td>The water fountain isn’t handy enough. Per capita consumption of bottled water increased from 16.2 gallons in 1999 to 34 gallons in 2014</td>
<td>Amazon.com is like having an entire shopping mall at our fingertips. Uber will deliver take-out meals. Netflix streams movies in seconds.</td>
</tr>
<tr>
<td>Appliances</td>
<td>And so on...</td>
<td>More Americans love to travel. They took nearly 1.8 billion leisure trips in 2016, spending a total of more than $830 billion.</td>
</tr>
</tbody>
</table>
Commodity Supplier Diversifies Just in Time

Texas’ roots are in the Agrarian Age. Once the Mexican government opened Texas’ borders in the 1820s, settlers trekked westward from Alabama, Mississippi, Louisiana and other states, lured by acres of cheap, fertile land—just perfect for growing cotton, a crop that brought with it the curse of slavery.

Behind the rush into Texas was the dawning of the Industrial Age. Half a world away, steam power and new machines were revolutionizing the textile industry, and factories in Manchester and other English cities needed tons of raw cotton. Americans colonized Texas to meet the surging demand.

Texas’ role as commodity supplier to the Industrial Revolution grew as disruptive technologies remade the U.S. economy. After the Civil War, the railroads had pushed far enough westward to give Texas ranchers access to distant markets. Cowpokes drove vast herds north along the Chisholm Trail and other routes to railheads in Kansas, where cattle could be shipped eastward, providing beef for the tables of America’s newly wealthy industrial cities.

In 1901, a drilling rig atop the Spindletop salt dome, near Beaumont, struck oil and gushed oil for days. The early strikes in East Texas were followed by later ones in the Permian Basin and elsewhere.

Oil would come to dominate the state’s economy as the Cullens, Hunts, Murchisons and Richardsons made great fortunes. The oil tycoon stood next to the cowboy as a Texas icon, and the state’s oil helped put the nation on wheels as the automobile came to signify America’s industrial might and affluence.

The easy riches of oil only added to Texas’ role as supplier of raw materials to the Industrial Age. Some Texas-based industries developed, but they were often tied to the production of basic raw materials needed for the Industrial Age—cotton trading in Dallas, meatpacking in Fort Worth, energy and oilfield equipment production in Houston.

Well into the 20th Century, Texas remained a commodity economy, dependent on the bounty of its land and natural resources, particularly oil and natural gas. Booms and busts beset economies that rely on commodities. Until recently, Texas was no exception: High oil prices brought prosperity; falling prices led to hard times.

Diversifying—at Long Last

Texas entered the 1980s on a giddy roll. Middle East turmoil had driven oil prices sky high, punishing the rest of the country, but Texans found themselves awash in money from a booming economy. In 1981, oilfield revenues accounted for 18 percent of the state’s personal income—a level not seen since the late 1950s (see chart).

Over the next few years, oil prices fell sharply, taking down the energy industry, bankrupting most of the state’s big banks and collapsing real estate values. State GDP fell 3 percent in 1985-86, accompanied by a loss of 252,000 jobs, or 3.8 percent, between November 1985 and January 1987.

The debacle accelerated diversification away from oil. Today, the state’s non-energy economy is 15 times larger than it was in 1948, when oil’s share peaked. Although still big, energy doesn’t carry the same clout. Over the past two decades, it ranks only fifth among the state’s fastest growing sectors, trailing wholesale and retail trade, manufacturing, professional and business services and financial services. Each expanded by more than 11 percent.

Vulnerability to oil-price shocks has declined. In 2014, a year when oil prices were nearly as high as they were in 1981, oilfield revenues were only 8.2 percent of Texas personal income. Shortly afterward, oil prices plunged by more than 50 percent, just like they did in the 1980s, and oilfield revenues fell to 3.4 percent of personal income in 2016. But the state didn’t see another economic collapse. It continued to grow and add jobs into 2017.

In the past decade, advances in fracking technology and drilling technology restored Texas oil production to near record levels—so energy is still important, and Texas does better when oil prices are high. However, Texas’ more diversified economy can still prosper after those prices start to fall.
Entering the New Age

Texas was a commodity supplier to the Industrial Age. It made strides toward diversity during the Information Age, becoming more like the rest of the United States, with strength in the white-collar services sector. How will Texas fare as America hurtles forward in The Imagination Age? Quite well, most likely—if it continues to do what it’s been doing. In the fracking boom, Texans have already seen the power of innovation to revitalize an industry once thought to be on an inevitable decline. That may be just the start.

The big changes Texas made over the past three decades will be an asset. To diversify so rapidly, the Texas economy had to be flexible, open to change and entrepreneurial. These characteristics require a high degree of economic freedom, which gives the private sector room to start new businesses and grow existing ones. High taxes and heavy-handed bureaucracy will stifle the Imagination Age. Newcomers fuel the new age with fresh ideas and energy. In recent decades, Texas led all other states in net in-migration, suggesting people continue to regard the state as a land of opportunity. At the same time, the state has become a magnet for companies looking for a better business climate.

Imagination and creativity flourish when people, ideas and cultures come together in the same economic space. Very often those places are big cities. The triangle formed by Dallas, Houston and Austin accounts for three-quarters of Texas’ economic activity.

Imagination Age business will be global, so being connected to the rest of the world is important. Texas exports more than any other state, and it’s home to Fortune 500 companies like Texas Instruments, which earns almost 90 percent of its revenue overseas.

Texas’ labor markets are relatively free, a major plus for shifting economic times. The state’s workforce is skilled and adaptable, one of the reasons so many companies are moving to Texas. Education—from kindergarten to college—provides the raw material for the labor market. It needs to keep up with the times. Like all states, Texas still runs its schools on an Industrial Age model that doesn’t do much to develop the skills and talents needed to thrive in the Imagination Age.

Texas doesn’t need a grand strategy for the Imagination Age. The path to success lies in tried-and-true economic principles—be flexible, entrepreneurial, free market, urban, open to new ideas and people, globally connected and better educated.
recreation and hobbies. At the same time, we sacrificed potential income to secure improved working conditions, including cleaner and quieter offices, greater on-the-job safety and more flexible schedules. We tapped our wealth for greater health, safety and security.

How we produce and how we consume have shown the same orderly consistency. Progress through the ages has taken most workers from the drudgery of Agrarian Age muscle power to Imagination Age work rewarding deeply human qualities. The same progress has moved most consumers beyond the struggle for food, clothing and shelter to a modern lifestyle of abundant goods and services and time to enjoy them.

Imagine That!

Machines will supplant more jobs—it’s the history of progress, it’s the future of progress. So Americans will still anguish about the future of work. Success will shower great wealth on the next generation of tech wizards and visionary investors, suggesting inequality will remain a testy issue.

Concerns about job losses and inequality will prompt at least some Americans to reject the Imagination Age. The most their protests will achieve is delay and disruption. History tells us that neo-Luddites don’t stop progress and new ages don’t wait for a consensus. They arrive according to the dictates of technology, never universally welcomed.

Many Americans, of course, will welcome the Imagination Age. Like their forebears at the beginnings of the industrial and information ages, they’ll grouse about good old days lost, but they’ll take advantage of tomorrow’s opportunities. They’ll eagerly buy the next big thing from inventive minds, eventually coming to take jaw-dropping progress for granted.

How can we be sure that the new age will deliver progress? Nothing’s guaranteed, of course. If economies moved forward randomly, or if economies could jump backward and forward from one age to another, progress could be accidental and thereby uncertain. Confidence in future progress comes from understanding the essential lesson of age shift—the orderly progression toward higher living standards.

Favorable policies will help move the Imagination Age forward. The gist of it: Capitalism works best when the private sector gets room to invent and innovate. New enterprises thrive on faster economic growth, and evidence suggests that small government, low taxes and minimal regulation will do the most to boost GDP.

Grand economic plans and strategies are likely to miss the mark, and subsidies for particular companies and industries will waste resources and divert them from real opportunities. The importance of education reform will only grow. A pedagogy that nurtures imagination, creativity and people skills/emotional intelligence should stand side-by-side with the teaching of basic skills like reading and math.

The Imagination Age teems with possibilities, ones we see and ones still over the horizon. For entrepreneurs in particular, the toolbox is bulging—vastly beyond what the world had at any time in history. The advances of previous ages will still contribute to progress. Other technologies are just now emerging, opening new vistas for our imaginations.

The great opportunity of the Imagination Age will be in using these technological treasures—and others that may come along in the future—to find better ways to meet consumers’ needs and wants. The optimists’ best argument: Human ingenuity is boundless—that’s why Julian Simon called it “the ultimate resource.” American capitalism offers rich rewards to those who imagine and deliver things that make the masses better off.

The basic know-how already exists for autonomous cars—self-driving vehicles that will be more efficient and safer. Imagine returning e-mails or watching a movie while traveling safely inside a car on the way to the office. Somebody already is.

3-D printers turn computer designs into physical objects. They’re already making toys, scale models and even human body parts. Imagine “printing out” an entire car or house. Somebody already is.

Like the Internet, drone technology came out of the military, but it is quickly migrating into the private sector. Imagine drones delivering groceries, replacing cranes at building sites, assessing damage in natural disasters and saving lives in wilderness rescues. Somebody already is.

Voice-recognition software allows machines to understand verbal commands and respond to them. It’s just one application of artificial intelligence (AI). Another is virtual reality. Imagine using it to tour the Seven Wonders of the World without ever leaving the house. Somebody already is.

Two decades ago, scientists deciphered the language of human genes. Genomics promises safer and more effective health care
through personalized medicine—treatments customized to the DNA of individual patients. Imagine immunotherapy therapies that cure cancer quickly and relatively cheaply. Somebody already is.

Nanotechnology involves tinkering at the molecular level—small things that make big things happen. Imagine synthetic materials that are harder than steel and more flexible than plastic. Somebody already is.

AI and wi-fi connectivity support an ever-widening Internet of things. We’re seeing thermostats and locks linked to smart phones and appliances that take inventories and order what’s needed. Imagine clothing and jewelry embedded with sensors to monitor our vital signs and report to the doctor. Somebody already is.

The future is impatient. It’s already starting to arrive. A better tomorrow starts with imagination, and it will become reality as long as Americans keep faith in capitalism.

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Notes and Data Sources

Exhibit 1:
America’s Economic Evolution


Box 1:
Railroads Reinvent America’s Economy


Exhibit 2:
Proven Path to Progress
Shares of employment in agriculture, industry and services: The World Bank, World Development Indicators. Available at databank.worldbank.org.

Exhibit 3:
The Way We Work

Exhibit 4:
The Way We Consume
Spending on food, clothing and shelter, and share of food dollar spent on food away from home: U.S. Department of Labor, Bureau of Labor Statistics. Available at bls.gov.


Box 2:
Texas in the Imagination Age

The William J. O’Neil Center for Global Markets and Freedom was established in 2008 with the broad mission of studying why some economies are rich and growing rapidly while others are poor and growing slowly. To this end, the center fosters an understanding of economic freedom among students, policy makers and the general public. We’re the only research institute with expertise in measuring economic freedom at all three levels of economic analysis—national, state and metropolitan areas.

The O’Neil Center focuses on three mutually supporting research agendas. **Global Economic Freedom** grew out of the economic freedom index compiled by center director Robert Lawson and his colleagues. **State and Metro Economic Freedom** builds on the state and metropolitan-area economic freedom indexes prepared by Dean Stansel, who joined the O’Neil Center in 2015. Under the banner of **Texas Economic Freedom**, the O’Neil Center concentrates on our home state and its largest cities, all ranking high in economic freedom and all outperforming the rest of the nation on key metrics. The three research agendas support our fourth initiative—**Student Enrichment and Public Outreach**. The O’Neil Center spreads the ideas of liberty and economic freedom to SMU students in classrooms and reading groups and to the broader Dallas-area community through public programs and the media.

In the 2016-17 academic year, O’Neil Center scholars wrote more than 50 articles for academic and general interest publications. They delivered more than 70 speeches, presentations and lectures. The center’s conference and the Annual Report essay explored the battle between optimists and pessimists over the nature of capitalism.

The new Texas Economic Forum added to the center’s lineup of on-campus events. The Flourishing & Free Society Forum, our rebranded general interest speakers’ series, featured four distinguished scholars. The Workshop Series for academics expanded to 10 presentations.

We taught more than 300 students
in SMU classes. Teaching Free Enterprise in Texas, a program that provides instruction and curriculum materials to improve economic education in the state’s high schools, ramped up with four teacher workshops and seven new curriculum units.

The O’Neil Center welcomed two new staff members. In August, Derek Yonai came on board as managing director; he is responsible for overseeing the center’s outreach and educational programs. Yonai previously served as founding director of the Center for Free Enterprise at Florida Southern College, where he developed programs for both students and the business community. In March, the center added Liz Chow as program specialist to help with logistics and marketing for the center’s initiatives.

Yonai and Chow joined an existing O’Neil Center staff that includes:

Robert Lawson, O’Neil Center director, holds the Jerome M. Fullinwider Endowed Centennial Chair in Economic Freedom.

Al Niemi stepped down as SMU Cox dean on July 31, 2017 and returns to teaching and research as a member of the center. He holds the William J. O’Neil Chair in Global Markets and Freedom.

W. Michael Cox, the O’Neil Center’s founding director, leads the Texas Economic Freedom initiative and co-authors the center’s Annual Report essays.

Dean Stansel, research associate professor, is co-author of the annual Economic Freedom of North America (EFNA) report and leads student reading groups.

Mike Davis, senior lecturer, takes on the center’s heaviest teaching load and is a well-informed and concise resource for local TV and other news media.


Ryan Murphy, research assistant professor, works primarily with Lawson on economic freedom research. He also directs a new advanced undergraduate reading group.

Daniel Serralde, economic education coordinator, oversees nearly all aspects of the Teaching Free Enterprise in Texas program.

Meg Tuszynski, research associate, works with Stansel on the EFNA report and related research. She earned her Ph.D. in economics from George Mason University in December.

For a third year, Dwight Lee continued his affiliation with the O’Neil Center as a senior fellow, visiting campus twice in the academic year and using his SMU affiliation in his writings and other professional activities.

The O’Neil Center relies primarily on contributions from donors to fund its operations. With an annual budget of over $2 million, the center is grateful for the generous support of the William E. Armentrout Foundation, McLane Company Inc., Richard W. Weekley, the Charles G. Koch Charitable Foundation, the William J. O’Neil Foundation, the Deason Foundation, Tucker Bridwell, and numerous individual donors.

The rest of this Year in Review provides details on the O’Neil Center’s activities and accomplishments from June 1, 2016, to May 31, 2017. It is arranged according to the center’s four primary initiatives—Global Economic Freedom, State and Metro Economic Freedom, Texas Economic Freedom and Student Enrichment and Public Outreach.
Global Economic Freedom

Global Economic Freedom addresses the O’Neil Center’s founding mission with research on why economies succeed and fail. Its centerpiece is The Economic Freedom of the World (EFW) report, an empirical measure that gives researchers a powerful tool to test ideas about free enterprise and its consequences. Studies find that high EFW scores correlate with higher incomes, faster economic growth, lower poverty rates, higher life expectancy and many other positive outcomes.

EFW Report

Lawson has been a key researcher on the EFW index for more than two decades. He and Murphy play a pivotal role in calculating scores for 159 countries, based on 42 data points organized into five components—the size of government, legal system and property rights, sound money, freedom to trade internationally and regulatory burdens.

Lawson and co-authors James Gwartney (Florida State University) and Joshua Hall (West Virginia University) released the latest EFW report in September. The most economically free places were Hong Kong, Singapore, New Zealand, Switzerland and Canada.

For the United States, the latest report found a slight decline in its economic freedom score—but the country’s ranking held steady at 16th in the world. The U.S. EFW score peaked in 2000, when it ranked second behind Hong Kong.


Annual Report Essay

The O’Neil Center’s Annual Report essay, written by Cox and Alm, examined the clash between optimists and pessimists over the nature of capitalism.

Onward and Upward! Bet on Capitalism—It Works raises the question of whether our economic system will continue moving toward greater abundance and progress, as the optimists say, or will it succumb to the pessimists’ story of increasing scarcity and decline?

Real prices serve as an objective arbiter—if they’re falling, it validates the optimists; if they’re rising, it supports the pessimists’ position. Cox and Alm begin by updating the famous bet between optimist Julian Simon and pessimist Paul Ehrlich over the price of five metals from 1980 to 1990, finding that the optimistic view would still win if the bet were extended through 2015.

Cox and Alm then broaden the inquiry to a larger basket of metals, a range of basic commodities and a cross-section of consumer goods, always finding the evidence supports the optimists—capitalism makes most people better off. Key to progress is the way free enterprise relentlessly drives human ingenuity to create new technologies and enterprises.

“The foundation of Simon’s optimism was a conviction that the market will spur human beings to increase the supply of resources that grow scarce or develop substitutes that are cheaper and more plentiful,” Cox and Alm write.
O’Neil Center Conference

The O’Neil Center hosted its eighth annual conference in November, attracting more than 250 business leaders and students with the theme “Capitalism: Curse or Cure?” The question reflects the angst many Americans feel in these uncertain times, often manifested in a skepticism about an economic system that made the country wealthy.

Matt Ridley gave the luncheon keynote. The English author of *The Rational Optimist* and *The Evolution of Everything* celebrated the beneficial outcomes of spontaneous order, both in the economy and nature. Most human progress, he said, comes from the ingenuity and creativity of free people, not from the designs of governments or social planners.

Sylvia Nasar, author of *A Beautiful Mind* and *Grand Pursuit*, traced the 150-year battle of ideas between the advocates of socialism and the champions of free enterprise. It’s still going on, she said.

Cox followed with a presentation based on *Onward and Upward! Bet on Capitalism—It Works* (see facing page).

Alex Epstein, author of *The Moral Case for Fossil Fuels*, contended that oil, gas and coal provide the cheapest forms of the energy humans need to sustain the modern world’s 7 billion people. From a purely human-welfare perspective, he said, forcing economies to reject fossil fuels would lead to misery and conflict.

Marian Tupy, editor of HumanProgress.org, presented a range of evidence to refute the oft-heard lament that U.S. economic well-being has been trending downward. By many measures, Americans are much better off than we used to be—and there’s every reason to believe that the march of progress will continue for future generations.

Robert Gordon of Northwestern University, author of *The Rise and Fall of American Growth*, characterized the past century’s stunning economic progress as an anomaly, the result of a few pervasive technological advances like electricity. Growth and progress are still possible—but not at the rates we saw in the past, he said.


Compiling historic data for EFW variables led to a Lawson and Murphy paper on “Extending the Economic Freedom of the World Index to the Cold-War Era,” which will be published in the *Cato Journal*.

Lawson and Murphy used new country-specific data on the stringency of antitrust laws to measure the effectiveness of these policies in an *Applied Economics Letters* paper titled “Does Antitrust Policy Promote Competition?”
In addition to his work with Lawson, six of Murphy’s other journal articles focused on EFW and related issues:

- In the *Journal of Private Enterprise*, “A Comment on ‘Measuring Economic Freedom: A Comparison of Two Major Sources: A Comment’” examined the gaps between the EFW and the Heritage Foundation’s economic freedom index;
- In *Economic Affairs*, “Wise Technocrats or Black Helicopters? Intergovernmental Organizations and Economic Freedom” found a slightly negative relationship between economic freedom and membership in such organizations as the United Nations and World Trade Organization;
- In *NCPA Issue Brief*, “The Deep Causes of Today’s Struggling U.S. Economy” contended that attacks on free trade and private property in advanced countries can account for America’s growth slowdown since 2000;
- In the *Review of Austrian Economics* (forthcoming), “Aggregate Demand Shortfalls and Economic Freedom” (with Taylor Leland Smith) finds evidence that populism might lead to an erosion of economic freedom (revised as “Did the Federal Reserve Cause Trump?” in the Institute of Economic Affairs blog);
- In *Contemporary Economic Policy* (forthcoming), “Do Institutions Mitigate the Risk of Natural Resource Conflicts?” (with Colin O’Reilly) looks at whether good institutions, as measured by economic freedom, can prevent conflicts over natural resources.

Lee remained a prolific commentator on liberty and economic freedom. His output for this academic year included:

- “Too Inexpensive to be Inexpensive” (with J.R. Clark), a book chapter in Joshua Hall (ed.), *Exploration in Public Sector Economics: Essays by Prominent Economists*;
- “Teaching the First Economics Course as if it is the Last” in the *Journal of Business and Management*, a Festschrift Volume on the Economics of Education in honor of James L. Doti and Lynne P. Doti at Chapman University;
- “Martin Luther King’s Free-Market Legacy” (with William Boyes) for *RealClearMarkets*;
- “Econ 101 Morality: The Amiable, the Mundane and the Market” (with J.R. Clark) in *Econ Journal Watch*;
- “In Remembrance of Robert D. Tollison,” an Invited Editorial Commentary on the career of the renowned economist for *Public Choice*.

Lawson gave public lectures on the EFW index and its implications to a range of audiences: The Economic Freedom Network in Slovenia, Adam Smith Institute in London, Charleston Southern University, Berry College, Mercer University, the Federal Reserve Bank of Dallas and the Cox Alumni Board in Taos, N.M.

At a George Mason University Public Choice seminar, Lawson presented a paper titled “You Say You Want a (Rose) Revolution? The Effects of Georgia’s 2004 Market Reforms,” which chronicled the former Soviet republic’s march toward greater economic freedom.

At the Mont Pelerin Society’s meeting in Seoul, South Korea, Lawson’s topic was “Freedom and Welfare: Taxation in the Liberal Tradition.”

At September’s Mont Pelerin Society meeting in Miami, Murphy presented a paper titled “Economic Freedom of the World in the 1950s and 1960s,” based on his ongoing research project to extend the EFW data backward in time. The same month, he delivered a talk on “The Effect of Immigration on Economic Freedom” at the Cato Institute in Washington, D.C. His research suggests immigrants nudge nations toward greater economic freedom.


Yonai moderated two September academic gatherings—a conference examining “Hayek on Law, Legislation, and Liberty,” co-sponsored by Liberty Fund and the Federalist Society, and a session on “The Rule of Law,” a part of the National Review Institute’s Regional Fellows Program.


Lee has studied Adam Smith’s work extensively. In March, he gave his lecture on “Market Skeptics, Sharing and Adam Smith” at the Citadel and at the College

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*Presentations and Speeches*

Continued next page
Also of Note

In its fall 2016 issue, the International Affairs Forum, a publication of the Center for International Relations, ran a three-page interview with Lawson on human trafficking. “Economic development, especially if driven by economic freedom, seems to be the best approach to combatting human trafficking,” Lawson said.

In July, the O’Neil Center and the Texas Public Policy Foundation co-hosted the Dallas stop on the Free Market Road Show’s American leg. Speakers from Europe, Mexico and the United States gave presentations on “The American Dream” and “The Self-Organizing and Sharing Society.” Dallas was one of six U.S. cities to host a road-show event.

In May, the center partnered with the Independent Institute for a symposium on the theme of “New Bridges: Advancing Liberty & Prosperity in a Divided America.” Luncheon keynote speaker George Gilder warned about potential chaos from the volume and volatility of today’s currency trading. Other speakers focused on market solutions to paying for health care, how governments sow economic instability and prospects for future prosperity.

State and Metro Economic Freedom

Since 2013, Stansel has been the primary author of the Economic Freedom of North America (EFNA) report, a data-driven assessment of the balance between markets and government control in each of the continent’s states and provinces. Stansel also created the first index that measures economic freedom for the nation’s 380-plus metropolitan statistical areas (MSAs).

EFNA Report

In December, Stansel and co-authors Jose Torra (Caminos de La Libertad) and Fred McMahon (Fraser Institute) released the EFNA 2016 report, providing the latest annual index of economic freedom for the 50 U.S. states, 10 Canadian provinces and 31 Mexican states.

The authors use 10 variables to calculate the scores for these states and providences. The data are grouped into three areas—government spending, taxes and labor market freedom. In the new report, the five freest states were: New Hampshire, Florida, South Dakota, Texas and Tennessee.


Academic Publications

Stansel and Tuszynski compiled a comprehensive review of empirical research articles on state-level economic freedom, which will be published as “Sub-national Economic Freedom: A Review and Analysis of the Literature” in the Journal of Regional Analysis and Policy.

The two O’Neil Center authors examine the extent to which economic development incentives might lead to an uptick of failing companies in “Targeted Business Incentives and Firm Deaths,” which has been submitted to the Review of Regional Studies.

Economic freedom and other state-level issues were central to five of Murphy’s articles:

• “Economic Freedom of North America at State Borders” in the Journal of Institutional Economics uses data for counties on either side of state borders to gauge the impact of economic freedom;
• Both “Beggaring Thy Neighbor at the State and Local Level” in the Journal of Financial Economic Policy and “Valuing the Government Spending Multiplier: Why Monetary Offset Must Be
Recognized” in Mercatus on Policy assess whether states have been rebounding from recession by siphoning jobs from elsewhere rather creating new ones;
• “A Short Empirical Note on State Misery Indexes” in the Journal of Regional Analysis & Policy takes advantage of newly available data on state-level inflation to calculate misery indexes by state;
• “U.S. Immigration Levels, Urban Housing Values and Their Implications for Capital Share” (with Alex Nowrasteh) in Economic Affairs finds only a few communities where increases in the foreign-born population play a role in explaining higher housing prices.

Stansel published “An Exploratory Empirical Note on the Relationship between Labor Market Freedom and the Female Labor Force Participation Rate in US Metropolitan Areas” (with Crystal Wong) in Empirical Economics Letters. The research finds that areas with greater labor market freedom tend to have higher labor-force participation rates among female workers, suggesting women may be disproportionately harmed by state interventions in labor markets.

Presentations and Speeches

“Economic Freedom of North America: An Overview” was the topic of Stansel’s September presentation to the Mont Pelerin Society’s meeting in Miami and at June’s EFNA Network Conference on the SMU campus. This was the second straight year that the O’Neil Center hosted policy researchers from the United States, Mexico and Canada, who swapped ideas on how to improve the EFNA index and increase its impact.

At the Economic and Business History Society Conference in Oklahoma City, Stansel and Murphy presented their research paper “Economic Freedom in U.S. States in the 19th Century,” which extended the measurement of state-level economic freedom backward in time.

At the Public Choice Society’s annual meeting in New Orleans, Stansel and Tuszynski presented a research paper titled “Examining the Relationship between Immigration and State Institutions,” which attempted to determine whether states with a larger share of immigrants have better or worse institutional outcomes as measured by the EFNA.

Stansel delivered his presentation on “Economic Freedom: What It Is and Why It Matters” to students at Kennesaw State University near Atlanta in February and to young professionals in the Dallas chapter of America’s Future Foundation in September. At Kennesaw State, he also spoke to students on “Why Some Cities Are Growing While Others Are Shrinking.”

In April, Stansel focused on state-level economic freedom in delivering remarks on a panel discussing the “Path Forward to Increasing Economic Growth in the States,” part of a Dallas conference with the theme of “Advancing Freedom, Creating Change: A Summit on Philanthropic Leadership in Higher Education.”

Stansel discussed state and local business incentives during a September panel on “Economic Development: A Debate on Corporate Welfare in Texas,” hosted by the Texas Public Policy Foundation in Austin.

On an October panel at the State Policy Network annual meeting in Nashville, Stansel cited his EFNA work on state-level economic freedom in remarks on “Unleashing Economic Growth and Job Creation.”

Cox used research from “The Wealth of Cities” report, written with Alm in 2015, as the basis for a talk on “What Makes a Successful City” to the Kansas City Chamber of Commerce.

For the State Policy Network meeting, Tuszynski created one-page EFNA summaries for each state, detailing the evolution of its economic freedom and providing a quick reference for why the state scored as it did in the EFNA report. She encouraged use of the EFNA index in policy work.

Stansel organized and served as chairman for four sessions on research related to state economic freedom at conferences organized by the Southern Economic Association, Public Choice Society and the Association of Private Enterprise Education.
Texas Economic Freedom

The O’Neil Center developed a research interest in the Texas economy early on, focusing its first two Annual Report essays on the Lone Star State. The Texas Economic Freedom initiative, launched in 2015, expanded our efforts to understand key trends shaping the state’s future. The research involves comparing Texas and its major cities to their counterparts across the United States.

Texas Economic Forum

As part of its Texas Economic Freedom initiative, the O’Neil Center launched a public forum for discussion of trends and issues important to the Texas economy. Our first event, held in September, brought together speakers from the O’Neil Center and two other SMU Cox research groups, the Maguire Energy Institute and the Folsom Institute for Real Estate.

Cox presented his research on the “Real Secret of Texas’ Economic Success.” While many outsiders assume Texas thrives on oil wealth, Cox emphasized the importance of economic freedom, which has allowed Texas’ private sector to re-invent itself in response to the 1980s oil bust.

Bruce Bullock, Maguire’s director, contended that oil prices aren’t likely to return to the $100-plus highs of 2014 because of the dampening pressures of market forces and technology. Robert Kramp, a regional director of research at the real-estate firm CBRE, addressed concerns about potential overbuilding of commercial property in Texas’ big cities.

For the second Texas Economic Forum, held in April, the center partnered with SMU Cox’s Caruth Institute for Entrepreneurship for a program on “The Entrepreneurial Edge.” Cox opened the event by describing the role of the entrepreneur as the “Engine of Capitalism.” Real-world testimony came from Hubert Zajiicek, founder of Health Wildcatters, an incubator for startups in the health-care industry. He brought along three incubator alumni who founded successful businesses in Texas. Jerry White, Caruth’s director, concluded the program by discussing “Lessons from Successful Entrepreneurs,” which reflected back on his long career in mentoring entrepreneurs.

Writing About Texas’ Economy

Cox and Alm report on their research in a regular column in *D CEO*, the Dallas area’s top business magazine. In academic year 2016-17, they wrote the following articles:

• “Troubles with Trade,” a commentary on the dangers of protectionism for Texas, the No. 1 state in merchandise exports;
• “Tied Up in Red Tape,” presenting data that show Texas’ regulatory burden doesn’t jibe with the state’s reputation for economic freedom;
• “Not Just a Roof Overhead,” an analysis of home prices in 25 cities that found DFW and Houston still had relatively affordable housing despite the soaring prices of recent years;
• “The Geography of Job Growth,” which used city-by-city data to show that northern DFW suburbs have accounted for an increasingly large share of the region’s employment gains since 1990.

O’Neil Center research on state and local economies has been highlighted in *The Texas Economy*, our on-line newsletter:

• In “The Real Secret Behind Texas’ Job-Creation Machine,” Cox and Alm linked Texas’ rapid job creation to its high level of labor-market freedom. They found that the 10 states with highest readings on EFNA’s labor-market freedom index created nearly half the nation’s jobs from 2000 to 2016.
• In “Why Texas Ranks as a Leader in Economic Freedom,”
Stansel analyzed the factors that have kept Texas among the top half-dozen states in EFNA scores since 1980. Texas exhibits strength across all three areas of state economic freedom—slow government spending growth, low taxes and high labor-market freedom.

In “Cities v. Suburbs in Texas Job Growth,” Cox and Alm compared job growth since 2000 in Texas’ four largest metropolitan areas, showing that DFW has had a more pronounced suburban tilt than the Houston, San Antonio and Austin areas.

Stansel’s EFNA-related work led to two op-ed articles focused on Texas. “Economic Freedom in Texas: High—But Room for Improvement” (with Vance Ginn) appeared in the Texas Tribune. The Austin American-Statesman published “Texas Should Follow Florida in Reducing Corporate Welfare,” which called on Texas to take steps to cut both tax and spending incentive programs.

In the Dallas Morning News, Stansel wrote “Arlington Is Likely to Strike Out Economically with New Stadium” (with Jacob Bundrick), an article on how spending for sports stadiums doesn’t deliver the positive economic benefits that proponents claim.

Also of Note

At a conference sponsored by the Bush Institute, Cox discussed “The Importance of Trade to the DFW Economy,” concluding that the region has a large stake in rejecting calls for increased protectionism.

The New Cities Initiative, a partnership among SMU, the City of Dallas and its public agencies, nonprofits and foundations, sought O’Neil Center expertise on the Dallas economy. After a December meeting, Cox, Stansel and Alm agreed to focus more of their research on the Dallas area and share relevant findings with the New Cities Initiative.

Student Enrichment and Public Outreach

Engaging with SMU students provides an opportunity to shape the next generation of American leaders, workers and voters. O’Neil Center professors teach classes and offer programs that introduce the ideas of liberty and economic freedom. Our commitment to education extends to the general public. The center sponsors speakers at SMU, makes presentations to non-academic audiences and responds to media requests.

Flourishing & A Free Society Forum

Each year, the O’Neil Center invites outside speakers to the SMU campus to share their perspectives on liberty and economic freedom—for example, TV journalist John Stossel and American Enterprise Institute president Arthur Brooks.

Under Yonai’s direction, the center rebranded its speakers’ series as the Flourishing & A Free Society Forum, emphasizing the goal of stimulating a dialog on the broader social and economic aspects of economic freedom that improve people’s lives. The more focused format helped double the average attendance at O’Neil Center lectures.

Four distinguished speakers appeared this year on the SMU campus:

- **Garett Jones**, BB&T professor for the Study of Capitalism, George Mason University: He discussed the thesis of his book *Hive Mind*, which empirically shows that measured intelligence matters more for nations than for individuals.
- **John Tamny**, senior fellow in economics at the Reason Foundation and editor of RealClear Markets.com: The author of *Who Needs the Fed?* took aim at the Federal Reserve’s money monopoly, suggesting that changes in the U.S. economy have left the central bank largely irrelevant in matters of growth and inflation.
- **Edward Glaeser**, Fred and Eleanor Glimp Professor of Economics at Harvard University: Building on themes in his book *Triumph of the City*, he focused on the importance of urban areas for accelerating economic progress.
- **Thomas W. Bell**, professor at the Fowler School of Law, Chapman University: He presented his research on how nation states’ lumbering bureaucracies are being replaced as providers of public services by small, focused special jurisdictions, such as trade zones.
Teaching Free Enterprise in Texas (TFET), begun in 2015, offers workshops and classroom materials for Texas high school teachers, with the goal of helping them meet the state’s mandate to provide economics instruction with an emphasis on the free-enterprise system and its benefits.

TFET moved forward in the 2016-17 academic year by working more closely with school districts and state officials to schedule events at times and places convenient for teachers. July workshops were held in Dallas and Irving. The next month, 320 teachers from the Cypress-Fairbanks school district near Houston attended two days of workshops—the program’s biggest event to date. Then it was back to Dallas for another workshop. By May 31, total attendance had reached 524 high-school teachers and administrators.

TFET will hit its stride in the upcoming academic year, with 15 seminars already scheduled, including the first ones in the biggest Dallas and Houston school districts.

The program began with four curriculum units—two from Lawson and two from Cox. In the 2016-17 academic year, the program added seven new units. Stansel and Tuszynski wrote the lesson plan for “Taxation and Public Finance,” which Stansel taught at the July event in Dallas. Yonai contributed “Morality and Markets,” which he debuted at August’s Region 10 Economics Summer Conference at SMU Cox. The five other new units came from Texas economists working outside the O’Neil Center, a move to expand and diversify the program’s content. Six additional units are in development.

Serralde and Alm co-authored a paper titled “Making Texas Classrooms Safe for Free Enterprise,” which focused on TFET’s development. Serralde presented the paper at April’s APEE conference in Hawaii, along with a demonstration session for Hawaiian teachers on how to use TFET materials in the classroom. In addition to the event in Hawaii, Serralde has had discussions with educators in Arkansas, Arizona, North Carolina and Mexico, all of whom expressed interest in using O’Neil Center curriculum units to improve the teaching of high school economics in their states.

O’Neil Center professors teach a variety of economics courses at SMU Cox—both required and elective, both undergraduate and master’s levels. Taken together, these courses taught more than 300 SMU students in the 2016-17 academic year.

Lawson taught Managerial Economics to MBA and MS students, Microeconomics to EMBAs and served as faculty adviser for EMBAs on their trip to Chile and Peru.

Cox taught Managerial Economics to PMBAs and MS students. His Markets and Freedom summer course for undergraduates continues to be popular, especially with non-business majors.

Davis’ teaching load included International Finance and Corporate Finance for both undergraduate and graduate students; for graduate students, he taught Macroeconomics and Decision-Making Under Uncertainty. He was faculty advisor on student trips to Havana, Tokyo and Shanghai.

Despite a busy schedule as dean, Niemi taught two sections of his Evolution of American Capitalism course in the fall, one for undergraduates and one for master’s students. A shortened version formed the basis for the Certificate in American Capitalism, a continuing education offering.
O’Neil Center Reading Groups

The O’Neil Center began its free-market reading groups three years ago. In the 2016-17 academic year, the program expanded to six groups, each meeting once a week, with fall and spring sessions. Stansel led the McLane Teammates Scholars and Armentrout Scholars reading groups. Murphy guided a new advanced reading group intended for students who wanted to build on what they’d learned in a previous O’Neil Center reading group.

Stansel’s two fall reading groups took up the theme of “Markets & Morality,” and readings included classic and contemporary works by such economists and philosophers as G.A. Cohen and F.A. Hayek. Students discussed a variety of questions: Which is more just: socialism or capitalism? By what moral standard should we evaluate markets? What moral norms do markets need to function effectively? Does capitalism make us selfish? Do markets corrupt our character or destroy communities? Should we be allowed to sell our organs or rent our bodies?

The fall sessions had a diverse mix of 20 undergraduate students, including majors from economics, finance, political science, philosophy, psychology, environmental studies, statistics and English.

In the spring, Stansel led two groups through discussions about “Cities, Local Government and Local Governance.” Readings included works by economists, political scientists and urban scholars, such as Jane Jacobs, Elinor Ostrom, Edward Glaeser, Gordon Tullock, Anthony Downs and Richard Florida. Key questions included: Why are cities important? Why are some cities shrinking while others are growing? Is urban sprawl good or bad? What should local governments do? What can the private, voluntary sector do? Are many small, local governments better than one large one?

The groups had a full roster of 24 undergraduate students. Once again, they were a diverse mix, including majors from economics, finance, political science, philosophy, psychology, environmental studies, statistics and English.

Murphy’s fall session focused on “Political Psychology.” Students first read Matt Ridley’s The Origins of Virtue for an evolutionary account of what underlies our sense of morality. This was followed by Jonathan Haidt’s The Righteous Mind, which shows how different moral foundations lead to different political beliefs. Complementing Haidt were discussions of Arnold Kling’s Three Languages of Politics on how conservatives, progressives and libertarians view the world differently. Students also read parts of Bryan Caplan’s The Myth of the Rational Voter and Paul Rubin’s influential journal article “Folk Economics.”

In the spring, Murphy led the students on an exploration of “A Brief History of Civilization.” The readings covered many current explanations for why economic development took place. Students read works by Daron Acemoglu, James A. Robinson, Paul Collier, Francis Fukuyama, F.A. Hayek, Deirdre McCloskey, Douglass North, Matt Ridley and Thomas Sowell. The explanations involved geography, social norms and mores, cultural practices, education, political institutions and economic freedom. Collier’s The Bottom Billion provided insight into why many countries still struggle to develop.

Edward Glaeser talks at reading group summit hosted by the O’Neil Center.
Working with Standout Students

Yonai led the O’Neil Center’s first Humanomics Undergraduate Colloquium in February, an event co-sponsored by the Institute for Humane Studies. The weekend on the SMU campus introduced students to economics as a set of tools for promoting human flourishing. A central thesis was what happens to science if we divorce it from virtue, ethics and morality. Nineteen students from 13 different universities attended.

Robert Lawson supervised Keri Lawson’s Armentrout Fellow research project on “The Ladies on Our Money: Queens, Suffragettes, Artists and Mothers,” an analysis of global currency design that won first place in the Undergraduate Poster Competition at APEE’s April conference. In the fall, Keri Lawson will enter the Ph.D. program in economics at West Virginia University.

Stansel was faculty advisor for Grace Ann Pulliam’s research project, “Examining Charter Schools in Arkansas,” which she presented at the APEE’s Undergraduate Poster Competition. Tuszynski assisted Pulliam in running regressions and creating figures for the project.

During the spring semester, Murphy directed Tamara Winter in an independent study on the effects of demographics on economic freedom. Winter participated in fall and spring semester reading groups and plans on going to graduate school next year.

Eric Li was Murphy’s research assistant in the fall semester of 2016. They wrote a paper on the poor historical returns for gold, published in Libertas: Segunda Epoca under the title “The Final Nail in the Cross of Gold.”

Luke Yeom was a spring semester research assistant for Murphy and Tuszynski. With Murphy, Yeom wrote a paper on whether the diversity of agricultural production in the 19th century impacts today’s economic freedom. It is now under review at an academic journal. Tuszynski guided Yeom to recent cross-national research on the connection between economic freedom and environmental outcomes, and then they looked for equivalent data to replicate the studies on the state level.

Robert Lawson served as SMU faculty advisor for two free market student groups—the Adam Smith Society, geared toward MBAs, and Liberty@SMU, composed of undergraduates.

Radio, Television, Print

At the end of the 2016-17 academic year, SMU Cox recognized Stansel, Davis and Niemi with Media Appreciation Awards, based on the number of media placements.

In addition to his op-eds on EFNA rankings and Texas topics (see Pages 21 and 24), Stansel did 68 radio interviews, including 30 on the Ed Dean Show, the No. 1 statewide public affairs program in Florida. In addition, Stansel’s research was cited at least 20 times in the print media, including The American Spectator, The Daily Caller, San Antonio Express-News and Orange County Register.

In July, CNBC featured Murphy’s work, published by the NCPA, linking the U.S. economy’s struggles to an erosion of both the rule of law and protection of private property. Murphy’s Cato Institute discussion of the links between immigration and greater economic freedom was live-streamed on C-SPAN in September.

Psychology Today and Inverse magazines reported on Murphy’s “Kissing Babies” article (see inside back cover), which explores the difficulty of discerning altruism from selfishness in the nation’s politics.

The Dallas Morning News published Lawson’s op-ed in February, which asked why the United States spends so much more on the fight against terrorism than on other risks that claim far more lives in any given year, such as automobile accidents.

In September, when Dallas wrestled with a public pension-funding crisis, Yonai presented state-level data detailing the depth of the public sector’s pension problems in a Dallas Morning News op-ed titled “If Texas Doesn’t Shore Up Pensions, Retirees Will Be Asking for Their Money.”
The O’Neil Center continued to host research seminars. For academic year 2016-17, the series was rebranded as the O’Neil Center Workshop Series to convey its focus on research in progress. Scholars discuss their methodologies and findings, with the O’Neil Center faculty and others in the SMU community providing feedback to help improve the presented paper for publication.

The center hosted 10 academic workshops, with topics ranging from the effects of prosecutorial discretion (Michael Braun, SMU) to market echoes in Don DeLillo’s *White Noise* (Richard McKelvey, SMU).

Many of the researchers explored the causes and consequences of economic freedom, presenting new research on such topics as infrastructure (Peter Calcagno, College of Charleston), natural resources (Colin O’Reilly, University of Wisconsin-Stout) and local barriers to starting businesses (Megan Teague, George Mason University).

The George W. Bush Institute invited Cox to speak at two public events. He served as moderator for a September program featuring George Gilder, the author of a half-dozen books on capitalism and technology. The Bush Institute called upon him again in March for a program evaluating the potential policies of a Donald Trump presidency.

Cox’s speeches offered a counterpoint to the widespread pessimism about American capitalism. An audience of 300 gathered for June’s “A Glass Half Full: An Optimistic Perspective on the American Economy” in Plano. He delivered a speech titled “Good News: America is Better Off Than You Think” in Dallas in September and Houston in October.

The evolution of America’s capitalist economy to a new period of prosperity was the theme of a speech on “Age Shift: The Fourth Wave of American Economic Progress,” which Cox delivered to business groups in Nashville, Plano, San Diego, Birmingham, Ala., and Hackensack, N.J.

In April, Cox presented the optimistic message of the O’Neil Center’s “Onward and Upward” Annual Report essay to a group of 150 war veterans in Dallas.

Tuszynski became Dallas chapter leader for America’s Future Foundation (AFF), a liberty-oriented networking group for young professionals. She organized six AFF events and connected the AFF chapter with on-campus student groups, including the Adam Smith Society, the Bastiat Society, Liberty@SMU, and the SMU Young Republicans.

O’Neil Center scholars’ wide-ranging interests led to some activities that didn’t fit into our research categories. For example, Murphy published some of his insights on American cultural phenomena, including the ritual of politicians kissing babies and our mania for do-your-self projects (see inside back cover, opposite).

Here are other examples of the O’Neil Center’s eclectic activities:

Lawson published a book chapter titled “The Effect of Early Media Projections on Presidential Voting in the Florida Panhandle” (with Russ Sobel) in *Explorations in Public Sector Economics* by Joshua Hall (ed.).

Yonai delivered a talk on “Raking up Rents: Cambridge University Press v. Patton” at July’s Western Economic Association International conference in Portland, Oregon and March’s Public Choice Society meeting in New Orleans. In March, Yonai was a panelist on the Leadership Session on Best Practices in Teaching Free Enterprise and Entrepreneurship at the Fourth Annual Interdisciplinary Symposium conference in Myrtle Beach, S.C.

At the Economic and Business History Society Conference in Oklahoma City, Stansel and Tuszynski spoke on “A Public Choice Analysis of the Passage of the 1935 Social Security Act.” They discussed historical concerns about the fiscal sustainability of Social Security’s old-age provisions and its passage during the Depression despite those red flags.


Lawson discussed O’Neil Center operations with his counterparts from other research institutions in two summits on running effective university centers/programs—at George Mason’s Mercatus Center and Dartmouth College.

Stansel and Lawson both began three-year terms on the Faculty Advisory Board for the new Mission Foods Texas-México Center at SMU.
Murphy’s academic year 2016-17 publications included these seven that didn’t expressly focus on national or state economic freedom:

“Do-It-Yourself and Distrusting Markets” in Regulation and “The Diseconomies of Do-It-Yourself” in The Independent Review (forthcoming) use conventional microeconomic arguments to suggest that Americans have gone overboard in their “Do-It-Yourself” efforts.

“Kissing Babies to Signal You Are Not a Psychopath” in the Journal of Neuroscience, Psychology and Economics sees strong constitutional limits on the power of governments as a bulwark against potentially evil politicians;

“A Simple Empirical Investigation into the Optimal Size of the NGDP Target and Level Targeting” (with Jiawen Chen) in the Journal of Economics and Finance assesses the effectiveness of various countries’ paths for controlling inflation by targeting nominal GDP;

“Are Strong States Key to Reducing Violence? A Test of Pinker” in Libertarian Papers casts doubt on the need for stronger governments to reduce homicide rates in developed countries;

“Minimum Wages and Appropriation of Quasi-Rents” in Economics Bulletin examines the longer-run employment impacts of raising minimum wages;

“The Perils of Buying Social Capital Locally” in the Journal of Private Enterprise (forthcoming) contends that the alleged increases in social capital from “buying local” movements may not be a good thing;

“The situations where DIY actually makes sense pertain to the economic imperfections of the real world: transaction costs are greater than zero, frictions exist and there are not an infinite number of sellers and buyers. These are simply not the primary stated reasons of the many advocates of doing it yourself. Hence, in many cases DIY is a mistake, owing to distrust of markets.”

– Ryan Murphy