

## **CHAPTER 6**

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## **IMPACTS ON COMPETITIVENESS**

**Region's Share of U.S. Jobs**

**Product Prices and Profits**

**Imports and Exports**

**Summary**

## **INTRODUCTION**

Regional economic competitiveness depends on various factors including business costs, workforce quality, public infrastructure, quality of life, and the regulatory environment. Air quality regulations directly affect business costs, quality of life and the regulatory environment. Specifically, the 1997 AQMP will affect regional economic competitiveness in two ways: (1) by imposing costs on business as a result of pollution control strategies; and (2) by improving the region's quality of life by reducing air pollution.

It is not possible at this time to quantify the costs associated with every control measure and benefits associated with every effect of clean air. Of the 45 control measures considered with emission reductions, only 28 have quantifiable costs. Costs for the other measures are not available at this time because control methods, control efficiencies, emission reductions, or costs of control technologies are not presently known. The REMI model, used to analyze potential impacts of the draft 1997 AQMP, projects possible impacts on product prices, profits, exports, and imports based upon the input of cost data for each control measure and benefit data for each effect of clean air. The reliability of such projections is dependent upon the validity of the input. The District staff believes that it would be inappropriate to make assumptions relative to cost impacts on product prices, profits, exports, and imports for unquantified measures. The analysis contained herein, therefore, considers only those measures and benefits for which quantification is available.

## **REGION'S SHARE OF U.S. JOBS**

Table 6-1 shows the impacts of quantified costs and benefits on the region's share of national jobs. The four-county region is predicted to gain a larger share of total national jobs through 2010, as compared to the baseline projection without the AQMP, ranging from 0.01 to 0.02 percent. In the manufacturing sector, the four-county region is predicted to have a smaller share of national manufacturing jobs from 2000 through 2010, as compared to the baseline projection without the AQMP, amounting to decreases that range from 0.01 percent in 2000 to a decrease of 0.02 percent in 2005 and 2010. Due to the extremely small values presented here, the draft 1997 AQMP is not expected to result in discernible differences in the four-county region's share of national jobs over the analysis period.

**TABLE 6-1**

Impacts on Region's Share of U.S. Jobs  
For Quantified Measures and Benefits  
(percent)

	Percent Share of U.S. Jobs			
	1997	2000	2005	2010
<u>Total Jobs</u>				
with quant. measures & benefits	5.41	5.52	5.72	5.89
without quant. measures & benefits	<u>5.39</u>	<u>5.51</u>	<u>5.71</u>	<u>5.88</u>
Difference	0.02	0.01	0.01	0.02
<u>Manufacturing Jobs</u>				
with quant. measures & benefits	5.45	5.54	5.66	5.60
without quant. measures & benefits	<u>5.45</u>	<u>5.55</u>	<u>5.68</u>	<u>5.61</u>
Difference	0.00	-0.01	-0.02	-0.02

## PRODUCT PRICES AND PROFITS

Relative to product prices, the REMI model assumes that national industries absorb additional production costs, while regional industries pass these costs on to consumers (all users of products). The impact of additional production costs on national industries will be changes in profits, but the impact on regional industries will be changes in selling prices. The REMI model calculates a composite index of product prices and profits for industries in the four-county region relative to those in the rest of the United States. An index of 1 indicates that the product prices and profits in the region are relatively the same as those in the rest of the United States. An index of product prices above or below 1 means that product prices in the four-county areas are higher or lower, respectively, than those in the rest of the United States. The same is true for profits.

Table 6-2 shows impacts on product prices for regional industries. On average, there will be an increase in product prices for the majority of sectors of less than one percent of the baseline price index. The transit sector (SIC 41), however, is expected to have a price increase of almost two percent in the years 2000 and 2010. This is due in large part to the additional demand for services in this sector resulting from control measure TCM-01 (transportation improvements).

Table 6-3 shows the impact of the AQMP on profits for national industries. On average, profits for the majority of national industries will decrease by less than one-half percent of the baseline profit index. The projections indicate that the wood products industry (SICs 244, 249, 251-3, 259) will likely experience the largest decrease in profits of 0.73 percent, on average, due mainly to control measure PRC-01 (Woodworking Operations).

**TABLE 6-2**  
**Impacts on Product Prices of Regional Industries**  
**Relative to Those in U.S.**  
**for Quantified Measures and Benefits**  
**(percent of sales)**

Industry	SIC	2000	2010	Average (1997-2010)
<b>Goods-Producing</b>				
Agricultural Services/Forest/Fish	07-09	0.32%	0.70%	0.62%
Mining	10-14	0.22%	0.19%	0.23%
Construction	15-17	0.41%	0.29%	0.39%
Commercial Printing	275	0.21%	0.17%	0.22%
Petroleum Refining	291	0.29%	0.32%	0.33%
Other Goods Producing		0.25%	0.16%	0.25%
<b>Service-Producing</b>				
Local and Inter-urban Transit	41	1.84%	1.77%	1.89%
Water and Transportation	44	0.36%	0.30%	0.38%
Water and Sanitation Districts	494-497, @493	0.27%	0.12%	0.23%
Wholesale Trade	50-51	0.30%	0.20%	0.30%
Restaurants	58	0.32%	0.48%	0.41%
Other Retail Trade	52-7,59	0.28%	0.30%	0.34%
Finance, Insurance Real Estate	60-67	0.07%	0.19%	0.12%
Drycleaners and Shoe Repair	721,725	0.31%	0.28%	0.34%
Auto Repair, Parking, & Services	752-754	0.28%	0.29%	0.33%
Motion Pictures	781-783	0.35%	0.23%	0.34%
Health Services	80	0.35%	0.26%	0.35%
Other Service Producing		0.35%	0.17%	0.32%

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**TABLE 6-3**  
 Impacts on Profits of National Industries  
 Relative to Those in U.S.  
 for Quantified Measures and Benefits  
 (percent of sales)

Industry	SIC	2000	2010	Average (1997-2010)
<b>Goods-Producing</b>				
Apparel and Textiles	22-23	-0.20%	-0.22%	-0.25%
Wood Products	244,249,251-3,259	-0.74%	-0.69%	-0.73%
Electrical and Electronic	36	-0.22%	-0.13%	-0.21%
Aerospace	372,3731,376,381,348	-0.22%	-0.17%	-0.23%
Other Goods Producing		-0.06%	-0.04%	-0.06%
<b>Service-Producing</b>				
Other Service Producing		-0.28%	-0.49%	-0.42%

## IMPORTS AND EXPORTS

Table 6-4 summarizes the overall impact of quantified measures and benefits on the region's exports and imports. In 1997, 2000, 2005, and 2010, the projected increase in demand for goods and services will be satisfied mostly by increases in imports. Exports will decline because of the current and carry-over effects of higher product prices resulting from pass-through of additional control costs by affected regional industries and lower profitability of national industries.

It should be noted that the magnitude of all of these directional changes is relatively small when compared with the overall size of the four-county economy. For example, in 2010 imports in the four county region are projected to increase by approximately 0.3 percent of the baseline imports. During the same time, exports are projected to decrease by 0.2 percent of the baseline exports.

In 2010, exports from Los Angeles and Orange counties to Riverside and San Bernardino counties are projected to increase while exports between Los Angeles and Orange counties are expected to go down. Conversely, there will be a decline in exports from San Bernardino County to Los Angeles and Orange counties. However, exports from Riverside County to the remaining three counties are expected to rise.

**TABLE 6-4**

Impacts on Imports and Exports for Quantified Measures and Benefits

	1997	2000	2005	2010
Demand*	+	+	+	+
Imports	+	+	+	+
Self Supply*	+	-	+	+
Exports	-	-	-	-
Output (Production)	+	-	-	+
Selling Price	+	+	+	+
Profit	-	-	-	-

A plus or minus sign means that there is an increase or decrease in the value of that economic variable resulting from the quantified measures and benefits of the draft 1997 AQMP relative to the baseline economic activities.

\* Include changes in demand due to changes in control requirements.

## SUMMARY

The results of this chapter show that the quantified measures and benefits of the draft 1997 AQMP are not expected to result in discernible differences in the four-county region's share of national jobs. For the majority of sectors, the impact on product prices is projected to be less than one percent of the baseline index of product prices and the impact on profits is projected to be less than one-half percent of the baseline index of profits. The impact on imports and exports in 2010 is projected at 0.3 percent of the baseline imports and -0.2 percent of the baseline exports in the region.

The competitive analysis focuses on the impact on various sectors of the local economy. Individual control measures could result in impacts on individual companies. Competitiveness at the company level will be further considered during individual rulemaking procedures.

The actual effects of the draft 1997 AQMP (including unquantified measures and benefits) on regional competitiveness could vary from the projected effects of quantified measures and benefits for several reasons. First, the analysis assumes that all control costs are "extra" costs when compared to air pollution control costs in other regions. This ignores the fact that competing regions tend to follow the SCAQMD's lead and adopt control measures with objectives similar to those proposed in the South Coast Basin or at a minimum have some level of control with its consequent costs. For example, a number of eastern states have adopted the California vehicle exhaust standards. Furthermore, a number of on-road and off-road measures reflect implementation of national standards on mobile sources. Second, the socioeconomic analysis underestimates the benefits from clean air that would increase regional attractiveness. Third, the District is continuing to implement special programs to foster economic competitiveness in the region. These programs cover two broad strategies:

- (1) reducing costs of meeting air quality mandates through the use of market incentive approaches, and educational programs on consumer awareness; and

- (2) business assistance programs, such as permit streamlining programs, small business assistance programs, economic development and business retention programs, and air quality assistance funding.

Finally, costs of unquantified measures may also affect competitiveness if they are implemented solely in the region. The impact of proposed air quality regulations on competitiveness will be examined during the rulemaking process for each proposed rule. Chapter 8 has a more detailed description of proposed enhancements to future assessments.