

The Profit Angle in Research

By FINDLEY WEAVER

Investigation of Business Possibilities Is Important Supplement to Plans for Establishing New Industries in State

RESearch in natural sciences applied to agriculture and industry has been carried on intensively in this country for at least half a century. Millions of dollars are spent annually on this type of organized research and the outstanding results are unquestionably worth far more to our economic welfare than the cost.

But the value of important research of chemists and other natural scientists is limited unless it is supplemented by business research. This is so because application of natural sciences attacks only one aspect of our industrial problem—the physical aspect—while the economic aspect is neglected without business research. The work of a chemist or other natural scientist in discovering a process for manufacturing a new product from a raw material commonplace in Oklahoma is of limited value unless research is also carried out to make use of this discovery on a business basis.

Natural science solves only part of the problem. It remains for business research to determine the character and location of the market, the quality and quantity of the labor supply needed, and also to study transportation, financing, and other business problems confronting the enterpriser who alone will organize the factors of production into a business enterprise and start a factory into production.

Despite the fact that business research is a necessary counterpart to the application of natural sciences to industry, it has not received public support commensurate with its importance. In fact, public support given to any kind of scientific research has been niggardly in Oklahoma except in the case of federal aid for experimental work in agriculture.

Why has organized business research received less attention so far than research in chemistry, physics, and biology?

Agricultural experiment stations and the Department of Agriculture are famous for their studies of agricultural problems. Farm-

ers' bulletins and many other publications of the experiment stations and of the department have been of utmost importance in pointing the way to improved farming methods and improvements in the marketing system for agricultural products. Likewise, the physical and chemical research of large business concerns has provided many new products (in the electrical industry, for example) and the value of these applications of science is widely recognized.

University business research, however, has not been applied to industry as the contribution of professional scientific research has been utilized in agriculture.

The first explanation of this situation is found in the great difference between financial aid to agricultural research as compared with the financial resources available for business studies. Agricultural experiment stations have long received substantial funds from the federal government which have permitted them to carry on elaborate experiments and publish the results for widespread distribution. This has not been so in the case of bureaus of business research, which have never received financial assistance from the federal government.

THIS comparatively greater interest in agricultural research is probably due to its more obvious or immediate benefits to a larger number of individuals. Showing farmers how to terrace land or instructing them on the control of insect pests brings immediate advantages to an individual farmer and the benefits are obvious to all. In contrast, a scientific study of the economic effects of the freight rate structure, although vital to the welfare of the state generally and to manufacturers in particular, will attract little public interest because the subject is complex and abstract and removed from the daily lives of most people.

A second reason for the fact that university business research has not been more fully utilized is that university training in

business has been in existence for only a short time. Consequently, until the last quarter-century, there has been a relatively smaller number of teachers or scientists interested in business and economics than the number of scientists engaged in agricultural work.

The study of business administration in universities is recent because the most rapid growth in the complexity of our business and economic system has occurred within the past fifty years. The chief problems of industry prior to the twentieth century were in the field of production; now the problems of production technique are not as pressing as are those of marketing, finance, and business organization and administration. For this reason, business research carried on by both private businesses and publicly supported institutions is more recent than in the case of research in natural sciences.

A third reason for limited public support of business research is that large and established business organizations, financially able because of their size, have carried out this work independently. These concerns, such as the General Electric Company and General Motors Corporation, have not been dependent upon public support of research and therefore conduct their own investigations. But what of smaller business concerns or new industries in a non-industrial state such as Oklahoma? The answer is that the latter need has not been properly served and cannot be met without public support—primarily through universities.

What does business research offer toward Oklahoma's economic progress?

Agriculture and the oil industry have been the basis of the state's economy. But there must be a shift in the basis of our economic system from now on if we are to maintain or increase the degree of prosperity we have had in the past. The economic position of agriculture has declined

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Medical Alumni News

By IDA LUCILLE WALLACE

DR. A. M. YOUNG, III, '37med, and Miss Joyce Mersfelder were married March 1 in the First Christian Church, Oklahoma City. Dr. Young is engaged in private practice with his father in Oklahoma City.

► Dr. Wylie T. McCollum, '40med, visited the Medical School last month. He is serving his internship in Gallinger Municipal Hospital at Washington, D. C. His brother, Dr. E. B. McCollum, '32med, has been practicing in Detroit, Michigan, for the last eight years.

► Capt. E. P. Reed, '31med, has been visiting his brother, Dr. Karl A. Reed, '33 med, at San Francisco, California, on his way to the Philippines for a year's active service in the Army Medical Corps. Captain Reed formerly practiced in Brownsville, Texas.

► Dr. Eugene N. Davie, '40med, a lieutenant in the United States Navy, was married February 8 to Miss Marjorie Inez Sifford. The marriage took place in St. Paul's Episcopal Church in Oakland, California. Dr. Davie is on duty at the Mare Island Naval Hospital, and their home address is 138 Farragut Avenue, Vallejo, California.

► Dr. Emma Jean Anthis Cantrell, '33 med, visited the Medical School recently. Dr. Cantrell is associated with her husband, Dr. David E. Cantrell, '34med, in private practice at Healdton, Oklahoma.

► The following graduates of the Medical School have recently been called to active service: Capt. Everett G. King, '33 med, of Duncan, to Station Hospital, Fort Sill; Lt. Victor Pryor, '31bs.med, Holdenville, to Fort Sill; Lt. James R. Ricks, '38med, formerly physician of the Oklahoma City public schools, to Fort Sill; Lt. Orville M. Woodson, '33med, of Poteau, to Fort Sill; and Lt. Herman W. Gaddis, '36med, of Corpus Christi, Texas, to Fort Sam Houston.

► Dr. Robert Messenger, '38med, and Mrs. Messenger, of Oklahoma City, announce the birth of a daughter, Karel Lee, February 25.

► The wedding of Dr. James Samuel Binkley, 29bs.med, '30ba, and Miss Katherine Bretch, '39fa, took place in Oklahoma City in March. Miss Bretch, whose home is in Oklahoma City, was a member of Pi Beta Phi at the University and was selected as beauty queen. Dr. Binkley is a cancer specialist in New York City. During the last year he was a Rockefeller Clinic Fellow in cancer and gave a series of postgraduate lectures to

physicians in Oklahoma. Dr. Binkley was a member of Phi Delta Theta fraternity at the University.

► A son, John Stephen, was born January 30 to Dr. E. O. Bradfield, '36med, and Mrs. Bradfield, of Temple, Texas. Dr. Bradfield is resident surgeon at the Scott and White Hospital at Temple.

► Dr. Samuel H. Alexander, '28med, major in the Medical Corps of the United States Army who is now stationed at Army Medical Center, Washington, D. C., reports that other O. U. alumni holding commissions in the regular Army and now on duty at the Medical Center at Washington are Capt. Audrey L. Jennings, '29med, and Capt. Rex C. House, '33med. Capt. Harold A. Vinson, '35med, was recently on duty in Washington but has been transferred to Fort Sill, Oklahoma.



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throughout the country during the past quarter-century because of world economic forces. Its decline in Oklahoma has been even more pronounced because the fertility of the virgin soil with which the state was originally endowed has been reduced by erosion and objectionable farming methods. The oil industry has augmented our wealth and income from farming during years past, but the decline of this industry is evident. We must turn, then, to new types of enterprise.

Other states in the south have been faced with a similar problem, which they have met by developing manufacturing. Much of this manufacturing has been of small-scale operation or has been developed to serve local markets, although some manufacturing, notably in the textile industry, is of large-scale production and serves a national market. Oklahoma must also find the solution of its problem in the development of manufacturing industries.

Business research can aid in a movement for developing manufacturing by making scientific studies of particular problems confronting business. Chief among these problems are:

1. Location, character, and extent of the market, both local and national.
2. Channels for reaching the market.
3. Quality and quantity of our labor supply, including the comparative advantages of the types of labor in the state in different types of industry.
4. Transportation costs, including the

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economic effects of the present freight rate structure.

5. Methods of promoting enterprises, especially in the case of small, isolated, or highly-specialized industries.

These problems should be treated both from a general point of view and in their detailed application to particular industries or businesses. Moreover, unbiased and scientific market surveys and analyses of other business problems should be made for existing or proposed new industries and individual businesses, and for localities within the state as a public service and in the interest of the state's general welfare.

Business research in other states where even modest support has been available has yielded important results. Consider Texas, our neighboring state, similar to Oklahoma in population and resources, where manufacturing has developed more rapidly than in Oklahoma. The possibilities of cotton manufacturing in Texas were studied a number of years ago by the Bureau of Business Research of the University of Texas. The same agency also studied the advantages Texas possesses in the production of cheese and other dairy products. This research has contributed materially to the development of industries in the state; witness the establishment of textile mills, cheese factories, and creameries. Definite usefulness to industry has come from university business research in Michigan, Pennsylvania, and Florida.

A large proportion of scientific progress has emanated from universities. Universities have long been centers for investigational work in the arts and sciences as well as in professional fields. It is no accident that important research has come from educational institutions. Research is a natural accompaniment of teaching, and those who are actively engaged in teaching find in their instructional work a recognition and appreciation of problems that the nature of their profession also qualifies them to study. This advantage of teachers, which holds true for research in business and economics as well as in natural sciences, forms the basic principle for the organization of business research, namely, that the research program should be conducted by university faculty members who are best qualified, by professional training and by interest in the social welfare, to do this work.

Besides the qualification of its faculty, a university should carry on business research because such work is in the public interest, and should therefore be publicly financed. The benefits of much scientific investigation would not be available to society if the work had not been done at state universities.

Undoubtedly business research in Oklahoma will suffer both in its quality and in the extent to which it can be carried on at all, without adequate support from the state through the University. With adequate public support, university business research offers incalculable benefits to the state and its people.

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