

San Diego Association of Governments
California Department of Transportation,
District 11

Economic Impacts of Wait Times at the San Diego–Baja California Border

Final Report

January 19, 2006

EXECUTIVE SUMMARY

OVERVIEW

Congestion at border crossings between San Diego County and Baja California causes more delay and travel time uncertainty for cars, trucks and pedestrians than at any time in history. Steady growth in global and regional economic integration squeezes ever more people and goods through border infrastructure that was sized for a much smaller and radically less security-conscious economy.

In today's global economy, economic growth of a region is directly related to its level of openness and trade with the rest of the world and the neighboring region in particular. For instance, people movement between Baja California and San Diego County fuels the economic activities in San Diego County, especially the retail sector. Freight movement, on the other hand, has a much broader impact as it significantly affects the labor market in the Mexican side, the retail and manufacturing market in the U.S. side, and the capital market in both sides of the border as the ownership of these operations are spread throughout the two countries. In essence, delay at the border has both a local impact when it comes to personal trips and a broader regional and national impact when it comes to freight movement.

Over sixty million people cross the San Diego County/Baja California border annually. More than half of the trips are for shopping and recreation. Some ten million are trips to and from work. Fully ninety percent of all personal trips across the border are local in character, either starting or finishing in San Diego County or Tijuana/Tecate.

Nearly 730,000 trucks travel across the San Diego County/Baja California ports of entry from Mexico annually and a similar number is estimated to cross southbound. Congested truck traffic at border crossings has an especially dampening impact on economic expansion. Delay hinders the ability of manufacturers in the border regions, including the maquiladoras, to support the kind of businesses that depend on reliable logistics for the distribution of freight. In an increasingly just-in-time manufacturing economy, unpredictable wait times for trucks at the border act as a barrier to trade that slows and inhibits cross-border economic investment opportunities. Cross-border traffic generates significant income for retailers, hotels and recreation businesses on both sides of the border. However, by discouraging some from making trips across the border, congestion inhibits potential growth in business income and therefore hinders trade in the long term.

PURPOSE OF STUDY

This study quantifies the local, regional and national economic opportunities missed because of current and projected traffic congestion and delays at the border of San Diego County and Baja California. We examine the economic effects of congestion on the two primary forms of cross-border movement, including personal trips by auto and foot, and cross-border freight operations.

ANALYSIS FRAMEWORK

An analytic model is employed that quantifies the incremental direct, indirect, and induced impacts of congestion on both sides of the border.¹ Uncertainty in economic multipliers and other key assumptions is addressed by using a probabilistic risk analysis and by engaging an expert panel to review model logic, assumptions and model probabilities.

The study employs baseline data from two primary surveys and official international trade and border crossing statistics:

1. For personal trip impacts: A survey of travelers crossing at three points of entry (San Ysidro, Otay Mesa, and Tecate) provided a sample of 3,603 personal interviews (results are accurate within plus or minus 2 percent).
2. For freight movement impacts: Published historical and current data on traffic and the industry using the borders was augmented with interviews of major cross-border freight stakeholders, including trucking companies, Customs brokers, major manufacturers as well as U.S. Customs and Border Protection.

KEY FINDINGS

- There is a significant economic interdependence between the San Diego region and Baja California, which is illustrated by the magnitude of cross-border personal travel and freight movements at the region's three ports of entry.
- Trade is a key contributor to local, state, and national economic growth. Mexico is the United States second largest trading partner, after Canada. In addition, Mexico is California's number one export market.
- Inadequate infrastructure capacity, which is failing to keep up with the increase in trade and security requirements at the principal border crossings between San Diego County and Baja California, currently creates traffic congestion and delay that costs the U.S. and Mexican economies an estimated US\$6 billion in gross output in 2005 (Summary Table 1). Fully 51,325 jobs are sacrificed because of the reduction in output.
- In fact, traffic congestion and delays are bad enough today that nearly 60 percent of the cross-border travelers surveyed said they would be willing to pay a \$3 toll to cross at new East Otay Mesa port of entry that would provide a faster way to cross the border. Similarly, an interview with the trucking industry revealed that the investment potential has been curbed due to the increasing delays at the border.
- As shown in Summary Table 1, the economic impact of congestion on personal travel is much stronger in the U.S. than in Mexico and concentrated principally in the San Diego County and Baja California regions. On the other hand, the economic impact of congestion

¹ For San Diego County and the State of California, the IMPLAN Input Output Model was used. For Baja California and Mexico, multipliers developed by the Autonomous University of Baja California (Universidad Autónoma de Baja California - UABC) were used.

on freight traffic is greater on the Mexican side, and spreads significantly to the state and national levels.

- While the majority of the economic impacts are concentrated in the San Diego and Baja California region, Summary Table 1 indicates that expected economic effects are not insignificant at the state and the national levels.
- The analysis given in Summary Table 2 below shows that, if steps are not taken to improve border crossing and transportation infrastructure and management, border delays keep growing and the losses incurred by the regional and national economies will more than double in the next ten years.²
- The manufacturing process of some products requires that partially assembled parts go back and forth across the border sometimes three or four times. Border delays result in increased transportation costs and interruptions in manufacturing and delivery cycles.
- To expedite cargo clearance at the border, companies make investments in programs such as Free and Secure Trade (FAST) and Empresa Certificada and they consider cost effective to pay highway tolls (e.g. Tijuana-Tecate toll road) to save travel time between the port of entry and the manufacturing plant in Baja California.

Summary Table 1: Total Economic Impact in 2005 from Constrained Border Infrastructure by Area and Type of Traffic (in Millions of 2005 Dollars)

Type of Traffic	Areas	Output	Employment
Personal Trips	San Diego County	\$2,259	31,454
	California	\$2,480	31,423
	United States	\$2,480	31,423
	Baja California	\$169	1,367
	Mexico	\$168	1,366
Freight Movements	San Diego County	\$455	2,461
	California	\$716	3,654
	United States	\$1,256	7,646
	Baja California	\$1,317	6,929
	Mexico	\$2,069	10,889
Combined Personal Trips and Freight Movements	San Diego County	\$2,714	33,915
	California	\$3,196	35,077
	United States	\$3,737	39,069
	Baja California	\$1,486	8,296
	Mexico	\$2,237	12,256
Combined Personal Trips and Freight Movements	Combined United States and Mexico	\$5,974	51,325

Note: Mean Expected Outcomes.

² The analysis assumes a 4.4% average annual increase in personal trips, and 4.3% average annual increase in truck movements. Average waiting times are assumed to increase by about 5.0% annually.

Summary Table 2: Expected Economic Impact from Delays Due to Increased Traffic in the Future – Cross-border Personal Trips and Freight (in Millions of 2005 Dollars)

Area	2005		2014		Change 2005 - 2014	
	Output	Employment	Output	Employment	Output	Employment
San Diego County and Baja California	-\$4,200	-42,211	-\$9,979	-104,146	-\$5,780	-61,934
					138%	147%
United States and Mexico	-\$5,974	-51,325	-\$13,873	-123,682	-\$7,899	-72,357
					132%	141%

The remainder of the Executive Summary presents findings on economic impacts of delays for cross-border personal trips and freight movements by geographic area in the United States and Mexico as well as combined at the regional and national levels.

CROSS-BORDER PERSONAL TRIPS

Direct Economic Impact of Cross-Border Personal Trip Delay

San Diego County and State of California

At today’s level of delay at the border (about 45 minutes per crossing on average based on the survey respondents), San Diego County loses 8.414 million personal trips a year, resulting in an estimated \$1.28 billion in lost business income. This impact is considered a net impact as the estimation adjusts for all the gains made when the expenditures occur in the U.S. rather than in Mexico as people choose not to cross the border due to delays at the border crossings. The retail sector is affected the most as it represents more than 90% of the impacts. In addition, about 3.155 million potential working hours in San Diego County are spent in delays at the border, resulting in an estimated \$41.8 million in lost wages. The overall economic impact at the state level, given that 5% of the trips are headed outside the San Diego region, is \$1.321 billion in addition to the \$44.3 million in income loss for work trips.³ Summary Table 3 presents the findings related to foregone personal trips and revenue losses due to delays at the border.

³ The estimates can be regarded as conservative for two main reasons: (1) travel time cost is included for work trips only and therefore any travel time cost for shopping and recreation trips is excluded; and (2) the sensitivity used to estimate foregone trips is based on the survey respondents who tend to be less sensitive to delay than people who already have foregone their trips in the past years.

Summary Table 3: Cross-Border Personal Trips – Net Direct Impacts Due to Delays at the Border in San Diego County and California (in Millions of 2005 Dollars)

	Description	SAN DIEGO COUNTY	CALIFORNIA
IN THE UNITED STATES	Total Foregone Person Trips to the US	-8,414,247	-8,913,398
	Gross Revenue Loss in the US - Retail (\$ Millions)	-\$1,240	-\$1,314
	Gross Revenue Loss in the US - Recreation & Entertainment (\$ Millions)	-\$12	-\$13
	Gross Revenue Loss in the US - Food & Lodging (\$ Millions)	-\$114	-\$121
	Total Gross Revenue Loss in the US (\$ Millions)	-\$1,366	-\$1,448
	Add' Revenue from Foregone Trips to Mexico - Retail (\$ Millions)	\$54	\$79
	Add' Revenue from Foregone Trips to Mexico - Recreation & Entertainment (\$ Millions)	\$5	\$7
	Add' Revenue from Foregone Trips to Mexico - Food & Lodging (\$ Millions)	\$28	\$41
	Total Add' Revenue from Foregone Trips to Mexico (\$ Millions)	\$87	\$127
	Net Revenue Loss in the US - Retail (\$ Millions)	-\$1,186	-\$1,235
	Net Revenue Loss in the US - Recreation & Entertainment (\$ Millions)	-\$7	-\$6
	Net Revenue Loss in the US - Food & Lodging (\$ Millions)	-\$86	-\$80
	Total Net Revenue Loss in the US (\$ Millions)	-\$1,280	-\$1,321
	Number of Work Hours Lost in the US	-3,155,204	-3,342,377
Labor Income Losses in the US (\$ Millions)	-\$41.8	-\$44.3	

Note: Mean expected outcomes. Annual estimates based on 2003 volumes and survey findings. California figures include San Diego County.

Baja California and Mexico

The economic impact on the Mexican side of the border is also found to be significant. Baja California loses 1.938 million personal trips a year that may result in about \$118 million in net revenues, after adjusting for the revenue gains due to local foregone trips to the U.S. The retail and food and lodging sectors represent 80% of net revenue losses. In addition, over half a million of potential working hours in Mexico are spent in delays at the border, which may result in \$10.8 million in productivity loss. The impact at the national level is similar to the regional level as most of the personal trips are regional. Summary Table 4 provides the findings related to foregone personal trips and revenue losses due to delays at the border.

Summary Table 4: Cross-Border Personal Trips – Net Direct Impacts Due to Delays at the Border in Baja California and Mexico (in Millions of 2005 Dollars)

	Description	BAJA CALIFORNIA	MEXICO
IN MEXICO	Total Foregone Person Trips to Mexico	-1,938,210	-1,938,210
	Gross Revenue Loss in Mexico - Retail (\$ Millions)	-\$197	-\$197
	Gross Revenue Loss in Mexico - Recreation & Entertainment (\$ Millions)	-\$26	-\$26
	Gross Revenue Loss in Mexico - Food & Lodging (\$ Millions)	-\$110	-\$110
	Total Gross Revenue Loss in Mexico (\$ Millions)	-\$333	-\$333
	Add' Revenue from Foregone Trips to the US - Retail (\$ Millions)	\$184	\$195
	Add' Revenue from Foregone Trips to the US - Recreation & Entertainment (\$ Millions)	\$3	\$3
	Add' Revenue from Foregone Trips to the US - Food & Lodging (\$ Millions)	\$27	\$28
	Total Add' Revenue from Foregone Trips to the US (\$ Millions)	\$214	\$227
	Net Revenue Loss in Mexico - Retail (\$ Millions)	-\$12	-\$2
	Net Revenue Loss in Mexico - Recreation & Entertainment (\$ Millions)	-\$23	-\$23
	Net Revenue Loss in Mexico - Food & Lodging (\$ Millions)	-\$83	-\$82
	Total Net Revenue Loss in Mexico (\$ Millions)	-\$118	-\$106
	Number of Work Hours Lost in Mexico	-511,259	-511,259
Labor Income Losses in Mexico (\$ Millions)	-\$10.8	-\$10.8	

Note: Mean Expected Outcomes. Annual estimates based on 2003 volumes and survey findings.

Total Economic Impact of Cross-Border Personal Trip Delay

San Diego County, State of California and United States

As shown in Summary Table 5, accounting for the indirect and induced effects⁴ of estimated revenue losses, the total local economic impact of border congestion is \$2.259 billion in production losses (about 1.2% of the regional output) and 31,454 lost jobs (about 1.7% of the regional labor force). Most employment losses occur in the retail sector.

At the state level, congestion leads to an estimated \$2.48 billion in lost output (0.1% of the state product) and 31,423 fewer jobs (0.2% of the state labor force).⁵

Summary Table 5: Cross-Border Personal Trips – Total Economic Impact Due to Delays at the Border for San Diego County, the State of California (in Millions of 2005 Dollars)

SAN DIEGO COUNTY

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$2,099
	Recreation & Entertainment	-\$14
	Food & Lodging	-\$147
	Total	-\$2,259
Labor Income (millions of U.S. dollars)	Retail	-\$925
	Recreation & Entertainment	-\$6
	Food & Lodging	-\$61
	Total	-\$992
Employment (jobs)	Retail	-29,056
	Recreation & Entertainment	-221
	Food & Lodging	-2,177
	Total	-31,454

⁴ **Direct Effects:** Direct effects are the result of direct spending. The distinguishing feature of direct effects is that they are an immediate consequence of the activities and expenditures.

Indirect Effects: Indirect effects are the result of purchases by local firms who are the direct suppliers to the region. Output, employment, income, and tax revenue resulting from spending by supplier firms (but not households) are considered to be indirect effects.

Induced Effects: Induced effects are changes in regional output, employment, income, and tax revenue that are the result of personal (household) spending for goods and services – including employees directly tied to the supplier firms (direct effects), and employees of all other firms comprising the indirect effects. As with business purchasing, personal consumption creates additional economic output, leading to still more employment, income and tax flows.

⁵ Note that job losses at the state level (31,423) are smaller than at the regional level (31,454). On the other hand, labor income losses at the state level (\$1,071 million) are larger than at the regional level (\$992 million). One possible explanation is that average employee compensation in the sectors impacted (retail, recreation and entertainment, etc.) is lower in San Diego County than in the rest of the State. The proximity to Mexico and the availability of a large pool of workers might explain this difference.

STATE OF CALIFORNIA

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$2,315
	Recreation & Entertainment	-\$12
	Food & Lodging	-\$154
	Total	-\$2,480
Labor Income (millions of U.S. dollars)	Retail	-\$1,005
	Recreation & Entertainment	-\$5
	Food & Lodging	-\$61
	Total	-\$1,071
Employment (jobs)	Retail	-29,136
	Recreation & Entertainment	-150
	Food & Lodging	-2,137
	Total	-31,423

Note: Mean expected outcomes. Annual estimates based on 2003 volumes and survey findings. California figures include San Diego County.

Based on survey data, a negligible number of cross-border personal trips have an origin or destination outside California. Therefore, the economic impact of border delays at the U.S. level is *assumed* equal to the impact at the California level.

Baja California and Mexico

Accounting for indirect and induced impacts, estimated revenue losses in Baja California are \$169 million in production losses (about 1.1% of the regional output) and 1,367 fewer jobs, mainly in the Food and Lodging sector (Summary Table 6).

Summary Table 6: Cross-Border Personal Trips – Total Economic Impact Due to Delays at the Border for Baja California and Mexico (in Millions of 2005 Dollars)

BAJA CALIFORNIA

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$15
	Recreation & Entertainment	-\$35
	Food & Lodging	-\$119
	Total	-\$169
Labor Income (millions of U.S. dollars)	Retail	-\$3
	Recreation & Entertainment	-\$5
	Food & Lodging	-\$19
	Total	-\$27
Employment (jobs)	Retail	-117
	Recreation & Entertainment	-161
	Food & Lodging	-1,089
	Total	-1,367

MEXICO

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$2
	Recreation & Entertainment	-\$38
	Food & Lodging	-\$128
	Total	-\$168
Labor Income (millions of U.S. dollars)	Retail	\$0
	Recreation & Entertainment	-\$5
	Food & Lodging	-\$21
	Total	-\$26
Employment (jobs)	Retail	-16
	Recreation & Entertainment	-176
	Food & Lodging	-1,174
	Total	-1,366

Note: Mean Expected Outcomes. Annual estimates based on 2003 volumes and survey findings.

Combined Economic Impact at the Regional and National Levels for Cross-Border Personal Trips

When assessing the impact at the regional level on both sides of the border, the analysis reveals that personal trip delays contribute to a loss in output and employment of \$2.428 billion and 32,821 jobs in 2005, respectively (see summary tables on the next page).⁶

⁶ The impact at the U.S. level is assumed similar to the impact at the California level.

Summary Table 7: Cross-Border Personal Trips – Total Regional Impact Due to Delays at the Border (San Diego County and Baja California)

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$2,114
	Recreation & Entertainment	-\$48
	Food & Lodging	-\$266
	Total	-\$2,428
Labor Income (millions of U.S. dollars)	Retail	-\$928
	Recreation & Entertainment	-\$11
	Food & Lodging	-\$80
	Total	-\$1,018
Employment (jobs)	Retail	-29,173
	Recreation & Entertainment	-383
	Food & Lodging	-3,266
	Total	-32,821

Note: Mean Expected Outcomes.

Summary Table 8: Cross-Border Personal Trips – Total National Impact Due to Delays at the Border (United States and Mexico)

Impact Category	From Reduced Spending in...	Total Impact
Output (millions of U.S. dollars)	Retail	-\$2,317
	Recreation & Entertainment	-\$49
	Food & Lodging	-\$282
	Total	-\$2,648
Labor Income (millions of U.S. dollars)	Retail	-\$1,005
	Recreation & Entertainment	-\$10
	Food & Lodging	-\$81
	Total	-\$1,097
Employment (jobs)	Retail	-29,152
	Recreation & Entertainment	-326
	Food & Lodging	-3,311
	Total	-32,789

Note: Mean Expected Outcomes.

CROSS-BORDER FREIGHT MOVEMENTS

Impacts of Cross-Border Freight Delays on San Diego County, the State of California and the United States

The economic impact of border congestion on freight reflects the effect of delay on productivity, industry competitiveness, and lost business income. The economic impact, however, can be considered as conservative at best since the estimates are mainly for the time lost by trucks in queues at the border and the impact constitutes the cost of delay and its reduced investment implications. Other long-term impacts such as relocation implications (i.e., industries are forced to move away from their best location and therefore the optimum supply chain configuration) on investment, prices, and demand is not included.

The analysis indicates that, at today's level of processing time and delay at the border (over two hours on average per truck crossing without U.S. secondary inspection), San Diego County loses \$271 million in direct net annual revenues from reduced freight activity, after adjusting for the revenue gains from the reduction in local trips to Mexico⁷. This translates into 1,409 direct lost jobs or \$69 million in lost labor income a year. We estimate that just under 45% of labor income losses occur in the machinery and equipment sector⁸ and in firms related to that sector through upstream and downstream inter-industry linkages.

From these estimates, we estimate that about 30% of trucks have a final destination outside San Diego County (See Appendix D). The overall impact at the state level, given that 30% of Mexican truck trips are headed outside the San Diego region,⁹ is \$362 million in net revenue losses and \$90 million in labor income losses (or 1,725 jobs lost).

When accounting for the indirect and induced effects of the estimated revenue losses, the total impact exceeds \$455 million in lost output and 2,461 fewer jobs. At the state level, losses exceed \$716 million in output and \$204 million in labor income (or 3,654 fewer jobs).

For the United States, total output losses are estimated at \$1,256 million and employment losses at 7,646 jobs. Output losses represent 13% of the value of U.S. exports to Mexico that move across the Otay Mesa and Tecate ports of entry, which in 2004 amounted to \$9,382 million.

Summary Table 9 shows the breakdown of estimated economic impacts by selected sectors.

⁷ This impact is a net loss as it is estimated as the difference between the losses in the U.S. side and the gains in the Mexican side. For instance, if agricultural merchandise did not make it to the U.S. due to border congestion (loss) and therefore was sold at a lower price in Mexico (gain), the impact is estimated as the difference between that loss and the gain in Mexico.

⁸ Components of the sectors assessed in the analysis are shown in Appendix G at the end of this report.

⁹ Approximately 70% of truck trips have an intermediate or final destination in the San Diego region. However, about 78% of product has a final destination outside San Diego and Imperial Counties (Caltrans, *California/Mexico Border Briefing*, 2005). This estimate is based on the following: Total California imports from Mexico in 2004 amounted to \$24.6 billion (US Census Bureau, Foreign Trade Division); out of which about \$17.0 billion -- or 70 percent -- was destined to San Diego County (San Diego Regional Chamber of Commerce, Economic Research Bureau; based on US Census Data).

Summary Table 9: Cross-Border Freight - Economic Impacts Due to Delays at the Border for San Diego County, the State of California and the United States (in Millions of 2005 Dollars)

SAN DIEGO COUNTY

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$82
	Mining and Mineral Products	-\$129
	Machinery and Equipment	-\$193
	Manufactured Goods	-\$51
	Total	-\$455
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$22
	Mining and Mineral Products	-\$35
	Machinery and Equipment	-\$59
	Manufactured Goods	-\$16
	Total	-\$131
Employment (jobs)	Agricultural and Food Products	-532
	Mining and Mineral Products	-644
	Machinery and Equipment	-941
	Manufactured Goods	-343
	Total	-2,461

STATE OF CALIFORNIA

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$135
	Mining and Mineral Products	-\$215
	Machinery and Equipment	-\$289
	Manufactured Goods	-\$76
	Total	-\$716
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$35
	Mining and Mineral Products	-\$53
	Machinery and Equipment	-\$94
	Manufactured Goods	-\$23
	Total	-\$204
Employment (jobs)	Agricultural and Food Products	-887
	Mining and Mineral Products	-911
	Machinery and Equipment	-1,356
	Manufactured Goods	-499
	Total	-3,654

UNITED STATES

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$262
	Mining and Mineral Products	-\$357
	Machinery and Equipment	-\$493
	Manufactured Goods	-\$144
	Total	-\$1,256
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$64
	Mining and Mineral Products	-\$97
	Machinery and Equipment	-\$146
	Manufactured Goods	-\$43
	Total	-\$351
Employment (jobs)	Agricultural and Food Products	-1,873
	Mining and Mineral Products	-1,954
	Machinery and Equipment	-2,789
	Manufactured Goods	-1,031
	Total	-7,646

Note: Mean Expected Outcomes.

Impacts of Cross-Border Freight Delays on Baja California and Mexico

The analysis summarized in Summary Table 10 indicates that the overall economic impacts of delaying trucks at the border are substantially higher on the Mexican side of the border than the American side. For Baja California, total output losses amount to \$1.317 billion and 6,929 jobs annually.¹⁰ Though the Machinery and Equipment sector is the most affected in terms of output losses (over \$655 million), Manufactured Goods and Agricultural and Food Products represent 74% of all jobs lost – the latter sector being very labor intense traditionally.

For Mexico, total impact is estimated at \$2.069 billion in lost output and 10,889 fewer jobs. The lost output represents 15% of the value of U.S. imports from Mexico that crossed at the Otay Mesa and Tecate ports of entry, which in 2004 reached \$13.8 billion.

Summary Table 10: Cross-Border Freight – Total Economic Impact Due to Delays at the Border for Baja California and Mexico (in Millions of 2005 Dollars)

BAJA CALIFORNIA

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$296
	Mining and Mineral Products	-\$113
	Machinery and Equipment	-\$655
	Manufactured Goods	-\$252
	Total	-\$1,317
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$28
	Mining and Mineral Products	-\$17
	Machinery and Equipment	-\$70
	Manufactured Goods	-\$35
	Total	-\$150
Employment (jobs)	Agricultural and Food Products	-2,439
	Mining and Mineral Products	-568
	Machinery and Equipment	-1,227
	Manufactured Goods	-2,695
	Total	-6,929

MEXICO

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$465
	Mining and Mineral Products	-\$178
	Machinery and Equipment	-\$1,030
	Manufactured Goods	-\$396
	Total	-\$2,069
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$44
	Mining and Mineral Products	-\$27
	Machinery and Equipment	-\$110
	Manufactured Goods	-\$54
	Total	-\$236
Employment (jobs)	Agricultural and Food Products	-3,833
	Mining and Mineral Products	-892
	Machinery and Equipment	-1,928
	Manufactured Goods	-4,235
	Total	-10,889

Note: Mean Expected Outcomes.

¹⁰ Losses in Mexico are larger than in the United States because most production and therefore more truck movements originate in Mexico. The economic impact model used in this study attributes production losses to the origin of freight.

Combined Impacts of Cross-Border Freight Delays at the Regional and National Levels

When assessing the impact at the regional level on both sides of the border, the analysis reveals that delays contribute to a loss in output and employment of \$1.772 billion and 9,390 jobs, respectively. At the national/state level, the impact is even greater: \$3.326 billion in output losses and 18,536 jobs lost (see summary tables below).

Summary Table 11: Cross-Border Freight – Total Regional Impact Due to Delays at the Border for San Diego and Baja California (in Millions of 2005 Dollars)

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$378
	Mining and Mineral Products	-\$242
	Machinery and Equipment	-\$849
	Manufactured Goods	-\$303
	Total	-\$1,772
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$50
	Mining and Mineral Products	-\$52
	Machinery and Equipment	-\$129
	Manufactured Goods	-\$50
	Total	-\$281
Employment (jobs)	Agricultural and Food Products	-2,972
	Mining and Mineral Products	-1,212
	Machinery and Equipment	-2,168
	Manufactured Goods	-3,039
	Total	-9,390

Note: Mean Expected Outcomes.

Summary Table 12: Cross-Border Freight – Total National Impact Due to Delays at the Border for the United States and Mexico (in Millions of 2005 Dollars)

Impact Category	From Direct Output Losses in...	Total Impact
Output (millions of U.S. dollars)	Agricultural and Food Products	-\$727
	Mining and Mineral Products	-\$535
	Machinery and Equipment	-\$1,523
	Manufactured Goods	-\$540
	Total	-\$3,326
Labor Income (millions of U.S. dollars)	Agricultural and Food Products	-\$109
	Mining and Mineral Products	-\$124
	Machinery and Equipment	-\$256
	Manufactured Goods	-\$97
	Total	-\$587
Employment (jobs)	Agricultural and Food Products	-5,706
	Mining and Mineral Products	-2,846
	Machinery and Equipment	-4,717
	Manufactured Goods	-5,266
	Total	-18,536

Note: Mean Expected Outcomes.