The Economic Impact of Production in California's Prison Industries

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Executive Summary

This report examines the impact of the California Prison Industry Authority (PIA) on the state of California. Two scenarios are analyzed. The first is the estimation of PIA impacts on the state. The second is the estimated impact should the PIA be eliminated in the state and the same purchases be made through the private sector. The interpretation of these impacts and the variables estimated are given in Section IV of the report. The primary research findings are summarized below.

PIA Impacts

- California PIA impacts are $324.2 million in sales, $113.9 million in income, and 2,362 jobs.
- The products and services that contribute most to the impacts are metal signs and products, fabric products, laundry and wood products.

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The methods used in this report are similar to those used by David S. Kraybill in a report for the Ohio Penal Industries titled "The Economic Impact of Production by Ohio Penal Industries", completed in February, 1996.

Impacts of Removing PIA and Replacing PIA With the Private Sector

- Removing PIA from California, and purchasing the same goods and services from the private sector would lead to a total state loss of $217.9 million in sales, $62.3 million in income, and 560 jobs.

- Income and employment effects of only reducing PIA sales are positive for many of the products currently being produced by PIA, suggesting that income will increase by $2.3 million and jobs by 271. However these partial impacts do not account for the fact that the PIA employs people to oversee the production and distribution of these goods and services (the direct effects). Once payroll and other operating expenditures are accounted for, the impact of removing PIA becomes negative (see previous bullet).

- The extent to which out-of-state purchases will substitute for PIA production of the products will determine the extent to which removing PIA will be detrimental to the state economy. The extent to which out-of-state purchases would substitute for local production varies from a low of 10 percent in laundry and furniture refinishing, to a high of 97 percent in metal and paper products.

I. Introduction

The California Prison Industry Authority (PIA) employs inmate-workers to produce a variety of goods and services in factories at correctional institutions throughout California. These production activities provide a variety of uses to the community including: (1) the training of inmates who acquire work habits and skills; (2) the supervision of inmates in a secure environment; and (3) the provision of goods and services to public sector agencies. Each of these services has an economic dimension in terms of contributing value added to the state economy or cost savings to the state government. In this report we focus solely on the third purpose -- PIA's contribution to the state and local economy by producing goods and services.

The PIA is a self-supporting government agency. PIA sales increased by 43 percent between 1990 and 1995, giving them the largest sales ($152 million) of any state prison industry system in the US in 1994-95 (Texas' state prison industry was second at $94 million)[1]. The PIA employs approximately 700 civilian employees as well as 7,000 inmates. The PIA uses its revenues to cover its costs such as purchasing raw materials, providing inmate supervision, inmate payroll, transporting and distributing their products, acquiring capital, reducing debts, and supporting the central office.[2]

The Prison Industry Board is responsible for overseeing PIA operations, setting general policy, appointing a General Manager, and monitoring existing

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[1] "Producing Productive People", the 1996 Directory of the Correctional Industries Association, Inc.

[2] California Prison Authority, "Report to the Legislature", Fiscal Year 1995-96.

operations, and deciding which new industries to enter. The board serves as a public hearing body charged with ensuring that the operations of PIA are self-sufficient and do not have a substantial adverse impact on private enterprises in California.

PIA customers are limited by law to local, state and federal government agencies (the public sector). The California Department of Corrections is PIA's largest customer, purchasing more than half of PIA's total annual production of goods and services.

This study estimates California's employment and income impacts arising from the production of goods and services by inmates employed by PIA. The analysis will consider two situations. The first is the economic impact of PIA, measuring its economic contribution to the state economy. The second situation considers the impact of removing PIA from the state, and estimating the extent to which the demand for the same goods and services will be supplied by California's private sector.

As a production facility, PIA is linked to the state economy in several ways. Most importantly, PIA purchases intermediate inputs (materials) for further processing in its factories. This study utilizes economic models of California that translates these intermediate input purchases into sales by place of production so that the multiplier effect of PIA on the state economy can be estimated.

II. Scope and Magnitude of PIA Production

In 1996-97, the California PIA had sales of $155 million. Table 1 on the following page shows the goods and services that were produced by the PIA, and their contribution towards total sales. Fabric products represent the largest product category with $32 million in sales. It is followed by paper and wood products at $30 million, metal products at $22 million, agricultural products at $21 million, and processed foods at $12 million in sales. Other goods and services, of which laundry services ($14 million) and optical products ($11 million) are the largest portion, make up the remainder $38 million in sales.

PIA operating and personnel expenses for the state are given at the end of Table 1, and total $48.2 million. PIA employs 700 civilians in addition to the 7,000 inmates that produce these goods and services. Inmates work approximately 30 to 35 hours a week, and received an average $0.57 per hour in 1995-96.[3]

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[3] Ibid.

Table 1: Goods and Services Produced by the California PIA

Sector	PIA Sales 1996/97 Dollars
Dairy / Farm	12,502,999
Chicken / Eggs	7,699,290
Hay & Alfalfa	112,523
Prunes	212,500
Almonds	565,687
Agriculture Sub-total	21,092,999
Meatcutting	8,109,721
Bakery	1,943,913
Coffee Roasting	2,151,147
Processed Foods Sub-total	12,204,781
Textile Mill	2,035
Knitting Mill	1,504,641
Fabric Products*	27,380,750
Silk Screening	209,145
Mattress Factory	2,919,159
Fabric Products Sub-total	32,015,730
Wood Products*	20,604,817
Paper Products	739,175
Specialty Printing*	4,796,642
Book Bindery	3,446,800
Paper & Wood Prod Sub-total	29,587,434

Sector	PIA Sales 1996/97 Dollars
	continued
Metal Products	11,860,072
License Plates	10,135,545
Metal Signs	389,950
Metal Products Sub-total	22,385,567
Concrete Precast	1,200,222
Cleaning Products	2,229,340
Corr Resource Recovery	1,702,739
Shoe Factory	6,701,561
Dental Lab	324,205
Optical	10,757,275
Laundry	14,123,360
Key Entry	298,078
Furniture Refinishing	570,801
Other Goods and Services	37,907,581
TOTAL SALES	155,194,092
PIA Operating & Personnel Expenses**	48,234,471

* Includes revenues from closed Industries at some institutions during 1996/97.

** Includes salaries, wages, benefits, and other operating expenses.

III. Economic Context for Correctional Industries

The economic analysis in this study takes into account the fact that correctional industries hire individuals who otherwise would make no contribution to the state economy during incarceration. By employing inmates, PIA uses labor with zero "opportunity costs" to the economy to make products that are sold to state agencies. An important part of the economic contribution of PIA production is that it captures, within California, all of the value-added (i.e., income) in the final manufacturing stage of its products. In the absence of correctional industries in California, many of the products now made by PIA would be manufactured outside of the state, representing a loss of value-added to California's economy. While California vendors would receive a margin for handling these goods, that margin would be less than the value-added at the final manufacturing stage since PIA currently captures both the value-added and the equivalent of the wholesale margin from its sales.

Part of the value-added at PIA goes into wage payments to employees who spend most of their income in the California economy. PIA's value-added also goes into the operation of PIA's program, which provides inmates with job skills and work habits.

IV. Method of Analysis and Sources of Data

We use a 514-sector input-output (I-O) model of the California economy to estimate the economic impacts of PIA. An I-O model measures the multiplier effects of economic activities through a complex set of accounts that track the circular flow of expenditure and income in the economy. The data in the I-O model consist of three major categories of economic transactions: (1)

interindustry sales and purchases of intermediate inputs: (2) final payments by industries to in-state labor, in-state owners of capital, various levels of government, and out-of-state producers and owners of capital; (3) and commodity purchases by households and governments plus inventory changes, investment, and exports. These three categories contain all the data necessary to estimate multiplier effects in the economy.

The California I-O accounts used in this study were prepared by The Minnesota IMPLAN Group. These accounts are based on numerous federal government data series including County Business Patterns, the Employment Security (ES202) series, the quinquennial national I-O accounts, and the Regional Economic Information System (REIS). The REIS data are derived from economic censuses (Manufactures, Retail, Agriculture, Governments, etc.) conducted by the US Bureau of the Census, the Gross State Product series, and various other statistical series.

The I-O accounts record California's transactions with the rest of the nation and the rest of the world. This information is essential for accurately estimating economic multipliers since the size of the multiplier is determined by the pattern of trade. The impact of replacing purchases from the PIA with purchases from the private sector is determined by the potential of the private sector within the state to substitute for the PIA in producing the products. This potential is represented by the regional purchase coefficient (RPC), which estimates the proportion of local (state) demand for specific products and services that will be met within the state. We use (1-RPC) to reflect the proportion of demand in the private sector in a given region that will be met out of that region. If the state has a great capacity to supply the demand for goods or

services in a particular sector, the RPC will be close to one, and the sectoral impact of removing the PIA will be small. On the other hand, if alternative suppliers of the goods or services are not readily available in the state, the regional RPC will be close to zero, and removing the PIA will have a much larger negative economic impact on the community.

In this study we analyze the impact of PIA under two scenarios. In the first scenario, we calculate the economic impact of PIA products and services on the economy of California. This includes its impact on state product, income and employment. In the second scenario we calculate the impact if the PIA were removed and the same goods and services were purchased from the private sector. Both analyses are based on sales figures of PIA's products and services for fiscal year 1996-97 that were provided by the PIA.

Economic impacts are measured in terms of (1) total California output/sales impacts (direct, indirect, and induced effects), (2) total California income impacts (only indirect and induced effects), and (3) total employment impacts (only indirect and induced effects). The *direct effect* occurs when the PIA produces and sells goods and services. The *indirect effect* occurs when the PIA purchases materials and supplies from distributors and manufacturers in the state. The *induced effect* occurs as workers in in-state industries that supply materials to PIA receive incomes that are then spent on consumer goods and services produced in the region. Together, these three effects make up the total effect. An input-output model measures these direct, indirect, and induced effects to assess their total impact on the economy.

Our model does not include the induced effects of PIA sales on the economy's total sales, since prisoners do not spend their income in the local

economy as a resident would. In addition, we do not include the direct effects of PIA sales on income and employment since we assume that inmate income is not spent in the community. However, since the PIA does employ people to oversee the production and distribution of these goods and services, the analysis accounts for this by including the total impact (direct, indirect and induced) of administrative expenses on the economy.

V. Economic Impacts of PIA in California

In this section we look at the impact of PIA on California's economy. The PIA operates in prison facilities in Amador, Del Norte, Imperial, Kern, Kings, Los Angeles, Madera, Marin, Monterey, Riverside, Sacramento, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Solano, and Tuolumne counties. The state impacts reflect the impacts arising from the production of goods and services in those facilities.

The analysis in this study examines two scenarios. The first is the impact of PIA sales in California. This is equivalent to asking the question: "What would be the impact if instead of purchasing goods and services from PIA, the public sector were to purchase them all from sources outside of the region?". This reflects the most common way of analyzing the economic impact of an industry.

The second scenario is to look at the impact of removing the PIA and purchasing the same goods and services from the most likely private sources, either within or outside of the state. This is equivalent to asking the question: "If the PIA were to vanish, where would the same goods and services be purchased, and what would this impact be?" In this case, some of the goods and

services will be provided within the state, while some will be purchased from out-of-state. Because some of the goods and services will continue to be purchased by the private sector within the state, the impact of eliminating PIA sales will be smaller than the total impact in the first scenario. The larger the proportion of products purchased outside the state, the greater will be the impact of removing PIA.

Finally, we note that due to rounding, the totals may not equal the sum of the numbers given in the tables.

A. The Impact of PIA in California

In Table 2, the first column of figures gives the state sales for each sector in 1996-97. The second through fourth columns of figures use the multiplier effects to give us the impact on the state from PIA sales as discussed in the previous section. The impacts of PIA's personnel services expenditures are included at the bottom of the table to account for the direct employment effects of PIA.

Table 2: California State PIA Impacts

Sector	PIA Sales & Expenditures 1996/97 Dollars	Impacts on California State		
		Sales Dollars	Income Dollars	Employment No. of Jobs
Dairy / Farm	12,502,999	14,897,323	2,755,899	88
Chicken / Eggs	7,699,290	10,458,400	1,583,459	55
Hay & Alfalfa	112,523	152,162	26,280	1
Prunes	212,500	227,337	49,827	2
Almonds	565,687	598,708	105,306	3
Concrete Precast	1,200,222	1,904,113	449,651	13
Meatcutting	8,109,721	13,883,713	2,112,923	92
Bakery	1,943,913	2,558,411	510,409	15
Coffee Roasting	2,151,147	3,571,528	1,293,489	39
Textile Mill	2,035	2,768	583	0
Knitting Mill	1,504,641	2,190,539	457,155	13
Fabric Products*	27,380,750	38,139,249	8,356,523	262
Silk Screening	209,145	291,323	63,830	2
Mattress Factory	2,919,159	3,841,625	830,603	26
Wood Products*	20,604,817	28,688,478	6,625,046	198
Paper Products	739,175	1,052,550	211,267	6
Specialty Printing*	4,796,642	6,722,220	1,646,668	47
Book Bindery	3,446,800	4,351,461	1,279,128	38
Cleaning Products	2,229,340	2,988,464	561,974	16
Corr Resource Recovery	1,702,739	2,882,824	813,538	24
Shoe Factory	6,701,561	9,322,347	1,938,768	56
Metal Products	11,860,072	16,661,919	3,863,573	112
License Plates	10,135,545	14,540,058	3,494,726	100
Dental Lab	324,205	460,288	108,395	3
Optical	10,757,275	13,587,675	3,666,768	109
Metal Signs	389,950	564,768	148,332	4
Laundry	14,123,360	18,959,184	6,017,837	199
Key Entry	298,078	385,653	115,773	3
Furniture Refinishing	570,801	876,802	208,192	6
Total Sales	155,194,092	214,761,890	49,295,923	1,532
PIA Operating & Personnel Expenses**	48,234,471	109,473,825	64,593,645	830
TOTAL	203,428,563	324,235,716	113,889,568	2,362

* Includes revenues from closed Industries at some institutions during 1996/97.

** Includes salaries, wages, benefits, and other operating expenses.

Total PIA sales are $155.2 million. Since the PIA purchases inputs from private firms, total multiplier effects (direct and indirect) are a total of $214.8 million of cumulative sales in the state. The indirect and induced impact on income generated within California is $49.3 million, creating 1,532 jobs. Additionally, PIA's operating and personnel expenditures ($48.2 million) generates $109.5 million in sales, $64.6 million in income and 830 jobs. Total impacts combining these two features are $324.2 million in sales, $113.9 million in income, and 2,362 jobs.

B. The Impact of Removing PIA in California

Table 3 gives the impact of discontinuing PIA production throughout California and purchasing the same goods and services from private sources. In this table we include an additional column to show the percent decline in sales in each sector due to purchases being made outside of the state. The interpretation of the final three columns are similar to that of the final three columns in Table 2. A negative loss in these columns represents a gain for the regional economy. Note that total state sales will decline since a proportion of the goods and services will be purchased outside of the state.

In this scenario the total reduction in direct sales (the amount purchased outside of the state) would be almost $77.3 million. This represents a 50 percent loss in direct purchases of these goods and services within the state. This direct sales reduction would have direct and indirect effects on state sales, leading to a loss in total California sales of $108.5 million. However, income would increase by $2.3 million, and employment in the private sector would increase by 271 jobs. The reason for this gain is that income and employment multipliers for PIA are much smaller than for the private sector because they do not include

Table 3: California State Impacts if PIA Vanishes

Sector	Reduction in Sales 1996/97	Purchases Outside of the State	Losses to California		
			Sales	Income	Employment
	Dollars	Percent	Dollars	Dollars	No. of Jobs
Dairy / Farm	3,249,880	26	3,872,231	-2,336,223	-24
Chicken / Eggs	2,812,782	37	3,820,767	-36,135	6
Hay & Alfalfa	98,364	87	133,014	20,288	1
Prunes	111,424	52	119,204	-23,269	-1
Almonds	188,401	33	199,399	-109,221	-3
Concrete Precast	150,195	13	238,279	-29,441	0
Meatcutting	5,523,750	68	9,456,572	1,045,835	49
Bakery	224,534	12	295,512	-391,405	-9
Coffee Roasting	484,587	23	804,555	129,483	6
Textile Mill	1,684	83	2,292	390	0
Knitting Mill	805,139	54	1,172,166	83,278	1
Fabric Products*	7,848,500	29	10,932,349	-3,361,186	-175
Silk Screening	59,950	29	83,506	-25,674	-1
Mattress Factory	666,952	23	877,711	-508,746	-16
Wood Products*	15,170,111	74	21,121,634	3,244,877	101
Paper Products	720,211	97	1,025,547	202,117	6
Specialty Printing*	2,484,071	52	3,481,283	29,073	2
Book Bindery	2,377,186	69	3,001,111	253,908	1
Cleaning Products	1,467,499	66	1,967,204	211,918	9
Corr Resource Recovery	937,424	55	1,587,107	349,890	11
Shoe Factory	6,226,246	93	8,661,150	1,679,445	44
Metal Products	11,474,916	97	16,120,823	3,621,375	106
License Plates	7,624,484	75	10,937,787	1,835,208	56
Dental Lab	43,161	13	61,278	-59,289	-1
Optical	4,824,670	45	6,094,113	-1,287,871	-11
Metal Signs	228,857	59	331,455	30,697	1
Laundry	1,412,336	10	1,895,918	-6,702,657	-420
Key Entry	59,616	20	77,131	-105,966	-1
Furniture Refinishing	57,080	10	87,680	-100,529	-7
Total Sales	77,334,009	50	108,458,779	-2,339,831	-271
PIA Operating & Personnel Expenses**	48,234,471	100	109,473,825	64,593,645	830
TOTAL	125,568,480		217,932,604	62,253,814	560

* Includes revenues from closed Industries at some institutions during 1996/97.

** Includes salaries, wages, benefits, and other operating expenses.

direct effects within the PIA such as hiring people to oversee the production and distribution of the goods. Once we account for the impact of PIA operating and personnel expenditures, losses to California's economy total $217.9 million in sales, $62.3 million in income, and 560 jobs.

A minus sign in the employment and income columns (such as in laundry, fabric, and dairy, to name the major sectors affected) represents a gain for the economy. In sectors such as meatcutting, wood products, shoe production, and metal products, a very high percent of the products would be purchased outside of California if the products were purchased from the private sector, and there would be losses in state income and employment. However, recall that these sector-specific impacts do not account for the fact that the PIA employs people to oversee the production and distribution of these goods and services, nor the impact of the rest of PIA's operating expenditures. The impacts of these PIA expenditures are $109.5 million in state sales, $64.6 million in income, and 830 jobs.

The extent to which out-of-state purchases will substitute for PIA production of the products determines the impact of removing PIA on the State. On the low end, only 10 percent of purchases would be redirected to out-of-state producers in laundry and furniture refinishing, while this proportion increases to 97 percent in metal and paper products.