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FISCAL SUPPORT OF STATE UNIVERSITIES AND STATE COLLEGES

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C. H. T.

FISCAL SUPPORT OF STATE UNIVERSITIES AND STATE COLLEGES

INTRODUCTION

The publicly supported higher educational institutions, with their large demands on State treasuries, are naturally objects of inquiry to the taxpayer, who is more and more alarmed at the increasing public burdens. His alarm is often based upon misconceptions and inaccuracies. For example, he often charges, without any accurate knowledge of the facts, that the demands of education, good roads, and State charitable institutions are bankrupting the Commonwealths. The only way to check his fear is through the proper use of facts. Certainly, to satisfy him, the authorities of the institutions need to know accurately the past, present, and probable future fiscal policies in State higher education. The knowledge needed must include answers to questions like the following: Is State higher education "free," or do these institutions require tuition and other fixed charges as do privately endowed institutions? What are the main sources of support to these institutions? What do the trends of income to these institutions show? What part of the cost of his education does a student pay as compared with what the State appropriates for collegiate purposes? What have been the methods of State support, and what means may best be employed at present? What about the mill tax and other specially assigned taxes? To what extent did the Federal Government stimulate the foundings,[1] and what part of their net receipts are Federal subventions? What effect have such Federal subventions as the 1914 Smith-Lever Act for extension work upon State support for collegiate purposes? How should the fiscal facts be presented in the fiscal reports of State colleges in order that the taxpayers who are providing part of the revenues may get an insight into the fiscal relationships of their institution?

These same taxpayers have called upon the State governments to broaden continuously the entire educational program and to include in this program many functions previously cared for in the home or

[1] Distinction between founding and operating: The word "founding" is here used to mean granting the charter upon the part of the legislature. It will be seen that laws providing that institutions might be organized were sometimes enacted some years before the institution was actually organized and put into operation.

through other agencies, as through the extension work. This call for higher educational institutions has been so insistent that every State now has at least one, and a number several State-aided higher educational institutions. The taking over of more institutions into the State's control, the coordinating and consolidating of the institutions already established, and the establishing of new ones still go on.

Taking over more institutions of this nature, and broadening the scope of those already established, necessarily demands greater revenues. As these obligations are shouldered by the different States, and the burden of supplying revenues is more keenly felt, knowledge to answer the foregoing questions is needed far more than ever. Until such knowledge is available it is idle to seek policies for State higher education that can be considered sound.

Chapter I

ORIGIN AND EFFECTS OF THE ORDINANCE OF 1787 AND THE ACT OF JULY 2, 1862

In his monograph on the Origin of American State Universities, 1903, Elmer E. Brown traces the establishment of a number of America's oldest collegiate institutions and their relation to the Colonies and States. The struggle of different States to gain directing control over private and church-controlled colleges within their borders whose charters had been granted by their legislatures or obtained from the British Crown is shown to have been fruitless. But that the peoples of the different States were determined that the colleges should offer education suitable to their needs was clearly demonstrated by the legislative efforts. The founding of new institutions by the State that should be directly responsible to the Government was the only alternative if the privately chartered institutions would not voluntarily become responsive to State direction, since the courts held it was illegal for a State to force a change of the charter by which a college was organized.

The colleges founded during colonial days, such as Harvard, 1636, College of William and Mary, 1693, Yale, 1701, Kings College (Columbia), 1754, Queens College (Rutgers), 1766, and Dartmouth College, 1769, all received some financial aid from the colonial governments in which they were located. But these institutions were chartered as private institutions, and they refused to be held responsible to the colonial, or later, to the State legislative bodies. Moreover, it was generally felt that each of the colleges belonged to some "faction, or section, or sect," and did not answer the needs of the particular Commonwealth in the matter of higher education. Colonies that did not have colleges felt an urgent need for them. Consequently, with the forming of State constitutions during and following the Revolutionary War, at least one State, North Carolina, in 1776 made provision for "at least one State-founded university," responsible to the State. Another constitution, that of Vermont, in 1777, urged the establishment of "one university in the State by the direction of the general assembly." The Legislature of Georgia passed an act on February 25, 1784, providing public lands for establishing a college and appointing trustees therefor. William Livingston, of New York, had urged the founding of such a State institution by New York when Kings College was founded. But it

was not until the University of North Carolina opened in 1795 that a regular State university was born. The opening of the Universities of Vermont and Georgia followed shortly after this—in 1800 and 1801.

It will be recalled that one of the great barriers to the formation of a closer union of the States after the Revolution was the claim to the "Northwest Territory" by Massachusetts, Connecticut, New York, and Virginia.[1] When Virginia ceded her claim on this territory to the Central Government in order that it might become part of the public domain, the Continental Congress was in serious financial straits. It looked upon the sale of the lands in this territory as one of its best sources of revenue to pay the public war debt and its debts to the soldiers of the Continental Army. Consequently, Congress lent an open ear to proposals made by the Ohio Company, of Boston, to purchase a large tract of land in Ohio, then part of the Northwest Territory. This was especially the case, as public land had not sold as had been anticipated under the ordinance of May 20, 1785. The wise provisions of the ordinance of July 13, 1787, which stated that "Religion, morality, and knowledge being essential to good government and the happiness of mankind, schools and the means of education shall forever be encouraged" have been heralded far and near as the most foresighted piece of legislation ever enacted by a central government. The counterpart of this act, passed July 27, 1787, which was the "purchase act," or terms of contract with the Ohio Company, contained reservations of sections 16 and 29 of each township, respectively, for schools and religion, and two entire townships for the support of a university. Though the ordinance of 1785 had provided for the reservation of a section in each township formed in the Northwest Territory for the support of the public schools, the reservation of two townships for a university was a distinct step in advance. But at least one State government had adopted the policy of reserving land for a college before the 1787 ordinance. Vermont,[2] in granting townships after the adoption of its State constitution, July 2, 1777, reserved one right of land in nearly every township for a college which the State constitution had paved the way for founding. These grants became the property of the University of Vermont.

But for the perseverance of such men as Dr. Manassah Cutler, who met with the congressional committee that drafted the "ordinance" and "purchase," and who twice refused to purchase the great tract in Ohio unless the reservations above set forth were included in the bills, Congress, which thought it was giving away too much land, certainly would not have set the national precedent at

[1] The Educational Significance of the Early Federal Land Grant Ordinances, Howard Cromwell Taylor. 1922.

[2] Catalogue, University of Vermont, 1921.

that time which was of such advantage in later years and has resulted in reserving at least two complete townships of land in each subsequent State formed out of the public domain for the founding of a seminary of learning or university. Thirty States have been assisted in founding universities by this act and subsequent acts, while each State has a college of agriculture, or agriculture and mechanic arts. The original 13 States, which had already been formed before the passage of the "ordinance," and Vermont, Kentucky, Maine, Texas, and West Virginia have not received land grants in pursuance of the policy set by the "ordinance" and the "purchase." None of these was a public-land State. Vermont and Texas were independent republics when admitted; Kentucky split off from Virginia during the years after the Revolution; and West Virginia split off from the same State during the first year of the War between the States. Nor was there any public land within Maine, which became a State in 1820. Consequently, none of these States received grants of land for the establishment of a seminary of learning.

Most of the Federal grants of land for the establishment of a university were made to the States with no reservations. The only conditions were that the Territorial or State legislature representing the Territory or State to which they were granted should use the rents from the lands or the returns from sales for a university.[3] Many of the States received the grants while they were still Territories and proceeded to lease the land and to establish an institution of learning while yet in the Territorial rank. A decided stimulus toward the development of a public system of education was thus set in motion by the university grants, as the higher institution could not prosper except by the establishment of a public-school system, from the primary through the high school. But the benefits from the great Federal act [4] of July 2, 1862, which has become commonly known as the Morrill Act, or the land grant act, for the establishment of colleges of agriculture and mechanic arts could not be secured by the different Territories until they became States. In several cases the number of acres that the Territory should receive when it should become a State was allotted by the Federal Government and not infrequently the lands were located. But no benefits for such colleges from these lands could be had until statehood was achieved. A number of the Territories established colleges of agriculture and mechanic arts before becoming States, in view of the land grants that should then become theirs. But this act did not turn over the allotment of 30,000 acres for each Representative and Senator to which a State was entitled by the census of 1860 to the States, without reservations, as had most of the acts providing the university grants. This Federal

[3] Since 1889 a minimum sale price has usually been set for the university and other lands.
[4] Stat. L. XII, 503.

statute gave the land as an endowment only for the designated college, with this exception,[5] that one-tenth of the sale price of the land could be used to purchase a site and experimental farm for the new college.

It has been stated that the peoples of the different Commonwealths had wanted higher education provided which was suitable to their needs; and undoubtedly with the establishment of the State universities, responsible to the State, as the head of their school systems they had expected to get such education. But the State universities for the most part followed, in their organization and courses, in the paths of Harvard, Yale, Columbia, and the older private colleges from which their presidents, professors, and instructors were drawn. When the Northwest Territory became more settled and the agricultural class became a greater economic force; when the development of the railroads and machinery called for more skilled mechanics and engineers, then from many States and sections of the country came the cry for a more practical education for the development of the agricultural and the industrial classes. Michigan chartered the Michigan Agricultural School in 1855. Pennsylvania chartered a Farmers High School—really a scientific agricultural college—in 1854. Iowa incorporated the State Agricultural College and Model Farm in 1858. Illinois [6] had accumulated a considerable sum of money from the sale of the State's public lands and the grant of the two townships for a university received through the State's enabling act of 1818. Though repeated efforts to found a State university through legislative action had failed, yet by 1850 agitation for the immediate establishment of an institution had become pronounced. In order to head off a plan of the private colleges to secure a division of these funds among themselves, a series of conventions were held, the first one at Granville, Ill., November 18, 1851. These resulted in the drawing up of a set of resolutions calling for higher educational institutions which should provide as liberal an education for the farmer and mechanic as did the older type of institution for professional men. These resolutions also called for cooperative effort on the part of the separate State legislatures in an attempt to secure from Congress a Federal land grant for the founding of colleges of agriculture and mechanic arts in every State of the Union. The resolutions were printed by the leading newspapers all over the Nation. They virtually embody the plan that was adopted by Congress in the Morrill Act of July 2, 1862. They were submitted to the Illinois Legislature, and Governor French of Illinois was made chairman of a committee to petition Congress on behalf of Illinois for such a grant of lands for the endowment of industrial universities for each State. The Illinois Legislature was the first legislature to

[5] Act 2, sec. 5, July 2, 1862. [6] James, Edmund, Origin of the Land Grant Act, 1910.

petition Congress for a Federal grant of land to each State for the establishment of industrial universities, though other States had petitioned for a single grant to found agricultural colleges in their own States.

Prof. Jonathan Turner, of Illinois College, Jacksonville, Ill., is shown by Edmund James to have been the leading spirit of the first convention and the main author of the resolutions urging higher industrial education [7] as well.

This shows the widespread demand for such institutions; and though a bill for such a purpose introduced by Mr. Morrill in the House of Representatives on December 14, 1857, passed both Houses in 1859, it was vetoed by President Buchanan. Thereafter it was not again attempted until a change of administration. Abraham Lincoln on July 2, 1862, signed the bill which had been so skillfully guided through the House of Representatives by Justin S. Morrill, of Vermont, and other adherents, though it was introduced in the Senate this time by Senator Wade, of Ohio.

It was clearly the intent of Mr. Morrill that the colleges of agriculture and mechanics to be founded under the act of July 2, 1862, should be distinct and separate State institutions. It was thought that the development of the new colleges would be hampered if made a part of the liberal arts institutions. These new institutions were to be "industrial colleges or universities." But Mr. Morrill, after a fruitless search of a year for a separate location in his own State, Vermont, gave up the attempt and the agricultural and mechanical college of that State was united with the University of Vermont. Twenty-two other States have at the present time made the agricultural and mechanical or the agricultural college a part of the State university. The policy of having one State institution of higher learning has proved to be highly successful, because jealousies, detrimental to the development and proper support of both, have frequently arisen in States having two separate institutions.

The two acts of the Continental Congress of 1787 including the seminary township grants for "an university" had set the precedent, but the act of 1862, together with the acts that have followed from it, has surpassed the original act in the magnitude of undertaking. The people of the Nation had become more potent and were more aware of their needs through the development of the country's natural resources, and progress was to have been expected. Though the minds of the legislators were diverted for the most part to the prosecution of the struggle between the States, Congress took time to deliberate upon this request of the States, and to pass the measure by which each State has subsequently directly benefited; by which

[7] Turner, J. B., Industrial Universities for the People. James, Edmund, Origin of the Land Grant Act Appendix C.

the whole Nation has become more closely welded together and immensely more wealthy; by which many, many thousands of young men and young women have already been stimulated to secure a higher education; and though these institutions are already highly developed in many of the States, the height of their usefulness to their States and to the Nation has not been reached.

Much has been written concerning the handling and mishandling of the public lands by the different States.[8] But while not for a moment condoning any mismanagement, squandering, or wastefulness on the part of those who handled these grants for the establishment and endowment of higher education, it should be pointed out that the first and prime object in the minds of those who had charge of these lands was, in most cases, to get the institution incorporated, established, and opened. As was natural in very many cases, these institutions opened as academies, but the foundations for the greater institutions which are now growing colleges and universities in every State of the Union were laid. Though it may easily be pointed out that had the lands been held for a few years and had they in all cases been disposed of by skillful managers, perhaps millions more might have been realized, yet there is another side to this question. The early establishment of these institutions led settlers of a high class to leave their more settled environments and move to the new States, since they felt assured that their children might there secure a good education. Thus the stability and wealth of the State increased. Through the early opening of these institutions, opportunity to the youth of the State for higher education was offered and taken advantage of, and benefits to the State through the development of leaders in professions and business shortly began to accrue. And when it became clear that the land grants, together with moderate or free tuition, would not adequately support the institution, who, if not the alumni, could be depended upon to see most clearly that the increasing wealth of the State had kept pace to a considerable extent with the increasing influence and leadership of the State's higher educational institution and that, therefore, in its need the institution should received a certain return on the State's wealth as an aid in keeping up its influence and leadership? And so after long, severe struggles in the case of many of the earlier founded institutions, State aid or support for higher education has been won in every State of the Union. Thus after getting the institutions into operation and giving them a little time to show their value, it has been possible to secure for them far larger incomes than could ever have been hoped for from the Federal land endowments.

[8] G. W. Knight, in "Land Grants for Education," and H. C. Taylor, in the "Educational Significance of Early Federal Land Ordinances," admirably treat this subject, as well as Benjamin F. Andrews, in the Bureau of Education Bulletin No. 13, 1918.

Chapter II

FEDERAL LAWS AFFECTING THE LAND-GRANT COLLEGES

The act of July 2, 1862, provided that any State should become entitled, upon acceptance of the provisions of the act, to 30,000 acres of land[1] or scrip for each member of its total representation in the two Houses of Congress, by the apportionment under the census of 1860, though no mineral lands could be selected or purchased under these provisions; that those States not having public land might sell the scrip assigned them and the assignee might locate public lands in other States having it; and that all lands selected should be those offered for sale at the then prevailing price of $1.25 per acre, except where there were no such lands. In case lands bringing double the amount were selected, the number of acres allotted was to be cut down proportionately.

Before a State could benefit by the provisions of this act its legislature had to guarantee that all but 10 per cent of the funds received from the sales of land should be kept as a perpetual fund on which the State, by the act of 1883, also pledged its faith that 5 per cent annual interest should be paid to the institution. This income the State agreed should always be applied to the objects set forth in section 4 of the act, which stated that it should be applied—

> to the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

Another important provision was that contained in the second condition of section 5, which stated that "No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings." A State, then, in accepting this grant, though some of them at the time did not seem to grasp it fully, agreed to provide for buildings and upkeep for at least one institution of the kind designated. This act provided that a State that claimed the benefit of the act must provide such a college within five years. The act[2] of July 23, 1866, extended the time limit which

[1] For full discussion of the handling of the lands granted by the act of 1862 refer to Bu. of Educ. Bul., No. 13, 1918, by B. F. Andrews.

[2] Stat. L., XIV, 208.

a State might have in which to claim the benefits of the original act, as well as extended the provisions to Territories when they should become States; so that by this amendment and by subsequent special acts every State in the Union has claimed the benefits and has established a land-grant college, or conferred on some institution already established the income from the land-grant fund.

The act[3] of March 3, 1883, provided for the safe investment and interest on the land-grant fund as previously discussed.

One serious handicap to the colleges of agriculture and mechanic arts when first established was the lack of a knowledge of how to organize and what to teach. Higher education had previously always followed other lines. Division of opinion on these matters seriously hampered the development of these institutions in many different States. The necessity of developing and organizing subject matter and content for the different courses undoubtedly played a large part in the passage of the Federal act[4] of March 2, 1887, for establishing agricultural experiment stations, which assigned $15,000 annually out of funds in the Treasury from the sale of public lands to each State establishing an agricultural experiment station in connection with a separate college of agriculture, for the maintenance and upkeep of such a plant. A sum not to exceed one-fifth of the first appropriation was allowed for erection, purchase, or securing a suitable building for the station. It was also provided that if a State had already established a separate station, the legislature might designate the station to which the fund should go.

The so-called second Morrill Act[5] of August 30, 1890, provided for an appropriation of $15,000, beginning June 30, 1890, with an annual increase of $1,000 a year for 10 years, or until $25,000 yearly should be reached, to each State for its agricultural and mechanical college, from the sale of public lands. The purposes were entirely similar to those of the 1862 act. It was provided that State legislatures of States having one institution of this nature for white students and one for colored students could equitably divide this appropriation between the two.

These two acts gave money from the sale of public land instead of land to the different States for better endowment of these agricultural and mechanical enterprises. Perhaps they paved the way for the act of May 17, 1900, which supplemented the earlier acts and provided that these subventions could be paid out of any moneys in the Treasury of the United States, provided there were not sufficient funds there from the sale of public lands.[6]

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[3] Stat. L., XXII, 484.
[4] Ibid., XXIV, pp. 440–441.
[5] Ibid., XXVI, pp. 18–19.
[6] Ibid., XXXI, p. 179.

The Adams Act[7] of March 16, 1906, granted $15,000 further endowment for the agricultural experiment stations provided for by the Hatch Act of 1887, making a total of $30,000 annual subvention to each State in aid of its agricultural experiment station. By the terms of this act $5,000 was appropriated for the year 1906, with an increase of $2,000 each year until $15,000 should be reached in 1911.

The Nelson amendment[8] of March 4, 1907, provided an additional $5,000 yearly, plus $5,000 each year for four years, or until $25,000 annually should have been reached, for purposes similar to those of the Morrill Act of 1890. This[9] money could also be used for the preparation of teachers of agriculture, mechanic arts, and home economics, and thus extended the scope of the work that might be financed from this fund.

The Smith-Lever[10] Act of May 8, 1914, provided for cooperative extension work in agriculture and home economics with the different States, the work to be carried on in connection with the work of the agricultural colleges, which were to cooperate with the United States Department of Agriculture in the work. The act provided that each college must submit plans for the year's work in advance before it could become eligible to receive any Federal funds for the year. The cooperative agricultural extension work to be carried on consists—

> of giving instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise, and this work shall be carried on in such a manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges receiving the benefits of this act.[11]

The act authorized the annual appropriation of $480,000 and the annual subvention of $10,000 each year to each State which assented to the provisions of the act. Furthermore, it appropriated $600,000 for the first fiscal year after the $480,000 appropriations became available and "for each year thereafter for seven years a sum exceeding by $500,000 the sum appropriated for each preceding year, and for each year thereafter there is permanently appropriated each year the sum of $4,100,000," in addition to the sum of $480,000 first provided. These funds in excess of the first $10,000 are distributed "in the proportion which the rural population of each State bears to the total rural population of all the States, as determined by the next preceding Federal census." No State, however, can receive a single dollar, above the first $10,000, whose legislature or the State

[7] Stat. L., XXXIV, p. 63.
[8] Ibid., XXXIV, pp. 1256, 1281.
[9] For fuller discussion of rulings, refer to Bu. of Educ. Bul., 1916, on Federal Laws and Regulations Affecting the Land-Grant Colleges.
[10] Stat. L., XXXIII, 372.
[11] Ibid., XXXIII, sec. 2.

at large has not appropriated for that year an amount equal to that to be distributed to the State by the Federal subvention. The fund used to match the Federal subvention may be raised by State appropriation, by counties, the college, local community, or private contribution, but an equal amount must be raised.

This matching of Federal money by State money has become known as the Federal Government's "dollar-for-dollar" policy. The provisions requiring the approval of the Secretary of Agriculture to all work planned before Federal money can be paid, as well as the other provisions to which each State must in the terms of the law "assent" before it could become eligible to receive the grant, give the Central Government more authority over the manner in which the subvention as well as the State's funds shall be expended than any previous grant relating to education. While there is general approval of the objects of the extension work, yet there have been objections to the manner in which the "cooperative work and plans" work out. It is argued, too, that no State legislature can resist matching the Federal sum for this work, even though in doing so it deprives the college of funds that it needs for collegiate work. A recent ruling of the Department of Agriculture permitting funds raised by counties, local communities, or gifts to be matched by an equal amount of Federal funds and expended for that community may tend to relieve this situation, as formerly all money had to be expended under the immediate supervision of the director of the college agricultural extension work. It may be fairly said that much of the extension work is not of collegiate grade at all, and that much expense could be saved by carrying the work on under the auspices of the local and consolidated high schools.

The second of the "dollar-for-dollar" acts of the Federal Government is commonly known as the Smith-Hughes Act for vocational education, approved February 23, 1917. This act was designed to further cooperative efforts along three major lines between the Federal Government and the States, as stated in sections 2, 3, and 4 of the act. The first purpose was to cooperate with the States in paying salaries of teachers, supervisors, or directors of agricultural subjects; and the second was for the purpose of cooperating with the States in paying salaries of teachers of trade, home economics, and industrial subjects. Beginning with 1918 there was appropriated by the act $500,000 for the first object and $500,000 for the second. Each succeeding year $250,000 additional for each object was appropriated until each appropriation should reach $3,000,000 in 1926; and after 1926 $3,000,000 annually will be appropriated for each of these purposes. The money for the first purpose is distributed, as are the Smith-Lever funds, to the States in the proportion that the State's rural population bears to the total population of the United States. The moneys for the second purpose are

distributed according to the proportion a State's urban population bears to the total urban population of the United States. Minimum grants were also fixed for each year by this law.

The third purpose was to cooperate with the States in preparing teachers, supervisors, and directors of agricultural subjects, and teachers of trade and industrial and home economics. For this object, $500,000 was appropriated in 1918. This appropriation increased by $200,000 for each of the next two years, and in 1921 and annually thereafter $1,000,000 was to be granted to the several States for this purpose.

To meet the provisions of the act and become eligible to receive these Federal grants this law provided that a State must create or establish a State board of not less than three members who should be empowered to cooperate with the Federal Board for Vocational Education in the administration of this act. A Federal Board for Vocational Education, consisting of the Secretaries of Agriculture, Commerce, and Labor, the Commissioner of Education, and three presidential appointees, was created by the act, and $200,000 annually appropriated for its use in the administration of the purposes of the act, for carrying on the authorized investigations and making reports, and for salaries and expenses of the board and their assistants.

Section 8 provides that no State can enjoy the benefits of this act unless detailed plans drawn up by the State board show specifically the kinds of vocational education for which the grant is to be used; "kinds of schools and equipment; courses of study; methods of instruction; qualifications of teachers; plans for the training of teachers; and, in the case of agricultural subjects, the qualifications of supervisors of agricultural education." All these plans must be submitted to the Federal Board for Vocational Education by the State board, "and if the Federal board finds the same to be in conformity with the provisions and purposes of this act, the same shall be approved."

The Federal appropriation for purposes one and two shall be used exclusively for the "payment of salaries of such teachers, supervisors, or directors having the minimum qualifications set up for the State by the State board, with the approval of the Federal Board for Vocational Education." The cost of all other instruction "necessary to build up a well-rounded course of study shall be borne by the State and local communities." Similar specific provisions are also made as to how the third purpose of the act shall be administered by the State board after securing the approval of the Federal board. All costs, other than for salaries, for plant and equipment must be borne by the local communities.

As in the Smith-Lever Act, this act provides that every dollar given the State by the Federal Government shall be matched by a

dollar appropriated by the State government. The conditions are ironclad and all State board plans must be approved by the Federal board before a dollar shall go to the State for these purposes. Even the setting up of the minimum requirements for the teachers, supervisors, and directors of these schools in the various States may be determined by the Federal board, since its approval is necessary. Many other specific requirements must be accepted by the State government, if it is to benefit under the Smith-Hughes Act.

This act, of course, applies only in part to the agricultural and mechanical colleges. It is in these institutions, largely, that teachers, supervisors, and directors of agriculture, home economics, trades, and the industries are being trained. Other State colleges also are sharing in the distribution of Smith-Hughes funds.

Chapter III

FISCAL AND LEGAL PROVISIONS AFFECTING THE FOUNDING, ORGANIZATION, AND SUPPORT OF STATE INSTITUTIONS

In a discussion of fiscal support for State colleges and universities, knowledge of how the institutions came into being and of the relationship that legally exists between the State universities and colleges and their respective States is of value.

The Bureau of Education Bulletin, No. 48, 1920, entitled "Statistics of State Colleges and Universities," contains the names of 93 institutions of higher education, most of which are considered to be of four-year collegiate ranking. Two of these, the Alabama Technical Institute and College for Women and the Idaho Technical Institute, are rated as junior colleges. The Universities of Hawaii and Porto Rico are also included. These four, the Lowell Textile School, the Mississippi State College for Women, the New York State Library School (which is operated in connection with the New York State Library), and the Medical College of Virginia, are not included in the study of fees and fiscal support, because of their relationship to the State or because of the author's inability to secure data concerning them. These, and the State teachers colleges and normal schools of the various States, might well have been included in the study were not the scope of the undertaking too great for any one individual. Moreover, the teachers colleges and normal schools represent a particular type of professional institution in which many of the States are so keenly interested that more generous fiscal provisions or even subsidies may be offered to secure attendance. The institutions shown in Table 1 are included in this study.

Table 1 shows the dates of founding or incorporation and the date of opening of the institution, and the notes give the dates of opening as a State institution in those cases in which the institution has been taken over by the State. This table shows that 1 of these had opened as a State institution before 1800, 9 more before 1825, 8 more before 1850, 26 more between 1850 and 1875, 30 more between 1875 and 1900, and that 7 more have opened since that date; 40 opened as State institutions since 1875, and 66 since 1850. Only 10 of them had opened before 1825 and only 18 before 1850. The table also shows that 62 of these institutions have opened as State institutions since 1862, which means that none of these has been operating over 60 years, and many of them for a much shorter period.

TABLE 1.—*State colleges and universities—Founding, land grants, and support*

Institution	Date of founding	Date of opening	Federal grants of lands for seminaries of learning or universities	Federal grants of lands for colleges of agriculture and mechanic arts	Sources of fiscal support for organization: State appropriation other than income from land grants at founding	Local subscription or gift	Private institution taken over by State	State constitution makes provision for institution
			Acres	*Acres*				
Alabama Polytechnic Institute	1872	1872		240,000			×	×
University of Alabama	1820	1831	92,160		(1)			
University of Arizona	1885	1891	[2] 396,080	150,000	×	×		
University of Arkansas	1871	1872	46,080	150,000	×	×		
University of California	1868	1869	46,080	150,000			×	×
University of Colorado	1861	1877	46,080		×	×		×
Colorado Agricultural College	1870	1879		91,600	×	×		
Colorado School of Mines	1874	1885			×	×		
Connecticut Agricultural College	1881	1881		180,000			×	
Delaware University	1833	1834		90,000			×	
University of Florida	1870	[3] 1884	46,080	90,000				
Florida College for Women	1857	[3] 1857	46,080				×	
University of Georgia	1784	1801		270,000		×		
Georgia School of Technology	1885	1888			×	×		
University of Idaho	1889	1892	[4] 196,080	90,000	×			×
University of Illinois	1867	1868	46,080	480,000		×		
Indiana University	1820	1824	[5] 23,040 42,080		(1)			×
Purdue University (Indiana)	1869	1874		390,000		×		
Iowa State College of Agriculture and Mechanic Arts	1858	[6] 1859		240,000	×			
State University of Iowa	1847	1885	46,080		×			×
University of Kansas	[7] 1863	1866	46,080			×	×	×
Kansas State Agricultural College	1858	[8] 1863		90,000			×	
University of Kentucky	1879	1880		330,000	×	×		
Louisiana State University and Agricultural and Mechanical College	1853	1860	46,080	210,000	[1, 9]			×
University of Maine	1865	1868		210,000	×	×		
University of Maryland	1807	[10] 1812 1914		210,000			×	
Massachusetts Agricultural College	1856	1867		360,000		×		
Massachusetts Institute of Technology	1861	1865					×	
University of Michigan	1837	1841	46,080		(11)	×		×
Michigan Agricultural College	1855	1857		240,000	×			×
Michigan College of Mines	1885	1886			×			×
University of Minnesota	1851	[12] 1867	92,160	120,000	×			×
Mississippi Agricultural and Mechanical College	1878	1880		210,000		×		
University of Mississippi	1840	1848	69,120			×		
University of Missouri	1839	1841	46,080	330,000		×		×
University of Montana	1893	1895	46,080		(13)	×		×

[1] Established on funds from land grant.
[2] 150,000 acres were for a school of mines.
[3] Present institution, 1905.
[4] 100,000 acres were for a school of science.
[5] This grant went to Vincennes University, later discontinued as a State college.
[6] Opened as a college 1869.
[7] Kansas University opened as a denominational college, 1859.
[8] Kansas took over the denominational Bluemont College for its agricultural college.
[9] Federal Government gave buildings and grounds of the military garrison at Baton Rouge to the university, 1902.
[10] In 1914, Maryland Agricultural College and the University of Maryland were united as the University of Maryland.
[11] A $100,000 loan against the land grant was made by the legislature of 1838.
[12] The preparatory department opened on this date.
[13] Bonds against the Federal land grants were authorized by the legislature.

TABLE 1.—*State colleges and universities—Founding, land grants, and support*—Continued

Institution	Date of founding	Date of opening	Federal grants of lands for seminaries of learning or universities	Federal grants of lands for colleges of agriculture and mechanic arts	Sources of fiscal support for organization: State appropriation other than income from land grants at founding	Local subscription or gift	Private institution taken over by State	State constitution makes provision for institution
			Acres	Acres				
Montana College of Agriculture and Mechanic Arts	1893	1893		140,000	[13]	×		
Montana State School of Mines	1893	1900		100,000	[13]			
University of Nebraska	1869	1871	46,080	90,000	×			
University of Nevada	1873	1874	46,080	90,000		×		×
New Hampshire State College of Agriculture and Mechanic Arts	1866	1868		150,000		×		
Rutgers College (New Jersey)	[14] 1766	1771		210,000			×	
University of New Mexico	1889	1892	[15] 312,703			×		
New Mexico College of Agriculture and Mechanic Arts	1889	1890		250,000		×	×	
New Mexico School of Mines	1889	1895		200,000	×			
Cornell University Agricultural College (New York)	1865	1868		990,000	[16] ×	×		
Cornell University Veterinary College (New York)					[16]			
New York State College of Forestry, Syracuse University	1911	1912			[16] ×			
University of North Carolina	1789	1795			×	×		×
North Carolina Agricultural and Engineering College	1887	1889		270,000				
University of North Dakota	1883	1884	[17] 126,080		×			×
North Dakota Agricultural and Mechanical College	1890	1890		130,000	×			×
Ohio State University	1870	1873		630,000		×		
Ohio University	1802	1809	46,080		(1)			
Miami University (Ohio)	1809	[18] 1824	23,040		(1)			
University of Oklahoma	1890	1891	250,000			×		
Oklahoma Agricultural and Mechanical College	1890	1891		150,000		×		×
Oklahoma College for Women	1908	1909			×	×		
University of Oregon	1872	1876	46,080			×		
Oregon Agricultural College	1865	[19] 1865		90,000	×			
Pennsylvania State College	1854	1859		780,000	×	×		
Rhode Island State College	1888	1890		120,000				
University of South Carolina	1801	1805			×			
Clemson Agricultural College (South Carolina)	1889	1893		180,000		×		
The Citadel, Military College of South Carolina	1842	1843			×		×	
Medical College of South Carolina	1823	[20] 1824				×	×	
University of South Dakota	1862	1883	86,080		×	×		×
South Dakota State College of Agriculture and Mechanic Arts	1881	1884		160,000	×	×		×
South Dakota State School of Mines	1885	1885		40,000	×			×
University of Tennessee	1794	[21] 1820	100,000	300,000			×	
University of Texas	1881	1883			×			×

[1] Established on funds from land grant.
[13] Bonds against the Federal land grants were authorized by the legislature.
[14] Rutgers became the State college for the benefit of agriculture and mechanic arts, 1864, and official State university of New Jersey, 1917.
[15] New Mexico received two grants for all three institutions, the first in 1898, the second in 1910
[16] Attached to privately endowed institution.
[17] Includes 40,000 acres for a school of mines.
[18] Date of opening as a college.
[19] Cowallis College, a denominational institute, became Oregon Agricultural College, 1885.
[20] Became a State college.
[21] Reopened as a college in 1820.

TABLE 1.—*State colleges and universities—Founding, land grants, and support*—Continued

Institution	Date of founding	Date of opening	Federal grants of lands for seminaries of learning or universities	Federal grants of lands for colleges of agriculture and mechanic arts	Sources of fiscal support for organization: State appropriation other than income from land grants at founding	Local subscription or gift	Private institution taken over by State	State constitution makes provision for institution
			Acres	*Acres*				
Agricultural and Mechanical College of Texas	1871	1876		180,000	×	×		×
College of Industrial Arts (Texas)	1901	1903			×	×		
University of Utah	1851	[11] 1867	[11] 256,080		([24])	×		
Agricultural College of Utah	1888	1890		200,000	×	×		
University of Vermont	1791	1800		150,000	×			
University of Virginia	1816	1819					×	
Virginia Polytechnic Institute	1872	1872		300,000			×	×
Virginia Military Institute	1839	1839			×			
College of William and Mary (Virginia)	1693	[11] 1693					×	
University of Washington	1861	[25] 1862	46,080			×		
State College of Washington	1890	1892		90,000	([27])			
West Virginia University	1867	1867		150,000			×	
University of Wisconsin	1848	1849	92,160	240,000	([1])			×
University of Wyoming	1886	1887	46,080	90,000	×	×		×

[1] Established on funds from land grant.
[11] Institution opened for a short time, 1850, but was discontinued until 1867.
[24] Includes 100,000 acres for a school of mines.
[25] Congress gave Utah 92 acres from the Fort Douglass Reservation for present location, 1894.
[27] Became full State college, 1906.
[25] Opened as an academy, 1862. Became a 4-year college in 1877.
[27] State advanced $65,000 against first sale of land.

Examination of the amounts of the Federal land grants to the States reveals much variation both in the application of the acts in pursuance of the Ordinance of 1787 granting two townships for the support of a university and in the application of the act of July 2, 1862, as the different public-land States were admitted. Ohio, by the two acts of 1787 and the grant to Symmes in 1792, which resulted in the founding of Miami; Tennessee by the act of April 18, 1806; and Florida by its enabling act, March 3, 1845, received grants for two seminaries of learning, or universities. The two grants to Ohio amounted to 69,020 acres. Fifty thousand acres for each of two institutions proposed for Tennessee were granted. Florida was granted two townships in the enabling act of March 3, 1845, in addition to two townships that had previously been reserved for the same purpose, making a total of 92,120 acres for two institutions.

Others of the earlier States that received more than two entire townships, or 46,080 acres, were Indiana, which by three separate grants was given 68,120 acres; Mississippi, which by two separate grants was given 69,120 acres; Alabama, Minnesota, and Wisconsin, each being granted 92,160 acres. Each of the latter was granted two

entire townships twice. The reasons for these additional grants are given in the discussions of the separate institutions.

With these exceptions all the public-land States entering the Union up till February 22, 1889, were granted the 46,080 acres for a university and 30,000 acres for each Senator and Representative to which they would be entitled by the Morrill Act of 1862 for agricultural and mechanical colleges. This was the date of the passing of the enabling acts for Montana, South and North Dakota, and Washington.[1]

In the case of Montana, the 46,080-acre grant of February 18, 1881, for the university was confirmed, and 140,000 acres for the agricultural and mechanical college and 100,000 acres for a school of mines were granted.

North Dakota was granted 86,080 acres for a university and 40,000 for a school of mines (which was combined with the university), and 130,000 acres for an agricultural college; South Dakota was granted 86,080 acres for a university, 160,000 acres for an agricultural college, and 40,000 for a school of mines; while Washington was given the former customary acreage. This act for the first time set a minimum price of $10 an acre on the land granted for higher educational purposes, and this was a precedent which was followed in the granting of university and college lands to practically all the States admitted later, though the price varied according to the value of the land in the other States. If Congress could only have decided upon such a policy in the earlier days!

Arizona, Idaho, New Mexico, Utah, Wyoming, and Oklahoma all profited greatly by the liberality and foresightedness of Congress in making large reservations of the public lands for their State colleges and universities. These additional grants were made in lieu of the usual grants made to new States for internal improvements under the act of 1841. Taylor[2] points out that every public-land State admitted between 1845 and 1889, except Minnesota, had diverted these grants, usually of 500,000 acres, to the support of education, and for this reason Congress adopted the policy of making additional grants for educational purposes. However, as these larger grants just mentioned were specifically for the support of the higher educational institutions, these, in turn, benefited more than they would have under the old system.

New Mexico received two Federal grants for all three of her institutions, the first by act of June 21, 1898, and the second by the enabling act of June 20, 1910. Arizona was granted the public lands for her institutions by this same act. The University of New Mexico was granted a total of 312,703 acres, including 1,622.86 acres

[1] Stat. L., XVIII, pp. 475–476.
[2] The Educational Significance of the Early Federal Land Ordinances, p. 109.

of saline lands, while the New Mexico School of Mines was granted 200,000 acres and the College of Agriculture and Mechanic Arts 250,000 acres.

The Universities of Arizona and Oklahoma each received a total of 250,000 acres. The University of Oklahoma also received one-third of each section 13 open to settlement in Oklahoma and Indian Territory, while another one-third of these same sections went to the agricultural college and to the colored normal university. The University of Wyoming was granted only 46,080 acres, and 90,000 acres for the agricultural college, but the State legislature granted to the university one-fourth of the income from 290,000-acre grant for educational, penal, etc., institutions. The Legislature of Washington assigned the whole of the 100,000-acre grant for educational, charitable, and correctional institutions to the support of the University of Washington.

Of the grants made specifically according to the act of July 2, 1862, for colleges of agriculture and mechanic arts, New York State, by virtue of her large population and representation in Congress, became entitled to 990,000 acres of scrip, which could not be located by the State. But the buyer of the scrip could locate the number of acres called for by the deed in any State where there was still public domain. Because of the masterly fashion in which the New York scrip was handled by Ezra Cornell, founder of Cornell University, together with his original gift to the institution of $525,000, a total endowment from this source of over $6,000,000 has been realized. Not all the lands for agricultural and mechanical colleges in some of the younger States have yet been sold, but this Cornell endowment appears to be by far the largest that will have been realized from the sale of scrip or lands.[3] Pennsylvania was entitled to 780,000 acres under the same law, but her scrip brought only $439,186.80.

Table 1 shows the source of funds for the establishment of these State-supported institutions and the number of privately endowed institutions taken over by the various States. Five of these State institutions were established and gotten into operation solely on the proceeds or rentals from the Federal land grants for State universities. Thirty-six of these institutions were granted a legislative appropriation for founding. In some cases this was in addition to the income from the land grants for universities. Eighteen privately endowed institutions have been taken over by the States and made into State colleges or universities. There are 23 State universities that combine colleges of agriculture and mechanic arts; 21 separate State universities; and 25 separate colleges of agriculture and mechanic arts, or agriculture, or engineering alone.

[3] New York State has ruled that the funds received from the original sale of scrip constitute the endowment of the New York State Agricultural College.

In some of the States bids were asked from various communities of the States when a new institution was to be established. In other cases, citizens of a community were so anxious that the State should establish a college that they raised a fund by subscription and offered it to the legislature if it would establish a college in that locality. In many cases individuals made gifts of land for sites; and in two cases, that of Purdue University in Indiana, and Clemson College, South Carolina, individuals gave such large sums that the respective States named their State agricultural and mechanical colleges in honor of these donors.

As this table shows, 40 of these institutions were recipients of local, or community gifts in order to provide a site, erect buildings, or purchase equipment, while 16 of these 40 were recipients of local gifts as well as State appropriations at their establishment. It is almost impossible to portray the important part played by individual citizens, local communities, and counties in the founding of State colleges and universities. This table shows that in 18 cases, the State, stimulated by a Federal grant of land, merely incorporated the institution and conferred the grant of land upon the institution. Individuals or local communities provided the site and the necessary funds to put the institution into operation. In other cases, part of the land grant had been sold, or it had been held long enough for a sum to accumulate, and this fund was added to by the individual bequests. In other cases, legislatures were persuaded to add to the gifts or proceeds from the land grants, when it was found that these would not provide adequate buildings and grounds.

Thus it may be seen that the founding and the getting into operation of these State colleges did not differ so greatly from the plans used to found Harvard, Yale, Dartmouth, and other privately supported institutions, as these and others of the earlier established institutions received grants from the State, in addition to bequests from individuals or communities. In the case of the State colleges, the founding and opening of several were hastened many years by these gifts. The idea that private munificence should largely furnish funds for the founding of higher educational institutions was quite prevalent throughout the foundings, and in a few States still legislatures appropriate funds with the proviso that a specified amount must be raised by private subscription before the appropriation is available.

It was a common fallacy, as is pointed out in the discussion of various institutions, for the legislators in founding one of these institutions to suppose that the land-grant income would provide very adequate funds for the establishment, in the case of the State universities, and for all the expenses of maintenance. Section 15 of the act founding the University of Kansas specifically stated: "Nothing herein contained shall be construed as involving the State in any

expense in the organization of the university." Individual gifts, combined with those from the city of Lawrence, establishing the college amounted to $180,000. One notable exception to this illusion was the case of California. Several of the men prominent in getting this institution under way were graduates of large eastern institutions, and immediate and probable future costs were given adequate consideration before the founding.

Three distinct differences between the charters of the older, eastern, privately endowed institutions and these State institutions should be pointed out. These differences give the States effective control. First, these latter institutions were chartered as State institutions, and the charter granted could be changed or amended at the will of the State. Secondly, the charters provided that the institutions were to be strictly nonsectarian in character, and this provision has been strictly adhered to. Many States also provided that no gifts could be received by the trustees of one of their State colleges until the gift had been given legislative approval. This was to prevent any special interests, factions, or sects from gaining an influence over the institution. Thirdly, the trustees, or regents, or the governing board in almost all cases are all directly responsible to the State. They are usually either appointed by the governor, with the advice and consent of the upper house, or elected by the people of the State.

A few exceptions and recent changes should be pointed out. Seven of the possible thirteen trustees of Clemson College, South Carolina, are by the terms of the Clemson bequest self-perpetuating, while the other six are elected jointly by the two houses of the legislature.

The State colleges and universities of Florida, Idaho, Iowa, Montana, and South Dakota are now directly under control of the State boards of education of those States. Montana, by law of May 14, 1913, united all four of her higher educational institutions into the University of Montana, though the locations of the four institutions were not changed. This move, as well as the placing of the institutions of these other States under one board, was made in the interest of coordinating the work of the different institutions to a greater extent in the attempt to secure greater efficiency.

Kansas and West Virginia have attempted a different form of control for their higher educational institutions. Kansas, by law of 1913, transferred to a State board of administration the powers of the board of regents and the control of both of her higher educational institutions. This board of administration consists of three members and the governor of the State as ex officio chairman. It has complete charge of the educational, charitable, and correctional institutions of the State.

West Virginia, by act of February 22, 1909, changed the control of her university. The educational and fiscal affairs of the institution

until 1909 had been in the hands of a board of regents. By the act referred to the financial affairs of the institution were put in the hands of the State board of control of three members, appointed by the governor, while the academic affairs are under the control of a board of regents consisting of the State superintendent of schools and four others.

The State superintendent of public instruction is a regular or ex officio member of the board of trustees of 46 of these institutions here considered. This provides opportunity for articulating the work of the lower and higher educational systems of the States.

Almost without exception the State universities are considered to be the head of the State's public educational system. In a few instances a separate State college of agriculture and mechanic arts is considered by law the head of the vocational education system of the State, as in Oklahoma, whose law states that "the agricultural and mechanical college shall be the technical head of the agricultural, industrial, and allied science system of education in Oklahoma." The working out of the Smith-Hughes and Smith-Lever Acts has practically brought the agricultural and mechanical colleges into such a relationship to the State school systems.

The laws of Georgia, Indiana, North Dakota, and Texas make the State university of each of these States the head of the State educational system, and the other higher institutions are cognate or branch colleges. In Georgia the trustees of the university have representation on the boards of trustees of the other State colleges, but this is not the case in the other States.

Four of the States—Kentucky, Mississippi, South Carolina, and Virginia—divide the interest on the funds derived from the land-grant subventions of 1862 between State institutions for white students and for colored students. These 4 and 13 others made division similarly of Morrill-Nelson subventions of 1890 and 1907. The additional States are Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Missouri, North Carolina, Oklahoma, Tennessee, Texas, and West Virginia. The amount of money designated to each of the institutions is given in the discussions of the individual institutions.

In the brief résumé given each of the 84 institutions included it has been the purpose to show the dates of the legislative enactments founding the institutions or making them State institutions; the nature of the institution so authorized; the amounts of the Federal land grants to each State and institution; the parts taken by the Federal and State Governments and by local communities and individuals in getting these institutions into actual operation. The early State support given the institution and the Federal subventions

to the institutions are shown. Other information peculiar to the institution is frequently included.[4]

This information has been gathered from various sources—United States Statutes at Large, State statutes, historical documents, and the catalogues of the institutions from the earliest ones published and recent numbers, and other sources cited in the discussion. So far as possible this has been carefully checked for accuracy. The epitome for each of the institutions follows.

[4] Because of the large size of this manuscript the discussions of the individual institutions were omitted from this volume. They are on file in the library of Teachers College, Columbia University, New York City.

Chapter IV

STUDENT FEES, TUITION, SCHOLARSHIPS, AND LOAN FUNDS

One source of income to State universities and colleges consists of fees and tuition. Charges which might commonly be called tuition may be made under the various headings of registration or matriculation, tuition, incidental, or contingent fees. An institution offering many laboratory courses may have such a wide and heavy system of laboratory charges as to produce the same effect as charging tuition. Because of State laws, or because of the desire to make the explanation in the catalogue that "tuition is free to State residents," which in many cases appears to be a sort of fiction, or to charge a number of different fees in order to obtain a sum from each individual in a way that he will feel it less keenly—for these or other reasons many State colleges and universities have seen fit to make charges under several different headings.

It has been a common supposition that education in State colleges and universities is free; that is, that the only costs to the student are board and room, books, and his own private expenses. It has also been commonly supposed that the different State laws provided for free education in their State-supported higher educational institutions. In order to ascertain just what the State laws do provide in regard to the different State-supported institutions, the laws in respect to tuition and fees for the 84 State institutions here concerned were carefully studied, and a request for information, checked on the first seven columns of Table 2, was sent to all these institutions. Sixty-nine[1] of these institutions returned these information sheets. The data on the other institutions are the best obtainable from the statutes without having the check of the institution on them.

State institutions very commonly make a distinction between resident and nonresident students. Residents are usually those who have established residence by living in the State for a whole year previous to entrance. Nonresidents are all others.

[1] Massachusetts Institute of Technology did return the request for information, though by mistake it is included in the other column. The present relationship of this college to the State was further determined by correspondence with the institution.

TABLE 2.—*State colleges and universities—Legal and administrative provisions affecting tuition and fees,*[1] *1921*

Institution	Tuition free to residents by law; certain fees may be charged	Trustees may fix tuition and fees	Law does not mention tuition and fees	Tuition or fees within limits are fixed by law	Nonresident tuition or fees are charged	Nonresident tuition or fees are higher by law	Nonresident tuition or fees are higher by ruling of trustees	State provides a scholarship system	Institution has loan funds
Institutions making full report									
University of Alabama		×	×		×		×		×
Alabama Polytechnic Institute		×	×		×		×		×
University of Arizona				×	×		×	×	×
University of Colorado		×	×		×		×	×	×
Colorado Agricultural College	×				×		×		×
Colorado School of Mines	×				×		×	×	×
Connecticut Agricultural College		×	×		×		×	×	×
University of Delaware		×	×		×		×	×	×
University of Florida			×					×	×
Florida State College for Women		×	×		×		×	×	×
University of Georgia			×		×		×	×	×
Georgia School of Technology		×	×		×		×	[2] ×	
University of Illinois			×		×		×	×	×
Indiana University		×			×		×		×
Purdue University			×		×		×	×	×
State University of Iowa			×						
University of Kansas	×				×		×		×
Kansas State Agricultural College			×		×		×		×
University of Kentucky		×	×		×		×		×
University of Maryland		×	×		×		×	×	
Massachusetts Agricultural College		×	×		×		×		
University of Michigan		×			×		×	×	×
Michigan Agricultural College	×				×		×		
Michigan College of Mines				×		×			×
University of Minnesota		×			×		×		×
Mississippi Agricultural and Mechanical College		×			×		×		
University of Missouri		×			×		×	×	
University of Montana	×							×	×
Montana State College of Agriculture and Mechanic Arts	×							×	×
Montana School of Mines	×				×	×		×	×
University of Nebraska	×								×
University of Nevada	×				×		×		×
New Hampshire College of Agriculture and Mechanic Arts		×			×		×	×	×
Rutgers College		×			×		×	×	
New Mexico School of Mines		×			×		×	×	
Cornell Agricultural and Veterinary College	×				×			[3] ×	×
New York State College of Forestry, Syracuse	×				×			×	
University of North Carolina				×	×	(4)	(4)	(5)	×
North Carolina Agricultural and Engineering College		×			×	(6)	(4)	×	×
University of North Dakota	×					(6)	(4)	(6)	
Ohio State University	×				×		×	×	
Miami University			×		×	(6)	(4)		×
University of Oklahoma	×				(7)				×
Oklahoma Agricultural and Mechanical College	×								×
Oklahoma College for Women	×				×		×		×

[1] Affecting arts and sciences and other undergraduate courses, but not including professional courses.
[2] Fifteen free scholarships from each county of State.
[3] New York has a large number of scholarships for general courses.
[4] Nonresident tuition is the same as resident.
[5] Free tuition to those planning to be teachers or ministers; there are many privately endowed scholarships.
[6] A few graduate scholarships are provided.
[7] Reciprocal law.

TABLE 2.—*State colleges and universities—Legal and administrative provisions affecting tuition and fees, 1921*—Continued

Institution	Tuition free to residents by law; certain fees may be charged	Trustees may fix tuition and fees	Law does not mention tuition and fees	Tuition or fees within limits are fixed by law	Nonresident tuition or fees are charged	Nonresident tuition or fees are higher by law	Nonresident tuition or fees are higher by ruling of trustees	State provides a scholarship system	Institution has loan funds
Institutions making full report—Continued									
University of Oregon		X			X		X		
Oregon Agricultural College		X			X		X		X
Pennsylvania State College			X		X		X	X	X
Rhode Island State College			X		X		X		X
University of South Carolina				X	X	(4)	(4)	X	
Clemson Agricultural College				X	X	(4)	(4)	X	X
The citadel, Military College of South Carolina		X		X	X	(5)	(5)	X	
Medical College of State of South Carolina				X	X	(4)	(4)	X	
University of South Dakota		X	X					X	
South Dakota State College of Agriculture and Mechanic Arts		X				(4)	(4)	X	
University of Tennessee	X					(9)	(9)	X	
University of Texas	X			11 X	X	(10)	(10)	X	X
Agricultural and Mechanical College of Texas		X			X	(4)	(4)	X	
University of Utah	X			X	(12)			13 X	
Agricultural College of Utah	X			(12)				(13)	X
University of Vermont			X					X	X
University of Virginia	X				X		X	X	X
Virginia Military Institute	X				X	X		X	
Virginia Polytechnic Institute		X			X	X		X	X
College of William and Mary			X		X			15 X	
University of Washington				14 X	X	X	X	X	
State College of Washington				14 X	X	X		(15)	X
West Virginia University		X			X	X			X
University of Wisconsin	X				X	X		X	X
Institutions not reporting; information gleaned from statutes									
University of Arkansas			X		X	(4)	(4)	16 X	
University of California		X			X		X	X	
University of Idaho	X								X
Iowa State College of Agriculture and Mechanic Arts	X				X	(5)	(5)	X	
University of Louisiana		X			17 X				
University of Maine		X			X		X	(18)	X
Massachusetts Institute of Technology	(19)	X							
University of Mississippi		X							
University of New Mexico				X	X	(5)	(5)		
New Mexico College of Agriculture and Mechanic Arts		X			X	(5)	(5)		
North Dakota Agricultural and Mechanical College			X		X			X	
Ohio University			X						X
South Dakota State School of Mines		X			X	(4)	(4)	X	
College of Industrial Arts, Texas			X					X	X
University of Wyoming		X						X	X

[1] Nonresident tuition is the same as resident.
[2] A few graduate scholarships are provided.
[3] Nonresident tuition is higher.
[4] Higher tuition in medicine and dentistry.
[5] Nonresidents pay no tuition except in medicine.
[6] Matriculation fee may not exceed $30.
[7] Matriculation fee of $25 annually for residents; $50 for nonresidents.
[8] Ten per cent of the students, if needy, may be relieved of the entrance fee of $25.
[9] Tuition for residents and nonresidents must be charged.
[10] System by which efficient students may defer their tuition.
[11] There are 1,000 free tuition scholarships for residents of the State.
[12] Tuition is charged to nonresidents of the United States.
[13] Maine has many privately endowed scholarships.
[14] Massachusetts Institute of Technology no longer receives State aid; it continues to receive one-third of the interest on the 1862 land-grant fund.

This table shows that the laws relating to 25 of these 84 State institutions provide that tuition at these institutions shall be free, but that "certain necessary fees" may be charged. This permissive part of the law undoubtedly accounts for the various headings under which certain fees of considerable size are charged at State institutions.

For 35 other institutions the trustees "may fix tuition and fees." The law either specifically states this or it has been interpreted to so empower the trustees.

For 16 other institutions, not included in the 35 just mentioned, the law does not specifically mention tuition and fees. Ten of the fourteen institutions checked the statement that the "law does not mention tuition and fees" on the information blank, but made no check on the statement "trustees may fix tuition and fees." But even though they so refrained, it is reasonable to assume that, if the law empowers the trustees to manage the institutions in all respects, but fails to mention "tuition and fees," that the trustees have power to fix such fees until there is a law to the contrary.

As the table shows, tuition and fees are not mentioned in the laws relating to 26 of these institutions, but the laws have been interpreted to give the trustees the power to fix such fees at 10 of these same 26 institutions.

This table shows that tuition or fees within certain limits are fixed by law, or must be charged, at 12 of these institutions.

One of these 12, The Citadel, the Military College of South Carolina, is also covered by the law that trustees may fix tuition. While the law states that tuition shall be free for both Utah institutions, by a recent law an entrance fee of $25 for residents of the State must be charged. At Texas the matriculation fee may not exceed $30.

If we add together the 8 institutions that by State law must charge tuition or fees, the 35 institutions whose laws provide that the trustees may fix tuition and fees, and the 16 institutions whose laws do not mention tuition and fees, we find, in reality, that tuition and fees can, at present, be fixed by the trustees or must be charged in 59 of the State institutions out of the total 84 here considered. The assumption, then, that the State laws provide for free education in the large proportion of our State institutions is fallacious. Rather, the contrary is true.

This table shows that 19 of these institutions do not charge nonresident tuition or fees, while another, the University of Oklahoma, charges the same nonresident tuition as a resident of Oklahoma would have to pay at the State institution of the nonresident student. Sixty-five of these institutions do charge nonresident tuition or fees. Tuition is higher by law for nonresidents at 8 of these State institutions. At 10 of them it is the same as for resident students. At

40 of these institutions the nonresident tuition or fee is higher by ruling of the trustees, while in 4 others the nonresident charge is higher, but information as to whether it was so by law or by administrative provision was not obtainable.

Table 3 treats annual charges for student fees and tuition in State colleges and universities in 1921. All the 84 State-supported institutions are here grouped together. Massachusetts Institute of Technology, by recent law, will no longer receive State aid other than one-third of the interest on the 1862 land-grant fund and the same proportion of the Morrill-Nelson fund. For this reason the charges at this institution will be omitted from the discussion. The Medical College of South Carolina is a professional school, and though it is included in the table—it being a separate institution—it is not included in the discussion.

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TABLE 3.—*State colleges and universities—Student fees and tuition*

Institution	Student fees and tuition in State colleges and universities,[1] 1921																										
			Tuition		Incidental or contingent								Laboratory fees (deposits not included)														
	Registration	Matriculation	For residents	For nonresidents	For residents	For nonresidents	Library	Gymnasium	Medical infirmary	Student activities and athletics	Diploma or graduation	Biology, botany, etc.	Chemistry	Engineering	Geology	Metallurgy	Physics	Agriculture	Home economics	Pharmacy	Veterinary medicine	General laboratory fee	Other laboratory fees or not specified
Alabama Polytechnic Institute			0	0	[2] $35	[2] $61				$11.00	$10.00	$1.00–2.50		$2.00–6.00		$6–8		$1.50–12.50	$5.00	$6.00–15.00	$3.00–15.00	$2.00–5.00	
University of Alabama			0	$60	[3] 27	27				12.00	15.00	4.50	$4.00–10.00		$2.00–5.00				1.50–5.00				
University of Arizona			0	30	10	10			$6.00	10.00	5.00	2.00–5.00	5.00–12.00	.50–4.50		3–15	$1.00–2.00	1.00–4.00	2.00–5.00				
University of Arkansas			$30	30	[4] 24	24					10.00	1.50–4.00	4.00–10.00	2.00	2.00		1.50		.50–5.00			[5] 5.00–[6] 30.00	
University of California			0	150	50	50					5.00	.75–2.00	1.75–2.75	(6)	1.00–5.00				1.00–5.00				
University of Colorado		$5	45	90	6	6																	
Colorado Agricultural College		9	0	0	0	25	$3			13.00	5.00	1.00–3.00	3.00–5.00	1.00–4.00			2.00		2.00–8.00		2.50–3.00		
Colorado School of Mines		5	0	150	0	0				16.00	5.00		10.00	5.00–10.00	5.00–15.00	5–20	5.00						$1.00–5.00
Connecticut Agricultural College	$10.00	5	0	[7] 60	50	50				10.00													
Delaware University		5	0	100	[8] 40	[8] 40				15.00		2.50–5.00	7.50–30.00	5.00–10.00			5.00	2.50–5.00					
University of Florida	10.00		0	40	0	0			3.00	15.00	10.00											5.00	
Florida State College for Women	[9] 10.00		0	40	0	0			8.00										.50–9.00			5.00	
University of Georgia		25	0	50	[9] 19	19	5						2.50–10.00	5.00				2.00–4.50			3.50–10.00		.50–2.00
Georgia School of Technology			100	175	0	0			5.00	13.00	5.00											[5]	
University of Idaho			0	0	0	0				[10]12.50												.50–12.50	
University of Illinois		10	0	0	50	[9] 50					10.00											[5]	
Indiana University			0	0	50	85					5.00											[11] 35.00	
Purdue University	5.00		0	35	10	10			1.00		5.00												

State University of Iowa			10	40	40	15	15						10.00																	
Iowa State College of Agriculture and Mechanic Arts.				0	51	18	18		$3.00				5.00																[4]	
University of Kansas			[12] 10–[13] 15	0	0	20	30			6.00			10.00																[5]	
Kansas State Agricultural College			[12] 10 [13] 15	0	0	20	30			3.00			10.00																[5]	
University of Kentucky				0	0	25– [14] 30	25– [14] 30				9.00																		[5]	
University of Louisiana		2.00	[15] 10	0	[16] 150	0	0			10.00	9.00		5.00																	
University of Maine				[17] 125	[17] 195	0	0																						[5]	1.00
University of Maryland				0	0	60	90				10.00		5.00	2.00																
Massachusetts Institute of Technology. [18]				250	250	0	0				9.00																		[5]	
Massachusetts Agricultural College.			5	0	50	0	0				8.00			3.00– 5.00							3.00	1.50– 4.00				2.00		[5]	
University of Michigan			[12] 10–[13] 25	0	0	80– [19] 95	105– [19] 120		1–2				10.00															[5]	
Michigan Agricultural College			5	0	45	45	45		3.00	4.50	15.00		5.00	1.00– 5.00	3.00– 10.00	1.50					1.50– 6.00	1.50	2.00– 10.00		4.00– 7.00		[5]	[5] 5.00– [5] 25.00	
Michigan College of Mines			[12] 10–[13] 25	25	110	9	9						15.00– [20] 25.00		1.00– 10.00	1.00– 10.00	1.00–5.00	5–10	2.00– 3.00									[5]	1.00
University of Minnesota				60	90	0	0			6.00																				
University of Mississippi			10	0	0	6	[7] 6		6.00	5.00			5.00	1.00– 4.00	4.00– 5.00						2.00								3.00
Mississippi Agricultural and Mechanical College.				0	80	0	0	5		8.50	5.00																			
University of Missouri				0	20	[21] 50	50						5.00	1.00– 6.00	1.00– 12.00	1.00– 7.00	1.00– 10.00		2.00– 6.00			2.00– 5.00		1.00– 5.00			2.00	1.00
University of Montana		10.00		0	0	0	0							2.00– 5.00	3.00–		.50–		1.00–			1.00–	2.00–					
Montana Agricultural and Mechanical College.		10.00		0	0	0	0			6.00	7.50			1.00– 4.00	2.00– 6.00	1.00– 2.00			1.00	1.00– 5.00		.50– 4.00						
Montana State School of Mines		10.00		0	50	0	0																							
University of Nebraska		5.00		0	0	10	10				10.00		5.00	2.00– 10.00	2.00	2.00– 6.00	1.00		2.00			1.00	3.00				[5]	
University of Nevada				0	60	0	0			5.00	12.00		5.00	1.00– 2.00	2.00– 6.00	1.00– 10.00		1–15	3.00			2.00– 5.00					[5]	
New Hampshire College of Agriculture and Mechanic Arts.				75	150	[17] 50	50						5.00																	

[1] Tuition for colleges of liberal arts and science, engineering, agriculture, home economics, and general undergraduate courses; professional courses in law, medicine, dentistry, etc., not included here.
[2] For matriculation, incidental, library, and medical.
[3] For same as (2) plus gymnasium.
[4] For matriculation, student activities, and library.
[5] Charge is made for material actually used.
[6] Fee of $2 per quarter hour.
[7] Physical training and library.
[8] Registration and library.
[9] Fee for infirmary, gymnasium, and athletics.
[10] Includes health fee.
[11] Flat fee of $35 charged to all students.
[12] Residents.
[13] Nonresidents.
[14] Engineering.
[15] Matriculation and incidental.
[16] To nonresidents of the United States.
[17] Includes all charges.
[18] This institution now receives no State support except one-third of the interest on the 1862 land-grant fund.
[19] Engineering, architecture, and pharmacy.
[20] Engineer of mines.
[21] Library and hospital fee included.

TABLE 3.—*State colleges and universities—Student fees and tuition*—Continued

Institution	Student fees and tuition in State colleges and universities,[1] 1921																								
			Tuition		Incidental or contingent							Laboratory fees (deposits not included)													
	Registration	Matriculation	For residents	For nonresidents	For residents	For nonresidents	Library	Gymnasium	Medical infirmary	Student activities and athletics	Diploma or graduation	Biology, botany, etc.	Chemistry	Engineering	Geology	Metallurgy	Physics	Agriculture	Home economics	Pharmacy	Veterinary medicine	General laboratory fee	Other laboratory fees or not specified
Rutgers College (New Jersey)	$5.00	----	$200	$200	[22] $50	[22] $50	----	----	----	----	$7.00	----	----	----	----	----	----	----	----	----	----	[22] $7.50–30.00	----
University of New Mexico	6.00	----	10	40	0	0	----	----	----	$10.00	----	----	----	----	----	----	----	----	----	----	----	[24] ([4])	----
New Mexico College of Agriculture and Mechanic Arts.	----	[25] $36	0	12	0	0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	([4])	----
New Mexico School of Mines	----	----	10	30	0	0	----	----	----	10.00	5.00–25.00	----	$5.00–10.00	----	----	$3	$3.00–4.00	----	----	----	----	([4])	----
Cornell Agricultural and Veterinary College.	----	10	[26] 0	200	0	0	----	----	$5.00	----	10.00	----	----	----	----	----	----	----	----	----	----	([4])	$2.00
New York State College of Forestry.	----	5	0	75	30	30	----	----	8.00	3.50	10.00	----	----	----	----	----	----	----	----	----	----	20.00	----
University of North Carolina	----	[27] 36	60	60	0	0	----	----	----	----	----	$4.00	4.00–10.00	$2.00–6.00	$2.00–5.00	----	2.00–2.50	----	----	$5.00–10.00	----	[28]	----
North Carolina Agricultural and Engineering College.	----	----	45	45	2	2	$1	$10.00	6.00	----	----	----	----	----	----	----	----	----	----	----	----	([28])	10.00
University of North Dakota	----	----	0	0	25	25	----	----	----	6.50	----	----	----	----	----	----	----	----	----	----	----	----	----
North Dakota Agricultural and Mechanical College.	----	5	15	24	1.50	1.50	----	----	----	8.25	----	----	----	----	----	----	----	----	----	[1] 10.00	$5.00	.50–2.00	----
Ohio State University	----	10	0	0	40	100	----	----	----	----	5.00	----	----	----	----	----	----	----	----	----	----	([5])	----
Ohio University	[29] 30.00	----	0	0	0	0	----	----	----	----	5.00	----	----	----	----	----	----	----	----	----	----	([5])	----
Miami University	----	----	0	0	50	50	----	----	8.00	----	----	----	----	----	----	----	----	----	----	----	----	([5])	----
University of Oklahoma	----	----	0	0	0	0	1	----	5.00	----	5.00	5.00–15.00	15.00	1.00–3.00	1.00	----	3.00–6.00	----	$0.50–3.00	6.00–10.00	----	([5])	----
Oklahoma Agricultural and Mechanical College.	----	----	0	0	0	0	2	----	----	----	4.00	----	----	----	----	----	----	----	----	----	----	1.00–2.50	----
Oklahoma College for Women	----	----	0	0	0	0	2	----	----	----	----	1.00	2.50	----	----	----	----	----	3.00	----	----	----	.50–5.00
University of Oregon	[30] 32.25	----	0	60	0	0	----	----	----	----	10.00	----	----	----	----	----	----	----	----	----	----	[4] 1.00–[4] 5.00	----
Oregon State Agricultural College	10.05	----	0	60	[30] 15	[30] 15	----	4.50–6.00	----	----	5.00	----	----	----	----	----	----	----	----	----	----	[31] 60.00	----

Pennsylvania State College			0	0	50	50	5	6.00	2.00	15.00	4.00																2.00– 40.00			
Rhode Island State College			0	50	10	10				10.00	5.00																[6] 10.00			
University of South Carolina			40	40	18	18			16.00																		3.00			
Clemson Agricultural College		3	40	40	9	9			12.15	12.00																	5.25			
Citadel, Military College of South Carolina.			40	40	0	0				10.00		2.50–5.00	7.50					2.00										3.00		
Medical College of South Carolina			150	150	0	0					3.00																			
University of South Dakota			12	12	0	0				10.00	5.00	1.00–2.00	[22]																	
South Dakota State College of Agriculture and Mechanic Arts.			12	12	0	0				9.00		1.00–4.00	2.00–5.00	1.00–2.25	1.00		5–10	2.00		.50–3.00		5.00								
South Dakota State School of Mines.			12	12	0	0				10.00	5.00		5.00–10.00																	
University of Tennessee			0	80	20	20	4	[23] 5.00–[24] 12.00			5.00	3.00–6.00	10.00–16.00	5.00–10.00	2.00–6.00			2.00–4.00		5.00–10.00							2.00–40.00			
University of Texas		[25] 10	0	0	0	0		1.00	5.00	10.00	2.50	3.00–6.00	1.25–6.00	1.50–6.00				2.00–4.50		1.50–10.00							([5])			
Agricultural and Mechanical College of Texas.	5.00		0	0	10	10			10.00	15.00		.50–1.50	2.00–6.00	.50–2.00	.50–2.00			.50–2.00				1.50–5.00			7.50					
College of Industrial Arts (Texas)		5	0	0	15	15	5		2.50	5.00			3.00													[26] 10.00		1.25	
University of Utah	[26] 25.00–[27] 50.00		0	0	0	0				7.50	10.00																			
Agricultural College of Utah	[26] 25.00–[27] 50.00		0	0	0	0		3.00	6.00	5.00	5.00																[28] 5.00			
University of Vermont			175	175	0	0				[23] 10.00	8.00	2.50–5.00	15.00	10.00–20.00				5.00–10.00		5.00–10.00		1.00–4.00	[8] 2.00–25.00							
University of Virginia		[25] 10–[27] 40	[29] 0	160	0	0						10.00	24.00–20.00	5.00–10.00	3.00			15.00			5.00		[23] 10.00							
Virginia Polytechnic Institute		15	[29] 0–[24] 6	80	0	0	2		5.00	9.00	3.00																[30] 10.00			
Virginia Military Institute			0	150	0	0	3		10.00	5.00																				
College of William and Mary (Virginia).	10.00		0	50	40	40				10.00	7.50	1.50	1.50					1.50												
University of Washington			45	150	0	0	15			10.00	5.00	2.50–4.00	7.50	2.00–6.00	1.00–3.00	5–20	2.50–5.00					3.00–7.50			2.00–7.50					
State College of Washington			20	150	0	0			4.00	12.00		2.50–6.00	1.50–10.00	2.00–15.00			1.00–2.00	1.00–6.00	2.00–10.00	1.00–10.00	3.00–7.50		1.00–25.00							
West Virginia University	4.00		0	100	25	25			5.00	10.00	10.00																			
University of Wisconsin			0	124	24	24			6.00			1.25–4.00	3.00–15.00	3.00–7.50	1.00–6.00		[31] 3.00			[31] 1.50	2.00–18.00	([5])								
University of Wyoming		2	0	0	9	9				9.00																				

[1] Charge is made for material actually used.
[22] Public room service.
[23] Laboratory and technical courses have charges varying from $7.50 to $30.
[24] A charge of $3 per semester credit hour.
[25] Charged annually.
[26] For resident students in agriculture and veterinary medicine.
[27] Includes medical, athletic, library, and gymnasium fee.
[28] Deposits and fees not separated.
[29] Includes $8 for student activities fee and $1.50 for hospital.
[30] Includes student activities fee.
[31] Average cost of fees and deposits.
[32] Fee of $1.50 per credit hour in laboratory courses in chemistry.
[33] Men.
[34] Women.
[35] To be paid for three years.
[36] Resident male students.
[37] Nonresident male students.
[38] Uniform laboratory and library fee per year.
[39] Average tuition in engineering is $120 per year.
[40] Flat laboratory fee.
[41] Per laboratory credit.

In order to do each institution full justice, it would be necessary to give a large number of these institutions separate treatment in the matter of charging tuition and fees, because of the varying State laws and the various provisions for scholarships, or for free tuition to special classes, or for deferred payment of charges. These many differences, peculiar to the individual institution, combined with the fact that the charges are made under various headings, made it very difficult both to tabulate the charges and to treat them together in interpreting the charges. But if all the institutions which perhaps should have separate treatment were so discussed, it would be impossible for the reader to gain any clear impressions from the interpretation. At the risk, therefore, of seemingly doing particular institutions an injustice by not putting the whole situation at any one institution into the discussion at one place, an attempt to picture the general situation will be made, and the matter of individual situations will be brought in as this discussion proceeds, as well as in the discussion of scholarships and loan funds. The reader may also refer to Table 2 relating to "Legal and administrative provisions affecting tuition and fees," for information on State scholarships and loan funds.

First, it should be pointed out that under the head of laboratory fees not all subjects are listed for which laboratory fees are charged in the various institutions. Only those subjects most frequently occurring in the different catalogues for which there is a charge are here given. Secondly, only the range of the fees for the particular laboratory subjects at an institution is given. Except as the institution states an average total charge for laboratory fees, or, as is in a few instances, the institution charges a flat laboratory rate, it is impossible to determine how much the students at the various institutions pay as laboratory fees.

It is sometimes stated in the catalogues that incidental or contingent fees are used to defray the expenses of light and heat or upkeep of buildings, janitor service, etc., and that not a cent of it is used for instructional service. This seems a distinction without a difference, for, if instruction is to be offered, suitable buildings must be provided. Again, the charge appears to be made in lieu of a tuition charge, or to cover miscellaneous fees, such as library, medical, and gymnasium, though it does not include laboratory charges. This charge appears to be a convenient one to make at many institutions whose catalogues explain that "tuition to State residents is free." Yet an incidental fee is made as an additional charge at several institutions which also charge tuition as such.

Table 3 shows that 23 of these institutions charge tuition by that name to residents of the State, while 59 do not. This tuition[1]

[1] Virginia Polytechnic charges resident women $6 tuition.

ranges from $10 at two of the New Mexico institutions to $200 at Rutgers College.

Of the 58 institutions that do not charge tuition under that head, 34 charge an incidental or contingent fee, ranging from $6 at the University of Mississippi to $95 at the University of Michigan. Of these, the following 7 institutions charge an incidental fee of $50: University of California, Connecticut Agricultural College, University of Illinois, Indiana University, University of Missouri, Miami University, and Pennsylvania State College. Ohio State University charges $40 and Michigan Agricultural College $45.

The median resident tuition or incidental fee charged by all these State institutions, excluding Massachusetts Institute, is $34.60.

The median resident incidental fee charged by those institutions which do not charge resident tuition is $30.80.

Now seven of the institutions that charge resident tuition also charge an incidental fee to residents. Of these, Rutgers makes a $50 charge for the use of public rooms; New Hampshire charges $50 and states that this extra fee covers all charges, though it does not include laboratory fees. The University of South Carolina charges $18 and makes a $16 medical and infirmary charge in addition, but has very low charges for laboratory use. The State University of Iowa charges an incidental fee of $15, but sometimes adds this $15 as part of her regular tuition charge in printed statements regarding tuition.

Several institutions that do not charge tuition charge higher incidental or contingent fees to nonresidents than to residents, as at Alabama Polytechnic Institute, Indiana University, University of Michigan, and Ohio State University.

Other institutions charge this incidental fee in the form of annual entrance fees, either as registration or matriculation. Matriculation formerly was the term commonly used to designate the fee paid but once by an individual upon his entrance into the institution, payment of which entitled him to all the privileges of the institution. No longer does it mean this at all the State institutions, though at several this practice still obtains, as at the Universities of Michigan, Illinois, and Ohio State. The University of Georgia charges the highest matriculation fee, $25, paid but once, on entrance to the university. The New Mexico College of Agriculture and Mechanic Arts and the University of North Carolina each charge an annual entrance fee of $36, while Ohio University charges $36 and the University of Oregon $32.25. These fees cover incidental expenses. Seven institutions charge higher registration or matriculation fees to nonresidents of the State than to residents. These are the two Kansas institutions, the University of Michigan, and Michigan School of Mines, the two Utah institutions, and the University of Virginia.

There are a number of institutions that have made the commendable change of charging just one fee which they call a tuition or incidental or contingent fee, and include all their charges under this head. Some others charge a matriculation fee in addition, and others charge laboratory fees or the cost of materials used in laboratory courses.

The University of California makes one charge to residents, covering all fees outside of laboratories. Georgia School of Technology makes a flat charge of $100 for tuition, which includes all laboratory fees and other charges except a $5 medical fee.

Purdue makes a flat incidental fee of $10 and a flat laboratory charge to all students of $35. There is, in addition, a $5 registration fee. The University of Iowa makes a charge of $40 for tuition and $15 incidental, but calls the combined sum, $55, the tuition charge, and this sum covers all fees, including laboratory. On entering this university there is a $10 matriculation charge. Maine now makes one charge for all fees, of $125. Minnesota includes all charges, except a medical fee of $6, in a flat tuition rate of $60. Ohio State University charges an incidental fee of $40, a matriculation fee of $10, and laboratory fees to cover the cost of materials. The University of Utah charges an entrance fee of $25 and makes a $10 flat laboratory charge. At several other institutions similar practices obtain.

Thirty-one institutions still list a separate medical fee, while others state that this fee is included in the incidental or entrance fee. A fee of this kind for the purpose of safeguarding the health and caring for those who are ill is a perfectly legitimate fee and may properly be included within the charge for tuition or incidental fee. The gymnasium fee, which is still commonly found, may also well be included within the general fee, if gymnaisum facilities are provided for all, as they should be. The library fee is one that might properly come within the general fee, as the library is run for the benefit of the entire institution. And if we go so far, why should not charges for the laboratories be averaged over a period of years and a flat fee included in the tuition or fee charged in the different schools? Some students use the library all through their course far more than others; some students will get far more than the charge out of the medical corps or infirmary, or from the gymnasium, but all pay the same fee. It is possible that many of those who use the laboratories most during their last two years, use the library much less, but whether they do or not, it appears perfectly reasonable that all students within a particular school or college should be charged a flat fee for the laboratory, and the laboratories will be there for them to use just as the library is.

Twenty-two institutions now make the statement that the bare cost of materials is charged in their laboratories, while four other institutions set a flat fee for the year. This is exclusive of those

which include the laboratory fee in their tuition or incidental charge. Oregon State Agricultural College makes the statement that the average laboratory charge is $60.

The making of a flat charge for every point elected is a very satisfactory system to both the student and the institution. Columbia, Yale, and several other institutions use this plan. It would seem as fair a system as can be worked out, too, as the student pays for those points only which he is allowed to take. The other system which gives satisfaction is the making of a flat charge including laboratory fees for a particular college, school, or course of study within a university. If the costs for various years, as in medicine, vary a great deal, a different fixed charge for the separate years may be made. A number of the State institutions are already using this system, and it seems a step in the right direction. The plan of stating a large number of different fees for services is to be deprecated, as is the charging of sufficient fees as incidentals or in the laboratory courses to make a sizable tuition, and still stating in the catalogue "tuition is free to all residents of the State."

The charge for student activities and athletics, which in all cases is a fee voted by the student body but collected at the time of registration by the college at the request of the students, is usually listed as a separate fee and this seems proper.

Forty-six of these institutions now charge a student activity fee separately, and five others include this charge in an entrance or incidental fee, making a total of 51. These fees cover, in most instances, activities carried on by the student bodies of the various institutions, such as musical clubs, dramatics, athletics, debate, and concerts. By payment of this fee the students are entitled to admission to any of these entertainments or contests. By thus cooperating in the payment of a common fee, all the students are able to obtain many advantages that could not be secured except by cooperative effort. This fee in nearly all cases is now compulsory, though voted by the student bodies originally. To fix such a fee and collect it of all, seems to be a move in the right direction, as all have an opportunity to participate in the advantages secured through this levy.

COMBINED FIXED CHARGES

With charges made under the various heads as they are on Table 3, it is almost impossible to make a comparison of fixed charges at the various institutions. Without knowledge of the average laboratory fees, it is impossible to show the cost to the student. But since, on the whole, laboratory fees are charged to cover the cost of materials, it is possible to make a summation of the annual fixed charges for entrance, tuition, incidental or contingent, library, gymnasium, and medical or infirmary. A summation of fixed charges

called a "combined fixed charge" for the years 1921 and 1913, the latter taken from a similar chart made up by the Bureau of Education, Bulletin No. 60, 1913, have been assembled for the different groups. It is the desire to shew as nearly as possible the fixed charges made in the first three groups of institutions.

In order to make comparisons of charges made at institutions that are somewhat similarly organized, four such tables have been drawn off Table 3. The groups on these tables are as follows: (1) Combined State universities and agricultural and mechanical colleges; (2) separate State universities; (3) separate agricultural and mechanical colleges; (4) all other State colleges.

Table 4 shows that average fixed charges for residents at State universities combining agricultural colleges largely increased during the period from 1913 to 1921, it being $23 at the former and $51 at the latter date.

For nonresidents the average fixed charge increased from $47 in 1913 to $98 in 1921.

TABLE 4.—*State universities which combine land-grant colleges—Fixed charges to students, 1913 and 1921*

Institutions	Combined fixed charge, 1913 [1]		Combined fixed charge, 1921 [2]	
	Resident	Nonresident	Resident	Nonresident
University of Arizona	$10.00	$40.00	$16.00	$46.00
University of Arkansas	14.00	14.00	54.00	54.00
University of California	6.00	26.00	50.00	200.00
Delaware University	6.50	66.50	40.00	140.00
University of Florida	8.00	28.00	10.00	50.00
University of Georgia	5.00	50.00	19.00	69.00
University of Idaho				
University of Illinois	24.00	24.00	50.00	50.00
University of Kentucky		15.00	25.00	25.00
University of Louisiana	15.00	75.00	22.00	172.00
University of Maine	60.00	70.00	[3] 125.00	[3] 195.00
University of Maryland	(4)	(4)	60.00	90.00
University of Minnesota	[3] 30.00	[3] 50.00	[3] 66.00	[3] 96.00
University of Missouri	20.00	40.00	50.00	70.00
University of Nebraska	12.00	42.00	15.00	15.00
University of Nevada			5.00	65.00
Rutgers College	115.00	115.00	255.00	255.00
Ohio State University	20.00	30.00	40.00	100.00
University of Tennessee	2.00	80.00	25.00	85.00
University of Vermont	115.00	115.00	175.00	175.00
West Virginia University	4.00	55.00	30.00	130.00
University of Wisconsin	24.00	94.00	30.00	154.00
University of Wyoming	12.00	12.00	11.00	11.00
Median	15.00	50.00	30.00	85.00
Average	23.00	47.00	51.00	98.00

[1] Compiled from Bu. of Educ. Bul. No. 60, 1913.
[2] Compiled from State university catalogues.
[3] Included all charges.
[4] A charge of $240 was made at Maryland Agricultural College in 1913, which covered all expenses, such as room and board.

Separate State universities increased their average fixed charge to residents from $20 in 1913 to $39 in 1921, and for nonresidents from $33 to $67 in the same period, as may be seen from Table 5.

TABLE 5.—*Separate State universities—Fixed charges to students, 1913 and 1921*

Institutions	Combined fixed charges, 1913		Combined fixed charges, 1921	
	Resident	Nonresident	Resident	Nonresident
University of Alabama	$12.00	$32.00	$27.00	$87.00
University of Colorado	20.00	30.00	56.00	101.00
Indiana University	16.00	60.00	50.00	85.00
State University of Iowa	21.00	21.00	55.00	55.00
University of Kansas	15.00	30.00	30.00	45.00
University of Michigan	30.00	45.00	81.00	106.00
University of Mississippi	10.00	10.00	17.00	17.00
University of Montana	15.00	15.00	10.00	10.00
University of New Mexico	6.00	26.00	16.00	46.00
University of North Carolina	85.00	85.00	96.00	96.00
Ohio University	18.00	18.00	28.00	28.00
Miami University	30.00	30.00	58.00	58.00
University of Oklahoma	5.00	5.00	6.00	6.00
University of Oregon	10.00	10.00	32.25	92.25
University of South Carolina	58.00	58.00	74.00	74.00
University of Texas	13.00	13.00	16.00	16.00
University of Utah	17.00	32.00	25.00	50.00
University of Virginia	10.00	135.00	10.00	160.00
College of William and Mary	24.00	61.00	50.00	90.00
University of Washington	[1]		60.00	165.00
University of South Dakota	12.00	12.00	12.00	12.00
Median	20.00	30.00	32.00	58.00
Average	20.00	33.00	39.00	67.00

Land-grant colleges increased their average fixed charge to residents from $17 in 1913 to $32 in 1921, while for nonresidents the average increase was from $35 in 1913 to $72 in 1921, as is shown by Table 6.

TABLE 6.—*Land-grant colleges—Fixed charges to students, 1913 and 1921*

Institutions	Combined fixed charges, 1913		Combined fixed charges, 1921	
	Resident	Nonresident	Resident	Nonresident
Alabama Polytechnic Institute	$7.00	$32.00	$25.00	$61.00
Colorado Agricultural College	5.00	5.00	12.00	28.00
Connecticut Agricultural College	15.00	75.00	75.00	125.00
Purdue University (Indiana)	15.00	40.00	16.00	51.00
Iowa State College of Agriculture and Mechanic Arts	24.00	49.00	21.00	72.00
Kansas State Agricultural College	9.00	40.00	33.00	48.00
Massachusetts Agricultural College		40.00	5.00	65.00
Michigan Agricultural College	7.50	17.50	52.50	97.50
Mississippi Agricultural and Mechanical College	10.00	[2] 50.00	13.50	93.50
Montana Agricultural and Mechanical College	[2] 6.00	[2] 6.00	10.00	10.00
New Hampshire State College of Agriculture and Mechanic Arts	60.00	60.00	125.00	200.00
New Mexico College of Agriculture and Mechanic Arts	5.00	15.00	36.00	48.00
New York State College of Agriculture and Veterinary Medicine at Cornell University	11.00	111.00	10.00	210.00
North Carolina Agricultural and Mechanical College	54.00	54.00	64.00	64.00
North Dakota Agricultural and Mechanical College	20.00	20.00	21.50	30.50
Oklahoma Agricultural and Mechanical College			2.00	2.00
Oregon State Agricultural College	9.00	9.00	[3] 31.00	[3] 81.00
Pennsylvania State College	38.00	38.00	63.00	63.00
Rhode Island State College	9.00	39.00	10.00	60.00
Clemson Agricultural College (South Carolina)	5.00	45.00	64.00	64.00
South Dakota State College of Agriculture and Mechanic Arts	37.00	37.00	12.00	12.00
Agricultural and Mechanical College of Texas	8.00	8.00	25.00	25.00
Agricultural College of Utah	5.00	25.00	25.00	60.00
Virginia Polytechnic Institute	57.00	57.00	22.00	87.00
State College of Washington	3.00	11.00	24.00	154.00
Median	10.00	38.00	24.00	65.00
Average	17.00	35.00	32.00	72.00

[1] Freshman year, $35; sophomore and junior, $45; senior, $55.
[2] $6 for agriculture, $17 for art, pharmacy, home economics, mechanic arts.
[3] Student activity fee can not be segregated.

Increases for other State colleges are shown in Table 7.

TABLE 7.—*Other State colleges—Fixed charges to students, 1913 and 1921*

Institutions	Combined fixed charges, 1913		Combined fixed charges, 1921	
	Resident	Nonresident	Resident	Nonresident
Colorado School of Mines	$5.00	$5.00	$5.00	$155.00
Florida State College for Women	8.50	28.50	10.00	50.00
Georgia School of Technology	60.00	135.00	105.00	180.00
Michigan College of Mines	35.00	175.00	44.00	144.00
Montana State School of Mines	10.00	60.00	10.00	60.00
New Mexico School of Mines	20.00	50.00	10.00	30.00
New York State School of Forestry, Syracuse			30.00	75.00
Oklahoma College for Women			2.00	2.00
The Citadel, the Military College of South Carolina		50.00	40.00	40.00
South Dakota State School of Mines	12.00	12.00	12.00	12.00
College of Industrial Arts, Texas			22.50	22.50
Virginia Military Institute	10.00	100.00	13.00	150.00
Median	10.00	50.00	13.00	55.00
Average	18.00	68.00	25.00	77.00

Table 8 gives a summary of the changes for the four groupings of State colleges just discussed. Of the three groups put together because of somewhat similar organization, the State universities which combine agricultural colleges show a median increase of $15 and an average increase of $28 between 1913 and 1921. The agricultural and mechanical colleges show a median increase of $14, or 140 per cent, which is the highest percentage of increase of all since their median fixed charge in 1913 was but $10. Separate State universities showed the smallest median increase—$12.

TABLE 8.—*State universities and colleges—Trend of combined fixed charges, 1913 and 1921—Lowest, median, average, highest—Increase*

Institutions and charges	1913		1921		Increase, 1913–1921			
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
							Per ct.	Per ct.
State colleges of agriculture and mechanic arts:								
Lowest			$2	$2				
Median	$10	$38	24	65	$14	$27	140	71
Average	17	35	32	72	15	37	88	105
Highest	60	111	125	200				
Separate State universities:								
Lowest			6	6				
Median	20	30	32	58	12	28	60	93
Average	20	35	39	67	8	32	38	91
Highest	85	135	96	165				
State universities which combine agricultural colleges:								
Lowest								
Median	15	50	30	85	15	35	100	70
Average	23	47	51	98	28	51	122	108
Highest	115	115	255	255				
Other State colleges:								
Lowest		5	2	2				
Median	10	50	13	55	3	5	30	10
Average	18	68	25	77	7	9	39	13
Highest	60	175	105	180				

Roughly, then, the average charges have increased about 100 per cent during the period in which costs mounted approximately in the same proportion.

FIXED CHARGES AND TUITION, 1900–1921

In order to ascertain what increases, if any, have taken place in the charges of State colleges and universities during the period of great expansion and enlarged activity, 24 State colleges and universities located in all the various sections of the country were selected. These institutions include 10 State universities which combine the university and the agricultural and mechanical college, 8 separate State universities, 5 colleges of agriculture and mechanic arts, and 1 of mechanic arts or engineering. The State laws regarding the charging of tuition and fees relating to these institutions include those requiring that tuition shall be free, those stating that the trustees may fix tuition or fees, and those requiring tuition to be charged. They represent, then, all sections of the country, and all the various legal conditions which affect the charging of tuition. They are regarded as typical.

Table 9 shows the tabulations of the annual fees for arts and sciences, law, medicine, engineering, dentistry, pharmacy, business administration, and the graduate school. These charges were taken from the catalogues of these institutions for the years shown.

TABLE 9.—*State colleges and universities—Tuition and incidental fee trends, 1900–1921*

Institution	Year	Tuition and incidental fees																	
		Arts, sciences, and other courses			A system of laboratory fees	Law		Engineering		Medicine		Dentistry		Pharmacy		Business administration		Graduate school	
		Registration and matriculation	Resident	Nonresident		Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
University of California	1900	.....	$1½	$21½	×	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1905	.....	10	30	×	.....	.....	.....	.....	$150	$150	.....	.....	.....	.....	.....	.....	.....	.....
	1910	.....	10	30	×	.....	.....	.....	.....	150	150	.....	.....	.....	.....	.....	.....	.....	.....
	1915	.....	10	30	×	.....	.....	.....	.....	150	150	.....	.....	.....	.....	.....	.....	.....	.....
	1920	.....	10	30	×	[1] $25	$55	.....	.....	150	150	.....	.....	.....	.....	.....	.....	.....	.....
	1921	.....	50	200	×	75	150	.....	.....	200	500	$150	$170	$140	$160	.....	.....	.....	.....
University of Illinois	1900	[1] $10	24	24	×	75	75	.....	.....	55	55	100	100	.....	.....	.....	.....	.....	.....
	1905	10	24	24	×	50	50	.....	.....	120	120	100	100	.....	.....	.....	.....	.....	.....
	1910	10	24	24	×	50	50	$24	$24	120 140	120 140	155	155	.....	.....	.....	.....	.....	.....
	1915	10	24	24	×	50	50	24	24	120 155	120 155	150	150	.....	.....	.....	.....	.....	.....
	1920	10	50	50	×	50	50	50	50	120 155	120 155	120	120	.....	.....	.....	.....	.....	.....
	1921	10	50	50	×	50	50	50	50	[3] 120 155	120 155	120	120	60 95	60 95	$50	$50	.....	.....
State University of Iowa	1900	.....	25	25	0	60	60	.....	.....	65	65	.....	.....	.....	.....	.....	.....	.....	.....
	1905	[1] 10	20	20	0	50	50	.....	.....	50	50	50	50	50	50	.....	.....	.....	.....
	1910	10	20	20	0	50	50	.....	.....	50	50	50	50	50	50	.....	.....	$20	$40
	1915	10	20	20	0	50	50	.....	.....	[2] 85	100	100	130	50	50	.....	.....	20	40
	1920	10	55	55	0	75	75	.....	.....	150	175	165 175	190 200	75	75	.....	.....	40	.....
	1921	10	55	55	0	75	75	.....	.....	150	175	165 175	190 200	75	75	.....	.....	15	15
University of Minnesota	1900	.....	5	5	×	60	60	.....	.....	100	100	100	100	.....	.....	.....	.....	.....	.....
	1905	.....	20	40	×	60	60	30	60	100	100	150	150	[4] 55	[4] 55	.....	.....	.....	.....
	1910	.....	20	40	×	60	60	30	60	150	150	150	150	[4] 55	[4] 55	.....	.....	.....	.....
	1915	.....	30	60	0	60	60	50	50	150	150	150	150	[4] 55	[4] 55	.....	.....	.....	.....
	1920	.....	60	80	0	90	120	90	120	180	210	180	210	90	120	90	120	.....	.....
	1921	.....	66	96	0	90	120	90	120	180	210	180	210	90	120	90	120	.....	.....
University of Michigan	1900	[1] 10 [5] 25	30	40	×	35	45	35	45	35	45	35	45	35	45	.....	.....	.....	.....

	1905	[1] 10 [6] 25	30	40	×	45	55	45	55	45	55	45	55	45	55	
	1910	[1] 10 [6] 25	30	40	×	55	65	45	55	45	55	55	75	45	55	
	1915	[1] 10 [6] 25	42	52	×	67	77	57	67	57	67	77	107	57	67	
	1920	[1] 10 [6] 25	80	105	×	105	125	95	120	140	165	140	175	95	120	
	1921	[1] 10 [6] 25	80	105	×	105	125	95	120	140	200	140	200	95	120	
University of Virginia	1900		40	[90 115]	×	140	140	140	140	[7] 128	[7] 128					
	1905		40	[90 115]	×	100	100	115	115	[7] 128	[7] 128					
	1910		[4] 10	[90 115]	×	140	140	70	115	128	128					
	1915		10	135	×	140	140	85	145	140	140					
	1920		10	175	×	175	175	128	210	175	175					
	1921		10	200	×	200	200	140	200	[9] 200 175	[9] 200 175					
Ohio State University	1900		18	18	×	60	60									
	1905		18	30	×	60	60									
	1910		20	30	×	60	60									
	1915		30	30	×	60	60			75	75			30	80	
	1920	[3] 10	40	100	×	60	110	30	80	150	200	[10] 100 [11] 150	[10] 150 [11] 200	30	80	
	1921	10	40	140	×	60	160	30	130	150	250	[10] 100 [11] 150	[10] 200 [11] 250	30	130	
University of Wisconsin	1900		20	50	×	[75 50]	[75 50]		55							
	1905		20	50	×	[75 60]	[75 50]		55							
	1910		30	100	×	34	94	34	104							
	1915		30	154	×	30	154	30	154							
	1920		30	154	×	30	154	30	154							
	1921		30	154	×	30	154	30	154							
University of Kansas	1900		0	10	×	0	25	0	10	0	25					
	1905	[5] 5 [6] 10	10	20	×	25	35	10	20	25	35					
	1910	[5] 5 [6] 10	10	20	×	25	35	10	20	25	35					
	1915	[5] 5 [6] 10	10	20	×	25	35	10	20	25	35					
	1920	[4] 10 [6] 15	20	30	×	35	45	20	30	[12] 35 110	45 110					
	1921	[4] 10 [6] 15	26	36	×	35	45	26	36	[12] 35 110	45 110					

[1] Library.
[2] Matriculation fee paid but once.
[3] First two years, $120; third year, $140, and fourth year, $155.
[4] First year, $45; second year, $55; third year, $65.
[5] Resident.
[6] Nonresident.
[7] First year, $110; second year, $100; third year, $80; fourth year, $60 + University fee.
[8] Fee for residents lowered by law.
[9] First two years, $200, last two years, $175.
[10] First year.
[11] Second, third, and fourth years.
[12] $35 for first two years, $110 for last two years.

TABLE 9.—*State colleges and universities—Tuition and incidental fee trends, 1900–1921*—Continued

Institution	Year	Tuition and incidental fees																	
		Arts, sciences, and other courses			A system of laboratory fees	Law		Engineering		Medicine		Dentistry		Pharmacy		Business administration		Graduate school	
		Registration and matriculation	Resident	Non-resident		Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non resident	Resident	Non-resident
University of Missouri	1900		$0	$0	X	$10	$10			$10	$10								
	1905		5	5	X	10	10												
	1910		10	10	X	20	20	$20	$20	20	20								
	1915		24	44	X	24	44	24	44	24	44								
	1920		30	50	X	30	50	30	50	30	50								
	1921		50	70	X	50	70	50	70	50	70								
University of Arizona	1900	$5	0	0	X	10	10												
	1905	5	1	10	X	10	10			10	10								
	1910	5	5	10	X	20	20	20	20	20	20								
	1915		10	20	X	24	24	24	24	24	44								
	1920		26	56	X	30	30	30	30										
	1921		26	56	X	50	50	50	50	50	70								
University of Washington	1900		0	0	X	25	25												
	1905		0	20	X	40	40												
	1910				X	80	80												
	1915	10	20	20	X	45	45												
	1920		30	30	X	60	60												
	1921		45	150	X	75	180												
University of Oregon	1900		10	10	X	60	60			{ 130	130								
										{ 100	100								
	1905		10	10	X	{ 60	60			130	130								
						{ 75	75			100	100								
	1910		10	10	X	{ 60	60			130	130								
						{ 75	75			100	100								
	1915		10	10	X	{ 60	60			150	150								
						{ 75	75												
	1920		17½	17½	X	47½	47½			150	150								
	1921		32¼	92½	X	62¼	92			150	150								

Louisiana State University and Agricultural and Mechanical College.	1900		17	17	X										
	1905		18	78	X										
	1910	2	20	80	X	25	85								
	1915	2	20	120	X										
	1920	2	20	120	X	21	150								
	1921	2	20	150	X										
University of North Carolina	1900	5	60	60	X	75	75			75	75			$60	$60
	1905	12½	60	60	X	70	70			70	70			60	60
	1910	12½	60	60	X	70	70			70	70			60	60
	1915	15	60	60	X	70	70			70	70			60	60
	1920	36	60	60	X	127½	127½			201	201			60	60
	1921	36	60	60	X	127½	127½			201	201			60	60
University of Maine	1900	10	50	50	X	60	60								
	1905	10	50	60	X	70	70	$30	$70						
	1910	0	60	75	X	70	70	60	100						
	1915														
	1920	10	60	100	0	60	100	60	100						
	1921	0	125	195	0	125	195	125	195						
University of Georgia	1900	[1] 10	0	0	X	75	75			150	150				
	1905	10	0	50	X	75	75			75 100	75 100			60	60
	1910	10	0	50	X	75	75			100	100			50	50
	1915	10	12	50	X	75	75							50	50
	1920	10	15	50	X	75	75							50	50
	1921	25	19	50	X	75	75							50	50
Indiana University	1900		0	0	X	37½	37½								
	1905		0	0	X	0	0								
	1910		15	36	X	15	36								
	1915		18	60	X	18	60								
	1920		50	85	X	65	100			[13] 125 150	[13] 125 150				
	1921		50	85	X	65	100			[13] 125 150	[13] 125 150				
Oregon State Agricultural College	1900		0	0	X										
	1905		0	0	X										
	1910	5	0	0	X										
	1915	5	0	0	X										
	1920														
	1921	10	0	60	X			10	60						
Pennsylvania State College	1900		20	120	X			20	120						
	1905		35	135	X			35	135						
	1910		35	35	X			35	35						
	1915		35	35	X			35	35						
	1920		56	56	X			56	56						
	1921		58	58	X			58	58						
Purdue University	1900	5	10	25	X			10	[14] 25					10	25
	1905	5	10	25	(14)			10	25					10	25
	1910	5	10	25	(14)			10	25					10	25
	1915	5	11	26	(14)			16	26					16	26
	1920	5	11	26	(14)			16	26					16	26
	1921	5	11	36	(15)			16	[15] 36					16	36

[13] $125 first two years, $150 last two years.

[14] Flat laboratory fee of $20 for all schools

[15] Flat laboratory fee of $35 for all schools.

TABLE 9.—*State colleges and universities—Tuition and incidental fee trends, 1900–1921*—Continued

Institution	Year	Tuition and incidental fees																	
		Arts, sciences, and other courses			A system of laboratory fees	Law		Engineering		Medicine		Dentistry		Pharmacy		Business administration		Graduate school	
		Registration and matriculation	Resident	Nonresident		Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
Iowa State College of Agriculture and Mechanic Arts	1900	.....	$10	$30	X	.....	.....	$10	$30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1905	.....	10	24	X	.....	.....	10	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1910	.....	21	50	X	.....	.....	21	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1915	.....	24	50	X	.....	.....	24	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1920	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	.....	24	51	X	.....	.....	24	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State College of Washington	1900	.....	.....	.....	X	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1905	.....	0	20	X	.....	.....	0	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1910	.....	0	20	X	.....	.....	0	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1915	.....	3	3	X	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1920	.....	3	3	X	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	.....	22	152	X	.....	.....	22	152	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgia School of Technology	1900	.....	0	0	0	.....	.....	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1905	.....	50	125	0	.....	.....	50	125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1910	.....	50	125	0	.....	.....	50	125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1915	.....	55	130	0	.....	.....	55	130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1920	.....	60	160	0	.....	.....	60	160	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	.....	105	180	0	.....	.....	105	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

It should be stated here that from the enactment of the fundamental laws relating to a large number of the State colleges and universities the line of demarcation between free tuition and charges was between courses like arts, science, agriculture, and home economics, and professional courses like the ones mentioned above, law especially being excepted many times. The charge that appears in the columns under arts and sciences represents the "combined fixed charge" used in the previous discussion. Laboratory fees could not be included, as the amount of these charges paid by students could not be ascertained. An X in the sixth column of Table 9 means laboratory fees were charged that year. A zero in this column means there were no laboratory charges that year. To as great an extent as possible the combined fixed charge for the professional schools represents all fixed charges. It was not possible to ascertain from the catalogues in all cases whether certain charges made in the nonprofessional schools were also charged the students in professional schools. It has been the policy when a charge was doubtful to omit it and err on the side of too small rather than too large a charge. In certain of the institutions there are fixed laboratory fees of considerable size in connection with such professional courses as medicine, engineering, dentistry, pharmacy, or graduate school work in chemistry. These were also omitted, on the ground that it was not fair to the institution that stated the fee to add this to the tuition, while another institution whose catalogue states that "the cost of materials will be charged" would appear to charge a lower tuition. Fixed incidental fees and other fixed annual charges are included under the head of tuition and fees. Student activity fees were not so included. The matriculation fees which were charged but once were not added in.

Table 9 shows the trends of average fixed charges in arts, sciences, and other courses having the same charges, and in the professional courses of law, engineering, medicine, dentistry, and pharmacy for both residents and nonresidents. There were not enough cases in the other subjects to make averages meaningful.

TABLE 10.—*State colleges and universities—Trends in fixed charges at 24 institutions regarded as typical, 1900–1921—Arts, sciences, and other courses*

Institutions	1900		1905		1910		1915		1920		1921	
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
Indiana University	0	0	0	0	$15	$36	$18	$60	$50	$85	$50	$85
State University of Iowa	$25	$25	$20	$20	20	20	20	20	55	55	55	55
University of Kansas	0	10	15	30	15	30	15	30	30	45	36	51
University of Michigan	30	40	30	40	30	40	42	52	80	105	80	105
University of Oregon	10	10	10	10	10	10	10	10	17½	17½	32¼	92½
University of Virginia	40	90	40	90	10	90	10	135	10	175	10	200
University of Washington	0	0	0	20			30	80	30	30	45	150
University of Arizona	5	5	6	10	10	15	10	20	26	56	26	56
University of California	1½	21½	10	30	10	30	10	30	10	30	50	200
University of Georgia	0	0	0	50	0	50	12	50	15	50	19	50
Louisiana State University [1]	17	17	18	78	22	82	22	122	22	122	22	152
University of Maine	60	60	60	70	60	75			70	110	125	195
University of Minnesota	5	5	20	40	20	40	30	60	60	80	66	96
University of Missouri	0	0	5	5	10	10	24	44	30	50	50	70
University of Illinois	24	24	24	24	24	24	24	24	50	50	50	50
Ohio State University	18	18	18	30	20	30	30	30	40	100	40	140
University of Wisconsin	20	50	20	50	30	100	30	154	30	154	30	154
Purdue University	15	30	15	30	15	30	16	31	16	31	16	41
Iowa State College of Agriculture and Mechanic Arts	10	30	10	24	21	50	24	50			24	51
Georgia School of Technology	0	0	50	125	50	125	55	130	60	160	105	180
Pennsylvania State College	20	120	35	135	35	[2] 35	35	35	56	56	58	58
State College of Washington	0	0	0	20	0	20	3	3	3	3	22	152
University of North Carolina	65	65	72½	72½	75½	72½	75	75	96	96	96	96
Oregon State Agricultural College	0	0	0	0	5	5	5	5			10	60
Average	16	27	20	42	22	44	24	52	39	75	47	106

[1] Only nonresidents of the United States pay nonresident tuition.
[2] Pennsylvania State College dropped the $100 nonresident tuition.

In 1900 no fixed charges were made in arts and sciences and other courses for residents of the State by 8 of the 24 institutions. The highest charge for residents was $65, at the University of North Carolina. The average resident charge was $16.

The average fixed charge or tuition in arts and sciences for 1921 was $47. The lowest 1921 fixed charge in these courses for residents was $10, made by the University of Virginia, and the highest, $125, was made by the University of Maine. The total increase in average resident fixed charges in arts and sciences and other nonprofessional courses for residents from 1900 to 1921 in these 24 institutions was $31, or 193 per cent. The average fixed charge for 1921 was $47, while the lowest was $10, charged by the Oregon State College and the University of Virginia, and the highest was $125, charged by the University of Maine.

Nonresident fees in "arts, sciences, and other courses," show a much greater increase for the same period. The average fee for nonresidents of these 24 institutions in 1900 was $27. In 1921 it was $106, an increase of $62. The total increase in fixed charges for nonresident students from 1900 to 1921 was $79, or a percentage increase of 293 per cent. Seven institutions made no nonresident charge in

1900. The highest fixed charge, $120, was made by Pennsylvania State College this year. In 1921 all these institutions made fixed charges for nonresidents. Twenty of the twenty-four made higher charges for nonresidents than residents. The lowest charge, of $41, for nonresidents in 1921 was made by Purdue University, and the highest, $200, was made by the Universities of California and Virginia. It should be pointed out that during all this period the fixed charge at Iowa has covered all fees, including laboratory courses. The same has been true at Maine for the years 1920 and 1921. At the University of Virginia the university fee was lowered from $41 to $10 between 1905 and 1910 in accord with an agreement with the

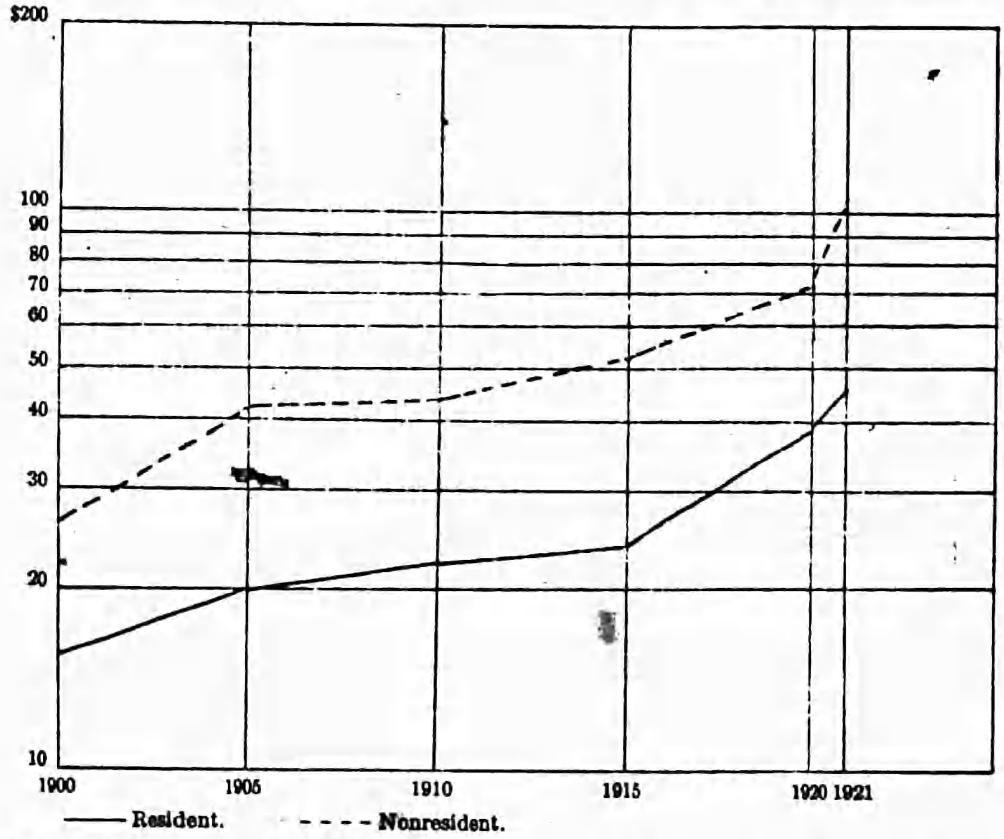

CHART I.—State colleges and universities, arts and sciences and other courses. Average tuition or fixed charges for resident and nonresident students

State concerning future support from the State. Pennsylvania State College dropped her nonresident tuition of $100 between 1905 and 1910.

Chart I represents graphically the trends in average tuition or fixed charges in arts, sciences, and other general courses for these 24 State colleges and universities regarded as typical, from 1900 to 1921. Beginning with an average resident tuition in these courses of $16 in 1900, the charge advanced gradually to 1915; while the increase from 1915 to 1921 was more rapid than during any other period, as might have been expected, and the average for 1921 was $47.

For nonresidents the average in 1900 was $27, and general tendencies of the trend are very similar to that for resident students. The rise since 1920 for nonresidents for these courses has been particularly sharp.

In law and the other professional courses in those cases in which a higher tuition is charged, wherever the rate differed for separate years, the charges for the number of years of the course were averaged, and this average fee was used in finding the average fee charged at all these institutions. The average resident tuition in law for 1900 was $51. The University of Kansas charged no fee, and the highest charge, $140, was by the University of Virginia. In 1921 the average

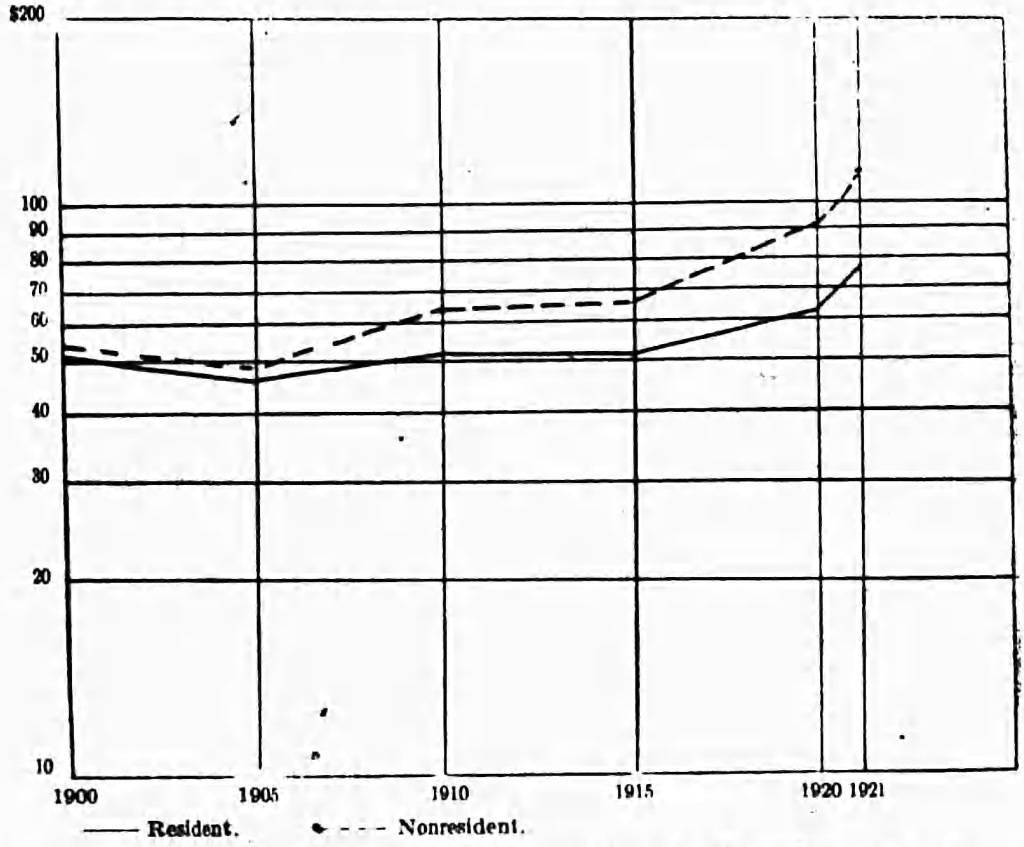

CHART II.—State colleges and universities, law. Average tuition or fixed charges for resident and nonresident students

fee was $79, while the lowest was $30, charged by the University of Wisconsin, and the highest, $200, by the University of Virginia. The total increase from 1900 to 1921 was $28, or an increase of 55 per cent.

The nonresident average tuition in law for 1900 was $53, while for 1921 the average nonresident charge was $116. There was a total increase of $63 in average nonresident tuition in law from 1900 to 1921, or a percentage increase of 119.

The lowest charge, $10, in law for nonresidents in 1900 was made by Arizona and Missouri Universities, while the highest, $140, was made by the University of Virginia. The low charge in 1921 for nonresidents was $45, made by the University of Kansas, while the high charge was $200, at the University of Virginia.

TABLE 11.—*State colleges and universities—Trends in fixed charges at State institutions regarded as typical, 1900–1921—Law and medicine*

LAW

Institutions	1900		1905		1910		1915		1920		1921	
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
Indiana University	$37½	$37½	0	0	$15	$36	$18	$60	$65	$100	$65	$100
State University of Iowa	60	60	$50	$50	50	50	50	50	75	75	75	75
University of Kansas	0	25	25	35	25	35	25	35	35	45	35	45
University of Michigan	35	45	45	55	55	65	67	77	105	125	105	125
University of North Carolina	75	75	70	70	70	70	70	70	127½	127½	127½	127½
University of Oregon	60	60	70	70	70	70	70	70	47½	47½	62¼	92
University of Virginia	140	140	100	100	140	140	140	140	175	175	200	200
University of Washington	25	25	40	40	80	80	45	45	60	60	75	180
University of Arizona	10	10	10	10	20	20	24	24	30	30	50	50
University of California									[1] 25	55	75	150
University of Georgia											75	75
Louisiana State University					25	85			21	150		
University of Maine	60	60	70	70	70	70			60	100	125	195
University of Minnesota	60	60	60	60	60	60	60	60	90	120	90	120
University of Missouri	10	10	10	10	20	20	24	44	30	50	50	70
University of Illinois	75	75	50	50	50	50	50	50	50	50	50	50
Ohio State University	60	60	60	60	60	60	60	60	60	110	60	160
University of Wisconsin	50	50	50	50	34	94	30	154	30	154	30	154
Average	51	53	47	49	53	63	52	67	64	93	79	116

MEDICINE

University of California					$150	$150	$150	$150	$150	$150	$200	$500
University of Illinois	$55	$55	$120	$120	130	130	143¾	143¾	143¾	143¾	143¾	143¾
State University of Iowa	65	65	50	50	50	50	85	100	150	175	150	175
University of Minnesota	100	100	100	100	150	150	150	150	180	210	180	210
University of Michigan	35	45	45	55	45	55	57	67	140	165	140	200
University of Virginia	128	128	128	128	128	128	140	140	175	175	187½	187½
Ohio State University							75	75	150	200	150	250
University of Kansas	0	25	25	35	25	35	25	35	72½	77½	72½	77½
University of Missouri			10	10	20	20	24	44	30	50	50	70
University of Arizona			10	10	20	20	24	44			50	70
University of Oregon	102½	102½	102½	102½	102½	102½	150	150	150	150	150	150
University of North Carolina	75	75	70	70	70	70	70	70	201	201	201	201
Indiana University									137½	137½	137½	137½
University of Georgia	150	150	87½	87½	100	100						
Average	79	83	68	70	83	84	91	97	140	158	139	182

[1] Library.

Chart II shows the trends in tuition or fixed charges in law for the same institutions during the same period. At the beginning of the period there was very little difference between the fixed charges for resident and nonresident students and the State institutions in this course, but with each succeeding year the average increase for nonresident students has been greater than for resident students. The increase since 1920 has been particularly marked.

In 1900 the average fixed resident charge in engineering, for institutions in this group offering this course and concerning which data were available, was $30. The Georgia School of Technology and the University of Kansas made no charges for this course, while the high charge of $140 was made by the University of Virginia.

In 1921 the average resident charge in this course was $57. This was a total increase since 1900 of $27, or 90 per cent increase in average charge for engineering in these institutions.

It should be noted that at Purdue University, Oregon State Agricultural College, Pennsylvania State College, Iowa State College of Agriculture and Mechanic Arts, Georgia School of Technology, and a number of the other institutions included here, the charge in engineering is practically the same as for the other courses in arts, science, and other courses which are for the most part nonprofessional. It appears to be quite a frequent practice in the colleges of agriculture and mechanic arts to make the same fixed charges for nearly all their courses. If large differences do actually exist in these institutions, they are to be found in the laboratory fees charged in the different courses.

TABLE 12.—*State colleges and universities—Trends in fixed charges at State institutions regarded as typical, 1900–1921—Engineering and pharmacy*

ENGINEERING

Institution	1900		1905		1910		1915		1920		1921	
	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident
University of Illinois	.....	.....	.....	.....	$24	$24	$24	$24	$50	$50	$50	$50
University of Minnesota	.....	.....	$30	$60	30	60	50	50	90	120	90	120
University of Michigan	$35	$45	45	55	45	55	57	67	95	120	95	120
University of Virginia	140	140	115	115	70	115	85	145	128	210	140	200
Ohio State University	.....	.....	.....	.....	.....	.....	.....	.....	30	80	30	130
University of Wisconsin	.....	55	.....	55	34	104	30	154	30	154	30	154
University of Kansas	0	10	10	20	10	20	10	20	20	30	26	36
University of Missouri	.....	.....	.....	.....	20	20	24	44	30	50	50	70
University of Arizona	.....	.....	.....	.....	20	20	24	24	30	30	50	50
University of Maine	.....	.....	30	70	60	100	.....	.....	60	100	125	195
Oregon State Agricultural College	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	60
Penn State College	20	120	35	135	35	35	35	35	56	56	58	58
Purdue University	10	25	10	25	10	25	10	26	10	26	10	26
Iowa State College, Ames	10	30	10	24	21	50	24	50	.....	.....	24	51
State College of Washington	.....	.....	0	20	0	20	2	2	2	2	22	152
Georgia School of Technology	0	0	50	125	50	125	55	130	60	160	105	180
Average	30	53	34	64	33	55	33	59	49	85	57	104

PHARMACY

University of California	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	140	160
University of Illinois	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71¾	71¾
State University of Iowa	.....	.....	50	50	50	50	50	50	75	75	75	75
University of Minnesota	.....	.....	55	55	55	55	55	55	90	120	90	120
University of Michigan	35	45	45	55	45	55	57	67	95	120	95	120
Ohio State University	.....	.....	.....	.....	.....	.....	30	80	30	80	30	120
University of North Carolina	60	60	60	60	60	60	60	60	60	60	60	60
University of Georgia	.....	.....	60	60	50	50	50	50	50	50	50	50
Purdue University	10	25	10	25	10	25	11	26	11	26	11	36
Average	35	43	47	51	45	49	45	55	59	76	69	90

Chart III shows the average tuition or fixed charges for the institutions of this group maintaining colleges of engineering. At the beginning of the period the average charges for residents amounted to $30 and for nonresidents to $53. Increases for the period for both have been practically parallel, as charges for both residents and nonresidents have doubled during the 21 years.

Data were available which showed fixed charges for 14 different medical colleges or schools operated by these institutions. The average resident fixed charge for medicine, excluding laboratory fees, in 1900 was $79, as shown by Table 12. The low charge, $0, was made by the University of Kansas, and the high charge, $150, by the

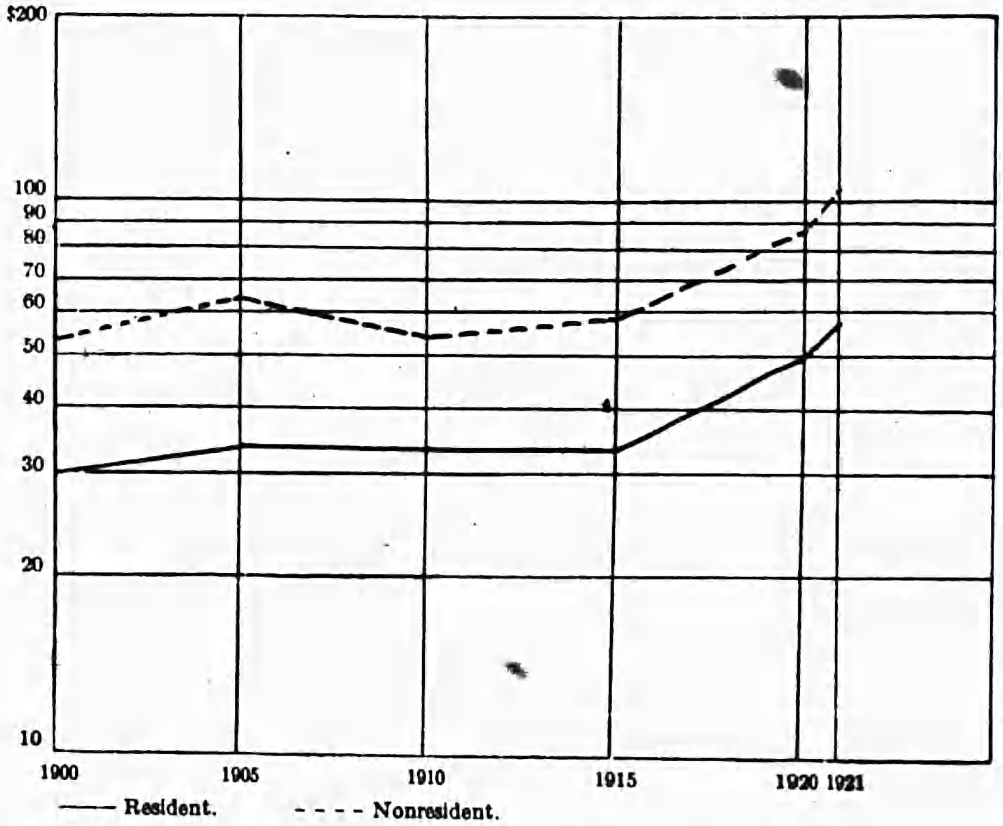

CHART III.—State colleges and universities, engineering. Average tuition or fixed charges for resident and nonresident students

medical college of the University of Georgia. The average fixed charge for residents in medicine for 1921 was $139, representing a total increase in average charge for residents in medicine from 1900 to 1921 of $60, or 76 per cent.

For nonresident tuition the average charge in 1900 was $83, with low charge $25 at the University of Kansas, and the high charge $128 at the University of Virginia. In 1921 the average charge for nonresidents was $182, a total increase over the 1900 average of $99, or 120 per cent. The low charge, $70, for 1921 was made by the Universities of Arizona and Missouri; while the high charge, $500, was

made by the University of California. So far as data were available this nonresident charge is the highest fee for medicine charged in either privately endowed or State universities in the United States.

Chart IV shows the trends in average tuition or fixed charges in medicine for those institutions of these same 24 State colleges and universities maintaining schools of medicine. This graph shows that there has been little difference between the average fixed charges for residents and nonresidents during the entire period, although the difference is more marked between the years 1920 and 1921 than previously. Tuition also in medicine has been uniformly higher since the beginning of the period for both residents and nonresidents

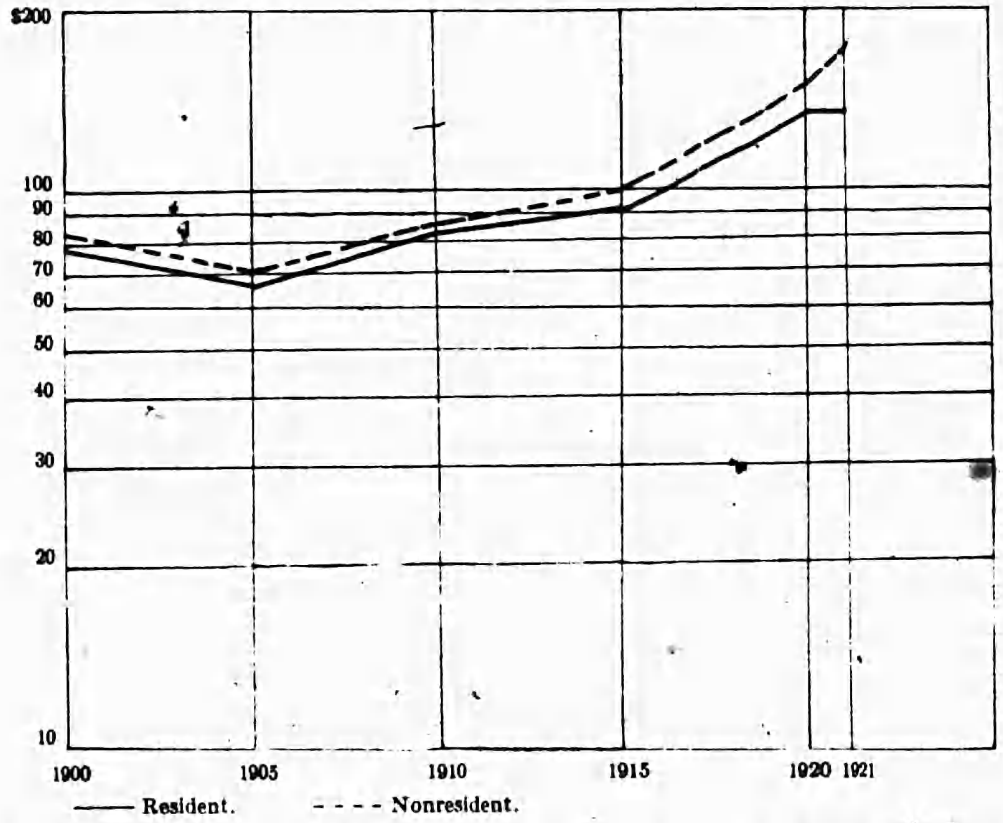

CHART IV.—State colleges and universities, medicine. Average tuition or fixed charges for resident and nonresident students

than in the arts and sciences or law course. The average tuition in this course began around $80 in 1900, dropped to about $70 in 1905, and since then has steadily increased.

It was possible to secure data on the charges at six of the dental schools maintained by these institutions for a part or all of this period. In 1900, Chart V shows the average resident fee in dentistry, excluding laboratory charges, was $78. The low fee, that of Michigan, was $35, while both the Universities of Illinois and Minnesota charged $160.

TABLE 13.—*State colleges and universities—Trends in fixed charges at State institutions regarded as typical, 1900–1921—Dentistry*

Institution	1900		1905		1910		1915		1920		1921	
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
University of California											$150	$170
University of Illinois	$100	$100	$100	$100	$155	$155	$150	$150	$120	$120	120	120
State University of Iowa			50	50	50	50	100	130	170	195	170	195
University of Minnesota	100	100	150	150	150	150	150	150	180	210	180	210
University of Michigan	35	45	45	55	55	75	77	107	140	175	140	200
Ohio State University									187½	187½	137½	237½
Average	78	81	86	88	102	108	119	134	149	177	150	188

In 1921 the average charge was $150 for residents. The low charge for 1921, $120, was made by the University of Illinois, while the high charge was $180, at the University of Minnesota. The total

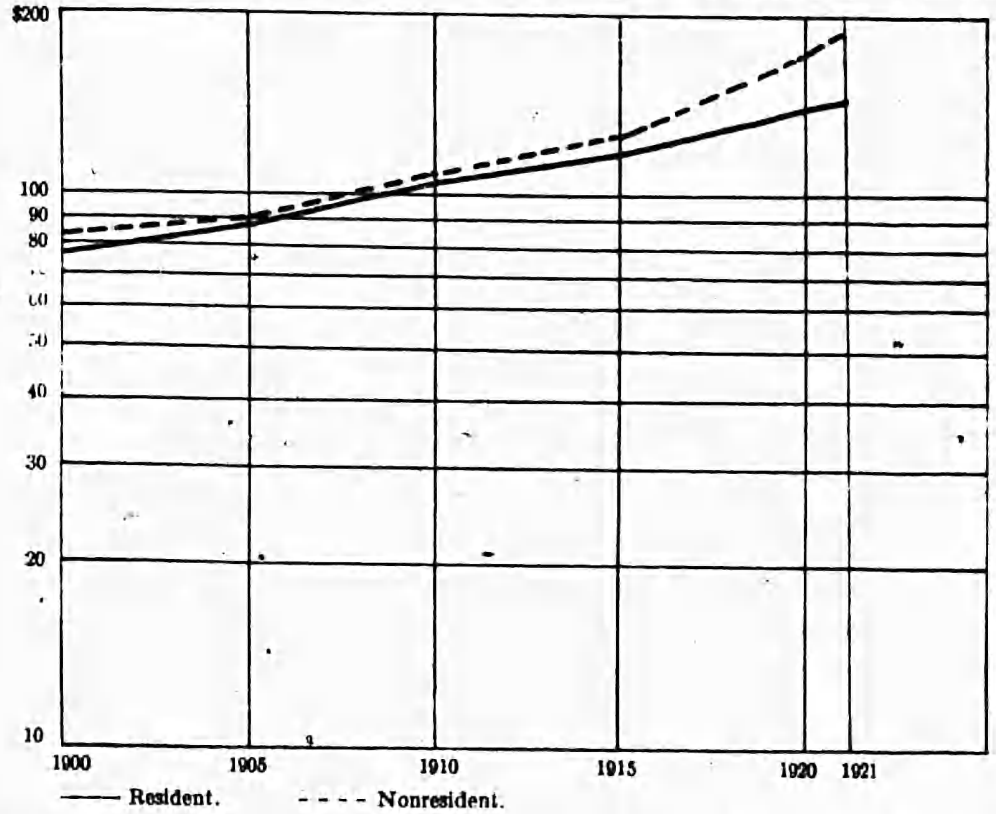

CHART V.—State colleges and universities, dentistry. Average tuition or fixed charges for resident and nonresident students

increase from 1900 to 1921 in average resident fixed charge for dentistry was $72, or 92 per cent.

For nonresidents the average fixed charge in 1900 for dentistry was $81, with the lowest, $45, at the University of Michigan, and the highest, $100, at Illinois and Minnesota. In 1921 the average fixed charge was $188, a total increase of $107, or 132 per cent. The lowest charge, $120, in 1921, was made by the University of Illinois, while the highest was $237.50, at Ohio State University.

Chart V shows the average tuition or fixed charges in dentistry fo colleges maintained by these same institutions. Dentistry charges

for both nonresidents and residents were practically the same from 1900 till 1910, while those for nonresidents have been increasing more rapidly since that date.

It was possible to secure data concerning fixed charges, excluding laboratory fees, for residents and nonresidents for pharmacy for part or all of the same years for nine of these institutions. In 1900 Table 13 shows the average resident fee for the three institutions represented that year was $35.

Purdue University charged the lowest pharmacy charge, $10. The University of North Carolina had the high charge, $60. In 1921 the average charge had increased to $69. The total increase over 1900 in average fixed charge for residents in pharmacy was $34, or 97 per cent. The low charge, $16, in 1921, was made at Purdue, and the high, $140, at the University of California.

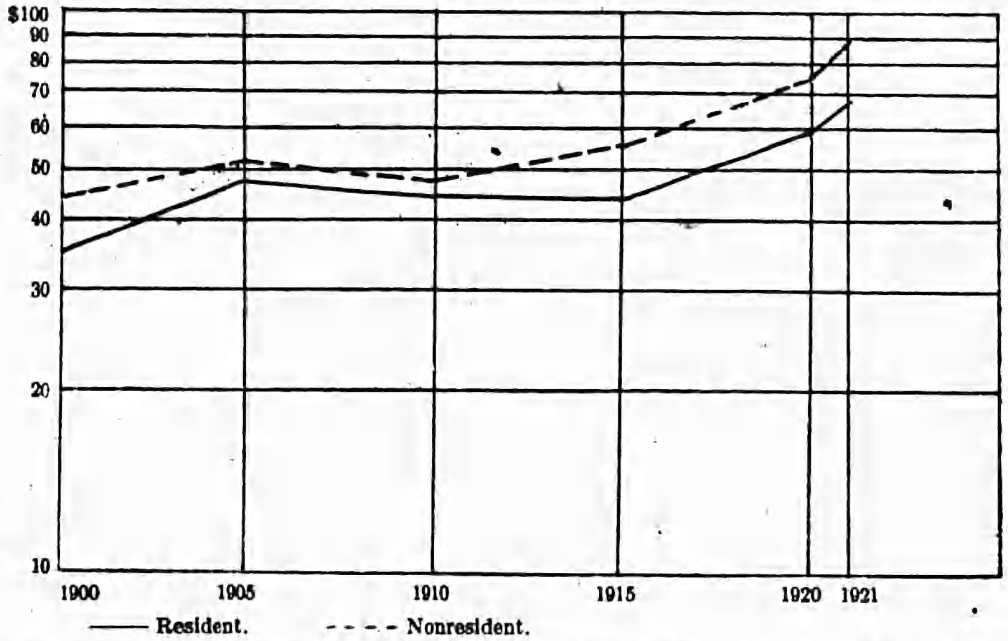

CHART VI.—State colleges and universities, pharmacy. Average tuition or fixed charges for resident and nonresident students

For nonresidents in pharmacy, the average charge in 1900 was $43. In 1921 it was $90, a total increase of $47, or 109 per cent. In 1921 the low charge, $36, was made at Purdue University, and the high charge, $160, by the University of California.

In addition to the trends of increases, Table 14 shows that during the period 1900 to 1910 the actual average increase in amount as well as per cent was greater for nonresidents than for residents at these institutions in arts, sciences, and other courses, and in law and dentistry, while the increases for residents during this same period were greater in engineering, medicine, and pharmacy. Since 1910 the increases in average charges have been higher for nonresidents in all these cases. For the period 1900–1921 the increase in per cent of average charges for nonresidents above residents was 100 per cent in

arts, sciences, and other courses; 64 per cent in law; 6 per cent in engineering; 45 per cent in medicine; and 12 per cent in pharmacy.

Chart VI shows the average tuition or fixed charges for residents and nonresidents in schools of pharmacy maintained by these institutions. The average tuition for residents started at $35 and for nonresidents at $43. Increases during the period for both residents and nonresidents have been similar. A large part of the increase in the charges for both has taken place since 1915. Fixed charges for residents and nonresidents during the period practically doubled.

Data were not available for enough institutions concerning the charges in the graduate school and business administration to make averages meaningful.

TABLE 14.—*State colleges and universities—Trends—Average tuition and fixed charges at State colleges regarded as typical, 1900–1921—Low, average, high—Increases*

School and rank	1900		1905		1910		1915		1920		1921	
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
Arts and sciences:												
Lowest	0	0	0	0	0	$10	$3	$3	$3	$3	$10	$51
Average	$16	$27	$20	$42	$22	44	24	52	39	75	47	106
Highest	65	120	60	135	73	125	75	154	96	175	125	200
Law:												
Lowest	0	10	10	10	15	20	18	24	21	30	30	45
Average	51	53	47	49	53	63	52	67	64	93	79	116
Highest	140	140	70	100	140	140	140	154	175	175	200	200
Engineering:												
Lowest	0	0	9	20	0	20	2	2	2	2	10	36
Average	30	53	34	64	33	55	33	59	49	85	57	104
Highest	140	140	115	135	70	125	85	145	128	210	140	200
Medicine:												
Lowest	0	25	10	10	20	20	24	35	30	50	50	70
Average	79	83	68	70	83	84	91	97	140	153	139	182
Highest	150	150	128	128	150	150	150	150	201	210	201	210
Dentistry:												
Lowest	35	45	45	50	50	50	77	107	120	120	120	120
Average	78	81	86	88	102	108	119	134	149	177	150	188
Highest	100	100	150	150	155	155	150	150	180	210	180	238
Pharmacy:												
Lowest	10	25	10	25	10	25	11	26	11	26	11	36
Average	35	43	47	51	45	49	45	55	59	76	69	90
Highest	60	60	60	60	60	60	60	80	95	120	140	160

AVERAGE INCREASE

	1900–1910				1910–1921				1900–1921			
	Amount		Per cent		Amount		Per cent		Amount		Per cent	
	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident	Resident	Nonresident
Arts and sciences	$6	$17	37	63	$25	$62	114	141	$31	$79	193	293
Law	2	10	4	19	26	53	49	83	28	63	55	119
Engineering	3	2	10	4	24	49	73	88	27	51	90	96
Medicine	4	1	5	1	56	98	67	117	60	99	75	120
Dentistry	24	27	31	33	48	80	47	74	72	107	92	132
Pharmacy	10	6	28	14	24	41	53	83	34	47	97	109

PRIVATELY ENDOWED INSTITUTIONS

Table 15 gives data on the annual tuition and fixed charges at eight different privately endowed institutions located in different sections of the United States. These institutions will be generally conceded to be institutions that are maintaining high standards. They are also institutions that offer, in most cases, several professional courses in addition to their arts, sciences, and other undergraduate courses for which the same fixed charge is made. One college for women, Bryn Mawr, is included.

TABLE 15.—*Privately endowed institutions—Tuition and fee trends, 1900–1921*

Institution	Year	Tuition and fees[1]													
		Registration or matriculation	Arts and sciences	Medical fee	Law	Engineering	Medicine	Dentistry	Pharmacy	Agriculture	Commerce and business	Applied science	School of education	Veterinary medicine	Graduate school
Harvard University, Massachusetts.	1900	....	$150	....	$150	$150	$200	[2]$200 150		$150	....	....	....	$150	$150
	1905	....	150	$4	150	150	200	200 150	....	150	....	....	....	....	150
	1910	....	150	4	150	175	200	200 150	....	....	$150	....	....	....	150
	1915	....	150	4	150	250	225	200 150	....	....	150	....	....	....	150
	1920	....	200	....	200	200	225	200 150	....	....	250	....	....	....	200
	1921	....	200	....	200	200	225	200 150	....	....	250	....	....	....	200
Columbia University, New York.	1900	$5	150	....	150	200	200	.....	.....	.....	.....	$200	....	....	150
	1905	5	150	....	150	250	250	.....	.....	.....	.....	250	....	....	150
	1910	5	(3)	....	150	250	250	.....	.....	.....	.....	250	....	....	150
	1915	5	(3)	....	150	250	250	.....	.....	.....	.....	(3)	....	....	(3)
	1920	10	(4)	....	(4)	(4)	(4)	.....	.....	.....	(4)	(4)	....	....	(4)
	1921	12	(5)	....	(5)	(5)	(5)	.....	.....	.....	(5)	(5)	....	....	(5)
University of Chicago, Illinois	1900	5	120	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120
	1905	5	120	....	150	....	.....	.....	.....	.....	.....	.....	.....	.....	120
	1910	5	120	....	150	....	180	.....	.....	.....	.....	.....	.....	.....	120
	1915	5	120	....	150	....	180	.....	.....	.....	.....	.....	.....	.....	120
	1920	5	150	....	150	....	180	.....	.....	.....	150	....	$150	....	120
	1921	5	150	....	195	....	225	.....	.....	.....	210	....	150	....	150
Leland Stanford Junior University, California.	1900	....	20	....	20	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1905	....	20	....	20	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1910	....	30	....	10	30	150	.....	.....	.....	.....	.....	.....	.....	.....
	1915	....	60	....	150	60	150	.....	.....	.....	.....	.....	.....	.....	.....
	1920	....	120	....	159	159	159	.....	.....	.....	.....	.....	.....	.....	159
	1921	....	285	....	195	285	255	.....	.....	.....	.....	.....	.....	.....	159
Johns Hopkins University, Maryland.	1900	5	150	....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....
	1905	5	150	....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....
	1910	5	150	....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....
	1915	5	150	....	.....	150	240	.....	.....	.....	.....	.....	.....	.....	.....
	1920	5	200	....	.....	200	250	.....	.....	.....	.....	.....	.....	.....	200
	1921	5	250	....	.....	250	300	.....	.....	.....	.....	.....	.....	.....	250
Vanderbilt University, Tennessee.	1900	....	100	....	100	100	100	105	$105	.....	.....	.....	.....	.....	.....
	1905	....	100	....	110	100	100	105	105	.....	.....	.....	.....	.....	.....
	1910	....	100	....	110	100	100	150	105	.....	.....	.....	.....	.....	.....
	1915	....	105	....	150	105	150	155	110	.....	.....	.....	.....	.....	.....
	1920	....	150	....	175	150	150	180	.....	.....	.....	.....	.....	.....	.....
	1921	....	150	....	175	150	[6]165 190	215	.....	.....	.....	.....	.....	.....	.....

[1] There is a system of laboratory fees at each of these institutions; Columbia charges a fee to cover the cost of materials.
[2] $200 first and second year, $150 third year.
[3] $5 per point taken; maximum $100.
[4] $6 per point; normal load of 32 points, $192.
[5] $8 per point; normal load of 32 points, $256.
[6] $165 first, second, and third year; $190 fourth year.

TABLE 15.—*Privately endowed institutions—Tuition and fee trends, 1900–1921*—Continued

Institution	Year	Tuition and fees													
		Registration or matriculation	Arts and sciences	Medical fee	Law	Engineering	Medicine	Dentistry	Pharmacy	Agriculture	Commerce and business	Applied science	School of education	Veterinary medicine	Graduate school
Bryn Mawr College, Pennsylvania.	1900	....	$150	....	....	....	....	....	....	....	....	....	....	....	....
	1905	....	200	....	....	....	....	....	....	....	....	....	....	....	$125
	1910	....	200	$5	....	....	....	....	....	....	....	....	....	....	125
	1915	....	200	10	....	....	....	....	....	....	....	....	....	....	125
	1920	....	[7] 200	10	....	....	....	....	....	....	....	....	....	....	125
	1921	....	300	20	....	....	....	....	....	....	....	....	....	....	[7] 125
Cornell University, New York.	1900	....	100	....	$100	$125	$150	....	....	[8] $100	....	....	....	$100	200
	1905	....	100	....	100	125	150	....	....	100	....	....	....	100	100
	1910	$5	100	4	100	150	150	....	....	100	....	....	....	100	[9] 125
	1915	5	125	6	100	150	125	....	....	125	....	....	....	100	[9] 100
	1920	10	200	10	200	200	200	....	....	200	....	....	....	200	[9] 150
	1921	10	200	10	200	200	200	....	....	200	....	....	....	200	(10)

[7] An emergency fee of $100 additional was collected in 1920.
[8] Nonresident charge.
[9] Graduate technical work.
[10] Same as undergraduate college in which major work lies.

These institutions were not selected in order to draw exact comparisons between the fixed charges in these institutions and the State-supported institutions, but rather to show the trends in charges and the percentage of increase, if any, in these privately endowed institutions over the same years—1900, 1905, 1910, 1915, 1920, 1921.

All of these institutions charge fees in laboratory courses. Columbia makes the statement in her catalogue that the charge for the cost of material actually used will be made in laboratory courses; in some other cases, fixed laboratory fees in connection with certain courses, but as such fees were not obtainable for all the institutions offering the course, the fee was omitted. Since 1920, Columbia charges a registration or university fee, which is collected at each registration in all courses. The registration, or matriculation, fee listed for the other institutions is collected but once. In a few cases an annual charge under the head of medical fee, in addition to the tuition charge, is made; and these annual fixed charges are added to the tuition charge in order to get the figure used for that year in obtaining the average fixed charge for the arts and science course. However, where it is not clear that these extra charges were collected from students taking professional courses, they are not added to the given charge for the professional course.

Cornell University is, of course, listed as a State-aided institution, and it is also a privately endowed institution. All charges given here are for those not holding State scholarships, or for nonresidents of the State of New York, in the colleges of agriculture and veterinary medicine, which are the only State-supported colleges at Cornell.

Leland Stanford Junior University made incidental charges only through 1910, as shown on Table 15, and these were included under the head of tuition and fixed fees.

TABLE 16.—*Privately endowed institutions—Trends in fixed charges, 1900-1921—Arts and sciences, law, engineering, medicine, graduate school*

ARTS AND SCIENCES

	1900	1905	1910	1915	1920	1921
Harvard University	$150	$154	$154	$154	$200	$200
Columbia University	150	150	100	100	202	268
Chicago University	120	120	120	120	150	150
Leland Stanford Junior University	20	20	30	60	120	285
Johns Hopkins University	150	150	150	150	200	250
Vanderbilt University	100	100	100	105	150	150
Bryn Mawr College	150	200	205	210	310	320
Cornell University	100	100	104	132	210	210
Average	118	125	121	130	192	229

LAW

Harvard University	$150	$150	$150	$150	$200	$200
Columbia University	150	150	150	150	202	268
Chicago University	.....	150	150	150	150	195
Leland Stanford Junior University	20	20	10	150	159	195
Vanderbilt University	100	110	110	150	175	175
Cornell University	100	100	100	100	200	200
Average	104	114	112	141	179	205

ENGINEERING

Harvard University	$150	$150	$175	$250	$200	$200
Columbia University	200	250	250	250	202	268
Leland Stanford Junior University	20	20	30	60	159	285
Johns Hopkins University	.....	.....	.....	150	200	250
Vanderbilt University	100	100	100	105	150	150
Cornell University	125	125	150	150	200	200
Average	120	130	141	162	184	225

MEDICINE

Harvard University	$200	$200	$200	$225	$225	$225
Columbia University	200	250	250	250	202	268
Chicago University	.....	.....	180	180	180	225
Leland Stanford Junior University	.....	.....	150	150	159	235
Johns Hopkins University	200	200	200	240	250	300
Vanderbilt University	100	100	100	150	150	171
Cornell University	150	150	150	125	200	200
Average	171	181	176	189	194	235

GRADUATE SCHOOL

Harvard University	$150	$150	$150	$150	$200	$200
Columbia University	155	155	155	105	202	268
Chicago University	120	120	120	120	120	150
Johns Hopkins University	.....	.....	.....	.....	200	250
Bryn Mawr College	125	125	125	125	225	300
Cornell University	100	100	100	125	.....	75
Leland Stanford Junior University	.....	.....	.....	.....	159	159
Average	130	130	130	125	184	188

The average charge in arts and sciences for these eight institutions in 1900, excluding laboratory fees, was $118. In 1910 it had increased to $121, or 2 per cent. Columbia had in reality lowered her fee $50, while Bryn Mawr had raised hers $55, and Harvard's charge had increased $54. The lowest fee, $20, in 1900, had been charged at Leland Stanford, while four institutions made the high charge of $150. In 1910 the low charge, $30, was made by Stanford and the high charge, $205, by Bryn Mawr.

In 1921 the average charge had increased to $229 in arts and sciences. This was an increase of $108 over 1910, or 89 per cent. It was also an increase of $38 over the 1920 charge. The total increase in average charges from 1910 to 1921 was $100, or 90 per cent. The low charge, $150, in 1921, was made by the University of Chicago and Vanderbilt University, while the high charge was made by Bryn Mawr, $320. The most noticeable increase during the period was that of Leland Stanford Junior, which had charged but $20 a year incidental fee in 1900, but in 1921 charged a total fee of $285. Bryn Mawr's charge increased from $150 to $320 during the period.

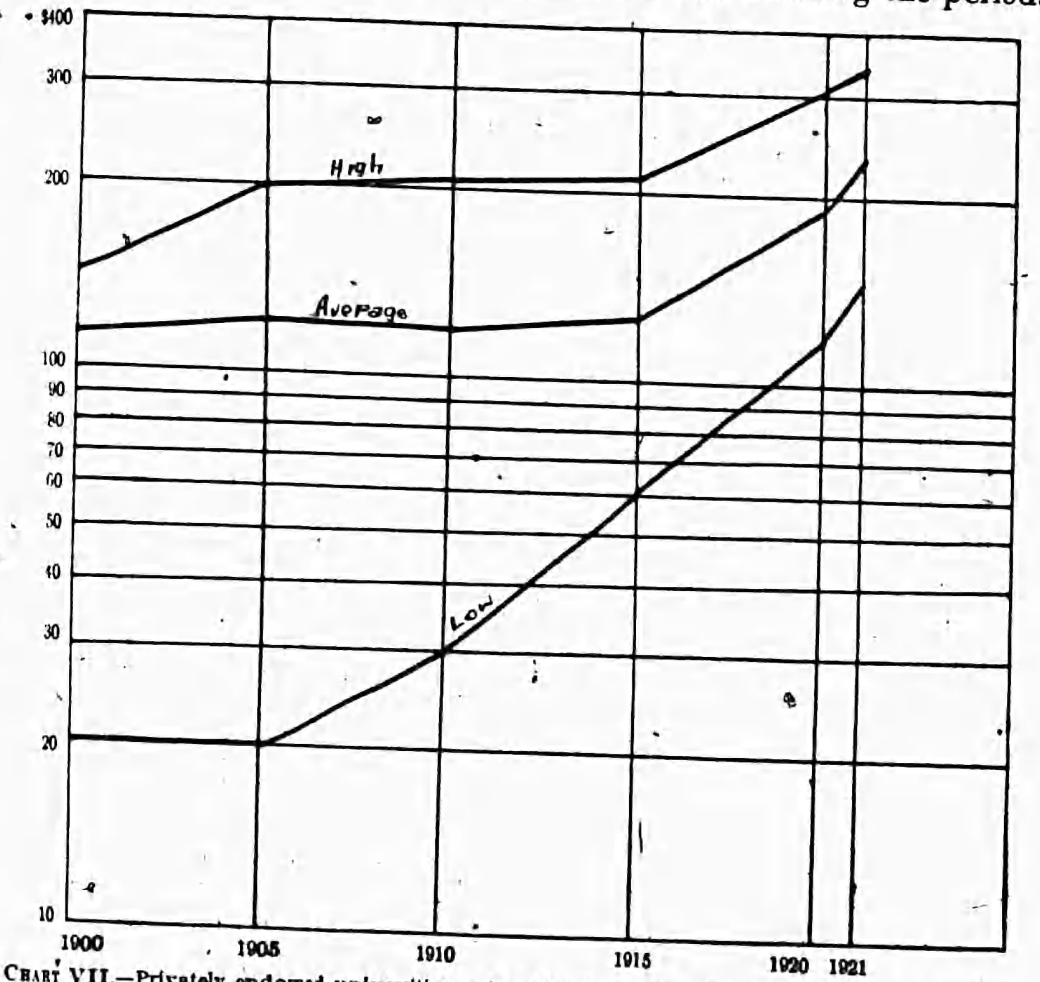

CHART VII.—Privately endowed universities, arts and sciences. Tuition or fixed charges for regular students

Another change worth noticing was inaugurated by Columbia. This was the charging of $5 per point taken with a maximum charge of $100 for undergraduate, nonprofessional courses during the 1910 and 1915 period, included in this table. The charge in all courses, including the professional schools, is now $8 per point for each point elected.

Chart VII shows the high, average, and low tuition or fixed charge in arts and sciences for regular students in eight privately endowed

institutions. While the low tuition in 1900 was $20, the average tuition $118, and the high $150, the low charge since 1905 has maintained a sharp rise, the average charge from the beginning till 1915 remained practically horizontal, as did the high charge from 1905 to 1915. It is interesting to note that the low charge for these institutions in 1921 has taken the place of the average charge, $150, up till 1915; and the average charge in 1921, $229, has now taken the place held previously to 1915 by the high charge, while the high charge in 1921 has advanced to $320.

In law, the average fixed charge in 1900 was $104. The low fee, $20, was charged by Leland Stanford, and the high fee, $150, by Columbia and Harvard. The average law fee had been increased to $112 in 1910, with the low fee, $10, charged by Stanford, and the high fee, $150, charged by Chicago, Harvard, and Columbia.

TABLE 17.—*Privately endowed universities—Average tuition or fixed charges, 1900–1921, low, average, high*

School and rank	1900	1905	1910	1915	1920	1921
Arts and sciences:						
Lowest	$20	$20	$30	$60	$120	$150
Average	118	125	121	130	192	229
Highest	150	200	205	210	310	320
Law:						
Lowest	20	20	10	100	150	175
Average	104	114	112	141	179	204
Highest	150	150	150	150	200	268
Engineering:						
Lowest	20	20	30	60	150	150
Average	120	130	142	161	184	225
Highest	200	250	250	250	200	285
Medicine:						
Lowest	100	100	100	125	150	171
Average	171	181	176	189	195	235
Highest	200	250	250	250	250	268
Graduate school:						
Lowest	100	100	100	100	120	75
Average	130	130	130	125	184	186
Highest	150	150	150	150	225	268

AVERAGE INCREASE

	1900–1910		1910–1921		1900–1921	
		Per cent		*Per cent*		*Per cent*
Arts and sciences	$3	2	$108	89	$111	90
Law	8	8	92	82	100	96
Engineering	22	19	83	58	105	87
Medicine	5	3	59	33	64	37
Graduate school	0	0	56	48	56	48

The average increase was $8, or 8 per cent. The average charge of 1921 was $204, an increase of $92, or 82 per cent. This was also an increase over 1920 of $25. There was a total increase in the average charge for law at these institutions of $100, or 96 per cent, during the period 1900 to 1921. The low charge, $175, in 1921 was made by Vanderbilt, and the high charge, $268, by Columbia.

Chart VIII shows the high, average, and low charges for the colleges of law maintained by these privately endowed institutions. The low charge up till 1915 showed great irregularities. The curve for the average and high charges, which began with $104 and with $150, respectively, gradually drew together till 1915, since which time all three trends have maintained practically parallel courses. In 1921 they are closely grouped together with a low charge for law, $175, the average $224, and the high $268.

In engineering the average charge, excluding laboratory fees, for 1900 was $120, with the low charge, $20, made at Leland Stanford,

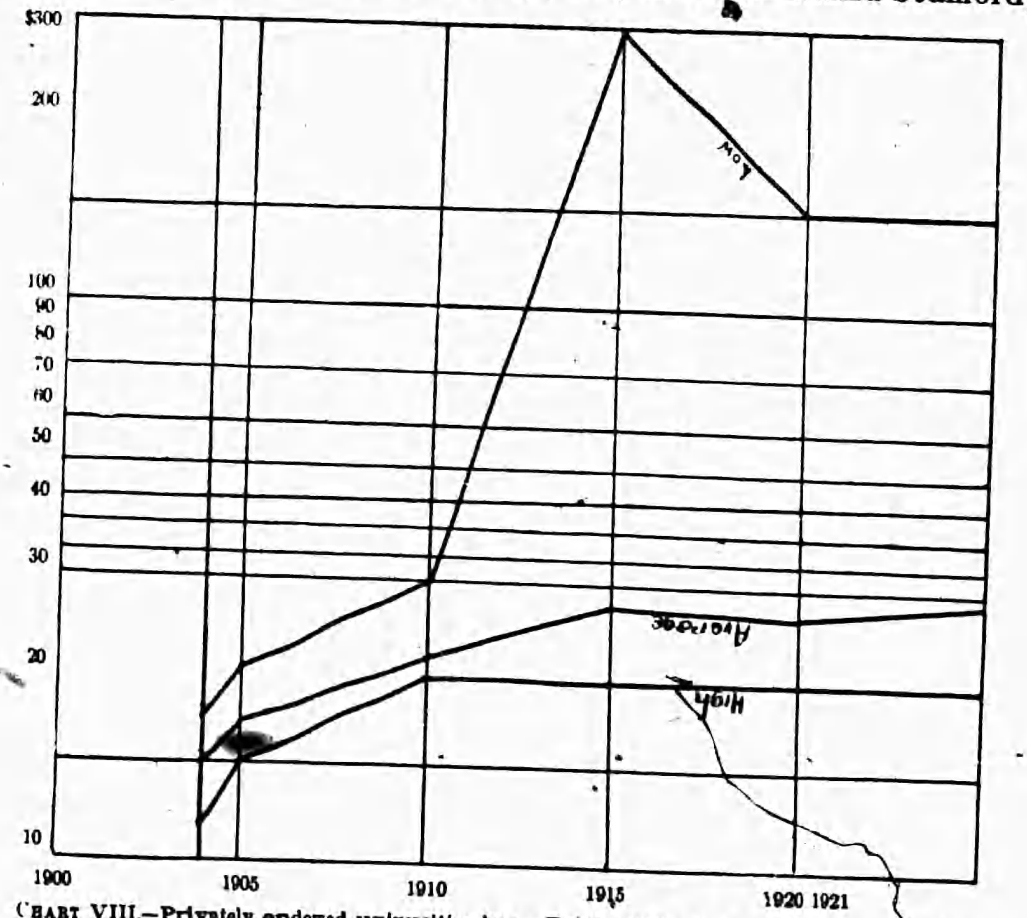

CHART VIII.—Privately endowed universities, law. Tuition or fixed charges for regular students

and the high, $200, by Columbia. In 1921 the average charge was $225, with the low charge, $150, at Vanderbilt, and the high, $285, at Leland Stanford. All the charges were $200 or above, except at Vanderbilt, in 1921. There was a total increase for the period from 1910 to 1921 of $105, or 87 per cent.

Chart IX shows the trends of tuition or fixed charges for engineering in schools maintained by these same eight institutions. At the beginning of the period the low charge, $20, the average charge, $120, and the high charge, $200, were far apart. The low charge has increased rapidly from 1905 till 1920, while the average charge has shown a very gradual increase until 1920, when it took a sharp rise. The

sharpest incline, however, between 1920 and 1921 is shown in the high trend.

In medicine the average charge in 1900, excluding laboratory fees, was $171. The low charge, $100, was made by Vanderbilt, and the high, $200, by Columbia. In 1921 the average charge was $235, with the low charge, $171, at Vanderbilt, and the high, $268, at Columbia. There was a total increase of $64 in average charge during the period, or 37 per cent. The largest average increase, $40 in medicine, came between 1920 and 1921.

Chart X shows the trends in average, low, and high tuition or fixed charges in the medical schools maintained by seven of these institu-

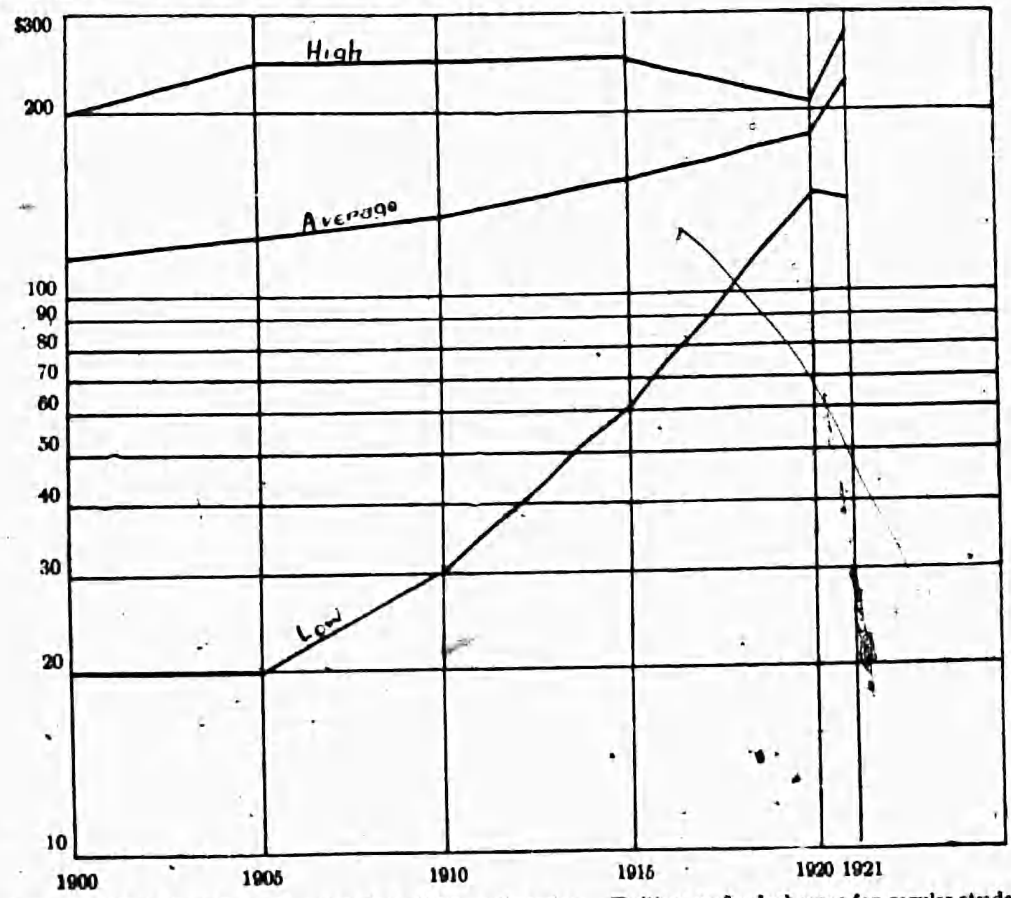

CHART IX.—Privately endowed universities, engineering. Tuition or fixed charges for regular students

tions. These trends do not manifest as marked changes as did the trends in the arts and sciences and law. They began at a higher level, the low charge in 1900 being $100, the average charge $171, and the high charge $200. The average and low curves begin to advance in 1910 and continue to the present, the sharpest rise being between 1920 and 1921, while the high charge remained at the same level till 1920, when it also was raised slightly. For law the tendency for the three curves was to come closer together in 1921.

Average charges in the graduate schools were the same, $130, for 1900, 1905, and 1910 in these institutions. In 1921 the average

charge was $186, which was an increase of $56, or 48 per cent. Cornell lowered the fee in the graduate school from $125 in 1915 to $75 in 1921. The low fee, $100 in 1900, was made at Cornell; and the high, $155, at Columbia. In 1921 the low fee, $75, was made at Cornell; and the high, $272, at Columbia.

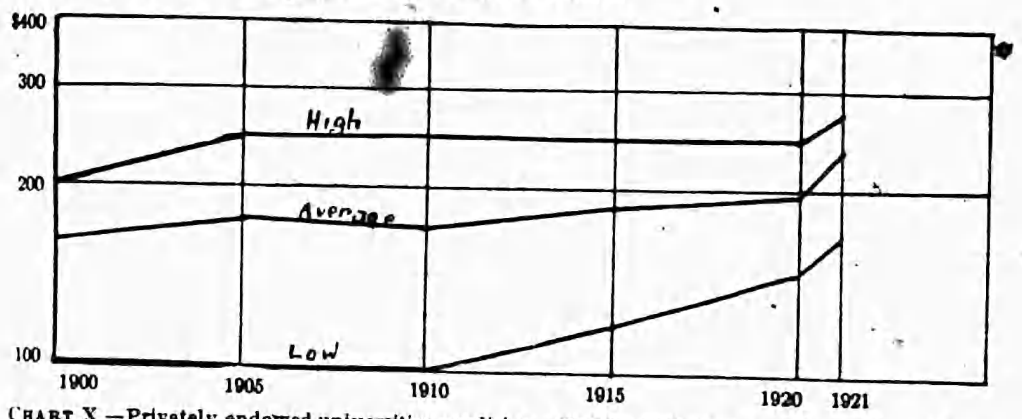

CHART X.—Privately endowed universities, medicine. Tuition or fixed charges for regular students

Trends in tuition or fixed charges for graduate schools are shown by Chart XI. Low, high, and average trends started fairly closely together in 1900 and remained so until 1915, since which time the average and high trends have shown a marked rise, while the low charge fell markedly in 1921. As yet there seems to be no very settled policy concerning the charging of graduate tuition and fixed charges in many institutions.

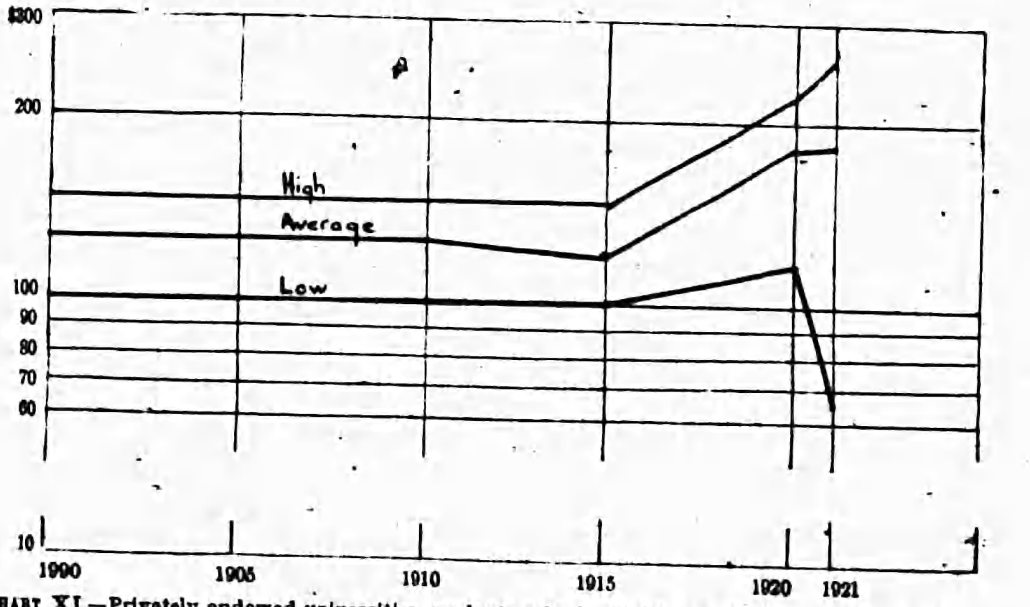

CHART XI.—Privately endowed universities, graduate school. Tuition or fixed charges for regular students

SCHOLARSHIPS AND LOAN FUNDS

Scholarships at these various State institutions provided out of State funds for undergraduate courses are awarded on the following four distinct bases, according to the information gathered from the catalogues of the various institutions for 1920 to 1922: (1) Honor

scholarships, for accredited high-school graduates of high rank; (2) distributive scholarships, giving each county or unit of the State a proportionate number without regard to need or scholastic rank; (3) beneficiary scholarships for capable and worthy but needy students; (4) scholarships for those preparing for specific lines of work or professions.

Table 2 shows that 47 of the State colleges and universities have systems of State scholarships. In addition to a State system, some of these institutions have many privately endowed scholarships These State scholarships vary greatly in value and in the system of award. Arkansas awards one honor scholarship to each fully accredited State high school. Arizona offers one $150 honor scholarship to be awarded by competitive examination to each county in the State, but only one such scholarship can be in force at one time. The University of Colorado remits $30 of the annual tuition to honor graduates of four-year high schools on the following bases: (1) To graduating classes of 10 or less, one scholarship to first or second in rank; (2) to graduating classes of 10 to 25, one scholarship to one of first five in rank; (3) to graduating classes of 25 to 50, two scholarships to any of first six in rank; (4) to graduating classes of 50 to 100, three scholarships to any of first nine in rank; (5) to graduating classes of over 100, four scholarships to any of first 12 in rank. This is an attempt to improve the basis of distribution. Illinois grants one competitive scholarship providing free instruction for four years to each county. The Iowa State College of Agriculture grants one honor scholarship to each approved four-year high school. Missouri remits fees for a year's work to the first-honor graduates of accredited high schools, normal schools, and junior colleges. Montana allows the principal of each fully accredited high school to nominate from one to four graduates (but not more than two to any one higher institution) for honor scholarships. Appointees pay none of the customary fees in any of the State's institutions. New Jersey provides one competitive honor scholarship in agriculture for each State representative. North Dakota Agricultural College provides one scholarship to the first-honor graduate of each State-accredited four-year high school. Pennsylvania State College has the same system, and her scholarships are of the value of the $50 incidental fee charge. New York's competitive scholarship system provides that 3,000 students may be granted $100 for tuition purposes at any of the colleges in the State. About 750 of them are available for new students annually. New Jersey offers at Rutgers as many free competitive scholarships as there are representatives in the State legislature, while a certain number of qualified additional students are exempted from tuition on the recommendation of the county school superintendents.

Some of the institutions offer both honor scholarships and distributive scholarships. Distributive scholarships are most frequently awarded by members of the State legislature either by the senators or representatives. Arkansas provides 1,000 free scholarships, distributed to the counties on the basis of population. Appointments are made by the county judge. Georgia School of Technology gives free tuition to 15 students from each county of the State, but these are assigned by the administration or faculty. For each of the South Dakota institutions, each State senator may appoint two students for scholarships and each representative may appoint one. For Texas Agricultural and Mechanical College there may be three scholarship students from each State senatorial district. One-half of these students must take the agricultural course and the other half the mechanical course.

Vermont offers, at the University of Vermont, 90 scholarships of the value of $120 for two-year periods. Appointments are made by the State senators. Purdue University is empowered to offer two scholarships to high-school graduates of each Indiana county, which release from the payment of all room, light, and other fees for men or women. The appointment is made by the county commissioner. New Hampshire offers 24 senatorial scholarships of the value of tuition, $75, appointment being made by the State senators, and there is also a scholarship of the same value available, so that each subordinate and Pomona Grange of the State may recommend a candidate. Each State senator in Pennsylvania may annually appoint one qualified student to free tuition in any college of the State. At Pennsylvania State College this amounts to the canceling of the $30 incidental fee. The Illinois law permits each member of the general assembly to appoint annually one eligible student from his district to a free scholarship at the University of Illinois. This scholarship cancels the matriculation fee and the annual incidental fee of $50 for four years. Virginia Polytechnic Institute offers by law a number of scholarships equal to four times the number of members of the house of delegates, to be apportioned in same manner, free tuition, use of laboratories, and use of public buildings.

A number of States provide beneficiary scholarships. The New Hampshire law provides that the State college shall furnish free tuition so far as practicable to indigent students. The South Carolina law fixes tuition at $40 a year at the university, Clemson, and the Citadel, but provides that "except in law the faculty may grant beneficiary scholarships to deserving youths who may be unable to pay tuition." At the Citadel, tuition is the same, while each county is entitled to at least one beneficiary scholarship. The law of North Carolina reads that the board of trustees shall admit free of tuition 120 youths "or a number equal to the representatives in the State's

lower house, who are qualified but unable to pay such tuition." The law of Texas reads that the "admission fee shall not exceed $30, and male and female students may be admitted free under the regulations prescribed by the regents." Eight per cent of the nonresident students at the University of Wisconsin may legally be relieved of the tuition, but not of incidental fees. Ten per cent of the resident students who may be unable to pay the present entrance fee of $25 at the Utah Agricultural College may, by law, have this fee abated.

A number of the State colleges have provided free tuition for those students preparing to enter certain lines of work. In several States higher education in agriculture was provided free of tuition before any other higher education was so provided. North Carolina University gives free tuition to those in the normal department preparing to teach, and the University of Utah does the same.

The University of South Carolina and the Citadel may remit tuition fees to those preparing to teach and who agree to teach two years. At the Citadel such students must give bond to teach two years. There are 119 State teacher's scholarships at the University of Virginia, one for each school division of the State. These were established in 1918 and entitle the holder to free lodging, heat, light, and janitor service in dormitories. A holder of one for two years must pledge to teach two years in the State. At the Virginia Military College not over 50 cadets are entitled by law to free tuition and they must repay it by teaching two years, serving in the State militia or serving as an engineer on the public roads. The College of William and Mary has 132 scholarships of the value of $58 provided by State aid for those preparing to teach.

The University of North Carolina gives free tuition to sons of ministers, and the University of Kentucky offers free tuition to candidates for the ministry. Each county of Kentucky is entitled to have, for each 3,000 white school children, or fraction over 1,500, one student at the State university free from all charges of tuition, fees, rent, light, and fuel.

In addition to these various scholarships, many of the State legislatures have provided free tuition for all residents of their States who served in the World War.

The University of Iowa is authorized to grant free tuition to any student who gets three trustworthy citizens of his home community to state that he is unable to pay tuition. The law relating to tuition and fees for the University of Maine made provision that the tuition of those students unable to pay it might be canceled. For some years following 1900 it was the custom at Maine to take interest-bearing notes signed by three owners of property for deferred tuition, but because the system worked poorly this was abandoned.

The State of Washington, in 1920, was forced to change from offering free tuition to charging tuition in both of its State institutions.

At the University of Washington a new system has been inaugurated which will perhaps set a precedent for many other State universities. A student who proves himself capable of doing good university work may after one term's residence defer payment of his tuition by giving his own note. This system has been established less than three years, but it is at present reported to be giving entire satisfaction.

Both Montana and Tennessee attempt to put higher education nearer the doors of qualified students by remitting part of one round-trip railroad fare to their State institutions. Montana remits all but $5 of this expense.

Besides the scholarship systems discussed, Table 2 shows that 53 of these State institutions have student loan funds. These funds vary in size from a few hundred dollars at some of the institutions which have recently started them, to over $75,000 at one of the older and larger institutions. The State of Virginia by law of 1908 ordered 1 per cent of the annual appropriation to the University of Virginia to be set aside for a loan fund for worthy students. Loans to one student are not to exceed $100 per session. The law makes a similar requirement of Virginia Polytechnic Institute.

The loan funds at most of the institutions have been accumulated as donations from private individuals, as the $25,000 Carnegie fund at Pennsylvania State or the large funds at Illinois and Michigan Universities. Others have been given by State organizations and clubs, while others have been raised by alumni associations and by active student body associations. In some cases only the interest from the fund can be used, while in others the entire fund can be let out. Notes of hand, with or without a small interest charge, are usually required. The loans may be used to help defray tuition and fees, or frequently to defray in part a student's general expenses through college. Tremendous good can be accomplished through such trust funds properly administered, and larger funds will be constantly needed with the larger student bodies.

THE FEASIBLE POLICY

Theoretically, America's educational program has been said to be: "Free education from the kindergarten through the university." Even in the lower reaches of the system the different States have varied a great deal in the quantity and quality of free education. This study has shown already that in reality the majority of the various State laws do not provide for free education in their State colleges and universities, and that a number of those that did once so provide, such as Washington, Utah, and South Dakota, have been compelled within the past few years to charge. Other institutions, with a very few exceptions, have gradually been compelled to in-

crease their charges. Graphs showing the steadily increasing liberality of a number of different States in providing a larger and larger proportion of their total State revenue to their higher educational institutions will be introduced later. The question now is, "Whither?" in the matter of charging tuition and fees. Many of these State institutions are now charging fees in their general undergraduate courses that are comparable to the tuition required by the smaller privately endowed institutions 7 to 10 years ago.[3] If the laboratory fees of many of these colleges should be added to the other fixed charges, even at several of the institutions whose fixed charges appear very low, the total would make a very considerable charge. The fees in the professional schools of law, medicine, dentistry, and pharmacy of a number of the State institutions frequently appear much like those in standard privately endowed institutions, and occasionally are as heavy. A glance over the charges listed in Table 9 will show that the Universities of Michigan, Illinois, Minnesota, Iowa, and several other States that have well-established standard professional schools in addition to the general undergraduate courses have found themselves compelled to charge fees of substantial amounts in spite of their desire to provide education at a cost that is within the reach of all who are qualified. Possibly they might have "squeezed and pinched" and have been able to keep charges somewhat lower. But the faculty would have been "cheaper" and the instruction and all other things would have been cheaper, as some States which have followed this procedure have found. Which course is to the advantage of the State and the students? Undoubtedly the institution must be kept a going and growing institution, for the other procedure kills initiative, and the institution becomes stagnant.

No matter what our theory in respect to higher education may be, the question of charging larger fees at the different State institutions will be decided by the economic and practical situations existing in the State and at the State institutions. At a few of the institutions this matter may not be so pressing, but there are few of the State colleges that have not within the past few years been compelled to raise their fixed fees.

The tendencies of the past score of years must be recognized, and an equitable solution of the problem of charges for higher education for all parties concerned must be worked out. The argument that these charges will continue, or perhaps be increased, is based upon the assumption that the present large enrollments will continue and increase at the State institutions. This assumption is based upon the annually increasing number of State-accredited four-year high schools; the annually increasing number of high-school graduates;

[3] Tenth An. Rep., Carnegie Foundation for the Advancement of Teaching.

the rapidly increasing enrollments of State colleges;[4] the trends of State appropriations to State universities and colleges; and the fact that many of the privately endowed institutions have definitely limited their enrollments, and it is their evident plan to so limit them permanently, while for the State institutions any discussion of limitation eventually, from the democratic point of view, simmers down to the elimination of the unfit.

Two fundamental considerations appear basic to this discussion: First, it is unthinkable that the great State university and college systems should be kept from developing, and consequently from leading the States. Secondly, it is equally unthinkable that qualified individuals having the intellectual capacity, but lacking the necessary funds, shall be deprived of a higher education in our American democracy. If we grant the first consideration, it is evident from this study that attention must be given to the second, since the same forces[5] that have been exerted in the past in making calls on the State legislatures for State appropriations will continue. In the past, increases in student enrollment and calls for institutional activity in experimental and extension work have come more rapidly than the State has supplied revenue to keep up the standards.

The trends clearly show a steadily increasing policy to charge nonresident students a larger proportion of the cost of their education. Though it seems desirable to have students from many sections of the Nation in a higher educational institution, yet it may be urged that residents of a State should be taken care of first. As neither the nonresident nor his parent pays direct taxes to the State, it appears fair to make fixed charges of nonresidents higher in arts, sciences, and other general courses, as well as in the professional curricula.

Anyone who views America's democratic institutions as a whole must advocate that the States make fiscal provision so that the highly capable, qualified resident student who happens to lack funds may gain a college education. Such provision would preclude the turning of America's higher educational system into a "class" system, as has been the case in a number of the European States. But does it hold equally that those who can well afford to pay for their higher education should have it provided free in these days when the cost is so large and when the modern State is being called upon to assume, laterally, increasingly heavy fiscal burdens for the public welfare?[6]

Our modern theory of taxation is based on the theory of ability to pay. That individual is expected to pay most, progressively, whose ability to pay is the greatest. The United States income tax provides exemptions up to a certain minimum, and then sets periodic

[4] U. S. Bu. of Educ. Bul., Statistics of State Universities and State Colleges year ending June 30, 1919; Bonner, The Accredited High School, Educ. Rev., June, 1922; Survey, University of Minnesota, 1920.
[5] G. D. H. Cole, The Future of Local Government, 1921; (3) Budget Making, Fitzpatrick, 1918.
[6] G. D. H. Cole, Ibid.

minimums, and incomes above these amounts pay income taxes at progressively higher rates. State income and inheritance taxes follow, in general, the same procedure. Is there any good reason why the same principle, ability to pay, should not be applied to students entering the State colleges and universities? As a matter of fact, this principle has been applied by those States which have provided beneficiary scholarships while charging those able to pay. Data are not at hand to show what percentage of the distributive scholarships secured by appointment have been awarded as beneficiary scholarships, but knowledge of practice in a number of States indicates that many have been awarded on this basis. Moreover, it is known that presidents of several State institutions have been empowered to abate part or all of the fixed charges when capable students have stated they could not pay the charges and remain in college. This principle then has been applied, and those who received State beneficiary scholarships and those whose tuition has been abated may be likened to citizens whose income is exempted by the Federal income tax. Recipients of privately endowed beneficiary scholarships may be included in the same classification, since both the State moneys and endowed moneys come from society. The one is a direct, the other an indirect beneficiary of the State.

Certain privately endowed institutions have adopted a similar practice. The catalogue states that fixed tuition is of a certain amount, but the students are told by the college officers that the cost of instruction amounts to a larger sum than the tuition, and if they can afford to pay the larger amount they are expected to do so. The principle is already in practice. But the numbers who can at present be aided by beneficiary scholarships are very limited. The annually increasing number of qualified students for higher State education makes the establishment of some fixed policy on this matter imperative. If "education for the wealthy only" is to be avoided, and present conditions continue, a State may logically follow one of two policies: It may apply the modern principle of progressive taxation and charge whatever part of the total per student cost is necessary to those who can pay, while it abates part or all of the charges to those who can not afford to pay. Secondly, it may follow the precedent of the University of Washington and arrange to defer until after graduation the charges of those who have demonstrated their capability. A variation from this second course is the Virginia plan of annually setting aside a percentage of the State appropriation as a loan fund out of which worthy students may receive aid to the extent of $100 per session. A further variation is the establishment of privately founded loan funds, which 53 of these institutions now have. By this plan students agree to pay back within a specified time, with or without interest, the amount loaned. If the plan of deferring charges

or making loans, as at the University of Washington and the two Virginia institutions, is adopted and the contracts are carried out, the State institution, after a period, should realize a considerable return each year from those students it has previously helped. This fund might be used for maintenance, or as a "revolving fund" for further aid to students in college. In either case names of recipients of aid should not be given out at the institution or published in a State report. Such practice would put the beneficiaries in the pauper class and would undoubtedly preclude applications for funds by most who are in need of them. Although it is not the general custom to publish such a list, a few institutions are required to include in their annual reports the lists of State students who pay and those who receive free tuition.

The first plan—i. e., abating tuition—will be attacked on the ground that it is not equitable to all who seek higher education. The answer is the accepted principle of modern taxation. Ability to pay determines the charge and the exemption. In the interest of a higher equity of taxation, progressive rates on greater incomes and inheritances are charged. In the interest of a higher equity of opportunity and in order that a greater number may receive higher education, the same principle may be applied to State university or college education, where it is necessary.

The second plan—i. e., deferring tuition—will be attacked on the ground that, from the administrative point of view, it can not be effectively carried out. The answer is that the University of Washington is now using the plan, while the State of Virginia has provided practically the same system for the University of Virginia and Virginia Polytechnic Institute. Recent actions of this kind show that this is now a real issue. The efficiency of the committee intrusted with the handling of these loans or deferred payments will determine whether this plan is feasible.

Delay on the part of the individual before entering college until he can earn a part or whole of his expenses is uneconomical, both for the individual and the State, as the value and the earning power of the individual are increased by higher education. Delayed higher education is therefore costly.

Whichever of these policies a State may decide upon is defensible. The modern theory of financing government—and higher education constitutes one of the large costs—is that one is expected to help himself in accordance with his ability to help himself. This principle can justly be applied to the matter of tuition and fees for higher education.

SUMMARY

This study shows that with a very few exceptions no longer is public higher education free. Mainly during the past 12 years increases in charges have been made until undergraduates in academic and general courses now pay nominal fixed charges. The line between free public higher education and payment of part of the cost has been generally lowered during the period of 20 years from the beginning of the professional courses, such as law, medicine, pharmacy, and dentistry, to the beginning of the undergraduate courses.

It must be emphasized again that it is incumbent upon the States, trustees, administrative officers, and faculties of these various institutions to furnish both academic and professional education at the lowest possible figure consistent with providing first-class instruction. Intellectually capable students who can not afford the cost should be provided for, either by deferring the charge or abating it, in the interests of democracy and equity.

It should also be emphasized that whatever part of the cost of higher education is paid by the State is not made as a gift, but as an investment. The State expects an intellectual return upon all its appropriations for education that will result in increasing the public well-being.

Wherever possible through revisions of taxation, or other increased revenues, charges should be lowered. However, the present tendencies in both academic and general and professional courses are still decidedly upward, and it is possible that State universities will find it necessary because of insufficient State support to ask students to pay a larger proportion of the total cost of their education in the years ahead.

Chapter V

TREND OF INCOME

TRENDS OF STATE COLLEGE SUPPORT AND TOTAL STATE EXPENDITURES FOR ELEVEN STATES

The appendix of Bulletin No. 19, 1916, United States Bureau of Education, contains charts showing the relative expenditures of a number of States as compared with the total State support for the States' higher educational institutions. The income for the institutions on these graphs included not only the State colleges and the universities, but also the State support to the normal schools. These charts brought the incomes and expenditures down to the year 1915 by five-year intervals, beginning with 1890. As the United States Bureau of the Census at that time had not begun publishing its reports of "Financial Statistics of States," the total expenditures of the States considered were worked up as uniformly as possible under the direction of S. P. Capen, then in charge of the higher education division of the United States Bureau of Education. The income to the State colleges and normal schools was taken from the annual reports made by these institutions to the Bureau of Education.

Table 18 shows the total income to the State colleges and universities of 11 States in five-year periods from 1895 to 1915 and in one-year periods from 1915 to 1919. This income was taken from the annual reports published by the United States Bureau of Education. These reports are made by the presidents of the State colleges and universities and compiled by the Bureau of Education. The support given by these States to their normal schools is not included in this table. Table 18 also shows the total State expenditures in five-year periods beginning with 1895 and up to 1915, and one-year periods from 1915 to 1919. The figures representing total State expenditures for the years 1895 to 1915 are those compiled under Doctor Capen's direction, as they were the only statistics available for these years that had been compiled on a uniform basis. The second figures for 1915 and each of those for the years since that date were taken from the United States Bureau of the Census, Financial Statistics of States, for the respective years. The percentage relationships for 1915 and thereafter are worked out from the statistics published in these reports.

The Bureau of the Census had not published Financial Statistics of States for 1920 or 1921, so the trends could not be brought down to 1921.

TABLE 18.—*State colleges and universities—Total appropriations to State colleges and total State expenditures for eleven States, 1895–1919*

Year	ILLINOIS			MICHIGAN			WISCONSIN			MINNESOTA			OHIO			INDIANA		
	Total appropriations to State colleges	Total State expenditures	Per cent to colleges	Total appropriations to State colleges	Total State expenditures	Per cent to colleges	Total appropriations to State colleges	Total State expenditures	Per cent to colleges	Total appropriations to State colleges	Total State expenditures	Per cent to colleges	Total appropriations to State colleges	Total State expenditures	Per cent to colleges	Total appropriations to State colleges	Total State expenditures	Per cent to colleges
1895	$333,300	$4,284,000	6.8	$244,333	[1] $3,925,600	6.2	$282,000	4,212,000	6.7	$110,071	$4,586,000	2.4	$116,285	$6,203,000	1.9	$136,000	$7,112,000	1.9
1900	267,450	3,559,000	4.6	443,583	[1] 5,168,700	8.6	270,000	4,990,800	5.4	294,423	5,575,000	5.3	219,267	7,708,000	2.8	155,278	5,460,000	2.8
1905	526,200	7,775,000	6.8	503,525	8,953,100	.....	505,500	7,542,300	6.7	459,098	8,279,000	5.5	541,005	8,869,000	6.1	511,171	6,260,000	8.2
1910	1,216,500	9,598,000	12.6	1,161,750	12,538,200	9.3	1,233,604	11,561,000	10.7	1,075,731	11,492,000	9.4	1,024,040	12,000,000	8.5	688,280	8,431,000	8.2
1915	2,286,500	{15,587,000 [2] 18,986,023	12.1	1,803,947	{16,211,300 18,264,977	9.9	{1,735,928	{14,217,300 15,890,525	10.9	2,063,913	{16,423,000 16,557,650	12.5	1,638,556	{18,000,000 18,644,017	8.8	1,082,450	{11,125,000 10,458,335	10.4
1916	2,453,371	22,935,139	10.7	1,575,000	19,712,058	8.0	1,664,602	14,808,507	11.2	1,820,063	19,409,882	9.4	1,834,579	19,631,035	9.3	1,159,884	11,168,392	10.4
1917	2,575,129	23,082,818	11.2	2,170,385	23,636,390	9.2	1,813,093	15,878,521	11.4	1,518,010	17,598,699	8.6	2,140,317	21,119,140	10.1	1,179,126	11,897,598	9.9
1918	2,333,283	25,453,117	9.2	1,927,700	24,749,114	7.8	1,793,063	16,647,953	10.7	1,902,586	19,802,430	9.6	2,167,695	22,146,076	9.8	1,249,729	12,703,909	9.8
1919	2,306,934	23,947,596	9.6	2,034,343	28,993,319	7.0	1,915,927	17,868,137	10.7	1,893,498	23,315,284	8.1	2,144,425	25,087,313	8.5	1,426,824	14,246,514	10.0
	TEXAS			IOWA			KANSAS			MONTANA			WASHINGTON					
1895	$103,000	$5,000,000	2.1	$94,089	$1,560,000	6.0	$124,070	$2,245,000	5.5	$13,000	$521,700	2.5	$120,019	$774,210	15.5	.....	.....	.....
1900	106,400	6,134,000	1.7	100,244	2,560,000	3.9	210,300	2,334,000	9.0	35,590	1,108,800	3.2	73,210	2,833,000	2.6	.....	.....	.....
1905	235,000	7,600,000	3.1	782,500	3,125,000	25.0	311,880	2,740,000	11.4	73,110	1,334,500	5.5	367,500	3,513,700	10.5	.....	.....	.....
1910	402,150	11,150,000	3.6	869,539	4,515,000	19.3	688,637	3,600,000	19.1	192,208	2,143,400	9.0	603,939	5,672,000	10.6	.....	.....	.....
1915	870,745	{12,400,000 16,364,780	5.3	1,823,040	{5,975,000 9,201,661	19.8	{1,169,360	{4,900,000 5,934,394	19.7	312,862	{3,195,000 3,173,644	9.9	796,530	{9,000,000 10,290,940	7.7	.....	.....	.....
1916	1,418,069	18,848,746	7.5	2,053,179	10,210,311	20.1	1,266,570	6,123,031	20.7	381,332	3,666,034	10.4	979,501	10,837,934	9.0	.....	.....	.....
1917	2,062,282	19,992,008	10.2	2,012,000	10,747,227	18.7	1,239,046	6,995,918	17.7	383,532	3,474,415	11.0	980,437	10,965,765	8.9	.....	.....	.....
1918	[3] 513,000	22,204,625	.....	1,199,916	[4] 11,502,353	.....	1,460,316	7,762,387	18.8	590,907	4,220,151	14.0	1,106,931	11,094,572	9.9	.....	.....	.....
1919	[3] 1,113,867	28,722,800	3.9	2,440,727	12,107,399	20.2	1,477,123	7,984,475	18.5	656,262	4,875,923	13.5	1,138,726	12,309,809	9.3	.....	.....	.....

[1] The appropriation to the College of Mines was not included until 1905.
[2] Figures taken from the Bureau of Census statistics of States for that year.
[3] The University of Texas did not report in 1918 or 1919, nor did the Texas Agricultural and Mechanical College report in 1918.
[4] Iowa State College of Agriculture and Mechanic Arts did not report in 1918.

Charts on the geometric scale showing graphically the relation between the total support for the State colleges and universities of eight of these States, as compared with the total State expenditures, are included. One or both of the State institutions of Indiana, Iowa, and Texas failed to make a fiscal report for the United States Bureau of Education since 1915; so no graphs for these States are presented. These graphs show the amounts of State income that have gone to the support of State colleges and universities in these eight States as compared to total State expenditures. They are of value only for the relationship which has existed within each State during this period. It would not be valid to infer that these charts show the liberality with which one State has supported its State institutions as compared with another, for the reason that no two States are organized on the same basis. Some of these States have quite highly centralized State governments, while in others the county units look after much of the public welfare. The total State expenditures of highly centralized States might, therefore, be expected to reach considerably higher totals than in those States in which the counties make the expenditures for the roads and other public improvements.

Chart XII shows that the income to the State colleges and universities of Washington amounted to 15½ per cent of the total State expenditure in 1895. It dropped in 1900 to 2.6 per cent. The total State expenditures were nearly four times as great in 1900 as in 1895, while the total State appropriations for the State colleges dropped from $120,000 to about $73,000. From 1905 to 1919 the relation between total State appropriations for the higher educational institutions and total State expenditures ran along very evenly. The highest percentage of income during these years for the State college was 10.6 per cent in 1910, and the lowest 7.7 per cent in 1915. The other years have averaged about 9 per cent.

Chart XIII shows the trends of total appropriations to the State colleges of Montana and the total State expenditures of Montana. This chart shows that the $13,000 appropriation in 1895 was 2½ per cent of the total State expenditures for that year. The proportion of total income of the State colleges of Montana to the total State expenditures has steadily increased from that time until 1918, at which time the peak was reached. The $590,907 total appropriations for the State colleges that year represented 14 per cent of the total State income. For 1919 the percentage was practically the same.

Chart XIV shows the total appropriations for the two State colleges of Kansas in 1895 amounted to 5.5 per cent of the total State expenditures. The percentage of total State expenditures

steadily increased till the peak was reached in 1916, when 20.7 per cent of the total State expenditures was given as appropriation to the State colleges. Since that date to 1919 the percentage was slightly smaller, with the average about 18.3 per cent.

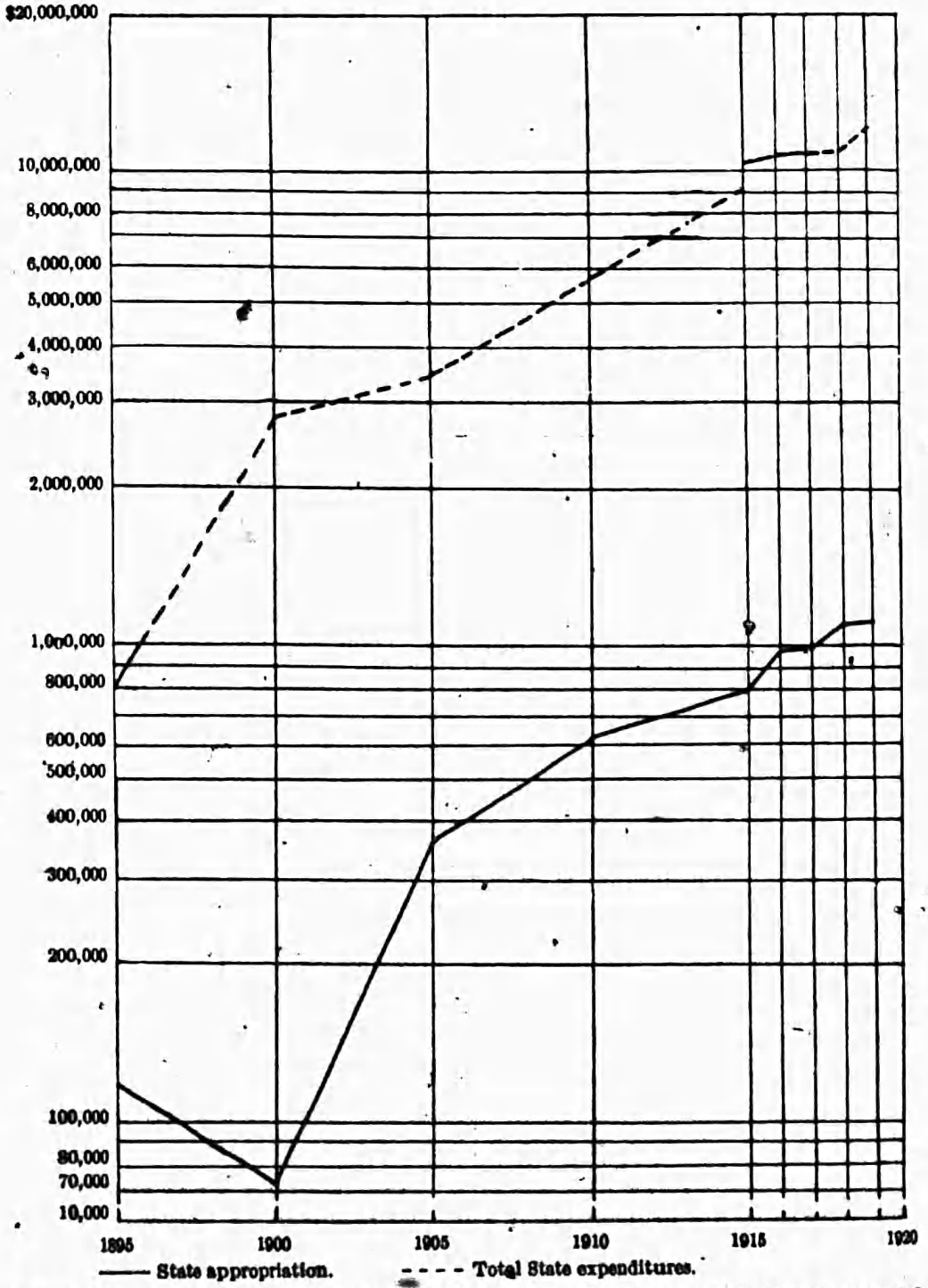

CHART XII.—Washington State appropriation to University of Washington and Washington State College, and total State expenditures

Chart XV shows that in 1895 the University of Minnesota was receiving about $110,000 for State support, while the total State expenditures of the State were $4,586,000. Thus the university received 2.4 per cent of the total expenditures. There was a steady

increase in the ratio going to the State university up till 1915, when the percentage reached 12.5 per cent. Since that time the ratio has ranged from 8.1 to 9.6 per cent up till 1919.

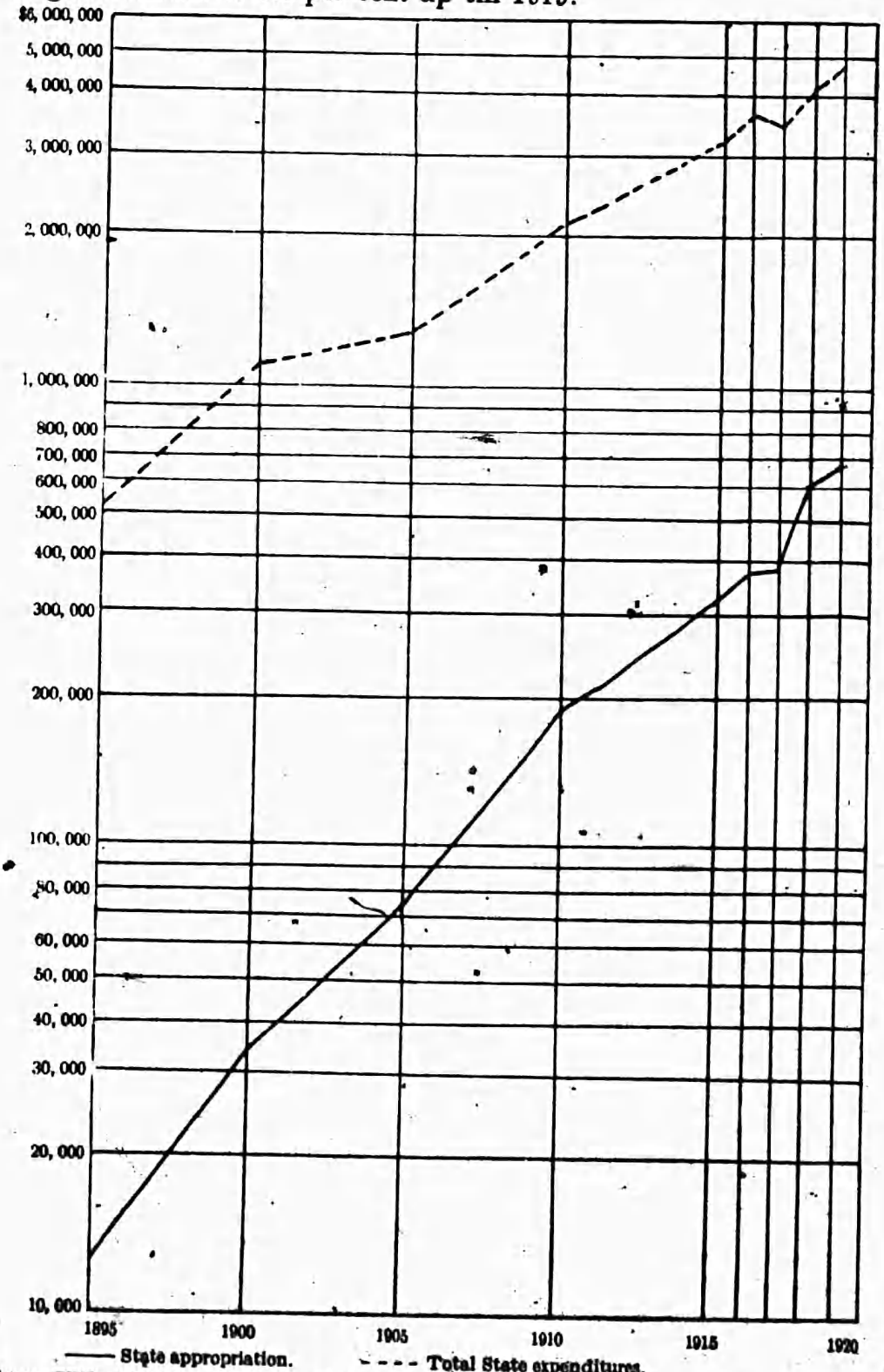

CHART XIII.—Montana State appropriation to University of Montana, Montana College of Agriculture and Mechanic Arts, and Montana State College of Mines, and total State expenditures

The total State appropriations for the University of Wisconsin and the total State expenditures are shown on Chart XVI. In 1895, 6.7 per cent of the total State expenditures were appropriated for

the university. This percentage had increased to 10.9 per cent in 1915 and 11.4 per cent in 1917. For 1918 and 1919 the University of Wisconsin received 10.7 per cent of the total State expenditures.

The relation existing between total appropriations for the University of Illinois and the total State expenditures is shown by Chart XVII. With the exception of a decrease in 1900, there was a steadily

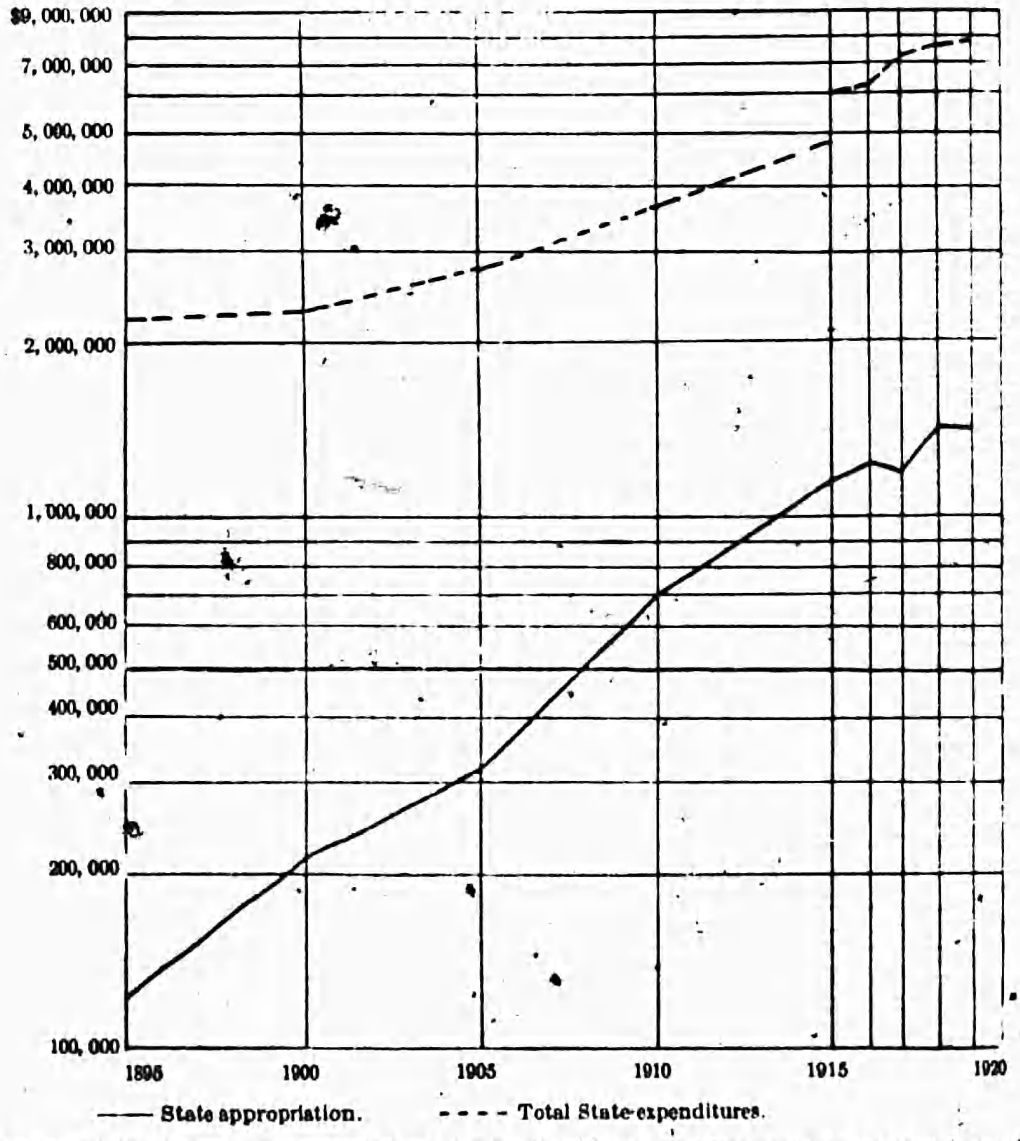

CHART XIV.—Kansas State appropriation to University of Kansas and Kansas Agricultural College, and total State expenditures

increasing percentage of the total State expenditures going to the University of Illinois up till 1910. Since that time till 1919 the percentage of total expenditure to the university varied from 9.2 per cent in 1918 to 12.1 per cent in 1915.

Chart XVIII shows the total appropriations to the State colleges and universities of Michigan and the total State expenditures for this

State. The appropriation for the Michigan College of Mines was not included in the totals given for 1900 and 1905, but this amounted at those dates to not over $25,000. The percentage of total expenditure going to the State colleges for support increased during this

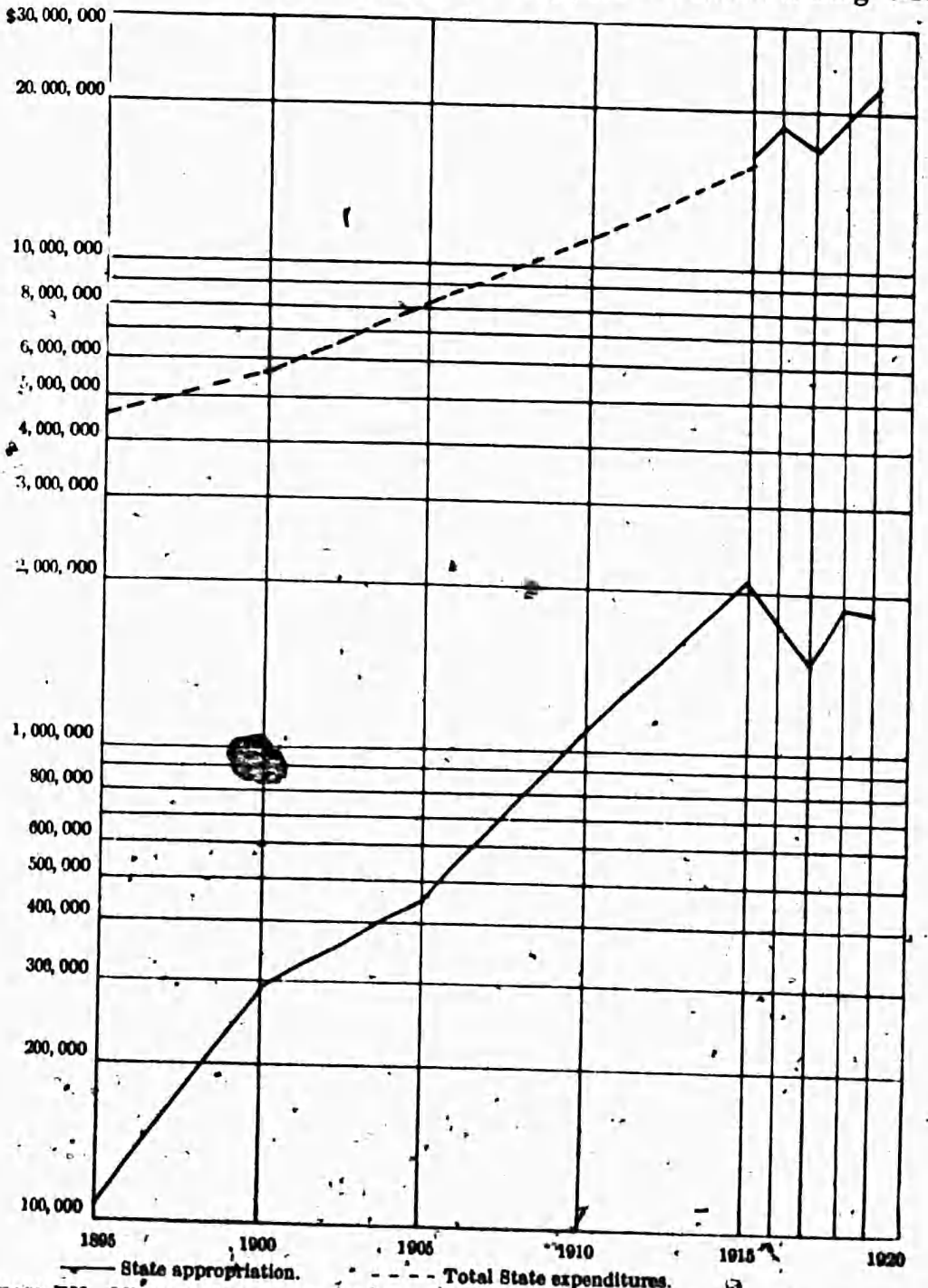

CHART XV.—Minnesota State appropriation to University of Minnesota and total State expenditures

period steadily from 6.2 per cent in 1895 to 9.9 per cent in 1915. Since that time till 1919 the per cent going to the State-supported colleges has varied from 7 to 9.2 per cent.

The total State appropriations to the three State universities of Ohio and the total State expenditures are shown in Chart XIX.

This chart shows that the total State support for the higher educational institutions of Ohio steadily became larger in proportion to the total State expenditures from 1895 to 1917, with the exception of 1905. It increased from 1.9 per cent in 1895 to 10.1 per cent in 1917. Since

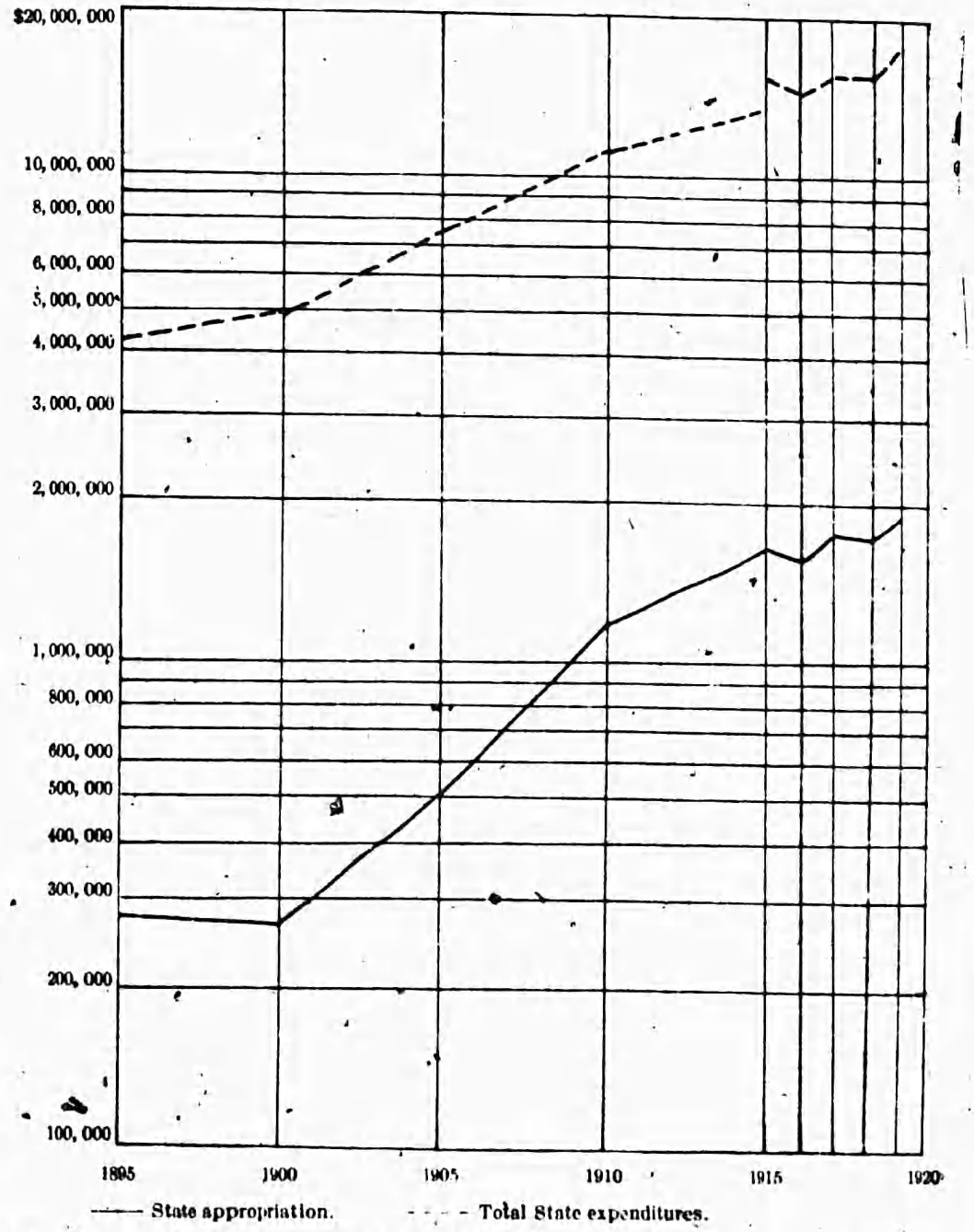

CHART XVI.—Wisconsin State appropriation to University of Wisconsin and total State expenditures

that time the proportion to the State universities has been slightly less.

The income to the Texas College of Industrial Arts was included for the first time in 1915 in the column for Texas in Table XVIII. The State support for the three State colleges of Texas amounted to

5.3 per cent of the total State expenditures in 1915, 7.5 per cent in 1916, and to 10.2 per cent in 1917. This was the last year considered in this table for which reports from all three institutions were available

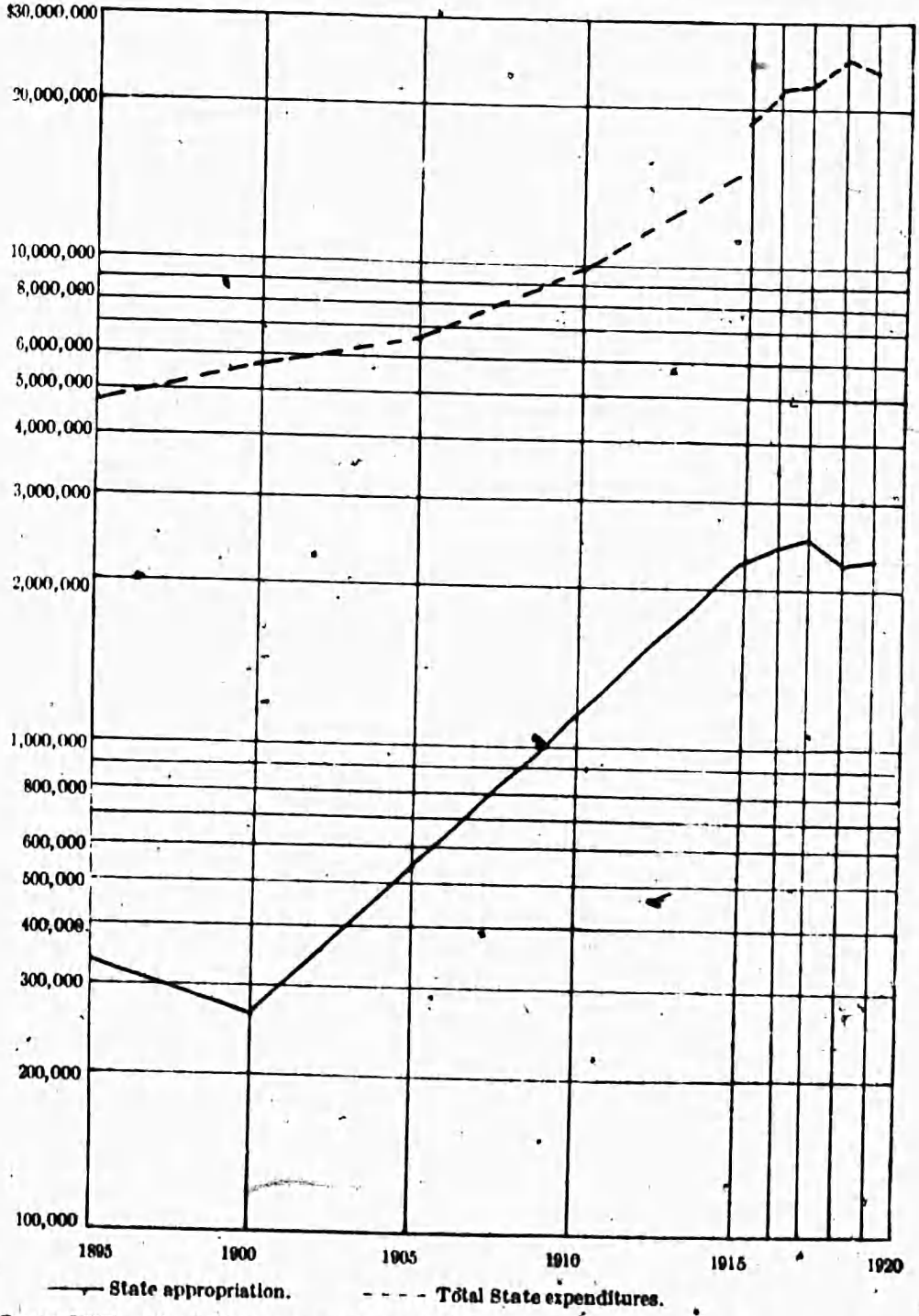

CHART XVII.—Illinois State appropriation to University of Illinois and total State expenditures

Table 18 shows that the two State-supported colleges of Iowa were granted 25 per cent of the total State expenditures for 1905. This was a very sharp increase over 1900. Since 1905 the percentage of support to these colleges, as compared to the total State expendi-

tures, has varied from 18.7 per cent to 20.2 per cent. The latter figure was for 1919.

Total State support, as shown by Table 18, for the two State colleges of Indiana increased rapidly from 1900 till 1905, amounted to

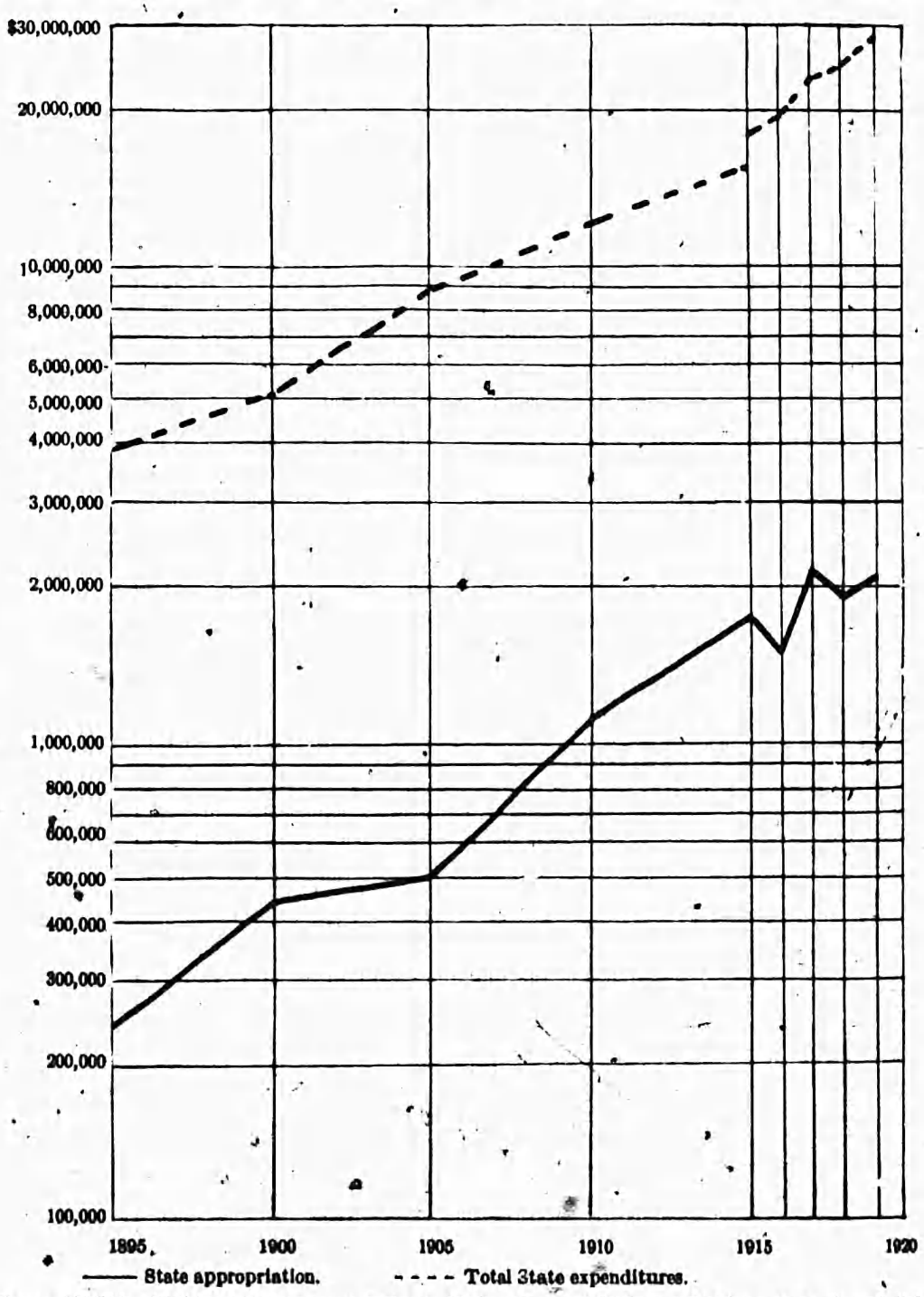

CHART XVIII.—Michigan State appropriation to University of Michigan, Michigan Agricultural College, and Michigan College of Mines, and total State expenditures

10.4 per cent of total State expenditures in both 1915 and 1916, was just under 10 per cent during the next two years, and was practically 10 per cent in 1919.

SUMMARY AND CONCLUSIONS

These comparisons show in general that the State colleges and universities were granted continually increasing proportions of the State expenditures up to about 1915. Since that time the percentage of

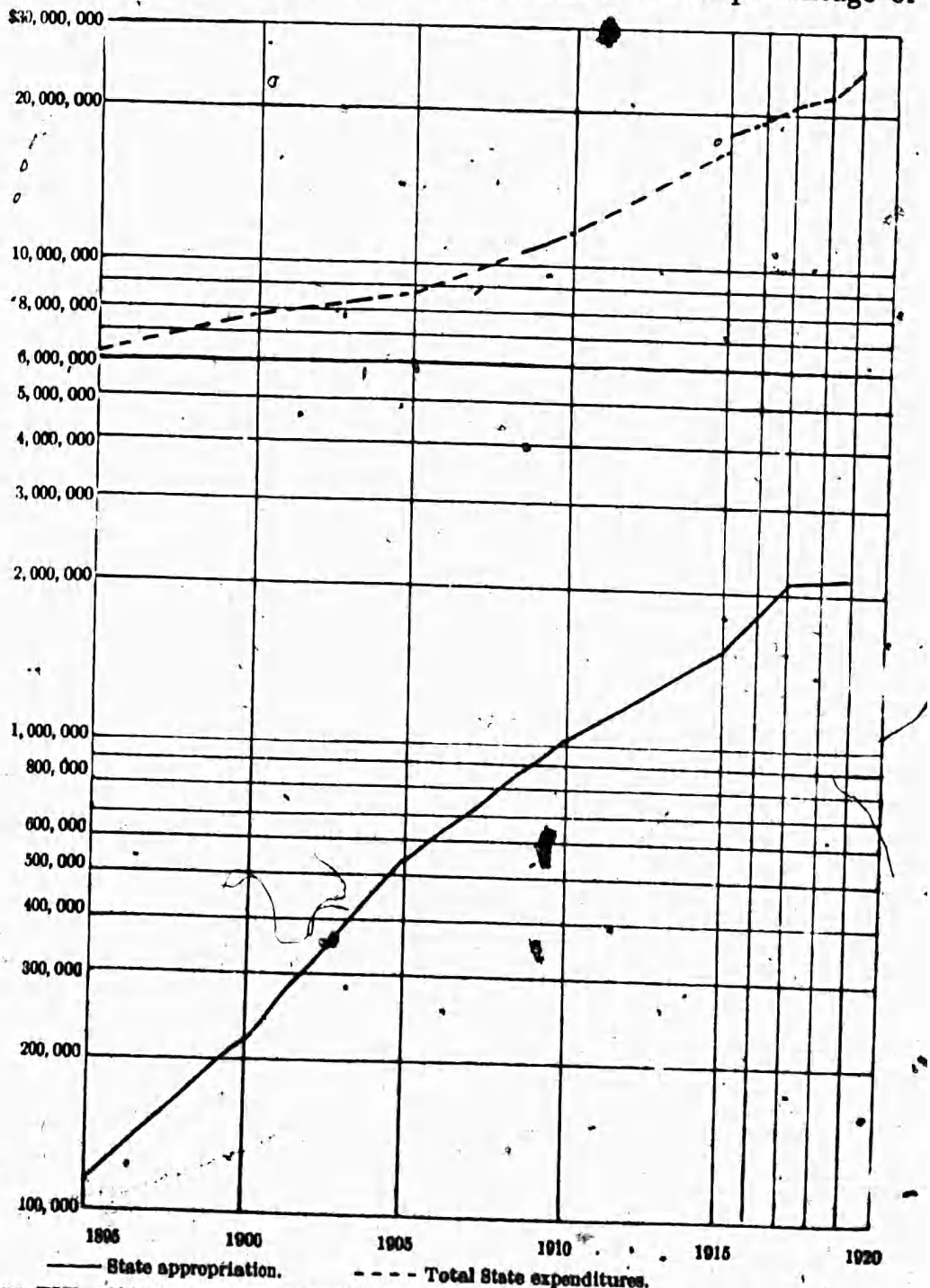

CHART XIX.—Ohio State appropriation to Ohio State, Miami, and Ohio Universities, and total State expenditures

total State expenditures going to the State universities has been but slightly less, and practically the same percentage relationships have been maintained.

The percentage of total State expenditures going to the State colleges depends largely upon the nature of the organization of the State government. In 1915 the percentages of total State expenditures going to the State colleges of these 11 States varied from 5.3 per cent in Texas to 19.8 per cent in Iowa. In 1919 these percentages varied from 7 per cent in Michigan to 20.2 per cent in Iowa, while the Texas report was not available. Texas in 1917 gave her colleges 10.2 per cent of her total expenditures. Kansas granted her institutions almost as large a percentage as Iowa in 1915, and this was still true in 1919.

These States granted in 1919 from one-fifth to one-fourteenth of their total State expenditures for the support of their State colleges and universities. The percentages varied according to the nature of the State organization. This means that the cost of maintaining the State colleges and universities has become one of the heaviest single burdens on the finances of these States. It has been quite generally conceded in many States that the State college is one of the State's most important "arms," on a level with the administrative, legislative, and judiciary functions of government.

TRENDS OF MAIN SOURCES OF INCOME

When this study was undertaken it was planned to make a careful analysis of the sources of income to State colleges and universities over a period of years. After a large number of the fiscal reports of these institutions were carefully examined it was found that there was no uniform basis of reporting income. Thorough search revealed that the only source of information from which these data could be secured for a typical group was the annual reports of the United States Bureau of Education, entitled "Statistics of State Colleges and Universities." Annual reports are made on uniform blanks to the Bureau of Education by the presidents of the State colleges and universities. These reports are compiled by the Bureau of Education. The main sources of income to the State colleges and universities have been listed in those bulletins since 1910 as student fees, productive funds, State appropriations, United States subventions, income from private gifts, and all other sources. A separate column for State appropriations for buildings and permanent improvements is also included in this bulletin. It was also possible to obtain from the United States Bureau of Education bulletin, "Statistics of Agricultural and Mechanical Colleges," the reports of State appropriations for the experiment stations and extension work, as well as the United States subventions for the same purposes. These reports are also made by the presidents of these State institutions. Unfortunately, in a number of cases the State institutions, in reporting to the United States Bureau of Education, did not segregate their income for build-

ings during part or all of the years. The same difficulty was found in connection with the State appropriation for experiment stations in many cases and in a few cases for the extension work. These appropriations were included in the total State appropriation to the institution, but they are not segregated.

Table 19 shows the income from the six main sources listed in the "Statistics of State Colleges and Universities" in periods from 1910 through 1921, inclusive. The specified income for buildings and permanent improvements for the experiment stations and for extension work is also shown in all the cases that the specified funds were reported. Twenty-four institutions, representing seven separate State universities, eight institutions which combine the State university and the agricultural college, eight agricultural and mechanical colleges, and one State college for women, were selected. These institutions are located in the various sections of the United States and are regarded as typical. As stated previously, the State appropriations listed under the six main sources of income include the specified appropriations for experiment station and extension work, as well as for permanent improvements and buildings, if any appropriations were made for these purposes. Most of the appropriations for buildings and permanent improvements are ordinarily made for collegiate purposes. The United States Bureau of Education blanks on which these reports are made give directions for the classification of income according to the six main sources mentioned and include according to the directions the following items. Student fees include net receipts from tuition and fees, but exclude board and lodging receipts. Income from productive funds includes interest on endowment funds, such as Federal land endowment funds and endowments from private gifts. Income from the State includes total State appropriations for the institution, including funds for construction and for the land-grant colleges, State funds for the experiment station, and extension work. Income from the United States includes the Hatch, Adams, Morrill, Nelson, Smith-Lever, and any grants under the Smith-Hughes subventions. Private gifts include benefactions for the year only for buildings or endowments or other purposes. Income from all other sources includes "revolving funds," net receipts from sales and other business transactions, net receipts from boarding and dormitory operations, receipts on account of trust funds, and miscellaneous net receipts.

Examination of the table showing trends of income to the 24 State colleges and universities discloses that, with the exceptions of Texas, California, and Indiana, none of these institutions receives any marked percentage of its total income from interest on productive funds. The University of Texas was granted an exceptionally large land endowment by the State, California has received many large

private benefactions, and Indiana University was given an endowment by State taxation. The receipts from productive funds to the University of California have increased in 1921, as compared with 1910, over $129,000, yet the receipts from productive funds have on the whole formed a decreasing percentage of total working income at California since 1914. At Indiana the receipts from productive funds have increased but slightly during the period, and the receipts from that source amounted to but 4.3 per cent of total working income in 1921 as against 11.9 per cent in 1910. Receipts from productive funds amounted to 30.2 per cent of total working income at Texas. In 1921 this source represented but 14.4 per cent of the total working income at Texas. It should be pointed out that receipts from this source at Texas have fluctuated considerably during the period. This may be accounted for by the variety of income that may be received from land endowments.

Receipts from productive funds have increased considerably at the Universities of Minnesota, Michigan, and Washington during the period, but the percentage of total working income from this source shows a decline at Minnesota and Michigan for the earlier years of the period. Receipts from this source at Washington were inconsiderable up till 1917. Most of the other institutions received no increase or but a slight increase in actual receipts from this source during the period.

A few of these institutions have benefited quite regularly through receipts from private gifts. California is the outstanding case among those here considered. This institution has received large private benefactions for permanent endowment, buildings, or improvements regularly throughout the period. Over $1,324,000 was received by California from this source in 1921, and twice before during this period there were receipts of over $1,000,000 in a single year. No other institution has been the recipient of such large benefactions. Wisconsin reports receipts from this source for each year during the period, and over $117,000 was received in 1917. The University of Michigan shows receipts from this source consistently during the period. The largest amount for any one year was $292,718 in 1918. Several other institutions report receipts from this source, some yearly, and occasional large gifts, for buildings in many instances, during the period.

To the so-called land-grant colleges for specified collegiate purposes the Federal subvention increased $10,000 during the first three years of the period. The other $2,000 increase shown went to the experiment station. Since 1915 all additional Federal subventions have been for cooperative extension or vocational education. The $50,000 Federal subventions available for collegiate purposes must, of course, be used for the benefit of the specified collegiate work only.

In general, receipts from student fees, State appropriations, and all other sources have shown the greatest consistent increase during the period. The heading "all other sources" represents such a variety of income during recent years that receipts under this heading constitute the crudest figure of those here included, since it is commonly the practice to include all net receipts from "revolving funds," sales and business transactions, receipts on account of trust and loan funds, etc., in this figure.

Even State appropriations have exhibited considerable fluctuation. This may in part be accounted for by the fact that the appropriations for buildings are included in this figure, and amounts for this purpose naturally vary from year to year. In the case of agricultural and mechanical colleges the amounts for experiment station and extension work are included in the State appropriation, and this gives rise to further fluctuation.

Since receipts from student fees and State appropriations represent the most consistent increasing revenues for collegiate purposes, a further analysis of the relation existing between these two sources will be undertaken. Trends of total working income will also be shown.

Percentages of increase in student fees, State appropriations, all other sources, and total working income have in most cases been very large since 1910. These increases appear to correspond to the large percentages of increased attendance, to the large percentages of increase in costs in general and building costs, and to the increases of cost of other institutional activity in extension work and research.

In order to ascertain the percentage realized from the receipts of student fees as compared with the State appropriations for collegiate work, the specified appropriations for experiment stations and extension work have been subtracted from the total State appropriation for each year for 24 institutions, and graphs showing the trends of student fees, State appropriations, minus the funds for experiment station and extension work, and the total working income for these institutions are included in this study. The State appropriations for buildings might well be taken out of the figures represented by the graph line for annual State appropriation. Though it would be very desirable to show lines representing State appropriations for maintenance and operation of collegiate work, such figures were not available, and as the funds for buildings represent a part of the State's contributions to higher education over a period of years, it is justifiable to compare this trend with the trend of income from student fees. Were the funds for buildings excluded, the student would then be shown to be paying a larger percentage. Had the funds for capital outlay been averaged and distributed over the entire period, the trends representing State appropriations would

have been more regular. It is realized that these statistics do not permit of the kind of an analysis that is most desirable. However, they were the only figures available compiled on a uniform basis for practically all of these institutions, and they show rough trends which are of value. Trends from a more refined analysis of income would be highly desirable and should be made as soon as the figures are available.

In the item "student fees" receipts from both resident and nonresident students are included. The proportion received from these two classes was not available. The trend of income from resident student fees would vary somewhat from the trends shown because of the inclusion of the nonresident fees. A few of these institutions have a good many nonresidents, and the fees for nonresidents in most instances are at present generally higher. The relation between the trend representing income from student fees and the trend representing State appropriations holds good, nevertheless.

At the separate State universities there are no specified incomes for experiment station and extension work; so the relationship between the income from student fees and State appropriations can be compared more accurately. The line representing State appropriations actually represents the total appropriations made by the State for the different years on the State university charts.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*

Institution and sources of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of California														
Student fees	$117,324	4.3	$155,516	6.8	$144,685	5.9	$257,161	7.4	$280,215	7.5	$594,211	10.2	$721,012	10.7
Productive funds	235,037	8.6	186,760	8.2	239,003	9.5	241,242	6.9	226,316	6.1	368,821	6.3	359,799	5.4
State	1,060,125	39.0	1,124,506	49.4	1,574,376	63.0	1,934,483	55.4	2,225,419	59.6	2,682,597	45.9	3,119,952	46.5
United States	68,000	2.5	80,000	3.5	80,000	3.2	101,037	2.9	119,433	3.2	159,339	2.7	174,620	2.6
Private gifts	1,156,323	42.5	566,029	24.9	191,421	7.6	656,320	18.8	240,461	6.4	943,326	16.1	1,324,245	19.7
All other sources	83,323	3.1	164,590	7.2	269,972	10.8	300,745	8.6	641,142	17.2	1,096,170	18.8	1,008,204	15.1
Total	2,720,653	100.0	2,277,401	100.0	2,499,457	100.0	3,490,988	100.0	3,732,986	100.0	5,844,464	100.0	6,707,832	100.0
Specified income (included above):														
Buildings	87,732	3.2	870,637	38.2	1,220,863	48.8	364,171	10.4	246,361	6.6	107,382	1.8	70,688	1.1
Experiment station—														
State	51,289	1.9	67,814	3.0	0		0		40,496	1.1	104,742	1.8	99,884	1.5
United States	28,000	1.0	30,000	1.3	30,000	1.2	30,000	.9	30,000	.8	30,000	.5	30,000	.4
Extension work—														
State			15,000	.7			11,037	.3	64,433	1.7	93,110	1.6	189,619	2.8
United States							21,037	.6	39,433	1.1	79,339	1.4	94,621	1.4
University of Illinois														
Student fees	203,161	12.4	241,114	10.2	240,452	8.5	246,923	8.1	239,591	7.8	353,684	9.0	516,630	12.5
Productive funds	32,415	2.0	32,464	1.4	32,463	1.1	32,450	1.1	32,450	1.0	32,451	.8	32,451	.8
State	1,216,500	74.2	1,918,900	81.2	2,286,500	81.0	2,453,371	80.4	2,333,263	76.9	2,871,500	73.3	2,526,753	61.1
United States	68,000	4.1	79,938	3.4	80,000	2.8	116,282	3.8	160,085	5.2	281,076	7.2	291,497	7.1
Private gifts			0		0		0		36,450	1.2	33,400	.9		
All other sources	119,716	7.3	91,295	3.8	184,637	6.6	202,849	1.6	273,568	8.9	344,138	8.8	766,697	18.5
Total	1,639,792	100.0	2,363,711	100.0	2,824,058	100.0	3,051,875	100.0	3,075,407	100.0	3,916,249	100.0	4,134,028	100.0
Specified income (included above):														
Buildings	218,000	13.3	453,250	19.2	650,000	23.0	436,500	14.3	250,000	8.1	425,000	10.9		
Experiment station—														
State	168,000	10.2	143,000	6.0	[1]		[1]		195,000	6.3			195,500	4.7
United States	28,000	1.7	29,938	1.3	30,000	1.1	30,000	1.0	30,000	1.0	30,000	.8	30,000	.7
Extension work—														
State											179,595	4.6	81,600	2.0
United States							36,282	1.2	80,086	2.6	189,695	4.8	211,496	5.1

[1] Included in State appropriation.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and sources of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of Wisconsin														
Student fees	$212,529	12.5	$270,637	12.7	$447,170	15.0	$447,899	17.1	$391,996	14.3	$716,360	20.6	$889,736	20.0
Productive funds	28,046	1.7	37,087	1.7	36,382	1.2	36,247	1.4	37,618	1.4	41,533	1.2	38,885	.9
State	1,223,604	72.1	1,552,398	72.9	[2] 2,153,856	72.5	1,664,602	63.6	1,793,063	65.2	1,926,160	55.3	2,541,545	57.2
United States	68,000	4.0	80,000	3.8	80,000	2.7	106,165	4.1	135,016	4.9	209,264	6.0	231,936	5.2
Private gifts	17,882	1.1	15,763	.8	12,721	.4	16,740	.6	24,863	.9	80,228	2.3	37,561	.8
All other sources	147,386	8.6	172,175	8.1	245,146	8.2	347,019	13.2	365,731	13.3	510,095	14.6	706,432	15.9
Total	1,697,447	100.0	2,128,060	100.0	2,969,475	100.0	2,618,672	100.0	2,748,287	100.0	3,483,640	100.0	4,446,095	100.0
Specified income (included above):														
Buildings	200,000	11.8	285,369	13.4	343,567	11.6	50,644	1.9	150,569	5.5	66,666	1.9		
Experiment station—														
State	52,000	3.1					3,000	.1					210,000	4.7
United States	28,000	1.6	30,000	1.4	30,000	1.0	30,000	1.1	30,000	1.1	30,000	.9	30,000	.7
Extension work—														
State			161,000	7.6	231,570	7.8	265,286	10.1	242,966	8.8	356,993	10.2	347,158	7.8
United States							26,164	1.0	53,107	1.9	120,460	3.5	133,931	3.0
University of Minnesota														
Student fees	164,438	11.6	186,604	7.0	233,208	8.0	290,884	11.4	271,322	9.7	501,420	11.4	711,690	13.3
Productive funds	61,959	4.4	57,529	2.1	62,196	2.1	55,030	2.2	58,052	2.1	109,883	2.5	115,535	2.2
State	1,075,731	76.0	2,314,713	86.3	[2] 2,362,254	81.3	1,820,063	71.2	1,902,586	67.9	2,948,851	66.9	3,656,498	68.5
United States	66,000	4.7	80,000	3.0	80,000	2.8	123,556	4.8	129,731	4.6	191,810	4.4	221,942	4.2
Private gifts	20,000	1.4									89,371	2.0		
All other sources	27,296	1.9	43,653	1.6	169,449	5.8	264,590	10.4	442,012	15.7	567,101	12.8	629,327	11.8
Total	1,415,424	100.0	2,682,499	100.0	2,907,107	100.0	2,554,123	100.0	2,803,703	100.0	4,408,436	100.0	5,334,992	100.0
Specified income (included above):														
Buildings			793,987	29.6	897,200	30.9	155,300	6.1	125,250	4.5	377,000	8.5	719,795	13.5
Experiment station—														
State	(1)		78,000	2.9	154,633	5.3	200,050	7.8	238,008	8.5	210,000	4.8	329,870	5.4
United States	26,000	1.8	30,000	1.1	30,000	1.0	30,000	1.2	30,000	1.1	30,000	.7	30,000	5.6
Extension work—														
State			36,590	1.4	433,767	14.9	55,000	2.2	25,000	.9	116,000	2.6	116,000	2.2
United States							24,899	1.0	49,731	1.8	74,562	1.7	124,226	2.3

[1] Part of 1913 income was not received until after July 1, 1913.

[2] Includes funds for Student Army Training Corps.

Table 19 shows the trends of income to the University of California, while Chart XX shows the trends of income from student fees, total working income, and income from State appropriations, minus the specified appropriations for the experiment station and extension fund. No report of appropriations for the experiment station was shown in 1914, 1915, and 1916, or for extension work in 1914 and 1915. It is evident that the students were bearing a larger percentage of the costs of their education so far as the State appropriations were con-

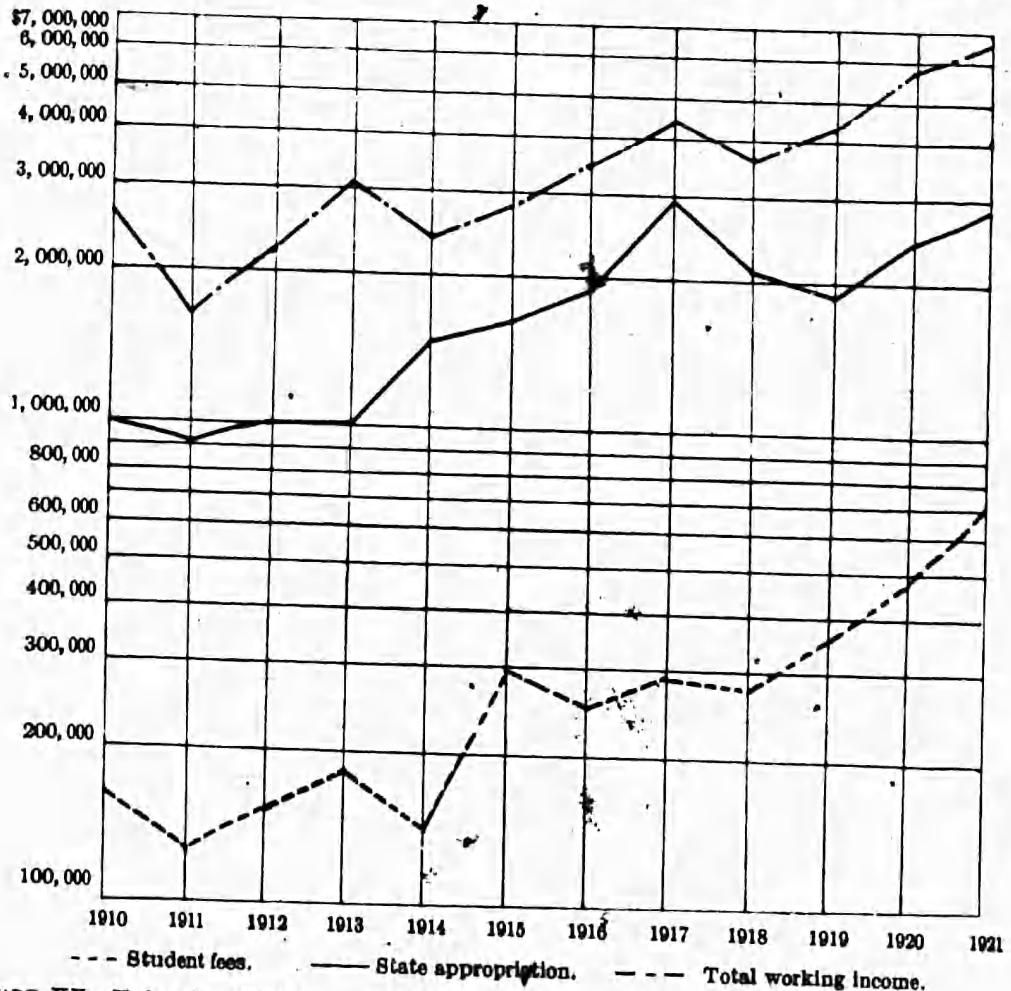

CHART XX.—University of California student fees, State appropriation, and total working income for 1910–1921, inclusive

cerned in 1921 than in 1910. In 1910, for every 11.6 cents received from student fees the State paid $1, while in 1921 the students paid in 25.4 cents for every dollar of State appropriation. In 1910 for every dollar paid in by the students, the State appropriated $8.60, while in 1921 for every dollar paid in by the students the State appropriated only $3.93. In 1921 the students were paying approximately $1 out of approximately every $5 when State appropriations and student fees only are taken into consideration.

Table 19 shows the trends of income for the University of Illinois. Chart XXI shows the trends of income from student fees, total working income, and total State appropriations, minus the appropriations for experiment station and extension funds whenever they could be segregated. They are segregated, however, for the years 1910 and 1921, as well as for several intervening years. The total working income has increased during the period nearly two and one-half times. In 1910, for every 19.4 cents paid in by the students, the State appropriated $1, but in 1921 the students paid in 23 cents for every dollar appropriated by the State. In 1910, for every dollar received from

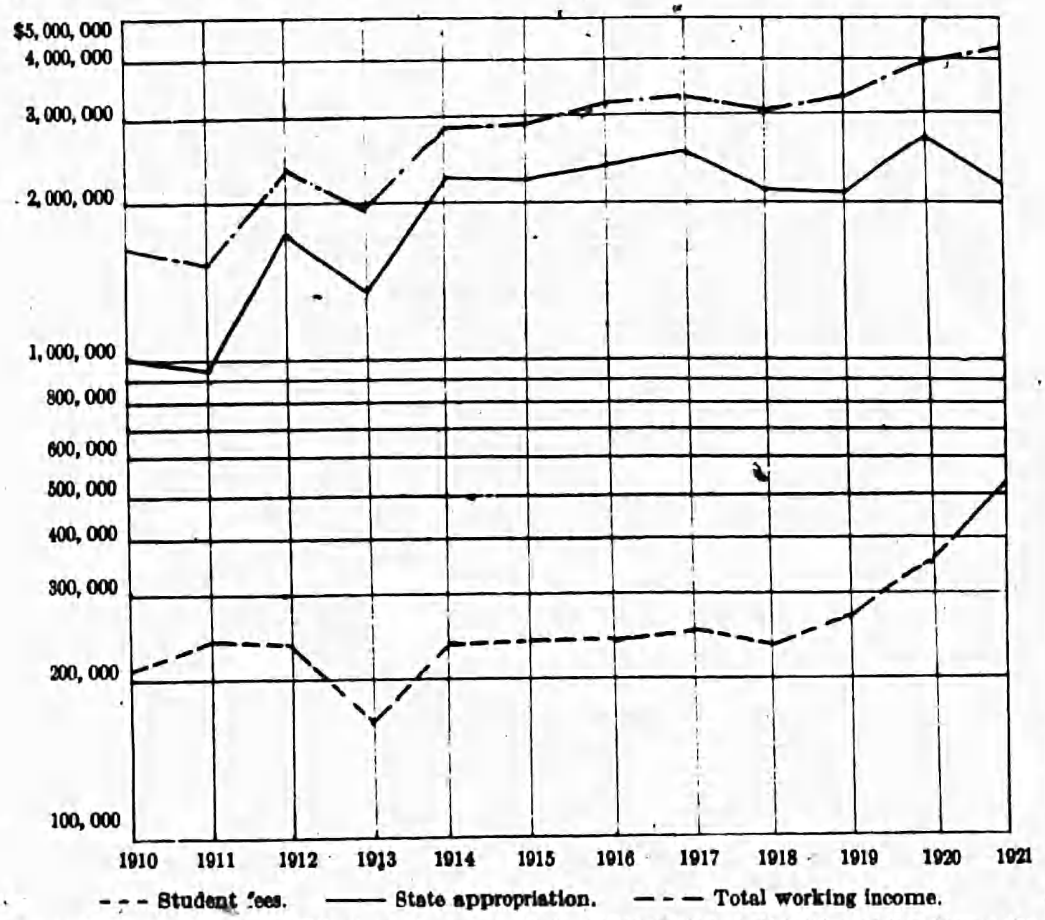

CHART XXI.—University of Illinois student fees, State appropriation, and total working income for 1910–1921, inclusive

student fees, the State appropriated $5.16; while in 1921, for every dollar of student fees received, the State paid $4.35. The students then were paying in slightly more in proportion to the amount received by State appropriations in 1921 than in 1910.

Table 19 shows trends of income to the University of Wisconsin. Chart XXII shows for the University of Wisconsin the trends of income from student fees and total working income and the State appropriations, minus the specified funds for the experiment station and extension work wherever they are shown. The appropriations for extension work are shown throughout the period, and the appro-

priations for the experiment station are shown for 1915, 1916, and for 1910 and 1921; i. e., at the beginning and closing of the period. At the beginning of the period, student fees represented about one-fifth of the appropriation made by the State, while in 1921 the student fees amounted to approximately 45 per cent of the State appropriation, less the specified appropriations mentioned.

In Wisconsin in 1910, for every 18.1 cents paid in by the students the State appropriated a dollar; while in 1921 the students paid in

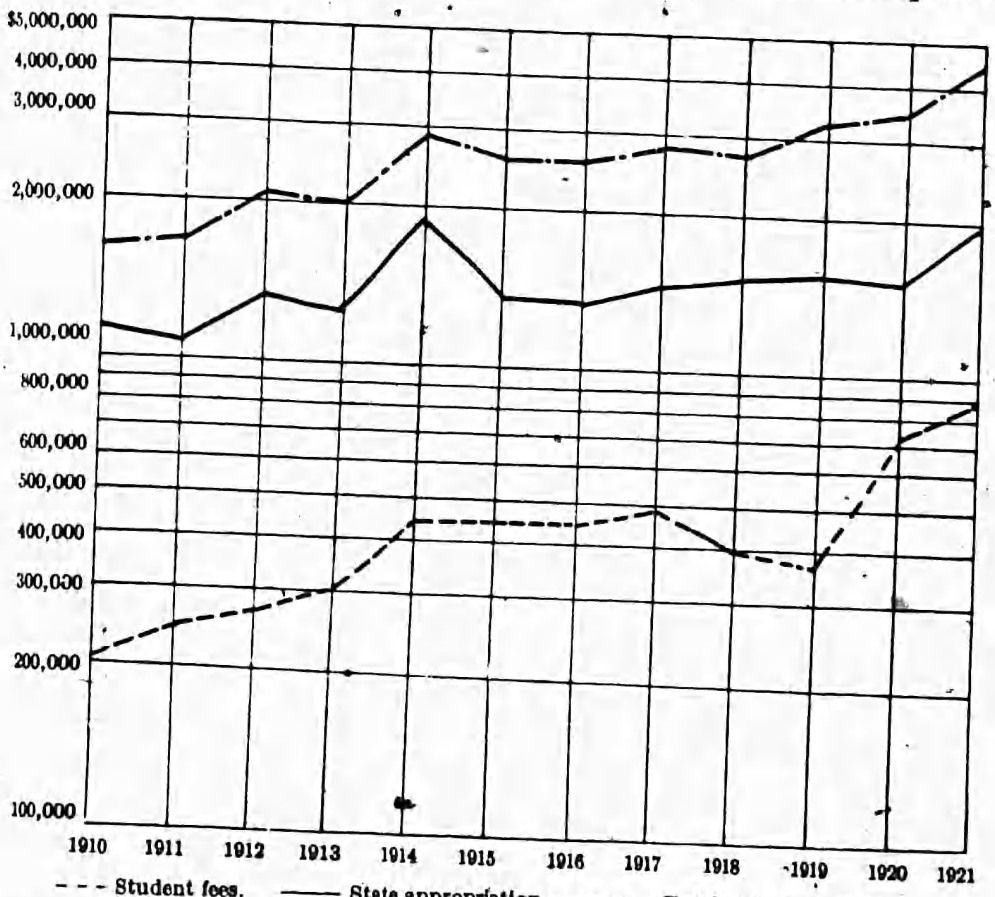

CHART XXII.—University of Wisconsin student fees, State appropriation, and total working income for 1910–1921, inclusive

44.9 cents for every dollar appropriated by the State. For every dollar received from student fees in 1910 the State appropriated $5.51, while in 1921 for every dollar received from student fees the State appropriated $2.23. This shows that in 1921, so far as the State appropriations are concerned, the students are paying $1 out of every $3.23 toward their education. The trend of income from State appropriations for Wisconsin, though it shows a considerable increase in 1921 over 1910, shows a more moderate rise since it dropped in 1915 than the same curve for many other States.

Table 19 shows the trends of income at the University of Minnesota. Chart XXIII shows the trends of income from student fees, total working income, and State appropriations, less the specified appropriations for experiment station and extension work. In 1910, for every 15.3 cents received from student fees, the State paid a dollar, while in 1921 the students paid 22.3 cents for every dollar from the State. In

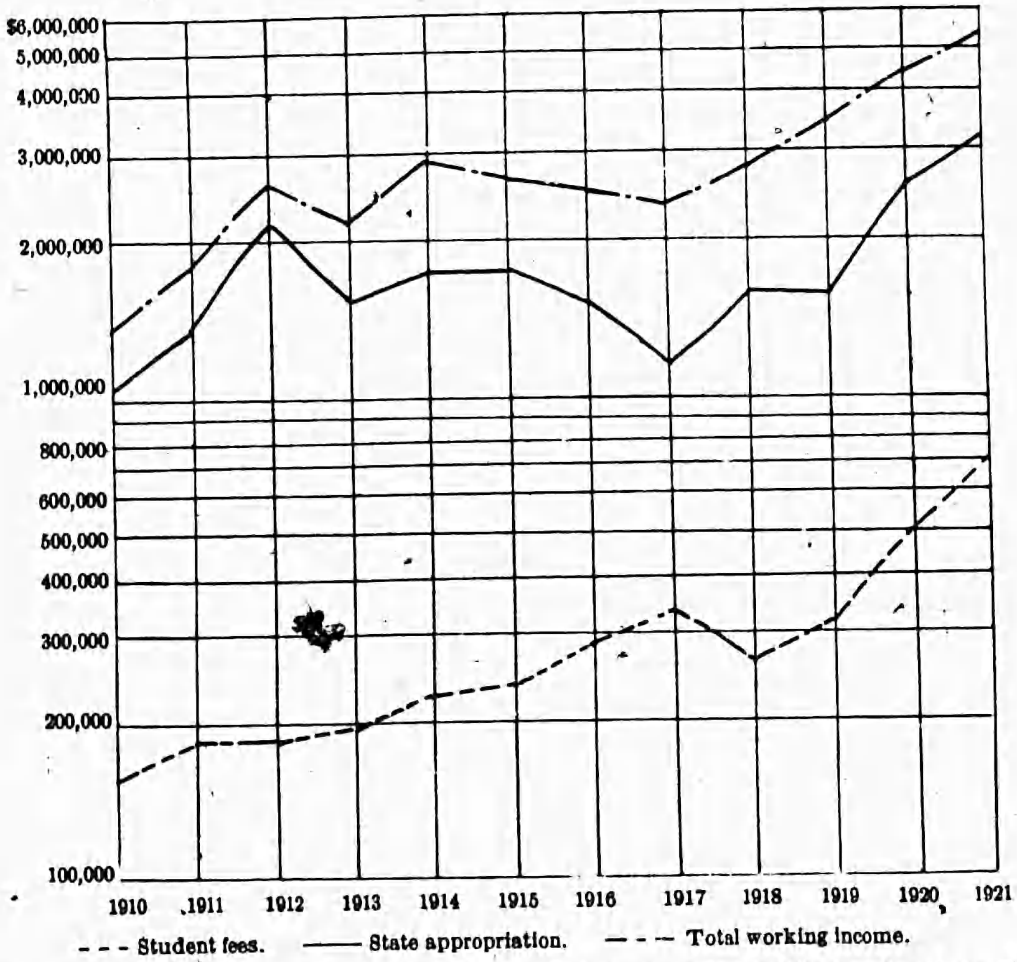

CHART XXIII.—University of Minnesota student fees, State appropriation, and total working income for 1910–1921, inclusive

1910, for every dollar received from student fees the State appropriated $6.54, while in 1921 the State appropriated $4.51 for every dollar of student fees. This shows that in 1921 the students were paying $1 out of every $5.51, so far as the State appropriations were concerned, for their education.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and source of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of Michigan														
Student fees	$327,000	22.6	$345,724	25.5	$427,522	19.6	$475,486	23.6	$427,870	16.2	$682,445	17.6	$990,487	19.0
Productive funds	55,500	3.8	56,003	4.1	57,746	2.7	63,647	3.2	77,666	2.9	90,320	2.3	96,686	1.9
State	910,200	62.9	785,738	58.0	1,363,835	62.6	1,059,000	52.5	1,294,000	48.9	2,346,750	60.5	3,018,750	58.0
United States	0		0		0		0		0		8,673	.2	15,612	.3
Private gifts			12,137	.9	41,139	1.9	75,972	3.8	292,718	11.0	80,573	2.2	164,438	3.1
All other sources	155,300	10.7	155,592	11.5	287,618	13.2	340,935	16.9	555,579	21.0	666,974	17.2	921,907	17.7
Total	1,448,000	100.0	1,355,194	100.0	2,177,860	100.0	2,015,040	100.0	2,647,833	100.0	3,875,735	100.0	5,207,790	100.0
Specified income (included above):														
Buildings			46,081	3.4	325,235	14.9	55,000	2.7	95,000	3.6	325,000	8.4	825,000	15.8
Michigan Agricultural College														
Student fees	23,048	5.7	23,399	5.2	36,790	6.5	38,793	4.8	38,418	3.8	108,846	7.5	132,041	7.3
Productive funds	71,109	17.6	70,265	15.5	71,325	12.6	71,417	8.8	70,539	7.0	70,736	4.9	70,685	3.9
State	186,550	46.1	202,210	44.7	228,800	40.5	451,000	55.3	561,000	55.8	785,000	54.4	1,085,000	60.3
United States	68,000	16.8	80,000	17.7	80,000	14.2	108,032	13.2	138,086	13.8	213,221	14.8	228,173	12.7
Private gifts							10,000	1.2	0		2,210	.2		
All other sources	55,996	13.8	76,544	16.9	148,372	26.2	−136,460	16.7	196,717	19.6	263,413	18.2	283,027	15.8
Total	404,673	100.0	452,418	100.0	565,287	100.0	815,702	100.0	1,004,760	100.0	1,443,426	100.0	1,798,926	100.0
Specified income (included above):														
Experiment station—														
State			(1)		(1)		15,555	1.9	20,000	2.0	115,624	8.0	197,013	11.0
United States	28,000	6.9	30,000	6.6	30,000	5.3	30,000	3.7	30,000	3.0	30,000	2.1	30,000	1.7
Extension work—														
State							32,275	4.0	40,000	4.0	75,797	5.3	92,193	5.1
United States							28,032	3.4	58,086	5.8	133,221	7.2	148,173	8.2

[1] Included in State appropriation.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and source of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
State University of Iowa														
Student fees	$61,077	10.6	$60,525	7.5	$143,472	15.2	$114,026	8.9	$118,312	7.2	$183,051	7.7	$294,875	9.8
Productive funds	13,060	2.3	11,167	1.4	71,452	7.6	22,475	1.8	22,904	1.4	23,419	1.0	22,011	.7
State	425,420	74.0	661,825	82.0	725,454	77.0	925,987	72.4	1,119,916	68.2	1,269,983	53.3	1,446,563	48.1
United States	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....
Private gifts	7,681	1.3	7,095	.9	0	.....	0	.....	0	.....	0	.....	0	.....
All other sources	67,700	11.8	66,290	8.2	2,116	.2	215,919	16.9	381,462	23.2	902,886	38.0	1,245,665	41.4
Total	574,938	100.0	806,902	100.0	942,494	100.0	1,278,407	100.0	1,642,594	100.0	2,378,939	100.0	3,009,114	100.0
Specified income (included above): Buildings	60,000	10.4	58,000	7.2	82,500	8.8	239,471	18.7	275,000	16.7	165,000	6.9	197,500	6.6
Iowa State College of Agriculture and Mechanic Arts														
Student fees	58,245	9.6	78,783	8.4	68,764	5.5	96,040	6.1	.....	.....	169,894	.....	213,645	7.9
Productive funds	34,417	5.0	35,019	3.7	35,192	2.8	38,324	2.4	(1)	.....	35,088	1.6	31,813	1.2
State	444,117	73.0	670,218	71.2	979,467	78.3	1,127,192	71.1	.....	.....	1,538,150	68.4	1,957,945	71.9
United States	68,000	11.7	80,000	8.5	80,000	6.4	108,781	6.9	.....	.....	218,388	9.7	243,989	9.0
Private gifts	1,900	.3	2,363	.2	2,325	.2	8,050	.5	.....	.....	1,000	.....	1,250	.....
All other sources	1,468	.2	75,091	6.0	84,905	6.8	204,896	13.0	.....	.....	286,785	12.8	272,795	10.0
Total	608,149	100.0	941,474	100.0	1,250,652	100.0	1,583,283	100.0	.....	.....	2,249,255	100.0	2,721,437	100.0
Specified income (included above): Buildings	161,619	26.6	182,000	19.3	134,204	10.7	92,500	5.8	.....	.....	229,070	10.2	505,976	18.6
Experiment station—														
State	40,000	6.6	75,400	8.0	91,200	7.3	153,000	9.7	175,500	.....	222,750	9.9	215,500	7.9
United States	28,000	4.6	30,000	3.2	30,000	2.4	30,000	1.9	30,000	.....	30,000	1.3	30,000	1.1
Extension work—														
State	.....	.....	50,000	5.3	102,800	8.2	115,000	7.3	91,500	.....	115,000	5.1	100,000	3.7
United States	.....	.....	.....	.....	.....	.....	28,781	1.8	60,083	.....	138,338	6.2	153,989	5.7

(1) Amount from tax levies of previous years not drawn until fiscal year 1916.

..... No report.

Table 19 shows the trends of income at the University of Michigan. Chart XXIV shows that at the University of Michigan in 1910 the income from student fees represented about one-third of the total State appropriations, and a little over one-fifth of the total working income. For every 36 cents that the students paid in in 1910 at the University of Michigan the State paid a dollar, and in 1921 for every 33 cents that the students paid in the State appropriated $1, or in 1910 for every dollar that the students paid in the State paid in $2.78,

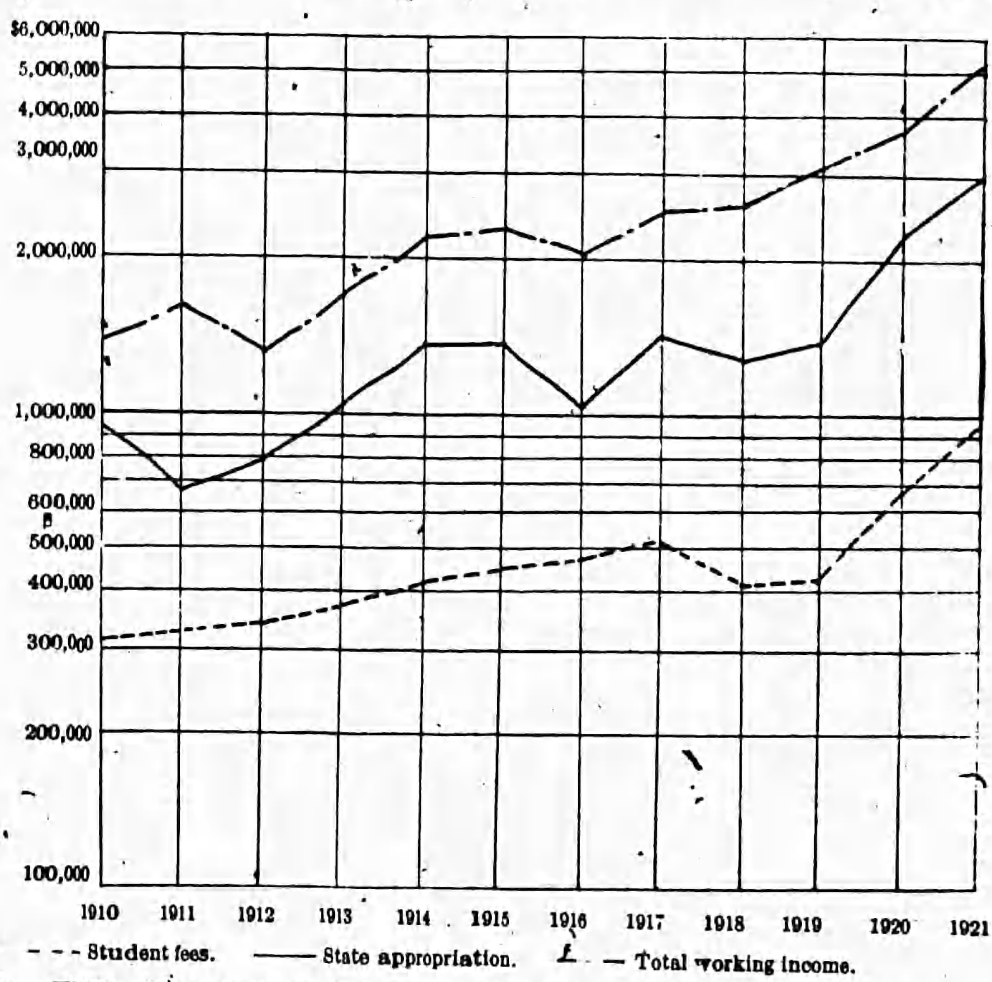

CHART XXIV.—University of Michigan student fees, State appropriation, and total working income for 1910-1921, inclusive

while in 1921 for every dollar that the students paid in the State appropriated $3.05. So far as the State appropriations are concerned, the students at the University of Michigan pay for about one-fourth of the cost of their education. This shows that at the University of Michigan in 1921 the students were not paying quite as large a proportion to the State appropriations as they were in 1910.

Table 19 shows the amounts of income from the six main sources listed, together with the specified appropriations to the Michigan Agricultural College for this entire period. Chart XXV shows the

curves representing income from student fees, total working income and State appropriations, less the specified appropriations for experiment station and extension work. In 1910 the State appropriated $1 for every 12.3 cents received through student fees, while in 1921 the students were paying 16.6 cents for every dollar received through State appropriation. In 1910 for each dollar received from student

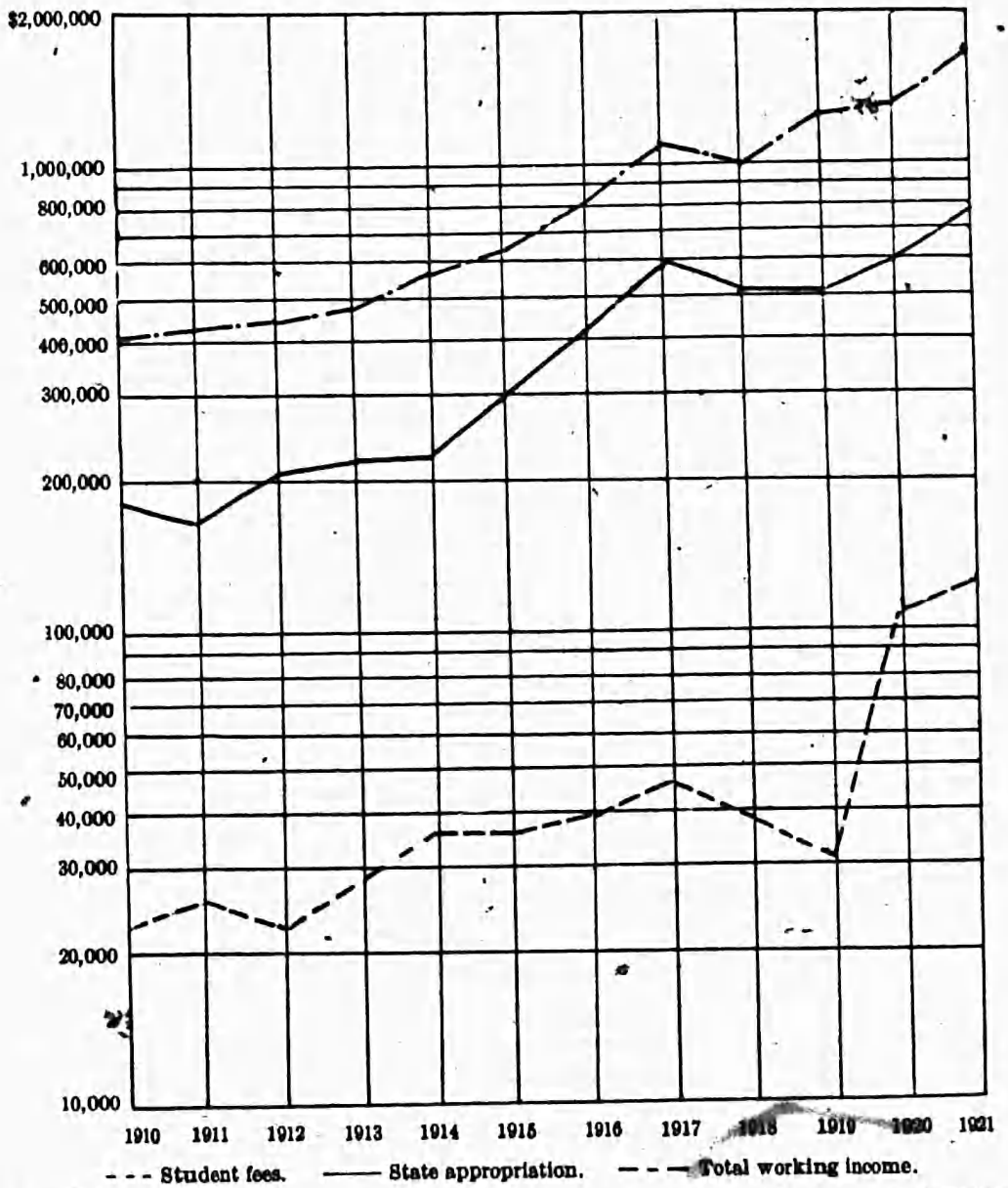

CHART XXV.—Michigan Agricultural College student fees, State appropriation, and total working income for 1910–1921, inclusive

fees the State appropriated $8.09, while in 1921 the State appropriated only $6.03 for every dollar received through student fees. At present, then, at the Michigan Agricultural School the student is paying $1 out of every $7.03, so far as these two funds are concerned, of the total cost of his education.

Chart XXVI and Table 19 show that at the University of Iowa in 1910, student fees were approximately one-seventh of the total State appropriation. In 1921 they were approximately one-fifth of the total State appropriation. In 1910, for every 14.4 cents paid in by

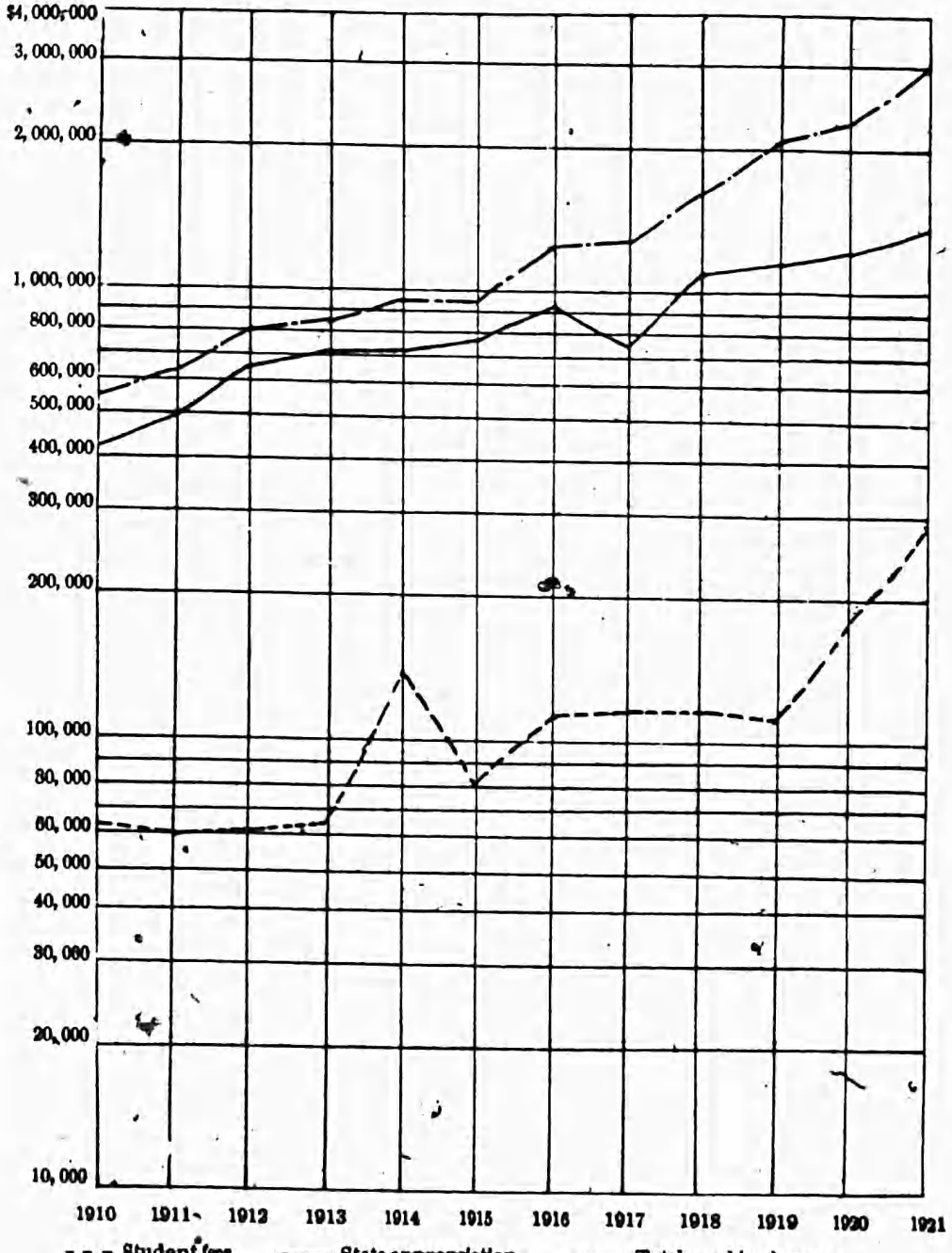

CHART XXVI.—University of Iowa student fees, State appropriation, and total working income for 1910–1921, inclusive

the students the State paid in $1 and for every 20.4 cents paid in by the students in 1921 the State paid in $1, or for every $1 paid in by the students in 1910 the State appropriated $6.93; while in 1921, for every dollar paid in by the students the State appropriated only

$4.91. This shows that in 1910 the State was paying in approximately seven times as much as were the students, while in 1921 the State was paying in but approximately five times as much.

Table 19 shows the amount of income to the Iowa State College from the six main sources listed. Chart XXVII shows the trend of

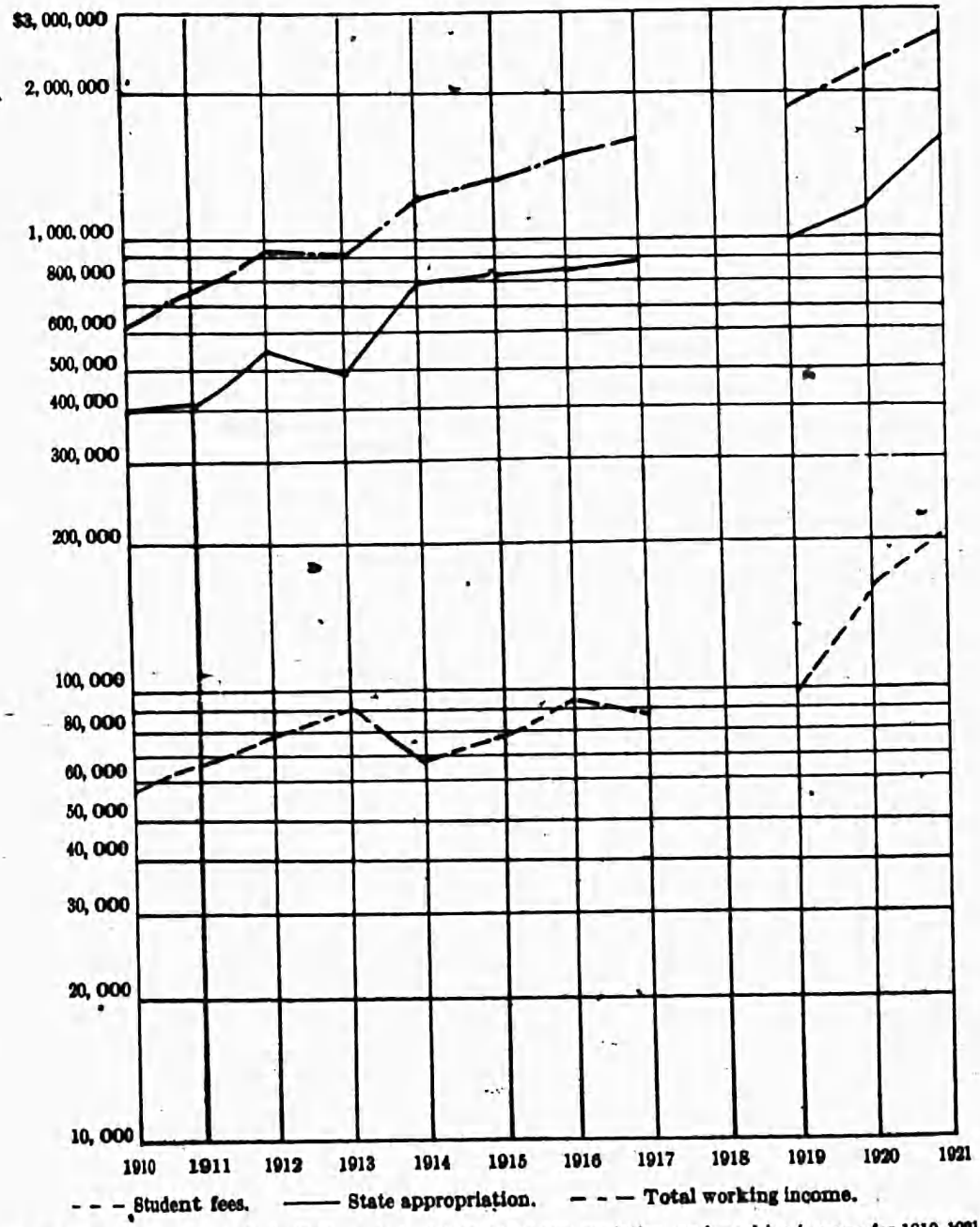

CHART XXVII.—Iowa State College student fees, State appropriation, and working income for 1910–1921, inclusive

student fees, total working income, and State appropriations, less the specified appropriations for experiment station and extension work. It will be noticed that Iowa State College made no reports in 1918; so the graph is broken from 1917–1919. The curves representing

all three incomes show a fairly steady rise from the beginning to the end of the period, though student fees have taken a sharp jump upward since 1919, and income from the State also showed a marked increase during 1921.

In 1910, for every 14.4 cents paid in by the students the State appropriated $1, while the State appropriated in 1921 $1 for every 13 cents paid in by the students. In 1910, for every dollar received from the students the State appropriated $6.94, while in 1921 it appropriated $7.68 for each dollar of student fees.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and source of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of Nebraska														
Student fees	$62,638	40.4	$68,938	7.5	$77,857	7.7	$100,917	7.1	$92,670	5.4	$155,009	6.5	$206,279	7.8
Productive funds	42,000	7.0	42,490	4.6	48,153	4.8	47,903	3.4	57,007	3.3	56,998	2.4	49,841	1.9
State	379,036	63.2	651,318	70.7	631,492	62.9	1,006,525	71.0	1,188,007	69.2	532,425	64.0	1,650,881	62.7
United States	68,000	11.3	80,000	8.7	80,000	8.0	100,716	7.1	118,576	6.9	163,225	6.8	172,155	6.5
Private gifts	1,000	.2					0		0		0			
All other sources	47,052	7.9	78,787	8.5	167,204	16.6	161,147	11.4	261,442	15.2	488,199	20.3	552,269	21.1
Total	599,725	100.0	921,533	100.0	1,004,706	100.0	1,417,208	100.0	1,717,702	100.0	2,395,856	100.0	2,631,425	100.0
Specified income (included above):														
Buildings	60,000	10.0	185,000	20.1	10,000	1.0	420,368	29.7	448,794	26.1	527,580	22.0	193,955	7.4
Experiment station—														
State	22,500	3.8	32,500	3.5	38,000	3.8	27,250	1.9	53,750	3.1	102,874	4.3	26,074	1.0
United States	28,000	4.7	30,000	3.3	30,000	3.0	30,000	2.1	30,000	1.7	30,000	1.3	30,000	1.1
Extension work—														
State			17,500	1.9	25,000	2.6	25,000	1.8	37,578	2.2	69,471	2.9	101,993	3.9
United States							20,716	1.5	38,576	2.2	83,225	3.5	92,155	3.5
University of Tennessee														
Student fees	45,235	21.6	30,099	13.8	60,138	22.9	57,722	18.2	38,413	11.2	71,267	9.4	119,741	13.9
Productive funds	26,167	12.5	25,708	11.8	26,084	9.9	26,513	8.4	26,252	7.6	24,210	3.2	24,210	2.8
State	53,546	25.6	66,139	30.4	78,862	30.0	104,848	33.1	110,585	32.1	273,000	36.0	292,742	33.9
United States	68,000	32.5	80,000	36.8	68,000	25.9	99,201	31.3	134,536	39.1	204,821	27.0	221,420	25.6
Private gifts	2,216	1.1	250	.1	4,000	1.5	3,550	1.1	3,650	1.1	49,357	6.5	60,783	7.0
All other sources	13,932	6.7	15,529	7.1	25,689	9.8	24,998	7.9	30,660	8.9	135,185	17.9	145,472	16.8
Total	209,096	100.0	217,725	100.0	262,773	100.0	316,832	100.0	344,096	100.0	757,840	100.0	864,368	100.0
Specified income (included above):														
Experiment station—														
State	15,000	7.2	15,000	6.8	15,000	5.7	15,000	4.7	15,000	4.4	40,475	5.3	25,008	2.9
United States	28,000	13.4	30,000	13.8	30,000	11.4	30,000	9.4	30,000	8.7	30,000	4.0	30,000	3.5
Extension work—														
State							21,201	6.7	56,536	16.3	44,000	5.8	52,863	6.1
United States							31,201	9.8	66,536	19.3	136,821	18.1	153,420	17.7

University of Louisiana														
Student fees	7,819	4.5	14,109	5.6	15,967	5.6	13,933	4.8	16,589	2.6	16,998	3.4	30,632	3.7
Productive funds	14,556	8.4	14,555	5.8	14,556	5.1	14,556	5.0	10,644	1.7	14,555	2.9	14,556	1.7
State	87,100	50.3	124,500	49.5	132,000	46.8	143,400	49.3	253,718	40.4	210,042	42.0	516,698	62.5
United States	50,149	29.0	57,686	23.0	58,898	20.9	81,622	28.0	139,030	22.2	165,221	33.0	177,848	21.6
Private gifts					40,000	14.2			3,000	.5				
All other sources	13,455	7.8	40,566	16.1	20,841	7.4	37,575	12.9	204,266	32.6	93,258	18.7	86,920	10.5
Total	173,079	100.0	251,416	100.0	282,262	100.0	291,086	100.0	627,247	100.0	500,074	100.0	826,654	100.0
Specified income (included above):														
Buildings					10,000	3.5								
Experiment station—														
State	10,000	5.8	24,500	9.7	22,000	7.8	24,500	8.4	24,000	3.8	26,542	5.3	50,000	6.0
United States	28,000	16.2	30,000	11.9	30,000	10.6	30,000	10.3	30,000	4.8	30,000	6.0	30,000	3.6
Extension work—														
State							14,094	4.8	25,000	4.0	48,500	9.7	72,861	8.8
United States							24,102	8.3	47,606	7.6	106,364	21.3	115,116	13.9
Pennsylvania State College														
Student fees	94,266	15.1	51,035	11.3	64,570	7.8	71,026	7.9	63,372	5.9	98,716	6.1	131,260	6.7
Productive funds	33,520	5.4	31,020	6.9	30,000	3.6	31,020	3.5	30,000	2.8	31,020	1.9	31,020	1.6
State	219,725	35.2	269,260	59.6	535,690	64.8	535,678	59.9	632,338	59.3	921,810	56.8	790,044	40.1
United States	68,000	10.9	80,000	17.7	80,000	9.7	126,894	14.2	188,383	17.7	276,631	17.0	295,819	15.0
Private gifts	1,354	.2			0								5,000	.3
All other sources	207,856	33.2	20,660	4.5	116,233	14.1	130,105	14.5	153,259	14.3	294,604	18.2	715,396	36.3
Total	624,721	100.0	451,975	100.0	826,493	100.0	894,723	100.0	1,066,352	100.0	1,622,781	100.0	1,968,537	100.0
Specified income (included above):														
Buildings	2,880	4.5			147,246	17.8	63,433	7.1	73,037	6.8				
Experiment station—														
State									1,550	.1			3,368	.2
United States	28,000	4.5	30,000	6.6	30,000	3.6	30,000	3.4	30,000	2.8	30,000	1.8	30,000	1.5
Extension work—														
State									163,658	15.3	153,365	9.5	214,519	10.9
United States							46,894	5.2	108,383	10.2	196,632	12.1	215,817	11.0

[6] Part for Agricultural and Industrial State Normal School for Negroes.
[7] State authorized $1,000,000 bonded indebtedness for building.

Table 19 shows the trends of income to the University of Indiana. Chart XXVIII shows that there was no report for the year 1919 from this university. The total working income for this university was but slightly more than the State appropriations throughout the period. The trend for student fees reached a high point in 1912 for three years, dropped considerably in 1915, and from 1916 has shown a

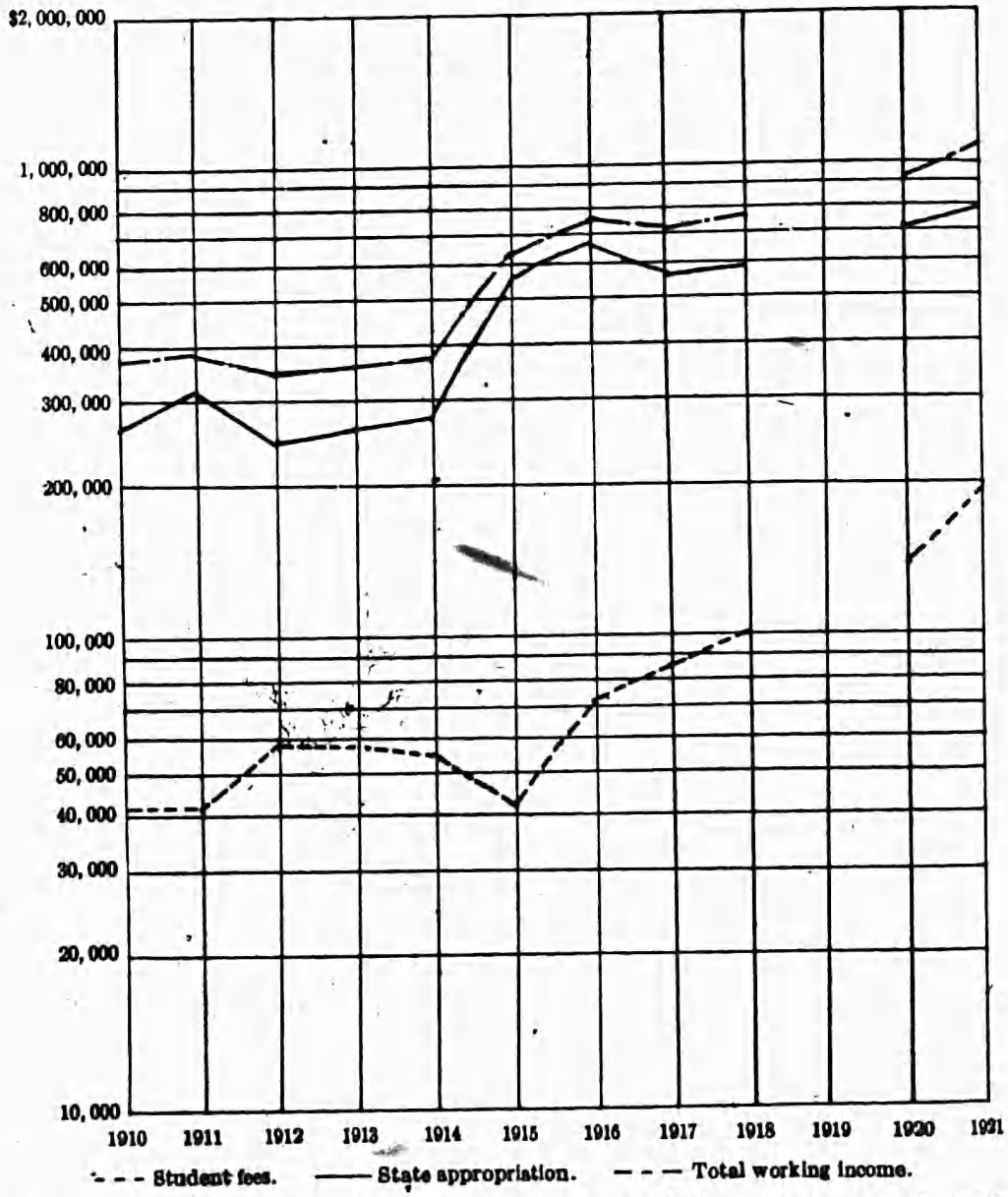

CHART XXVIII.—University of Indiana student fees, State appropriation, and total working income for 1910-1921, inclusive

steady increase to 1918 and a rapid increase during 1921. In 1910, for every 15.6 cents received from student fees the State appropriated $1, while in 1921 the students paid in 26.2 cents for every $1 appropriated by the State. In 1910, for every dollar paid in by the students $6.40 was appropriated by the State, while in 1921 the ratio appropriated by the State had decreased so that for every dollar paid in by the students the State appropriated only $3.82.

Table 19 gives the six main sources of income, together with the specified appropriations to Purdue University over the period 1910–1921. Chart XXIX shows the trends representing student fees, total working income, and appropriations from the State, less the specific appropriations for experiment station and extension work. The trend representing total State appropriations, less the specified appropria-

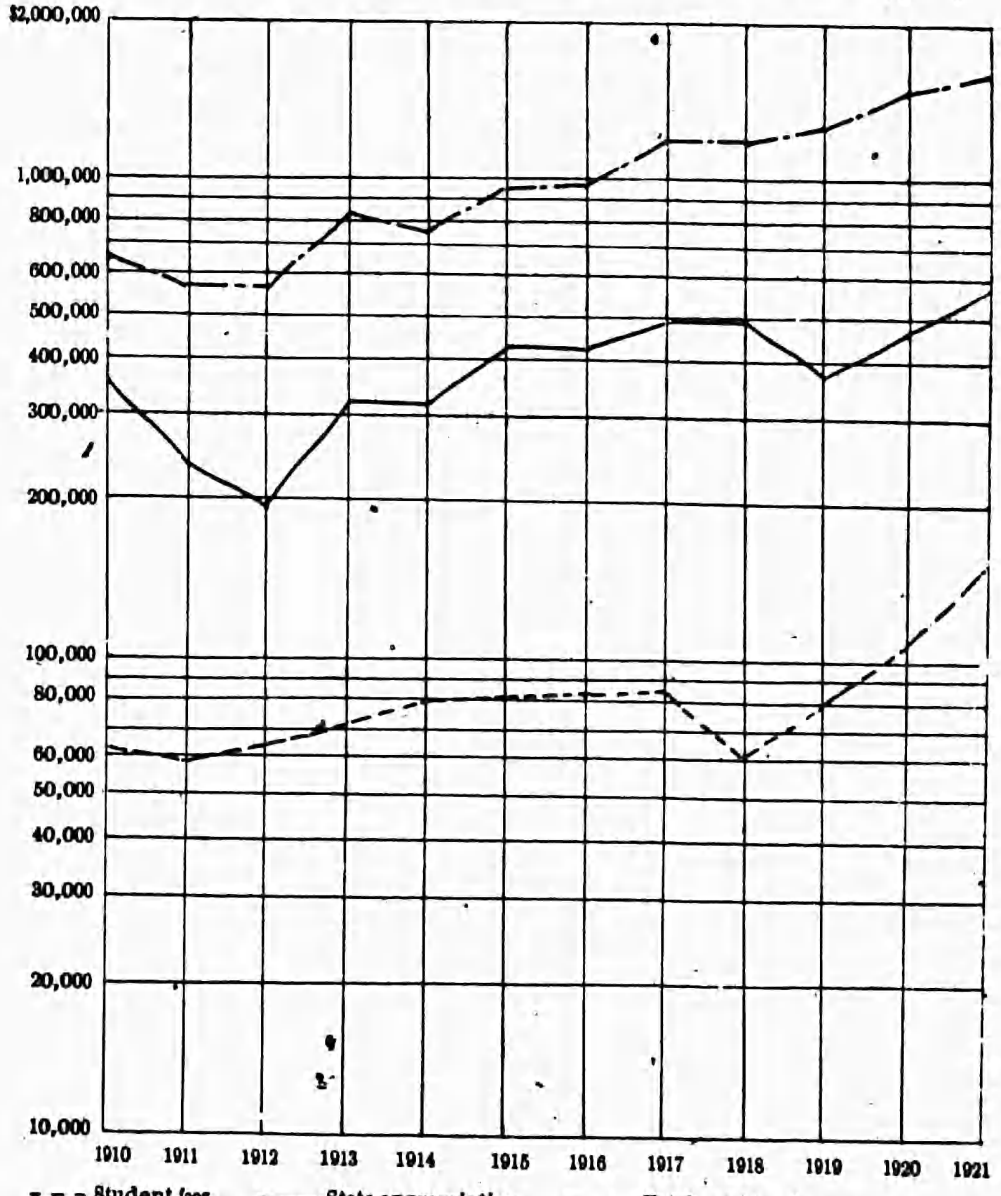

CHART XXIX.—Purdue University student fees, State appropriation, and total working income for 1910–1921, inclusive

tions for experiment station and extension work, shows that during the whole period the appropriations from the State have not increased to any large extent. This means that, though Table 19 shows that the total State appropriations have a little more than doubled during this period, such a large proportion of the increase has been going to the experiment station and the extension work that the appropriation for collegiate purposes had increased very moderately. This

curve shows that there was a rapid decrease in appropriations from 1910 to 1912, caused by appropriations for buildings during the first two years and a decided increase nearly back to the 1910 level in 1913. From 1913 to 1917 there was a very moderate increase on the whole, a sharp decrease in 1919, with a moderate increase since that period. The curve representing student fees rose very moderately from 1911 till 1914, rose only very slightly to 1917, shows a marked fall in 1918, but has risen quite rapidly since that period. The curve representing total working income shows a less marked rise than do similar curves for many other State institutions represented in this study.

At Purdue University in 1910 the students paid in 17.2 cents for every dollar appropriated by the State, while in 1921 the students paid 28.1 cents for every dollar received through State appropriations. In 1910 students paid $1 for every $5.81 appropriated by the State, while in 1921 they were paying $1 for every $3.56 paid by the State. This shows that at Purdue the students in 1921 paid in $1 out of every $4.56 from these two funds for their education.

Table 19 shows amounts of income to the University of North Carolina. Chart XXX shows trends of income from student fees, total State appropriations, and total working income. At the beginning of the period the income from student fees amounted to little over one-half the State appropriations, while at the end of the period, though the trend in general shows a steady rise with a rapid rise since 1919, the trend for State appropriations has risen more rapidly since 1916, and the student fees amount in 1921 to but 22.4 per cent of the

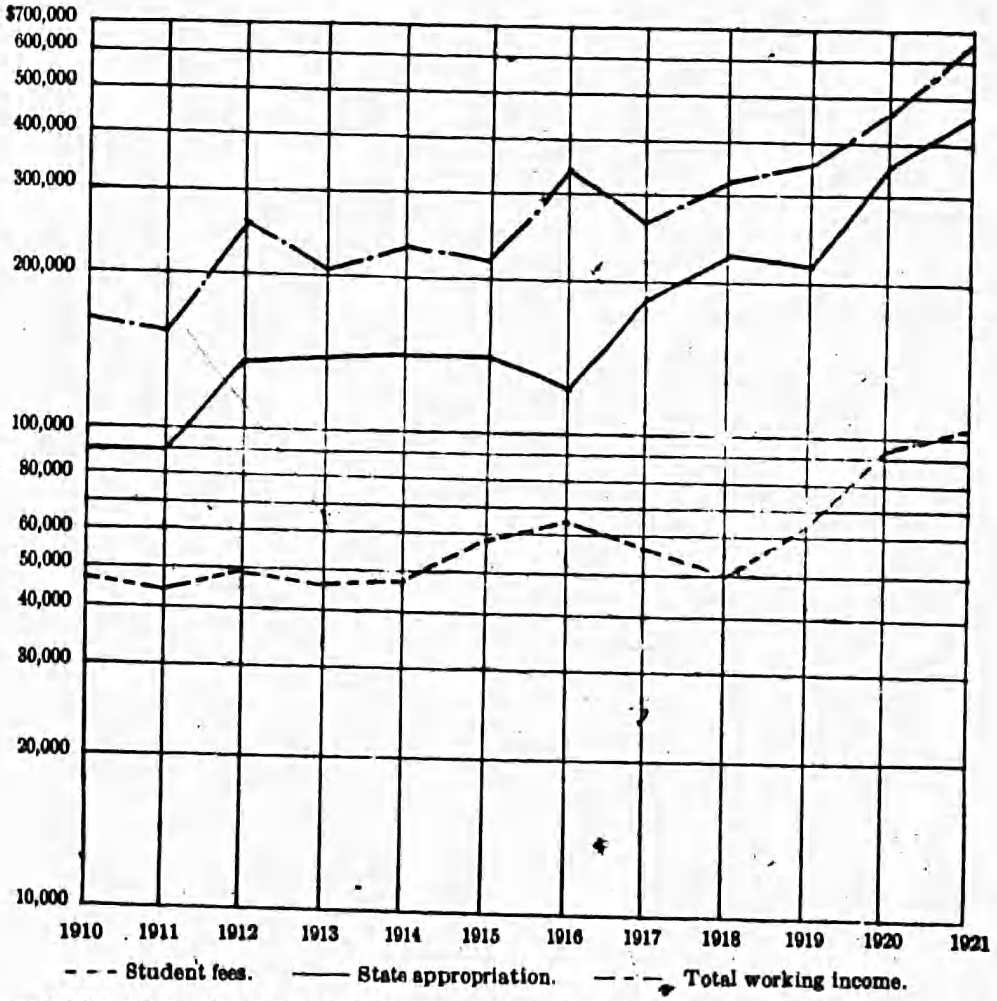

CHART XXX.—University of North Carolina student fees, State appropriation, and total working income for 1910–1921, inclusive

total income from the State. This shows that North Carolina has increased the State revenues for the university more rapidly since 1916 than have the charges increased at the university. In 1910, for every 52.9 cents received from student fees the State appropriated $1, but in 1921 the State was appropriating $1 for every 22.4 cents paid in by the students. In 1910, for every dollar paid by the students $1.89 was appropriated by the State, while in 1921 the State appropriated $4.46 for every dollar paid by the students. The proportion

paid by the students at the beginning of the period was very large, while at the close of the period the proportion was nearer like that maintained in a number of the other institutions here discussed.

Table 19 gives the amounts of income, together with the specified appropriations to the North Carolina College of Agriculture and Engineering during the period 1910 to 1921. Chart XXXI shows the curves representing income from student fees, total working in-

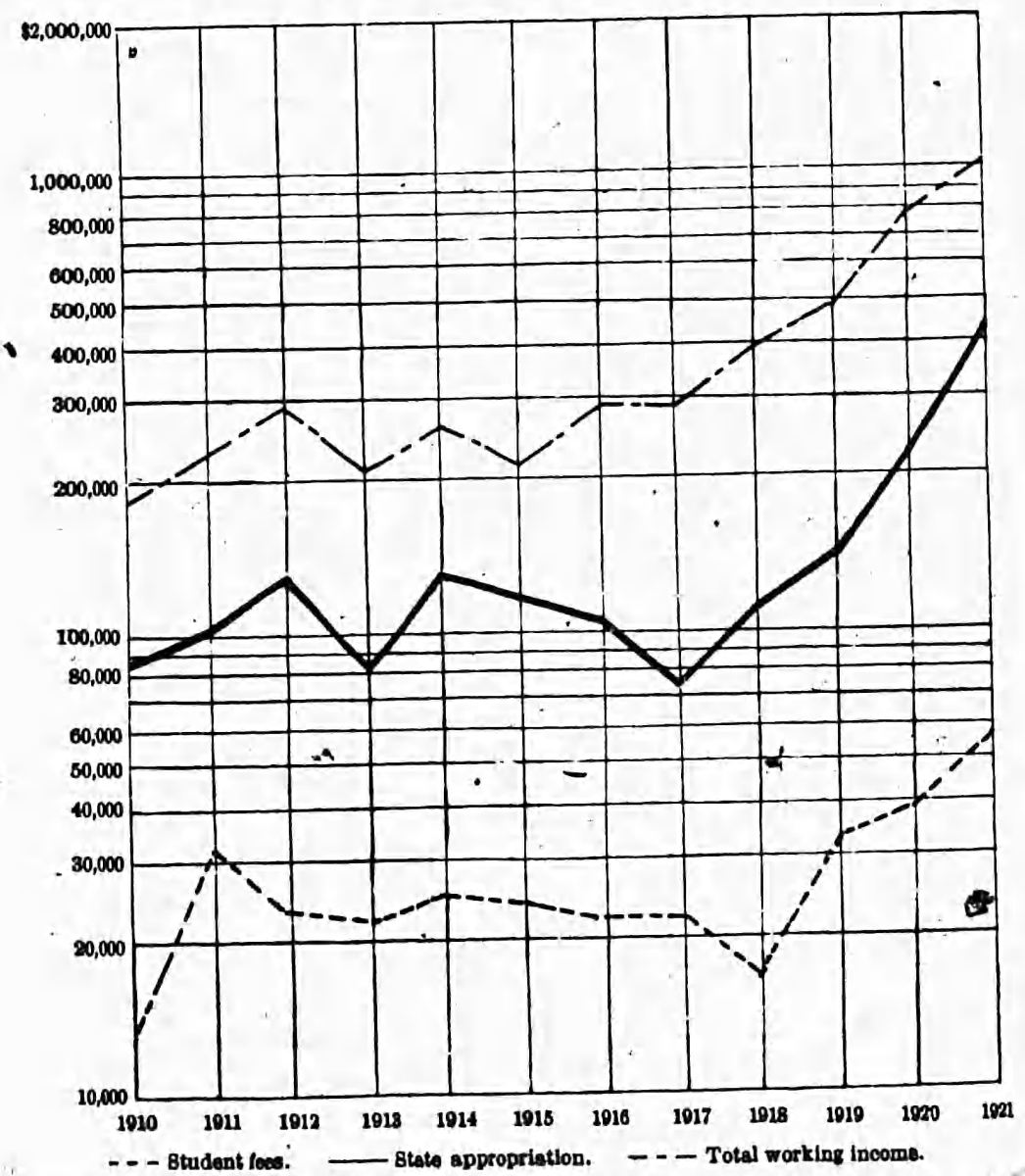

CHART XXXI.—North Carolina College of Agriculture and Engineering student fees, State appropriation, and total working income for 1910–1921, inclusive

come, and the total State appropriations, less the specified appropriations for experiment station and extension work. The curve showing income from student fees mounted sharply from the beginning of the period till 1911, on the whole showed a decline till 1917, reflected the war conditions in 1918, and in general showed a rapid rise since that period through 1921. The curve showing State appro-

priations, less the specified appropriations for experiment station and extension work, shows marked irregularities from 1910 till 1917. The curve showed a rapid rise till 1912, dropped in 1923, rose again to practically the same level in 1914 as in 1912, but from that point declined to a lower level in 1917 than at the beginning of the period. Since 1917 the curve shows a very rapid rise through 1921. The curve representing total working income appears to reflect to a very large extent the curve representing the State appropriations.

In 1910 the students paid in 15.8 cents for every dollar appropriated by the State, while in 1921 the students paid in only 13.4 cents for each dollar appropriated by the State. For each dollar received through student fees in 1910 the State appropriated $6.34, while in 1921 for each dollar received from student fees the State appropriated $7.46.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and sources of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of Texas														
Student fees	$28,000	5.2	$32,455	7.2	$35,445	4.1	$50,001	5.2	$57,091	5.2	$113,234	7.9	$122,234	5.6
Productive funds	163,000	30.2	145,703	32.4	176,637	20.3	202,249	21.0	224,234	20.3	438,500	30.6	312,010	14.4
State	295,000	54.7	268,455	59.7	658,300	75.5	711,682	73.8	819,454	74.1	839,365	58.4	1,356,623	62.6
United States											6,604	.5	7,667	.4
Private gifts	25,000	4.7			100				5,000	.4	8,000	.5	100,000	4.6
All other sources	28,000	5.2	3,115	.7	1,174	.1					31,106	2.2	267,625	12.4
Total	539,000	100.0	449,728	100.0	871,396	100.0	963,932	100.0	1,105,779	100.0	1,436,809	100.0	2,166,159	100.0
Agricultural and Mechanical College of Texas														
Student fees	4,173	2.3	14,980	2.9	3,858	1.1	11,473	1.5	2,314	.1	86,973	4.6	104,289	4.6
Productive funds	12,180	6.7	6,500	1.3	6,150	1.7	11,475	1.5	10,450	.6	10,450	.6	10,450	.5
State	107,150	58.9	404,947	78.4	251,050	70.3	479,200	64.0	432,595	23.4	1,027,005	54.7	1,412,890	62.3
United States	58,000	31.9	80,000	15.5	70,000	19.6	113,449	15.1	173,415	9.4	340,124	18.1	323,555	14.3
Private gifts	535	.2											1,390	.1
All other sources			10,000	1.9	26,075	7.3	133,614	17.9	1,231,901	66.5	411,964	22.0	415,546	18.2
Total	182,038	100.0	516,427	100.0	357,133	100.0	749,211	100.0	1,850,675	100.0	1,876,516	100.0	2,268,120	100.0
Specified income (included above):														
Buildings	11,600	6.4	196,250	38.0	7,500	2.1	132,500	17.7			17,500	.9	466,250	20.6
Experiment station—														
State	19,500	10.7			43,750	12.3			230,856	12.5	213,540	11.4	220,520	9.7
United States	28,000	15.4	30,000	5.7	30,000	8.4	30,000	4.0	30,000	1.6	30,000	1.6	30,000	1.3
Extension work—														
State			9,000	1.7			35,970	4.8	96,247	5.2	155,870	8.3	268,156	11.8
United States							45,970	6.1	105,919	5.7	272,428	14.5	285,158	12.6
College of Industrial Arts (Texas)														
Student fees							35,000	13.5	33,856	6.1	44,237	9.9	82,054	11.5
State							222,187	85.7	513,000	92.9	371,751	83.5	545,274	76.7
United States											3,497	.8	3,500	.5
All other sources							2,000	.8	5,238	1.0	25,724	5.8	80,328	11.3
Total							259,187	100.0	552,094	100.0	445,209	100.0	711,156	100.0
Specified income (included above):														
Buildings							106,000	40.9	350,000	63.4	136,671	30.7	260,600	36.6

University of Maine

Student fees	40,225	13.5	38,700	13.7	50,079	12.8	73,076	17.5	57,252	15.3	93,122	16.7	131,162	18.6
Productive funds	9,915	3.3	9,915	3.5	9,915	2.5	9,915	2.4	9,915	2.6	9,915	1.8	12,471	1.8
State	162,026	54.2	115,000	40.6	192,250	49.1	185,639	44.4	149,202	39.8	220,983	39.6	294,809	41.8
United States	68,000	22.8	80,000	28.2	80,000	20.4	94,388	22.6	101,702	27.1	119,986	21.5	123,644	17.5
Private gifts													1,500	.3
All other sources	18,529	6.2	39,641	14.0	59,282	15.2	55,368	13.1	57,058	15.2	114,456	20.4	141,129	20.0
Total	298,695	100.0	283,296	100.0	391,526	100.0	418,386	100.0	375,129	100.0	558,463	100.0	704,715	100.0
Specified income (included above):														
Buildings			(1)		71,250	18.2	48,750	11.7						
Experiment station—														
State	29,026	9.7	13,500	4.8	9,500	2.4	10,000	2.4	21,771	5.8	28,959	5.2	15,000	2.1
United States	28,000	9.4	30,000	10.6	30,000	7.7	30,000	7.2	30,000	8.0	30,000	5.4	30,000	4.3
Extension work—														
State							4,389	1.0	11,702	3.1	29,987	5.4	33,643	4.8
United States							14,389	3.4	21,702	5.8	29,016	5.2	43,643	6.2

[1] Included in State appropriation.

No income from student fees is reported on Chart XXXII or Table 19 for the University of Washington in 1910, so comparisons between 1911 and 1921 will be made. The increase in income from student fees at the University of Washington mounted sharply from 1911 till 1915, slightly less than held its own till 1919, and again jumped sharply till 1921. The State appropriations and the total working income

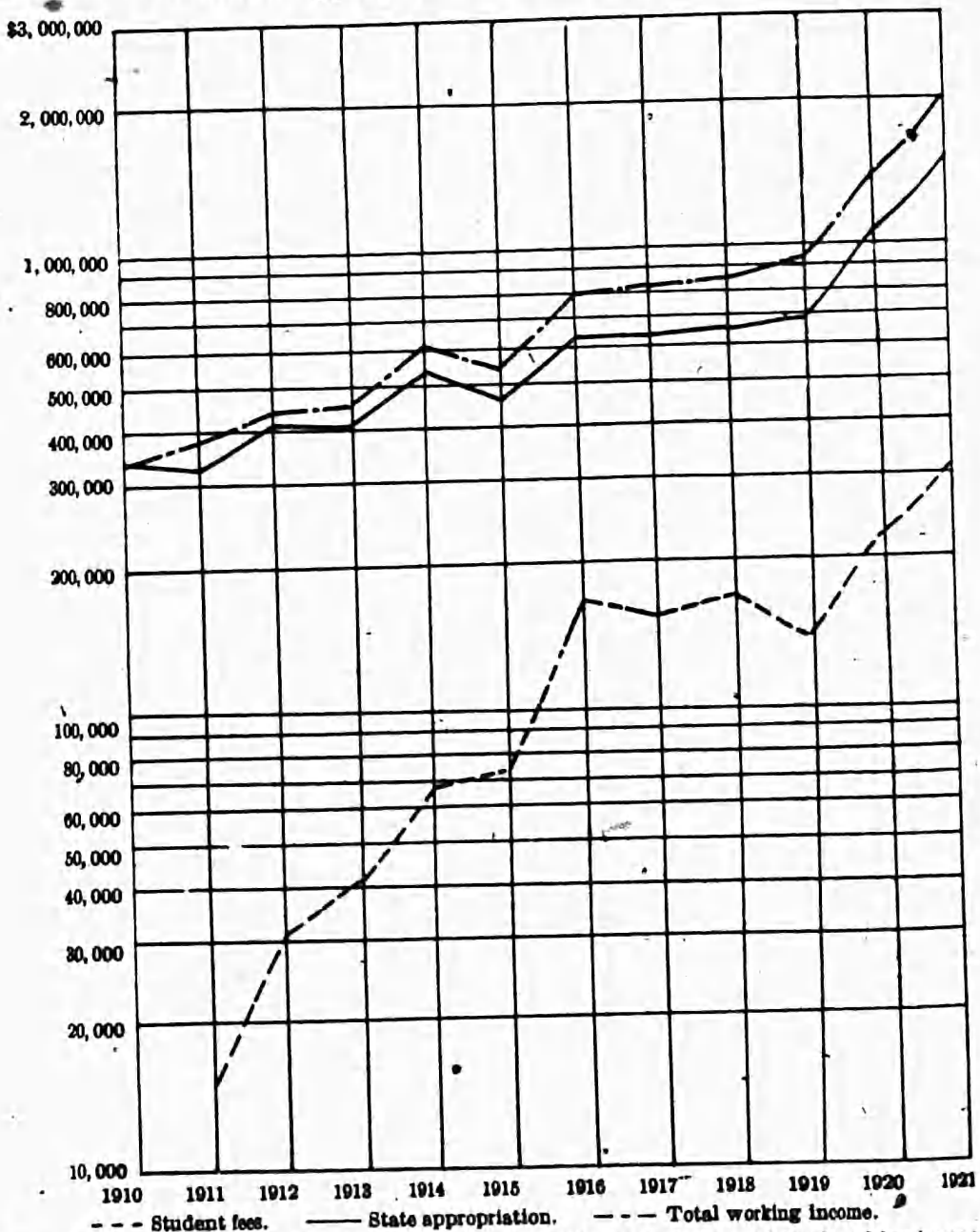

CHART XXXII.—University of Washington student fees, State appropriation, and total working income for 1910–1921, inclusive

showed a gradual rise until 1919, and a sharp rise from that time to 1921. In 1911, for every 4.6 cents received from student fees the State appropriated $1, while in 1921 for every 19.6 cents received from student fees the State appropriated $1. In 1911, for every dollar paid in by the students the State appropriated $21.60, while in 1921 for every dollar paid in by the students the State appropriated $5.11.

Table 19 gives the amount of income from six main sources, together with the specified appropriations for the State College of Washington for the even years from 1910 to 1921, inclusive. No income from student fees was reported in 1910 or 1915. Chart XXXIII shows the curves for income from student fees, total working income, and total State appropriations, less the specified appropriation

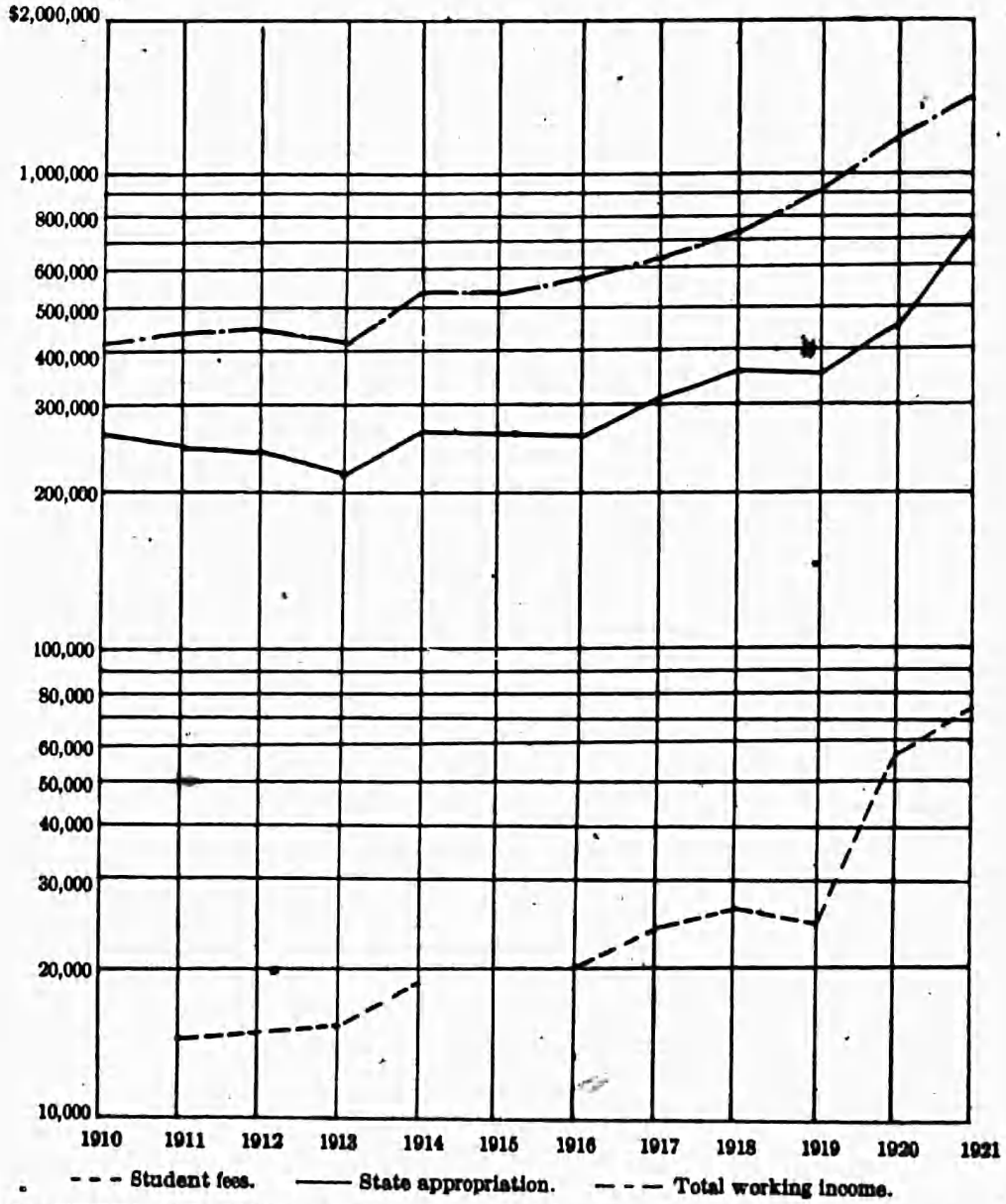

CHART XXXIII.—State College of Washington student fees, State appropriation, and total working income for 1910–1921, inclusive

for experiment station and extension work. Beginning in 1911 the curve representing income from student fees shows a moderate increase till 1914, again in 1916 a moderate increase to 1918, and a decline in 1919, a very sharp rise in 1920, and a moderate increase to 1921. The curve representing the total State appropriations, less the specified appropriations for experiment station and extension

work, shows a slight decline from 1910 to 1914. It shows on the whole a moderate rise from 1913 to 1919, and a rather sharp rise during the last two years. The total working income curve shows a rather steady rise till 1917, since which time it has been rising more rapidly.

In 1910, $175 was reported as being received at the State College of Washington from student fees. This amount was so negligible that percentages mean nothing. In 1921, however, the students at the State College of Washington paid in 9.6 cents for every dollar paid in by the State, or for every dollar paid in by the students the State appropriated $10.25.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and source of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
University of Washington														
Student fees			$30,759	7.0	$68,664	11.4	$172,098	21.3	$170,430	19.5	$228,074	15.4	$317,687	15.5
Productive funds					1,250	.2	1,250	.1	41,477	4.7	42,696	2.9	42,642	2.1
State	$336,661		408,000	92.7	531,324	88.4	634,893	78.6	662,247	75.8	1,133,978	76.7	1,624,225	79.4
United States											7,746	.5	3,400	.2
Private gifts			1,350	.3										
All other sources											66,540	4.5	58,382	2.8
Total	336,661	100.0	440,109	100.0	601,238	100.0	808,241	100.0	874,154	100.0	1,479,034	100.0	2,046,336	100.0
Specified income (included above):														
Buildings			29,000	6.6			70,311	8.7	69,017	7.9	146,196	9.9	538,644	26.3
State College of Washington														
Student fees	175	.0	15,532	3.6	18,545	3.4	20,560	3.5	26,263	3.5	58,427	4.8	72,370	4.9
Productive funds	29,000	7.2	42,052	9.6	52,000	9.5	52,000	8.8	54,517	7.3	78,046	6.4	62,856	4.3
State	267,278	66.2	267,500	60.2	344,153		344,608	58.4	444,684	59.9	691,313	56.3	892,556	61.1
United States	68,000	16.8	80,000	18.3	80,000		96,523	16.4	107,393	14.5	134,570	11.0	140,005	9.6
Private gifts							2,510	.4						
All other sources	39,597	9.8	32,155	7.3	54,854	9.9	73,411	12.5	110,054	14.8	265,616	21.5	293,597	20.1
Total	404,040	100.0	437,239	100.0	549,552	100.0	589,612	100.0	742,911	100.0	1,227,972	100.0	1,461,384	100.0
Specified income (included above):														
Buildings			(1)		(1)		(1)				192,500	15.7		
Experiment station—														
State			15,000	3.4	55,088	10.0	54,504	9.2	58,176	7.8	186,576	15.2	87,760	6.0
United States	28,000	6.9	30,000	6.9	30,000	5.5	30,000	5.1	30,000	4.0	30,000	2.4	30,000	2.1
Extension work—														
State			10,000	2.3	17,500	3.2	19,920	3.4	24,186	3.3	40,291	3.3	63,130	4.3
United States							16,522	2.8	27,393	3.7	54,570	4.4	60,005	4.1

[1] Included in State appropriation.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Intitution and sources of income	1910	Per cent of total	1912	Per cent of totol	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of totol	1921	Per cent of total
University of Oregon														
Student fees			$7,250	5.1	$9,480	4.6	$9,864	3.3	$22,239	7.2	$35,847	3.3	$76,163	6.0
Productive funds	$8,200	5.9	9,239	6.5	6,299	3.1	10,728	3.6	10,681	3.4	8,377	4.8	9,397	.7
State	125,000	90.3	125,000	88.4	190,000	92.3	280,595	93.1	278,582	89.4	973,997	90.4	1,039,703	82.5
Private gifts											50,000	4.6	113,269	9.0
All other sources	5,250	3.8									9,290	.9	21,258	1.7
Total	138,450	100.0	141,489	100.0	205,779	100.0	301,187	100.0	311,502	100.0	1,077,511	100.0	1,259,790	100.0
Specified income (included above):														
Buildings											400,000	37.1	113,269	9.0
Oregon State Agricultural College														
Student fees	17,826	4.6	16,625	5.7	27,886	3.9	32,689	4.8	33,693	4.6	75,599	6.7	77,560	4.1
Productive funds	12,115	3.1	11,033	3.8	13,041	1.8	11,615	1.7	10,973	1.5	11,786	1.0	11,272	.6
State	288,000	73.7	183,725	62.7	572,547	80.3	500,054	73.0	510,074	69.5	849,656	75.2	1,469,132	78.4
United States	68,000	17.4	75,000	25.6	90,700	12.7	102,346	14.9	131,857	18.0	120,383	10.7	124,089	6.6
Private gifts					8,560	1.2								
All other sources	4,977	1.2	6,433	2.2			38,115	5.6	47,552	6.4	72,896	6.4	192,549	10.3
Total	390,918	100.0	292,816	100.0	712,734	100.0	684,809	100.0	734,149	100.0	1,130,320	100.0	1,874,602	100.0
Specified income (included above):														
Buildings	105,000	26.9	105,000	35.9	249,000	(1)					60,000	5.3		
Experiment station—														
State	13,000	3.3	27,000	9.2	72,000	10.1	30,000	4.4	43,000	5.9	85,000	7.5	92,750	4.9
United States	28,000	7.2	30,000	10.2	30,000	4.2	30,000	4.4	40,450	5.5	30,000	2.7	30,000	1.6
Extension work—														
State			2,500	.9	51,325	7.2	82,025	12.0	70,950	9.7	100,978	8.9	132,199	7.1
United States							14,446	2.1	21,857	3.0	40,383	3.6	44,089	2.4

[1] Special appropriation for buildings, equipment, and improvements, for biennium ending Dec. 31, 1914.

Chart XXXIV and Table 19 show the State appropriations, minus the specified appropriations for experiment station and extension work, for the University of Nebraska. Both the State appropriations and the total working income of the university display a steady increasing trend and hold about the same relationship throughout the

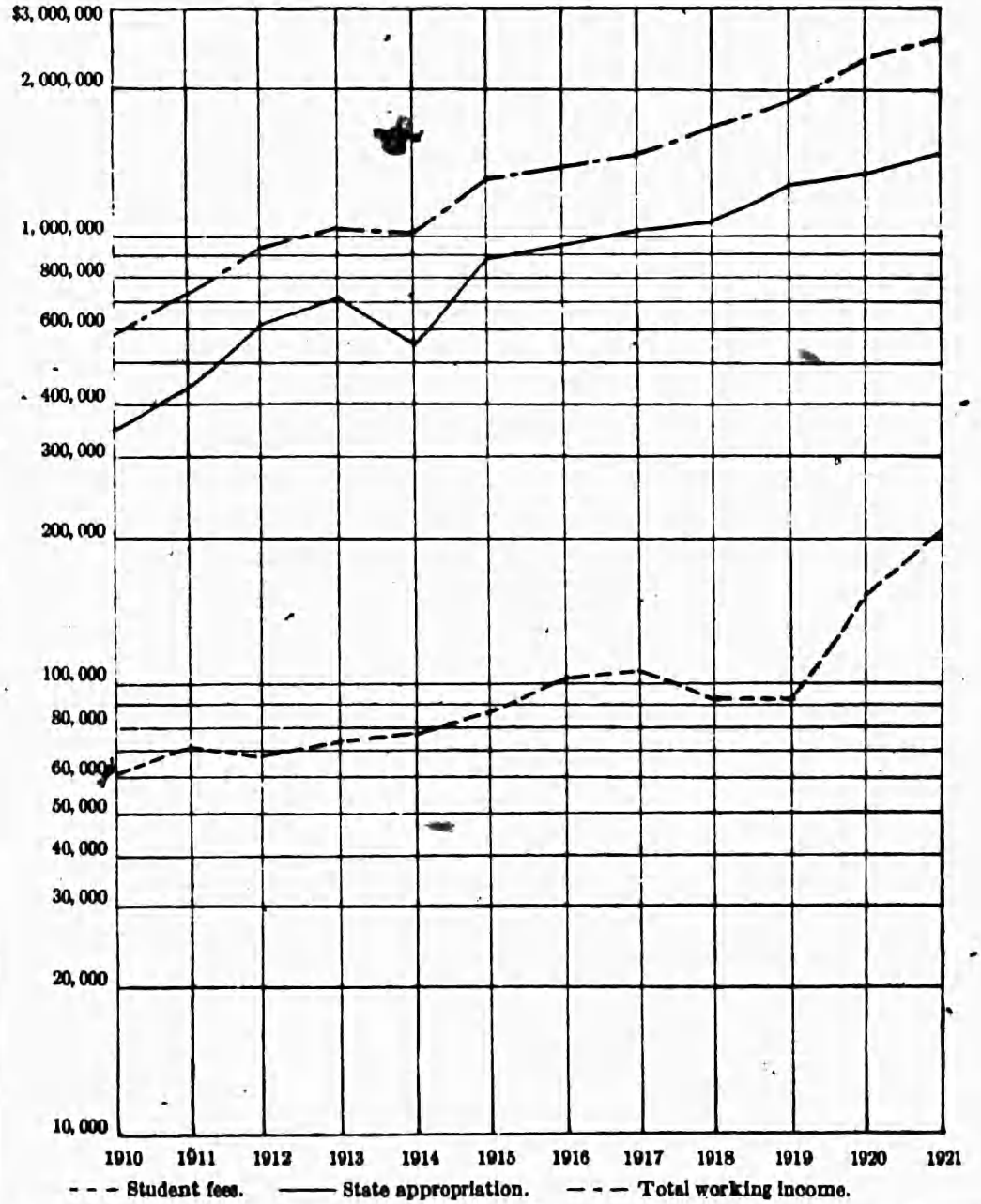

CHART XXXIV.—University of Nebraska student fees, State appropriation, and total working income for 1910-1921, inclusive

period considered. The curve for income from student fees grows very slowly from 1910 to 1917, shows a decrease till 1919, and then rises sharply. In 1910 for every 17.5 cents paid in by the students $1 was paid in by the State, while in 1921 for every 13.5 cents paid in by the students $1 in State appropriations was made. In 1910 the students paid in $1 for every $5.69 paid in by the State, while

in 1921 for every dollar received from the students the State paid $7.38. In spite of the sharp increase in receipts from student fees in 1920 and 1921, the State is appropriating a slightly larger ratio than it did at the beginning of the period.

Table 19 shows the trends of income from six main sources listed for Pennsylvania State College. Chart XXXV gives the trends of income from student fees, total working income, and income from

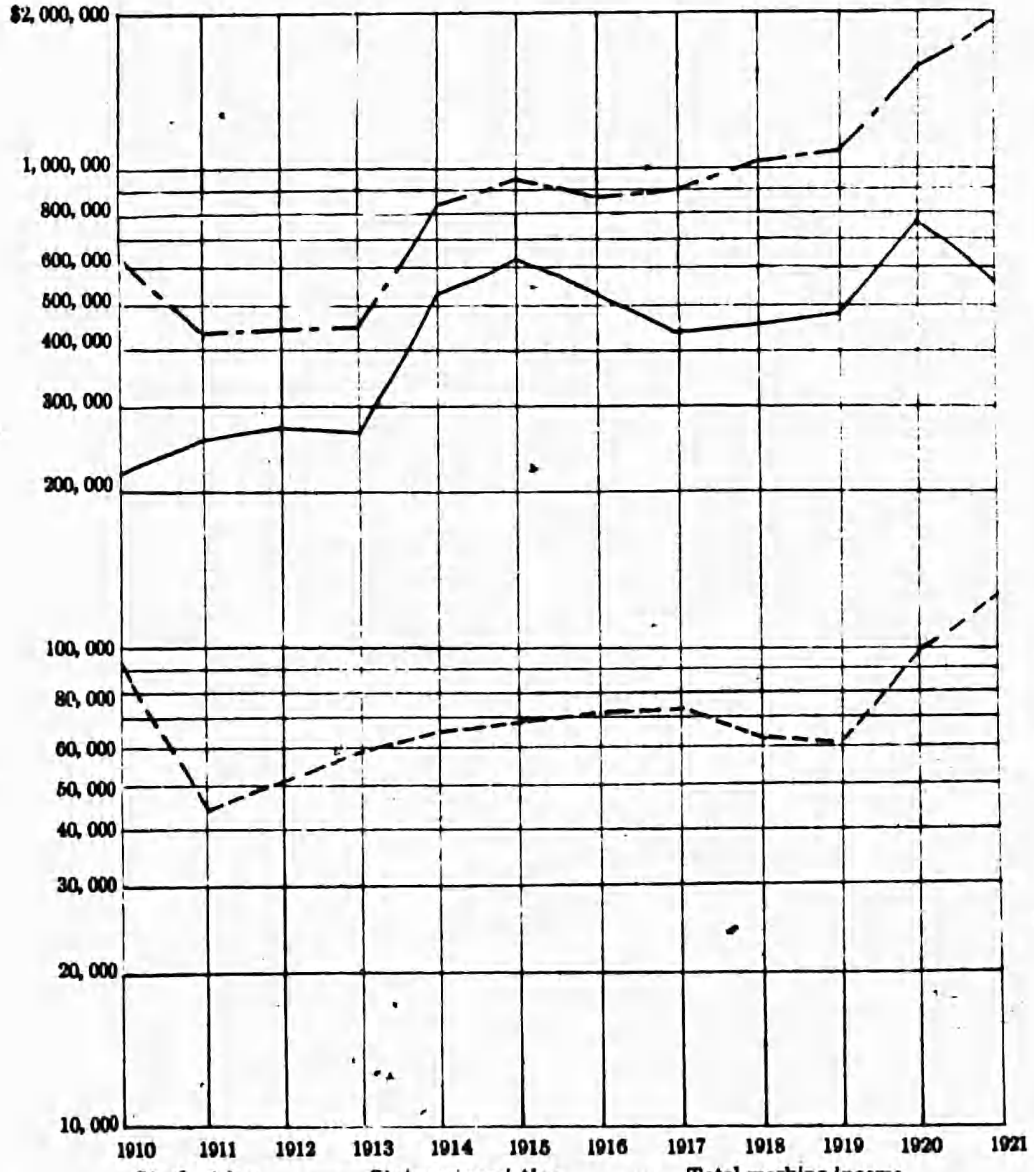

CHART XXXV.—Pennsylvania State College student fees, State appropriation, and total working income for 1910–1921, inclusive

State appropriations, less the specified appropriations for experiment station and extension work. The curve representing student fees dropped sharply from 1910 to 1911, rose very gradually until 1917, and showed the effects of the war during the next two years, and rose sharply till 1921. The curve representing State income showed some rather marked irregularities. A sharp rise from 1913 to 1915 perhaps indicates a large building program, as probably does

the sharp rise in 1920 over 1919. The total working income curve shows a relationship to both the trend lines representing student fees and the curve representing income from the State.

In 1910 the students of Pennsylvania State College paid in 42.9 cents for every dollar appropriated by the State, whereas in 1921 they paid in only 22.9 cents for each dollar appropriated by the State. In 1910 there was received from student fees $1 for every $2.33 appropriated by the State, while in 1921 the State appropriated $4.36 for each dollar received through student fees. In 1910, so far as the student fees and State appropriations were concerned, the students were paying $1 out of every $3.33 for their education, while in 1921 they were paying $1 out of every $5.36.

TABLE 19.—*State colleges and universities—Income trends, 1910–1921*—Continued

Institution and source of income	1910	Per cent of total	1912	Per cent of total	1914	Per cent of total	1916	Per cent of total	1918	Per cent of total	1920	Per cent of total	1921	Per cent of total
Indiana University														
Student fees	$41,414	11.2	$56,000	15.8	$54,000	14.3	$71,532	9.4	$101,545	13.5	$142,144	15.3	$196,903	17.2
Productive funds	43,752	11.9	43,200	12.2	44,933	11.9	43,920	5.7	45,511	6.0	54,660	5.9	49,780	4.3
State	265,281	71.9	255,000	71.9	278,757	73.7	642,527	84.1	586,671	77.7	703,127	75.8	751,308	65.6
United States											12,851	1.4		
All other sources	18,453	5.0	500	.1	575	.1	6,391	.8	20,855	2.8	14,423	1.6	146,736	12.9
Total	368,900	100.0	354,700	100.0	378,265	100.0	764,370	100.0	754,582	100.0	927,205	100.0	1,144,727	100.0
Specified income (included above): Buildings	91,633	24.8					82,263	10.8						
Purdue University														
Student fees	61,573	9.5	63,094	10.9	80,339	10.2	84,950	8.7	63,461	5.3	109,337	7.3	162,267	9.8
Productive funds	17,000	2.6	17,000	2.9	17,550	2.2	17,088	1.7	29,499	2.4	45,728	3.0	39,431	2.4
State	423,009	65.1	301,195	52.2	433,389	55.0	517,357	52.8	663,058	55.1	735,523	48.9	862,756	52.0
United States	68,000	10.4	80,000	13.9	80,000	10.2	108,931	11.1	140,483	11.7	219,362	14.6	235,138	14.1
Private gifts	15,865	2.4			6,359	.8								
All other sources	64,771	10.0	115,871	20.1	169,764	21.6	251,466	25.7	307,982	25.5	393,627	26.2	359,179	21.7
Total	650,218	100.0	577,160	100.0	787,401	100.0	979,792	100.0	1,204,183	100.0	1,503,577	100.0	1,658,771	100.0
Specified income (included above): Buildings	158,908	24.4			27,485	3.5	104,380	10.7	(1)		(1)			
Experiment station—														
State	75,000	11.5	75,000	13.2	88,000	11.2	71,000	7.2	91,000	7.5	91,000	6.1	102,250	6.2
United States	28,000	4.3	30,000	5.2	30,000	3.8	30,000	3.1	30,000	2.5	30,000	2.0	30,000	1.8
Extension work—														
State			27,500	4.8	30,000	3.8	30,000	3.1	86,552	7.2	175,156	11.6	183,050	11.0
United States							28,931	3.0	60,483	5.0	139,362	9.3	155,138	9.4
University of North Carolina														
Student fees	47,569	28.7	47,635	18.2	46,643	19.7	63,003	18.2	49,014	15.1	95,629	20.3	104,303	18.3
Productive funds	12,500	7.5	12,500	4.8	11,195	4.7	14,362	4.2	12,391	3.8	14,058	3.0		
State	90,000	54.3	137,000	52.4	145,000	61.2	125,417	36.2	228,812	70.3	360,000	76.5	465,000	81.7
Private gifts			44,885	17.2	3,828	1.6			8,057	2.5	1,000	.2		
All other sources	15,743	9.5	19,563	7.4	30,361	12.8	143,172	41.4	27,225	8.3				
Total	165,812	100.0	261,583	100.0	237,027	100.0	345,954	100.0	325,499	100.0	470,687	100.0	569,303	100.0

Specified income (included above): Buildings	26,000	15.7	50,000	19.1	50,000	21.1	20,000	5.8	63,812	19.6	125,300	26.6	250,000	43.9
North Carolina College of Agriculture and Engineering														
Student fees	13,873	7.4	22,860	8.1	24,654	9.3	22,129	7.7	17,120	4.3	39,941	5.1	57,178	5.5
Productive funds	7,500	4.0	7,500	2.6	7,500	2.8	7,500	2.6	7,500	1.9	7,500	.9	7,500	.7
State	88,000	46.7	133,000	47.0	135,000	50.9	127,953	44.6	183,707	46.3	383,843	48.6	602,637	58.1
United States	54,800	29.1	63,500	22.4	63,500	23.9	96,452	33.6	134,707	34.0	232,343	29.4	249,470	24.1
Private gifts							20,000	7.0						
All other sources	24,084	12.8	56,318	19.9	34,753	13.1	13,124	4.3	53,519	13.5	126,455	16.0	120,151	11.6
Total	188,257	100.0	283,178	100.0	265,407	100.0	287,158	100.0	396,553	100.0	790,082	100.0	1,036,936	100.0
Specified income (included above): Buildings	18,000	9.6	50,000	17.7			20,000	7.0			75,000	.9	402,637	38.8
Experiment station— State														
United States	28,000	14.9	30,000	10.6	30,000	11.3	30,000	10.4	30,000	7.6	30,000	3.8	30,000	2.9
Extension work— State							22,953	8.0	71,207	18.0	158,843	20.1	175,970	17.0
United States							32,953	11.5	71,207	18.0	168,843	21.1	185,970	19.9

[1] Included in State appropriation.

Table 19 shows the amounts of income under this period for the University of Texas, while Chart XXXVI shows the trends of income from student fees, State appropriations, and total working income. The trends for total working income and State appropriations decreased from 1910 to 1912 slightly, increased sharply to 1914, de-

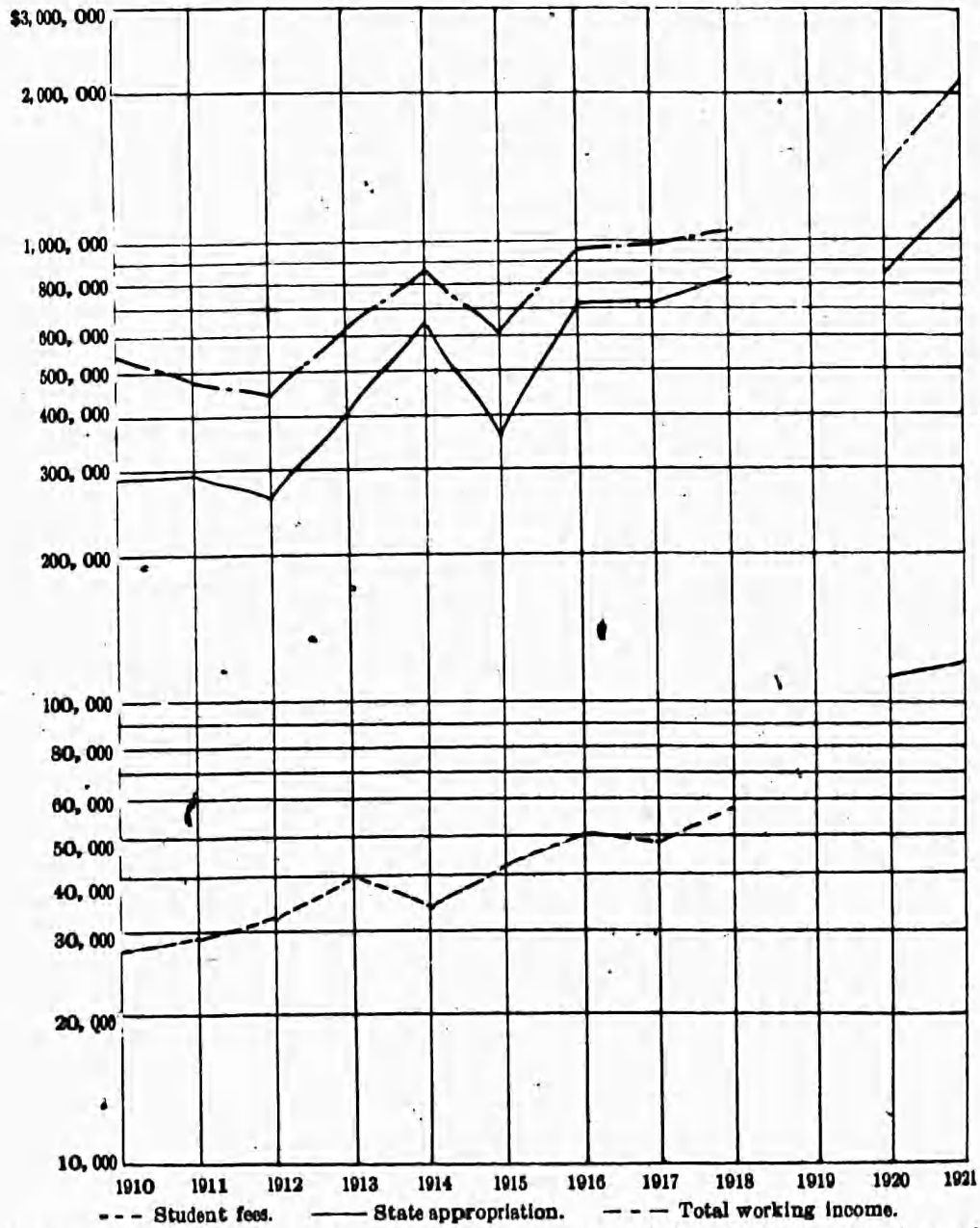

CHART XXXVI.—University of Texas student fees, State appropriation, and total working income for 1910–1921, inclusive

creased again in 1915, rose to the former plane in 1916, increased very slightly for the succeeding two years and sharply from 1920 to 1921. There was no report, as is shown on this chart, for 1919. The trend of income from student fees increased rather steadily to 1918, and though the year 1919 is omitted it is evident that there is a sharp rise to 1920. This chart shows that for the year 1910 for every 9.5

cents received through student fees the State appropriated $1, and in 1921 the State appropriated $1 for every 9 cents from student fees. In 1910 for every dollar paid in by student fees the State raised $10.53, and in 1921 the State was raising $11.09. This shows a slight increase in the ratio of appropriations from the State to the student fees.

Table 19 shows the trends of income for the University of Maine. Chart XXXVII shows the trends of income from student fees, total State appropriations minus specified funds for the experiment station and extension work, and total working income. The income from

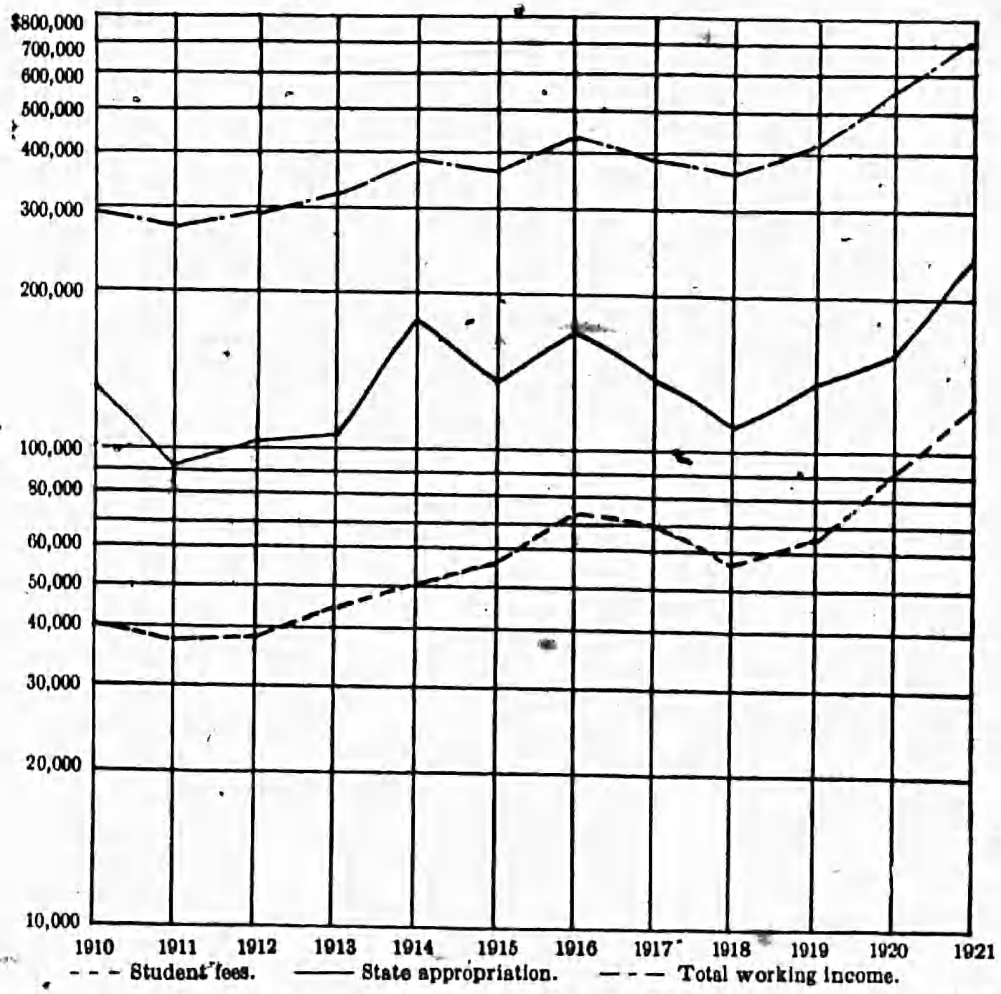

CHART XXXVII.—University of Maine student fees, State appropriation, and total working income for 1910–1921, inclusive

the student fees at the University of Maine decreased slightly from 1910 to 1912 and then increased steadily till 1916, followed by a slight drop to 1918 brought about by the war, but since 1919 this trend shows a sharp increase. The amount received from the State is shown to have been very irregular, but since 1918 there has been quite a steady increase. In 1910 for every 30.2 cents received from student fees the State appropriated $1, while in 1921 the students paid in 53.2 cents for every dollar received from the State. In 1910 for every dollar received from the students the State appropriated $3.31,

while in 1921 for every dollar received from the students the State appropriated but $1.88. This shows that the State of Maine is appropriating less, proportionately to the amount received from student fees, in 1921 than it was in 1910. At Maine, so far as the State appropriations are concerned, the students are now paying over one-third of the cost of their education.

Table 20 gives the regular year enrollment figures for the 24 State colleges and universities regarded as typical and representing various sections of the country. No short-course students or summer students are included in this enrollment, because it was impossible to equate those students on the basis of the regular year enrollment. This table shows that the regular year enrollment at the various institutions has increased during this period without exception. The three most notable increases of enrollment are at the University of California, at Oregon State College, and the University of Michigan. California's enrollment in 1910 was 3,858 students, while 14,445 students were reported in 1921. The enrollment at Oregon State Agricultural College increased from 1,065 in 1910 to 4,075 in 1921. The enrollment at the University of Michigan increased from 1,755 in 1910 to 9,611 in 1921, this being over five times the enrollment in 1910. Examination of the chart shows that the regular year enrollment at the University of Washington more than trebled during this period, and more than doubled at the University of Texas, Penn State College, University of Nebraska, University of Iowa, and Iowa State College. The increase in regular year enrollment of 1921 over 1910 for the same 81 institutions included in the reports on "Statistics of State Colleges and Universities," Bureau of Education, for these years was 114 per cent. The average increase for these 24 institutions for 1921 over 1910 is 122 per cent; so these institutions are quite typical from the point of view of increase of enrollment. In 1910 the average regular year enrollment for these 24 institutions was 2,043, while in 1921 the average was 4,537.

TABLE 20.—*State colleges and universities—Enrollment trends, 1910–1921*

Institutions (24)	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Pennsylvania State College	1,417	1,381	1,692	2,006	2,155	2,359	2,428	2,509	2,193	2,388	3,294	3,254
University of Tennessee	931	830	860	956	952	988	1,010	1,036	833	728	1,128	1,167
University of Louisiana	654	655	724	761	768	921	915	952	913	1,216	1,098	1,178
University of Nebraska	3,062	2,839	3,261	3,316	3,075	3,832	4,826	5,405	3,547	4,564	5,759	6,763
University of Iowa	2,146	2,055	2,066	2,146	2,270	2,690	2,633	3,523	3,303	4,103	4,561	5,345
Iowa State College	1,769	1,564	1,791	2,027	2,459	2,923	2,977	3,054	2,611	2,944	4,034	4,601
University of Michigan	1,755	4,751	4,930	5,099	5,520	5,926	6,462	6,802	5,932	8,857	8,652	9,611
Michigan Agricultural College	1,215	1,568	1,319	1,322	1,608	1,552	1,712	1,678	1,140	939	1,425	1,600
University of California	3,858	4,314	4,806	5,383	5,928	6,434	6,507	7,501	7,249	7,422	12,630	14,445
University of Illinois	4,783	4,896	4,843	4,687	5,588	5,439	5,850	6,192	5,087	7,157	7,935	8,739
University of North Carolina	821	788	796	810	891	900	1,059	1,038	855	1,158	1,437	1,530
North Carolina State College of Agriculture and Engineering	469	511	540	608	1,637	645	663	742	552	900	1,014	1,069
University of Indiana	2,328	2,122	1,902	1,770	2,299	2,065	2,669	3,089	2,659	.....	3,783	3,914
Purdue University	1,750	1,716	1,817	1,814	1,929	2,014	2,085	2,146	1,653	2,511	2,781	2,954
University of Maine	709	858	722	790	901	1,048	1,205	1,146	913	712	1,213	1,337
University of Texas	1,861	1,939	2,070	2,366	2,530	2,574	2,749	2,993	.....	3,222	4,418	5,108
Agricultural and Mechanical College of Texas	838	1,057	1,129	1,013	888	915	1,068	1,242	1,152	2,310	1,802	1,848
University of Oregon	874	900	920	1,086	1,208	1,315	1,243	1,328	1,296	1,566	1,889	2,023
Oregon State Agricultural College	1,065	1,142	970	1,364	1,580	1,629	1,663	1,826	1,668	3,034	3,442	4,075
University of Washington	1,908	2,142	2,264	2,423	2,737	3,249	3,225	3,716	2,771	2,996	5,520	5,882
State College of Washington	1,077	1,226	952	1,020	1,169	1,201	1,403	1,603	1,728	1,622	2,593	2,261
University of Wisconsin	3,645	4,099	4,149	4,237	4,686	5,128	5,131	5,471	4,286	.....	7,294	7,673
University of Minnesota	5,050	5,662	4,889	4,864	4,958	5,484	7,802	6,752	6,140	6,095	12,180	11,282
College of Industrial Arts, Texas	.....	.....	.....	.....	.....	628	805	1,075	1,247	1,850	1,463	1,319
Total	46,985	49,015	49,432	51,869	56,242	61,859	68,035	72,817	59,728	68,334	101,345	108,878
Average	2,043	2,131	2,149	2,255	2,445	2,577	2,835	3,034	2,597	3,106	4,223	4,537

Increase of 1921 over 1910, number, 2,494; per cent, 122.

Chart XXXVIII gives the trend showing the average regular year enrollment for the 24 State colleges and universities regarded as typical. The curve shows a very steady rise from 1910 to 1917, reflects the war conditions in 1918, mounts rapidly to 1920, with a very moderate rise to 1921.

It is evident that if the cost of living in 1920 was approximately double that of 1910, then it should cost twice as much to give the same number of students an equivalent education in 1920. If the number of students doubled during the period, then the cost of giving equivalent instruction would be quadrupled. The trends of regular year attendance (Chart XXXVIII) for the 24 institutions included in this study show there was an increase of 122 per cent in attendance during the period 1910 to 1921. The median State appropriation for the 24 State institutions regarded as typical (Chart XXXIX) was 426 per cent larger in 1921 than in 1910. How-

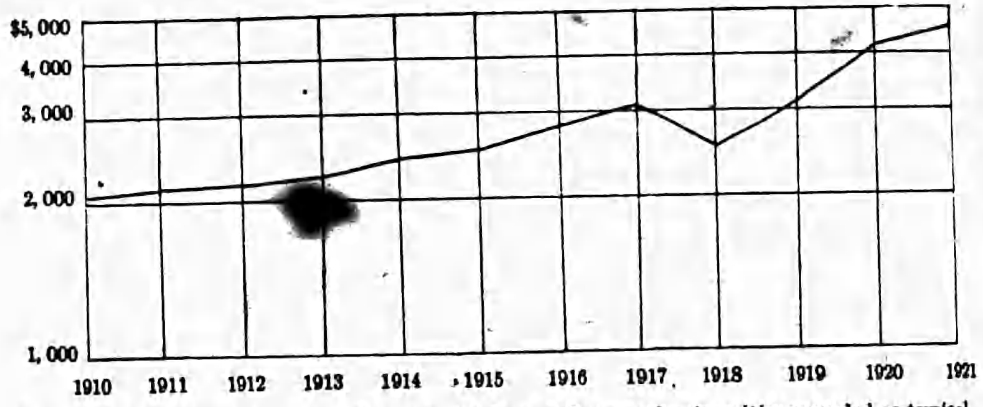

CHART XXXVIII.—Average enrollment for 24 State colleges and universities regarded as typical

ever, large sums were appropriated in 1920 and 1921 for buildings that had been long overdue; so it is impossible to determine from these figures the median percentages of increase for cost of instruction, exclusive of capital outlay. These crude data appear to bear evidence however, that the quality of the instruction it was possible to offer in 1921 would suffer in comparison with that provided in 1910.

SUMMARY

These graphs and discussions show that both in 1910 and 1921 much variation existed at these different State institutions in the relations existing between the amounts received from student fees and State appropriations. In 1910 this range of variation was as follows: At the University of Washington $21.60 was appropriated by the State legislature for every dollar received from student fees, while at the University of North Carolina the students were paying in $1 in student fees for every $1.89 appropriated by the legislature. In 1921 the University of Texas received $11.09 through State appropriation for every dollar received from student fees, while at the University

of Wisconsin the students paid $1 for every $2.23 appropriated by the State.

These graphs show that the students at 10 of these institutions were paying a larger proportion of the cost of their education so far as student fees and State appropriations were concerned than they were in 1910. This was the case at the State universities of Iowa, Washington, Maine, Indiana, Illinois, California, Wisconsin, and

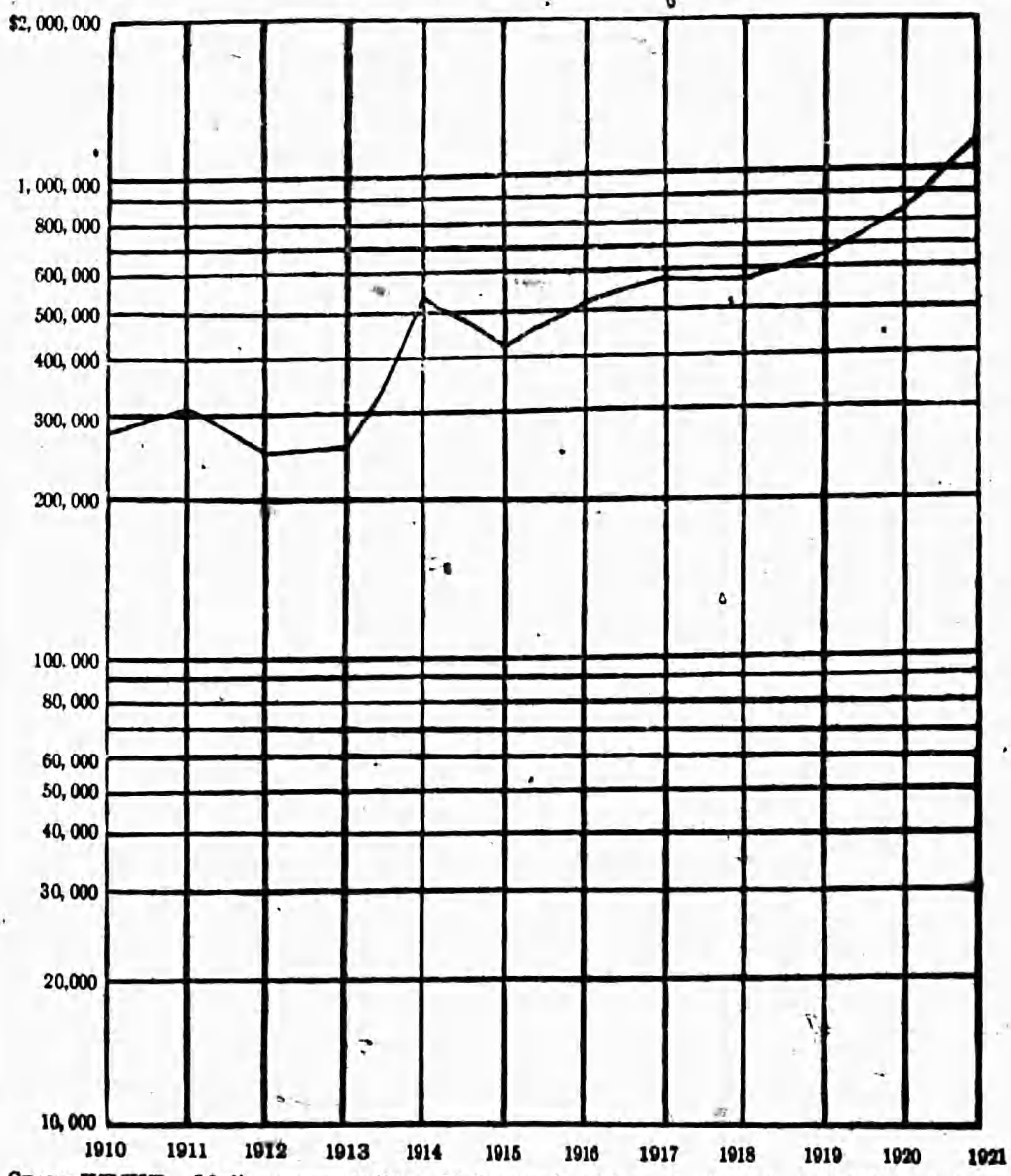

CHART XXXIX.—Median appropriation to 24 State universities and colleges for 1910-1921, inclusive

Minnesota, and at Michigan Agricultural College and Purdue University.

On the other hand, very moderate increases in amounts appropriated by the State as against receipts from student fees occurred at the Universities of Michigan, Nebraska, North Carolina, and Texas, and at Iowa State College of Agriculture and Mechanic Arts, Pennsylvania State College, and North Carolina State College of

Agriculture and Engineering. Figures for 1910 for the State College of Washington were not available so no comparison is possible.

At the University of Michigan in 1921 students were paying $1 out of every $4.05 for their education, so far as these two funds were concerned. It will be noted, too, that these two funds represented 77 per cent of the total working income for 1921 at Michigan. If the $825,000 State appropriations for buildings for the University of Michigan were taken out of the total State appropriation for the latter year, the student would then be paying $1 for every $2.21 appropriated by the State for maintenance and operation, or in reality a larger proportion for these functions than he was paying in 1910, which was $1 for every $2.78 appropriated by the State. Were the appropriations for buildings subtracted from the total State appropriation at several of these institutions where it appears that the State gave a larger proportionate support in 1921, it would be found that there would be little if any difference in favor of State aid between the relationships of these two funds in 1910 and 1921..

Some of the changes in the other direction should be noted. While the State was appropriating $21.60 for every dollar of student fees to the University of Washington in 1910, in 1921 it was appropriating but $5.11, while at California the ratio changed from $1 of student fees to $8.60 in 1910 to $1 to $3.93 in 1921. Marked changes of this nature also took place at the Universities of Maine, Indiana, Purdue, Wisconsin, and Minnesota.

It is realized that these figures do not show exactly what proportion of the cost of his education any one student pays or what the students of any school or college of a university pay. Only total net receipts from student fees and, roughly, State appropriations for collegiate purposes were taken into account. But in so far as these figures represent the State support for collegiate purposes and income from student fees, they show what different States are appropriating for the students at their State-supported institutions in comparison with what the student is paying himself.

The taxpayers of a State and the students should know the proportion of the cost of operation and maintenance of collegiate work borne by the student, by the State, and by any other major sources; and it is therefore recommended that such relationships be shown in the fiscal reports of the State institutions.

Chapter VI

FORMS OF SUPPORT AND TAXATION FOR STATE COLLEGES AND UNIVERSITIES

The problems of increased support of State colleges and universities during the past few years has been even more acute than in privately endowed institutions, partly because the latter could limit the enrollment, while with but one known exception, the University of Washington, State institutions have not considered this plan as tenable.

The regular year enrollment in the same 81 institutions listed in the bulletin "Statistics of State Colleges and Universities," Bureau of Education, for 1910 and 1921, most of which are included in this study, has by the statistics there included increased from 84,555 to 180,635, or 114 per cent. The rapid increases since 1919 have overtaxed the capacity of many of these institutions.

The Bureau of Education survey of the higher educational institutions of Iowa[1] stated that the average total per capita cost of a student in one of the Iowa State colleges was not far from $250, and that this was a reasonable cost. But that was for 1915, before the large advances in salaries and costs that have followed in the wake of the war. Since the war no thorough study of the cost of adding a certain unit of enrollment has been published, though unit-cost studies are much needed. President Kinley, of the University of Illinois,[2] hazarded the statement that for the preceding year, 1919–20, an average cost of $500 per student at that institution would probably be not far wrong. This would, of course, vary much for the different courses.

Bryn Mawr College stated in its 1920 catalogue as the reason for adding a $100 fee that year that the average cost of teaching each undergraduate for the previous year was $516 and the cost was estimated as above $550 for 1920–21.

In order to discuss support for these State institutions, it is necessary briefly to discuss their functions. The purpose of the great number of State institutions is, as stated in their catalogues, threefold. It includes the giving of instruction, extension work, and experimental work or research. Instruction in the ancient languages,

[1] State Higher Educational Institutions of Iowa, Bu. of Educ. Bul., 1916, No. 19.
[2] The National Association of State Universities, Report, 1920.

English, mathematics, and theology was not so long ago considered a sufficiently broad curricula for our leading private institutions. But for a score or more of years, course after course and department after department have been added in our large institutions, public and private; and there seemingly is no end to the demand. Giving resident instruction is still one of the most important functions of the State college.

These institutions should also carry on research along the various lines most needed in the State. Nor should any instructor who has the taste and capacity for research be denied entirely the opportunity at least for incidental research, since such stimulation is necessary, if high standards of instruction are to be maintained. Agricultural experiment stations have been operating for many years in connection with the agricultural and mechanical colleges, and more recently many of these have added the engineering experiment stations. The cost of research is heavy; but both experiment stations and the schools of science, home economics, and other applied science research, have thoroughly demonstrated their economic value to the States. The research work in the liberal arts keeps the institution more evenly balanced, and places emphasis upon cultural values as one of the ends of education. Without the latter emphasis, the State institutions may turn out lopsided products at each commencement. An institution whose finances do not permit research work, or whose administrative officers do not insist upon it, soon becomes "moss-backed." It does not keep up with the times. It can not lead the way in State enterprises. It looks to the past rather than the future. Consequently, income must be provided for research which will enable the institution to develop symmetrically, if the State institutions are to be universities worthy of the name and are to offer the best instruction. No State should be satisfied with less.

College extension work has also demonstrated its worth to the peoples of the States, and provision should certainly be made for the continuation of needed extension work that is truly of collegiate grade. But, as pointed out in the discussion of the Smith-Lever law, there is much of this work that is not of this grade. A distinct demarcation should be made, and some expenditures should be saved the college as well as the State from the elimination of the non-collegiate extension work.

In any discussion of what changes may be made in matters of designating special State taxes, extending the mill tax, or the budget system to State institutions, knowledge of what has been done in the past, together with the results, should be of value. A study of the catalogue, fiscal reports, and laws concerning State institutions reveals that different States have from time to time designated the revenues

from special sources for part or all of the State's support of its State college. A discussion of some of these attempts follows.

The constitution of North Carolina of 1776 provided that "all property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estate of deceased persons shall be appropriated to the use of the university." For some time following its enactment this law brought in considerable revenue to the institution, but though it still remains on the statute books the income for 1921 amounted to only $107.

Missouri allotted to the university the State collateral inheritance tax for a number of years, but this was discontinued by 1919. The income from this source was largely dependent upon the number of wealthy bachelors who died in any particular year, and consequently the amounts received annually varied a great deal. This income sometimes amounted to a few thousand dollars, but, though this sum could go to no other use, it was necessary that the legislature reappropriate it in the same manner as other appropriations were made.

An attempt was made by the Indiana Legislature in 1883 to provide Indiana University with a sufficient endowment fund to provide for its needs by levying a tax of "one-half of 1 per cent on each $100 worth of taxable property in the State for a period of 13 years." This yielded an endowment of $651,106, and the income from this sum in 1920 was reported as $45,358. There has been added to the original fund the principal which accrues from a source known as the "college fund." This latter amounted to $113,422 in 1922. The institution had grown to such an extent and its needs had so increased that in 1895 the State legislature provided an annual tax of one-sixth of 1 mill on the dollar for the support of its three higher educational institutions, two-fifths of which was for the annual maintenance of Indiana University; and since that date, though the rate has been changed three times, a mill tax has been in force for the institution's State support. So far as can be ascertained this is the only attempt that a State has made to provide one of the State colleges or universities with an endowment fund the interest from which should furnish the maintenance funds of the institution. The drawbacks of such a plan are evident. The money raised by taxation and put into a permanent endowment fund becomes practically a frozen credit. The rates of interest on such a fund increase but little. Consequently, the total amount of the fund would have to increase by great jumps if the interest on it were to be sufficient to meet the needs of an institution whose enrollment is steadily increasing.

Clemson, the agricultural college of South Carolina, has for 31 years received its sole State support for collegiate maintenance and buildings from a designated special license tax of 25 cents per ton on all fertilizers sold within the State. The agreement between the trustees of Clemson and the State legislature to "erect and maintain" an agricultural college on the receipts from this tax without other direct State appropriations was entered into in 1890. The annual returns from this tax have shown great variations, since they depend for the most part on the acreage of the cotton that is planted. During the past 10 years the income from this source has fluctuated to this extent: For the fiscal year 1912, $221,000; 1913, $231,500; 1914, $276,000; 1915, $171,000; 1916, $171,019; 1917, $216,432; 1918, $268,722; 1919, $258,477; 1920, $313,473; 1921, $167,505; estimated 1922, $150,000, with the budget for maintenance only of the college calling for $400,825 for 1922. There exists a high correlation between the revenue from this designated license tax and the condition of the cotton industry, but not between the needs of the institution and the returns from the tax. The latter relationship must exist if the college is to maintain a steady, healthful development, even though the law was passed in order that a more "adequate support" might be given Clemson than could be expected from legislative appropriations. In addition to the previous shortcoming, the base for this tax is far too narrow for the stable support of a State college. If the one industry dries up for a time, even the life of the institution is threatened. Moreover, one year's income may be greatly inadequate, while another's may be so much larger than usual as to enable the trustees to make expansion which can not later be financed. In any case, such a narrow base will inevitably prove an unsatisfactory source of main income over a period of years.

Besides small incomes which special departments of the agricultural and mechanical colleges and mining institutions have received for doing certain licensing work or assaying for the State, there have been a few other variations and attempts to provide income for these State institutions, besides the ad valorem or mill tax and State appropriations.

The University of California had for a number of years previous to 1911 received the major part of its State support from a 0.3 mill tax on every dollar of the State's grand roll assessment. In 1911, after the taxation system of the State had been revised so that the greater part of the State's revenues was to be derived from corporation and business taxes, the university was granted an income on the basis of what was in 1911 "3 per cent ad valorem on the State's grand roll assessment, plus a cumulative 7 per cent increase each year," which has been extended to the present year. The plan for increase was intended to care for the increased needs of the institution, but

just as it had been necessary to call for added appropriations while getting State support from the mill tax, so it has been necessary under this system to call for additional appropriations. The appropriations by the State for the maintenance and buildings of all the activities of the University of California for 1922 amount to $9,680,904, while the income from the "University Fund—Allotment of Revenue" of 1911 as amended in 1921, plus the other continuing appropriations, including funds for the paying of interest and sinking funds on bond issues for buildings, amounted to but $4,788,949, or less than half the total appropriations.

The State support for the University of Tennessee for the years 1913 and 1914 is reported[1] to have been 1⅓ per cent of the gross revenue of the State, while for 1915 this was increased to 2⅓ per cent of the gross revenue. This provision continued till 1918, when a mill tax of 2 cents on the $100 of the State's grand roll assessment was passed. This was changed in 1920 to 5 cents on the $100.

In order to keep up the necessary building programs for their State institutions, several States have found it advisable within the past few years to provide for such construction by means of bond issues. The Legislature of California in 1915 (Initiative Measure No. 11, 1915) authorized a $1,000,000 bond issue. The Montana Legislature, by a special initiative measure of 1920, authorized a $3,750,000 bond issue to provide a suitable building program for the State's four higher institutions of learning. The North Carolina Legislature authorized a bond issue of $1,490,000 for the building program during the biennium 1920–1922. Tennessee's Legislature authorized a bond issue of $1,000,000 for a building program, beginning in 1918. Of course these are temporary measures.

In addition to these the following institutions report that bond issues have in the past been authorized to provide buildings: Indiana University, Mississippi Agricultural and Mechanical College, New Hampshire State College, University of Utah, and Virginia Polytechnic Institute. There have not been bond issues for these institutions during the past 10 years. Up till 1921 nearly all of the buildings for the University of Nevada had been financed by bond issues.

Certain States that provide the State support through a mill tax have added a special mill tax for building purposes. The University of Colorado, Colorado Agricultural and Mechanical College, University of Nevada, and the University of Wyoming all have been given special mill taxes for building purposes, which are listed in Table 24.

In order to ascertain what methods the various States are employing to support their State colleges and universities, a request for

[1] U. S. Bu. of Educ., Statistics of State Colleges and Universities, 1913, 1914, 1915.

information was sent out to the 84 institutions included in this study. The information given in the various catalogues regarding the income of the institutions, as well as the State laws, had been gone over, but the official check of the institution upon these matters was desired.

Sixty-nine of these institutions answered the inquiry and added valuable information in many instances. Massachusetts Institute of Technology is not included because it no longer receives State appropriations, though continuing to receive part of the income from the 1862 land-grant income and part of the Morrill-Nelson subventions. Table 21 shows the present methods of State support for these 68 institutions and also gives the best obtainable information for the other 14, but the latter information has not been checked by the institution. The University of California had previously sent most of this information.

TABLE 21.—*State colleges and universities—Present methods of State support*

Institution	Mill tax rate per $100		Appropriations			Assigned special tax
	General, 1922-23	Special, 1922-23	Biennial	Annual	Special	
Institutions reporting						
University of Alabama				X		
Alabama Polytechnic Institute				X		[1] X
University of Arizona	0.065			X		
University of California	[2]			X		
University of Colorado	.04284	[3] 0.012				
Colorado Agricultural College	.021495	[3] .009			X	
Colorado School of Mines			X			
Connecticut Agricultural College			X			
University of Delaware			X			
University of Florida			X			
Florida State College for Women			X			
University of Georgia			X			
Georgia School of Technology			X			
University of Illinois	.0666					
University of Indiana	.02					
Purdue University	.02					
State University of Iowa			X			
University of Kansas			X			
Kansas State Agricultural College			X			
University of Kentucky	.0175		[4] X			
University of Maryland			[5]	X		
Massachusetts Agricultural College				X		
University of Michigan	.06				X	
Michigan Agricultural College	.02				X	
Michigan College of Mines			X			
University of Minnesota	.023			X	X	
Mississippi Agricultural and Mechanical College			X			
University of Missouri			X			
State University of Montana	[6] X					
Montana State College of Agriculture and Mechanic Arts	[6] X					
Montana State School of Mines	[6] X					
University of Nebraska			[7] X			

[1] A tax on kerosene is assigned to the institution.
[2] The special revenues assigned to the University of California amount to what was in 1911 "3 per cent ad valorem on the State's grand roll assessment plus a cumulative 7 per cent increase each year," extended to the present.
[3] Special mill tax for building purposes.
[4] An inheritance tax, corporation tax, and personal income tax furnish part of the State support to the university.
[5] Money for construction purposes always comes through a special bond issue.
[6] For the 4 higher educational institutions Montana has assigned a mill tax of 15 cents on the $100; division of the income among the institutions is made by the State board of education.
[7] Nebraska's mill tax of 10 cents on $100 was discontinued in 1921.

TABLE 21.—*State colleges and universities—Present methods of State support*—Con.

Institution	Mill tax rate per $100		Appropriations			Assigned special tax
	General, 1922-23	Special, 1922-23	Biennial	Annual	Special	
Institutions reporting—Continued						
University of Nevada	[1] 13					
New Hampshire College of Agriculture and Mechanic Arts			×			
Rutgers College				×		
Cornell Agricultural and Veterinary College				×		
New York College of Forestry, Syracuse				×		
University of North Carolina			×			[2] ×
North Carolina Agricultural and Engineering College			×			
University of North Dakota			×			
Ohio State University		[3] ×	×			
Miami University (Ohio)			×			
University of Oklahoma			×			
Oklahoma Agricultural and Mechanical College			×			
Oklahoma College for Women			×			
University of Oregon	.08142				×	
Oregon Agricultural College	.1086					
Pennsylvania State College			×			
Rhode Island State College				×		
University of South Carolina			×			
Clemson Agricultural College (South Carolina)					[10] ×	[11] ×
The Citadel, military college of South Carolina				×		
Medical College of State of South Carolina				×		
University of South Dakota			×			
South Dakota State College of Agriculture and Mechanic Arts			×			
University of Tennessee	.05			×		
University of Texas			×			
Agricultural and Mechanical College of Texas			×			
University of Utah	[12] ×					
Agricultural College of Utah	[13] ×					
University of Vermont			×			
University of Virginia			×			
Virginia Military Institute			×			
Virginia Polytechnic Institute			×			
College of William and Mary			×			
University of Washington	.11					
State College of Washington	.067					
West Virginia University			×			
University of Wisconsin	.0375		×			
Institutions not reporting						
University of Arkansas			×			
University of Idaho			×			
Iowa State College of Agriculture and Mechanic Arts			×			
University of Louisiana			×			
University of Maine			×			[14]
University of Mississippi			×			
University of New Mexico			×			
New Mexico College of Agriculture and Mechanic Arts			×			
Ohio University			×			
South Dakota State School of Mines			×			
University of Wyoming	.0375	[1].01275				

[1] Special mill tax for building purposes.
[2] Includes 2 cents for permanent construction purposes.
[3] An old escheat law still returns a little income.
[10] Special appropriations for other than collegiate work.
[11] Tax on fertilizer is assigned to Clemson; it has yielded an average of approximately $250,000 annually for the past 10 years.
[12] 64.43 per cent of 28 per cent of tax of 2.4 cents on each $100 of both real and personal property on State's grand roll assessment.
[13] 28.34 per cent of 28 per cent of 2.4 cents on each $100 (as in note 12).
[14] The residue of the severance tax revenues was assigned to the College of Agriculture for maintenance and buildings.

Table 21 shows that 61 institutions receive State aid through annual or biennial appropriations. Twenty-three institutions report that part or all of their support from the State is received through a designated ad valorem, or as it is commonly called, mill tax. Clemson

Agricultural College of South Carolina is the one institution reporting that total State support for the collegiate part of the institution comes from an assigned special tax. The so-called Louisiana severance tax law, approved June 20, 1920, on all natural resources, such as gas, oil, and coal, appropriated all the residue from such revenues, after certain appropriations had been made, for the maintenance and for buildings of the Louisiana State University and State Agricultural College. An income of $1,144,425 was received from that source in 1922, and there remained in the State treasury a balance of $1,256,034 on December 31, 1922, from this tax.[4] Such a source of revenue may yield more than is necessary, or it may yield too little. Aside from these and a few minor specially assigned taxes, such as at North Carolina, and a tax on kerosene for Alabama Polytechnic Institute, it appears that the State legislatures have abandoned the assignment of special taxes for support of their institutions.

No attempt will be made to equate what the different States are doing for higher institutions on the basis of the mill tax designated, as it is impossible to determine actually what the grand roll assessments of the various States would be if all property were appraised at a full 100 per cent. Moreover, Kentucky reports that there are included in the funds designated to the State university income from a personal income tax, inheritance tax, and corporation tax, while a part of the revenues from the income tax in Wisconsin is assigned to the university.

What are the basic criteria and principles which must be applied to any source of State support which may be satisfactory? The following are accepted principles of taxation:

1. The tax must be productive and certain.
2. The tax must have a broad base.
3. The tax must be elastic, to meet changing and increasing needs.
4. The source and amount of revenue must be approved by the people of the State and the legislature.

No tax, of course, is of any value that is not productive; and no tax can meet the needs of institutions requiring, as was shown in the previous chapter, from one-twelfth to one-fifth of the total annual State expenditures that is not elastic; that is, the amount of yield must correspond to the change in rate.

The base of taxation must be broad enough to produce steadily from year to year. The returns must be certain, or the work of years in building up a strong faculty for the institution—a situation not measurable by monetary standards alone—may be destroyed in a brief interval. The fourth principle is self-evident.

If these principles and criteria are sound—and they are generally accepted by taxation experts where large revenues are involved—then

[4] Report on severance tax received through personal correspondence with the president.

it is difficult to see how any base narrower than the entire State system of taxation is broad enough to supply the needs of our modern State colleges and universities.

How do these principles affect the mill tax? How are we to determone whether a mill tax should be enacted for State support, or continued for State support, or abolished?

The answers must depend to a certain extent upon the proportion of the State's taxable wealth that is agricultural; the proportion that is invested in corporations, public utilities, and industries; and the amount of natural resources that are being mined or produced in the State. In other words, how far has the State advanced from being largely an agricultural to largely an industrial community? What part of the State's revenues comes from the general property tax, and what part from other sources?

The general property tax is transitional.[5] It is the tax applied when a new part of the country is opened up as an agricultural community, and it works fairly well. But as the State develops industrially and the State's wealth is found in many different forms, then if the general property tax is applied as the single tax it breaks down woefully as a producer of revenue. It is not the purpose here to enter into a thorough discussion of the problems of taxation. They are thoroughly treated in the treatise above referred to. However, it should be pointed out that it is quite generally agreed that, if there were to be but one tax, the income tax would be the best single measure of ability to pay. This, however, needs to be supplemented when taxing rural communities, corporations, mining, natural resources, and inheritances by taxes on real estate, by corporation taxes, license, or business taxes, taxes on natural resources, progressive inheritance taxes, etc.

Now the ratio, ad valorem, or mill tax is a tax of a fraction or more of a mill on every dollar of the State's grand roll assessment assigned to the support of a State college or university. So far as can be ascertained this method of guaranteeing an annual State appropriation was first employed by Michigan for its university in 1871. Very few of the State institutions had won regular State support for higher education at that time. It was at a time, too, when the State was predominantly agricultural, the State's wealth was largely in lands, buildings, and other real estate, and the State's revenues were raised very largely by the general property tax. With the adoption of this law regular State support for a State university had been won, and that was a great step in advance. Since practically all forms of property were listed on the grand roll assessment, as the value of property increased, it was argued, the ratio tax would return larger revenues to the university as that, too, increased in size. It is quite

[5] Essays in Taxation, E. R. A. Seligman, 1921.

probable, too, that there was at the time quite a positive correlation between the increasing needs of the university and the increasing returns from the tax. For it seems probable that the general property tax at that time more nearly reflected the taxable wealth and consequently the possibilities of revenue than it can to-day, when incomes, stocks and bonds, and other forms of intangibles represent so much present day wealth.

The friends of other State colleges and universities recognized the meager existence these institutions were eking out from the income on the land grants and very moderate fees. They, too, sought regular State support for the State institutions; and as revenue of the other States was largely raised by the general property tax the same kind of support was urged as had been granted the University of Michigan. The Wisconsin Legislature granted a mill tax for the university in 1876, and Indiana University was granted the mill tax for an endowment fund in 1883.

It should also be pointed out that the State university and college system had not then won for itself the place that it now holds in the American educational scheme. In the seventies the system was still in its infancy from the national point of view. Political conditions were very unsettled in many of these States, and the foes of the institution might be in control of the legislature one session and the friends the next. Consequently, the guaranteeing of a regular annual revenue, so that the institution could make the necessary plans for the future, helped also to solve the political difficulties which impeded its progress.

It is true that some of the less developed States are still predominantly agricultural in character. Nevertheless, great changes have been taking place in the forms of wealth within the States, and equally striking changes have been made in the revision of the revenue systems for many of them. However, we are still lagging in the latter respect, and much wealth is going practically untaxed because of the attempt of many States to raise all revenues by means of a general property tax, which has broken down and no longer can bear the burden. In other words, it is not the kind of a tax by which to reach railroads, public utilities, and other corporations, mining and natural resources, stocks and bonds, and other forms of intangible and personal wealth.

Now the mill tax system has been extended to other States down almost to the present. Tennessee passed such a tax for the support of the university in 1918, and Montana did the same in 1920. However, a number of States, including Iowa in 1915 and Nebraska in 1921, dropped the mill tax as a means of State support for their State colleges and universities. But whether or not more States are granting such ad valorem taxes for the support of their higher educa-

tional institutions proves little or nothing as to the present advisability of the scheme. Some States have hung to an outworn system of taxation until State finances were in a serious condition. As a considerable part of the annual expenditures of many States goes to the support of these institutions, it should be helpful to ascertain the percentages of total revenues raised for State purposes which come from the general property tax and those that come from all other taxes.

Statistics taken from the Bureau of Census report for 1903 [6] on Taxation and Wealth show that the general property tax brought in 43.5 per cent of the total taxes raised by the States for that year, while 56.5 per cent was raised by all other forms of taxation. In 1913 the same source shows that the general property tax raised 38 per cent, while all the other State taxes yielded 62 per cent. In 1913 the Bureau of the Census published its most recent comprehensive report on Taxation, Wealth, etc. Turning to a number of the separate States supporting State colleges and regarded as typical, we find that the percentages of their total taxes for general State purposes in that year were raised as follows:

	General property tax in 1913	All other taxes		General property tax in 1913	All other taxes
	Per cent	*Per cent*		*Per cent*	*Per cent*
California	0.068	0.932	Tennessee	0.37	0.63
Montana	.342	.658	Texas	.502	.498
Washington	.465	.535	Colorado	.58	.42
Wisconsin	.60	.40	Minnesota	.29	.61
Iowa	.60	.40	Nebraska	.58	.42
Illinois	.576	.424	Pennsylvania	.043	.957
Ohio	.21	.79	North Carolina	.597	.403
Missouri	.39	.61	Kentucky	.56	.44

Half of the States in this group receive more than half but not more than 60 per cent of their total revenues from the general property tax, while in Pennsylvania, California, and Ohio most of the revenues are raised by other than a general property tax.

The attempt made by California to provide a permanent income for the university has already been discussed. It was also shown that these provisions are entirely inadequate at present, more than half the total State support being provided by special appropriations. A mill tax of 23/100 is still assigned to the University of Minnesota, but this returned only $401,524 for 1920 out of the total State support of $3,491,005. The difference of $3,089,481 was made up by legislative appropriations. The maintenance appropriation alone amounted to

[6] It is realized that many States have revised their taxation systems since that date. The figures from the Bureau of Census reports on Financial Statistics of States for 1919 are not used because the State officers make out those requested reports, while the Federal employees collected the 1903 and 1913 data on an entirely uniform basis.

$1,865,000. For the biennium 1922–1924 the annual State appropriation for maintenance amounts to $3,000,000, in addition to the sum to be received from the 23/100 mill tax. Special appropriations of $157,000 annually for the biennium were provided. Moreover, the $3,000,000 appropriation is not raised by the general property tax. Michigan Agricultural College and the University of Michigan are still assigned mill taxes, but their building programs are supplied by extra legislative appropriations. For the year ending June 30, 1921, the University of Michigan received $825,000 out of the total of $3,018,750 from the State by legislative appropriation.

In 1913 Purdue University and Indiana University were assigned an increased mill levy, which was to provide both maintenance and building. This mill tax at the time seemed perfectly adequate to meet the increasing needs of the two institutions as the wealth of the State increased. A kind of gentlemen's agreement was entered into providing that, if the legislature passed this increased levy for permanent support, no requests for additional appropriations should be made. The same rate was in force for seven years, and during the last several years of this period the institutions were extremely hard pressed.

The five-eighth mill tax on the dollar is still in force for the University of Wisconsin, but the university was granted an appropriation of over $800,000 above the receipts of the mill tax for the year ending June 30, 1922. As is clearly the case in Minnesota, the amount of State support to the University of Wisconsin does not depend upon the receipts of the mill tax assigned to the university. The University of Wisconsin is on a budget system. It presents its proposed budget to the legislature, and provision for the institution is made on the basis of the needs and the ability of the legislature to balance the revenues of the State and the appropriations.

A number of States that have tried to provide practically all of their support for their higher educational institutions have found it necessary to change the rates fairly frequently, and usually such a procedure is the only method by which there would be a high correlation between the needs of the institutions and the returns from the tax. Washington found it necessary to increase the rates of the mill tax first passed in 1911 in both 1917 and 1921. Wyoming first passed a mill tax for the support of the university in 1886. The rate of the tax or the amount of the receipts that could be assigned was changed in 1891, 1905, 1911, 1913, and 1915. Besides these changes there have been special legislative appropriations. Nine institutions report a change in their mill tax since 1919. Practically all of the institutions that have had a mill tax designated as the means of their State support have been compelled to call upon their legislatures for relief in the form of appropriations at different times. Of the 22 institu-

tions listed in Table 21 as getting State support by a mill tax 13 report that this income is supplemented by appropriations.

A mill tax might be fairly satisfactory as a source of State support for maintenance under the following conditions: First, if the large part of the State's revenues are raised by the general property tax; second, if the rate of the tax is fixed for each biennium rather than for a period of years. Or with a permanent rate if the State legislature supplements the revenues from the tax with appropriations for maintenance and buildings. But these latter plans amount practically to granting appropriations for the entire budget of the institution.

A permanent mill tax may bring in the proper revenues to the institution for the biennium after it is passed. But the longer the institution receives its State support from this set rate the less the probability that the revenues from it will be sufficient to meet the increased needs, for these reasons. Wherever the general revenues of the State are raised largely by the general property tax there has been a distinct tendency for each community and each county to keep its assessments of property as low as possible. The lower the assessments, the lower the proportion of the total State taxes paid by the community. Various methods have been tried to overcome this tendency, though none may be said to be entirely successful. New York for a time abandoned the general property tax for the raising of State revenue. It was hoped that when the local communities had all the revenues from this source they would keep up the assessments. Now New York [7] has another plan. It redistributes the revenues [8] from the income tax to the counties and from thence to the communities on the basis that the total assessment of the general property tax of the county bears to the total general property assessment of the State. Wisconsin's State tax commission has the power to control to a considerable extent the local assessments and the local assessors. Other State equalization boards have the power to raise the assessments of a county as a whole. None of these measures have given entire satisfaction, and the tendency for local communities to make low assessments still persists.

Now, the main emphasis should be placed on this point: The needs of the university, as well as other needs of the State governments, have increased more rapidly than has the assessed valuations. One of the chief objections [9] to the general property tax is the inequality that exists in the rate of assessments, and these same inequalities make it very difficult to raise the rate of assessments. Because of the ever-increasing burdens on property, then, a more equitable system of taxation must be provided.

[7] Ch. 627, sec. 382, Laws of 1919.
[8] It is not implied that New York changed to this plan only to raise local assessments.
[9] Essays on Taxation, E. R. A. Seligman.

This cause, together with the present general tendency of the States to exempt personalty and other forms of taxation from the general property tax in order to reach such exemptions by other forms of taxation, prevents any rapid increasing of the State's grand roll assessment, of which the general property tax consists, and on which the mill, or ad valorem, tax is levied. The tendency is to retain the land and realty taxes as part of the general property tax, but to supplement this tax for raising State revenues with such business taxes as the "Gross receipts" tax of Texas, 1907; the "Severance tax" of Louisiana, June 30, 1920; the "Gross production tax" of Oklahoma, February 14, 1916; the "Pennsylvania output tax," May 11, 1921; the "Alabama tonnage tax," 1919; the Minnesota occupation tax, April 11, 1921, in reality a super tax on the tonnage of iron ore mined, and estimated to raise $18,000,000 in 1922.

The tendency, then, is yearly to make the base of the general property tax narrower, and to reach intangibles, personalty, and other wealth by other taxes. It follows that the revenues from the general property tax necessarily will not continue to increase at the rate of the increasing demands of the State colleges and universities and the other State needs.

If this is the case, why the mill tax? It is argued that it is of great advantage to have a given mill tax on the State's statute books for the support of the institution. This, however, is a political expediency argument, and though in the days when the political conditions were so unsettled it might have been justifiable, it should become less and less so.

State support through assigning part of the revenues from an income tax or from corporation or other business taxes have been suggested. It is urged that it is inadvisable to tie the support of these State universities and colleges to any separate source of revenue or to connect it with any special interests in the State. Even the returns from an income tax may fluctuate to a large extent, while the other bases mentioned are undoubtedly too narrow. If the funds for these institutions are appropriated out of all the revenues raised by the State, there will be less likelihood that serious fluctuations will take place. If one of the State's sources of revenue falls short for a time, the returns from other sources may well be sufficient to make up this deficiency. If all sources should fall short, it might be justifiable for a State to cut the size of the appropriation. With these points in mind it is urged that the total State sources of revenue will prove to have greater elasticity to meet the yearly increasing needs for revenue of the State colleges than will any single source.

To-day, as not previously in the recent history of America, revenues and appropriations are being checked up. Heretofore it has been thought there was no limit to our increase in wealth and in ability to pay, and our States and communities have freely assumed one burden after another. The tendency for the present is to demand

greater justification for expenditures. The adoption of budget systems by all expenders of the public revenues has long been advocated by experts,[10] and their advice is being heeded. Our National Government and many of our State governments now have at least the beginnings of a working budget system. Great Britain for many years has been noted among the nations as a State that could estimate to a nicety her revenues and could keep her disbursements within her estimated receipts. Great Britain operates on a well-formulated budget system. The sooner all our American State governments adopt a sound budgetary procedure, the better for our higher educational institutions as well as for other State functions.

Burruss [11] made a thorough report and recommendations concerning budgetary procedure in the land-grant colleges in 1921. If a budget system of such a nature be adopted and the needs of the institution through such a system be well set forth and presented to the legislature in the form of "legislature askings," as is done by the Iowa institutions, or by the plans used by Wisconsin, Minnesota, or California, it is evident that the State college or university need not fear lest it fail to receive its fair share of the total revenue raised by the State.

Furthermore, it may be urged that from the point of view of the State there is exactly as much reason in asking for justification of the appropriations for higher education as for any other State expenditures.[12] Presenting the needs of the State college to the budget commission and director, and thus to the legislature, really offers the very best opportunity of informing the public of the value of these State institutions. If the public is kept fully informed and in touch with the institutions, less difficulty in securing the necessary appropriations should be encountered. Only by giving out such complete information can a State college expect to receive the necessarily larger appropriations from the State.

CONTINUING APPROPRIATIONS

To protect an institution against such a possible experience as befell the University of Texas in 1918 (see Fitzpatrick, Budget-Making in a Democracy), it is urged that a State legislature pass "continuing appropriations." The organization of a higher educational institution is such that failure to appropriate the necessary funds, either through legislative disagreement or governor's veto, produces irreparable loss to the State. Therefore it should be necessary for the legislature to pass an act in order to change the amount of the previous legislature's appropriation, and unless altered such previous appropriation would then continue to the institution unchanged and

[10] Buck, A. E., The Budget System, 1921.
[11] Burruss, J. A., A Study of the Business Administration of Colleges, 1921.
[12] Fitzpatrick, Budget Making in a Democracy, New York City, 1918.

thus insure continuity of the program in higher education. Failure of the legislature to act or the governor's veto after the adjournment of the legislature could not then deprive the institution of the funds necessary to carry on the year's work.

In order to operate under the budget system successfully a State must probably consolidate and coordinate the State's administrative agencies,[13] and each State should have a director of the budget responsible to the governor. His responsibilities are heavy, and the position is one calling for a salary that can command a man of unusual ability.

Given such a State system, or the Kansas system in which the affairs of all the State educational, charitable, and correctional institutions are administered by one board; or the Wisconsin, Iowa, Montana, and South Dakota systems, in which the State board of education coordinates the work of the institutions and passes on their financial requirements, the needs of the State colleges should be obtained through legislative appropriations without resorting to the medieval system of attempting to assign a set revenue for an institution's support without knowing whether or not it will continue to meet the needs of the institution.

SUMMARY

The assigning of special revenues will usually prove unsatisfactory as a source of total State support to the higher educational institutions, because of the narrow base. Such a tax may yield too much one year and too little the next. Such fluctuation violates good fiscal policy. Because of the revision of laws to reach various forms of wealth in an endeavor to make all wealth bear an equitable share of the taxation burden, the tendency is to narrow the general property tax base. This, combined with low assessments, makes the assigning of a permanent set mill tax for the total State support of an institution inadvisable. Raising revenue for a State institution, then, really becomes a problem of raising revenue for the State, as no base narrower than the total base providing revenue for the State is likely to prove satisfactory for the State support of higher education in most of the States.

Before a new State makes any special provision for its institution, a thorough study of the State's wealth should be made. Total revenues received from the different sources should be ascertained, as well as the possibility of increased revenues from the passage of income and business taxes. It is suggested that the best business principles urge the State colleges to adopt the budget system, and that the State assign appropriations on the basis of needs as shown by legislative askings.

How much further can the States go in providing increasing revenues to their State colleges? The Bureau of Economic Re-

[13] E. R. Brown, Methods and Extent of State Support, Report of Association of University and College Business Officers, 1921.

search [14] shows that the estimated income of the United States has increased from 28.8 billions in 1909 to 36 billions in 1915 and 61 billions in 1918. This bureau also shows the distribution of income [15] by States for 1919. Per capita income varies from $874 in New York to $345 in Alabama, according to this report.

Income is probably the best single index of ability to pay, but in order to know the size of the total revenues a State might be expected to raise, statistics showing the total wealth by States need to be collected. These two indices would give a very good indication of the limits to which a State may go in raising revenues.

Undoubtedly there are limits beyond which the States can not go in the support of higher education. Surveys of these different colleges and universities, such as was made by the University of Minnesota, should be made by each State. Only by making such individual studies will it be possible to know what provisions will be necessary in the future. The study should show trends of the total wealth of the State over a period of years, trends of State appropriations to the State college, trends of population, trends of State college attendance, trends of high-school attendance and graduates, trends of attendance at the other colleges in the State.

The Federal Government is now making annual provision for an $80,000 subvention to each State for its college of agriculture and mechanic arts and agricultural experiment station. This amounts to $3,840,000 for the 48 States. In addition, it provides $4,580,000 annually for the cooperative agricultural extension work, while a part of the vocational education fund goes to these institutions.

The expenditures for high and common schools are being even more closely scrutinized by the taxpayer of the local community than are those for higher education, as provision for the latter is made by the legislature, while usually the revenues for the public schools are largely raised and expended locally. Now, the communities have taken up heavy responsibilities in trying to provide free public education from the kindergarten through the high school, and the full import of that burden is just now being fully realized. It may be urged that it is imperative to provide free public education through the high school for all those who have the capacity, as a "sixth grade" democracy can not exist. Provisions for laterally extending the public school system so as to offer a wider variety of courses is also defensible, providing there are sufficient revenues.

The State universities will undoubtedly profit much from gifts of alumni for special purposes as they become older, but from the trends presented it does not now appear that they can ever hope to receive much of a part of their operating expenses from the endowment source. The State and student fees, then, must bear the brunt of the expense, and the State must continue to bear as large a part as possible.

[14] The Income of the United States, Bureau of Economic Research. New York City. 1922.
[15] Distribution of Income by States, [14] ibid

Chapter VII

SUGGESTED SUMMARY TABLES FOR FISCAL REPORTS AND REVIEW OF UNIT COSTS

Anyone who has made a serious attempt to study the fiscal reports of the various State colleges and universities in order to obtain comparative information on their sources of income and their expenditures for their administrative departments and divisions, as well as to ascertain what percentages go for salaries, operating expenditures, equipment, and capital outlay, has found that, with but a proportionately small number of exceptions, little or no headway can be made. On the whole, income is better classified than expenditures, but in the large number of reports the different schedules giving the receipts from different sources are scattered over a number of pages without a summary table. This is certainly undesirable, and certain institutions have for several years been publishing summary tables of income. However, the different institutions have had somewhat different classifications; so it is not a simple matter to make comparisons even for those institutions publishing such tables. Much progress in the direction of uniform summary tables has been made by 11 institutions, mostly in the Middle West, whose business managers have been associated together for several years. Several of these institutions have departments part of whose work is to show through charts, graphs, and trends the sources of income and expenditure in an understandable way in the fiscal reports of the institutions.

In 1921 the Carnegie Foundation for the Advancement of Teaching [1] published a revised edition of its bulletin on Standard Forms for Financial Reports of Colleges, Universities, and Technical Schools. This edition, as well as the one published in 1910, included a suggested list of schedules and forms dealing with income and expenditures which might be used to improve college accounting. They also showed the form in which the colleges might report the state of their finances to those interested in them. That this bulletin gave a summary of the best principles and practices of colleges accounting is evidenced by the number of college fiscal reports that have used to a considerable extent the forms and schedules recommended in the two bulletins.

In his Study of the Business Administration of Colleges, Burruss [2] makes thorough recommendations concerning budget making and

[1] Carnegie Foundation for the Advancement of Teaching, Bulletin No. 8, 1921.
[2] Budget Making in the Land Grant Colleges, J. A. Burruss, 1921.

fiscal reports and shows the advantages to be derived from making reports that are understandable by those interested in them.

If all the State colleges and universities can adapt to their needs the recommendations made in these studies, and thus make adequate fiscal reports, a long step in advance of the present status will have been taken. It can not be too strongly recommended that those institutions not having adopted such a system do so at once.

The 1921 Carnegie Foundation Report shows forms for summary tables for income and expenditures, but the Association of University and College Business Officers of the Middle West have really gone the farthest in making recommendations for summary tables of income and expenditures especially suitable to State colleges and universities. The business officers of 11 institutions, including Illinois, Minnesota, University of Iowa, both the University of Michigan and Michigan Agricultural College, Indiana University, Ohio State University, University of Kentucky, and the University of Washington, from the far West are united in this organization.

TABLE 22.—*State colleges and universities—Receipts*

A. Receipts from the State (including only appropriations to the university for all purposes, out of State taxes, and exclusive of appropriations of Federal funds, student fees, or other direct receipts of the institution)—	
1. For operation, maintenance, and equipment	
2. For buildings and land	
3. Total State appropriations	
B. Receipts from endowments (not including receipts on account of student loans)	
C. Receipts from or on account of Federal grants:	
Federal land grants other than that of 1862	
Land grant act, 1862	
Morrill Act, 1890	
Nelson Act, 1907	
Hatch Act, 1881	
Adams Act, 1906	
Smith-Lever Act, 1914	
Smith-Hughes Act, 1917	
Total United States grants	
D. Receipts from student fees (including general and laboratory fees, but exclusive of athletic, student organization, dormitory, or dining-hall charges)	
E. Sales and miscellaneous, receipts of educational character:	
1. Agricultural departments (farm, dairy, etc.)	
2. Hospitals, infirmaries, dispensaries	
3. University extension	
4. Agricultural extension	
Subtotal A-E	
F. Noneducational departments:	
1. Dormitories and dining halls	
2. Printing department	
3. Storerooms	
4. Athletics	
5. Trust funds not included under B	
G. Receipts from private gifts	
Grand total receipts	

INCOME OR RECEIPTS

The forms represented by Tables 22 and 23 for receipts and disbursements of State colleges and universities are drawn up so as to incorporate substantially the suggestions of the committee of the above organization. Similar reports were adopted to be incorporated in the annual fiscal reports of those 11 institutions. Some minor

changes were made in the items included. For instance, on the receipts form, under heading C, no place for income from Federal land grants other than the 1862 grant was noted, and so the "Receipts from Federal Land Grants," not including the 1862 grant, was inserted. No provision for receipts from gifts was included; so another heading, G, was added. It is possible that some institution will find it necessary to add a yearly "Balance or deficit" heading. This form also agrees to a considerable extent with the income blanks on which the United States Bureau of Education began collecting its reports from the State colleges in 1922. It is urged that it is necessary to make such reports on a uniformly comparable basis, or it will be impossible to make any study of trends of income on a basis that is analyzable.

The directions given on Table 22 make it possible to list the schedules of income under these various headings on a uniform basis.

EXPENDITURES OR DISBURSEMENTS

To present a summary table of disbursements in annual reports is as desirable as to print a summary table of income, and a few State institutions whose reports are at hand have made admirable summary tables of expenditures. It seems to be quite commonly agreed among those that have made a study of such tables that the ones included in the annual reports of the University of Illinois are among the most desirable yet published, and it is recommended that the form used by that institution be carefully studied by any institution contemplating the adoption of a summary table for its annual report.

The University of Illinois published in 1920 comparative summary tables of income and expenditures covering a period of six years, and it is recommended that comparative tables of this nature be published every few years, so that trends of income and expenditures may be shown. Ohio State University made an excellent report of this kind in 1921.

TABLE 23.—*State colleges and universities—Summary of disbursements*

Purposes	Operation and maintenance disbursements								Supplementary disbursements						
	Salaries	Wages	Supplies and repairs	Office expense and travel	Printing and publication	Books and equipment	Unclassified	Total operation, maintenance, equipment	Total capital lands and buildings	Total operation of hospitals	Total operation of dining halls, dormitories	Total operation of storerooms and service department	Total disbursement for athletics	Total disbursements from special trust funds	Grand total disbursements
A. (1) General administrative offices															
(2) Library															
(3) Operation and maintenance of physical plant															
(4) Instruction and research by schools, colleges, major divisions, including salaries, supplies, and equipment of instructional department															
Total instruction and research															
(5) Extension (university, agricultural, and Federal)															
(6) Investigations (so far as separately budgeted and reported; otherwise under instruction above)															
(7) Total operation, maintenance, equipment															
B. For capital additions (including buildings, land, physical plant extension)															
Total of A and B															
C. Disbursements on account of operation of hospitals, infirmaries, and dispensaries															
D. Disbursements on account of dormitories and dining halls															
E. Disbursements on account of operation of storerooms and service departments															
F. Disbursements for athletics															
G. Disbursements from special trust funds															
Grand total of disbursements															

Table 23 is a summary blank for disbursements, drawn up to include substantially the items agreed upon by the association of business officers previously referred to. As is pointed out by Comptroller Morey, of the University of Illinois, in a paper on Comparative Financial Statistics of State Universities, it is practically impossible to make such tables uniform and comparable for the different institutions unless a good many arbitrary rulings upon different classifications are agreed upon.

It would be highly desirable that a committee representing the National Association of State University Presidents, together with a committee from the Association of Business Officers referred to, work out the arbitrary decisions necessary to make summary tables of disbursements for the reports of the different institutions contain uniform and comparable reports similar to the form shown by Table 23, and that the report may be widely adopted.

A point that would vary a great deal without specific agreement and directions would be the amount of capital outlay included under the head of "Books and equipment" that would be charged to the various administrative divisions and would become part of "Total operation, maintenance, and equipment" for the year. The Federal Government has agreed to charge under a similar head within the yearly total for maintenance and operation all equipment and material whose durability for inventory valuation will not exceed two years. New Hampshire State College has adopted the same practice, but several institutions showing summary tables of expenditures fail to discuss this point or to give in their reports any account of the general basis on which they make their classifications.

The suggestions for classifications under these various headings have been gathered from several fiscal reports and are a summary of the best practice. The reports of the University of Illinois, New Hampshire State College, and the Joint Board of Higher Curricula of Washington, as well as other reports, have furnished definite and valuable material. The following are the brief suggestions. Complete and ironclad classifications, as well as directions for the distribution of overhead charges, can best be made through such a conference as has been suggested.

DISBURSEMENTS

Expenditures for operation, maintenance, and equipment of all administrative education, scientific departments, excluding hospitals, fall into seven major groups, as follows:

1. General administrative offices and disbursements. This heading includes the expenses of the general administrative offices of the college, the health service, the offices and departments for student welfare administration and record; the general publications and

printing of the college, the expenses of the board of trustees, expenses on account of the general college exercises, and other miscellaneous expenses of a general character.

2. Library. Under this heading disbursements for the purchase of books, expenses of maintenance and operation are included.

3. Operation and maintenance of physical plant. Under this head expenditures for the following five divisions should be included: (*a*) Heat, light, water, and power; (*b*) janitor services and supplies; (*c*) building repairs and upkeep; (*d*) grounds upkeep; (*e*) miscellaneous.

4. Instruction and research. The expenses on account of the various schools, colleges, teaching departments, and other major administrative classifications including the salaries, supplies, and departmental equipment of two years' durability should be included under this head. Incidental research carried on in connection with teaching which is not separated in the budget or listed in another division should be included.

5. Extension. Expenditures for college, agricultural, and Federal extension should be included here.

6. Investigations. The expenditures for those projects of research and investigation which are provided for separately in the budget are included here. Wherever investigations are not separately budgeted and reported, such expenditures should be included under (4) Instruction and research.

7. The total disbursements for operation, maintenance, and equipment of an educational character should be here summarized.

The disbursements classification has eight minor divisions, as follows:

1. Salaries. Under this heading include the salaries of the scientific and instructional staffs and the salaries of the administrative and clerical staffs.

2. Wages. Under this heading include the costs of all mechanical and farm labor, unskilled help, temporary employees, and irregular personal service.

3. Supplies and repairs. Supplies include laboratory and shop supplies for class work or research; materials for operation of plants, including light, water, heat, and power; and for operation of buildings, grounds, and farms. Repairs includes both labor and material charges for repairs, and upkeep of property equipment.

4. Office and travel. Office expenses include expenditures for postage, telephone, telegraph, freight, express and drayage, stationery and office supplies. Travel includes all traveling expenditures paid by the college whether for college employees or other persons on college business. The cost of subsistence and transportation of college employees in the field on the business of the institution for agricultural or experimental work is included here.

5. Printing and publication. Under this heading include expenditures for the printing of letter heads, blanks, notes, office forms, etc., the disbursements for circulars and reprints, and the publishing of bulletins.

6. Books and equipment. It is suggested that under this head books and departmental equipment and apparatus which will not have inventory value for longer than two years be classified.[3]

7. Unclassified. Under this heading there should be included any miscellaneous disbursements which do not fall under the other headings.

8. Total operation, maintenance, and equipment. This summation should be the same as the total for operation, maintenance, and equipment of distribution.

Under the head of "Land and buildings," the cost of new buildings, additions to buildings, the purchase of land and all improvements on land, such as walks, grading, pavements, fencing, tiling, irrigation, sewers, wells, and nursery stock for permanent landscape gardens, and extension of the power plant, lighting, and tools, should be classified.

Equipment.—Under this heading should be classified the cost of departmental equipment that will have inventory value longer than two years, including the cost of laboratory apparatus, machinery for the engineering laboratories, laboratory materials, charts, maps, stereopticons, lanterns and their equipment; furniture, including desks and tables, filing cases, movable blackboards, pianos, lockers etc.; office equipment such as telephones, adding and computing machines, typewriters, addressographs, duplicators; multigraphs; farm machinery and tools for the physical plant and farms; livestock and farm animals of all kinds; disbursements for books, periodicals, of permanent library material; permanent illustrative material such as charts, models, and skeletons for science laboratories.

SUMMARY TABLE OF SALARIES

During the past few years when it was found necessary because of highly increased costs to raise the salaries of the members of the staffs of these institutions, many institutions, in order to show their legislatures that it was necessary to provide more funds for instructional purposes, made comparisons between the salaries that were paid members of their faculties and staffs with those paid by other institutions. Strangely enough, nearly every institution that made such comparisons was able to show by means of the statistics which it used that the professors, associates and assistant professors, and instructors of the home institution generally received lower remunera-

[3] This is in keeping with the Federal Government's classification, but it may be desirable to make a more liberal classification for State college accounting.

tion than was paid at any of the other institutions of about the same class. Of course, this situation could not be possible, and it came about because adequate statistics were not available. It is recommended, therefore, that a summary table of salaries paid at the different State institutions should be included as one of the summary tables in the fiscal reports of each institution. Ohio State University published in its financial report for the year ending June 30, 1921, a summary table showing the departmental salaries of the instructional staff and the salaries of the administrative staff. No names were mentioned, but the number of the professors, associate professors, assistant professors, instructors, assistants, graduate students and student assistants, with the amounts of salary paid to each class of the staff, was shown.

The Association of University and College Business Officers recommended that the following items for a summary table of salaries be included in the fiscal report:[1]

(1) Itemized salary list by positions of the administrative offices, including president, deans, and general administrative offices.

(2) Maximum, minimum, and average salaries, and the number of each in all ranks of the instructional staff reckoned on the basis of full-time employment.

(3) The secretarial, clerical, and stenographic salaries, with the number at monthly salary rate paid.

(4) The wages of mechanical employees, with the hourly wage and the average monthly rate, together with the average or regular rate paid in each group for (*a*) janitors, (*b*) mechanics, (*c*) farm laborers, (*d*) unskilled laborers.

If such tables were included, it would be possible for each institution to know accurately the situation. If the median or average salaries and wages at the home institution vary from others, it will be possible either to improve the efficiency, if that is possible, or to show why, because of peculiar local situation, costs are heavier or lighter than at any other institution of the same class.

Another summary table which should be included in fiscal reports is receipts from student fees. The Association of University and College Business Officers recommended, in their report to which reference was made, that a summary table giving receipts from matriculation fees for residents and nonresidents in each college be included in the fiscal reports. As a result of the study previously reported concerning tuition and fees, it seems advisable to recommend that this summary table should include a summary of the receipts of laboratory fees in each college in addition to fees that were recommended, since a number of these colleges have widespread and some a heavy

[1] Report of the Association of University and College Business Officers, Eleventh Annual Meeting held at the State University of Iowa, May, 1921.

system of laboratory fees. This table should also show the number registered in each college, the number not paying fees, the number paying fees, and the net receipts to each college from tuition, incidentals, and laboratory fees, and total net receipts from students.

As the total number enrolled fluctuates from time to time, it is necessary to fix some date arbitrarily as the date on which statistics representing the total regular session enrollment shall be taken. November 1 was recommended by the Association of Business Officers, and that seems to be a desirable date, since the large proportion of those who will voluntarily withdraw have left college by that time, and the institution is then carrying its largest regular enrollment.

A summary table giving the total investment in plant and equipment at cost should also be included. This table should show the investment in, (1) land and equipment other than buildings, (2) buildings, (3) equipment including books.

UNIT COSTS

As soon as such an accounting system has been established it becomes possible for an institution to ascertain scientifically the unit costs per student. Such data are now highly desirable, even though in the past many institutions have jealously guarded their own costs. If improvement in efficiency is to be obtained, there must be much more regular interchange of best practice between our higher educational institutions than there has been in the past. It should unquestionably be assumed that up to a reasonable limit at least the higher the per-student cost the finer the quality of the instruction offered. Nor is there more adequate reason for withholding the per-student or the per-subject costs in higher education than for other forms of public education, yet costs in the elementary and secondary school fields have been published for many years. Nor is the day far distant when State legislatures will require the publication of such unit costs of those institutions that have not already taken it upon themselves to publish such information.

The State institutions of Washington and the University of Minnesota have led the way in publishing such unit-cost figures, though different techniques were used.

The technique utilized by the University of Minnesota[8] involves the ascertaining of the cost per student credit, or credit hour, the yearly cost per student being found by multiplying the cost per credit hour by the average number of hours carried by students in a particular college. Overhead general administrative expenses are prorated under this scheme to the separate schools and colleges in the proportion that the direct maintenance costs of the college bear

[8] University of Minnesota, Survey Commission Series, V, Minneapolis, 1921.

to the total maintenance cost of the whole university. The total cost of the college is then divided by the total number of credit hours taught in the college. This gives the cost per credit hour.

The joint board of higher curricula of the State of Washington has followed a more complicated technique in computing the cost of instruction than that utilized by the survey commission of the University of Minnesota.

The Washington plan involves the computing of costs per "student clock hour" and multiplying this unit cost by the average number of clock hours a student majoring in a particular field must take. This product shows the average cost to the State of a student in each major curricula.

This technique is fully described in the second biennial report of the joint board of higher curricula, 1921.[1] It involves the taking of a census on a uniform date at all the State's institutions. This census shows the total number of students enrolled, as well as the number in each class and the number of hours each class meets, together with the number of credit points that may be obtained from each class. The "student clock hour" is defined as "an hour of instruction of one student in lecture, recitation, laboratory, or conference." To find the number of clock hours represented by a course, multiply the number of students by the number of clock hours per week of instruction and the result by the number of weeks involved. If English III had an enrollment of 50 students, meeting 5 recitation hours each week for 12 weeks, the total number of student clock hours would be 3,000. Through this process the total number of student clock hours taken at an institution is computed.

The distribution of cost of overhead by the Washington plan is also more involved than the Minnesota plan. The part of the "General, administrative, and physical plant overhead" chargeable to cooperative services (extension, experiment stations, and research) is distributed to these services in the proportion that the total square feet of floor space used by the cooperative services bears to the total number of square feet of floor space utilized by the entire institution.

"After deducting the amounts chargeable to cooperative services from the general and administrative overhead expenditures, (*a*) the remainder of the general and administrative and student welfare overhead shall be distributed to the instructional departments on the basis of the student clock hours, while (*b*), the remainder of the physical plant overhead, shall be distributed to the instructional departments on the basis of the square-feet-hours of floor space occupied." (This latter figure is obtained by multiplying the number of square feet utilized by the number of recitation hours it is occu-

[1] Joint Board of Higher Curricula, pp. 3-7. Olympia, Washington, 1921.

pied by a department). "Items charged under the head of capital outlay shall not be directly distributed or charged to the cost of instruction. There shall be, however, charged to the cost of instruction the value of depreciation as annually computed upon capital equipment." When the overhead has been thus distributed and added to the direct maintenance cost of a department, this total cost is divided by the total number of "student clock hours" taught by a department, which operation gives the cost per student clock hour. The total cost per student per major department is found by multiplying the cost per "student clock hour" by the number of hours a major student takes per given major department.

Whether this apparently more refined and involved technique will yield more scientific results than the Minnesota technique of prorating the cost of all overhead in direct proportion to maintenance costs is not definitely settled. Costs worked out by both techniques so that opportunity may be given to ascertain effects of the various variables in the Washington plan will help to determine which technique is the more desirable. One thing is certain; the taxpayers of the State are interested in knowing the cost per student in the various colleges. They are not interested particularly as to how many cents per student per hour of instruction it costs to run a college freshman English class. Such costs are not meaningful to them, nor even to the average man on the faculty. But the taxpayer does want to know the *per-student cost* in each college. He should also be shown why costs in separate colleges vary, and that it is as impossible to equalize the costs as between colleges as it would be to equalize costs in a number of associated but different phases of the same business. It is urged, therefore, that per-student unit-cost figures shall be developed at each institution and that such information shall be included in each State university and college fiscal report. Such information will give the taxpayers of a State confidence in the soundness of the fiscal policy of the institution, and in the long run will redound to the advantage of the institution.

SUMMARY

The business officers of the 11 institutions organized in the association referred to agreed that summary tables giving practically all of these items and information should be included in the fiscal reports published by the institutions they represent. This is a very commendable program, and it is recommended that all State institutions should show such summary tables in annual fiscal reports. Very little improvement can be made through comparisons of costs for improvement of efficiency until such summary tables and unit costs are available.

Fitzpatrick, in his book on Budget Making,[1] shows that any institution supported by the State must show to the legislature and the taxpayers of the State the social needs that the institution is satisfying in order to receive appropriations from the public treasury. As has been stated, much improvement has been evidenced in the type of fiscal report published by a number of the State institutions during the past decade. The State appropriations for the support of higher education in the various States have been shown to have increased very rapidly. In spite of this fact, it has been found necessary at a number of institutions, as has been shown by the trends, to raise the rate of tuition and fixed charges so that the student shall pay a larger proportion of the cost of his education as compared with what the State pays. Consequently, it is recommended that all these State institutions publish summary tables, charts, unit costs, graphs and trends, with explanations, in such a manner that the relationships of income from the different sources, and the disbursements for the different functions and objects may be made as easily and as fully understandable to the layman as is humanly possible. Fiscal reports that show the receipts to the college by schedules only on separate pages, and show expenditures for different functions on separate pages, though giving a large part of the facts necessary, present them in such a scattered way that it is to a considerable extent impossible for the layman or for any one else not equipped with a statistical laboratory to discover from what sources income is received or how it is expended. The taxpayers have a right to know the sources of receipts and of revenues to State colleges and universities, as well as the way in which the income of these institutions is expended. The State institution may expect to hold the confidence of the taxpayers of the State that it represents and to receive appropriations in accordance with the extent to which it shows through its fiscal reports its manner of expending the moneys assigned to its use.

[1] Fitzpatrick, Budget Making in a Democracy, New York City, 1918.

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