

THE IMPACT OF PIDA LOANS ON EMPLOYMENT

General Assembly of the Commonwealth of Pennsylvania  
JOINT STATE GOVERNMENT COMMISSION  
108 Finance Building  
Harrisburg, Pennsylvania 17120  
September, 1980

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The Joint State Government Commission was created by act of 1937, July 1, P.L. 2460, as amended, as a continuing agency for the development of facts and recommendations on all phases of government for the use of the General Assembly.

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## Joint State Government Commission, 1979-1980

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GENERAL ASSEMBLY OF THE COMMONWEALTH OF PENNSYLVANIA  
JOINT STATE GOVERNMENT COMMISSION

ROOM 108 - FINANCE BUILDING  
HARRISBURG 17120

September 29, 1980

TO THE MEMBERS OF THE GENERAL ASSEMBLY:

In 1979 Resolution Serial No. 86, the House of Representatives directs the Joint State Government Commission to study the success of the loan program of the Pennsylvania Industrial Development Authority in increasing employment in new and existing industries. The authorizing resolution--sponsored by Representatives Kenneth J. Cole, K. Leroy Irvis, James J. Manderino and Ted Stuban--specifically requests the Commission to relate the number of new jobs created with the number projected in PIDA loan applications and to evaluate PIDA's performance in monitoring and verifying the creation of jobs during the life of the loans.

Since the resolution does not call for the development of policy recommendations or legislation, a legislative task force was not appointed to assist in the study, as is customary in Commission studies initiated by resolutions adopted by either or both chambers of the General Assembly. The study was conducted by the staff under the general supervision of Donald C. Steele, research director.

To facilitate evaluation of the impact of the PIDA program on employment, chapters I and II of this report include background information on the statutory and administrative history of the authority as well as a general analysis of the economic changes that have occurred since the inception of the loan program in 1956. The third chapter provides insight into the success of the program by focusing on the employment results of a random sample of PIDA loans over a ten-year period.

The Commission recognizes with gratitude the cooperation in this study of Harry B. McDowell, director, Bureau of Economic Assistance, Department of Commerce; Gerald W. Kapp, executive secretary, Pennsylvania Industrial Development Authority; and John V. Senise, executive director, Office of Employment Security, Department of Labor and Industry.

Respectfully submitted,

A handwritten signature in cursive script that reads "Fred J. Shupnik". The signature is written in dark ink and is positioned above the typed name.

Fred J. Shupnik  
Chairman

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## SUMMARY

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1. To stimulate the growth of private enterprise and create new jobs, the General Assembly in 1956 established the Pennsylvania Industrial Development Authority to make loans at below-market interest rates for the acquisition or construction of industrial facilities. The average PIDA loan covers 37 percent of the total cost of the loan project.
2. Total PIDA loans since 1956 exceed \$575 million and involve 1,617 industrial facilities. In the last three fiscal years, PIDA annually has averaged 67 loans totaling \$48 million. Annual loan repayments currently approximate \$25 million and are available for new loans along with funds provided by Commonwealth appropriations and revenue bond issues.
3. Eighty-eight percent of the total number of PIDA projects, 84 percent of total loan dollars and 91 percent of projected new jobs are in manufacturing industries, Standard Industrial Codes (SIC) 20-39. In Pennsylvania, employment in the manufacturing industry as a whole grew slowly between 1956 and 1969 and then began a steady decline (12 percent through 1979).
4. An estimated 85 percent of PIDA's loans have been to established firms, although numerous economic studies sponsored by academic and governmental institutions have concluded that state loan subsidies are most effective when directed at small new firms unable to obtain capital through customary channels.
5. Over the years, PIDA has made only sporadic and incomplete attempts to measure the accuracy of projections of new jobs in loan applications and, as far as it is known, has made no attempt to determine if, in the absence of PIDA loans, individual development projects would have proceeded.

6. In response to a request to specify current job monitoring practices, PIDA indicates that it is initiating a system of site inspection reports to monitor employment levels of individual companies. The extent and success of this new policy must await future evaluation.
7. On the basis of a stratified random sample of PIDA loans from 1967 through 1976, it was found that for every 100 new jobs projected on loan applications, only 35 were actually created within the following three years. The "success rate" of 35 percent is unadjusted for any overall industrial employment trends.
8. When each sample firm is assumed to have experienced the same employment trend over the three years subsequent to loan approval as the industry group of which it is a part, the average "adjusted success rate" is 51 percent.
9. The reason for third-year success rates far below 100 percent cannot readily be determined. Except for the relatively small number of new enterprises, the actual number of new jobs created cannot be directly ascertained. For existing firms, actual third-year employment includes jobs attributable both to the loan-financed expansion and to ongoing operations. The success rate, therefore, is measured by dividing actual third-year employment less employment existing at loan approval by the number of projected new jobs. Over-projection of new jobs is subject to no penalty and may enhance a project's chances for loan approval or a larger loan. Unanticipated changes in industry conditions over the following three years, however, may invalidate the most conscientious projection. In any event, the total "planned employment" published for PIDA loan projects probably overstates actual new jobs created by 100 to 200 percent.
10. By the sixth year after loan approval, the average success rate adjusted for industry change is 76 percent for loans approved from 1967 through 1973. While the increase in the success rate between the third and sixth years may indicate the long-term viability of PIDA loan projects, changes in numerous other factors--e.g., type of operation, ownership, etc.--over such a long time period tend to cloud the reliability of this finding.

# I. THE PENNSYLVANIA INDUSTRIAL DEVELOPMENT AUTHORITY

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## STATUTORY HISTORY

The General Assembly created the Pennsylvania Industrial Development Authority (PIDA) in 1956 for the purpose of increasing the number of jobs in areas of critical unemployment by assisting the growth of private enterprise.

The "Pennsylvania Industrial Development Authority Act," as amended,<sup>1</sup> empowers PIDA, a public corporation, to make loans for the acquisition, construction or development of facilities for industrial, manufacturing, research and development and agricultural enterprises, as defined in the law. The loans may only be made to community-sponsored, nonprofit industrial development agencies for projects in critical economic areas and may apply to any site or structure--excluding equipment and machinery--relating to a qualified enterprise. The projects are sold or leased by the local industrial development agencies to new or expanding firms, with PIDA usually holding the second mortgages.

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1. May 17, 1956, P.L. (1955) 1609, No. 537, (73 P.S. §§301-310.1); amended 1961, July 18, P.L. 793, No. 350; 1963, July 10, P.L. 221, No. 125; 1965, May 5, P.L. 42, No. 37; 1967, October 5, P.L. 323, No. 142; 1968, July 18, P.L. 420, No. 193; 1972, June 16, P.L. 475, No. 153; 1973, September 27, P.L. 257, No. 73; 1975, July 16, P.L. 58, No. 35; 1975, December 19, P.L. 591, No. 166; and 1980, May 15, No. 49.

The statute establishes a 12-member Pennsylvania Industrial Development Authority Board, consisting of 5 members of the Governor's cabinet and 7 public members appointed by the Governor and confirmed by the Senate. The Secretary of Commerce serves as chairman. Other cabinet officers are the Secretaries of Labor and Industry, Community Affairs, Agriculture and Banking. The board is authorized to employ staff and retain consultants.

Among the major responsibilities assigned by law to PIDA are to

- Designate critical economic areas on the basis of statutorily set unemployment rates.
- Cooperate with industrial development agencies in promoting the growth of qualified enterprises in critical areas.
- Investigate and approve loan applications according to statutory guidelines.
- Determine the length and interest rates of loans.
- Make loans from a revolving Industrial Development Fund, a special account in the State Treasury, and provide for their repayment and redeposit in the fund.
- Protect loans by taking title by foreclosure or by purchasing first mortgages.
- Borrow money and issue bonds, with principal and interest payable solely from PIDA's mortgage income.

Act No. 537 stipulates the maximum percentage of the cost of an industrial development project that may be covered by a PIDA loan and sets a minimum percentage of the cost to be provided by the local industrial development agency. These percentages vary with the unemployment rate in an area and the type of enterprise. With the exception of small business projects (those with less than 50 full-time employees), the maximum PIDA loan currently ranges from 30 to 60 percent of project cost and the minimum investment of the local industrial development corporation

from 0 to 20 percent of project cost. The 1980 amendments to the PIDA law, which insert special provisions for small businesses, permit PIDA loans to cover up to 70 percent of the cost of small business projects in areas where the annual unemployment rate averages 10 percent or above.

In addition to gradually increasing the maximum amount of project cost to be covered by a PIDA loan (from 30 percent for all loans in the 1956 act), amendments to the 1956 statute have broadened the range of enterprises eligible for loans,<sup>2</sup> reduced the minimum unemployment rate for the "critical economic area" designation to 4 percent (1972) and added the borrowing and bond-issuing power (1973).

## ADMINISTRATIVE HISTORY

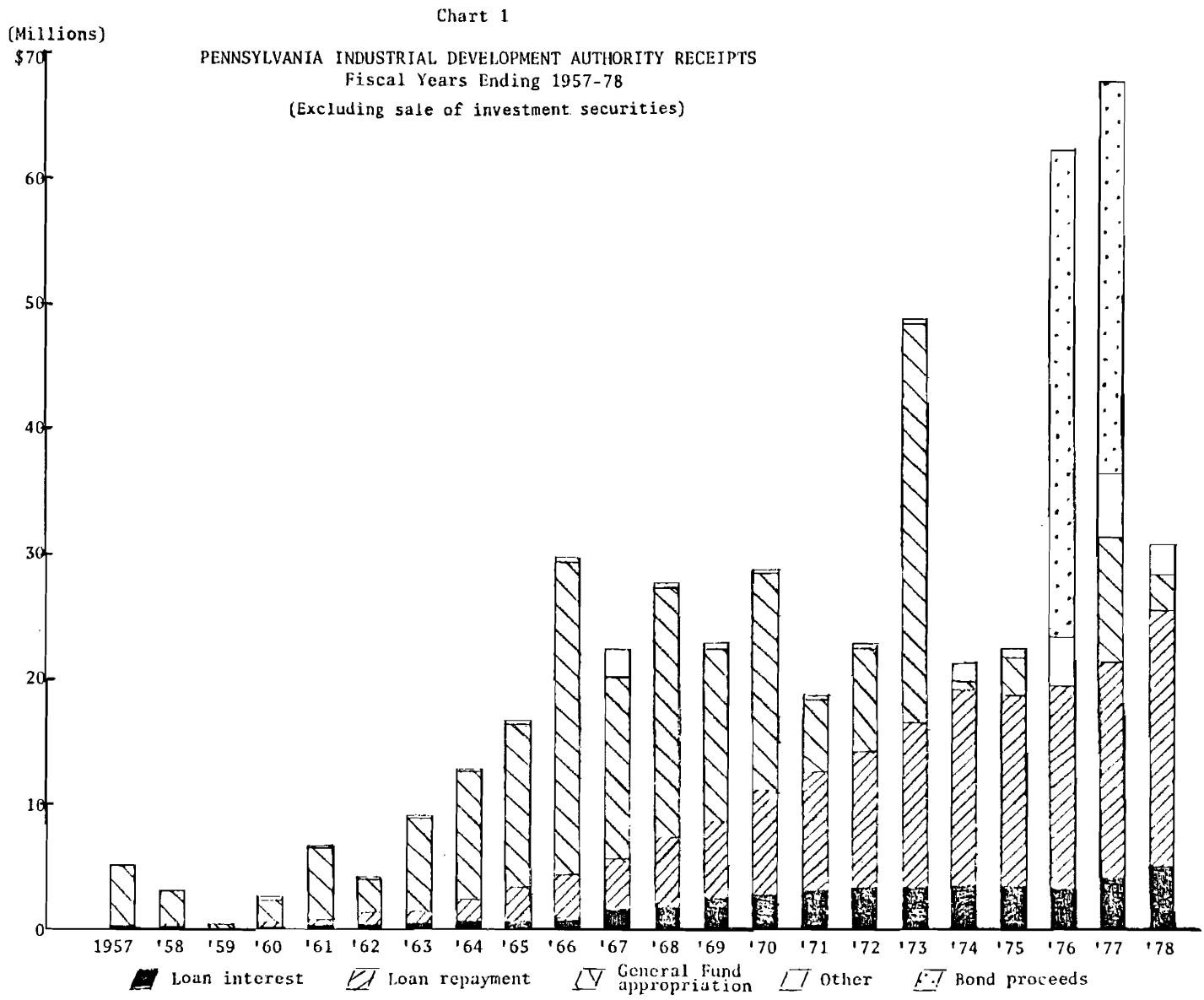
### Organization and Funding

Since PIDA's establishment in 1956, the staff employed by the PIDA board has been attached to and augmented by the Commerce Department's Bureau of Economic Assistance. Further assisting the PIDA staff, composed of two professional administrators and two clerical personnel, are professional services on a contractual basis, including a law firm, an engineering company and two accounting organizations, one of which reviews applications for loans and the other audits the PIDA program.

The Industrial Development Fund proceeds are used to finance PIDA loans and other expenses. Chart 1 shows the annual receipts of the Industrial Development

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2. "Research and development enterprise" was added in 1963 and "agricultural enterprise" in 1972 to the definition of "industrial development project." Specific types of operations--such as warehouses and terminals and computer and clerical operation centers--were added to the enterprise definitions. A special Senate committee is proposing an amendment (1980 Senate Bill 1496) to permit PIDA loans to wholesale, retail and service enterprises: see Senate of Pennsylvania, "Report and Recommendations of the Special Senate Committee to Investigate Significant Business Closings in the Commonwealth of Pennsylvania," p. 32.



SOURCE: Audit Reports, Auditor General, 1957-76, and unreleased reports for 1977-78.

Fund for the 21-year period for which complete data are available--1956-57 through 1977-78. Initially, the receipts largely consisted of funds appropriated by the Commonwealth. As years passed, loan repayments and interest represented a steadily increasing part of each year's receipts. Nevertheless, total receipts from year to year have fluctuated because of wide variations in appropriation transfers from the General Fund and the large bond issues in several years. To date there have been three bond issues totaling \$95 million--\$40 million in 1975-76, \$32.5 million in 1976-77 and \$22.5 million in 1978-79 (not shown on the chart).

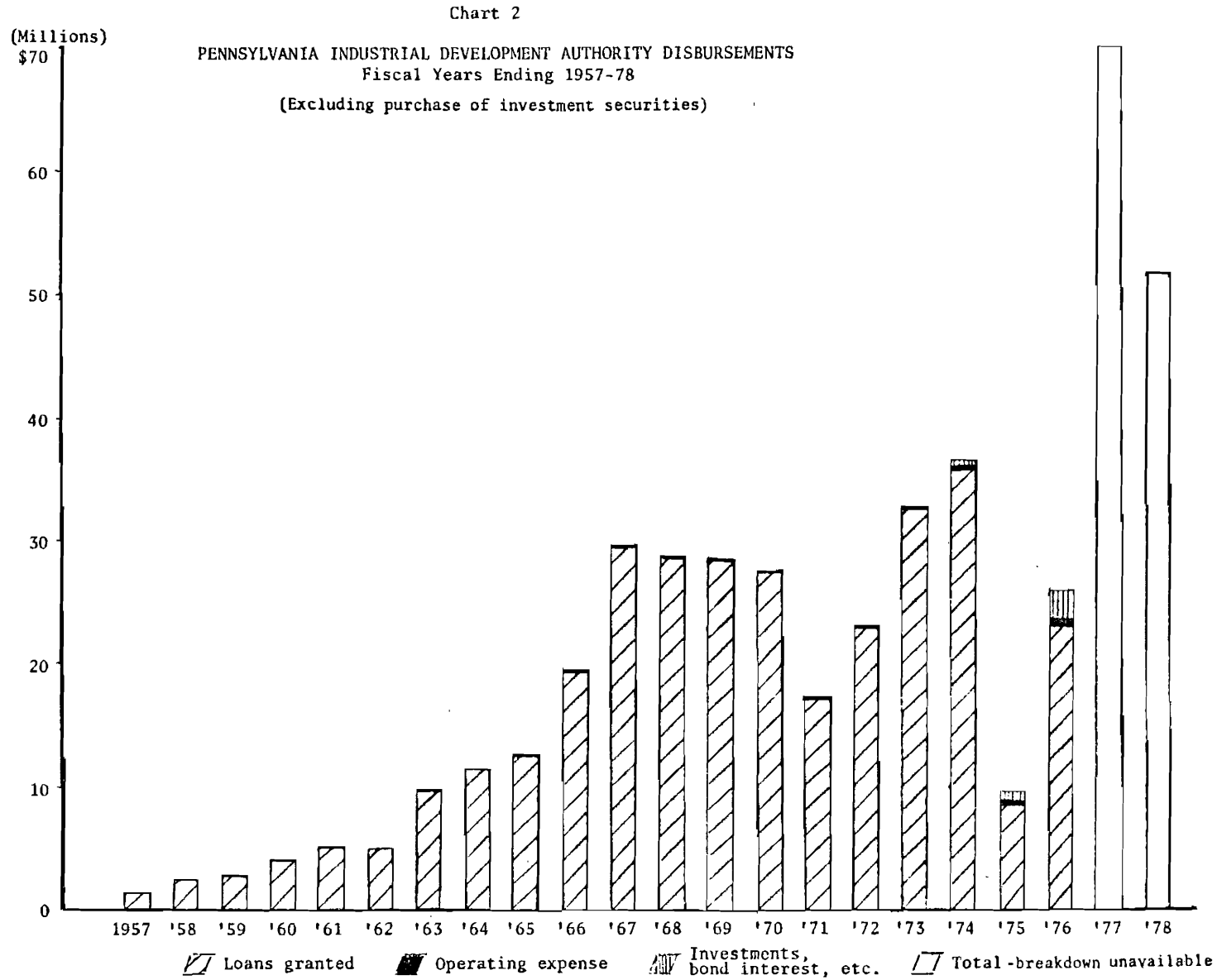
It should be made clear that the appropriation receipts shown on the chart represent the amount transferred into the industrial development fund from the General Fund in a particular year and do not correspond with the amount actually appropriated by the Legislature in that year. The largest appropriation--\$38.5 million--was enacted in 1966-67 followed by \$18.6 million for the next two fiscal years. Between 1969-70 and 1979-80 the annual appropriation did not exceed \$10 million. An \$18 million appropriation was enacted for fiscal 1980-81.

In 1980 the fund is estimated to have total assets of \$357 million, of which \$300 million represents loans receivable. Loan repayments in 1980 will approximate \$25 million.

Chart 2 displays the growth of fund disbursements between 1956-57 and 1977-78. For that time period, total disbursements exceeded \$450 million and by 1980-81 are estimated to exceed \$570 million. About 95 percent of total disbursements is attributable to loans granted. The fund's indebtedness consists of the \$95 million in serial bonds, which were issued with an average interest rate of approximately 6.8 percent. PIDA's bond interest carrying cost for 1980 is estimated at \$5.8 million. The interest cost will decline each year until all bonds are redeemed.

### Industrial Development Projects

In its 24-year history (1956 to 1980) PIDA has granted loans totaling \$577 million for 1,617 projects in 61 of Pennsylvania's 67 counties (table 1). The increased



SOURCE: Office of the Auditor General, reports of examination of the Department of Commerce and the Pennsylvania Industrial Development Authority.



Table 1  
 LOAN PROJECTS OF THE PENNSYLVANIA INDUSTRIAL  
 DEVELOPMENT AUTHORITY  
 July, 1956 through June, 1980

Counties	Total No.	Loans and Commitments	Project Cost	Planned Employment	Estimated Payroll <sup>1/</sup>
Adams	5	\$ 2,075,733	\$ 5,500,828	644	\$ 9,352,812
Allegheny	126	53,896,044	141,463,626	11,156	162,018,588
Armstrong	13	3,330,280	10,840,025	2,293	33,301,239
Beaver	12	13,161,135	33,825,750	2,001	29,060,523
Bedford	5	2,043,000	5,210,000	1,102	16,004,346
Berks	5	3,612,000	11,140,000	1,803	26,184,969
Blair	64	13,075,506	33,353,412	7,431	107,920,413
Bradford	22	6,633,302	17,763,915	1,898	27,564,654
Bucks	96	26,265,285	68,800,415	11,555	167,813,265
Butler	13	5,890,975	15,034,250	1,348	19,577,004
Cambria	15	10,865,616	26,922,542	2,021	29,350,983
Cameron	1	46,120	115,300	--	--
Carbon	15	1,370,035	3,793,418	878	12,751,194
Centre	11	1,531,865	4,164,250	1,527	22,176,621
Chester	6	12,033,090	39,379,284	1,704	24,747,192
Clarion	14	1,665,327	4,403,362	673	9,773,979
Clearfield	18	3,120,530	8,481,868	2,930	42,552,390
Clinton	9	2,321,300	5,864,500	1,531	22,234,713
Columbia	29	8,019,090	19,439,150	3,058	44,411,334
Crawford	17	7,546,372	22,328,421	2,275	33,039,825
Cumberland	8	7,639,520	36,464,420	2,227	32,342,721
Dauphin	3	3,009,000	10,595,481	4,425	64,264,275
Delaware	21	12,556,380	32,203,019	2,260	32,821,980
Elk	11	4,603,503	11,467,027	971	14,101,833
Erie	67	13,805,051	37,018,164	6,792	98,640,216
Fayette	25	4,223,024	11,298,907	2,376	34,506,648
Franklin	9	2,026,547	6,398,120	1,099	15,960,777
Fulton	1	280,000	700,000	245	3,558,135
Greene	5	596,000	1,510,000	440	6,390,120
Huntingdon	18	1,958,840	4,914,609	2,614	37,963,122
Indiana	11	1,439,450	4,286,835	1,677	24,355,071
Jefferson	8	654,811	1,734,152	614	8,917,122
Lackawanna	78	37,549,493	94,483,183	11,453	166,331,919
Lawrence	26	4,487,593	10,599,861	1,818	26,402,814
Lehigh	59	33,323,613	119,365,930	8,149	118,347,927
Luzerne	192	57,618,312	152,973,795	24,788	359,996,124
Lycoming	51	8,952,227	23,577,758	5,483	79,629,609
McKean	5	649,780	1,824,950	428	6,215,844
Mercer	23	3,394,001	8,700,873	1,432	20,796,936
Mifflin	15	2,134,150	6,137,826	1,650	23,962,950
Monroe	13	2,547,925	8,252,322	1,127	16,367,421
Montgomery	16	9,202,221	26,076,497	2,022	29,365,506
Montour	5	884,650	2,506,300	620	9,004,260
Northampton	40	12,048,589	33,758,302	5,272	76,565,256
Northumberland	52	9,099,397	25,424,150	4,587	66,617,001
Philadelphia	70	51,547,239	125,179,349	12,016	174,508,368
Pike	1	100,200	334,000	42	609,966
Potter	1	75,000	229,534	100	1,452,300
Schuylkill	73	17,273,152	46,223,695	9,287	134,875,101
Snyder	32	3,272,332	8,372,319	2,508	36,423,684
Somerset	18	3,419,760	8,657,727	2,039	29,612,397
Sullivan	4	334,400	838,369	265	3,848,595
Susquehanna	4	1,081,900	2,641,625	328	4,763,544
Tioga	13	1,609,720	3,796,800	1,568	22,772,064
Union	8	2,332,562	6,602,000	810	11,763,630
Venango	25	3,040,017	7,761,760	1,177	17,093,571
Warren	1	37,500	125,000	40	580,920
Washington	53	12,211,877	31,198,537	4,264	61,926,072
Wayne	3	306,000	860,000	246	3,572,658
Westmoreland	26	58,194,918	146,770,178	7,891	114,600,993
York	27	8,889,038	25,048,438	4,367	63,421,941
	1,617	\$576,912,297	\$1,564,736,128	199,345	\$2,895,087,435

1/ Payroll estimated on average for Fiscal Year 1979-80 projects approved at \$14,523.

SOURCE: Reproduced from Pa. Department of Commerce, Bureau of Statistics, Research and Planning, Pennsylvania Industrial Development Authority, Summary of Loans, July 1979-June 1980, Report No. 47.

employment projected in the loan applications for the third year after loan approval totals nearly 200,000 jobs. (The accuracy of job projections is discussed later in this chapter and evaluated in chapter III.) During the past three fiscal years, PIDA annually has averaged 67 loans totaling \$47.7 million.<sup>3</sup>

Based on data in table 1, total PIDA loans since 1956 have covered 37 percent of total project costs. Despite the amendments to the law which raise the ceiling for PIDA participation in a project, the percentage of project costs covered by PIDA loans during the last few years does not differ significantly from the 24-year rate.

The average projected number of new jobs per loan in the past three fiscal years is 20 fewer than the overall average (123), but the amount of the average loan, reflecting inflation, has increased substantially (\$715,931 from July 1977 to June 1980 as compared with \$356,779 for the 24-year period).

Table 2 lists the 29 industries that have qualified for PIDA loans. Eighty-eight percent of the total number of projects, 84 percent of the total PIDA loan dollars and 91 percent of the projected jobs are in the manufacturing industries, Standard Industrial Codes (SIC) 20-39. Chart 3, which maps the distribution of PIDA loan dollars throughout the Commonwealth, illustrates that the areas with the heavier concentrations of manufacturing enterprises have received the larger dollar amounts.

By far the largest and most complex loan project to date is the development of facilities for Volkswagen on the site of a never-completed Chrysler Corporation plant located in East Huntingdon and Hempfield Townships in Westmoreland County. The application of the Greater Greensburg Industrial Development Corporation for the \$40 million first-mortgage PIDA loan on the \$80 million

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3. Pa. Department of Commerce, Bureau of Statistics, Research and Planning, Pennsylvania Industrial Development Authority, Summary of Loans, July 1977-June 1980, Report Nos. 44, 46 and 47. Each report in this series provides the names of firms to occupy the industrial development projects and other information on individual loans approved during the fiscal year under review.

Table 2  
 THE PENNSYLVANIA INDUSTRIAL DEVELOPMENT AUTHORITY  
 LOAN PROJECTS BY INDUSTRY GROUPS  
 July, 1956 through June, 1980

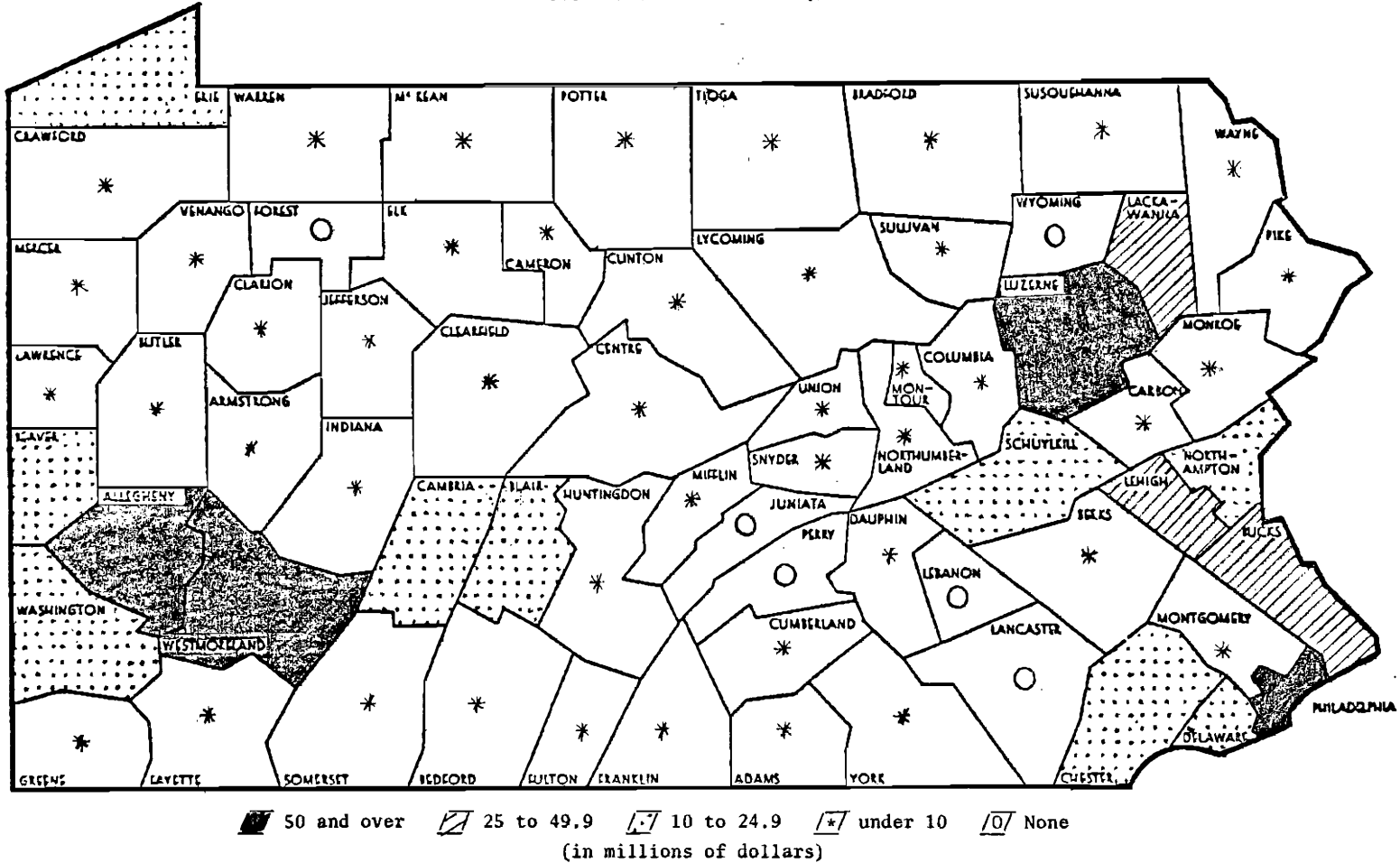
SIC Code	Industry Group	No. of Projects	Loan Amount	Planned Employment	Project Cost	Estimated Payroll
01	Agricultural production - crops	1	\$ 316,650	60	\$ 933,300	\$ 871,380
16	Construction - general contractors	1	90,000	50	225,000	726,150
19	Ordnance	1	636,000	500	1,200,000	7,261,500
20	Food and kindred products	83	36,400,119	8,121	107,255,786	117,941,283
21	Tobacco manufacturers	6	966,700	1,104	2,513,000	16,033,392
22	Textile mill products	74	15,421,904	6,391	40,994,564	92,816,493
23	Apparel and other finished products made from fabric and similar materials	137	27,068,314	19,892	71,050,954	288,891,516
24	Lumber and wood products, except furniture	47	10,341,525	4,214	27,564,317	61,199,922
25	Furniture and fixtures	63	10,718,027	7,636	28,199,385	110,897,628
26	Paper and allied products	50	15,030,233	6,000	42,714,273	87,138,000
27	Printing, publishing and allied industries	45	17,229,005	4,791	43,110,168	69,579,693
28	Chemicals and allied products	64	22,717,175	5,170	70,527,737	75,083,910
29	Petroleum industry	1	152,732	175	381,832	2,541,525
30	Rubber and miscellaneous plastic products	78	16,157,789	7,660	41,281,876	111,246,180
31	Leather and leather products	42	6,927,060	6,449	17,571,359	93,658,827
32	Stone, clay, glass and concrete products	56	31,664,406	7,084	97,480,018	102,880,932
33	Primary metal industries	69	52,268,998	9,022	136,507,177	131,026,506
34	Fabricated metal products	162	30,590,374	13,505	78,760,984	196,133,115
35	Machinery, other than electrical	182	46,522,228	19,903	136,992,896	289,051,269
36	Electrical machinery, equipment and supplies	109	51,011,414	23,612	130,450,473	342,917,076
37	Transportation equipment	64	67,886,990	19,554	179,841,408	283,982,742
38	Professional, scientific, and controlling instruments; photographic and optical goods	39	10,847,096	4,854	28,784,877	70,494,642
39	Miscellaneous manufacturing industries	45	15,199,015	6,628	42,546,300	96,258,444
42	Motor freight transportation, terminals	23	5,543,977	1,881	14,898,055	27,317,763
47	Transportation services	1	390,000	107	880,000	1,553,961
50	Wholesale distribution, durable goods	68	29,910,206	8,807	69,122,848	127,904,061
51	Wholesale distribution, nondurable goods	18	17,847,750	1,598	46,279,199	23,207,754
65	Land development, industrial parks	54	13,613,412		41,615,448	
73) 89)	Research and development	34	23,443,198	4,577	65,052,894	66,471,771
		1,617	576,912,297	199,345	\$1,564,736,128	\$2,895,087,435

1/ Payroll estimated on average for Fiscal Year 1979-80 projects approved at \$14,523.

SOURCE: Reproduced from Pa. Department of Commerce, Bureau of Statistics, Research and Planning, Pennsylvania Industrial Development Authority, Summary of Loans, July 1979-June 1980, Report No. 47.

Chart 3

LOANS AND COMMITMENTS OF THE PENNSYLVANIA INDUSTRIAL  
DEVELOPMENT AUTHORITY BY COUNTY  
JULY 1956 THROUGH JUNE 1980



SOURCE: Data provided in Pa. Department of Commerce, Bureau of Statistics, Research and Planning, Pennsylvania Industrial Development Authority, Summary of Loans, July 1979-June 1980, Report No. 47.

project was approved in June 1976. The terms of the loan include a 1.75 percent interest rate for 22 years and an 8.5 percent rate for the 8 years thereafter. Other funding for the project was supplied by a \$20 million note from Chrysler (later purchased by a subsidiary of Volkswagen), a \$6 million loan from the school and State employees' retirement funds, a \$6.8 million Commonwealth appropriation for the construction of a rail spur and yards and the company's equity of \$7.2 million. Employment at the plant was projected for 5,000 three years after production began. By the end of 1979, employment had reached 4,500.

Before approving a loan and establishing the terms, the PIDA board reviews the eligibility, purpose, location, size and cost of the project; the firm to occupy the facility; employment projections; and method of financing. These matters are covered in the loan application materials reproduced in the appendix, pp. 44-48.

As listed in "PIDA Program Profile" (May 1980), loan interest rates established by PIDA currently range from 3 to 6 percent depending on the level of unemployment in an area. The length of a loan may range from 10 to 20 years. In a sample of PIDA loans approved from 1967 to 1976, which is analyzed in chapter III, 58 percent had an interest rate of 2 percent; 29 percent, a 7/8 of 1 percent rate; and 13 percent, a 4 percent rate. Fifty-five percent were for a 20-year term and 30 percent for terms from 15 to 19-1/2 years.

The authors of a comprehensive study on state economic development policy make special note of the fiscal stability of PIDA projects:

The largest tax-financed state lender, the Pennsylvania Industrial Development Authority, has experienced extraordinarily low losses. PIDA has written off only \$52,000 out of \$428.7 million in loans between 1956 and 1976. Many people in Pennsylvania interviewed in the course of a recent study, however, declared that PIDA was more stringent than commercial banks in the state.<sup>4</sup>

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4. Lawrence Litvak and Belden Daniels, Innovations in Development Finance (Council of State Planning Agencies, Washington, D.C.: 1979), p. 109.

The PIDA program has been criticized for its lack of statutory and administrative policies to encourage development in geographic areas and industry groups which can make the greatest contribution to the State's economic objectives. For example, a 1974 memorandum of the State Planning Board concludes:

The data indicate that even though PIDA investments, in the aggregate, may have contributed somewhat toward strengthening Pennsylvania's economic base overall, not every area has shared in these benefits. This would be the case when the mix of industries attracted to an area by the availability of cheap capital tended merely to reinforce existing conditions characterized by economic inefficiency, low worker earnings potential, industrial obsolescence, and a propensity for structural unemployment.<sup>5</sup>

The report recommends priorities that would:

(1) direct growth away from large population centers toward less populated areas; (2) reduce regional disparities in development status and in the rate of economic growth; (3) alleviate urban ghetto and rural unemployment; and (4) promote the development of industries which have the greatest potential for future growth and which provide greatest long-term benefits to individual workers.<sup>6</sup>

According to PIDA officials, sufficient funds have been available in at least the last decade to accommodate all applicants. The rare rejection of an applicant is because the proposed project does not meet statutory guidelines as set by the General Assembly. PIDA has designated each county and each municipality with a population over 25,000 as an economic area. As shown in the appendix, p. 49, currently every location in the State meets the statutory qualification for "critical economic area" since no county has an unemployment rate below 4 percent.

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5. Pa. Office of State Planning and Development, Pennsylvania Industrial Development Authority Program: An Appraisal, Interim Report, Technical Working Memorandum No. 3, Comprehensive Investment Plan for Pennsylvania (Harrisburg: April 1974), p. 14.

6. Ibid., pp. 16-17.

## MONITORING JOB EXPERIENCE

In addition to directing the Commission to study whether job projections have been met, 1979 House Resolution Serial No. 86 asked for an evaluation of steps taken by PIDA to monitor and verify the creation of jobs over the life of the loan. The Commission staff found that PIDA monitoring efforts to date have consisted largely of sporadic employment surveys--two in the 1970s and a third in the late 1960s.

The two most recent reports are one-page internal memoranda which summarize the returns from questionnaires sent by the PIDA staff to sponsoring industrial development agencies. The March 16, 1977 memorandum reports that 52 questionnaires were sent to the local industrial development agencies which had projects approved in 1973. Thirty-four agencies responded (65 percent of those queried) and indicated their projects had achieved 5,821 jobs, 105.6 percent of the original projection of 5,514 new jobs after three years.

The August 29, 1975 memorandum summarizes a survey of projects approved during 1971 and 1972, a total of 149 loans with a projection of 15,391 jobs. Based on information supplied by the industrial development agencies on 123 of the projects (an 83 percent return), 13,585 jobs were actually created, or 88 percent of anticipated employment.

In these surveys, PIDA acquired its data from an intermediate source--the industrial development agencies, which had supplied the job projections on the loan applications--rather than directly from the firms occupying the projects under review or from the records of the State Office of Employment Security. In gathering data for the sample loans analyzed in chapter III, the staff found that employment data supplied by the industrial development agencies were often at variance with employment security records. Furthermore, PIDA apparently made no attempt to resurvey the projects for which survey returns were not received nor to determine whether the average projected employment differed between the responding and nonresponding projects. No reliable findings concerning new jobs resulting from PIDA projects in general can be derived from these surveys. As far as can be determined,

PIDA has never attempted to measure or has even addressed the question of whether the project enterprises would have made the same investment decisions without the subsidized loans.<sup>7</sup>

With respect to monitoring efforts, Harry B. McDowell, the Commerce Department's director of economic assistance, in a letter of April 14, 1980 to the Commission staff, indicates:

PIDA has been taking the following specific actions in connection with employment level verifications:

1. The Authority staff has initiated (through the Bureau of Economic Development) a system of site inspection reports, which will be used, among other things, to monitor employment levels of individual companies.

2. The Authority will be requesting PIDA applicants to provide it with existing employment figures as provided by the Office of Employment Security.

3. In addition, the Authority will, in the future, be requesting of each applicant a breakdown of job categories to be created (i.e., skilled, semiskilled and unskilled).

The second and third actions listed in the letter are reflected in the new PIDA loan instructions and loan application (appendix, pp. 44-46).

PIDA at this time has not announced plans to monitor the employment results of all loans (or representative samplings) at regular intervals following approval. Such information--categorized by economic area; industry; size, age and type of firm; and nature and pay range of jobs created--is necessary for meaningful program evaluation and could serve as the basis for future program policies.

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7. See p. 27 for comments on this subject which appear in Litvak and Daniels, Innovations in Development Finance.



## II. THE ECONOMIC SETTING

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An understanding of the overall industrial trends is prerequisite to an evaluation of PIDA's efforts and accomplishments in promoting employment.

### NATIONAL, REGIONAL AND STATE TRENDS

Over the last three decades, the United States has experienced a great disparity in employment growth between manufacturing and nonmanufacturing industries as well as further dispersion of employment, population and personal income from the industrial regions of the North to the younger, faster-growing areas of the South and West. Appendix tables 1A through 4A (pp. 52-55), prepared by the staff of the Advisory Commission on Intergovernmental Relations from U.S. Department of Commerce and Department of Labor data, facilitate analysis of the changes within each region and state from 1950 to 1978.

Total U.S. nonagricultural employment nearly doubled in the 28-year span, increasing from 45 million to 86 million. The most dramatic increase has been in nonmanufacturing employment,<sup>8</sup> which increased from

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8. Calculated by deducting the manufacturing employment data in table 2A from the nonagricultural data in table 1A.

approximately 30 million to 66 million from 1950 to 1978. Manufacturing employment increased only by one-third, from 15 million to 20 million, with nearly all of the growth occurring before 1970.

In the Mideast region--comprised of Delaware, the District of Columbia, Maryland, New Jersey, New York and Pennsylvania--gains in nonmanufacturing employment pushed total nonagricultural employment from 12 million to nearly 17 million between 1950 and 1978, while manufacturing employment dropped from 4.5 million to under 4 million.

During the 28-year period, Pennsylvania's total nonagricultural employment increased by about 1.1 million (from 3.6 million to 4.7 million). Manufacturing employment--which showed some growth until the late 1960s and then declined--was approximately 1.5 million in 1950 and 1.4 million in 1978. Nonmanufacturing jobs, on the other hand, increased about 50 percent, from less than 2.2 million in 1950 to 3.3 million in 1978. In 1950, more than 40 percent of all Pennsylvania nonagricultural jobs were in manufacturing; in 1978, this proportion had declined to approximately 30 percent.

Table 3 indicates the higher employment growth rates of regions in the South and West. Pennsylvania's 1.88 percent average annual rate of nonagricultural employment growth from 1975 to 1978 is less than half the national rate and less than one-third the rate of the three western U.S. regions. Pennsylvania's rate of growth, however, has exceeded that of the Mideast region as a whole since 1970.

Table 4--which shows for selected years each region's percentage of total U.S. manufacturing and nonmanufacturing employment, population and personal income--highlights the dispersion from the areas of earliest industrialization. Some of the largest proportional shifts are seen in employment. For example, in 1950 the Southeast region had 15 percent of the nation's manufacturing employment and the Mideast and Great Lakes regions each accounted for about 29 percent. In 1978, the Southeast region accounted for 22 percent of the total and the Mideast and Great Lakes regions for 19 and 25 percent, respectively.

Table 3  
 AVERAGE ANNUAL RATE OF GROWTH OF NONAGRICULTURAL  
 EMPLOYMENT BY REGION AND FOR PENNSYLVANIA  
 SELECTED YEARS 1950-78

Region	1950-60	1960-70	1970-75	1975-78
United States	1.80%	2.69%	1.69%	3.91%
New England	.95	2.08	.65	3.46
Mideast	.95	1.85	-.05	1.17
PENNSYLVANIA	.19	1.59	.31	1.88
Great Lakes	1.12	2.25	.65	3.30
Plains	1.47	2.46	2.08	3.82
Southeast	2.58	3.69	3.00	4.92
Southwest	3.04	3.55	4.00	5.92
Rocky Mountain	2.72	3.00	4.74	6.31
Far West	4.07	3.54	2.58	5.92

SOURCE: Advisory Commission on Intergovernmental Relations, Regional Growth: Historic Perspective (Washington, D.C.: June 1980), table A-12.

While the Southeast now leads the nation in nonagricultural employment and population, the Mideast still has a slight edge in personal income, although its share has dropped from 26.2 percent in 1950 to 20.3 percent in 1978. In Regional Growth: Historic Perspective, the Advisory Commission on Intergovernmental Relations concludes:

. . . Over the last 50 years (perhaps over the last century), economic activity and population movements have resulted in growing equalization of well-being among the eight regions of the country as measured by per capita incomes. In 1930 per capita incomes in the Mideast states were more than twice those in the Southeast. By 1977 they were less than 25% greater.<sup>9</sup>

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9. (Washington, D.C.: June 1980), p. 5. The per capita income for a state or region in a selected year can be calculated by dividing the data on personal income in table 4A by that on population in table 3A. Pennsylvania's per capita income was 103 percent of the national average in 1950 and 99 percent in 1978.

Table 4

MANUFACTURING AND NONAGRICULTURAL\* EMPLOYMENT, POPULATION AND  
PERSONAL INCOME AS A PERCENTAGE OF U.S. TOTALS  
BY REGIONS AND FOR PENNSYLVANIA  
SELECTED YEARS 1950-78

	Percentage of U.S. Totals in			
	1950	1960	1970	1978
<u>New England</u>				
Manufacturing employment	9.60%	8.70%	7.50%	7.23%
Nonagricultural employment	7.40	6.80	6.40	6.02
Population	6.2	5.9	5.8	5.6
Personal income	6.6	6.4	6.3	5.7
<u>Mideast</u>				
Manufacturing employment	29.20	26.70	23.30	19.11
Nonagricultural employment	27.10	25.00	23.00	19.46
Population	22.3	21.4	20.9	19.4
Personal income	26.2	24.8	23.5	20.3
<u>PENNSYLVANIA</u>				
Manufacturing employment	9.70	8.59	7.87	6.70
Nonagricultural employment	8.11	6.87	6.14	5.40
Population	6.9	6.3	5.8	5.4
Personal income	7.2	6.4	5.8	5.3
<u>Great Lakes</u>				
Manufacturing employment	29.40	26.80	26.00	24.87
Nonagricultural employment	23.00	21.60	20.60	19.34
Population	20.2	20.2	19.8	18.9
Personal income	22.5	21.7	20.6	19.8
<u>Plains</u>				
Manufacturing employment	5.70	6.00	6.30	6.79
Nonagricultural employment	8.00	7.80	7.60	7.70
Population	9.3	8.6	8.0	7.8
Personal income	8.9	7.9	7.6	7.6
<u>Southeast</u>				
Manufacturing employment	15.00	16.60	20.20	22.09
Nonagricultural employment	16.50	17.70	19.50	21.27
Population	22.4	21.6	21.6	22.6
Personal income	15.3	15.6	17.7	19.6
<u>Southwest</u>				
Manufacturing employment	3.00	3.80	5.10	6.31
Nonagricultural employment	6.00	6.80	7.40	8.78
Population	7.6	7.9	8.2	8.9
Personal income	6.6	6.9	7.3	8.6
<u>Rocky Mountain</u>				
Manufacturing employment	.90	1.10	1.30	1.67
Nonagricultural employment	2.00	2.20	2.30	2.84
Population	2.3	2.4	2.5	2.8
Personal income	2.3	2.3	2.2	2.7
<u>Far West</u>				
Manufacturing employment	7.10	10.40	10.60	11.93
Nonagricultural employment	9.70	12.10	13.20	14.60
Population	10.2	12.0	13.3	14.0
Personal income	12.2	14.1	14.7	15.7

\*Includes manufacturing employment.

SOURCE: Advisory Commission on Intergovernmental Relations, Regional Growth: Historic Perspective (Washington, D.C.: June 1980), tables A-4, A-7, A-8 and A-10.

## Pennsylvania Industrial Employment Trends

Table 5 shows manufacturing employment covered by the Pennsylvania Unemployment Compensation Law from 1967 to 1979. This period was selected because it coincides with that under review in chapter III, which analyzes the employment results of PIDA loan projects, most of which involve manufacturing enterprises. Between 1967 and 1979, manufacturing employment in Pennsylvania decreased over 10 percent, from approximately 1.56 million to 1.39 million jobs. Six of the manufacturing industry groups registered employment increases: lumber and wood products, printing and publishing, rubber and miscellaneous plastic products, machinery (except electrical), transportation equipment and instruments and related products.

The following changes have occurred between 1967 and 1979 in the covered employment in the industry groups with the heaviest PIDA loan investments:

<u>Standard industrial classification</u>	<u>Percentage employment change 1967-79</u>	<u>Total PIDA loans 1956-80</u>
37-Transportation equipment	+13.8	\$67,886,990
33-Primary metal industries	-20.6	52,268,998
36-Electrical machinery, equipment and supplies	-20.2	51,011,414
50 and 51-Wholesale trade*	+22.3	47,757,956
35-Machinery other than electrical	+1.6	46,522,228
20-Food and kindred products	-12.8	36,400,119
32-Stone, clay, glass and concrete products	-1.2	31,664,406
19 and 34-Ordnance and fabricated metal products	-7.0	31,226,374
23-Apparel and other textile products	-28.0	27,068,314

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\*Nonmanufacturing.

Table 5

PENNSYLVANIA MANUFACTURING EMPLOYMENT COVERED BY PENNSYLVANIA UNEMPLOYMENT COMPENSATION LAW, 1967-79  
(in thousands)

Coded industry group	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
19-Ordnance and accessories <sup>1</sup>	10.8	12.9	12.5	10.0	7.3	7.4	6.6	5.8	--	--	--	--	--
20-Food and kindred products	115.0	114.2	114.8	113.8	111.8	109.6	106.0	102.2	99.5	100.9	99.8	100.1	100.3
21-Tobacco manufactures	9.8	9.9	8.8	9.0	7.9	7.2	7.0	6.5	5.0	4.1	3.8	4.0	3.7
22-Textile mill products	68.1	69.8	69.4	65.4	62.7	62.6	63.2	59.2	50.6	50.7	50.2	51.0	48.6
23-Apparel and other textile products	178.9	180.4	181.9	171.8	163.1	161.6	160.4	148.2	132.5	136.8	134.0	134.8	128.8
24-Lumber and wood products	14.6	14.8	14.4	14.0	14.3	14.9	15.1	14.8	18.3	20.1	21.4	22.0	23.0
25-Furniture and fixtures	27.9	28.7	29.5	28.0	26.1	27.5	29.1	27.4	18.6	18.2	19.0	20.4	20.5
26-Paper and allied products	45.6	46.3	48.5	48.4	46.7	45.7	46.2	45.4	40.5	41.8	42.9	44.3	44.4
27-Printing and publishing	69.6	70.9	69.5	69.0	67.2	69.3	71.0	68.4	67.8	67.9	69.8	71.3	72.1
28-Chemicals and allied products	61.2	62.8	63.7	62.4	59.9	58.8	59.9	59.4	57.2	57.2	59.8	60.4	61.4
29-Petroleum and coal products	19.3	19.2	19.9	19.9	18.8	18.6	18.0	17.7	17.4	16.9	17.2	17.1	17.4
30-Rubber and miscellaneous plastic products	29.3	31.9	35.2	34.5	34.6	35.7	37.9	38.5	33.8	35.0	38.0	39.8	42.0
31-Leather and leather products	31.3	30.7	28.9	27.9	26.9	25.8	24.2	21.9	19.8	21.0	20.0	19.3	17.6
32-Stone, clay and glass products	66.2	65.2	66.8	64.8	63.2	63.9	67.1	67.3	61.4	62.2	62.8	64.1	65.4
33-Primary metal industries	256.8	254.8	253.0	244.5	224.2	220.6	232.8	237.6	207.4	202.5	200.4	199.4	203.8
34-Fabricated metal products	115.8	114.2	117.2	113.3	105.3	103.0	110.0	114.5	113.8	114.8	112.3	112.7	117.7
35-Machinery (except electrical)	139.6	138.3	144.5	138.1	128.7	128.2	135.7	142.6	141.1	135.0	135.9	138.4	141.8
36-Electrical and electronic equipment	158.7	157.7	160.0	152.7	140.8	141.3	149.7	149.1	125.1	126.5	123.8	124.4	126.7
37-Transportation equipment	77.1	77.5	78.7	71.5	67.4	68.5	74.1	72.5	66.6	65.0	74.1	81.6	87.7
38-Instruments and related products	38.6	38.5	39.0	37.6	33.2	34.9	35.1	36.9	36.0	35.3	36.9	38.9	42.7
39-Miscellaneous manufacturing industries	28.4	29.2	29.0	28.5	27.2	28.3	29.1	27.8	28.3	27.7	27.7	26.5	26.7
Total manufacturing employment <sup>2</sup>	1,562.4	1,567.8	1,585.2	1,525.2	1,437.2	1,433.2	1,478.0	1,463.6	1,340.7	1,339.3	1,349.7	1,370.7	1,392.4

1. After 1974, included in fabricated metal products.

2. Totals may not agree with the sum of the items because of rounding.

SOURCE: Pa. Department of Labor and Industry, Office of Employment Security, Employment and Wages of Workers Covered by the Pennsylvania Unemployment Compensation Law, Annual Reports 1967-79.

Most nonmanufacturing industries do not qualify under the statutory requirements for PIDA loans although they may qualify under other Commerce Department loan programs.

## FACTORS UNDERLYING EMPLOYMENT CHANGE

### Economic Life Cycles

A report of the Advisory Commission on Intergovernmental Relations discusses the theory that much of the difference in regional growth is attributable to economic maturity or life cycle concepts. The more slowly growing economies of the Northeast and Midwest are "older" as contrasted with the faster growing "younger" economies of the South and West. The report summarizes the changes likely to occur as economies mature:

It might be supposed that as a regional economy matures it ultimately encounters obstacles in its capacity to produce output and to find new markets. The maturity process or life cycle posits as initial development of new industries; over time they take up space, use capital, and employ labor. They expand and ultimately mature, that is stop expanding, grow slowly, or perhaps decline. Plants become obsolete (i.e., their products can be produced more cheaply with newer technology), perhaps even labor in the region becomes characterized by relatively obsolete skills. If we assume that technological change is more rapid in newer sectors and the supply of land available in a region is limited, then aging would be associated with increasing densities of activity, perhaps reaching capacity limits and going beyond to congestion.

This would stimulate dispersion of activity to relatively less crowded regions--less mature economies. The aging of the capital stock--in physical and technological terms--would increase unit production costs relative to the cost of new plants. Development of new product lines may intensify the dispersion, especially if economically attractive space is a limiting factor in the older economy.

On the demand side, the older region may be characterized by products with low income elasticity of demand and a slower sales growth to external (other regions') purchasers, perhaps reinforced by a population decline and its direct demands. The aggregate result is death of firms, slow growth, and perhaps relocation of firms.<sup>10</sup>

The report further documents the conclusion that regional and state differences have not arisen from different compositions of industries. The same industries within the various states grew at rates which differed from the national average.<sup>11</sup> With respect to public policy, the report concludes:

Most suggestions to cope with current regional growth disparities are designed to help distressed areas, particularly the central cities. They concentrate on the micro-economic level, on regional development banks, or changes in federal procurement policies, or the location of military bases, or special investment tax credits for distressed areas. Each proposal presumably would help prevent a reversal of the fortunes of one or more of the nation's regions.

Such suggestions are open to several objections however: (1) they exacerbate political conflict and sectionalism; (2) they hamper the necessary adjustments within, and between regional economies and thus, reduce overall economic efficiency; (3) they ignore some of the important natural correctives already built into the nation's economy, e.g., the progressive tax system; and (4) their potential payoff is uncertain at best.

The most important regional policy both in terms of national acceptance and regional efficiency may well be the maintenance of a rapidly growing national economy. This has immediate payoff to the older industrial regions in employment and income growth. Our study found that these regions have been relatively robust in the last 25 years only during periods of rapid national growth. Moreover, a strong

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10. Regional Growth: Historic Perspective (Washington, D.C.: June 1980), p. 32.

11. Ibid., pp. 33-39.



national economy would also provide a cushion against which some necessary restructuring of regional economies could take place.

Given the evidence on differences in regional response to national economic conditions, it may well be that macro-economic policy would in fact be implemented more effectively if it had a regional orientation. Some of the micro-economic remedies indicated above could serve this purpose. They may thus be more promising as supplements to an aggregate growth policy than they would be in the slowly growing national economy anticipated for the next decade or two.<sup>12</sup>

#### Birth, Death, Expansion/Contraction and Migration of Firms

A recent Economic Development Research Report of the U.S. Department of Commerce provides insight into the major components of the employment gains and losses that have occurred in regions of the U.S. and suggests a direction for public policies aimed at sustaining or increasing employment levels.<sup>13</sup> The study is based on Dun and Bradstreet Corporation data covering December 31, 1969 to December 31, 1974.<sup>14</sup> Four tables making intra-regional and interregional comparisons are presented in the appendix, pp. 56-58. The data in the tables document the following findings:

1. The most important factor accounting for the employment decline in the North was that the losses resulting from the death of firms greatly outweighed the gains due to the establishment of new businesses. During the period under review, the death of firms accounted for a 20.5 percent decline in job opportunities from the 1969 job level while the birth of firms resulted in a 8.9 percent increase. (table 5A)

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12. Ibid., p. 91.

13. Carol L. Jusenius and Larry C. Ledebur, Documenting the "Decline" of the North, (U.S. Department of Commerce: June 1978).

14. The Dun and Bradstreet Corporation data cover almost all manufacturing industries but a considerably smaller portion of firms in other types of industries.

2. Compared with the North, the expansion of existing firms was more important to the South's employment growth than the establishment of new firms. Total job opportunities due to the birth of firms increased 8.9 percent over the 1969 level in the North and 17.1 percent in the South, an 8.2 percent difference between the two regions. Opportunities due to the net growth of existing firms increased 5.6 percent in the North and 15.7 percent in the South, a 10.1 percent difference. (table 5A)
3. The outmigration of firms from the North had a relatively insignificant effect on the region's employment. Net migration decreased job opportunities in the North by only .15 percent over the 1969 level. (tables 5A and 6A)
4. Pennsylvania's closure rate of firms was lower than that of any of the 15 northern states in the sample but the birth rate was also lower. During the period under review, the closure of firms in the Commonwealth decreased the number of firms by 29 percent of the 1969 level. The birth of firms increased the number by 16 percent. (table 6A)
5. Since manufacturing is typically considered a "basic" industry in an economy, closures in this industry were the most serious blow in the Middle Atlantic area: the manufacturing closure rate was 31 percent as compared with a birth rate of 14 percent. (tables 7A and 8A)
6. The composition of the North's industrial structure appears to be changing, with industries employing a relatively large proportion of "blue-collar" workers declining and those utilizing "white-collar" workers increasing. For example, the birth rate for finance, insurance and real estate firms was 40 percent in the Middle Atlantic States compared with a closure rate of 29 percent (tables 7A and 8A)

7. Of the firms in the sample which closed in the North, approximately 98 percent had fewer than 100 employees and the majority (62 percent) were in the wholesale/retail trade industry.

With respect to the public policy implications of the study, the report states:

An identification of the changes occurring (firm outmigration, closure or contraction, for example) is important as public programs for the redevelopment of the region are formulated. For each of the three sources of employment losses, there are social costs associated with the underutilization of both labor and capital. However, with closure and outmigration of firms, there are the additional social costs attendant on possible capital abandonment.

Furthermore, there are greater possibilities for a reversal of recent employment problems in the North if the job losses are found to be a function of firm contraction. Renewed economic growth at the national level may be sufficient to turn employment contraction into employment expansion at the firm level, but it's not likely to enable a "dead" firm to reopen. Although there is little direct evidence, it is likely that capital and capacity are lost when firms close. On the other hand, when firms contract their employment, the capital remains--available as standby capacity for future use. Based on historical experience, it seems reasonable to state that public policies aimed at increasing the use of this standby capacity have a higher chance of success than those which must also aim at establishing new businesses.<sup>15</sup>

The report further concludes:

. . . it is clear that differences do exist among the Northern States in their present as well as future well-being. Hence, public policy aimed at reducing the "decline of the North" as a whole would be misdirected. Rather, public programs should continue to be directed toward problems as they are found in specific States and localities.<sup>16</sup>

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15. Ibid., pp. 1-2.

16. Ibid., p. 11.

The insignificant impact on employment of the migration of firms between regions is underscored in a similar study undertaken by the Joint Center for Urban Studies of M.I.T. and Harvard University, which concludes:

Finally, a surprising finding is the exceedingly low rate of interstate migration of firms--less than .5% of employment for most states and most employment types. This contradicts much conventional wisdom, and suggests that the support of existing businesses and the fostering of new ones is a far more sensible economic development strategy than attempting to lure existing business from other parts of the country.<sup>17</sup>

A report of the Wharton Applied Research Center of the University of Pennsylvania documents that "certain industries characteristically experience significant employment changes due to new firms, while changes in employment in other industries are dominated by expansions or contractions of existing firms."<sup>18</sup> (See appendix table 9A.) The report suggests that economic development programs in the manufacturing sector be directed "(a) to provide assistance to existing firms in those industries where expansion and contraction of existing firms is the chief source of growth, and (b) to assist new firms in those industries where new births constitute a significant potential for economic growth." The study also finds that, regardless of geographic location, young, small, independent firms provide the bulk of new jobs.<sup>19</sup> (See appendix tables 10A and 11A.)

A comprehensive study published by the Council of State Planning Agencies on state-government use of capital subsidies to enhance economic development and create jobs finds such subsidies may frequently be costly or wasteful, but can be justified if directed to small new firms which are unable to raise capital through ordinary channels. Specifically, the study points out that:

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17. Peter M. Allaman and David L. Birch, Components of Employment Change for States by Industry Groups, 1970-72 (Cambridge, Mass.: September 1975), p. 18.

18. Factors Influencing the Economic Development of Pennsylvania (Philadelphia: September 1979), p. 28.

19. Ibid., p. 31.

The cost of capital is relatively small in the overall costs of doing business, and the availability of capital is a necessary but often insufficient factor. The demand for capital by enterprises in a state, and the corresponding attractiveness of a state for investment, depend primarily on whether it has a growing market and on its supply of resources other than capital. . . .

In practice, economic incentives have usually been employed to induce firms to locate or expand in one state as opposed to another. Any state considering lowering capital costs as an incentive to stimulate investment should be aware of several serious obstacles. Interstate and interregional production cost and market differences can be substantial. Capital subsidies, to be effective, may have to be very large and quite expensive. Moreover, unless the state can predict very accurately the cases where a subsidy will make a difference, a lot of money will be wasted giving subsidies to firms that would have invested anyway. . . .

. . . Industrial revenue bond financing is primarily a vehicle for subsidizing the cost of capital. Unfortunately, the reduced costs of production these subsidies provide to the beneficiary corporations do not amount to much in light of total production cost or market differences among states. And their effect is further neutralized by the fact that most states offer them. Besides their dubious benefits, IRBs have hidden costs for the issuing state. . . .

. . . intervention [in capital markets] may require spending increasingly scarce tax dollars; these public funds have alternative uses. A dollar misspent on loan subsidies means one less dollar available for public clinics or aid to secondary education.

In addition to these opportunity costs, raising the necessary tax dollars means transferring income from taxpayers to someone else. This may have undesirable effects on the distribution of income, especially if the recipient of the transfer turns out to be a large creditworthy corporation that needs neither credit nor subsidy, and would have made the same investment decision without the gift of taxpayers' money. . . .<sup>20</sup>

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20. Litvak and Daniels, Innovations in Development Finance, pp. 1, 4, 5 and 60.

With respect to potentially "capital-starved" small new firms, the report concludes:

. . . opportunities for employment and income growth may go unrealized when capital markets fail to channel funds to enterprises that could use them most productively. And even well-functioning capital markets, left to their own devices, will not finance investment projects that fail to offer a competitive private return but provide compensating social benefits. . . .

Although branch plants and subsidiaries generate a significant amount of employment, the birth and expansion of independent single plant firms is equally important to job creation. It is precisely these small firms that are most likely to have difficulty gaining access to capital because of imperfections in capital markets.

These are the firms that suffer from inadequate mechanisms for spreading and pooling risk, unduly high information and transaction costs, various forms of prejudice, market concentration, and the perverse consequences of some federal and state government regulation of capital markets. On the whole, small firms have higher debt/equity ratios, reflecting their difficulty in raising equity capital, through either the public market or venture capitalists. Their debt financing differs as well, being shorter in term and when long term, more often from banks as opposed to private placement sources.<sup>21</sup>

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21. Ibid., pp. 1-2.

### III. PIDA LOANS AND EMPLOYMENT CHANGE

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#### DATA BASE

To provide a representative data base for an evaluation of "whether the number of new jobs actually created by new or existing industries is consistent with the amount of new jobs projected in the loan applications submitted to PIDA," as directed in House Resolution Serial No. 86, the Commission staff reviewed a random sample of loans made over the 10-year period 1967-76. Since the employment projections in the PIDA loan applications consist of the number of new employees anticipated for the third year after loan approval, the most recent loans for which employment experience can be analyzed are those approved in 1976.

#### Total Loans

Total PIDA loans during the 10-year period number 749.<sup>22</sup> Less than 15 percent of the loan applications indicate the loan is to establish a new business. The average loan amounts to \$328,000, with an average projected new employment of 117. By way of comparison, for the three fiscal years beginning July 1977 and ending June 1980, the average loan is \$715,931 and the average projected new

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22. This figure does not include the Volkswagen loan and those for industrial parks.

employment, 103. The size of the PIDA loan is directly related to the number of additional employees projected for the third year as the following tabulation indicates:

<u>Third-year projected increase in employees</u>	<u>Average loan</u>	<u>Number of loans</u>
50 or fewer	\$113,000	310
51-150	271,000	292
more than 150	<u>896,000</u>	<u>147</u>
Total	328,000	749

For all 749 PIDA loans during the period under review, the amount of the loan and the number of new jobs projected can be expressed by the following regression equation:

$$\begin{aligned} \text{The estimated PIDA loan} &= \$66,630 + \$2,250 \times \\ \text{the number of projected new employees} & \qquad \qquad \qquad R^2 = .38 \end{aligned}$$

More than 90 percent of the projected PIDA jobs are in manufacturing industries. As may be observed from table 5, p. 20, over the period 1967-79 approximately three-quarters of the manufacturing industry groups in Pennsylvania experienced an employment decline, although the rates of change varied significantly among and within these groups.

#### Sample Loans

Because of difficulties encountered in collecting employment information in a pretest of loan projects, it was decided to make estimates for all 749 PIDA loans from a representative sample rather than attempt the nearly impossible task of gathering data for all loans. PIDA does not systematically collect data on the actual third-year employment of loan enterprises, and employment information supplied by the industrial development agencies on loan applications and in response to requests by the Commission staff was in many cases incomplete or inaccurate. For example, loan application data on the number of existing employees at loan sites in some instances were found to represent the employment in main or branch plants at other locations.



The stratified random sample analyzed in this chapter consists of 123 loans drawn on the basis of the period of loan approval (1967 to 1970 or 1971 to 1976) and the status of the firm involved (new or expanding).<sup>23</sup> The sample includes 61 of the 346 loans approved prior to 1971 and 62 of the 403 loans during 1971 through 1976. The loans were for 62 "new" establishments and 61 "expanding" firms.

In analyzing the sample, the loans were assigned to the industry groups of the original firms occupying the loan facilities. It was decided not to categorize the sample estimates according to whether the firms were new or expanding Pennsylvania enterprises because of a possible bias due to misspecification. After the sample had been drawn, it was found that some of the firms shown in PIDA information to be expanding were actually new operations in Pennsylvania (branches of out-of-state firms).

The employment records of the State Office of Employment Security proved to be the most reliable source of data. The staff was granted access to these records with the understanding that the names of the companies would be kept confidential. Research of the sample loans, however, proved to be time-consuming and tedious. In some cases, the names of the firms on the loan applications were not those of the companies occupying the loan facilities but rather those of the parent companies, subsidiaries or branches. It was necessary to contact these firms for the names of the companies in the industrial development projects before the employment records could be traced.

When gathering data on third- and sixth-year employment experience, the staff found that for a sizable portion of the loans the original firms had changed their names, gone out of business in Pennsylvania or moved to other facilities. The names of subsequent occupants had to be discovered and their employment records traced. These subsequent occupants of the loan facilities were not necessarily operating in the same industry groups as the original loan enterprises or, for that matter, in industries qualifying under law for PIDA loans.

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23. Technical notes on the sample are included in appendix C, p. 60.

Twenty-three firms in these sample projects began operations under names other than those on the loan applications. By the sixth year, 29 of the projects had different occupants. Sixteen of these 29 had one occupant subsequent to the original and 13 had more than one. Nine of the subsequent occupants were operating in industry groups other than the original firms.

Ten of the original occupants are known to have gone out of business in Pennsylvania during the first three years following loan approval and nine during the next three.

## MEASUREMENTS

### Third-Year Employment

PIDA's loan application (p. 46) requests the number of existing employees at the loan site and the number of new employees anticipated for the first and third years. In reporting on loans approved, PIDA notes the projections of new employment for only the third year. This study concentrates on the third-year projected employment because the sample loan applications do not always include the first-year projections and operations in some facilities do not get underway until after the first year.<sup>24</sup>

Methodology--Except for a relatively small number of new enterprises--less than 15 percent of the total loans--it is not possible to determine the exact number of new jobs created. For expanding firms, the observable

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24. As a test of the representativeness of the sample, estimated total projected new employment derived from the sample can be compared with the actual total for the 749 loan projects approved between 1967 and 1976. The sample estimate is 87,386 new jobs projected while the sum of the actual projections for all 749 loan projects is 86,465--a difference of approximately 1 percent of the actual total. On infrequent occasions, loans are rescinded and no third-year employment exists to compare with the projection. Reductions in the original projection due to rescinded loans total about 7,300 jobs, reducing to about 80,000 the estimated number of projected new jobs used in the analysis to compare actual and projected employment.

third-year employment includes both employment attributable to the expansion and to the ongoing operations of the firm. The simplest measure of the success of employment projections--which ignores any employment changes over the three years not attributable to the loan--is given by the formula:

$$\frac{\text{Actual third-year employment} - \text{Existing employment at loan approval}}{\text{Projected new third-year employment}} = \text{Success rate}$$

If the existing employment remains unchanged and the number of new jobs projected is actually reached, the success rate would equal 100 percent. With these extreme assumptions, the estimated success rate for the aggregate of the 749 loans from 1967 through 1976 calculated from the sample data is:

$$\frac{160,590 - 132,334}{80,071} = .35$$

In other words, the sample data indicate that for every 100 additional jobs projected at the time of loan approval, only 35 new jobs were actually created within the following three years.

It is unrealistic, however, to assume that the experience of the average firm receiving a loan does not reflect the employment pattern of the industry group of which it is a part. It would be illogical for a firm to plan for new employment of, for example, 50 in three years if it in fact could anticipate that its existing employment would decline by 50 in three years. The relevance and precision of the projections of new employment can be improved by adjusting both the existing employment at the time of the loan and the projected third-year new employment by the change in total industry employment over the same period. Data are available to make adjustments at least at the two digit industry code level (see table 5, p. 20). For example, in adjusting the data for a project in the primary metal industry receiving loan approval in 1969, the existing employment and the predicted new employment shown in the application were both multiplied by the ratio of 1972 to 1969 employment, or 220.6/253.0.

In the following analysis, therefore, the average projected new and average existing employment based on sample data are adjusted to produce a success rate calculated by:

$$\frac{\text{Actual third-year employment} - \text{Adjusted existing employment at loan approval}}{\text{Adjusted projected new third-year employment}} = \text{Adjusted success rate}$$

Estimates of Success Rates--The adjusted average success rate for all firms is estimated from sample data to be .51, or 51 percent (table 6, first row). On the average, the firms projected new employment of 102, but three years later employed only 52 additional persons. In contrast to the unadjusted overall success rate of .35, the higher success rate using the adjusted formula reflects the generally declining employment experience throughout the entire period 1967-79 for most manufacturing industry groups.

It was shown previously (p. 30) that the amount of the loan is directly correlated with projected new employment. On the average, each new job is associated with \$2,250 in additional loan funds. It is not surprising, therefore, that the overall success rate is far below 100 percent. Since projection errors are apparently costless, firms applying for loans have an incentive to make high employment projections on loan applications in order to maximize their loans. This type of built-in bias would be difficult for PIDA to detect in individual cases, but it clearly invalidates the aggregate employment increase that PIDA customarily claims. For example, the totals for planned employment--199,345--and estimated payroll--\$2,895,000,000--shown in PIDA data (table 1, p. 7) are probably double the actual amounts.

Reliability of Estimates--Repeated random samples from the same population will produce varying estimates of the average value of any particular characteristic. The average success rate, therefore, of 51 percent, estimated from the sample utilized for this study, would be expected to differ were another random sample selected. A measure of the extent of this difference is provided by the standard deviation. Standard statistical theory shows

Table 6

AVERAGE LOAN AMOUNT, AVERAGE PROJECTED EMPLOYMENT, AVERAGE EMPLOYMENT CHANGE AND  
 PERCENTAGE OF PROJECTED EMPLOYMENT ACHIEVED IN THREE YEARS<sup>1</sup>  
 PIDA LOANS APPROVED 1967-76

Category	Total loans		Number of sample loans	Average employment estimates based on sample <sup>1</sup>		Adjusted success rate
	Number	Average dollar amount approved		Projected new third year adjusted	Actual third year less adjusted existing <sup>2</sup>	
Total	749	\$328,000	123	102	52(13)	51%
New employees projected						
50 or fewer	310	113,000	45	30	12(7)	40
51 to 150	292	271,000	44	89	26(21)	29
more than 150	147	896,000	34	230	144(40)	63
Industry codes						
2200-2399	97	269,000	25	93	98(34)	106
2400-3299	231	352,000	33	102	58(19)	57
3300-4299	328	297,000	47	115	33(19)	29
Loans approved						
1967-70	346	278,000	61	120	53(20)	44
1971-76	403	371,000	62	86	51(21)	59

1. The existing and projected new employment for each sample loan have been adjusted by the rate of employment change in the respective industry over the three years subsequent to loan approval.

2. The numbers in parentheses are the standard deviations of the mean for each category. The estimated average changes shown in each category are not expected to differ from the actual changes in employment in repeated samples by more than plus or minus two times the standard deviations with 95 percent confidence.

SOURCE: Calculations from data obtained from Pa. Industrial Development Authority loan applications and the Office of Employment Security, Department of Labor and Industry.

that any average (i.e., mean) value estimated from a random sample will fall within plus or minus two times its standard deviation in at least 95 percent of the samples chosen.

To determine if the actual new employment estimated from the sample would be consistently lower than the projected new employment in repeated additional samples, the standard deviations of the actual third-year employment averages have been calculated and are shown in parentheses in table 6. For the overall sample, the estimate of an average of 52 actual new jobs per loan plus twice its standard deviation of 13, or a total of 78, is still far below the average projected new employment of 102. Alternatively, the success rate, therefore, is at most well below 100 percent.<sup>25</sup>

The remainder of table 6 presents estimates of actual and projected new employment and the calculated adjusted success rates for various subsets of the sample which contain a sufficient number of firms to compute meaningful averages. As for the overall picture, the standard deviations for the averages in the subsets may be used to indicate whether or not the estimate of actual new jobs falls significantly below the estimate of the average number of new jobs projected or is significantly greater than zero.

Projection Size Categories--When the firms are grouped by the number of projected new employees into three size categories, the firms in the largest category (with more than 150 new jobs projected and an average loan of almost \$900,000) are shown to have an adjusted success rate of 63 percent in contrast to a rate of 40 percent or below for firms with fewer projected new employees. The higher success rate for larger projects may indicate either more accurate projections on the part of these firms or more success in achieving a realistic goal. Surprisingly, as shown in connection with an analysis of data in table 7, a reversal in the success rates by size category occurs between the third and sixth years.

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25. The standard deviation also indicates whether or not the sample estimates are greater than zero. For the overall sample, the estimate of 52 less two standard deviations equals 26, which is significantly greater than zero.

The same methodology was used in preparing the data in tables 6 and 7, except that in table 7 the sixth-year actual employment was substituted for that of the third year and only loans through 1973 could be included.

Adjusted Success Rates--In the sixth year, the average adjusted success rate for the 609 loans represented by the sample group was 76 percent (as compared with the third-year success rate in table 6 of 51 percent). The standard deviation of 22 indicates that it is not certain that the success rate would actually fall below 100 percent in repeated samples of the same size.

The firms projecting the smallest employment increases (50 or fewer) on the average surpassed those making larger projections by achieving 132 percent of the employment projection by the sixth year.

By the sixth year, the firms in the textile and apparel industries on the average achieved nearly double their third-year projected employment and had an average estimated increase of 184 employees (as compared with the overall average of 84). Firms in each of the other two industrial categories achieved a success rate of only 50-55 percent by the sixth year--not a large increase over the success rate of 42 percent that they collectively achieved at the end of three years. More detailed data are necessary in order to make evaluations about particular industries within these broad categories.

The average firm receiving a loan between 1967 and 1970 and between 1971 and 1973 recorded an adjusted success rate of 80 percent and 70 percent, respectively, by the sixth year. These rates are higher than the comparable third-year rates.

It is difficult to place a precise interpretation upon the appreciable improvement in the success rate between the third and sixth years. To the extent that some firms are slow in starting operations, the process of filling new jobs may still be incomplete by the third year and the sixth-year rate may be more meaningful.

However, the longer the time period after the loan the greater the chance of changes occurring which break the link between the projected and actual new employment. A change in ownership or a change in the

type of operation could result in increased employment at the loan facility offsetting decreased employment at some other location in the State. Since the decrease would not show in the sample data, an increased success rate would be spurious.

The adjustment process intended to reflect changes in the appropriate overall industry employment may introduce unavoidable distortions. Not to make some adjustment, however, implies perfect foresight on the part of each firm receiving a loan (or that the projection errors offset each other). Since employment in most industry groups declined throughout the period under study, unadjusted success rates would be lower.

Unadjusted Averages--For purposes of comparison, the unadjusted employment averages are presented in table 8 for the same 609 firms and the same categories shown in table 7. For all firms the unadjusted sixth-year success rate is 61/117, or 52 percent, practically the same as the adjusted third-year rate of 51 percent (see table 6).

Among the three size categories, only those firms projecting 50 or fewer new employees (which also happen to be the smallest firms, on the average) succeeded after six years in surpassing their projected additional employment. The most dismal experience is recorded by firms projecting from 51 to 150 new jobs. These firms, averaging 254 existing employees at the time of loan approval, managed to employ only 10 of a projected 97 additional employees at the end of six years.

Among the industry groups, textile and apparel firms (codes 2200 to 2399) actually employed by the sixth year slightly more than the number of new positions projected, but firms in the other industry groups filled less than half the projected new jobs in six years.



Table 8

ESTIMATED AVERAGE NUMBER OF ADDITIONAL EMPLOYEES PROJECTED FOR  
THIRD YEAR AND ACTUALLY REALIZED BY THIRD AND SIXTH YEARS  
PIDA LOANS APPROVED 1967-73

Category	Average number of employees existing at loan approval	Average number of additional employees <sup>1</sup>		
		Projected third year	Actual third year	Actual sixth year
Total	162	117	45	61
New employees projected				
50 or fewer	56	30	17	35
51 to 150	254	97	-5	10
more than 150	203	260	153	151
Industry codes				
2200-2399	282	113	77	119
2400-3299	86	102	40	44
3300-4299	133	127	23	52
Loans approved				
1967-70	183	128	39	70
1971-73	134	103	52	49

1. Actual additional third-year and sixth-year employment calculated by subtracting the average employment existing at time of loan approval from the average employment in the third or sixth years.

SOURCE: Calculations from data obtained from Pa. Industrial Development Authority loan applications and the Office of Employment Security, Department of Labor and Industry.



APPENDIX A

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PIDA PROGRAM DOCUMENTS

GENERAL APPLICATION INFORMATION

All applications must be submitted by a community-sponsored, non-profit Industrial Development Agency, which is the official applicant.

Make sure all costs are directly related to the land or building only.

Check your PIDA cost per job - if it exceeds \$10,000, a complete detailed explanation must be attached.

Employment - existing employment must be for this site only and the latest data submitted to the Pennsylvania Office of Employment Security should be used - both existing and new jobs should be full time - any variance must be explained in detail.

Check the term of the first mortgage commitment (usually the bank) and the term of the second mortgage (usually PIDA) to make sure the PIDA term is either the same or shorter term.

It is suggested that you consult the PIDA Staff to ascertain when PIDA funds may be disbursed for this project - tentative approval does not mean funds will be immediately available.

The industrial occupant (company) should occupy the entire building being financed. In cases where a small portion of the building will be sub-leased, PIDA will require payment of 50% of the gross rentals as a prepayment on its loan.

Make sure when you receive your tentative approval letter that you sign, accept, and return a copy of this letter to the PIDA office within 30 days of receipt. Note we have provided space for this execution on the last page of the letter.

Make sure the commitment fee (1% of PIDA loan amount - \$500 minimum - \$10,000 maximum) is returned with the acceptance of the tentative approval letter.

PIDA makes every effort to keep all applications confidential until they are presented to the PIDA Board. Upon approval, an application becomes public information and general information about the project is released to the news media.

Keep in close touch with the PIDA Engineer. Note: You need engineering approval before any funds may be disbursed. Please note in the Engineering Guidelines that the Engineer requires your cooperation until the project has been completed, in operation, and all costs are correctly ascertained.

During the term of the loan, please report to PIDA in writing any changes you are requested to make by the company. Remember, most changes require Board action.

Indicate to PIDA who will be responsible for making the loan payments. Maintain a constant vigil on all your outstanding loans to make sure payments are current.

Check (at least once a year) to be certain that the PIDA building has adequate insurance coverage, the taxes are being paid currently, and the building is being properly maintained.

Submit to PIDA annually the financial statement of each company who received the benefits of a PIDA loan.

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DON'T

Commence construction or acquire property before receiving PIDA Board tentative approval.

Apply to PIDA for projects which involve refinancing, investor developers, or any project which would not comply with the public purpose of the Act.

Apply to PIDA for financing of machinery or equipment, working capital, or any financing not directly related to the land or building.

Apply to PIDA if your project is mercantile, commercial, or retail. You may want to consider The Revenue Bond and Mortgage Program for this type of financing.

Apply to PIDA if your project constitutes a removal from one area of the Commonwealth to another.

THE PENNSYLVANIA INDUSTRIAL DEVELOPMENT AUTHORITY  
SUMMARY LOAN APPLICATION

PIDA NUMBER
DATE

APPLICANT (Industrial Development Agency)

ADDRESS

PERSON TO CONTACT TELEPHONE NUMBER

COMPANY (If this company [or affiliate] has ever had a PIDA loan, please check box and give all details on separate sheet of paper.)

PRESIDENT MAILING ADDRESS

PRODUCT PERSON TO CONTACT TELEPHONE NUMBER

TYPE OF ENTERPRISE:  
 Manufacturing  Regional or National Headquarters  Research & Development  Agri-Business  
 Warehouse & Terminal  Industrial  Computer or Clerical Operation Center

	Unskilled	Semi-skilled	Skilled	TOTAL	Payroll (Annually)	Average Wage (Annually)	Average Hrs. Worked (Weekly)
Existing Employment This Site Only							
New Employment First Year Only							
New Employment Three Years Only (Include One Year Projections)							

SIZE OF PROJECT (Sq. Ft.) SIZE OF SITE (Acres) LOCATION OF PLANT SITE (Include Municipality and Mailing Address) COUNTY

PURPOSE OF PROJECT (Please check appropriate box(es))  
 To construct new building  To expand in a new location within Pa. (Not a relocation)  
 To expand existing building  To relocate existing plant from \_\_\_\_\_ (Name of State)  
 To acquire existing building  To acquire and renovate existing building  
 Other: \_\_\_\_\_

PIDA LOAN REQUESTED	TOTAL PROJECT COST	COST PER SQ. FT.	COST PER JOB TOTAL PROJECT	COST PER JOB - PIDA
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METHOD OF FINANCING

- FIRST MORTGAGE \_\_\_\_\_ % Participation
  - Amount \_\_\_\_\_
  - Name of Mortgagee \_\_\_\_\_
  - Interest Rate \_\_\_\_\_
  - Terms \_\_\_\_\_
  - Person to contact \_\_\_\_\_ Telephone No. \_\_\_\_\_
- PIDA MORTGAGE \_\_\_\_\_ % Participation
  - Amount \_\_\_\_\_
  - Interest Rate \_\_\_\_\_
  - Terms \_\_\_\_\_
- COMMUNITY PARTICIPATION \_\_\_\_\_ % Participation
  - Amount \_\_\_\_\_
  - Interest Rate \_\_\_\_\_
  - Terms \_\_\_\_\_
- OTHER PARTICIPATION \_\_\_\_\_ % Participation
  - Amount \_\_\_\_\_
  - Interest Rate \_\_\_\_\_
  - Terms \_\_\_\_\_
  - By Whom \_\_\_\_\_

PIDA USE ONLY - PIDA ELIGIBILITY

CRITICAL ECONOMIC AREA	COUNTY	MUNICIPALITY
UNEMPLOYMENT RATE _____ % <input type="checkbox"/> 5 - 10 Yrs. <input type="checkbox"/> 12 Mo.	PIDA PARTICIPATION _____ %	GENERAL FUNDS <input type="checkbox"/> BOND FUNDS <input type="checkbox"/>

APPLICATION REQUIREMENTS  
THE PENNSYLVANIA INDUSTRIAL DEVELOPMENT AUTHORITY  
Act of May 17, 1956 (Act No. 537), as amended

1. A general description of the industrial development project to include the size of the project, the general type of construction, insurance currently carried or to be carried on the project, etc. Include the type of zoning, other uses for which the building could be utilized, and any energy efficient items included in the building.
2. Legal description of the project site and an engineering survey showing metes and bounds and the location of the building.
3. Cost of industrial development project - Itemized estimated cost of construction; include building cost financing charges, engineering and applicant's legal expenses. If acquisition of existing building, supply two complete appraisals. Appraisals must include the attached Appraisal Brief.
4. Method for financing industrial development project - Attach (a) commitment letter from first mortgagee including interest rate and term, (b) statement of the community's participation - interest rate and term if applicable, and (c) requested terms of PIDA loan and schedule of repayment - please state when PIDA funds are required.
5. List all finders fees or consultant fees paid or to be paid with respect to the project. (Finders fees and consultant fees may not be a part of the project cost to be financed by PIDA. Professional fees to be paid for services performed, such as legal, accounting, architectural or engineering, are not considered finder or consultant fees and, if provided for, or on behalf of applicant, may be financed by PIDA). Also, list the amount of any service fee charged by the industrial development agency.
6. Attach the latest certified financial statement of applicant (industrial development agency).
7. Attach lease or sales agreement and all related agreements to be entered into with the purchaser or tenant or, if the agreements have not yet been prepared, a general description of the proposed agreement(s).
8. Attach financial statements of the proposed occupant, parent company, and any other proposed guarantors, if any, for the last three years of operation, said statements to be prepared by an independent certified public accountant. One copy of the said statements should be in the accountant's bound folder and include the accountant's report, and all footnotes to the financial statements. The latest statement should not be more than six months old. If the project is for a new company, then pro-forma balance sheets and projected statements of income and cash flow prepared by an independent certified public accountant for at least the first three full years of operation should be furnished along with current financial statements of the major investors. If statements prepared by an independent certified public accountant are not available, please contact the PIDA office.

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9. Comprehensive description of occupant - Attach a history and financial rating of affiliates and subsidiaries. List all other facilities, their locations and number of employees. List names, titles, and short resume of principal officers. If not a publicly held corporation, include a statement showing stock ownership.
10. Marketing information - List geographical marketing area, 4 or 5 major customers and percent of sales to each, number of total customers, major competitors, major suppliers and sales channels. Describe each product in detail and give specific examples of its use.
11. Provide a complete breakdown by job category of existing and new employment.
12. Describe any other governmental assistance which will be utilized for this project. Include employment and training programs.
13. Has any of the company's principals ever been convicted of a criminal offense or are criminal charges pending against any of the company's principals? Exclude minor vehicle violations. Please note one certification may require the completion and attachment thereto of an addendum concerning Section 103 loans, delinquencies and/or pollution violations. If yes - explain in detail.
14. The contractor shall supply and erect a project sign according to the specifications outlined by the PIDA engineer assigned to the project.
15. The two certifications attached hereto must be completed and executed by applicant and/or occupant. Please note that the one certification may require the completion and attachment thereto of an addendum concerning Section 103 and delinquent loans.



1980 PIDA ELIGIBILITY RATES FOR COUNTIES AND MUNICIPALITIES OVER 25,000 POPULATION\*

(CRITICAL ECONOMIC AREA)	Average of the <sup>1/</sup> Highest 5 Yrs. of the Last 10 Yrs. %			Floating <sup>2/</sup> 12 Month Average %			Average of the <sup>1/</sup> Highest 5 Yrs. of the Last 10 Yrs. %			Floating <sup>2/</sup> 12 Month Average %			
	("A" & "C")			("B")			("A" & "C")			("B")			
	UR	s	l	UR	s	l	UR	s	l	UR	s	l	
ADAMS	7.1	50	40	6.5	50	30	GREENE	7.9	60	50	8.5	60	50
ALLEGHENY	6.2	40	40	5.7	40	30	HUNTINGDON	11.0	70	60	10.3	70	60
Baldwin Boro				5.5	40	30	INDIANA	5.7	50	30	6.8	50	30
Bethel Park Boro				3.6	-	-	JEFFERSON	7.7	60	50	9.5	60	50
McKeesport City				6.7	50	30	JUNIATA	9.5	60	50	9.8	60	50
Monroeville Boro				4.0	40	30	LACKAWANNA	9.3	60	50	8.6	60	50
Mt. Lebanon Twp				3.0	-	-	Scranton City				8.2	60	50
Penn Hills Twp				4.9	40	30	LANCASTER	5.2	40	30	4.7	40	30
Pittsburgh City				6.3	50	30	Lancaster City				5.8	40	30
Plum Boro				4.5	40	30	LAWRENCE	8.4	50	40	7.6	50	30
Ross Twp				3.8	-	-	New Castle City				7.9	50	30
Shaler Twp				3.7	-	-	LEBANON	6.7	50	40	6.3	50	30
West Mifflin Boro				6.1	50	30	Lebanon City				6.3	50	30
ARMSTRONG	8.9	60	50	9.4	60	50	LEHIGH	6.4	50	40	6.1	50	30
BEAVER	5.5	40	30	5.4	40	30	Allentown City				7.2	50	30
BEDFORD	12.3	70	60	12.4	70	60	LUZERNE	9.8	60	50	9.3	60	50
BERKS	6.2	50	40	6.0	50	30	Hazleton City				9.5	60	50
Reading City				7.9	50	30	Wilkes-Barre City				8.6	60	50
BLAIR	8.1	60	50	8.8	60	50	LYCOMING	9.2	70	60	10.3	70	60
Altoona City				8.6	60	50	Williamsport City				9.4	60	50
BRADFORD	7.8	50	40	7.3	50	30	MCKEAN	8.6	50	40	6.4	50	30
BUCKS	7.5	50	40	6.6	50	30	MERCER	7.9	50	40	6.5	50	30
Warminster Twp				5.7	40	30	MIFFLIN	9.1	60	50	9.1	60	50
Bensalem Twp				7.2	50	30	MONROE	9.0	60	50	8.9	60	50
Bristol Twp				8.3	60	50	MONTGOMERY	7.2	40	40	5.9	40	30
Falls Twp				6.4	50	30	Pottstown Boro				7.5	50	30
Middletown Twp				6.6	50	30	Abington Twp				5.3	40	30
BUTLER	7.6	50	40	6.6	50	30	Cheltenham Twp				4.5	40	30
CAMBRIA	8.7	60	50	9.1	60	50	Lower Merion Twp				3.9	-	-
Johnstown City				9.6	60	50	Norristown Boro				9.0	60	30
CAMERON	13.7	70	60	12.1	70	60	Upper Merion Twp				3.4	-	-
CARBON	7.6	60	50	8.8	60	50	Upper Moreland Twp				4.5	40	30
CENTRE	6.1	40	40	5.7	40	30	MONTOUR	6.7	50	40	7.1	50	30
State College Boro				3.6	-	-	NORTHAMPTON	6.6	50	40	6.9	50	30
CHESTER	5.8	40	30	4.8	40	30	Bethlehem City				6.2	50	30
CLARION	6.8	50	40	7.7	50	30	Easton City				10.9	70	60
CLEARFIELD	9.0	70	60	10.0	70	60	NORTHUMBERLAND	10.3	60	50	9.9	60	50
CLINTON	11.9	70	60	11.4	70	60	PERRY	6.1	50	40	6.4	50	30
COLUMBIA	10.7	60	50	8.6	60	50	PHILADELPHIA	9.3	60	50	8.1	60	50
CRAWFORD	8.9	50	40	7.6	50	30	PIKE	7.3	60	50	8.5	60	50
CUMBERLAND	5.0	40	30	4.5	40	30	POTTER	9.9	60	50	9.9	60	50
DAUPHIN	5.8	40	30	5.2	40	30	SCHUYLKILL	9.4	60	50	9.4	60	50
Harrisburg City				6.1	50	30	SNYDER	7.1	50	40	7.8	50	30
Lower Paxton Twp				2.9	-	-	SOMERSET	8.5	60	50	9.1	60	50
DELAWARE	7.7	50	40	6.0	50	30	SULLIVAN	9.1	60	50	9.5	60	50
Springfield Twp				5.1	40	30	SUSQUEHANNA	8.0	60	50	8.6	60	50
Chester City				7.5	50	30	TIOGA	8.7	60	50	9.1	60	50
Haverford Twp				4.9	40	30	UNION	7.0	50	40	6.6	50	30
Radnor Twp				3.4	-	-	VENANGO	7.2	50	40	7.3	50	30
Ridley Twp				5.9	40	30	WARREN	6.3	40	40	5.9	40	30
Upper Darby Twp				7.1	50	30	WASHINGTON	6.5	50	40	6.8	50	30
ELK	9.7	50	40	6.6	50	30	WAYNE	8.4	60	50	8.3	60	50
ERIE	7.9	50	40	7.5	50	30	WESTMORELAND	7.5	50	40	7.6	50	30
Erie City				7.9	50	30	Hempfield Twp				6.8	50	30
Millcreek Twp				5.9	40	30	North Huntingdon Twp				5.9	40	30
FAYETTE	9.0	60	50	9.6	60	50	WYOMING	11.6	70	60	11.3	70	60
FOREST	8.3	50	40	7.8	50	30	YORK	6.1	40	40	5.3	40	30
FRANKLIN	6.2	40	30	5.7	40	30	York City				6.5	50	30
FULTON	9.2	50	40	7.9	50	30							

\* Population for cities based on 1970 Census figures.

<sup>1/</sup> 1970-79, inclusive.

<sup>2/</sup> Floating 12 month average, April 1979 through March 1980.

Prepared by: PA Department of Commerce  
Bureau of Statistics, Research & Planning  
July 17, 1980

UR - Unemployment Rate.

PP - PIDA Participation.

s - Small business (less than 50 employees, including all affiliates).

l - Large Business.



APPENDIX B

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TABLES ILLUSTRATING ECONOMIC CHANGES

Appendix Table 1A  
**NONAGRICULTURAL EMPLOYMENT, BY REGION AND STATE, SELECTED YEARS, 1950-78**  
(In thousands)

Region and State	1950	1960	1970	1975	1978
<b>UNITED STATES</b>	45,222	54,234	70,920	77,051	86,446
<b>NEW ENGLAND</b>	3,344.8	3,697.9	4,549.0	4,696.7	5,203
Connecticut	766.1	915.4	1,197.5	1,220.4	1,350
Maine	253.9	277.5	332.2	356.1	405
Massachusetts	1,761.0	1,904.7	2,268.3	2,324.7	2,499
New Hampshire	168.3	200.7	259.9	293.2	362
Rhode Island	298.6	291.7	343.2	343.0	398
Vermont	96.9	107.9	147.9	159.3	189
<b>MIDEAST</b>	12,210.8	13,497.7	16,308.2	16,240.8	16,820
Delaware	120.5	153.9	213.1	226.6	249
District of Columbia	497.8	535.5	683.7	715.0*	590 <sup>1</sup>
Maryland	716.1	896.4	1,300.7	1,424.3	1,586
New Jersey	1,657.1	2,017.1	2,608.6	2,667.9	2,700 est.
New York	5,576.0	6,181.9	7,154.8	6,791.1	7,025
Pennsylvania	3,643.3	3,712.9	4,347.3	4,415.9	4,670
<b>GREAT LAKES</b>	10,368.2	11,643.2	14,593.6	15,161.7	16,715
Illinois	3,160.0	3,522.0	4,328.6	4,424.9	4,729
Indiana	1,272.4	1,431.4	1,849.0	1,903.4	2,191
Michigan	2,153.9	2,350.7	3,004.9	3,127.0	3,535
Ohio	2,759.8	3,147.2	3,880.7	4,009.5	4,381
Wisconsin	1,022.1	1,191.9	1,530.4	1,669.9	1,879
<b>PLAINS</b>	3,607.8	4,193.3	5,361.5	5,944.1	6,652
Iowa	609.6	681.0	882.8	993.1	1,105
Kansas	463.8	559.0	677.0	796.9	913
Minnesota	803.1	959.8	1,317.2	1,469.9	1,683
Missouri	1,184.9	1,344.5	1,662.0	1,718.5	1,928
Nebraska	319.2	381.2	482.1	554.1	558
North Dakota	108.7	126.3	163.2	203.1	232
South Dakota	118.5	141.5	177.2	208.5	233
<b>SOUTHEAST</b>	7,411.0	9,543.8	13,771.8	15,919.4	18,388
Alabama	619.6	776.4	1,010.4	1,149.8	1,336
Arkansas	298.3	367.3	534.3	620.0	726
Florida	704.4	1,320.6	2,152.1	2,729.0	3,124
Georgia	806.6	1,051.1	1,557.5	1,724.8	1,992
Kentucky	556.6	653.6	910.1	1,041.7	1,224
Louisiana	636.2	789.8	1,041.6	1,199.4	1,416
Mississippi	311.6	404.0	577.2	667.3	813
North Carolina	927.3	1,195.5	1,782.7	1,996.3	2,265
South Carolina	461.4	582.5	842.0	977.8	1,134
Tennessee	759.3	925.3	1,327.6	1,497.3	1,708
Virginia	805.4	1,017.6	1,519.6	1,755.0	2,036
West Virginia	524.3	460.0	516.7	561.0	614
<b>SOUTHWEST</b>	2,711.5	3,683.4	5,245.8	6,389.6	7,593
Arizona	161.6	333.8	547.4	724.3	884
New Mexico	151.6	236.3	292.7	364.8	445
Oklahoma	476.9	581.6	769.5	887.4	1,026
Texas	1,921.4	2,531.7	3,636.2	4,413.1	5,238
<b>ROCKY MOUNTAIN</b>	909.4	1,199.4	1,619.6	2,044.1	2,456
Colorado	358.2	515.4	742.7	948.3	1,135
Idaho	131.6	155.2	207.8	267.5	329
Montana	149.0	166.8	201.4	240.0	278
Utah	190.2	264.8	358.7	441.6	525
Wyoming	80.4	97.2	109.0	146.7	189
<b>FAR WEST</b>	4,384.5	6,566.6	9,326.7	10,620.7	12,620
California	3,209.4	4,896.0	6,947.7	7,815.3	9,230
Nevada	53.8	103.4	203.0	263.7	350
Oregon	437.6	509.2	709.2	830.8	1,005
Washington	683.7	812.6	1,080.0	1,209.4	1,497
Alaska	0.0	56.6	93.1	162.3	164
Hawaii	0.0	188.8	293.7	339.2	374

\*The reporting jurisdiction for the D.C. area changed between 1970 and 1975 so this figure was adjusted to make it comparable with previous years.  
<sup>1</sup>Comparable figure with previous years not readily available.

SOURCE: 1950-75, U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, States and Areas 1939-1975*, Bulletin 1370-12, 1977; U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1979*; and Bureau of Economic Analysis, *Survey of Current Business*, January 1980 as presented in Advisory Commission on Intergovernmental Relations, *Regional Growth: Historic Perspective* (Washington, D.C.: June 1980), pp. 124-125.

Appendix Table 2A  
**MANUFACTURING EMPLOYMENT, BY REGION AND STATE, SELECTED YEARS, 1950-78**  
 (in thousands)

Region and State	1950	1960	1970	1975	1978
<b>UNITED STATES</b>	15,257.7	16,753.2	19,368.8	18,452	20,332
<b>NEW ENGLAND</b>	1,468.6	1,451.7	1,455.8	1,310	1,470
Connecticut	379.9	407.2	443.7	382	420
Maine	109.0	104.5	110.4	95	111
Massachusetts	715.7	698.0	648.3	593	647
New Hampshire	79.1	87.0	91.8	86	110
Rhode Island	148.0	119.7	120.9	115	135
Vermont	36.9	35.3	40.5	39	47
<b>MIDEAST</b>	4,456.2	4,465.8	4,507.9	3,855	3,886
Delaware	51.3	58.8	71.2	66	69
District of Columbia	19.2	20.2	18.6	16	15
Maryland	232.9	259.9	271.1	235	242
New Jersey	756.4	808.6	863.0	730	715 est.
New York	1,915.8	1,878.7	1,760.6	1,458	1,483
Pennsylvania	1,480.6	1,439.6	1,523.4	1,350	1,362
<b>GREAT LAKES</b>	4,493.4	4,495.2	5,032.1	4,643	5,056
Illinois	1,197.9	1,210.5	1,342.1	1,222	1,237
Indiana	480.1	593.9	710.2	650	738
Michigan	1,063.2	967.6	1,071.5	992	1,140
Ohio	1,217.7	1,262.8	1,407.4	1,271	1,379
Wisconsin	434.5	460.4	500.9	508	562
<b>PLAINS</b>	874.0	1,001.4	1,226.2	1,244	1,381
Iowa	154.4	176.6	215.5	235	250
Kansas	95.3	116.0	134.5	160	187
Minnesota	200.7	229.7	319.4	321	358
Missouri	353.8	392.7	446.1	407	453
Nebraska	52.1	66.8	85.0	86	93
North Dakota	6.1	6.5	9.9	15	16
South Dakota	11.6	13.1	15.8	20	24
<b>SOUTHEAST</b>	2,291.6	2,789.6	3,903.5	3,989	4,491
Alabama	218.1	237.0	323.8	328	365
Arkansas	75.7	102.3	167.8	175	218
Florida	102.3	206.7	321.6	346	420
Georgia	286.5	340.8	465.6	442	510
Kentucky	140.1	171.6	252.9	273	290
Louisiana	145.0	142.0	175.4	182	207
Mississippi	86.4	119.9	181.7	204	236
North Carolina	418.3	509.3	718.4	735	802
South Carolina	210.4	244.8	340.0	341	390
Tennessee	249.9	315.6	464.6	475	522
Virginia	229.5	275.0	365.2	368	408
West Virginia	131.4	124.6	126.5	122	125
<b>SOUTHWEST</b>	463.3	642.1	987.0	1,074	1,283
Arizona	17.0	49.3	91.2	99	125
New Mexico	10.1	16.7	21.0	27	33
Oklahoma	65.6	86.6	133.9	149	171
Texas	363.6	489.5	740.9	799	954
<b>ROCKY MOUNTAIN</b>	137.8	192.3	244.2	279	339
Colorado	61.6	87.7	117.5	135	166
Idaho	22.4	28.9	40.3	46	58
Montana	18.0	20.4	23.9	22	28
Utah	29.4	47.0	55.1	68	80
Wyoming	6.4	8.4	7.4	8	9
<b>FAR WEST</b>	1,079.8	1,748.8	2,046.5	2,090	2,426
California	759.7	1,317.3	1,558.8	1,586	1,869
Nevada	3.5	5.4	8.4	12	18
Oregon	138.0	144.4	172.3	184	218
Washington	178.6	216.8	239.4	244	285
Alaska	NA	5.8	8.6	8	12
Hawaii	NA	25.7	25.6	24	24

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, States and Areas 1959-75*, Bulletin 1370-12, 1977; and U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1979* as presented in Advisory Commission on Intergovernmental Relations, *Regional Growth: Historic Perspective* (Washington, D.C.: June 1980), pp. 120-121.

Appendix Table 3A  
**POPULATION, BY REGION AND STATE, SELECTED YEARS, 1950-78**  
 (in thousands)

Region and State	1950	1960	1970	1975	1977	1978*
<b>UNITED STATES</b>	151,237	179,954	203,795	213,040	216,332	218,065
<b>NEW ENGLAND</b>	9,316	10,532	11,883	12,188	12,242	12,257
Connecticut	2,016	2,544	3,041	3,095	3,108	3,099
Maine	917	975	997	1,059	1,085	1,091
Massachusetts	4,686	5,160	5,706	5,818	5,782	5,774
New Hampshire	532	609	742	818	849	871
Rhode Island	788	855	951	927	935	935
Vermont	379	389	446	471	483	487
<b>MIDEAST</b>	33,728	38,597	42,519	42,660	42,449	42,225
Delaware	321	449	551	579	582	583
District of Columbia	806	765	758	716	690	674
Maryland	2,355	3,113	3,938	4,098	4,139	4,143
New Jersey	4,872	6,103	7,193	7,316	7,329	7,327
New York	14,865	16,838	18,268	18,122	17,924	17,748
Pennsylvania	10,507	11,329	11,813	11,829	11,785	11,750
<b>GREAT LAKES</b>	30,530	36,290	40,313	40,978	41,056	41,234
Illinois	8,738	10,086	11,128	11,145	11,245	11,243
Indiana	3,967	4,674	5,202	5,311	5,330	5,374
Michigan	6,407	7,834	8,890	9,157	9,129	9,189
Ohio	7,980	9,734	10,664	10,759	10,701	10,749
Wisconsin	3,438	3,962	4,429	4,606	4,651	4,679
<b>PLAINS</b>	14,103	15,424	16,360	16,687	16,884	17,019
Iowa	2,625	2,756	2,832	2,870	2,879	2,896
Kansas	1,916	2,183	2,249	2,267	2,326	2,348
Minnesota	2,997	3,425	3,815	3,925	3,975	4,008
Missouri	3,964	4,326	4,688	4,763	4,801	4,860
Nebraska	1,327	1,417	1,488	1,542	1,561	1,565
North Dakota	619	634	620	637	653	652
South Dakota	655	683	668	683	689	690
<b>SOUTHEAST</b>	33,860	38,885	43,983	47,760	48,796	49,334
Alabama	3,058	3,274	3,451	3,614	3,690	3,742
Arkansas	1,908	1,789	1,932	2,116	2,144	2,186
Florida	2,810	5,004	6,848	8,346	8,452	8,594
Georgia	3,458	3,956	4,607	4,926	5,048	5,084
Kentucky	2,936	3,041	3,231	3,396	3,458	3,498
Louisiana	2,697	3,260	3,652	3,791	3,921	3,966
Mississippi	2,176	2,182	2,220	2,346	2,389	2,404
North Carolina	4,068	4,573	5,098	5,451	5,525	5,577
South Carolina	2,113	2,392	2,597	2,818	2,876	2,918
Tennessee	3,315	3,575	3,937	4,188	4,299	4,357
Virginia	3,315	3,986	4,659	4,967	5,135	5,148
West Virginia	2,006	1,853	1,751	1,803	1,859	1,860
<b>SOUTHWEST</b>	11,450	14,235	16,618	18,319	19,127	19,460
Arizona	756	1,321	1,792	2,224	2,296	2,354
New Mexico	689	954	1,023	1,147	1,190	1,212
Oklahoma	2,229	2,336	2,567	2,712	2,811	2,880
Texas	7,776	9,624	11,236	12,237	12,830	13,014
<b>ROCKY MOUNTAIN</b>	3,494	4,350	5,039	5,682	5,911	6,064
Colorado	1,325	1,769	2,223	2,534	2,619	2,670
Idaho	590	671	718	821	857	878
Montana	593	679	698	748	761	785
Utah	696	900	1,066	1,206	1,268	1,307
Wyoming	290	331	334	374	406	424
<b>FAR WEST</b>	15,392	21,641	27,080	28,765	29,865	30,472
California	10,677	15,870	20,007	21,133	21,896	22,294
Nevada	162	291	493	592	633	660
Oregon	1,532	1,772	2,101	2,288	2,376	2,444
Washington	2,387	2,855	3,413	3,547	3,658	3,774
Alaska	135	229	304	352	407	403
Hawaii	499	824	762	852	895	897

\*The 1978 figures are provisional from U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Series P-25, #790, December 1978.*  
 SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, Regional Economic Division, 1977 as presented in Advisory Commission on Intergovernmental Relations, *Regional Growth: Historic Perspective* (Washington, D.C.: June 1980), pp. 114-115.

Appendix Table 4A  
**PERSONAL INCOME IN CURRENT DOLLARS, BY REGION AND STATE,  
 SELECTED YEARS, 1950-78**  
 (in millions)

Region and State	1950	1960	1970	1975	1977	1978
<b>UNITED STATES</b>	\$226,214	\$399,947	\$808,223	\$1,257,354	\$1,518,390	\$1,708,545
<b>NEW ENGLAND</b>	14,911	25,645	51,096	74,319	87,932	96,820
Connecticut	3,779	7,219	14,952	21,584	25,055	27,612
Maine	1,087	1,815	3,292	5,071	6,221	6,867
Massachusetts	7,654	12,697	24,767	35,568	41,964	45,751
New Hampshire	704	1,300	2,773	4,346	5,547	6,409
Rhode Island	1,262	1,895	3,765	5,413	6,332	6,984
Vermont	425	719	1,547	2,336	2,814	3,197
<b>MIDEAST</b>	59,268	99,306	190,104	274,420	318,332	347,485
Delaware	684	1,251	2,493	3,908	4,477	4,972
District of Columbia	1,790	2,282	3,839	5,544	6,210	6,684
Maryland	3,772	7,288	16,968	26,533	31,337	34,646
New Jersey	8,934	16,645	33,814	49,181	58,589	64,281
New York	27,841	46,135	86,078	118,958	135,089	145,963
Pennsylvania	16,189	25,706	46,913	70,296	82,630	90,939
<b>GREAT LAKES</b>	50,649	86,822	166,681	250,838	301,646	339,119
Illinois	15,948	26,688	50,149	75,666	87,346	100,091
Indiana	5,998	10,178	19,624	30,023	36,890	41,412
Michigan	10,895	18,463	37,158	58,526	69,554	77,943
Ohio	12,930	22,822	42,869	62,514	75,809	84,432
Wisconsin	5,078	8,670	16,882	26,109	32,047	35,241
<b>PLAINS</b>	20,139	31,712	61,373	96,533	115,316	130,194
Iowa	3,897	5,466	10,623	17,440	19,802	23,170
Kansas	2,765	4,715	8,665	13,655	16,594	18,505
Minnesota	4,227	7,107	14,721	22,793	28,337	31,703
Missouri	5,672	9,134	17,726	26,244	31,943	35,538
Nebraska	1,978	2,990	5,638	9,384	10,491	11,868
North Dakota	782	1,081	1,913	3,652	4,044	4,677
South Dakota	814	1,218	2,086	3,365	4,104	4,733
<b>SOUTHEAST</b>	34,589	63,343	143,231	241,406	295,466	334,155
Alabama	2,691	4,974	10,175	16,779	20,745	23,540
Arkansas	1,575	2,486	5,560	9,775	11,878	13,047
Florida	3,599	9,741	25,598	47,055	56,496	65,084
Georgia	3,574	6,533	15,453	25,052	30,358	34,087
Kentucky	2,881	4,823	10,056	16,541	20,561	23,114
Louisiana	3,021	5,439	11,285	18,591	23,187	26,638
Mississippi	1,643	2,667	5,830	9,504	12,019	13,290
North Carolina	4,219	7,270	16,578	26,995	32,791	36,871
South Carolina	1,886	3,341	7,765	13,014	16,186	18,346
Tennessee	3,295	5,636	12,281	20,501	24,869	28,527
Virginia	4,070	7,430	17,294	28,732	35,246	39,492
West Virginia	2,136	3,003	5,360	8,867	11,129	12,318
<b>SOUTHWEST</b>	14,850	27,435	58,925	100,523	127,032	146,478
Arizona	1,006	2,658	6,568	11,908	14,943	17,352
New Mexico	811	1,758	3,148	5,476	6,970	7,969
Oklahoma	2,547	4,382	8,693	14,237	17,839	20,556
Texas	10,486	18,636	40,515	68,903	87,280	100,601
<b>ROCKY MOUNTAIN</b>	5,092	9,132	18,088	31,686	39,123	45,343
Colorado	1,970	3,984	8,569	15,168	18,752	21,645
Idaho	764	1,241	2,362	4,234	5,128	6,156
Montana	962	1,382	2,443	4,054	4,661	5,299
Utah	911	1,781	3,439	5,937	7,510	8,585
Wyoming	484	744	1,274	2,294	3,073	3,658
<b>FAR WEST</b>	47,592	58,553	118,725	187,632	222,459	268,952
California	39,774	42,947	89,892	139,337	173,214	199,010
Nevada	327	814	2,250	3,935	5,059	6,229
Oregon	2,482	3,934	7,814	13,201	16,651	19,775
Washington	3,995	6,797	13,834	22,158	27,534	32,058
Alaska	322	643	1,412	3,324	4,311	4,415
Hawaii	692	1,478	3,523	5,674	6,773	7,465

SOURCE: 1950-75: U. S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, Regional Economic Division.

1978: Survey of Current Business, August 1979, Part II.

As presented in Advisory Commission on Intergovernmental Relations, Regional Growth: Historic Perspective (Washington, D.C.: June 1980), pp. 108-109.

APPENDIX TABLES 5A-8A

Appendix tables 5A, 6A, 7A and 8A, containing Dun and Bradstreet data, appear in Carol L. Jusenius and Larry C. Ledebur, Documenting the "Decline" of the North (U.S. Department of Commerce: June 1978), pp. 3, 4, 6 and 7.

Appendix Table 5A

EMPLOYMENT CHANGE BETWEEN DECEMBER 31, 1969 AND DECEMBER 31, 1974 IN THE NORTH AND SOUTH

Region	Total job opportunities	Percentage change 1969-74	Change in jobs as a percent of 1969 level attributable to:						
			Closure of firms <sup>1</sup>	Birth of firms <sup>2</sup>	Expansion/contraction	Migration out of region	Migration into region	Outmigration to other subregions <sup>1</sup>	Inmigration from other subregions <sup>1</sup>
North	20,718,094	-5.8%	20.5%	8.9%	5.6%	0.21%	0.06%	--	--
New England	2,897,583	-7.4	21.9	9.4	4.5	0.11	0.03	0.12%	0.77%
Middle Atlantic	8,731,946	-11.1	21.7	8.6	2.0	0.27	0.06	0.50	0.01
East North Central	9,088,565	-0.3	18.9	9.1	9.5	0.18	0.08	0.11	0.28
South	20,983,550	+11.6	21.7	17.1	15.7	0.16	0.61	--	--

1. 1969 employment.

2. 1974 employment.



Appendix Table 6A

RATES OF CLOSURE, BIRTH, IN- AND OUTMIGRATION OF FIRMS BY STATE  
IN THE NORTH AND SOUTH  
DECEMBER 31, 1969-DECEMBER 31, 1974

State	Closure rate	Birth rate	Inmigration rate	Outmigration rate
North	33%	20%	.02%	.07%
New England	33	22	.22	.09
Connecticut	33	23	.69	.24
Maine	34	22	.20	.08
Massachusetts	32	21	.17	.19
New Hampshire	37	29	.65	.22
Rhode Island	33	21	.24	.36
Vermont	36	23	.20	.11
Middle Atlantic	33	18	.05	.17
New Jersey	33	19	1.05	.27
New York	35	19	.11	.59
Pennsylvania	29	16	.12	.22
East North Central	33	22	.05	.08
Illinois	33	24	.17	.26
Indiana	33	20	.16	.20
Michigan	34	25	.08	.10
Ohio	33	20	.11	.15
Wisconsin	30	19	.13	.09
South	35	29	.10	.03

Appendix Table 7A

RATES OF FIRM CLOSURE AND BIRTH BY INDUSTRY FOR THE NORTH AND SOUTH  
DECEMBER 31, 1969-DECEMBER 31, 1974

Industry	North	South	North	South
	Closure rate <sup>1</sup>	Closure rate <sup>1</sup>	Birth rate <sup>2</sup>	Birth rate <sup>2</sup>
Average	33%	35%	20%	29%
Agriculture	25	28	.14	.21
Mining	33	39	.14	.25
Construction	29	33	.19	.38
Manufacturing	30	33	.15	.26
Transportation, Communications and Public Utilities	28	31	.18	.24
Wholesale/Retail Trade	36	37	.21	.27
Finance, Insurance and Real Estate	28	29	.47	.69
Services	26	29	.24	.29
Public Administration	26	18	.20	.29
Unclassified	32	41	.01	.01

1. When the Wholesale/Retail Trade industry is excluded, the average closure rate for the North is 29 percent, and for the South, 32 percent.

2. When the Wholesale/Retail Trade industry is excluded, the average birth rate for the North is 19 percent, and for the South, 31 percent.

Appendix Table 8A

RATES OF CLOSURE AND BIRTH OF FIRMS BY INDUSTRY IN THE SUBREGIONS OF THE NORTH  
DECEMBER 31, 1969-DECEMBER 31, 1974

Industry	New	Middle	East	New	Middle	East
	England	Atlantic	North Central	England	Atlantic	North Central
	Closure rate			Birth rate		
Average	33%	33%	33%	22%	18%	22%
Agriculture	27	23	25	16	11	16
Mining	25	36	32	19	14	13
Construction	29	29	29	28	15	21
Manufacturing	31	31	29	17	14	17
Transportation, Communications and Public Utilities	28	27	28	22	18	16
Wholesale/Retail Trade	36	36	36	21	19	23
Finance, Insurance and Real Estate	29	29	28	55	40	54
Services	28	25	27	26	21	26
Public Administration	26	30	19	13	16	29
Unclassified	39	30	31	01	-- <sup>a</sup>	03

a. Less than .01.

Appendix Table 9A

CHANGES IN EMPLOYMENT IN MANUFACTURING INDUSTRIES IN PENNSYLVANIA  
BY MAJOR INDUSTRY GROUPS: 1977 AND 1976\*

Industry Group	Number of Employees			Employment Changes Attributed to:			
	1977	1976	Net Change	New Establish- ments	Establish- ments Dis- continuing Operations	Changes in Existing Establish- ments	Other Changes
Total	1,246,027	1,241,109	+4,918	5,410	12,553	+15,230	-3,886
Food and kindred products	98,064	100,487	-2,423	385	1,550	-267	-1,002
Tobacco manufacturers	3,346	3,641	-295	-	70	-225	-
Textile mill products	49,511	49,680	-169	207	899	+1,097	-574
Apparel and related products	126,330	130,595	-4,265	1,901	4,106	-2,096	+36
Lumber and wood products	20,566	19,707	+859	204	311	+984	-35
Furniture and fixtures	21,124	19,730	-1,394	455	491	+1,042	+388
Paper and allied products	41,996	42,222	-226	98	91	-122	-140
Printing, publishing and allied products	65,102	63,708	+1,394	355	862	+2,534	-813
Chemicals and allied products	49,760	49,044	-226	29	126	+848	-35
Petroleum refining and related products	11,447	11,355	+92	6	47	+228	-95
Rubber and miscellaneous plastics products	32,178	33,273	-1,095	243	245	+1,519	-2,635
Leather and leather products	18,934	19,672	-738	11	196	-269	-284
Stone, clay, glass, and concrete products	53,183	51,825	+1,358	122	359	+1,713	-120
Primary metal products	176,870	178,027	-1,157	75	398	-927	+93
Fabricated metal products	116,054	115,665	+389	461	1,412	+1,301	-255
Machinery, except electrical	125,548	126,257	-709	396	317	-827	+35
Electrical & electronic mach- inery equipment & supplies	102,668	99,715	+2,953	195	678	+4,318	-888
Transportation equipment	71,048	68,555	+2,493	63	46	+2,193	+283
Instruments & related products	38,502	36,638	+1,864	75	70	+1,763	-51
Miscellaneous manufacturers	23,796	21,313	+2,483	129	279	+423	+2,206

\* Details may not add to total figures due to incomplete coverage.

SOURCE: Reproduced from Wharton Applied Research Center, University of Pennsylvania, Factors Influencing the Economic Development of Pennsylvania (Philadelphia: September 1979), pp. 29-30.

Appendix Table 10A  
 PERCENT DISTRIBUTION OF NEW JOBS CREATED IN EACH REGION  
 BETWEEN 1974 AND 1976 BY AGE OF ESTABLISHMENT

Industry	Region	YEARS				Total
		0-4*	5-8	9-12	13+	
Manufacturing	Northeast	67.3%	13.9%	9.3%	9.6%	100%
	North Central	75.4	9.9	8.6	6.1	100
	South	74.1	15.1	6.2	5.9	100
	West	71.0	13.1	8.9	7.0	100
Trade	Northeast	78.2%	9.4%	6.2%	6.1%	100%
	North Central	81.5	8.5	5.4	4.7	100
	South	82.2	8.4	5.1	4.5	100
	West	81.8	8.7	5.1	4.6	100
Service	Northeast	79.4%	8.5%	7.4%	6.6%	100%
	North Central	84.7	7.0	4.6	3.8	100
	South	84.8	7.3	4.3	3.6	100
	West	87.3	5.9	3.4	3.4	100
Total	Northeast	75.5%	10.4%	7.5%	6.5%	100%
	North Central	80.8	8.4	6.0	4.8	100
	South	80.4	9.9	5.1	4.6	100
	West	80.9	8.8	5.5	4.8	100

\* Includes any new business facility or new branch facility of an existing firm.

SOURCE: David L. Birch, "The Job Generation Process," Cambridge, Massachusetts, 1979, as presented in Wharton Applied Research Center, University of Pennsylvania, Factors Influencing the Economic Development of Pennsylvania (Philadelphia: September 1979), p. 32.

Appendix Table 11A  
 PERCENTAGE OF TOTAL JOBS<sup>1</sup> GENERATED BY SIZE AND STATUS FOR REGIONS  
 AND THE U. S. BETWEEN 1960 AND 1976

Region	Ownership	Number of Employees					Total
		0-20	21-50	51-100	101-500	500-1	
North	Indep.	12.9.1%	-11.2%	-22.3%	-21.1%	24.3%	98.8%
	HQ/Br.	36.4	10.5	1.3	- 6.6	-32.8	8.8
	Par/Sub.	11.6	7.2	3.6	- 5.5	-24.4	- 7.6
	Totals	177.1	6.5	-17.4	-33.3	-32.9	100.0
North Central	Indep.	52.8%	4.5%	.3%	- 2.8%	2.9%	57.7%
	HQ/Br.	12.4	5.8	3.8	4.9	13.1	39.9
	Par/Sub.	2.0	1.7	1.2	1.0	- 3.5	2.4
	Totals	67.2	12.0	5.2	3.1	12.4	100.0
South	Indep.	42.7%	5.7%	1.5%	0.0%	.4%	50.1%
	HQ/Br.	9.3	4.0	2.9	7.4	16.7	40.3
	Par/Sub.	1.5	1.5	1.1	2.0	3.3	9.6
	Totals	53.5	11.2	5.5	9.4	20.4	100.0
West	Indep.	47.8%	5.9%	2.2%	1.9%	2.9%	60.8%
	HQ/Br.	10.0	4.3	3.0	6.2	8.6	32.0
	Par/Sub.	1.7	1.4	1.1	1.8	1.8	7.2
	Totals	59.5	11.6	6.3	9.3	13.3	100.0
U. S.	Indep.	51.8%	4.4%	0.0%	- 1.5%	3.1%	57.8%
	HQ/Br.	11.9	4.9	3.1	5.6	10.6	36.1
	Par/Sub.	2.3	1.9	1.3	1.1	.5	6.1
	Totals	66.0	11.2	4.3	5.2	13.3	100.0

<sup>1</sup> Total jobs generated in each region are Northeast (410,890), North Central (1,674,222), South (2,873,619), and West (1,800,112).

SOURCE: Wharton Applied Research Center, University of Pennsylvania, Factors Influencing the Economic Development of Pennsylvania (Philadelphia: September 1979), p. 33.

## TECHNICAL NOTES ON PIDA LOAN SAMPLE

The universe sampled was composed of PIDA loans approved during the period 1967 through 1976 but excluding loans to industrial parks and to Volkswagen. There were 749 loans in the universe.

The 123-loan sample was a random stratified sample consisting of four strata:

1. Loans prior to 1971
  - a. "New" establishments (31 out of 45)
  - b. "Existing" establishments (30 out of 301)
2. Loans during 1971 through 1976
  - a. "New" establishments (31 out of 62)
  - b. "Existing" establishments (31 out of 341)

The "new" and "existing" establishments as assigned in the strata were determined on the basis of data contained in 20 Years of Job-Creating Loans, Summary of Loan Projects, July 1956-December 1975 and Major Industrial Development Projects Announced in Pennsylvania, 1976.<sup>1</sup>

After the sample was drawn, further information concerning the sample loans was obtained from the records of the Pennsylvania Office of Employment Security compensation records. On the basis of this information, it was determined that there is no well-defined distinction between "new" and "existing" establishments and no analysis is presented on the basis of this distinction.

In the analysis, characteristics of the loans prior to 1971 and loans from 1971 to 1976 are presented separately for the purpose of comparison. Two other breakdowns are also shown (1) the number of the

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1. Pa. Department of Commerce, Bureau of Statistics, Research and Planning.

additional employees projected and (2) standard industrial codes. Since the firms occupying the loan facilities changed in many cases during the period under observation, for the purpose of the analysis, these loans were assigned to the category indicated for the original industry obtaining the loan.

In the case of estimated characteristics of subsets of the sample, the number in the universe in the subset was multiplied by the average of the sample subset to obtain the point estimates. The knowledge of the size of the universe affords a better estimate and smaller variance than is possible when the magnitude of the subset in the universe is unknown.<sup>2</sup>

It was verified that one loan in the sample was rescinded. On the basis of this one loan in the sample, a 95 percent confidence interval would indicate that no more than 15 (2.0 percent of the loans in the universe) were rescinded. Because of conflicting information, it is difficult to ascertain whether there are additional sample loans which were rescinded.

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2. Hanson, Hurwitz and Madow, Sample Survey Methods and Theory, vol. 1, p. 126, 1953.

