TAKEAWAYS: The rise of the digital economy has changed the way we work and shop. Such changes, which are transforming the marketplaces of products and labor, contribute to an emerging divide with winners and losers in different regions and industries. Future economic growth in the region relies critically on how the community leverages its transition to the new economy.

Information and communications technologies (ICT) have altered the landscape of our economy. The most obvious changes are the expansion of the digital infrastructure for computer and telecommunication networks and the digital media (the content and software that people create and access). The amount of digital transactions, or e-commerce, has also grown remarkably in the United States as a whole, but not in every community.

This article looks at how this evolution has changed the local economy particularly in Corpus Christi.

New Economy
The digital economy is a bright spot in the U.S. The Bureau of Economic Analysis (BEA) has monitored the changing size of the digital economy, which includes the entire ICT sector and the digital infrastructure, e-commerce, and the digital media industry. According to the official data, this new component of the U.S. overall economy currently supports 5.1 million jobs, or 3.3 percent of overall employment. A typical employee in the digital economy earns about twice as much as a typical U.S. worker (about $132,000 annually vs. $68,500).

During the last two decades between 1998 and 2017, the size of the digital economy, measured by the real value added of digital goods and services, grew at an average annual rate of 9.9 percent, more than three times the annual growth rate of the U.S. overall economy at 2.3 percent. Today, this new sector accounts for nearly 7 percent of the U.S. economy. Within the digital economy, the hardware component grew the fastest at 18.4 percent annually, followed by e-commerce and digital media at 12.2 percent.

Tame Inflation
While real output in the digital economy has grown much faster than real output in the overall economy, prices of digital goods and services have fallen steadily during that same period. Since 1998, prices for the digital economy has fallen at an average annual rate of 1.0 percent, as opposed to the average annual rate of 1.6 percent increase for all goods and services in the United States. This means that the digital economy has helped tame the overall U.S. inflation in recent decades.

Other than the direct effect of falling prices of digital goods and services on overall inflation, the expansion of online commerce has provided consumers access to more products and services at competitive prices. Online retail platforms, such as Amazon and e-Bay, connect consumers with merchants virtually around the world; smartphone apps and online platforms, like Uber and Airbnb, connect out-of-town travelers directly with local services.

So, as information technologies improve coordination between buyers and sellers, consumers can find competitive prices more easily, reducing the market or bargaining power of local businesses.

Gig Economy
While e-commerce has benefited consumers with more products and services at competitive prices, digital technologies
have provided an increasingly number of workers with freelance, or gig, employment opportunities. These workers are mostly self-employed, working under contracts instead of company payrolls.

Like online retailers in the goods markets, these freelancers, such as Uber drivers, tend to lower the bargaining power of regular, or so-called W2, employees in local labor markets. This may explain the relatively slow wage growth in the past decade despite robust job growth.

Telecommunications technologies have also enabled an increasing number of people working away from their work sites. The Census Bureau estimates that slightly more than 5 percent of the U.S. workforce now works primarily from home. The growing popularity of telecommuting is exemplified by the employment trend for the Austin-Round metro area, whose share of telecommuting workforce increased steadily from about 5 percent in 2006 to 8.6 percent in 2017. But for Corpus Christi, this share dwindled around 3 percent over the same period.

The rise of gig employment and telecommuting also helps explain a persistent decline in the unemployment rate across the nation in recent years to historic levels. Basically, the information and communications technologies have reduced the geographic barriers that otherwise prevent people from finding employment opportunities far away from where they live.

A Growing Divide
While the digital economy has boosted the growth of gig-employment, a number of occupations have been displaced by robots or automation. There are now fewer than half as many telemarketers in the U.S. than those just 10 years ago.

The number of telemarketing jobs in the Corpus Christi metro area reduced from 322 in 2008 to 72 today, a 78% reduction. Other occupations that have disappeared the fastest, such as file clerks and postal sorters, are jobs that can easily be automated.
Winners and Losers

By far the most obvious consequence of e-commerce to consumers is their move to online shopping, which has upended many local brick-and-mortar retailers. During the past decade, the retail industry as a whole continued to grow steadily. But different retail segments are headed in different directions, with online sales and distribution centers outpacing the rest of the industry.

Nationwide, gasoline stations, and food and beverage stores that have mostly brick-and-mortar establishments gained the most jobs over the past decade. But other types of retailers, notably furniture, electronic, and clothing stores, posted substantial declines.

Geographic Divide

The introduction of the Sears catalog in the late 1800s has shifted the bulk of downtown retail to suburbs. Today, brick-and-mortar retail stores can still be found in every neighborhood, but the geography of e-commerce is lopsided. As more consumer shopping goes online, increasingly more areas are suffering losses in retail business, although not everywhere.

Research (Maciag, 2018) based on county job data suggests that the bulk of growth in e-commerce occurs in only a few locations of the nation: Over the last decade, only 31 of more than 3,000 counties accounted for half of the growth in the two core e-commerce industries of electronic shopping and warehousing.

The counties that added the most e-commerce jobs were typically large urban areas or communities outside major metro areas with fulfillment facilities’ locations favorable for regional logistics.

Nearly 60 percent of counties sustained retail job losses over the decade.

The same study finds that traditional retail as well as large, regional shopping centers hold up well in fast growing cities, particularly in Texas and Florida. Discount retailers and luxury stores also continue to garner sales growth. Meanwhile, counties that have experienced population losses, including those in the Coastal Bend region, are particularly vulnerable to the spread of e-commerce. So are those relatively smaller malls with anchor tenants, such as Sears, which fail to compete with online retailers.

Local Retail

So how does our local retail industry fare? With about 1,000 establishments and 18,000 employees, retail trade is the fourth largest private sector in Nueces County. Changes in local employment are in the same direction as the national trends in some retail segments, but different in others. As for the rest of the nation, the workforce among clothing, and electronic and appliance stores shrank between 2007 and 2017.

But gas stations, and food and beverage stores shed the most locally, while these brick-and-mortar retailers were less affected by e-commerce nationally. Significant job gains among auto dealerships, sporting goods, and general merchandise stores reflected some unique spending behavior of consumers in this region. Job losses in different retail segments followed the closing of their business establishments, particularly those in food and beverage retail.
Creative Destruction
As reported in a recent Economic Pulse article, automation or computerization is slated to disrupt future employment growth in many occupations. A recent report from the University of Delaware estimates that 7.5 million retail jobs are at high risk of computerization.

Other than replacing jobs, the new economy may be altering the skill requirements of existing jobs. The responsibilities of salespersons may focus more on online ordering and customer service.

According to a theoretical study from the Federal Reserve Bank of San Francisco, the waves of information and communications technologies beginning in the 1990s were the driving forces for some major shifts in the economy and its industries at both local and national levels. Such shifts include a falling share of labor in overall income due to rising productivity and cost efficiencies across firms.

Another observation is rising firm concentration, meaning fewer but larger firms, within a particular industry as stiffer competition eliminates low-performing firms over time. Meanwhile, high-performing and innovative firms grow larger by adding establishments in new locations.

In a nutshell, it is creative destruction at work.