

THE ECONOMIC IMPACT OF U.S. CABLE PROVIDERS

2022 NATIONAL, STATE,
AND CONGRESSIONAL
DISTRICT ESTIMATES





ABOUT OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modeling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on more than 200 countries, 100 industries, and 8,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centers in New York, London, Frankfurt, and Singapore, Oxford Economics has offices across the globe in Belfast, Boston, Cape Town, Chicago, Dubai, Dublin, Hong Kong, Los Angeles, Mexico City, Milan, Paris, Philadelphia, Stockholm, Sydney, Tokyo, and Toronto. We employ 600 staff, including more than 350 professional economists, industry experts, and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now

comprises over 2,000 international organizations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

SEPTEMBER 2023

All data shown in tables and charts are Oxford Economics' own data, except where otherwise stated and cited in footnotes, and are copyright © Oxford Economics Ltd.

This report is confidential to NCTA and may not be published or distributed without their prior written permission.

The modeling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

To discuss the report further, please contact:

Alice Gambarin
agambarin@oxfordeconomics.com

Valentyna Katsalap
vkatsalap@oxfordeconomics.com

Oxford Economics
5 Hanover Sq, 8th Floor
New York, NY 10004
Tel: +1 646-786-1879

CONTENTS

Executive summary	4
1. Introduction	6
1.1 Cable providers overview	7
1.2 Overview of downstream effects	7
1.3 Cable programming providers overview	8
2. The economic impact of cable providers	9
2.1 The impact of cable providers on the U.S. economy	9
2.2 The impact of cable providers on jobs and wages	10
2.3 The impact of cable providers on tax revenue	11
3. Downstream impact of cable providers	12
4. The economic impact of cable programming providers	15
4.1 Cable programming providers' impact on the U.S. economy	15
4.2 The impact of cable programming providers on jobs and wages	16
4.3 The impact of cable programming providers on tax revenue	18
5. Conclusion	19
Appendix A: Methodology	20
Appendix B: Economic impact of cable providers by state	22
Appendix C: Economic impact of cable providers by congressional district	24

EXECUTIVE SUMMARY

The U.S. cable industry helps to power the national economy by providing high-speed fiber-rich networks across all of America and by creating high quality programming. Cable providers have, in the 20 years prior to 2022, invested some \$310 billion in infrastructure, generating direct benefits in the economy as well as impacts in areas such as technical services, real estate, and repair & maintenance industries.

This report, commissioned by NCTA, shows that cable providers and cable programming providers had a significant impact on the U.S. economy in 2022 in terms of their contribution to GDP, the number of jobs they support, and the tax revenue they stimulate.

KEY FINDINGS

Estimated **impacts of cable provider services** in 2022:

- Providers of cable internet and TV services (“cable providers”) directly employed 263,000 workers, and directly generated \$96 billion in GDP.
- In total, cable providers supported over 1 million jobs across the U.S., which is greater than the workforces in 15 states.
- These workers earned \$83 billion in income.
- Including all channels of impact, cable providers supported the generation of \$196 billion of U.S. GDP, equivalent to \$1 in every \$130 of GDP generated across the U.S. economy.
- Cable providers contribute to the economies of all 50 states and the District of Columbia, supporting at least 500 jobs within 96% of all congressional districts.
- The total economic activity stemming from cable providers supported almost \$41.4 billion in taxes.

263K direct, 1m+ total

Jobs supported by cable providers



\$96 bn direct, \$196 bn total

Cable provider-supported GDP



The economic importance of U.S. cable internet service is also seen through the host of firms that depend upon and use cable-provided internet services as a key component of their business operations. This greatly expands the impact of cable providers on the economy.

- In 2022, the direct **downstream impact** of internet services provided by cable broadband providers amounted to \$132 billion in GDP and 549,000 jobs.



\$132 bn Downstream GDP impact of cable internet services



549,000 Downstream jobs supported by cable broadband providers

Estimated **impacts of cable TV programming** in 2022:¹

- Cable programming providers directly employed 32,000 workers, generating \$44 billion in GDP in the U.S.
- The total employment impact of cable programming providers across the U.S. amounted to 495,000 workers, earning \$46 billion in income.
- Cable programming providers supported the generation of \$104 billion of GDP, equivalent to \$1 in every \$246 of GDP generated across the U.S.
- The total economic activity stemming from cable programming supported activities supported \$16.4 billion in taxes.

¹ Since providers of cable programming are suppliers to cable broadband and TV providers, a portion of the total impact of cable programming is included in the total impacts of cable providers. As such, the total impacts for both providers and programmers as presented in this report are not additive.

1. INTRODUCTION

Having a fast internet connection at home opens up a world of opportunities; it is vital for learning, working from home, interacting with friends and family, and so much more. Over the past several decades, U.S. cable broadband providers have constructed high-speed networks spreading across all of America and continue to work on extending access to previously unserved homes. With cable's dedicated determination to reach unserved communities, the objective of connecting all Americans to the internet is within reach.

NCTA commissioned Oxford Economics to conduct an analysis of cable's U.S.-based operations and the economic impacts that are felt all across the domestic economy. Cable broadband providers not only make high-speed internet available to approximately 85% of all U.S. homes, offering gigabit internet speeds in both urban and rural communities, but they also provide access to more than 200 TV networks and streaming video services, many created by cable programming providers, with a rich history of popular and award-winning television content. Having invested hundreds of billions of dollars in infrastructure and programming over the last several decades, cable providers' commitment to powering the country's digital economy is clear. The remainder of this section describes the components of the industry, as defined within this study.



1.1 CABLE PROVIDERS OVERVIEW

Providers of cable internet and TV services (“cable providers”) offer broadband internet and entertainment products and services to residential and business consumers. Of the 88% of U.S. households estimated to subscribe to fixed broadband internet access at home, almost two-thirds subscribe to a cable provider.²

Most of the revenue of cable providers consists of fees paid by consumers and businesses for high-speed internet, multichannel video, voice, and mobile services. While revenue from multichannel video has declined over the past few years, the provision of services to businesses and residential high-speed internet has grown substantially, with mobile services increasingly providing a key source of additional growth. Cable providers also generate revenue from the sale of advertising.

Cable providers have, between 2002 and 2022, invested some \$310 billion in infrastructure, generating impacts in areas such as technical services, real estate, and repair & maintenance industries. They also create economic impact in the entertainment industry, through their purchase of programming to show on their video services, and add value to the U.S. economy by providing broadband access for streaming services and other businesses that use broadband as a production input.

1.2 OVERVIEW OF DOWNSTREAM EFFECTS

A host of downstream industry sectors depend upon and use internet services from cable providers as a key component of their business operations. This makes the cable-impacted share of the economy even larger than what is created through its direct activities and its purchases of goods and services. Wired and wireless telecommunications providers are naturally large purchasers of cable internet services, but industries such as hospitality leverage cable internet services to manage and streamline booking processes, while also subscribing to cable television as a value-added amenity for their customers. Streaming video services, such as Netflix, Disney+, Peacock, and HBO Max also rely heavily on cable broadband networks as a way of delivering their programming to consumers.

² Federal Communications Commission, 2022 Communications Marketplace Report, Fig. II.A.1, 2022.

1.3 CABLE PROGRAMMING PROVIDERS OVERVIEW

Providers of cable programming produce entertainment, lifestyle, news and sports content, which is then distributed via cable video and broadband networks and other multichannel video programming distributors. Traditional cable programming includes the following types of networks:

- Basic cable channels, which include networks such as ESPN, TNT, USA, CNN, Nickelodeon, and FX.
- Premium cable channels, which offer specialized content beyond basic cable, including original series, movies, and special events (e.g., HBO, Showtime, Starz).
- Regional sports networks (RSN), which hold the broadcasting rights for regional sports. Some of the largest are Spectrum Sports, Bally Sports (previously Fox Sports), NBC Sports, and MSG.

Major content producing companies, like Warner Bros. Discovery, Disney, NBCU, and Paramount also have created streaming platforms for online content delivery. However, in this report, as mentioned above, the effects of these streaming networks are generally captured as downstream services that use cable and other broadband providers as an input to reach their customers.³

Most of the revenue generated by cable programming providers still comes from basic cable services. Across all three network segments, affiliate revenue (or licensing fees) generates most of the revenue, while for basic cable channels, advertising constitutes an additional important portion of the revenue stream. However, the breakdown of revenue among the types of cable programming providers has changed substantially over the last few years; last year, basic cable and RSN revenue contracted, while premium cable channels displayed a 10% annual revenue growth, continuing the trend of high growth from the prior year.⁴

The success of cable programming relies upon the quality of the content. Because of this, cable programming providers invest heavily in content production and acquisition. In 2022, basic cable networks spent \$33.8 billion on content, supporting upstream economic impacts with studios, producers, artists, and performers, as well as for the sports industry in the case of RSNs and some of the basic cable channels.⁵

³ Given that many cable programming providers also own streaming services, it is conceivable that some employment or output effects from these services could be captured here. However, programming providers generally keep streaming services separate as lines of business, and the data that is used in this report to estimate the output and employment effects of programming providers is meant to be limited to traditional cable networks.

⁴ Estimates from Kagan, a division of S&P Global Market Intelligence.

⁵ Ibid.

2. THE ECONOMIC IMPACT OF CABLE PROVIDERS

2.1 THE IMPACT OF CABLE PROVIDERS ON THE U.S. ECONOMY

With over 82 million cable broadband customers and tens of millions of video, voice, and mobile customers, cable providers directly created nearly \$96 billion worth of GDP for the American economy in 2022. This represents over half of the GDP generated by all U.S. wired telecommunications carriers.⁶

In addition to their direct impacts, the expenditures of cable providers within their U.S.-based supply chains also generates an enormous amount of economic activity across all sectors and regions of the economy. In 2022, these supply-chain effects totaled approximately \$54 billion of GDP. Moreover, the economic activity supported by the spending of the workers employed by cable providers and their supply chains generated a further \$46 billion in GDP in 2022.⁷

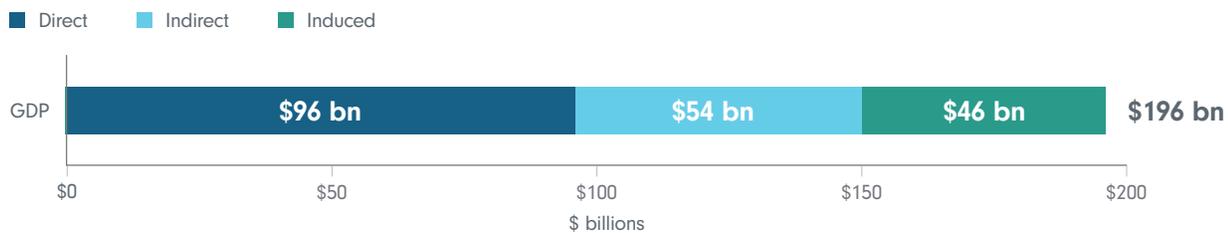
Combining all channels of impact, cable providers contributed \$196 billion to U.S. GDP in 2022. This is equivalent to \$1 in every \$130 of GDP generated across the U.S. economy.

As the total economic impact of cable providers was two times the direct impact alone, the GDP multiplier was 2.0. That is, for every \$1 of GDP generated by cable providers themselves, a further \$1 of GDP is supported in other parts of the U.S. economy as a result of supply chain linkages and wage-funded spending effects.

\$96 bn
U.S. cable providers' direct GDP contribution in 2022

2.0x
GDP multiplier of cable providers in 2022

Fig. 1. Cable providers' GDP impact in the U.S., 2022



Source: NCTA, Oxford Economics

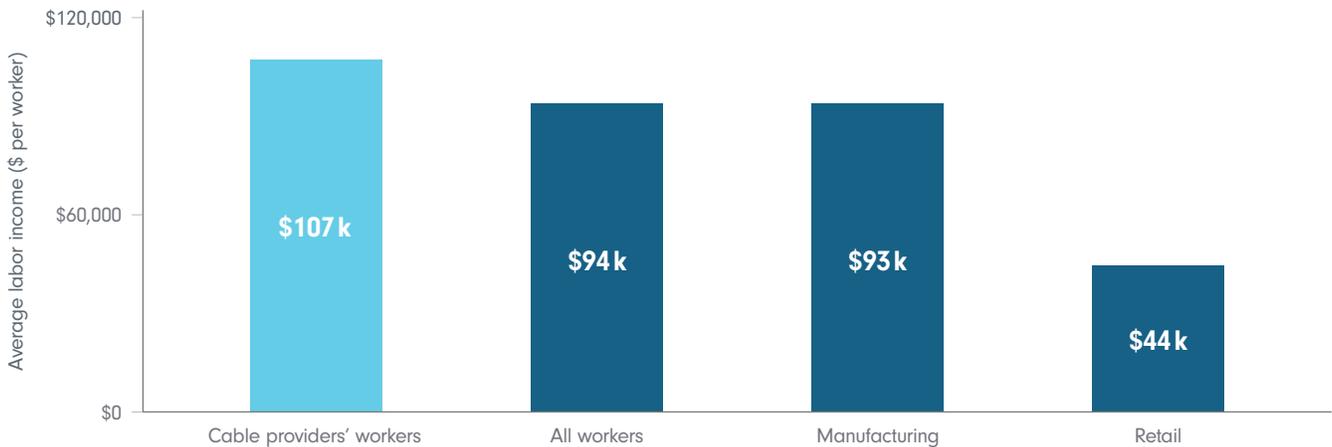
⁶ Over and above cable providers, the wired telecommunications industry also includes other non-cable wired broadband Internet service providers (e.g., fiber, DSL), direct-to-home satellite system (DTH) services, local and long-distance wired telephone carriers, multichannel multipoint distribution services (MMDS), satellite television distribution systems, and VoIP service providers using their own wired telecommunications infrastructure.

⁷ The expenditures within supply chains generate "indirect effects" in the economy, while the expenditures by workers generate "induced effects." See Appendix A for more detail about these concepts.

2.2 THE IMPACT OF CABLE PROVIDERS ON JOBS AND WAGES

Cable providers in the U.S. employed 263,000 workers in 2022, accounting for 46% of the entire wired telecommunications industry workforce. These workers are estimated to have earned some \$28 billion in labor income in 2022 and their average compensation was approximately 13% higher than the compensation of the average American worker and 14% higher than the average for all manufacturing workers.

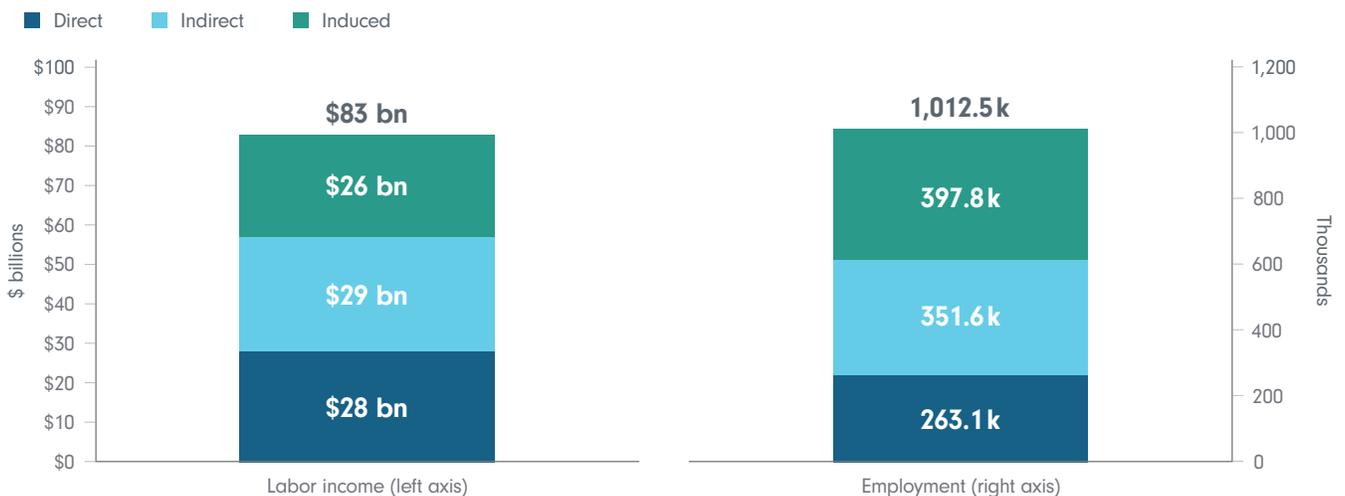
Fig. 2. Comparison of average labor income by industry, 2022



Source: Oxford Economics, IMPLAN

The supply chain expenditures of cable providers supported a further 351,600 jobs through the economy and wage-based spending supported an additional 397,800 jobs. Adding all the channels together, cable providers supported 1,012,500 jobs across the U.S. in 2022. These workers received an estimated \$83 billion in labor income.

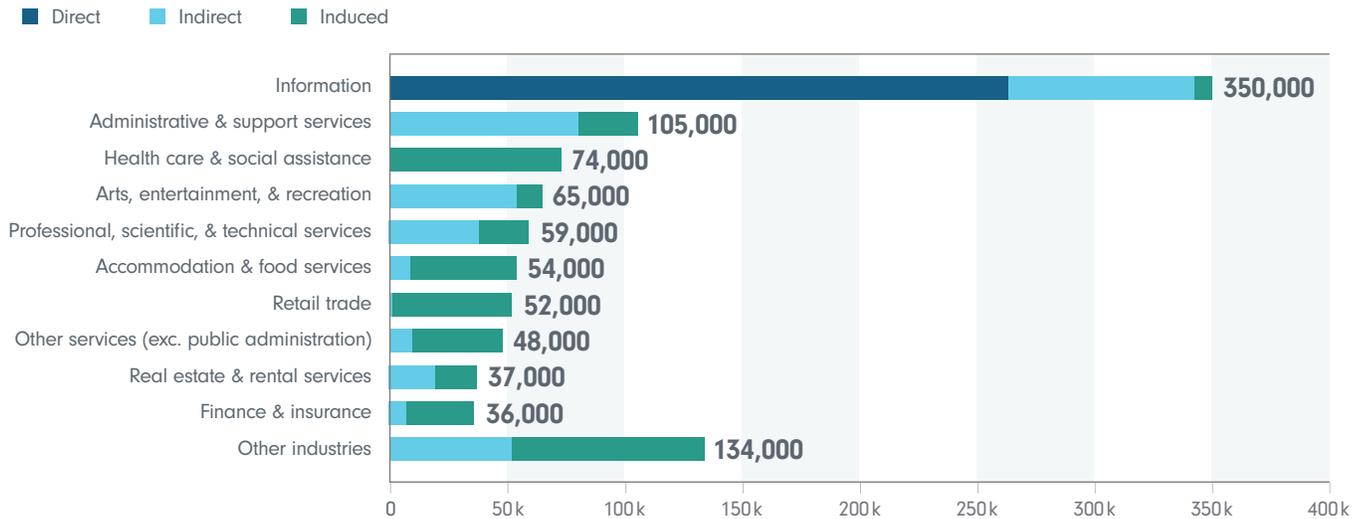
Fig. 3. Cable providers' employment impact in the U.S., 2022



Source: NCTA, Oxford Economics

Cable providers' spending creates jobs across the U.S. economy. For every individual directly employed by cable providers in 2022, 2.8 additional jobs were supported in other areas within the U.S.—a jobs multiplier of 3.8. This includes an estimated 350,000 information jobs, 105,000 administrative jobs, and employment for 74,000 healthcare and social workers.

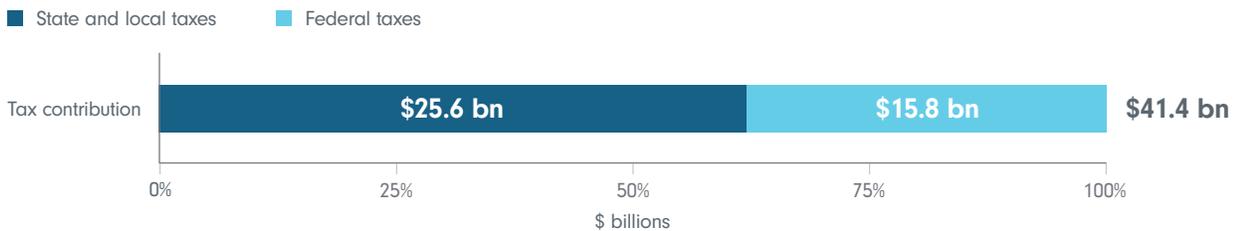
Fig. 4. Total cable providers' employment impact by industry, 2022⁸



2.3 THE IMPACT OF CABLE PROVIDERS ON TAX REVENUE

The economic activity supported by cable providers sustained almost \$41.4 billion in taxes at all levels of government in 2022.

Fig. 5. Total tax contribution of cable providers

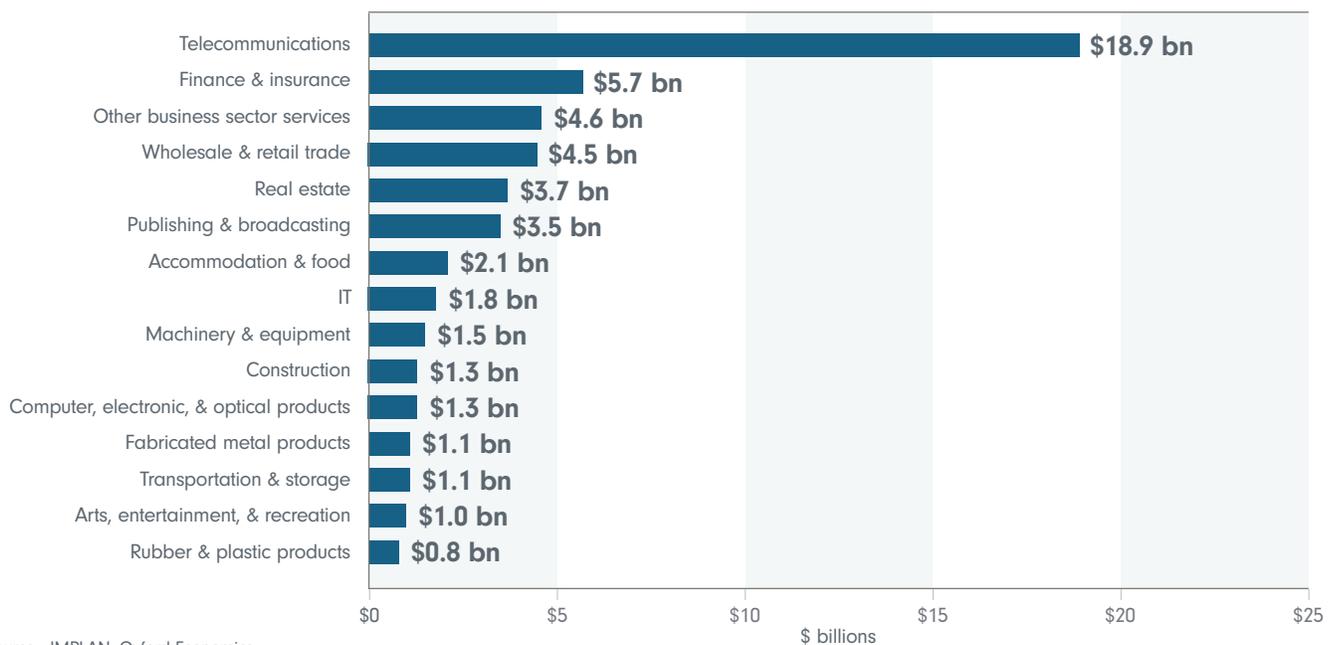


⁸ The industries listed in these table are based on categories in the North American Industry Classification System ("NAICS") 2-digit codes.

3. DOWNSTREAM IMPACT OF CABLE PROVIDERS

The economic importance of U.S. cable providers is even larger than what is supported through their direct activity, supply chain purchases, and the spending of their employees. In this section, we profile the downstream use of cable-provided internet services by other industries using input-output (IO) economic data similar to that used to calculate the upstream economic impacts described earlier. These IO data identify which industries rely most heavily on cable providers based on those that spend the most (in absolute and relative terms) on wired telecommunications services.⁹

Fig. 6. Top industries that purchase from U.S. cable providers, ranked by amount



Source: IMPLAN, Oxford Economics

In 2022, U.S. firms spent approximately \$118.3 billion on wired telecommunications services, which include an estimated \$58.6 billion spent with cable providers. The types of companies that spent the largest amounts with U.S. cable providers were wireless and wired telecommunications carriers and satellite and telecommunications resellers. These same industries were also the ones that depended most heavily on cable provider services in relative terms, measured as the proportion of intermediate consumption spent with wired telecommunication carriers. Cable broadband services, however, are used in a host of other

⁹ We cannot identify which industries purchase their wired telecommunications services from cable providers as opposed to other ISPs. To fill this gap, we have used cable providers' estimated share of the sector (50% when measured in terms of output) to estimate cable's share of total wired telecommunications services spending.

industry sectors, as demonstrated by Fig. 6. For example, the hospitality sector leverages cable internet services to manage and streamline booking processes, while also subscribing to cable television as a value-added amenity for their customers.

This spending in turn supports jobs and economic activity within those downstream sectors, as it enables those sectors to operate more productively or provides opportunities for additional value added. For example, satellite and telecommunications resellers are estimated to spend 14% of their total intermediate consumption with U.S.-based cable providers, while wireless telecommunications carriers purchase 5% of their intermediate goods and services from the industry. This could imply that 14% and 5% of those industry's operations are directly dependent on cable-provided internet services.

\$132 bn

Downstream GDP impacts supported by cable providers in 2022



549,000

Downstream cable-dependent jobs supported by cable providers in 2022



By applying this approach to every industry, we estimate that the direct downstream impact of cable providers in 2022 amounts to \$132 billion in GDP and to 549,000 jobs.¹⁰ In terms of GDP, telecommunications is by far the most cable-dependent sector, followed by finance and business services (Fig. 7). In terms of employment, the retail and hospitality sectors are major beneficiaries, with 68,000 and 48,000 cable-dependent jobs, respectively (Fig. 8).

These figures do not take into account the contributions made by sectors that do not directly purchase cable provider services but indirectly depend on and use wired telecommunications services. This could represent hundreds of billions in additional GDP, as well as hundreds of thousands of additional workers. A host of downstream market segments indirectly rely upon the services of cable providers, including search engines, digital advertising agencies, and social networking sites. The internet services offered by cable providers are, therefore, an important contributing factor to the growth of these sectors. In addition, by being the main source of residential internet in the U.S., cable providers indirectly enable the work of thousands of sellers on platforms like eBay, Etsy, and Craigslist, as well as the activity of hundreds of thousands of content creators (e.g., YouTubers) and digital entertainers (e.g., podcast creators).

¹⁰ In this study, we only assess the value of the direct (or first-round) downstream impacts of cable providers. While a methodology exists to calculate the full range of downstream multipliers (also known as Ghoshian multipliers), such an approach is only appropriate in limited circumstances, for example when assessing a fresh injection of a supply-constrained commodity. In a supply-constrained economy, increased activity in one sector allows other sectors (that use its products as inputs) to expand. In addition, it is important to note that the upstream multiplier effects estimated in the previous sections of this report and the first-round of downstream impacts presented in this chapter should not be combined into an all-encompassing "total impact." These effects measure the impacts of different kinds of disturbances to the economy and, in choosing one or the other, we are making a judgement about the kind of economy being investigated.

Fig. 7. Cable providers' direct downstream GDP impact, by sector

Industry	Downstream cable-dependent GDP (\$ billions)
Telecommunications	\$35.8
Financial and insurance activities	\$13.8
Other business sector services	\$13.6
Wholesale and retail trade; repair of motor vehicles	\$12.3
Real estate activities	\$9.2
Publishing, audiovisual, and broadcasting activities	\$6.8
Accommodation and food services	\$4.7
Transportation and storage	\$3.8
IT and other information services	\$3.5
Machinery and equipment	\$3.1
Human health and social work	\$2.6
Computer, electronic, and optical products	\$2.6
Construction	\$2.5
Arts, entertainment, recreation, and other service activities	\$2.3
Fabricated metal products	\$2.1
Rubber and plastic products	\$2.1
Other	\$10.9
Total	\$131.8

Fig. 8. Cable providers' direct downstream jobs impact, by sector

Industry	Downstream cable-dependent jobs (Thousands)
Other business sector services	78.4
Wholesale and retail trade; repair of motor vehicles	68.5
Telecommunications	49.6
Accommodation and food services	47.7
Financial and insurance activities	45.4
Real estate activities	36.4
Transportation and storage	35.2
Human health and social work	34.4
Arts, entertainment, recreation, and other service activities	25.6
Education	21.3
Construction	13.7
Machinery and equipment	13.2
Computer, electronic, and optical products	12.4
IT and other information services	10.0
Other	57.2
Total	548.9

4. THE ECONOMIC IMPACT OF CABLE PROGRAMMING PROVIDERS

4.1 CABLE PROGRAMMING PROVIDERS' IMPACT ON THE U.S. ECONOMY

Cable programming providers directly created nearly \$44 billion of GDP in the U.S. in 2022. In addition to the direct economic impacts, expenditures by cable programming providers across their U.S. supply chains further generated \$35 billion in GDP. Finally, the economic activity supported by the wage spending of workers supported another \$25 billion in GDP in 2022.

Across all channels of activity, cable programming providers contributed a total of \$104 billion in GDP to the U.S. economy in 2022. This is equivalent to \$1 in every \$246 of GDP generated across the U.S. economy.

The total economic impact of cable programming providers is equivalent to almost 2.4 times the direct impact. This GDP multiplier indicates that for every \$1 of GDP generated by cable programmers, a further \$1.40 of GDP is supported across other U.S. industries as a result of supply chain expenditure and wage-induced spending.

\$44 bn

U.S. cable programming providers' direct GDP contribution in 2022



2.4x

GDP multiplier of cable programming providers' operations in 2022



Fig. 9. Cable programming providers' GDP impact in the U.S., 2022



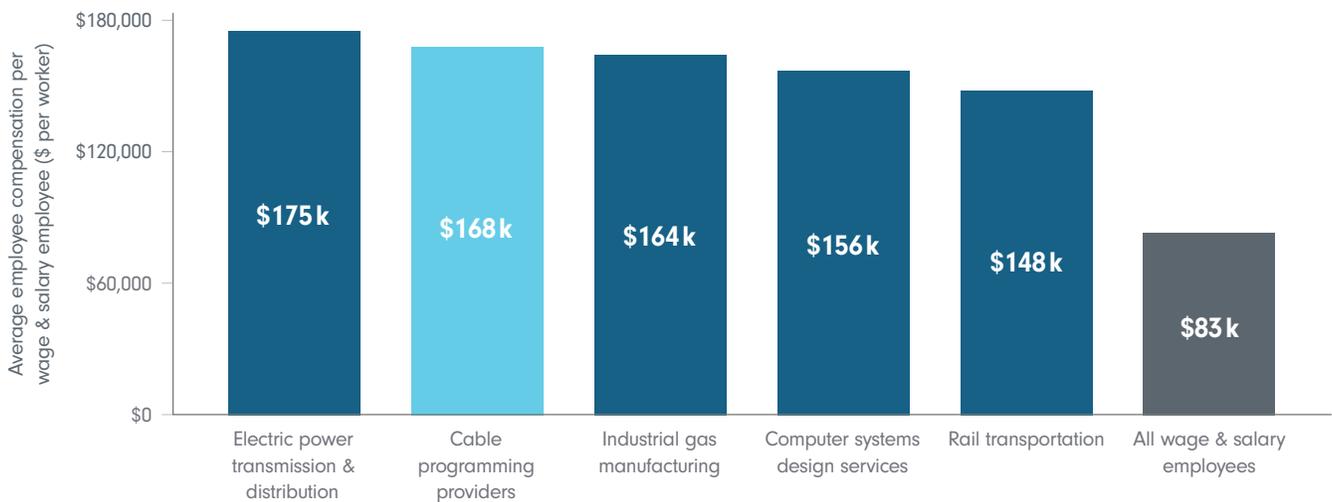
Source: NCTA, Oxford Economics

4.2 THE IMPACT OF CABLE PROGRAMMING PROVIDERS ON JOBS AND WAGES

We estimate that cable programmers employed 32,000 workers in 2022 who earned over \$13 billion in labor income across the U.S.

In common with all other U.S. industries, cable programming providers employ both salaried and wage-earning workers. Some 21% of the workforce of cable programming providers are estimated to be made up of proprietors. Our analysis indicates that there is significant variability between average compensation of salaried or wage-earning employees and proprietors, with the former earning \$168,000 on average, while the latter had a mean income of over \$1.2 million per year. Given this discrepancy, Fig. 10 compares only the salaried and wage-earning cable programming provider employees with employees in other industry sectors and illustrates that cable programming providers pay salaries that are twice the economy-wide average and that are on par with electricity transmission and distribution and computer systems design services.

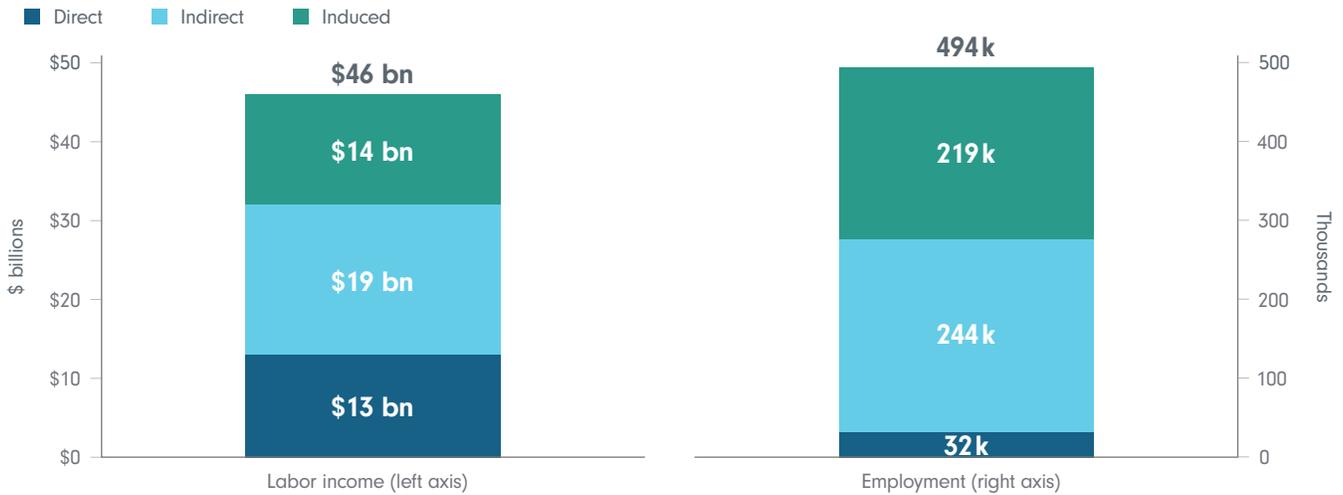
Fig. 10. Comparison of average employee compensation per wage and salary employee by industry, 2022



Source: Oxford Economics, IMPLAN

Cable programming providers supported an additional 244,000 jobs across the U.S. economy as a result of their supply chain expenditures and 219,000 jobs through wage-supported spending. In total, cable programming providers supported 495,000 jobs across the U.S., with these workers earning nearly \$46 billion in labor income in 2022.

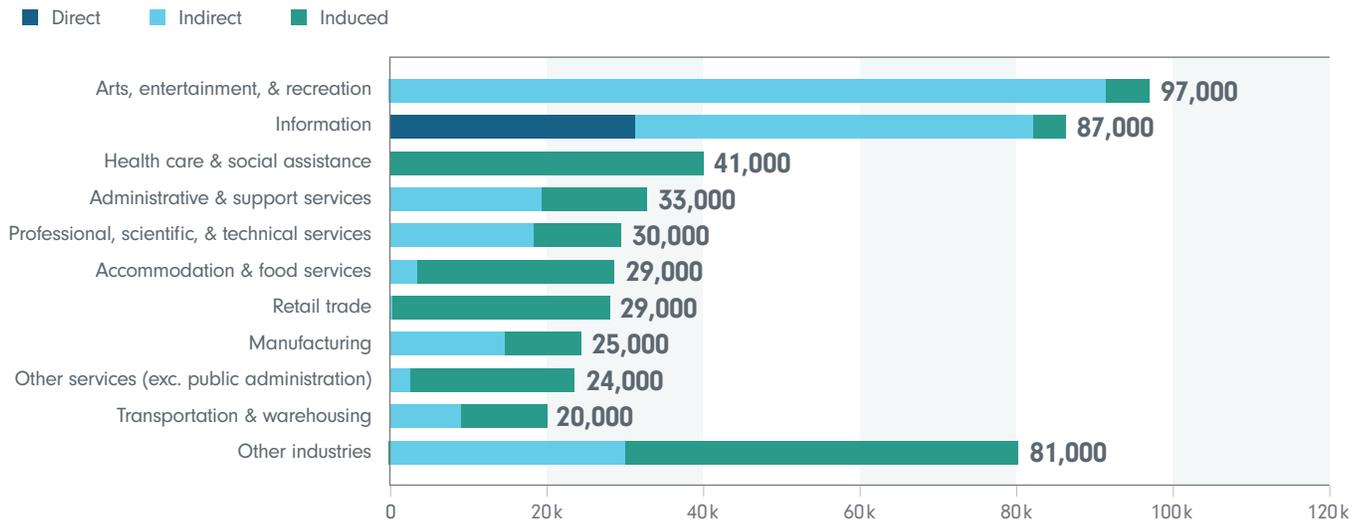
Fig. 11. Impact of cable programming providers' employment in the U.S., 2022



Source: NCTA, Oxford Economics

For each worker employed by cable programming providers in 2022, 14.5 additional jobs were supported in other industries across the U.S. This employment footprint includes an estimated 97,000 creative industries' jobs, 87,000 information jobs, and employment for 41,000 healthcare and social workers. The fact that the highest number of jobs was supported in the arts, recreation, and entertainment sector—a highly labor-intensive industry—helps contribute to this very large employment multiplier.

Fig. 12. Total cable programming providers' employment impact by sector, 2022¹¹

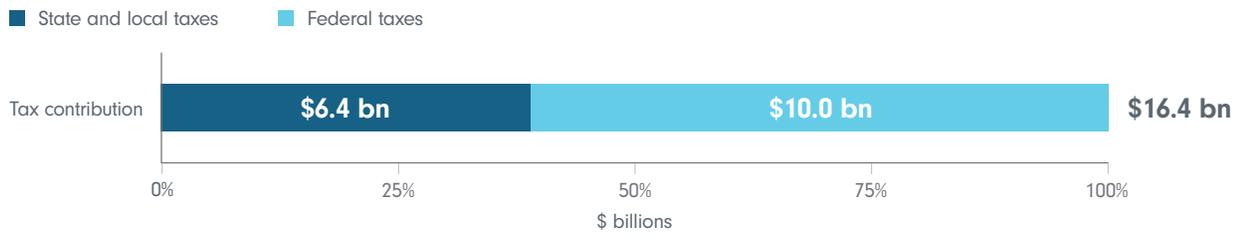


¹¹ NAICS 2-digit code.

4.3 THE IMPACT OF CABLE PROGRAMMING PROVIDERS ON TAX REVENUE

The direct, indirect, and induced economic activity supported by cable programming providers supported almost \$16.4 billion in taxes at all levels of government in 2022.

Fig. 13. Total tax contribution of cable programming providers, 2022



5. CONCLUSION

The U.S. cable internet, TV and programming providers play an essential and powerful role in driving the national economy. In 2022, cable providers supported the generation of \$196 billion of U.S. GDP, 1,012,000 jobs, and more than \$41 billion in taxes at all levels of government. These benefits were spread across the U.S., with 96% of all U.S. congressional districts hosting more than 500 cable-related jobs (see Appendix C for more detail on employment by congressional district).

The economic impact of cable providers also results from the fact that many industry sectors depend upon and use cable-provided internet services as a key component of their business operations. Our analysis shows that this direct downstream impact in 2022 amounted to \$132 billion in GDP and 550,000 jobs, with the GDP impact greatest in the telecommunications industry, and the retail and hospitality sectors among the largest beneficiaries in terms of employment.

Cable programming providers supported the generation of \$104 billion of U.S. GDP in 2022, supported almost 500,000 jobs, and generated more than \$16 billion in taxes.

As the internet has transformed people's lives and the ways that they learn, communicate, and do business, cable providers will continue to play an integral role in the U.S. economy both by sustaining growth, job creation, and tax revenues, and also by supporting downstream industry sectors that depend upon and use robust cable-provided internet services.

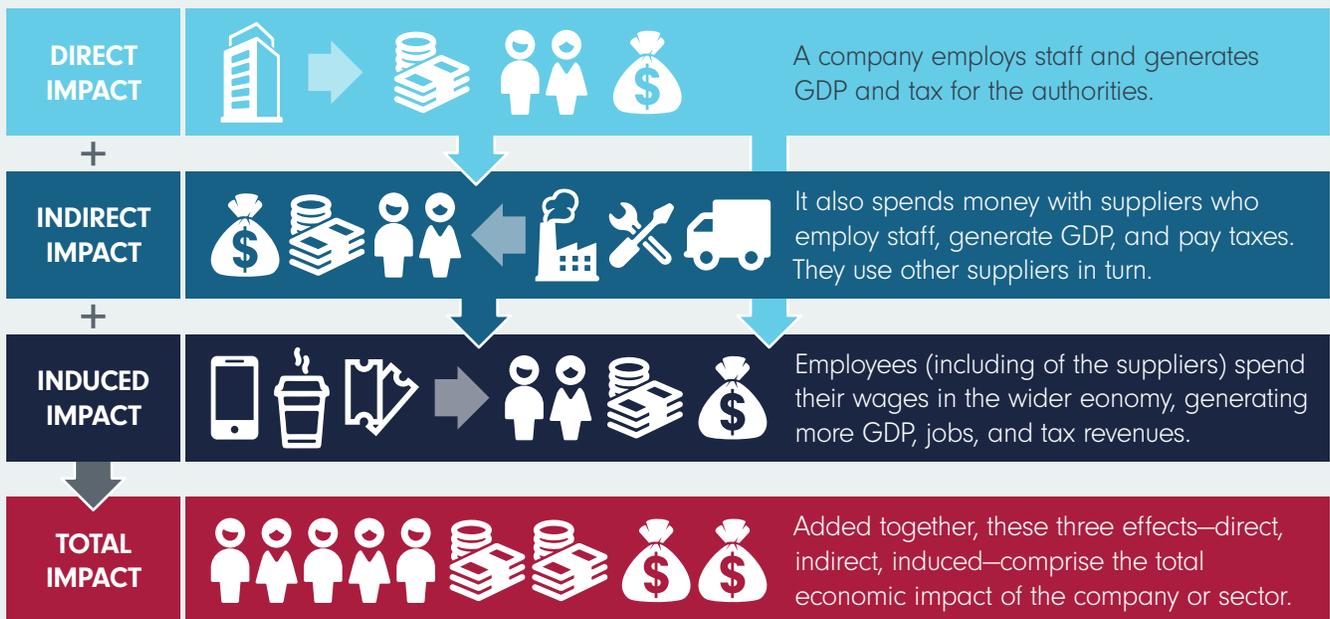
APPENDIX A: METHODOLOGY

ECONOMIC IMPACT MODELING

Economic impact modeling is a standard tool used to quantify the economic contribution of an investment, a company, or a sector of the economy. Impact analysis traces the economic contribution of an investment or other spending through three separate channels:

- **Direct impact:** refers to activity conducted directly by the industry in the U.S.
- **Indirect impact:** consists of activity that is supported as a result of the purchase of goods and services by the industry in the U.S., purchases by those companies in turn, and so on.
- **Induced impact:** reflects activity supported by the spending of wage income by direct and indirect employees.

Fig. 14. Channels of economic impact



The model captures the inter-industry relationships, consumer spending, and ripple effects that result from the economic activity of interest. The economic impact is measured in terms of:

- **GDP:** Value-added economic activity.
- **Employment:** Total jobs, measured on a headcount basis, including both wage and salary workers and the self-employed.
- **Labor income:** Total compensation (including benefits) for these workers.
- **Taxes:** Total taxes generated by the direct, indirect, and induced economic activity.

Impacts were calculated using the IMPLAN economic impact software.¹² IMPLAN is an industry-standard tool that collates government economic data from a variety of sources and streamlines economic impact calculations across different geographies. The national results presented in chapters 2, 3 and 4 are based on an IMPLAN model built on the inputs provided by NCTA. The precise makeup of the industries' operational spending by commodity type was sourced directly from IMPLAN in its 546 industry and commodity coding system.

The national model inputs were split by congressional district based on the results of our original survey of cable providers and based on IMPLAN county-level data for wired telecommunications providers. In order to map the county-level data to congressional districts, we used population weights from the Missouri Census Data Center (MCDC). The allocation of cable workers by congressional district was then computed through an iterative process; whenever the survey yielded an employment figure that was greater or equal to the IMPLAN figure for wired telecoms, we used the survey at face value. For all other districts, we used IMPLAN's proportional breakout of wired telecoms workers to allocate all the remaining cable employees. At this point, a new set of congressional districts resulted in survey results being larger than the estimated figure, and hence we repeated the same process as before, where we used the survey value in these cases. We continued to apply this approach until the survey responses of all congressional districts were smaller or equal to the estimated allocation.

The state-level and congressional district-level total impacts were estimated by applying congressional district-specific output multipliers from IMPLAN to direct impacts by district and then aggregating results by state. The latest version of output multipliers in IMPLAN is for the 117th Congress. They were converted into those for the 118th Congress by applying population weights.

The sum of subnational results was scaled to match the results from the national modeling. In other words, the sum of the economic impacts across all states (and congressional districts) adds up to the total economic impact across the U.S.

¹² See www.implan.com.

APPENDIX B:

ECONOMIC IMPACT OF CABLE PROVIDERS BY STATE

State	Total GDP (millions)	Total employment
Alabama	\$1,898	13,642
Alaska	\$1,203	8,575
Arizona	\$1,505	9,522
Arkansas	\$922	8,505
California	\$12,856	51,436
Colorado	\$8,078	59,605
Connecticut	\$5,703	15,834
Delaware	\$870	6,721
District of Columbia	\$1,230	3,070
Florida	\$9,772	72,569
Georgia	\$12,157	37,946
Hawaii	\$1,049	7,410
Idaho	\$441	4,803
Illinois	\$3,598	17,518
Indiana	\$1,438	15,435
Iowa	\$1,762	13,539
Kansas	\$3,358	16,234
Kentucky	\$2,886	21,568
Louisiana	\$1,910	12,129
Maine	\$981	8,676
Maryland	\$2,071	9,979
Massachusetts	\$2,580	16,863
Michigan	\$3,155	18,148
Minnesota	\$2,816	13,699
Mississippi	\$680	6,197
Missouri	\$4,132	32,328
Montana	\$715	5,290
Nebraska	\$1,186	8,347
Nevada	\$1,304	7,471
New Hampshire	\$1,370	10,109

State	Total GDP (millions)	Total employment
New Jersey	\$7,236	30,533
New Mexico	\$441	5,230
New York	\$14,786	55,754
North Carolina	\$7,959	52,979
North Dakota	\$491	3,400
Ohio	\$5,154	28,624
Oklahoma	\$2,914	19,659
Oregon	\$1,293	10,160
Pennsylvania	\$22,836	49,580
Rhode Island	\$761	4,103
South Carolina	\$3,029	26,543
South Dakota	\$769	5,823
Tennessee	\$2,336	20,801
Texas	\$18,648	73,434
Utah	\$1,546	8,677
Vermont	\$554	4,542
Virginia	\$3,817	28,320
Washington	\$2,456	20,331
West Virginia	\$1,019	7,692
Wisconsin	\$3,524	19,864
Wyoming	\$347	3,277
Total	\$195,543	1,012,493

APPENDIX C: ECONOMIC IMPACT OF CABLE PROVIDERS BY CONGRESSIONAL DISTRICT

Congressional district (CD)	Total GDP (millions)	Total employment
AK-01 (Alaska First CD)	\$1,203	8,575
AL-01 (Alabama First CD)	\$354	2,550
AL-02 (Alabama Second CD)	\$173	1,414
AL-03 (Alabama Third CD)	\$106	783
AL-04 (Alabama Fourth CD)	\$139	984
AL-05 (Alabama Fifth CD)	\$447	3,754
AL-06 (Alabama Sixth CD)	\$400	2,513
AL-07 (Alabama Seventh CD)	\$279	1,644
AR-01 (Arkansas First CD)	\$205	1,775
AR-02 (Arkansas Second CD)	\$458	4,402
AR-03 (Arkansas Third CD)	\$176	1,546
AR-04 (Arkansas Fourth CD)	\$83	782
AZ-01 (Arizona First CD)	\$270	1,431
AZ-02 (Arizona Second CD)	\$59	499
AZ-03 (Arizona Third CD)	\$174	999
AZ-04 (Arizona Fourth CD)	\$137	663
AZ-05 (Arizona Fifth CD)	\$100	539
AZ-06 (Arizona Sixth CD)	\$183	1,768
AZ-07 (Arizona Seventh CD)	\$160	1,418
AZ-08 (Arizona Eighth CD)	\$336	1,584
AZ-09 (Arizona Ninth CD)	\$87	621
CA-01 (California First CD)	\$201	1,437
CA-02 (California Second CD)	\$305	2,275
CA-03 (California Third CD)	\$174	1,578
CA-04 (California Fourth CD)	\$195	1,269
CA-05 (California Fifth CD)	\$222	1,342
CA-06 (California Sixth CD)	\$108	1,411
CA-07 (California Seventh CD)	\$109	1,422

Congressional district (CD)	Total GDP (millions)	Total employment
CA-08 (California Eighth CD)	\$506	2,055
CA-09 (California Ninth CD)	\$144	747
CA-10 (California Tenth CD)	\$747	2,641
CA-11 (California Eleventh CD)	\$731	2,559
CA-12 (California Twelfth CD)	\$216	1,015
CA-13 (California Thirteenth CD)	\$146	748
CA-14 (California Fourteenth CD)	\$406	1,003
CA-15 (California Fifteenth CD)	\$478	1,601
CA-16 (California Sixteenth CD)	\$521	889
CA-17 (California Seventeenth CD)	\$569	739
CA-18 (California Eighteenth CD)	\$404	1,161
CA-19 (California Nineteenth CD)	\$436	1,322
CA-20 (California Twentieth CD)	\$130	654
CA-21 (California Twenty-first CD)	\$168	831
CA-22 (California Twenty-second CD)	\$96	450
CA-23 (California Twenty-third CD)	\$71	343
CA-24 (California Twenty-fourth CD)	\$346	2,386
CA-25 (California Twenty-fifth CD)	\$141	589
CA-26 (California Twenty-sixth CD)	\$193	1,108
CA-27 (California Twenty-seventh CD)	\$141	501
CA-28 (California Twenty-eighth CD)	\$136	430
CA-29 (California Twenty-ninth CD)	\$190	578
CA-30 (California Thirtieth CD)	\$175	612
CA-31 (California Thirty-first CD)	\$187	546
CA-32 (California Thirty-second CD)	\$212	735
CA-33 (California Thirty-third CD)	\$63	313
CA-34 (California Thirty-fourth CD)	\$149	457
CA-35 (California Thirty-fifth CD)	\$167	789
CA-36 (California Thirty-sixth CD)	\$507	1,835
CA-37 (California Thirty-seventh CD)	\$167	566
CA-38 (California Thirty-eighth CD)	\$144	437
CA-39 (California Thirty-ninth CD)	\$178	758
CA-40 (California Fortieth CD)	\$280	856
CA-41 (California Forty-first CD)	\$114	504
CA-42 (California Forty-second CD)	\$144	422
CA-43 (California Forty-third CD)	\$144	426
CA-44 (California Forty-fourth CD)	\$144	427
CA-45 (California Forty-fifth CD)	\$249	736

Congressional district (CD)	Total GDP (millions)	Total employment
CA-46 (California Forty-sixth CD)	\$242	740
CA-47 (California Forty-seventh CD)	\$244	751
CA-48 (California Forty-eighth CD)	\$134	513
CA-49 (California Forty-ninth CD)	\$165	593
CA-50 (California Fiftieth CD)	\$205	857
CA-51 (California Fifty-first CD)	\$370	1,508
CA-52 (California Fifty-second CD)	\$245	969
CO-01 (Colorado First CD)	\$878	4,554
CO-02 (Colorado Second CD)	\$185	1,190
CO-03 (Colorado Third CD)	\$160	1,660
CO-04 (Colorado Fourth CD)	\$878	7,916
CO-05 (Colorado Fifth CD)	\$481	6,495
CO-06 (Colorado Sixth CD)	\$4,675	33,692
CO-07 (Colorado Seventh CD)	\$633	3,296
CO-08 (Colorado Eighth CD)	\$187	802
CT-01 (Connecticut First CD)	\$514	3,018
CT-02 (Connecticut Second CD)	\$144	979
CT-03 (Connecticut Third CD)	\$397	1,889
CT-04 (Connecticut Fourth CD)	\$4,268	9,218
CT-05 (Connecticut Fifth CD)	\$380	729
DC-01 (District of Columbia First CD)	\$1,230	3,070
DE-01 (Delaware First CD)	\$870	6,721
FL-01 (Florida First CD)	\$602	5,837
FL-02 (Florida Second CD)	\$149	1,094
FL-03 (Florida Third CD)	\$120	978
FL-04 (Florida Fourth CD)	\$219	1,596
FL-05 (Florida Fifth CD)	\$277	2,214
FL-06 (Florida Sixth CD)	\$187	1,923
FL-07 (Florida Seventh CD)	\$780	5,631
FL-08 (Florida Eighth CD)	\$263	2,531
FL-09 (Florida Ninth CD)	\$143	1,053
FL-10 (Florida Tenth CD)	\$987	6,706
FL-11 (Florida Eleventh CD)	\$204	1,474
FL-12 (Florida Twelfth CD)	\$128	1,225
FL-13 (Florida Thirteenth CD)	\$296	2,671
FL-14 (Florida Fourteenth CD)	\$1,701	11,000
FL-15 (Florida Fifteenth CD)	\$396	2,229
FL-16 (Florida Sixteenth CD)	\$1,025	7,442

Congressional district (CD)	Total GDP (millions)	Total employment
FL-17 (Florida Seventeenth CD)	\$172	1,652
FL-18 (Florida Eighteenth CD)	\$400	3,413
FL-19 (Florida Nineteenth CD)	\$266	2,505
FL-20 (Florida Twentieth CD)	\$244	1,448
FL-21 (Florida Twenty-first CD)	\$120	1,088
FL-22 (Florida Twenty-second CD)	\$124	735
FL-23 (Florida Twenty-third CD)	\$238	1,501
FL-24 (Florida Twenty-fourth CD)	\$119	660
FL-25 (Florida Twenty-fifth CD)	\$241	1,416
FL-26 (Florida Twenty-sixth CD)	\$100	624
FL-27 (Florida Twenty-seventh CD)	\$138	893
FL-28 (Florida Twenty-eighth CD)	\$135	1,031
GA-01 (Georgia First CD)	\$226	1,822
GA-02 (Georgia Second CD)	\$221	2,085
GA-03 (Georgia Third CD)	\$190	1,718
GA-04 (Georgia Fourth CD)	\$1,290	3,025
GA-05 (Georgia Fifth CD)	\$3,763	8,133
GA-06 (Georgia Sixth CD)	\$2,254	5,864
GA-07 (Georgia Seventh CD)	\$1,010	2,693
GA-08 (Georgia Eighth CD)	\$144	1,201
GA-09 (Georgia Ninth CD)	\$462	1,964
GA-10 (Georgia Tenth CD)	\$87	713
GA-11 (Georgia Eleventh CD)	\$1,390	4,081
GA-12 (Georgia Twelfth CD)	\$190	1,545
GA-13 (Georgia Thirteenth CD)	\$719	1,756
GA-14 (Georgia Fourteenth CD)	\$210	1,345
HI-01 (Hawaii First CD)	\$782	5,480
HI-02 (Hawaii Second CD)	\$267	1,930
IA-01 (Iowa First CD)	\$275	2,085
IA-02 (Iowa Second CD)	\$442	3,278
IA-03 (Iowa Third CD)	\$745	5,980
IA-04 (Iowa Fourth CD)	\$301	2,196
ID-01 (Idaho First CD)	\$227	2,250
ID-02 (Idaho Second CD)	\$215	2,553
IL-01 (Illinois First CD)	\$167	545
IL-02 (Illinois Second CD)	\$219	1,043
IL-03 (Illinois Third CD)	\$246	786
IL-04 (Illinois Fourth CD)	\$188	592

Congressional district (CD)	Total GDP (millions)	Total employment
IL-05 (Illinois Fifth CD)	\$190	628
IL-06 (Illinois Sixth CD)	\$272	886
IL-07 (Illinois Seventh CD)	\$285	1,158
IL-08 (Illinois Eighth CD)	\$211	695
IL-09 (Illinois Ninth CD)	\$173	581
IL-10 (Illinois Tenth CD)	\$89	466
IL-11 (Illinois Eleventh CD)	\$237	1,022
IL-12 (Illinois Twelfth CD)	\$230	1,690
IL-13 (Illinois Thirteenth CD)	\$258	1,792
IL-14 (Illinois Fourteenth CD)	\$156	735
IL-15 (Illinois Fifteenth CD)	\$231	1,640
IL-16 (Illinois Sixteenth CD)	\$200	1,441
IL-17 (Illinois Seventeenth CD)	\$247	1,817
IN-01 (Indiana First CD)	\$156	1,722
IN-02 (Indiana Second CD)	\$126	1,439
IN-03 (Indiana Third CD)	\$262	3,038
IN-04 (Indiana Fourth CD)	\$69	827
IN-05 (Indiana Fifth CD)	\$105	959
IN-06 (Indiana Sixth CD)	\$152	1,620
IN-07 (Indiana Seventh CD)	\$297	2,450
IN-08 (Indiana Eighth CD)	\$138	1,793
IN-09 (Indiana Ninth CD)	\$133	1,587
KS-01 (Kansas First CD)	\$320	1,987
KS-02 (Kansas Second CD)	\$260	1,521
KS-03 (Kansas Third CD)	\$1,978	7,584
KS-04 (Kansas Fourth CD)	\$800	5,142
KY-01 (Kentucky First CD)	\$143	1,088
KY-02 (Kentucky Second CD)	\$283	1,830
KY-03 (Kentucky Third CD)	\$1,663	12,547
KY-04 (Kentucky Fourth CD)	\$301	2,180
KY-05 (Kentucky Fifth CD)	\$205	1,553
KY-06 (Kentucky Sixth CD)	\$291	2,370
LA-01 (Louisiana First CD)	\$366	1,915
LA-02 (Louisiana Second CD)	\$218	1,382
LA-03 (Louisiana Third CD)	\$226	1,413
LA-04 (Louisiana Fourth CD)	\$169	1,172
LA-05 (Louisiana Fifth CD)	\$648	3,822
LA-06 (Louisiana Sixth CD)	\$283	2,426

Congressional district (CD)	Total GDP (millions)	Total employment
MA-01 (Massachusetts First CD)	\$496	4,415
MA-02 (Massachusetts Second CD)	\$269	2,173
MA-03 (Massachusetts Third CD)	\$210	993
MA-04 (Massachusetts Fourth CD)	\$266	1,551
MA-05 (Massachusetts Fifth CD)	\$333	1,733
MA-06 (Massachusetts Sixth CD)	\$194	1,205
MA-07 (Massachusetts Seventh CD)	\$317	1,615
MA-08 (Massachusetts Eighth CD)	\$224	1,193
MA-09 (Massachusetts Ninth CD)	\$270	1,986
MD-01 (Maryland First CD)	\$167	1,122
MD-02 (Maryland Second CD)	\$241	1,086
MD-03 (Maryland Third CD)	\$344	1,389
MD-04 (Maryland Fourth CD)	\$128	599
MD-05 (Maryland Fifth CD)	\$97	533
MD-06 (Maryland Sixth CD)	\$288	1,572
MD-07 (Maryland Seventh CD)	\$233	929
MD-08 (Maryland Eighth CD)	\$573	2,750
ME-01 (Maine First CD)	\$696	6,142
ME-02 (Maine Second CD)	\$285	2,534
MI-01 (Michigan First CD)	\$278	2,298
MI-02 (Michigan Second CD)	\$135	880
MI-03 (Michigan Third CD)	\$462	2,798
MI-04 (Michigan Fourth CD)	\$170	1,187
MI-05 (Michigan Fifth CD)	\$86	575
MI-06 (Michigan Sixth CD)	\$219	1,096
MI-07 (Michigan Seventh CD)	\$177	1,059
MI-08 (Michigan Eighth CD)	\$408	2,626
MI-09 (Michigan Ninth CD)	\$176	1,084
MI-10 (Michigan Tenth CD)	\$191	1,062
MI-11 (Michigan Eleventh CD)	\$365	1,460
MI-12 (Michigan Twelfth CD)	\$341	1,426
MI-13 (Michigan Thirteenth CD)	\$147	597
MN-01 (Minnesota First CD)	\$630	3,889
MN-02 (Minnesota Second CD)	\$135	775
MN-03 (Minnesota Third CD)	\$269	932
MN-04 (Minnesota Fourth CD)	\$843	3,482
MN-05 (Minnesota Fifth CD)	\$326	1,135
MN-06 (Minnesota Sixth CD)	\$94	434

Congressional district (CD)	Total GDP (millions)	Total employment
MN-07 (Minnesota Seventh CD)	\$226	1,321
MN-08 (Minnesota Eighth CD)	\$294	1,728
MO-01 (Missouri First CD)	\$1,797	10,843
MO-02 (Missouri Second CD)	\$918	7,886
MO-03 (Missouri Third CD)	\$119	1,147
MO-04 (Missouri Fourth CD)	\$105	1,067
MO-05 (Missouri Fifth CD)	\$669	5,666
MO-06 (Missouri Sixth CD)	\$62	659
MO-07 (Missouri Seventh CD)	\$271	3,067
MO-08 (Missouri Eighth CD)	\$192	1,994
MS-01 (Mississippi First CD)	\$142	1,515
MS-02 (Mississippi Second CD)	\$238	1,986
MS-03 (Mississippi Third CD)	\$181	1,579
MS-04 (Mississippi Fourth CD)	\$119	1,117
MT-01 (Montana First CD)	\$355	2,629
MT-02 (Montana Second CD)	\$360	2,661
NC-01 (North Carolina First CD)	\$125	799
NC-02 (North Carolina Second CD)	\$852	5,074
NC-03 (North Carolina Third CD)	\$110	1,178
NC-04 (North Carolina Fourth CD)	\$260	1,652
NC-05 (North Carolina Fifth CD)	\$112	1,109
NC-06 (North Carolina Sixth CD)	\$442	4,032
NC-07 (North Carolina Seventh CD)	\$209	1,960
NC-08 (North Carolina Eighth CD)	\$60	515
NC-09 (North Carolina Ninth CD)	\$127	947
NC-10 (North Carolina Tenth CD)	\$131	1,328
NC-11 (North Carolina Eleventh CD)	\$80	870
NC-12 (North Carolina Twelfth CD)	\$1,154	6,759
NC-13 (North Carolina Thirteenth CD)	\$309	2,635
NC-14 (North Carolina Fourteenth CD)	\$3,987	24,121
ND-01 (North Dakota First CD)	\$491	3,400
NE-01 (Nebraska First CD)	\$264	1,812
NE-02 (Nebraska Second CD)	\$716	4,938
NE-03 (Nebraska Third CD)	\$207	1,597
NH-01 (New Hampshire First CD)	\$993	6,755
NH-02 (New Hampshire Second CD)	\$377	3,353
NJ-01 (New Jersey First CD)	\$718	5,850
NJ-02 (New Jersey Second CD)	\$256	1,910

Congressional district (CD)	Total GDP (millions)	Total employment
NJ-03 (New Jersey Third CD)	\$941	4,254
NJ-04 (New Jersey Fourth CD)	\$538	2,082
NJ-05 (New Jersey Fifth CD)	\$198	894
NJ-06 (New Jersey Sixth CD)	\$589	2,559
NJ-07 (New Jersey Seventh CD)	\$1,629	4,181
NJ-08 (New Jersey Eighth CD)	\$155	846
NJ-09 (New Jersey Ninth CD)	\$141	580
NJ-10 (New Jersey Tenth CD)	\$289	1,014
NJ-11 (New Jersey Eleventh CD)	\$560	1,530
NJ-12 (New Jersey Twelfth CD)	\$1,221	4,833
NM-01 (New Mexico First CD)	\$201	2,299
NM-02 (New Mexico Second CD)	\$131	1,464
NM-03 (New Mexico Third CD)	\$109	1,467
NV-01 (Nevada First CD)	\$150	819
NV-02 (Nevada Second CD)	\$427	3,036
NV-03 (Nevada Third CD)	\$142	751
NV-04 (Nevada Fourth CD)	\$585	2,864
NY-01 (New York First CD)	\$225	696
NY-02 (New York Second CD)	\$202	549
NY-03 (New York Third CD)	\$494	1,398
NY-04 (New York Fourth CD)	\$518	1,416
NY-05 (New York Fifth CD)	\$140	392
NY-06 (New York Sixth CD)	\$393	1,169
NY-07 (New York Seventh CD)	\$427	1,106
NY-08 (New York Eighth CD)	\$182	685
NY-09 (New York Ninth CD)	\$236	645
NY-10 (New York Tenth CD)	\$561	1,291
NY-11 (New York Eleventh CD)	\$333	1,040
NY-12 (New York Twelfth CD)	\$1,326	2,909
NY-13 (New York Thirteenth CD)	\$758	1,185
NY-14 (New York Fourteenth CD)	\$193	564
NY-15 (New York Fifteenth CD)	\$163	496
NY-16 (New York Sixteenth CD)	\$327	1,095
NY-17 (New York Seventeenth CD)	\$368	1,425
NY-18 (New York Eighteenth CD)	\$1,156	4,595
NY-19 (New York Nineteenth CD)	\$416	2,306
NY-20 (New York Twentieth CD)	\$1,930	9,515
NY-21 (New York Twenty-first CD)	\$261	1,335

Congressional district (CD)	Total GDP (millions)	Total employment
NY-22 (New York Twenty-second CD)	\$1,145	5,803
NY-23 (New York Twenty-third CD)	\$362	1,789
NY-24 (New York Twenty-fourth CD)	\$241	1,161
NY-25 (New York Twenty-fifth CD)	\$1,615	7,476
NY-26 (New York Twenty-sixth CD)	\$814	3,710
OH-01 (Ohio First CD)	\$628	2,770
OH-02 (Ohio Second CD)	\$93	470
OH-03 (Ohio Third CD)	\$621	3,312
OH-04 (Ohio Fourth CD)	\$132	816
OH-05 (Ohio Fifth CD)	\$175	1,146
OH-06 (Ohio Sixth CD)	\$136	893
OH-07 (Ohio Seventh CD)	\$137	680
OH-08 (Ohio Eighth CD)	\$446	2,323
OH-09 (Ohio Ninth CD)	\$177	1,126
OH-10 (Ohio Tenth CD)	\$674	4,646
OH-11 (Ohio Eleventh CD)	\$370	1,693
OH-12 (Ohio Twelfth CD)	\$369	2,138
OH-13 (Ohio Thirteenth CD)	\$684	3,704
OH-14 (Ohio Fourteenth CD)	\$208	1,190
OH-15 (Ohio Fifteenth CD)	\$305	1,714
OK-01 (Oklahoma First CD)	\$1,786	11,604
OK-02 (Oklahoma Second CD)	\$179	1,394
OK-03 (Oklahoma Third CD)	\$178	1,349
OK-04 (Oklahoma Fourth CD)	\$111	931
OK-05 (Oklahoma Fifth CD)	\$659	4,380
OR-01 (Oregon First CD)	\$236	1,562
OR-02 (Oregon Second CD)	\$244	2,294
OR-03 (Oregon Third CD)	\$133	1,109
OR-04 (Oregon Fourth CD)	\$196	1,697
OR-05 (Oregon Fifth CD)	\$165	1,357
OR-06 (Oregon Sixth CD)	\$318	2,141
PA-01 (Pennsylvania First CD)	\$1,171	2,455
PA-02 (Pennsylvania Second CD)	\$2,857	3,918
PA-03 (Pennsylvania Third CD)	\$9,906	16,320
PA-04 (Pennsylvania Fourth CD)	\$1,012	2,775
PA-05 (Pennsylvania Fifth CD)	\$743	1,838
PA-06 (Pennsylvania Sixth CD)	\$1,829	3,994
PA-07 (Pennsylvania Seventh CD)	\$1,043	3,821

Congressional district (CD)	Total GDP (millions)	Total employment
PA-08 (Pennsylvania Eighth CD)	\$543	1,973
PA-09 (Pennsylvania Ninth CD)	\$230	895
PA-10 (Pennsylvania Tenth CD)	\$633	1,942
PA-11 (Pennsylvania Eleventh CD)	\$246	997
PA-12 (Pennsylvania Twelfth CD)	\$765	2,113
PA-13 (Pennsylvania Thirteenth CD)	\$275	1,013
PA-14 (Pennsylvania Fourteenth CD)	\$313	1,108
PA-15 (Pennsylvania Fifteenth CD)	\$357	1,407
PA-16 (Pennsylvania Sixteenth CD)	\$399	1,741
PA-17 (Pennsylvania Seventeenth CD)	\$513	1,272
RI-01 (Rhode Island First CD)	\$172	960
RI-02 (Rhode Island Second CD)	\$588	3,143
SC-01 (South Carolina First CD)	\$185	1,594
SC-02 (South Carolina Second CD)	\$742	6,071
SC-03 (South Carolina Third CD)	\$169	1,549
SC-04 (South Carolina Fourth CD)	\$1,151	9,768
SC-05 (South Carolina Fifth CD)	\$269	2,970
SC-06 (South Carolina Sixth CD)	\$203	1,570
SC-07 (South Carolina Seventh CD)	\$309	3,022
SD-01 (South Dakota First CD)	\$769	5,823
TN-01 (Tennessee First CD)	\$238	2,435
TN-02 (Tennessee Second CD)	\$687	5,649
TN-03 (Tennessee Third CD)	\$176	1,628
TN-04 (Tennessee Fourth CD)	\$108	991
TN-05 (Tennessee Fifth CD)	\$396	3,613
TN-06 (Tennessee Sixth CD)	\$229	2,200
TN-07 (Tennessee Seventh CD)	\$219	1,973
TN-08 (Tennessee Eighth CD)	\$86	778
TN-09 (Tennessee Ninth CD)	\$197	1,535
TX-01 (Texas First CD)	\$483	2,801
TX-02 (Texas Second CD)	\$190	871
TX-03 (Texas Third CD)	\$750	2,495
TX-04 (Texas Fourth CD)	\$446	1,731
TX-05 (Texas Fifth CD)	\$989	2,715
TX-06 (Texas Sixth CD)	\$395	1,083
TX-07 (Texas Seventh CD)	\$167	591
TX-08 (Texas Eighth CD)	\$196	834
TX-09 (Texas Ninth CD)	\$154	535

Congressional district (CD)	Total GDP (millions)	Total employment
TX-10 (Texas Tenth CD)	\$263	1,048
TX-11 (Texas Eleventh CD)	\$192	1,088
TX-12 (Texas Twelfth CD)	\$157	623
TX-13 (Texas Thirteenth CD)	\$319	1,887
TX-14 (Texas Fourteenth CD)	\$197	1,155
TX-15 (Texas Fifteenth CD)	\$678	3,740
TX-16 (Texas Sixteenth CD)	\$2,181	12,978
TX-17 (Texas Seventeenth CD)	\$244	1,155
TX-18 (Texas Eighteenth CD)	\$253	841
TX-19 (Texas Nineteenth CD)	\$388	2,431
TX-20 (Texas Twentieth CD)	\$616	2,284
TX-21 (Texas Twenty-first CD)	\$1,030	3,688
TX-22 (Texas Twenty-second CD)	\$108	502
TX-23 (Texas Twenty-third CD)	\$253	1,076
TX-24 (Texas Twenty-fourth CD)	\$786	1,936
TX-25 (Texas Twenty-fifth CD)	\$142	664
TX-26 (Texas Twenty-sixth CD)	\$144	458
TX-27 (Texas Twenty-seventh CD)	\$228	1,278
TX-28 (Texas twenty-eighth CD)	\$192	783
TX-29 (Texas Twenty-ninth CD)	\$176	549
TX-30 (Texas Thirtieth CD)	\$1,349	2,963
TX-31 (Texas Thirty-first CD)	\$97	478
TX-32 (Texas Thirty-second CD)	\$1,381	3,368
TX-33 (Texas Thirty-third CD)	\$743	1,669
TX-34 (Texas Thirty-fourth CD)	\$571	3,182
TX-35 (Texas Thirty-fifth CD)	\$456	1,440
TX-36 (Texas Thirty-sixth CD)	\$134	643
TX-37 (Texas Thirty-seventh CD)	\$1,385	5,114
TX-38 (Texas Thirty-eighth CD)	\$214	755
UT-01 (Utah First CD)	\$193	1,395
UT-02 (Utah Second CD)	\$325	1,636
UT-03 (Utah Third CD)	\$474	2,891
UT-04 (Utah Fourth CD)	\$553	2,755
VA-01 (Virginia First CD)	\$211	1,545
VA-02 (Virginia Second CD)	\$494	3,581
VA-03 (Virginia Third CD)	\$425	2,711
VA-04 (Virginia Fourth CD)	\$167	1,286
VA-05 (Virginia Fifth CD)	\$153	1,499

Congressional district (CD)	Total GDP (millions)	Total employment
VA-06 (Virginia Sixth CD)	\$199	1,276
VA-07 (Virginia Seventh CD)	\$88	681
VA-08 (Virginia Eighth CD)	\$506	5,408
VA-09 (Virginia Ninth CD)	\$147	1,734
VA-10 (Virginia Tenth CD)	\$918	3,855
VA-11 (Virginia Eleventh CD)	\$509	4,742
VT-01 (Vermont First CD)	\$554	4,542
WA-01 (Washington First CD)	\$256	1,478
WA-02 (Washington Second CD)	\$204	1,370
WA-03 (Washington Third CD)	\$392	4,262
WA-04 (Washington Fourth CD)	\$125	1,270
WA-05 (Washington Fifth CD)	\$404	4,729
WA-06 (Washington Sixth CD)	\$125	1,122
WA-07 (Washington Seventh CD)	\$268	1,524
WA-08 (Washington Eighth CD)	\$147	813
WA-09 (Washington Ninth CD)	\$218	1,152
WA-10 (Washington Tenth CD)	\$317	2,610
WI-01 (Wisconsin First CD)	\$145	796
WI-02 (Wisconsin Second CD)	\$950	5,111
WI-03 (Wisconsin Third CD)	\$323	1,881
WI-04 (Wisconsin Fourth CD)	\$662	3,479
WI-05 (Wisconsin Fifth CD)	\$202	994
WI-06 (Wisconsin Sixth CD)	\$442	2,626
WI-07 (Wisconsin Seventh CD)	\$153	948
WI-08 (Wisconsin Eighth CD)	\$648	4,029
WV-01 (West Virginia First CD)	\$653	4,744
WV-02 (West Virginia Second CD)	\$366	2,947
WY-01 (Wyoming First CD)	\$347	3,277



OXFORD
ECONOMICS

Global headquarters

Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK
Tel: +44 (0)1865 268900

London

4 Millbank
London, SW1P 3JA
UK
Tel: +44 (0)203 910 8000

Frankfurt

Marienstr. 15
60329 Frankfurt am Main
Germany
Tel: +49 69 96 758 658

New York

5 Hanover Square, 8th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Singapore

6 Battery Road
#38-05
Singapore 049909
Tel: +65 6850 0110

Europe, Middle East and Africa

Oxford
London
Belfast
Dublin
Frankfurt
Paris
Milan
Stockholm
Cape Town
Dubai

Americas

New York
Philadelphia
Boston
Chicago
Los Angeles
Toronto
Mexico City

Asia Pacific

Singapore
Hong Kong
Tokyo
Sydney

Email:

mailbox@oxfordeconomics.com

Website:

www.oxfordeconomics.com

Further contact details:

www.oxfordeconomics.com/about-us/worldwide-offices