

Testimony of Arnold H. Raphaelson, PhD
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Before the Committee on Judiciary
The General Assembly of Pennsylvania

on

House Bill 873 - Session of 1989

Mr. Chairman, we are professors of economics at Temple University with particular interests in health economics and public policy related to health care finance and health regulation.

We have been asked to testify today about an economic study that was sponsored by the Philadelphia Drug Exchange, whose membership is composed of the major drug manufacturing and distribution firms of Pennsylvania. We want to stress that our testimony may not reflect official views of the Drug Exchange or of Temple University.

Plainly, some of the members of the Philadelphia Drug Exchange are concerned that HB 873, if enacted, will cast a shadow over the future of pharmaceutical research in Pennsylvania. If their concerns materialize, it is clear that drug firms could with relative ease conduct their research elsewhere.

Research and development are the engines that drive the health care industry. R&D has been responsible for the dramatic advances in therapeutics of the last several decades. We all see this among the children spared of polio, the adults brought back from a heart attack or spared of the need for ulcer surgery by a simple pill. In 1987 it is estimated that 1.5 billion prescriptions were filled in the United States, and in 1988 about \$8.6 billion

in over-the-counter (non-prescription) products were credited with saving \$24 billion in physicians' fees and lost work time.

These benefits are more apparent than the conditions and the institutions that provide such discoveries. But we should recognize the possibility that if we do not nurture these institutions and see to the environment in which they operate best, we could lose them. We often assume that the big advances in medicine come from distant non-profit institutions, but the truth is that most new drugs come from drug companies--and Pennsylvania is almost singularly powerful in this field.

In the federal publication U.S. Industrial Outlook, 1989, the U.S. drug industry as a whole (SIC 283) is cited as having about \$50 billion in world-wide sales, including exports and products made abroad. There was a favorable international trade balance (one of the few), with \$3.79 billion in exports and \$3.65 billion in imports, despite an estimated \$2 billion loss to patent pirates.

The publication cited several factors as important to the prosperity of the industry, including contributions to meeting national health goals, especially with an aging population with growing health needs; the number of new products developed; the value of exports, especially to developing nations and the continued increases in productivity. Four questions are said to guide the industry's spending for research and development: "Will the new product satisfy a medical need? Does the industry have the competence to develop the product within a reasonable length of time? Will the product bring about a significant therapeutic improvement? and Will the demand justify the expenditure?"

The U.S. industry's responses to such questions are measured by total spending of about \$6 billion on research and development in 1988, with \$5 billion spent in this country and \$1 billion spent abroad. In 1987, 16 of the 21 new drugs approved by the U.S. Food and Drug Administration were developed in the U.S., the Outlook publication states. "New drugs can only be developed if the R&D environment is economically and politically friendly and if there is some relief from litigation once the new drug has been placed on the market."

The costs of R&D and of liability insurance are very high. Competitive pressures have increased as patents have expired and as generics and non-prescription drug sales have grown. As a result, some firms have stopped developing and producing vaccines and other high risk products, and there have been mergers, both domestic (Eastman Kodak-Sterling) and international (SmithKline-Beecham). It is clear that, just as the Eastman-Sterling decision was to move to Pennsylvania from New York state for a favorable research environment, there can be moves from Pennsylvania to other states or foreign nations if that environment is perceived as deteriorating.

Pennsylvanians may not fully appreciate how much medical progress has been conceived and brought to life in the Commonwealth by members of the Philadelphia Drug Exchange. Many of the major advances against heart disease, gastric and duodenal ulcer, arthritis, mental illness, infection and pain originated or were developed within 100 miles of Harrisburg, in the research laboratories of less than a dozen Philadelphia-area firms.

A few years ago the Philadelphia Drug Exchange commissioned the two of us and Erwin A. Blackstone, PhD, also a professor of economics at Temple to provide an impact analysis on the pharmaceutical industry in Pennsylvania. A booklet summarizing our findings was produced, and we will summarize those findings for you now.

In almost every measure we found Pennsylvania's drug industry to be growing--in sales, in payroll, in capital expenditures and in spending for R&D--while as we know, much of Pennsylvania's basic industry was in decline, with resultant loss of people and revenues.

- Federal data show that in the period 1977-1982 the Pennsylvania-based drug industry's sales rose by 71.9%. This was about triple the rate for Pennsylvania industry manufacturing and was higher than the 66.4% growth rate for the drug industry nationally. The drug industry is one of the fastest growing of American industries, and the Pennsylvania drug firms are among its leaders.
- In the 1977-1982 period the drug industry's role as a manufacturing employer grew in Pennsylvania in percentage terms. Although employment in the industry did fall by 8%, employment overall in Pennsylvania manufacturing fell by 13%.
- While capital investment in Pennsylvania grew only 47.6% between 1977 and 1982, drug companies' capital expenditures rose 291.8%. This rate of

increase in Pennsylvania was 2.5 times the rate for the industry nationally, and six times the rate of rise in capital spending for all Pennsylvania manufacturers.

- And while the national dollar payroll in manufacturing rose 43.9% in the 1977-82 period, the Pennsylvania payroll in drug manufacturing rose 45.1%. It should be borne in mind that the importance of the drug industry to Pennsylvania is understated by manufacturing employment and payroll data. The industry's ability to sustain employment during the 1981-83 recession is a case in point. In that period, employment in the drug industry declined at a lower rate, and its sales and payrolls rose. By the end of 1983, the Pennsylvania drug industry's sales, at about \$3.5 billion, represented almost one dollar in eleven of the state's manufactures.

- Beyond the government data, we surveyed eight drug firms in Pennsylvania. They contributed some \$23.4 million in state and local taxes in 1983. Real estate taxes, gross receipts taxes and other local tax payments rose 11.6%, 450% and 31.4% respectively between 1981 and 1983. The industry's employees paid some \$13.7 million in state income taxes in 1983, up 36.7% since 1981, and local income taxes reached \$8.3 million.

- These firms increased R&D spending to \$333 million in 1983.

- The drug industry is renowned for its support of community and educational organizations in Pennsylvania. Our survey found that they contributed some \$1.2 million to colleges and universities in 1983, and \$4.1 million in cash donations and more than \$7.1 million in product contributions to others.

Much of the data just described will soon be updated as new census information becomes available. I have obtained some recent information on Pennsylvania firms' R&D expenditures of possible interest to the Committee. The numbers are imprecise in that they include operations outside the Commonwealth for firms like Merck and Johnson & Johnson, but they are nevertheless useful in demonstrating the size of the present commitment to R&D. For 1988, the six major firms operating in Pennsylvania spent more than \$2.2 billion world-wide on R&D. The Sterling Drug Division of Eastman Kodak may add \$150 million or more annually as its R&D operations transfer to the Delaware Valley from New York state over the next several years.

Clearly, Mr. Chairman and members of the Committee, the pharmaceutical industry is a powerful economic, social and cultural presence in Pennsylvania. I feel sure that in considering any legislation regulating that industry, you will recognize the effects on that industry's ability to continue and expand its contributions to our economy.

We will be pleased to attempt to answer any questions you or your colleagues may have on our testimony.