

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH



CALIFORNIA TECH-E-COMMERCE JOBS AND TAX REVENUES

BY: MICHAEL MANDEL / 06.22.2021

The large tech and ecommerce companies have become massive job generating and income creating machines, hiring hundreds of thousands of workers in the United States. This is one of the great hiring surges in history, providing well-paying jobs for an unprecedented number of workers.

But just looking at hiring by the tech giants themselves does not fully answer the question of their impact on the labor market. It could be that, like tall trees, they block the sunlight and keep other tech companies and ecommerce companies stunted.

This “ecosystem dominance” would manifest as weak job and income growth in the tech-e-commerce sector as a whole. If true, this harm to workers becomes a powerful justification for strong regulatory and antitrust growth against the tech giants. In other words, chopping down the trees would help the rest of the forest grow.

Alternatively, strong job and income growth across all tech and ecommerce industries would show the tech giants—who invested a stunning \$65 billion in the United States in 2020—are

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

sense would call for regulatory prudence. As the saying goes “if it ain’t broke, don’t fix it.”

California

For this blog post we will focus on the job, income, and tax impact of the tech-e-commerce sector on California, which is the headquarters of three out of the four tech giants. In addition, in the [fourth quarter of 2020](#), Amazon employed more workers in California (153,000+) than it does in Washington (80,000+).

Our analysis builds on PPI’s April 2021 paper, “Innovative Job Growth in the 21st Century: Has the Tech-Ecommerce Ecosystem Become the New Manufacturing?”. The [tech-e-commerce ecosystem](#) includes five tech industries and three ecommerce industries. The tech industries are computer and electronic production manufacturing (NAICS 3341); publishing (NAICS 5112); data processing and hosting (NAICS 518); Internet publishing and search, and other information services (NAICS 519); and computer systems design and programming (NAICS 5415). The three ecommerce industries are electronic shopping and mail order houses (NAICS 4541); local delivery (NAICS 492); and ecommerce fulfillment and warehousing (NAICS 493).

We draw on Bureau of Labor Statistics data from the Quarterly Census of Employment and Wages (QCEW). This dataset reports on all wages, salaries, and bonuses, including ordinary income from exercised stock options. We look at the five-year period from 2015 to 2020, which includes the pandemic year.

Table 1. Strong Job and Labor Income Growth in California’s Tech-Ecommerce Sector

Tech-e-commerce sector	Percentage change, 2015-2020			
	California	Core tech counties*	Rest of California	United States
Jobs	38%	30%	43%	31%
Total wage and salary income**	76%	77%	74%	56%

*San Francisco, San Mateo, Santa Clara

**Includes exercised stock options

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

Table 1 shows the growth of jobs and labor income in California's tech-e-commerce sector from 2015 to 2020. Tech-e-commerce jobs rose by 38% over the five-year stretch in California, compared to 31% in the United States as a whole. Meanwhile, private sector jobs rose by 0.3% in California and fell by 0.3% nationally (not shown on table).

Wages and salaries in California's tech-e-commerce sector rose by an astounding 76% from 2015-2020, compared to 56% nationally. Meanwhile, private sector wages and salaries rose by 31% in California, and 21% nationally.

Table 2 shows the importance of the tech-e-commerce sector for California's economy. The tech-e-commerce sector added 350,000 jobs between 2015-2020 in the state, and \$100 billion in additional wage and salary income. That means the tech-e-commerce sector accounted for 38% of the entire increase in private sector wages in the state over that period.

Table 2. Tech-Ecommerce Sector Powers California Income Growth

Tech-e-commerce sector	California	Core tech counties	Rest of California	United States
Increase in jobs, 2015-2020 (thousands)	350	113	237	1738
Increase in wage income, 2015-2020 (billions of dollars)	\$100	\$62	\$37	\$289
Share of private sector wages, 2020 (percent)	21%	45%	11%	11%
Share of private sector wage growth, 2015-2020 (percent)	38%	56%	25%	22%

*San Francisco, San Mateo, Santa Clara

**Includes exercised stock options

Data: BLS QCEW

Note that Table 1 and Table 2 break out the core tech counties, San Francisco, San Mateo, and Santa Clara, from the rest of the state. Taken together, the two tables show that both the core

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

forced a dramatic decline of brick-and-mortar retail jobs in the state. At the same time, the number of ecommerce jobs increased by more than enough to counteract the decline of brick-and-mortar retail. Moreover, the ecommerce jobs were substantially better paid on average.

As a result, when we combine brick-and-mortar retail with ecommerce industries in California, the number of net jobs rose by 28,000. Average annual pay rose by 22 percent.

Table 3. California's Ecommerce Industries Create Net New Jobs and Boost Average Pay

Brick-and mortar retail	Thousands of jobs	Average annual pay
2015	1611	33229
2020	1475	40199
Change, 2015-2020	-136	
Ecommerce industries		
2015	207	54078
2020	372	55882
Change, 2015-2020	164	
Brick-and-mortar retail plus ecommerce		
2015	1819	35608
2020	1847	43360
Change, 2015-2020	28	

Data: BLS QCEW

Finally, we turn to the question of the impact of the tech-e-commerce sector on personal income taxes in California. Tax collections have come in much stronger than expected, with

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

How much of that gain is accounted for by the tech-e-commerce sector? There are several issues with making this calculation. The state government reports and forecasts tax revenue data on a fiscal year basis, while our data on the tech-e-commerce sector is on a calendar year basis and stops with 2020. Second, our definition of the tech-e-commerce sector includes a wide variety of industries, with average annual pay that runs from roughly \$50,000 to well over \$300,000. Third, much of the surge in personal tax revenues is coming from capital gains, which is directly connected with the success of the tech-e-commerce sector but is not reported in the BLS QCEW data.

Nevertheless, we can make a back-of-the-envelope estimate of the personal tax revenue generated by the tech-e-commerce sector. First, let's start by looking the increases in personal tax revenues coming from wage and salary income (included ordinary income from exercised stock options) over the 2015-2020 period. By our estimate, the increase in tech-e-commerce wages and salaries accounts for roughly 37% of the increase in personal tax revenues from wages and salaries in the 2015-2020 period.

But of course, there has been a surge in capital gains revenues as well. If we attribute half the unanticipated increase in capital gains in 2020 to the tech-e-commerce sector, then tech-e-commerce accounts for roughly 42% of the increase in California personal tax revenues from 2015 to 2020. This should be viewed as a rough estimate rather than a final number.

TWITTER FEED



PPI @ppi · 2h



"Roads connect us, broadband connects us. We have to make sure that everybody has access to it."

-- @RepDavids on a new episode of #RadicallyPragmatic 
<https://podcasts.apple.com/us/podcast/joint-episode-mosaic-e...>

   Twitter



PPI @ppi · 3h



Don't miss @crystalswann of PPI's @MosaicPPI on this week's episode of the Essential Podcast!  ↓

  1  1 Twitter



PPI @ppi · 3h



California's economic success is linked to the thriving tech-e-commerce sector which accounted for 37-42% of growth in CA's personal income tax revenues since 2015.

ISSUES

OUR WORK

QUICKLINK ISSUES

Politics

Health Care

Education

Tax

Economy

Tech & eCommerce

Broadband

Energy & Environment

Transportation

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

RELATED BLOG ARTICLES

BLOG

BLOG

<

>

Carolina Postcard: W

ISSUES

OUR WORK

PRESS

BLOG

EVENTS

PROJECTS

ABOUT US

SEARCH

SOCIAL MEDIA



CONNECT

1156 15th Street NW, Ste 400
Washington, DC 20005
Tel: 202-525-3926
Fax: 202-525-3941

[Home](#) [Issues](#) [Our Work](#) [Press](#) [Blog](#) [Events](#) [Projects](#) [Podcasts](#) [About Us](#) [Search](#) [Donate](#)

COPYRIGHT © 2021 THE PROGRESSIVE POLICY INSTITUTE. ALL RIGHTS RESERVED.