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THE ECONOMIC IMPACT OF **ONTARIO** INTERNATIONAL AIRPORT

SEPTEMBER 2022



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EXECUTIVE SUMMARY



The Los Angeles-Long Beach Combined Statistical Area, California

Ontario International Airport plays an integral role in the economy of the Southern California region, specifically in and around the Inland Empire. Oxford Economics was commissioned by Ontario International Airport to complete an economic impact study of the airport on the Los Angeles-Long Beach Combined Statistical Area.¹ The analysis laid out in this report quantifies the impact of airport operations, on-site logistics company operations, and visitor spending in the region through direct, indirect, and induced channels.

ECONOMIC IMPACT OF ONTARIO INTERNATIONAL AIRPORT

The impact of economic activity taking place at Ontario International Airport itself, including the activity of the airport authority, airlines and their suppliers, government workers, airport concessions, and logistics companies is estimated at **\$3.8 billion** in 2022. This will support **\$2.2 billion in GDP** and **27,800 jobs**. The bulk of these impacts—71% of the GDP impacts and 76% of the jobs impacts—reflect the impact of visitor spending in the region.

This \$2.2 billion of local economic activity (GDP) will result in a total of \$571 million in tax impact. This consists of \$319 million in federal tax impacts and \$253 million in state and local impacts. As with the GDP impacts, the majority (71%) of these tax impacts are driven by the spending of visitors to the region.

ECONOMIC IMPACT OF THE LOCAL LOGISTICS INDUSTRY

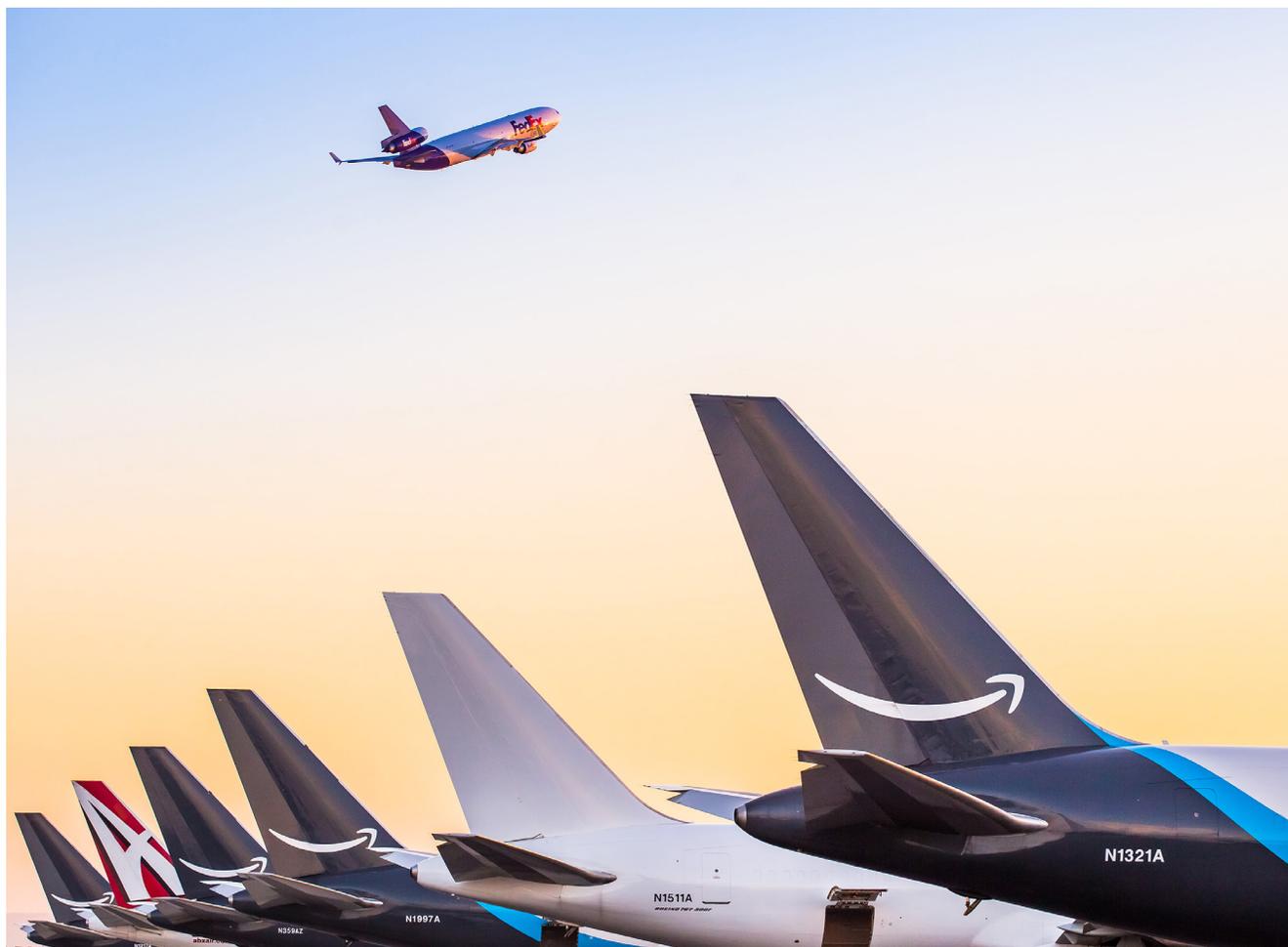
Oxford Economics' analysis of the Inland Empire region would be incomplete without looking at the broader economic impacts of the logistics industry surrounding Ontario International Airport. The concentration of e-commerce and goods moving companies in the area and significant investments in warehouses and other facilities highlight the boundless economic opportunities in the area. This report brings attention to the major industry players that have invested in facilities both at and around the airport, and the local business leaders whose businesses have been boosted or even made possible in the first place by the Inland Empire's transportation hub, at the center of which is Ontario International Airport.

As the Ontario International Airport Authority not only improved existing facilities at the airport in recent years but also built new ones to better leverage existing resources, airport tenants have also made significant investments at and around the airport:

- FedEx Express has unveiled a \$290 million project at Ontario International Airport with innovative automated technologies designed to improve service efficiencies;
- FedEx Ground has made considerable investments in the Inland Empire region with plans to spend over \$90 million;
- UPS has opened its Western Regional Air Hub in Ontario to process over 400,000 packages daily; and

- Amazon has spent over \$19 billion in the Inland Empire since 2010 and is developing its largest warehouse globally in the city of Ontario.

The Inland Empire logistics industry is growing rapidly. Between 2019 to 2021, wage and salary employment in the logistics industry grew 44%, from 121,600 to 175,700. Within the eight zip codes immediately adjacent to Ontario International Airport total logistics industry employment in 2020 was 71,475, or approximately 41% of the total logistics employment throughout the Inland Empire (173,544). The total economic impact of the logistics activity in the eight zip codes adjacent to Ontario International Airport was \$17.8 billion of economic output, \$9.9 billion of GDP, and 122,200 jobs. This activity generated \$2.3 billion in federal, state, and local taxes.



1. INTRODUCTION

1.1 OVERVIEW

Ontario International Airport (ONT), established in 1929 and located two miles east of Ontario, California, is a key driver of economic activity in Southern California and in the Inland Empire² specifically.³ According to *Global Traveler*, a leading publication for frequent fliers, ONT has been awarded the title of the fastest growing airport in the US four years in row as of December 2021.⁴ As a full-service airport, it provides commercial travel options to one of the fastest growing counties by population in the US⁵ while simultaneously functioning as a major hub for international logistics companies that rely on air cargo.⁶

The Ontario International Airport Authority commissioned Oxford Economics to conduct

this analysis of the economic impact of Ontario International Airport. This report quantifies the impact both of the economic activity at the airport itself, along with the catalytic effects associated with the spending by visitor to the region who arrive at Ontario International Airport. As the airport serves as an important e-commerce hub underpinning the logistical operations of companies such as Amazon, FedEx, and UPS, Oxford Economics has also completed a detailed impact analysis of the airport's cargo related operations and the region's broader logistics industry. Various community stakeholders were also engaged in the development of this report, and provide qualitative insight into the integral role of the airport in supporting the local economy.

1.2 GROWTH STORY

Prior to the devastating effect of the COVID-19 pandemic on the air transport industry, Ontario International Airport experienced rapid growth in both passenger and freight volumes (see Fig. 1). Total passengers⁷ grew from 4.0 million in 2013 to 5.6 million in 2019, a total increase of 41%, or an annualized increase of 6% per year. This success is rooted in a targeted growth strategy and highly effective resource management. Most importantly, one of the key determinants of the airport's success has been the dedication and determination of the local community and engaged stakeholders in turning around

the impact of years of limited funding and competing priorities.⁸

Ontario International Airport is currently owned by the Ontario International Airport Authority (under a Joint Powers Agreement or JPA between the City of Ontario and the County of San Bernardino).⁹ The airport was initially developed, owned, and operated by the City of Ontario in 1929 but federal funding shortages led Ontario to enter a JPA with Los Angeles in which the airport was then to be administered by Los Angeles World Airports (LAWA). Although

2 We use the term "Inland Empire" synonymously with the Riverside-San Bernardino-Ontario, CA MSA, which consists of Riverside and San Bernardino counties.

3 See <https://www.flyontario.com/airport-information/economic-impact>.

4 See <https://www.kvcrnews.org/local-news/2021-12-27/ontario-international-ranked-fastest-growing-airport-in-the-u-s>.

5 See <https://iebizjournal.com/ontario-international-airport-achieves-milestone-in-march-as-passenger-volume-exceeded-pre-pandemic-level>.

6 See <https://iebizjournal.com/ontario-international-airport-optimism-for-2021-after-a-challenging-2020>.

7 I.e., summing both arriving and departing passengers.

8 See <https://www.stinson.com/assets/htmldocuments/Ontario.pdf>.

9 See <https://www.flyontario.com/corporate/airport-information>.

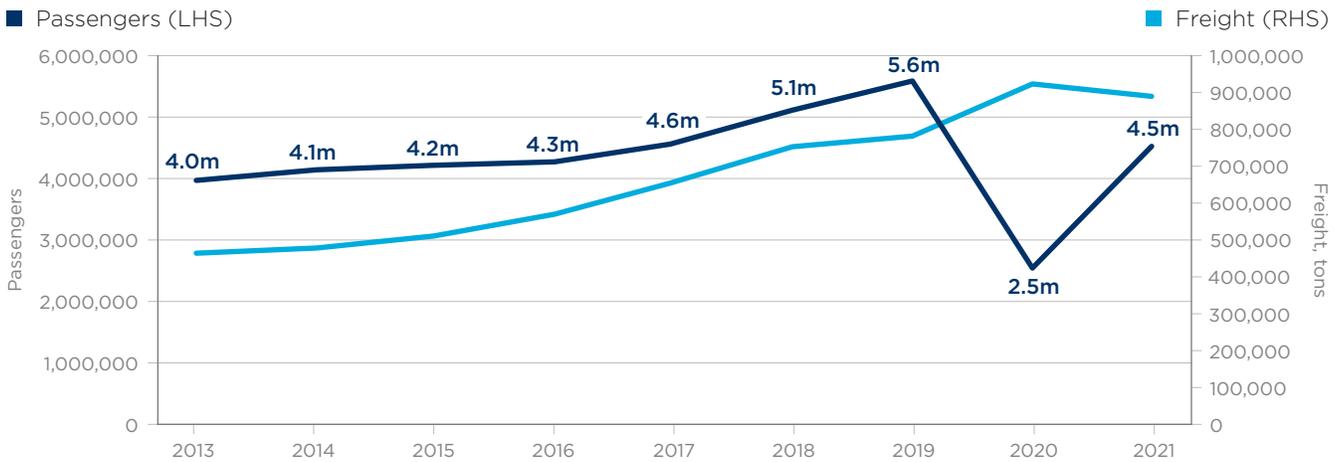
the City of Ontario retained ownership of the airport at this time, it transferred ownership to Los Angeles in 1985 due to a new acquisition agreement under which LA was required to use its best efforts to grow air service operations at the airport. The airport experienced positive growth until 2008, when a combination of the financial crisis and poor airport management led to catastrophic economic impacts to the airport and its surrounding communities.¹⁰

Ontario and San Bernardino formed the Ontario International Airport Authority and began the legal battle to regain ownership of the airport with resounding support from the local community. After several years of litigation, the deal to transfer the airport to the OIAA was finalized in 2016.¹¹ Since then, the OIAA has

worked to employ dedicated professionals and experienced leaders to reclaim the airport’s role as a vital economic engine for the Riverside and San Bernardino counties.

Despite reduced travel during the pandemic, by September 2021, the airport quickly bounced back and passenger volume returned to 97% of pre-pandemic levels. Additional investments in infrastructure, branding, and other key components to improve the travel experience (such as upgraded dining and retail options) have led to consistent growth and a promising future. **By March 2022, passenger volumes at ONT had surpassed pre-pandemic levels, ranking ONT among the fastest recovering airports in the country.**

Fig. 1. Ontario International Airport passenger and freight volume, 2013-2021¹²



Source: Ontario International Airport Authority, Oxford Economics

¹⁰ See <https://www.stinson.com/assets/htmldocuments/Ontario.pdf>.

¹¹ *Ibid.*

¹² See <https://www.flyontario.com/air-service/statistics>.

1.3 CARGO AND LOGISTICS

Ontario International Airport's reputation as a premier aviation gateway is not limited to passenger travel. The airport has consistently remained an important air cargo hub and ranked in the top 10 largest US airports for air cargo by the FAA in 2021.¹³ During the pandemic, while passenger travel declined, demand for e-commerce surged.¹⁴ Ontario International Airport had the second highest air cargo growth out of all airports nationwide in 2020 and was one out of only two airports to experience double digit growth in air cargo that year.¹⁵

Ontario International Airport plays an integral role in the US logistics industry. UPS, Amazon, and FedEx not only fly out of the airport, but also have large sorting facilities located at

the airport sustaining regional employment. Consistent investment and ongoing projects in the immediate areas surrounding the airport have supported the rapid growth of the cargo and logistics industry and the broader regional economy. Industry leaders recognize the strategic value of the Inland Empire and the role that the airport plays in multiplying opportunities across sectors of the economy. As noted by the President and CEO of the Inland Empire Economic Partnership (IEEP), Paul Granillo, **“Ontario International Airport is the center of the regional economy. The industries supported by the airport are among the largest employers in the Inland Empire, and future economic growth will happen in lockstep with expanded service from the airport.”**

1.4 BUSINESS AND CONNECTIVITY HUB

As investment into the development of airport facilities continues, the airport and surrounding Inland Empire region have become increasingly strategic locations for growing businesses and new opportunities. Headquartered in Redlands, a city in southern California, Esri is a global market leader in geographic information systems software, location intelligence, and mapping. According to Don Berry, Chief Operating Officer for Esri, Ontario International Airport enables the company to stay connected to its global customers. Esri regularly brings senior IT executives from organizations around the

world to its global headquarters for training in its software and to better understand new technologies and challenges. For example, the company recently held its Chief Information Officer Summit at its Redlands, CA campus and regularly hosts meetings of its international distributors on campus as well. Without access through Ontario International Airport, it would be far less convenient to host global and national conferences and training sessions at the Redlands campus. As Mr. Berry explains: **“The fact that Ontario is here is why this location works for Esri.”**

¹³ See https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/cy21_cargo_airports.

¹⁴ See <https://www.aircargonews.net/cargo-airport/cargo-the-bright-spot-last-year-at-ontario-international-airport>.

¹⁵ See <https://www.dailybulletin.com/2020/09/01/ontario-airport-second-in-nation-with-highest-air-cargo-growth-in-2020>.

2. ECONOMIC IMPACT

This section quantifies the economic impact of Ontario International Airport to the Los Angeles-Long Beach Combined Statistical Area in 2022. Economic impacts are estimated using a technique called input-output modeling, which is described in the box on pages 11-12. Data sources for these estimates are outlined below and described in greater detail in Appendix B.

In section 2.1, we quantify the impact of economic activity taking place at Ontario International Airport itself, including the activity of the airport authority, airlines and their suppliers, government workers, airport concessions, and logistics companies (e.g., FedEx and UPS) operating at the airport itself. This section also quantifies the

economic activity generated by the spending of visitors to the region who arrive at Ontario International Airport on travel related expenses, such as hotels, recreation, and dining.

In section 2.2, we explore the economic impact of the broader logistics industry of the Inland Empire. The Inland Empire's logistics sector has significantly high levels of employment due to many factors including the presence of Ontario International Airport. The large concentration of logistics firms in the zip codes immediately adjacent to the airport speak to the critical role the airport plays in accommodating intermodal freight while supporting regional employment and driving economic growth.

2.1 ECONOMIC IMPACT OF ONTARIO INTERNATIONAL AIRPORT

In this section, we quantify the economic impact of Ontario International Airport in three key areas:

- The **economic activity at the airport itself** (excluding logistics, which is broken out below). This includes:
 - Operations of the airport authority
 - Operations of airlines
 - Suppliers for airport and airline operations at the airport¹⁶
 - Retail and restaurant concessions¹⁷
 - Government workers at the airport (security, police, and emergency personnel)¹⁸

- Operations of **logistics companies** (parcel services such as UPS and FedEx) operating at the airport itself.
- Activity supported by the **spending of visitors to the region** arriving at Ontario International Airport.

The primary data source used to estimate the activity taking place at the airport, including on-airport logistics, is the headcount employment at the airport in each of the industry categories referenced above. This headcount employment is based on the number of active employment-related security badges, data about which were provided directly by the

¹⁶ These are part of the indirect impact. Indirect impacts for other categories (e.g. logistics companies' supply chains) are also included in the estimates. Suppliers of airlines and airports are broken out here because they are estimated based on airport badge data.

¹⁷ These concession impacts are discounted to avoid double-counting of spending by visitors to the region; concession impacts only include sales to Southern California residents.

¹⁸ Impacts from government spending include only direct employee compensation and induced impacts. Indirect (supply chain) impacts and direct impacts other than employee compensation are omitted.

Ontario International Airport Authority. These employment values served as inputs to the economic impact modeling, which used standard industry activity patterns for the region scaled by employment size. Additional details are provided in Appendix B, which also provides in Fig. 12 a breakout by job function of the 4,158 active security badges as of July 2022.

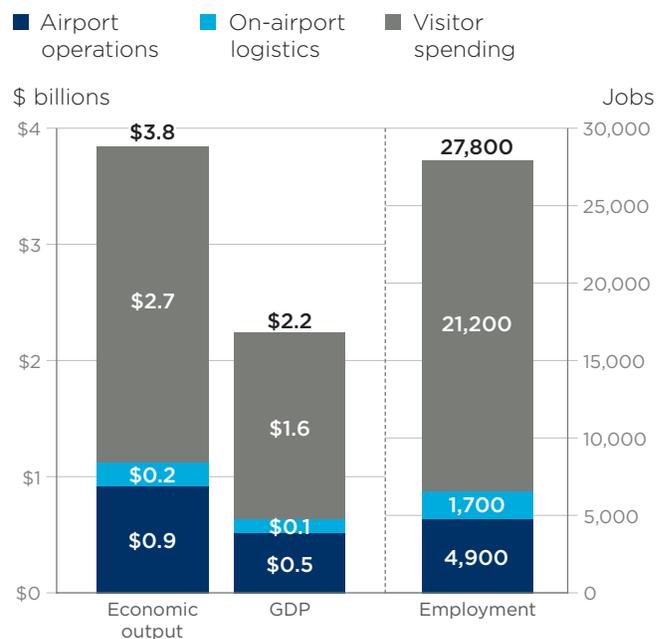
The passenger spending impacts are driven by an estimated \$1.58 billion of the total spending by visitors to the region who arrive at Ontario International Airport. This estimate is calculated as follows:



Additional methodological details are provided in Appendix B.

In 2022, the total economic impact of Ontario International Airport across these three categories of impacts is projected at **\$3.8 billion of economic output**.¹⁹ This is equivalent to 1.2% of the total economy of the Inland Empire, which had an estimated GDP of \$188 billion and economic output of \$330 billion in 2020.²⁰ (Note, however, that the economic impacts quantified here are for the whole of the Los Angeles-Long Beach CSA, so not all of this impact is within the Inland Empire.) The largest share of that (\$2.7 billion) is the result of visitors’ spending, with airport operations contributing \$900 million and on-airport logistics \$200 million. This supports **\$2.2 billion in GDP, and 27,800 jobs** (Fig. 2).

Fig. 2. Economic impact of Ontario International Airport operations and visitors, 2022²¹



Source: Oxford Economics

19 As described in the methodology box on page 12, economic output sums the total sales or revenue of entities through the supply chain, while GDP sums the value-added.

20 These figures are from IMPLAN, based on data from the Bureau of Economic Analysis and elsewhere. At the time of publication, 2020 was the most recent data available.

21 Throughout, sums may not add to totals because of independent rounding.

METHODOLOGICAL INTRODUCTION: ECONOMIC IMPACT ANALYSIS

Economic impact results were calculated using an input-output model constructed using IMPLAN software, an industry standard.²² Input-output models capture the flow of value throughout the economy, following the inter-industry linkages of supply chains. All results quantify the economic activity in the Los Angeles-Long Beach Combined Statistical Area (CSA).²³ Results are for 2022, and are presented in 2022 dollars.

In making our calculations, Oxford Economics examined three categories of activity at Ontario International Airport outlined below:

- **Ontario International Airport economic activity:** This includes airport authority operations, airline operations, suppliers for airport authority and airline operations, retail and restaurant concessions, and government workers at the airport. This section excludes logistics.
- **Visitor spending:** This captures the activity supported by the travel and tourism spending of out-of-area visitors to the region who arrive at Ontario International Airport.
- **Logistics companies' operations:** In our core impact results, this includes logistics companies' (such as UPS and FedEx) operations at Ontario International Airport itself (e.g., loading

and unloading cargo from aircraft). Additionally, in section 2.2, we explore the broader logistics industry in the immediate vicinity of the airport, and the entirety of the logistics industry in the Inland Empire.

In calculating our results, we include to the following three “channels” of economic activity. These distinguish among spending for direct operations, the supply-chain supporting those operations, and wider impacts as the additional employees from the first two channels (direct and suppliers) spend their wages in the broader US economy. The three channels are defined as follows:

- **Direct:** These are the jobs and activity attributable directly to airlines and airport operations, on-site logistics company operations, or hotels and services directly catering to visitors arriving at the airport.
- **Indirect:** These are the employment and value-added contributions that are attributable to the supply chain supporting the direct operations of the airlines, airports, on-site logistics companies, or hospitality and related services companies.
- **Induced:** This includes the economic benefit that results as employees and others in the supply chain spend their incomes in the local community.

²² See www.implan.com.

²³ Economic impact results are estimated relative to a specific geography. The Los Angeles-Long Beach CSA consists of five southern California counties: Los Angeles, Orange, Riverside, San Bernardino, and Ventura. Economic activity taking place within these counties is captured in the model.

These three channels are summarized graphically in Fig. 3 below.

These impacts are quantified according to the following four metrics:

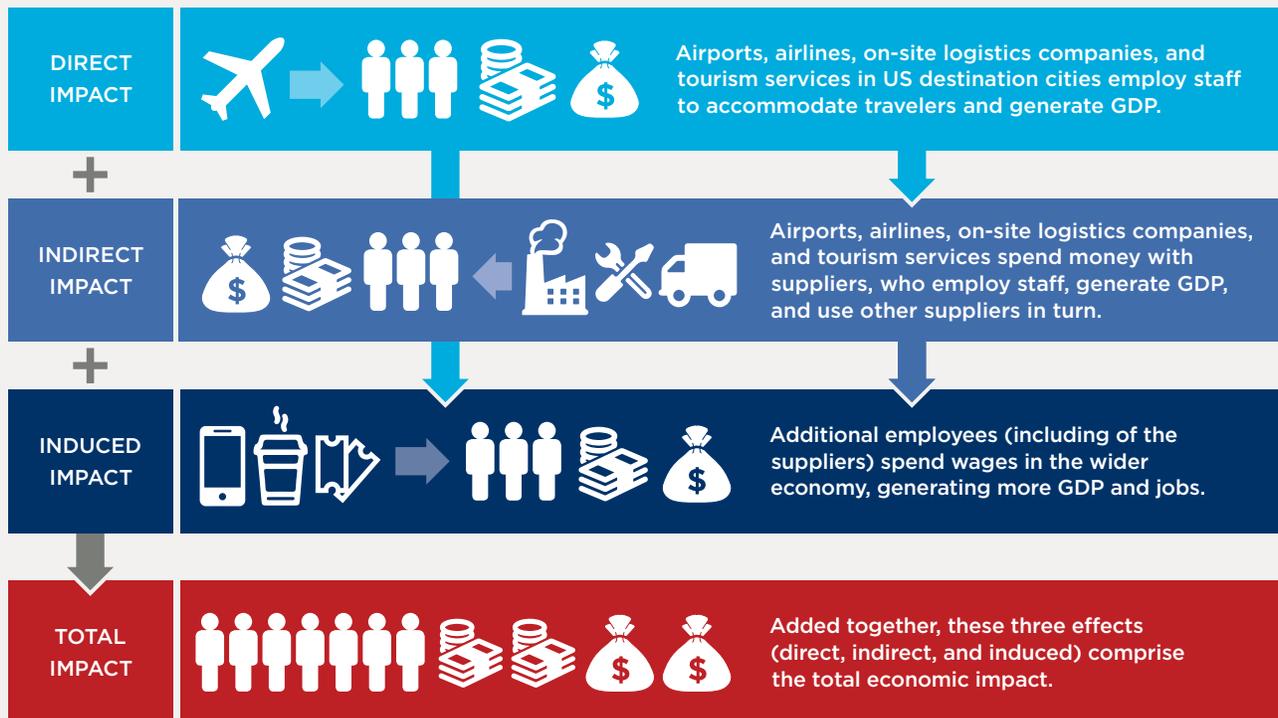
- **Economic output:** This represents the sum of sales or revenue of entities through the supply chain. Because total sales includes the value of production inputs, totaling economic output of different entities through the supply chain results in double-counting the economic activity that goes into producing these goods and services.
- **GDP:** GDP avoids the double-counting problem noted above by totaling only

the economic value-added of each entity in the supply chain, and thus reflects the sum of economic activity occurring in the region as a result of the activity being modeled.²⁴

- **Employment:** This represents the headcount employment associated with the economic activity being quantified.
- **Taxes:** This includes taxes at the local, state and federal levels as a result of the economic activity.

Additional details of the data, assumptions, and estimates that underpin the economic impact model can be found in Appendix B.

Fig. 3. The relationship among direct, indirect, and induced channels



²⁴ As an example, assume company A purchases \$50 of production inputs from outside the region, adds \$25 of value, and then sells the resulting \$75 in output to company B. B then adds \$35 of value and sells the resulting \$110 of output to consumers. The total economic output in the region would be \$185 (\$75 of economic output sold by A plus \$110 of economic output sold by B). The regional GDP impact would be \$60 (\$25 of value-added by A plus \$35 of value-added by B), which is equivalent to the total value of the final output (\$110) minus the total regional imports of production inputs (\$50).

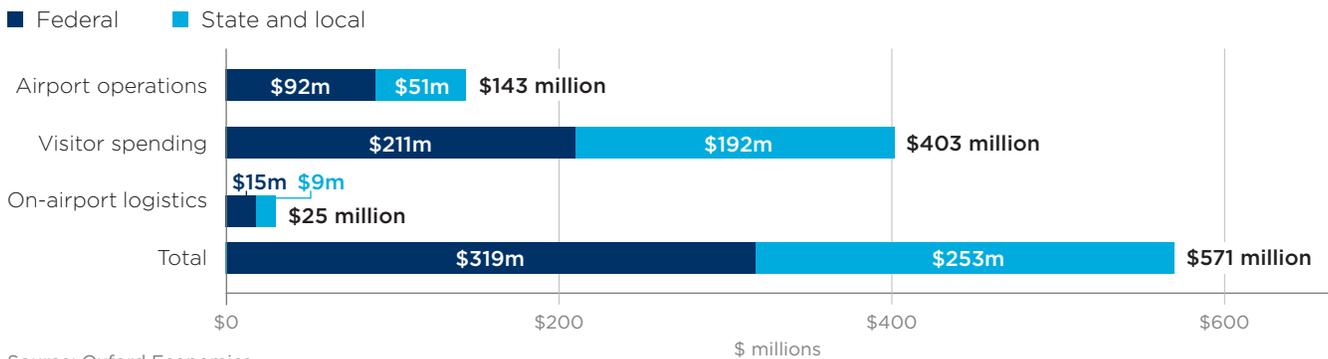
Additional detail, including breakouts by direct, indirect, and induced channels of impact, are provided in Fig. 10 in Appendix A.

Approximately three-quarters of these impacts—71% of the GDP impacts and 76% of the jobs impacts—are from visitor spending in the region, which is typical of airport economic impact assessments. The relative scale of these two types of impacts makes sense if one considers the spending driving them: Visitor spending impacts are driven by an assumed \$976 of spending per arriving visitor, with visitors representing 48% of all travelers, implying \$469 of spending per traveler for all travelers. Airport operational impacts (excluding logistics) are supported by approximately one half of the airfare paid by travelers arriving at or departing from Ontario International Airport (one half

because the value is roughly split between the departure and arrival airports, with some of the ticket value going to airline profits and expenses not at airports). Note, however, that this does not reflect the structure of the modeling of airport operational impacts, which are estimated based on actual employment at Ontario International Airport, rather than on passenger spending on airline tickets.

This \$2.2 billion of local economic activity (GDP) generated by Ontario International Airport is expected to result in a total of \$571 million in tax impacts (Fig. 4). This consists of \$319 million in federal tax impacts and \$253 million in state and local impacts. As with the GDP impacts, the majority (71%) of these tax impacts are driven by the spending of visitors to the region.

Fig. 4. Tax impacts of Ontario International Airport operations and visitors



Source: Oxford Economics

2.2 ECONOMIC IMPACT OF THE LOCAL LOGISTICS INDUSTRY

The previous section quantified the economic impact of operations at Ontario International Airport, including that of 1,208 direct employees of logistics companies who work at ONT itself, performing tasks such loading and unloading cargo from aircraft. However, focusing only on the employees of logistics firms who physically work at the airport excludes the many thousands of logistics workers who work in the immediate vicinity of the airport without going through airport security.

The logistics industry is critical to the economy of the Inland Empire. Access to Ontario International Airport—a large international airport with the capacity to handle cargo flights—is a major factor in the region’s suitability as the primary logistics hub of Southern California. The region’s geographic proximity to the city of Los Angeles, and the availability of land on which to build modern logistics facilities, are also important factors in its success as a major logistics hub.²⁵

²⁵ We define the “logistics industry” to comprise three North American Industry Classification System (NAICS) codes: truck transportation (484), couriers and messengers (492), and warehousing and storage (493). See <https://www.census.gov/naics> for industry definitions.

2.2.1 Logistics facilities and ongoing investment

In recent years, the Ontario International Airport Authority has not only improved existing facilities at the airport but also built new ones to better leverage existing resources.²⁶ Airport tenants have been eager to mirror the airport's investments. The surge in online shopping and air cargo volumes during the COVID-19 pandemic has only accelerated the growth and development of this air cargo infrastructure.²⁷

During the first year of the pandemic, FedEx Express unveiled a \$290 million project at Ontario International Airport with innovative automated technologies designed to improve service efficiencies.²⁸ UPS has expanded its Western Regional Air Hub in Ontario to process over 400,000 packages daily.²⁹ FedEx Ground has also made considerable investments in the Inland Empire region with plans to spend over \$90 million.³⁰ Meanwhile, Amazon has spent over \$19 billion in the Inland Empire since 2010. In its most recent move to supplement its growing number of fulfilment centers in the area,

Amazon is developing its largest warehouse globally in the city of Ontario.³¹

Developing and proposed real estate projects at Ontario International Airport will bring state of the art logistics infrastructure, streamlined customs clearance, and light industrial development to the Inland Empire, according to Elisa Grey, Director of Commercial Real Estate at Ontario International Airport. Currently proposed near the airport is 4.1 million square feet of e-commerce and light industrial space; a project that will be further supported by a new Container Freight Station (CFS) that has 120,000 square feet to be used for international cargo clearance. As Ms. Grey explains, "These developments are driven by market demand. Carriers want to transport international cargo directly to the Inland Empire and the CFS will allow that to happen. That in turn attracts advanced manufacturers who rely on air service for time-sensitive electronic components." These proposed real estate developments are expected to bring both economic and

ENABLING SOLUTIONS IN A POST-PANDEMIC ECONOMY

From her perspective as President of Bank of America Inland Empire, Bansree Parikh has her pulse on the Inland Empire's economy. Labor and supply-shortages are the leading constraints confronting businesses in today's economy and Ontario International Airport is playing a key part in helping local businesses and the region meet these challenges. For example, as the logistics industry transforms itself through new technologies, many of the high-value, time-sensitive components that are critical to that technological transformation are transported to the region through Ontario International Airport. The same is true

for advanced manufacturers located in the Valley. Next generation logistics and advanced manufactures require robotics, chips, and electronic circuitry that depend on speedy transport through Ontario International Airport. As Ms. Parikh notes, **"Next generation logistics and advanced manufacturing require skilled labor and advanced technologies. For the Inland Empire to be successful in meeting this challenge, both skilled workers and advanced components required for technological transformation will depend on Ontario International Airport for speedy, easy access to the region."**

²⁶ <https://airportimprovement.com/article/space-constraints-rapid-growth-spark-new-cargo-facilities-ontario-int-l>.

²⁷ <https://www.ttnews.com/articles/developer-plans-1-million-square-foot-warehouse-ontario-calif>.

²⁸ <https://emeryair.net/air-cargo-construction-is-booming-thanks-to-amazon>.

²⁹ <https://abc7.com/ups-ontario-holiday-season-new-facility/11217359>.

³⁰ <https://economicimpact.fedex.com/data/2021-FedEx-Economic-Impact-Report.pdf>.

³¹ <https://startempirewire.com/inland-empire-amazons-largest-warehouse>.

environmental benefits to the region. Together these projects will potentially employ nearly 4,000 people when fully operational and help reduce truck traffic currently required to move cargo from LAX to the Inland Empire.

Ongoing investment in the logistics and goods moving sector in the Inland Empire has quickly

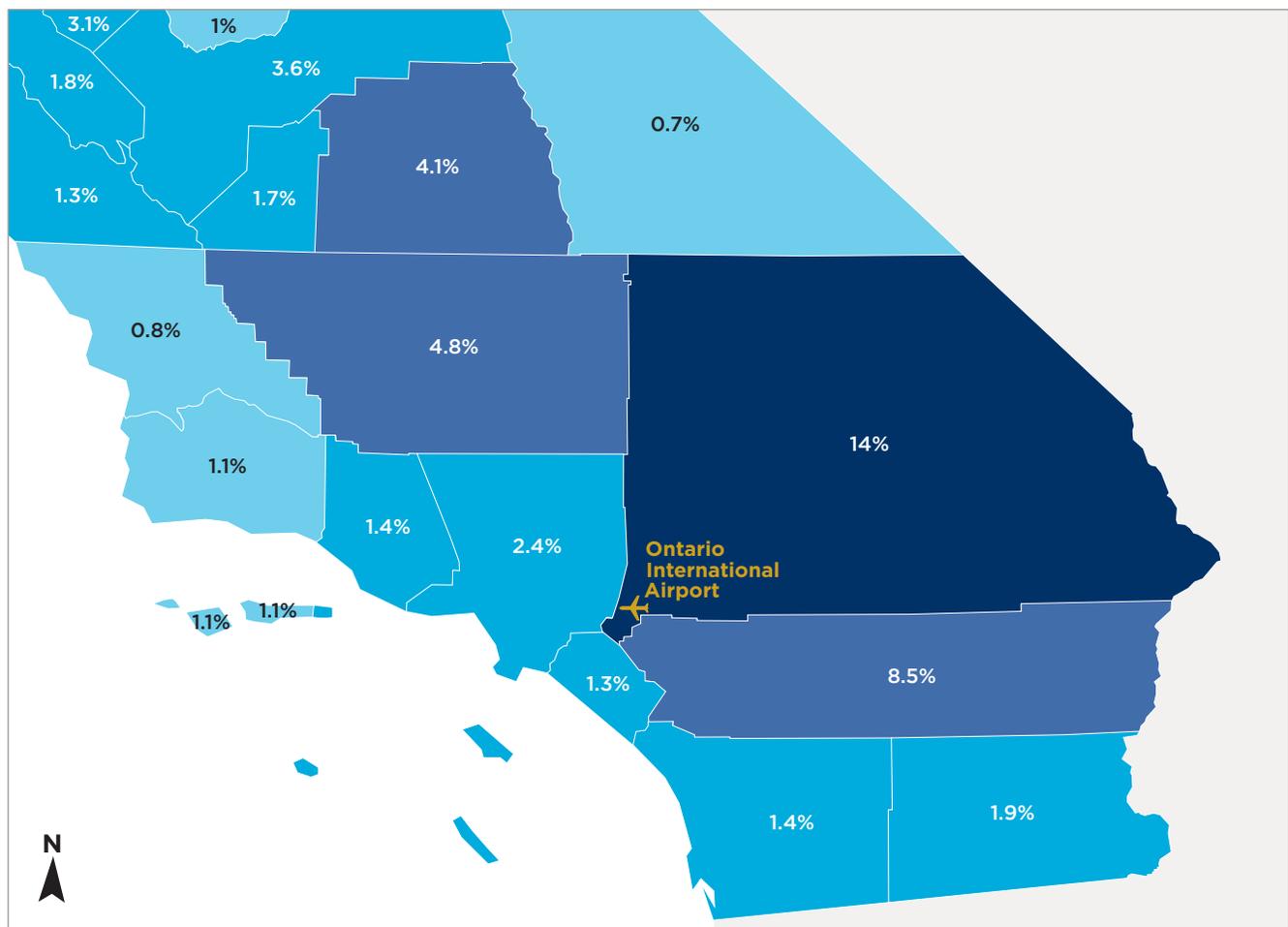
propelled the region to the forefront of the industry nationally. As this concentrated and consistent growth does not seem to be slowing, Ontario International Airport’s importance as a logistics and connectivity hub will only continue to increase, providing regional employment and a range of economic opportunities.

2.2.2 Logistics industry employment

A total of 14.0% of wage and salary workers in San Bernardino County, and 8.5% of those in Riverside County are employed directly by

the logistics industry, the two highest shares of Southern California Counties (see Fig. 5).³² Across the two counties, which had a wage and

Fig. 5. Percent of county wage and salary employment in the logistics industry by county, 2021



Source: Oxford Economics, QCEW

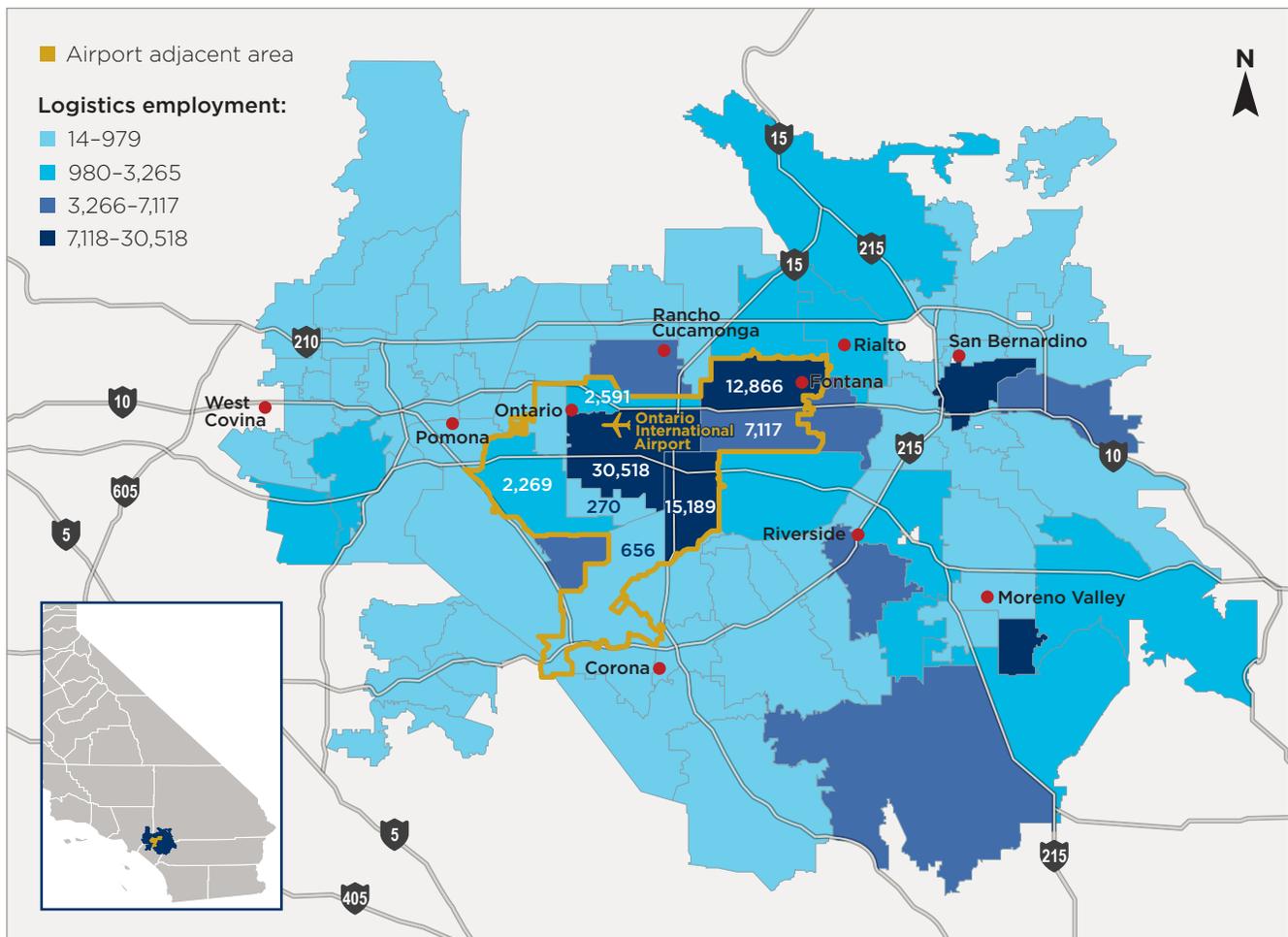
³² State-wide, only San Joaquin County, with 14.7% of wage and salary workers employed in logistics, beats either of these.

salary employment of 1,556,600 in 2021,³³ there were 175,700 jobs in the logistics industry, or one out of every nine jobs (11%).

The Inland Empire logistics industry is also growing rapidly. Over just two years from 2019 to 2021, logistics employment grew 44%, from 121,600 to 175,700 (Fig. 6). The majority of these jobs (69%) were in warehousing & storage, with an additional 18% in truck transportation and 13% in courier & messenger services.

Remarkably, 41% of the Inland Empire’s total logistics industry employment is located in the eight zip codes immediately adjacent to Ontario International Airport (see map in Fig. 7), according to estimates from IMPLAN.³⁴ According to IMPLAN, the total logistics industry employment in these eight zip codes in 2020 was 71,475, with employment in the Inland Empire as a whole of 173,544.³⁵ These values serve as the basis for the economic impact results presented below.³⁶

Fig. 7. Map of logistics employment by zip code, 2020



Source: Oxford Economics, IMPLAN

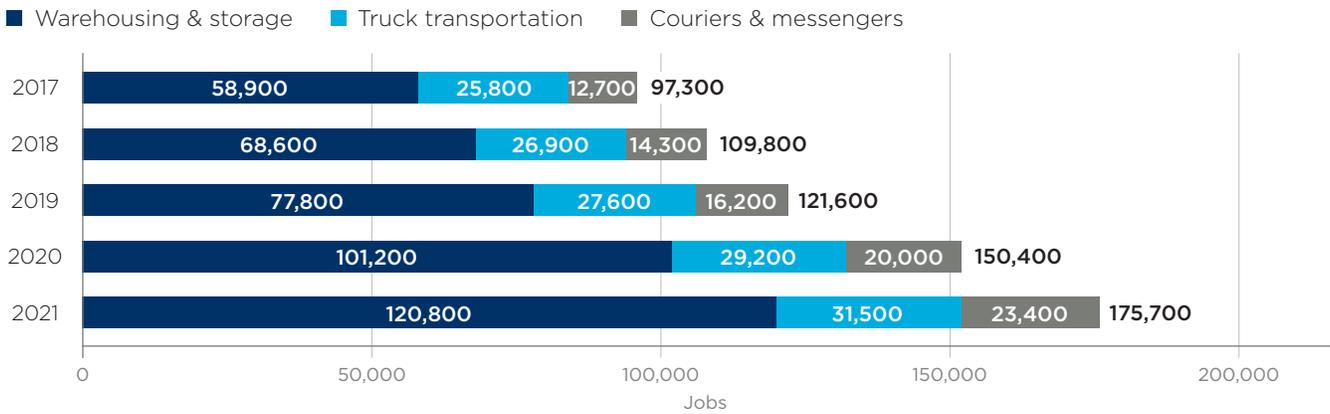
³³ Source: Quarterly Census of Employment and Wages (QCEW). Note that this total excludes the self-employed, who are included in indirect and induced economic impact estimates reported elsewhere.

³⁴ Because of privacy concerns, government data do not provide comprehensive zip-code level employment by industry. IMPLAN combines multiple government data sources, including the Economic Census and the County Business Patterns, to estimate these values.

³⁵ IMPLAN estimates include “proprietor” (i.e., self) employment along with wage and salary employment. Estimates for 2021 were not yet available when this paper was written.

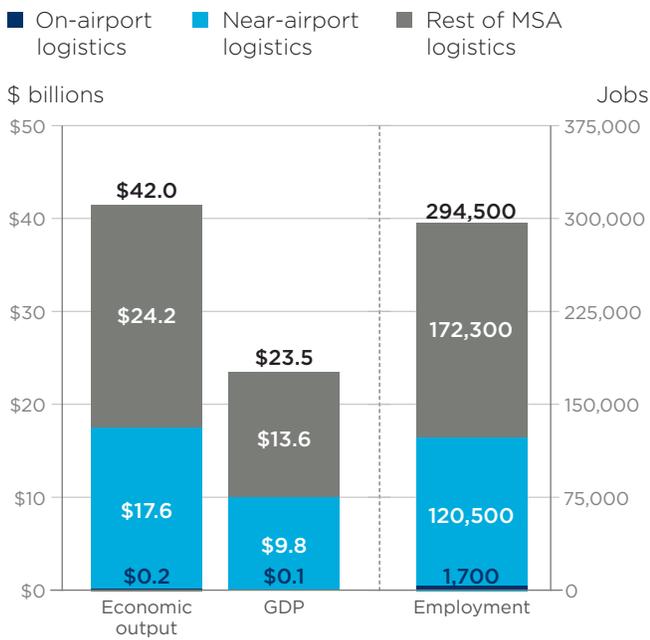
³⁶ Impacts are based on 2020 employment, but for consistency with the rest of the report, are reported in 2022 dollars.

Fig. 6. Inland Empire logistics industry wage and salary employment, 2017-2021³⁷



Source: BLS QCEW, Oxford Economics

Fig. 8. Economic impact of the Inland Empire logistics industry, 2022



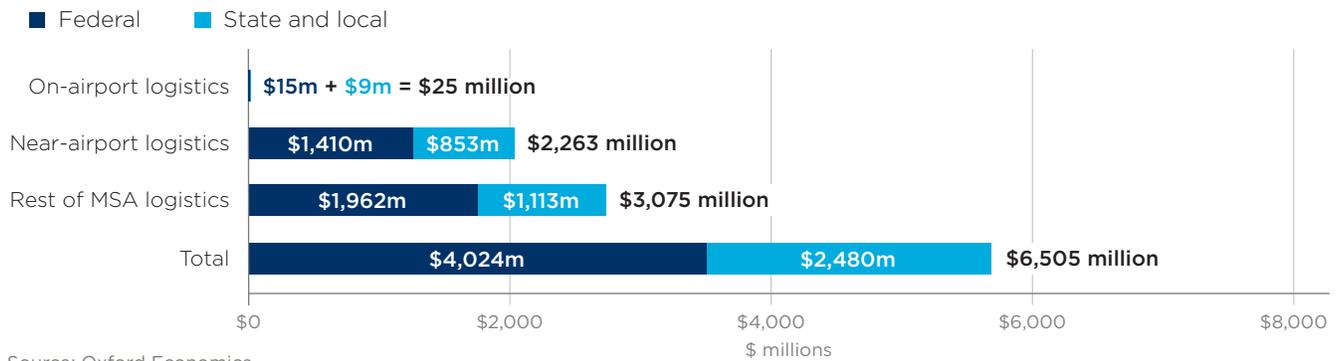
Source: Oxford Economics

The total economic impact of the logistics activity in the eight zip codes adjacent to Ontario International Airport (including on-airport logistics activity) is \$17.8 billion of economic output, \$9.9 billion of GDP, and 122,200 jobs (Fig. 8). This represents about 42% of the total \$23.5 billion GDP impact and 41% of the total 294,500 jobs impact of the logistics industry in the entire Inland Empire.

The \$9.9 billion in local economic activity (GDP) supported by the logistics industry in the zip codes adjacent to Ontario International Airport is expected to generate \$2.3 billion in federal, state, and local taxes. The broader logistics industry in the rest of the Inland Empire is projected to create an additional \$3.1 billion in tax impacts (Fig. 9).

³⁷ These figures are from the QCEW and do not include self-employment. Impact results below do include estimates of self-employment based on IMPLAN data.

Fig. 9. Tax impacts of the Inland Empire logistics industry, 2022³⁸



3. CONCLUSION

Ontario International Airport plays an integral role in Southern California's economy, and specifically within and around the Inland Empire region. It is projected that in 2022, the combined activities of the airport itself, logistics companies operating at the airport, and the spending of visitors to the region will produce an economic output of \$3.8 billion, with \$2.2 billion in value-added local economic activity (GDP), sustaining 27,800 jobs across direct, indirect, and induced channels. The economic impact of visitor spending in the region is expected to be the largest contributor to the total economy, followed by airport operations, and on-airport logistics.

While the economic impacts outlined above focus on the activities occurring at Ontario International Airport, the San Bernardino and Riverside counties which make up the Inland Empire are home to a thriving logistics industry. The logistics sector in this region grew through the pandemic at a rate of 44% from 2019 to 2021, providing employment

opportunities in the warehousing & storage, truck transportation, and couriers & messaging industries. A substantial 41% of the Inland Empire's entire logistics industry employment is within the eight zip codes immediately adjacent to Ontario International Airport. This cluster of logistics activity immediately adjacent to the airport, whose magnitude is estimated based on the most recently available employment data from 2020, is estimated to produce \$17.8 billion of economic output, contribute \$9.9 billion to local GDP, and sustain 122,200 jobs.

Recent and ongoing investments in the Inland Empire region by global e-commerce and logistics companies reflect the optimism surrounding the region's ascent to the forefront of the national logistics industry. Industry leaders and business executives tout the remarkable growth in opportunities for businesses and employees alike and cannot overestimate the positive impacts of the economic activity supported by the airport and its surrounding area to the broader economy.



APPENDIX A: DETAILED RESULTS

Fig. 10 presents a more detailed version of the economic impact results across direct, indirect, and induced channels and broken down by operations and logistics activity.

Fig. 10. Detailed impact results

Operations and logistics activity		Total	Direct	Indirect	Induced
Output (\$ millions)	Airline operations	\$352	\$226	\$59	\$67
	Airport operations	\$33	\$17	\$6	\$10
	Airline and airport suppliers	\$392	\$203	\$73	\$116
	Government employees	\$86	\$44	\$0	\$42
	Airport concessions	\$2,700	\$1,392	\$624	\$684
	On-airport logistics	\$203	\$98	\$54	\$50
	Near-airport logistics	\$17,575	\$8,128	\$4,717	\$4,730
	Rest of MSA logistics	\$24,250	\$11,207	\$6,443	\$6,599
GDP (\$ millions)	Airline operations	\$218	\$147	\$30	\$41
	Airport operations	\$19	\$9	\$3	\$6
	Airline and airport suppliers	\$221	\$110	\$40	\$71
	Government employees	\$70	\$44	\$0	\$26
	Airport concessions	\$1,575	\$806	\$347	\$422
	On-airport logistics	\$113	\$54	\$28	\$31
	Near-airport logistics	\$9,786	\$4,300	\$2,567	\$2,918
	Rest of MSA logistics	\$13,577	\$5,991	\$3,514	\$4,072
Jobs	Airline operations	1,067	460	239	368
	Airport operations	195	105	35	55
	Airline and airport suppliers	2,286	1,232	413	640
	Government employees	1,168	937	0	231
	Airport concessions	21,194	14,497	2,916	3,781
	On-airport logistics	1,741	1,208	254	279
	Near-airport logistics	120,454	70,267	24,003	26,184
	Rest of MSA logistics	172,283	102,069	33,695	36,519

Source: Oxford Economics,

APPENDIX B: METHODOLOGY

MODELING BASICS

Economic impact estimates were calculated using IMPLAN economic impact software, an industry standard.³⁹ All models were constructed for the Los Angeles-Long Beach, CA MSA.⁴⁰ The underlying economic data for the modeling is

from 2019, which was selected over 2020 due to concerns about the economic effects of COVID-19, and because data for 2021 were not yet available. However, the reference year for all models is 2022, and all results are in 2022 dollars.

INPUT ASSUMPTIONS

Airport operations

Data sources for all the models are described briefly in the main body of the text and are expanded upon here. The primary data source for airport operations and on-airport logistics was security badge data provided by the Airport Authority, which are interpreted as headcount employment in the relevant industries (Fig. 11).

Several adjustments were made when using the data in Fig. 10 as model inputs:

- To compensate for including badge data on airline and airport suppliers, the supply chain spending for the airlines, airport, and the airline and airport suppliers themselves was adjusted to remove any additional spending on support services for air transport (i.e., the entire supply chain in this category is assumed to be already captured in the badge data itself).
- Concessions were adjusted to avoid double-counting with the visitor spend data. Specifically, the impacts were reduced 48%, corresponding to the share of Ontario International Airport passengers who are

out-of-area visitors, and whose spending (including on airport concessions) is already captured in the visitor spending impact.

- For government workers, indirect (supply chain) impacts were suppressed, along with direct impacts aside from employee compensation. Induced impacts from this compensation were included.

Fig. 11. Number of security badges by category

Category	Number of workers
Airlines	460
Airport	105
Airline & airport suppliers	1,232
Concessions	216
Government workers	937
On-airport logistics	1,208
Total	4,158

Source: Ontario International Airport Authority

³⁹ www.implan.org.

⁴⁰ In order to capture cross-border trade with the rest of the country, a multi-regional input output (MRIO) framework was used, with the rest of the United States excluding the Los Angeles-Long Beach MSA constituting the second region. All results are for economic activity in the Los Angeles-Long Beach MSA only. In practice, the amount of additional economic activity captured through this MRIO modeling, which reflects supply chain spending that crosses the MSA border twice (or more) is small.

Visitor spending

As described in the main text, the model is driven by an estimated \$1.580 billion in visitor spending in 2022. This is calculated as the product of 3,386,000 arriving passengers (estimated by Oxford Economics based on historical arrival data), 47.8% of incoming passengers coming from out of the region (based on historical data from OAG; the remaining 52.2% of passengers are locals returning home), and an average spend of \$976 per trip (based on estimates from the Oxford Economics Travel and Tourism Databank).

This total spending is then distributed among spending categories based on data from the Bureau of Economic Analysis' 2020 Travel and Tourism Satellite Account on the spending patterns of travelers, summarized in Fig 12.⁴¹

Logistics industry

The logistics industry is modeled as industry employment impacts (i.e., using default patterns for the relevant industries based solely on headcount employment) using employment values derived from IMPLAN. As noted in the text, these values are estimated at the zip code level by IMPLAN. The eight zip codes immediately adjacent to Ontario International

Retail sales are attributed to specific spending categories using data on household spending in the MSA.

Fig. 12. Visitor spending pattern

Spend category	Spend share
Food service	32%
Accommodations	23%
Arts, entertainment & recreation	15%
Retail sales	15%
Local transportation & gas	12%
Food stores	4%

Source: Oxford Economics

Airport (see map in Fig. 6) are labeled the "near airport" region, with values for this region reported separately. We define the logistics industry to comprise three industries: truck transport (NAICS 484), couriers and messengers (492), and warehousing and storage (493). Precise values for these input assumptions are given in Fig. 13 below.

Fig. 13. Logistics employment in Inland Empire, 2020 used as model inputs

Region	Truck transport	Couriers and messengers	Warehousing and storage	Total
On airport	0	1,208	0	1,208
Near airport	21,502	14,105	34,660	70,267
Total on and near airport	21,502	15,313	34,660	71,475
Rest of MSA	19,504	13,988	68,577	102,069
Total MSA	41,006	29,301	103,237	173,544

Source: Oxford Economics, IMPLAN



➡ Gates 401-414 ⬅ Ground Transportation
➡ Elevator ⬅ Restrooms ⬅ Ticketing

➡ Training ⬅ Gift Shop ⬅ All Air Transportation

➡ Restrooms ⬅ All Air Transportation

Office Information Security Check

Restroom

101 Pro



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