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ABSTRACT

This study of the University of San Francisco provides empirical estimates for the next five years of a set of institutional variables reflecting institutional vital signs. It is intended to provide a sensitization to the fact that a time perspective is important, that the degree of fit between institutional goals and their fulfillment is a dynamic process. The utility of this report will be found if the frame of reference of the university's leadership is focused upon the need for planning and budgeting of a long range type than that which is now practiced. The appendix contains charts of statistical data. (Author/MJM)

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UNIVERSITY PLANNING AND TRIAL ESTIMATES IN FUTURES

by

James Steve Coc:elis

THE UNIVERSITY OF SAN FRANCISCO

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July 23, 1973

PREFACE

The University of San Francisco, like many of its sister institutions, is in the throes of massive changes, the meaning of which is not quite clear to all. But change can be directed by intelligence as John Dewey was fond of saying. And planning is the application of intelligence to university change.

This report is a response to the change processes on-going in the university. The President's Committee on University Priorities, our new provost Dr. Anthony E. Seidl, and the faculty as a whole under the President's leadership are all involved in the university's change processes as they are now evolving. To provide an empirical and time dimension to that planning process, this report was developed. It could not have come to fruition without the help of many. Mr. William J. Dillon, Associate Director and colleague, helped greatly to establish and verify the data. Mr. Paul D'Anna, undergraduate student programmer, did the computer work so that the regression studies included in this report were possible. Ms. Diane Pederson, the office's typist, prepared the typescript and graphics in this report. Mr. Robert A. Frenette, representative of the Monroe Calculator Company, lent the office the Monroe 1860 programmable calculator for testing at a time when the report was in progress. I am indebted to all these fine people. They have cheerfully, reliably and creatively given their talents. My thanks goes to each.

Of course, the character and responsibility for this report and its findings rest with this writer as it should. My hope is that it contributes to this university's development in a significant way.

---JSC

The University of San Francisco
July 23, 1973

ERRATUM

A segment of Chart No. 4 was placed erroneously within Chart No. 2 and the whole report was paginated and duplicated.

Having detected this discrepancy in substantive order, p. 26 was removed from its sequential paginated position in the report and placed between p. 39 and p. 40. Therefore the substantive order of both Chart No. 2 and Chart No. 4 was corrected.

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As in the case of the individual, not all information which is available to the race at one time is accessible without special effort.

--- Norbert Wiener, Cybernetics

UNIVERSITY PLANNING AND TRIAL ESTIMATES IN FUTURES

by

James Steve Counelis[+]

Orientation:

University planning, especially of the long term variety, is rarely practiced sy: tematically. Further, most short term university planning continues tc be of the "back-of-the-envelope" variety, regardless of our vaunted possession of computerized datal files and administrative expertise in even the largest systems of higher education.

Nonetheless, the need for planning in American higher education at all levels has galloped apace in the last several years. There are at least three reasons for this. Firstly, there is institutional wastage of material and human resources, viz., the faculty as professional and the student as client, that has become intolerable in both human and economic perspectives. Secondly, the economic depression in American higher education is inducing more realistic ends that empirically are attainable and justifiable on humanely pragmatic grounds. Thirdly,

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American higher education is competing for public and private resources with other social needs, some of which appear humanely more pressing and therefore gain a higher priority for public and private support. The admixture of these reasons results in an alchemy of need for efficiency and effectiveness in American higher education that is guided by humane considerations and the notion of the general welfare in our American commonwealth. University planning is thus need supported. University humanely guided efficiency and effectiveness in higher education are attainable dynamically, given the will.

Part of the planning procedure is to assess where one is now and what might happen if one continued the same program into the future, assuming the same historical trends continue and barring programmatic intervention for the given time period under assessment. Though such an exercise is not real in the sense that people do change programs and short run predictions are subject to all the contingencies of history, this type of exercise is insightful for developing a mentality or "mindset" for planning. The insights generated are those of an <u>appreciation for the genetic perspective of time on human events</u> and <u>a cognitive awareness if not understanding of the degree of fit between institutional goals and their possible institutional fulfillment in the future</u>, say five years down the pike.

In the University of San Francisco, the President's Committee on University Priorities has developed a large sheaf of responsible ques-

tions, thoughts, and data about the university. This study was undertaken to provide an empirical futuristic dimension to the Committee's work. The obvious intent of the Committee and this study is to help shape a set of plans--a designed mix of procedures, organizational vehicles, and resources that together are flexible and geared to meet continually reassessed goals in flexible orders of priority.

This study will provide empirical estimates for the next five years of a set of institutional variables reflecting institutional vital signs. It will be noted that the title of this paper uses the financial term "estimates in futures" rather than the term "predictions." This is done because the term "estimates" conveys the notion of human error and societal contingency; whereas, the oft used term "predictions" conveys the notion of definiteness and precision of determination. This latter term and its connotation is to be avoided like the plague in the context of university long range/short range planning.

Some gross observations on these five year estimates in futures will be provided as grist for discussion. The combined wisdom and insight of the university committees and leadership will have a firmer handle with which to steer the university into the next half decade.

Methodological Approach:

To extrapolate into the next five years certain empirical university variables, the mathematic derivation of a regression equation that is based upon the best fit of the empirical university data to given mathematical curves by the principle of least squares was done. Some 82 problems were solved. These will be discussed below.

The historical-empirical university data used to derive these regression equations were of two types: (a) student data; (b) financial indicators.

The student sets of data used were the following three. Their time frame was FY 1968-1969 to FY 1972-1973.

(1) Student Credit Hours: fiscal year and term; school or college; undergraduate and graduate/professional.

(2) Student Head Count: fiscal year and term; school or college; undergraduate and graduate/professional.

(3) Fall FTE Enrollment: fiscal year; total university.

The six financial indicators used in this study reflected the total university for several fiscal years, viz., FY 1967-1968 to FY 1972-1973. The following financial indicators were used:

(1) Income
(2) Expenditures
(3) Accounts Receivable
(4) Accounts Payable
(5) Inventory
(6) Bad Debts Reserve.

These financial variables were used because they were available. The same is true for the student variables. But their value rests in that they are gross institutional parameters of the university's operational vitality.

The least squares curve fitting technique was used to take advantage of the sequential historical experience empirically encapsulated in the institutional data of the last five years. By calculating a best fit regression equation for this historical data, the equation provides the algorithm for calculating the extrapolations for the next five years, that is to FY 1978-1979.

Eighty-two separate regression problems were solved and the results tabled in Charts Nos. 1-8. All sets of data were tested to determine which of five types of mathematical curves best described by least squares principle the historical trend in the data sets. The best fit comparatively was determined by the smallest calculated standard error of estimate for each curve type per set of data. Hence some 410 separate regression equations were calculated and compared, viz., 82 x 5 = 410 The five mathematical curves tested were:

(1) Linear: $Y = a + bX$
(2) Quadratic or parabolic: $Y = a + bX + cX^2$
(3) Exponential: $Y = ab^X$
(4) Power: $Y = aX^b$
(5) Logrithmic: $Y = a + b(LnX)$.

Out of the 82 sets of data, 41 were best described to be linear and 41

were best described to be quadratic or parabolic. However when the quadratic equations were used to calculate the next five years, these equations produced sequential results that were too precipitous for short range estimation purposes. Hence the linear equations were used because their generated results sequentially were more reasonable and gradual.

Charts Nos. 1, 3, and 6 provide the mathematical and statistical character of the regression study including the regression equation itself. Charts Nos. 2, 4, and 7 provide the actual and the future estimates of the several variables. Hence a full continuance of information for one decade is provided. This is the time perspective provided by the study, presented on a per college/school basis and on a total university basis for the student variables. This is the time perspective provided by this study for the total university financial indicators. Upon Charts No. 2, 4, and 7, observations will be made. But before embarking upon those observations, the following limits must be observed in the interpretation of the information given:

(1) These future estimates are made upon the assumption that past historical trends continue into the future five years.

(2) These future estimates are made upon the assumption that no programmatic changes in curriculum and/or organization are made in the next five years.

(3) The regression algorithm is concerned with developing a trend line based upon historical experience of a longrun type. The calculated trend line may be insensitive to the more recent upturn or downturn in the variables under consideration. Hence it is possible that values for FY 1972-1973 are not smoothly continuous with FY 1973-1974 estimated values. This caveat must be taken into consideration.

(4) There will be several anomalous appearing results when the extrapolations of the headcounts are compared with the extrapolations of the student credit hours. This is possible because each of the algorithms treat two sets of data separately, with each set having a different slope. The direction of the slope will be the same for both sets of data but the ratios differ, expectedly.

Keeping these cautionary notions in mind, a brief set of observations will be made on Charts Nos. 2, 4, and 7.

Observations and University Questions: Student Variables

These observations are made with the comment that no attempt will be made here to relate these findings to demographic occupational trends. This job must be done in another paper and in concert with the personnel on staff who are closest to the fields. Certainly, the President's Committee on University Priorities needs to be involved here. The emphasis here is on the resultant mix of internal resources and productivity in the years ahead if no programmatic and/or organizational intervention occurs down to FY 1978-1979. The university is a whole community of interests that is indivisible in its concerns but whose divisible parts affect the whole greatly. How greatly total inaction can affect the university is suggested here.

Beginning with the College of Arts, Charts Nos. 2 and 4 indicate a steady decline in student credit hours and students over the FY 1972-1973 to FY 1978-1979 period. The overall rate of decline is 10% and 12% respectively, about 2% per year.

Graduate education appears to be in precipitous decline over

this same period, even though it is totally a very small program. Cognizance is taken of the anomalous results in graduate arts data for FY 1978-1979 wherein 234 students and 34 student credit hours are estimated and the reason explained earlier. Nonetheless the decline is a firm fact.

The following questions seem reasonable at this time:

(1) What are the qualitative curricular implications in this decline in the arts for this university as a whole and for certain programs in particular?

(2) What are the faculty implications of this arts decline for the university overall quality as an institution of learning.

(3) What are the administrational and financial implications in this arts decline?

(4) Should the graduate program in the arts be continued, and if so, at what price?

Of course, there is need to relate these questions to the external fields of occupations and church mission, especially in the arts. Consequently our institutional relations to other Bay Area institutions in the arts needs to be considered here as well.

The College of Business Administration appears to have, respectively, an overall 35% and 38% increase in student credit hours and students for the FY 1972-1973 to FY 1978-1979 time frame. This averages to about a 5.8% and 6.3% annual increase. This general upward trend is attributable to undergraduates. The MBA program, however, appears to be in steep decline. The following questions are posed:

(1) What are the curricular implications of this great upturn in undergraduate business enrollment for the university as a whole?

(2) What are the faculty implications of this undergraduate upturn in business enrollment for the university as a whole?

(3) What is the implication to be drawn from a steep decline in the MBA program for the university as a whole?

(4) Is the decline in the MBA program factually related to the occupational trends in the marketplace?

(5) What influence or impact could the closing of the MBA program have on university programs, the university community and the business community in the Bay Area?

Certainly, the College of Business Administration is one of the vital tielines of the university to the Bay Area life. And close consideration of the marketplace of jobs and our instructional strengths and weaknesses need to be estimated and placed into our overall university planning.

The School of Education presents an institution in a period of turbulent flux. The impact of the Ryan legislation will start to take effect this fall. The internal organization of the School of Education has been a trying experience. Also, the announced retirement of Dean Edward J. Griffin this year presents a time of hesitancy.

Nonetheless, the expected growth in undergraduate units and students is not reflected in Charts Nos. 2 and 4. But the anticipated growth in graduate education (A.M. and M.A.T.) programs is elicited, providing there is greater flexibility in programming that involves in-service and continuing education formats. The overall 3.9% increase in student credit hours per year may not be exorbitant. The overall steady-state enrollment of about 900 FT and PT students for this period, FY 1972-1973 to FY

1978-1979, may reflect the notion of a different mix of undergraduates/ graduates, leaning over toward a heavier graduate emphasis than in the past. Some questions are:

(1) What will be the effect on the university as a whole when the proportional mix of students in education shifts toward the graduate side of the ledger?

(2) What will be the curriculum support services needed for this gradual shift to graduate education work in education?

(3) What will be the administrative and financial effect of education's shift to graduate education on the university as a whole?

There is particular need in the discipline of education to take cognizanceof the Bay Area and peninsula institutions that are in education programs. An appropriate institutional fit is needed, negotiated by consortial arrangements preferably.

Charts Nos. 2 and 4 demonstrate that the present format of the Evening College is in a calamitous and steep decline toward extinction soon. The problem of the Evening College has been recognized for some time, and no further discussion will be made here. The following questions need to be raised:

(1) What would the extinction of the Evening College do to the university's mission and quality of education?

(2) Is the extinction of the Evening College a desirable end for the university as a whole?

(3) What financial/administrative impact could the Evening College extinction have upon curriculum, faculty, students and the San Francisco community as a whole?

The University of San Francisco Law School is in a strong updraft of growth. Certainly, the Dean's intention for the School to be held at some steady-level appears reasonable. There is little doubt that unlimited growth of the Law School would be cancerous. To almost double the students and student credit hours in FY 1978-1979 from FY 1972-1973's level would have a very large financial impact upon the university; and an administrative impact upon the School itself and the university as a whole. The most pregnant questions about the Law School's future are related to the occupational projections in the future; these question need to be raised at the appropriate time.

The School of Nursing seems to be in a strong updraft of students and student credit hours as viewed in Charts Nos. 2 and 4. The growth patterns average out annually to about 5.8% for student credit hours and 4.8% for student head count. With nursing being a field in flux, these suggested growth patterns raise questions:

(1) Can the current curriculum be carried on with a third increase in students with equal quality?

(2) What would be the requisite pattern of funding to support and develop nursing education professionally?

(3) What would be the impact of a graduate nursing program upon the undergraduate nursing program and the curriculum of the university as a whole, were one instituted?

(4) What is the future impact of nursing upon the university as a whole, financially, curricularly, and administratively?

The School of Nursing, like the College of Business Administration and the School of Education, is an outreach institution by virtue of its curricu-

lar design and occupational orientation. And this fact in line with considerations about health care professions development in the future need careful study. Much by consortial cooperation can be reaped in the Bay Area.

The College of Sciences is also in a strong growth position on campus. A 36% increase in units and a 27% increase in students for the FY 1972-1973 to FY 1978-1979 period is charted. The annual growth rates average to 6% in units and 4.5% in students. Though the graduate program is not large, a strong increase in students and units seems in the offing. Some questions are:

(1) What is the effect of the growth of science education in relation to the concomitant decline in arts education upon the quality of the university as a whole?

(2) What growth curricula in sciences can be encouraged? What costs in faculty and resources are suggested by this encouragement?

(3) Could interninstitutional cooperation with local state institutions help science education develop?

(4) Can the university administratively and financially accommodate higher levels of graduate education in science?

The Summer Session data in Charts Nos. 2 and 4 suggest a steady-state condition over the next five years. Some questions need to be asked:

(1) What is the import of having a Summer Session program in a steady-state condition in enrollment and student credit hours?

(2) Can a steady-state unit like Summer Session contribute vitally to the university as a whole?

(3) Is a steady-state unit in any university a significant indication of incipient programmatic decay?

At the end of Charts Nos. 2 and 4, there are some collective statistics on student credit hours and student head count. These statistics represent the university as a whole. The following findings are from these collective statistics on the university as a whole:

(1) Overall 6 year (FY 1972-1973 to FY 1978-1979) decline in units will be about 8 percent, or annually, 1.3%.

(2) Overall 6 year (FY 1972-1973 to FY 1978-1979) increase in units will be about 49 percent; or annually, 8.2%.

(3) Overall 6 year (FY 1972-1973 to FY 1978-1979) decline in undergraduate student head count (FT and PT) will be about 15 percent; or annually, 2.5%.

(4) Overall 6 year (FY 1972-1973 to FY 1978-1979) increase in graduate/professional student head count (FT and PT) will be about 37 percent; or annually, 6.2%.

(5) Overall 6 year (FY 1972-1973 to FY 1978-1979) increase in full time students (U and G/P) will be about 9 percent, or annually, 1.5%.

(6) Overall 6 year (FY 1972-1973 to FY 1978-1979) decline in part time students (U and G/P) will be about 18 percent, or annually, 3%.

(7) Overall 6 year (FY 1972-1973 to FY 1978-1979) trend for all groups of students appears to be a steady-state condition about 1,200 head count per year.

These facts individually and collectively suggest that a different mix of full time and part time students is in the offing. A different mix of undergraduate and graduate/professional students would result also. To zero in on this fact, Chart No. 5 was developed. It provides comparative estimates and proportions of students for FY 1972-1973 and FY 1978-1979 in terms of their joint distribution by academic level and full/part time classifications.

Chart No. 5 indicates that substantial overall shifts in student mix are possible:

(1) The FY 1972-1973 proportion of 79% for undergraduates (F and PT) probably will shift downward to 66% by FY 1978-1979.

(2) The FY 1972-1973 proportion of full time students (U and G/P) probably will shift upward to 64% by FY 1978-1979.

The full details are in Chart No. 5. The implications for curriculum, finances, plant needs, faculty, and administration appear significant at face value. The implications rest in the fact that the major proportional shifts within a steady-state university enrollment are the graduate/professional level student 13% increase and an 8% increase in resident students.

Observations and University Questions: Financial Indicators

Charts Nos. 6 and 7 provide data on six year extrapolations for ten financial indicators. These indicators are extrapolated on the basis of historical data in the several university audits and for FY 1972-1973 estimates by the University Controller, Mr. Daryl J. Evans. In particular, Chart No. 6 presents the regression equations from which the extrapolations were made along with other pertinent statistical data. The review of Chart No. 7 follows:

(1) The fall FTE enrollments reflect the steady-state student population over the whole 12 year period, viz., FY 1967-1968 to FY 1978-1979.

(2) The university income will rise about 45% over the FY 1972-1973 to FY 1978-1975 time frame, or annually 7.2%.

(3) The university income per FTE student will rise about 42% over the FY 1972-1973 to FY 1978-1979 time frame, or annually 6%.

(4) The university expenses will rise about 46% over the FY 1972-1973 to FY 1978-1979 period, or annually 6.6%.

(5) The university expenses per FTE student will rise about 43% over the FY 1972-1973 to FY 1978-1979 time period, or annually 6.1%.

(6) The university's accounts receivable will rise a fantastic 170% or about 24% annually for the FY 1972-1973 to FY 1978-1979 period. In this variable, the regression algorithm and historical data were insensitive to the considerable improvement of FY 1972-1973. And I anticipate that with current tightening of accounting and cash flow processes, this condition will be continually improving.

(7) The university's bad debts reserve appears to be in radical decline to about 44% for the FY 1972-1973 to FY 1978-1979 time frame, an annual decling rate of about 6.3%.

(8) The university's accounts payable will rise about 25% for the FY 1972-1973 to FY 1978-1979 period, or annually about 3.6%.

(9) The university's inventory account appears to be in radical decline, about 41% for the FY 1972-1973 to FY 1978-1979 period, or annually 5.9%.

These facts indicate in part that the steady-state student enrollment will produce a negatively skewed deficit per each FTE student, for each of the next seven years. See the following differences between FTE income and FTE expenses per student.

(a) FY 1972-1973: $ 46/FTE student
(b) FY 1973-1974: $124/FTE student
(c) FY 1974-1975: $115/FTE student
(d) FY 1975-1976: $108/FTE student
(e) FY 1976-1977: $103/FTE student
(f) FY 1977-1978: $ 96/FTE student
(g) FY 1978-1979: $ 91/FTE student

Knowing that the accounting category "university income" does not only include tuition and fees, this problem of FTE student deficit is one that needs consideration in planning. In this regard perhaps Maynard's long run cost function, viz., $Y = a - 0.244X + 0.00002275X^2$, will be of help. Maynard suggests that 5363+ FTE undergraduate students yields a flat cost function.[1] Hence the university could gain certain economies of scale by raising its FTE undergraduates to about 5400. What that cost function would be for a mixed student body (U + G/P) as anticipated for this universiy needs to be investigated. Certain cues to the costs and benefits of graduate education can be found in the 1970 Powel and Lamson study for the Council of Graduate Schools in the United States and the National Association of College and University Business Officers.[2] But these cues have not been studied at this time.

Chart No. 8 provides a linear regression and extrapolation for undergraduate tuition and fees for FY 1969-1970 through FY 1978-1979. The extrapolated costs appear by today's standards very high, an increase of about 60% over the FY 1972-1973 to FY 1978-1979 period, or annually 8.6%

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[1]James Maynard, Some Microeconomics of Higher Education: Economies of Scale (Lincoln, Neb.: University of Nebraska Press, 1971). For other technical economic studies, see: Karl A. Fox (ed.), Economic Analysis for Educational Planning: Resource Allocations in Nonmarket Systems (Baltimore, Md.: The Johns Hopkins University Press, 1972).

[2]John H. Powel, Jr. and Robert D. Lamson, Elements Related to the Determination of Costs and Benefits of Graduate Education (Washington, D.C.: The Council of Graduate Schools, 1972).

In summary, the financial indicators describe a University of San Francisco continually in debt if no corrective actions are taken. But corrective actions must be of such a nature as to reflect in curriculum and student service the highest quality, pragmatic relevance, and humane values to which this university dedicates itself.

Concluding Comments:

If the University of San Francisco were to do nothing in curriculum and organization and if the current secular trends continued, the University of San Francisco would be a vastly different place in FY 1978-1979. Change is inevitable. Even the most conservative decision to hold tight and not to change would nevertheless yield a grudging change by ongoing secular external forces over which the university has little control at best. Hence, the choice is not between no-change and change. The choice is between "grudged change" and "planned change."

This report was intended to provide a sensitization to the fact that a time perspective is important; and that the degree of fit between institutional goals and their fulfillment is a dynamic process, one that can be likened to the helmsman, steering a sailing ship, who takes into consideration the contingencies of the moment, ever keeping the bow of the ship headed toward some distant port.

The extrapolations over the next six or so years presented here are merely estimates based upon history. These are not predictions. But

if the secular trends seem viable, the direction at least appears valid enoough. One must always be closer to historical events to know the shifts well.

The utility of this report will be found if the frame of reference of the university's leadership is focused upon the need for planning and budgeting of a longer-range type than that which is now practiced. The role of university developed priorities in that planning process is elementary. But what is not elementary is the institutionalization of the planning mentality so that it is flexible and relevant in action and product. For that, no magic formula is known. The combined goodwill of all to do their jobs well in cooperation is the basic human foundation. The university is a human service institution, be it for liberal education, manpower training or research. And this university, in living its historic heritage as a human community, is dedicated to those larger ends of American higher education, these being embedded in Christian commitment.

APPENDIX

CHART NO. 1: REGRESSION ESTIMATES OF STUDENT CREDIT HOURS BY BUDGETED INSTRUCTIONAL AREAS, FY 1973-1974*

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (SCH)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	SCH REGRESSION ESTIMATE: Y' FY 1973-74
Arts:						
Fall: UG	Y = 37195 - 755.6X	35683.8	1795.95	-.61	.37	33417
Spring: UG	Y = 35396 - 903.3X	33589.0	1703.63	-.70	.48	30879
Sub Total						64296
Fall: G	Y = 455 - 42.1X	371.0	59.64	-.79	.62	244
Spring: G	Y = 530 - 69.1X	391.8	64.10	-.89	.80	184
Sub Total						428
Total						64954
Business Administration:						
Fall: UG	Y = 2682 + 438.8X	3559.2	473.39	.86	.74	4876
Spring: UG	Y = 2547 + 488X	3523.0	337.25	.94	.87	4987
Sub Total						9863
Fall: G	Y = 1289 - 62.8X	1163.8	55.21	-.90	.81	975
Spring: G	Y = 1320 - 80.3X	1169.0	74.00	-.89	.80	928
Sub Total						1903
Total						11766

*Excludes intersession and non-credit courses.

CHART NO. 1: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (SCH)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	SCH REGRESSION ESTIMATE: Y' FY 1973-74
Education:						
Fall: UG	Y = 2664 - 51.4X	2560.8	433.40	-.21	.04	2407
Spring: UG	Y = 1992 - 61.6X	1868.8	161.35	-.57	.33	1684
Sub Total						4091
Fall: G/P	Y = 9[illegible] - 156.5X	1278.6	339.56	.64	.41	1749
Spring: G/P	Y = + 126.9X	1944.0	226.15	.72	.51	2275
Sub Total						4024
Total						8115
Evening College:						
Summer: UG	Y = 6171 - 1009.6X	4152.0	701.32	-.94	.87	1123
Fall: UG	Y = 12537 - 1163.2X	10210.4	1059.82	-.89	.80	6721
Spring: UG	Y = 12459 - 1195.6X	10068.2	1194.75	-.88	.77	6461
Total						14305

CHART NO. 1: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (SCH)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	SCH REGRESSION ESTIMATE: Y' FY 1973-74
Law:						
Summer: P	Y = -14 + 136.5X	258.6	127.05	.89	.79	669
Fall: P	Y = 3748 + 1300.2X	6348.2	463.41	.98	.96	10249
Spring: P	Y = 3459 + 1324.6X	6108.4	542.59	.98	.96	10082
Total	----------	------	-------	---	---	21000
Nursing:						
Fall: UG	Y = 2280 + 190.7X	2661.2	121.69	.94	.89	3234
Spring: UG	Y = 2208 181.3X	2570.4	76.01	.98	.95	3115
Total	----------	------	-------	---	---	6349

CHART NO. 1: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (SCH)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	SCH REGRESSION ESTIMATE: Y' FY 1973-74
Science:						
Fall: UG	Y = 7153 + 675.4X	8503.4	492.39	.93	.86	10530
Spring: UG	Y = 6761 + 562X	7885.2	229.49	.98	.95	9571
Sub Total						20101
Fall: G	Y = 48 + 12.2X	72.0	22.03	.71	.51	109
Spring: G	Y = 56 + 9.2X	74.2	23.75	.58	.33	94
Sub Total						203
Total						20304
Summer Session:						
UG	Y = 8422 - 68X	8286.0	551.59	-.22	.05	8082
G	Y = 1223 - 28.9X	1164.8	88.82	-.51	.26	1078
Total						9160

CHART NO. 2: ACTUAL AND PROJECTED STUDENT CREDIT HOURS, FY 1968-1969 TO

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	197 197
Arts:								
Fall: UG	36088	36142	38030	35556	32603	33417	32661	319
Spring: UG	34165	34511	35755	33220	30294	30879	29976	290
Sub Total	70253	70653	73785	68776	62897	64296	62637	609
Fall: G	519	361	321	330	324	244	202	1
Spring: G	592	420	347	287	313	184	115	
Sub Total	1111	781	668	617	637	428	317	2
Total	71364	71434	74453	69393	63534	64724	62954	611
Business Administration:								
Fall: UG	3148	2849	3049	3967	4783	4876	5315	57
Spring: UG	2866	2559	3545	4119	4526	4987	5475	59
Sub Total	6014	5408	6594	8086	9309	9863	10790	117
Fall: G	1280	1287	1107	1071	1074	975	912	8
Spring: G	1276	1251	1257	1122	939	928	848	7
Sub Total	2556	2538	2364	2193	2013	1903	1760	16
Total	8570	7946	8958	10279	11322	11766	12550	133

ACTUAL AND PROJECTED STUDENT CREDIT HOURS, FY 1968-1969 TO FY 1978-1979

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
38030	35556	32603	33417	32661	31906	31150	30395	29639
35755	33220	30294	30879	29976	29073	28170	27266	26363
73785	68776	62897	64296	62637	60979	59320	57661	56002
321	330	324	244	202	160	118	76	34
347	287	313	184	115	46	---	--	--
668	617	637	428	317	206	118	76	34
74453	69393	63534	64721	62954	61185	59438	57737	56036
3049	3967	4783	4876	5315	5754	6192	6631	7070
3545	4119	4526	4987	5475	5963	6451	6939	7427
6594	8086	9309	9863	10790	11717	12643	13570	14497
1107	1071	1074	975	912	849	787	724	661
1257	1122	939	928	848	768	688	607	527
2364	2193	2013	1903	1760	1617	1475	1331	1188
8958	10279	11322	11766	12550	13334	14118	14901	15685

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CHART NO. 2: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975
Education:								
Fall: UG	2276	2757	3024	2699	2048	2407	2356	23(
Spring: UG	1816	2093	1978	1805	1652	1684	1622	15(
Sub Total	4092	4850	5002	4504	3700	4091	3978	38(
Fall: G/P	618	1491	1340	1596	1348	1749	1905	20(
Spring: G/P	1520	1835	2257	2072	2036	2275	2451	25(
Sub Total	2138	3326	3597	3668	3384	4024	4356	46(
Total	6230	8176	8599	8172	7084	8115	8334	85(
Evening College:								
Summer: UG	6538	4326	4854	2778	2264	1,23	113	---
Fall: UG	11462	12734	10554	8578	7724	6721	5558	43(
Spring: UG	11281	12517	10921	8121	7501	6461	5285	40(
Total	29281	29577	26329	19477	17489	14305	10956	84(

CHART NO. 2: CONTINUED

197[illegible]-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
3024	2699	2048	2407	2356	2304	2253	2201	2150
1978	1805	1652	1684	1622	1561	1499	1438	1376
5002	4504	3700	4091	3978	3865	3752	3639	3526
1340	1596	1348	1749	1905	2062	2218	2375	2531
2257	2072	2036	2275	2451	2578	2705	2832	2959
3597	3668	3384	4024	4356	4640	4923	5207	5490
8599	8172	7084	8115	8334	8505	8675	8846	9016
4854	2778	2264	1123	113	----	----	----	----
10554	8578	7724	6721	5558	4395	3231	2068	905
10921	8121	7501	6461	5285	4090	2894	1699	503
26329	19477	17489	14305	10956	8485	6125	3767	1408

CHART NO. 2: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	19 19
Law:								
Summer: P	87	99	123	330	654	669	805	
Fall: P	4215	4442	6224	7846	9014	10249	11549	12
Spring: P	3936	4048	6092	7766	8700	10082	11407	12
Total	8238	8589	12439	15942	18368	21000	23761	26
Nursing:								
Fall: UG	2334	2356	2779	2743	3094	3234	3424	3
Spring: UG	2256	2312	2623	2685	2976	3115	3296	3
Total	4590	4668	5402	5428	6070	6349	6720	7

CHART NO. 2: CONTINUED

970- 971	1971- 1972	1972- 1973	1973- 1974	1974- 1975	1975- 1976	1976- 1977	1977- 1978	1978- 1979
123	330	654	669	805	942	1078	1215	1351
6224	7846	9014	10249	11549	12848	14150	15450	16750
6092	7766	8700	10082	11407	12731	14056	15380	16705
12439	15942	18368	21000	23761	26521	29284	32045	34806
2779	2743	3094	3234	3424	3615	3806	3996	4197
2623	2685	2976	3115	3296	3477	3658	3840	4021
5402	5428	6070	6349	6720	7092	7464	7836	8218

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CHART NO. 2: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	197 197
Science:								
Fall: UG	7517	7808	7864	9060	10268	10530	11205	11
Spring: UG	6960	7224	7587	8546	9109	9571	10133	10
Sub Total	14477	15032	15451	17606	19377	20101	21338	22
Fall: G	70	39	53	95	103	109	121	
Spring: G	71	39	70	109	82	94	111	
Sub Total	141	78	123	204	185	203	232	
Total	14618	15110	15574	17810	19562	20304	21570	22
Summer Session:								
UG	8028	8466	8651	8727	7557	8082	8014	7
G/P	1234	1189	1088	1258	1058	1078	1050	1
Total	9262	9655	9739	9985	8615	9160	9064	8
TOTAL:								
UG	136735	138654	141214	132604	126399	127087	124433	122
G/P	15418	16501	20279	23882	25645	28636	31476	34
	152153	155155	161493	156486	152044	155723	155909	156

CHART NO. 2: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
7864	9060	10268	10530	11205	11881	12556	13232	13907
7587	8546	9109	9571	10133	10695	11257	11819	12381
15451	17606	19377	20101	21338	22576	23813	25051	26288
53	95	103	109	121	133	146	158	170
70	109	82	94	111	120	130	139	148
123	204	185	203	232	253	276	297	318
15574	17810	19562	20304	21570	22829	24089	25348	26606
8651	8727	7557	8082	8014	7946	7878	7810	7742
1088	1258	1058	1078	1050	1021	992	963	934
9739	9985	8615	9160	9064	8967	8870	8773	8676
141214	132604	126399	127087	124433	122660	120995	119334	117681
20279	23882	25645	28636	31476	34258	37068	39919	42770
161493	156486	152044	155723	155909	156918	158063	159253	160451

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CHART NO. 3: REGRESSION ESTIMATES OF STUDENT HEAD COUNT BY BUDGETED INSTRUCTIONAL AREAS, FY 1973-1974*

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Arts:						
Fall: UG						
FT	Y = 1953 - 19.6X	1913.4	119.62	-.29	.08	1855
PT	Y = 212 - 12.9X	186.2	44.10	-.47	.22	148
Sub Total						2003
Spring: UG						
FT	Y = 1853 - 56.6X	1739.8	110.28	-.68	.47	1570
PT	Y = 217 - 12.8X	191.6	73.16	-.30	.09	153
Sub Total						1723
Fall: G						
FT	Y = 31 - 4.6X	22.0	9.21	.67	.45	8
PT	Y = 110 + 2.5X	115.0	23.62	.19	.04	123
Sub Total						131
Spring: G						
FT	Y = 21 - 2.2X	16.4	7.93	-.45	.20	10
PT	Y = 147 - 4.8X	137.8	9.21	-.69	.48	123
Sub Total						133
Total:						3990

*Excludes intersession and non-credit course areas.

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Business Administration:						
Fall: UG						
FT	Y = 403 + 34X	471.0	31.01	.90	.80	573
PT	Y = 33 - 5.1X	22.8	6.02	-.84	.71	8
Sub Total						581
Spring: UG						
FT	Y = 360 + 40.1X	439.6	36.60	.89	.80	561
PT	Y = 32 + 1.2X	34.4	10.15	.21	.04	38
Sub Total						599
Fall: G						
FT	Y = -1 + 4.3X	7.6	2.85	.94	.88	21
PT	Y = 259 - 22.6X	213.4	13.36	-.95	.91	146
Sub Total						167
Spring: G						
FT	Y = 4 + 1.4X	6.8	6.66	.36	.13	11
PT	Y = 260 - 24.2X	211.4	7.46	-.99	.97	139
Sub Total						150
Total:						1497

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Education:						
Fall: UG						
FT	Y = 88 - 9.8X	68.4	29.15	-.52	.27	39
PT	Y = 334 - 29.4X	275.6	59.27	-.67	.45	187
Sub Total						226
Spring: UG						
FT	Y = 118 - 18.2X	81.6	44.5	-.60	.36	27
PT	Y = 267 - .6X	266.0	20.0	.95	.90	264
Sub Total						291
Fall: G/P						
FT	Y = 24 - .4X	23.0	5.30	-.14	.02	22
PT	Y = 83 + 25.7X	134.2	26.31	.87	.76	212
Sub Total						234
Spring: G/P						
FT	Y = 14 + .4X	15.2	6.20	.12	.01	16
PT	Y = 123 + 8.3X	139.2	38.22	.37	.14	165
Sub Total						181
Total:						932

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Evening College:						
UG						
Summer						
PT	Y = 1456 - 211.7X	1032.6	93.67	-.97	.94	398
Sub Total						398
Fall						
FT	Y = 535 - 65X	405.2	48.44	-.93	.86	210
PT	Y = 1365 - 180.7X	1003.6	251.66	-.80	.63	462
Sub Total						672
Spring						
FT	Y = 477 - 49.3X	378.0	40.43	-.91	.83	231
PT	Y = 1176 - 139.9X	896.4	227.20	-.75	.56	477
Sub Total						708
Total:						1778

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Law: P						
Summer						
PT	Y = -5 + 45.5X	86.2	42.34	.89	.79	223
Sub Total						223
Fall						
FT	Y = 170 + 78.9X	327.8	40.89	.96	.93	565
PT	Y = 130 + 30.7X	191.2	11.57	.98	.96	284
Sub Total						849
Spring						
FT	Y = 166 + 77.5X	320.8	38.33	.97	.93	554
PT	Y = 109 + 29.8X	168.2	11.47	.98	.96	258
Sub Total						812
Total:						1884

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Nursing: UG						
Fall						
FT	Y = 327 + 20.5X	368.0	6.36	.99	.97	430
PT	Y = 16 + 1.9X	20.0	2.70	.79	.62	26
Sub Total						456
Spring						
FT	Y = 317 + 17.7X	352.2	8.22	.97	.94	406
PT	Y = 20 + 6.1X	30.0		.83	.70	46
Sub Total						452
Total:						908
Science:						
Fall: UG						
FT	Y = 555 + 26.7X	608.0	24.41	.89	.80	689
PT	Y = 44 - .4X	43.6	18.55	*	*	42
Sub Total						731
Spring: UG						
FT	Y = 484 + 33.5X	550.8	19.84	.95	.90	652
PT	Y = 47 + 5.4X	57.6	8.75	.75	.56	74
Sub Total						726

*Less than .01.

CHART NO. 3: CONTINUED

BUDGETED INSTRUCTIONAL AREAS/COURSE LEVEL/TERM	REGRESSION EQUATIONS	MEAN OF Y (HC)	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	HC REGRESSION ESTIMATE: Y' FY 1973-74
Science:						
Fall: G						
FT	Y = 5 - .7X	3.4	2.33	-.48	.23	2
PT	Y = 6 + 3.9X	14.2	8.96	.62	.39	26
Sub Total						28
Spring: G						
FT	Y = .4 + .5X	1.4	.48	.88	.78	3
PT	Y = 12 + 1.5X	15.0	5.70	.43	.19	20
Sub Total						23
Total:						1508
Summer Session:						
U: PT	Y = 1670 - 8.6X	1652.4	35.61	-.40	.16	1627
G/P: PT	Y = 516 + 7.3X	531.0	112.08	.12	.01	553
Total:						2180

CHART NO. 4: ACTUAL AND PROJECTED STUDENT HEAD COUNT, FY 1968-1969 TO F

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Arts:								
Fall: UG								
FT	1860	1946	2058	1936	1767	1855	1835	1816
PT	173	215	230	194	119	148	135	122
Sub Total	2033	2161	2288	2130	1886	2003	1970	1938
Spring: UG								
FT	1767	1814	1854	1746	1518	157C	1513	1457
PT	216	143	288	155	146	153	140	127
Sub Total	1983	1957	2142	1901	1664	1723	1653	1584
Total:	4016	4118	4430	4031	3550	3726	3623	3522
Fall: G								
FT	27	38	12	20	13	8	3	---
PT	118	101	100	150	106	123	125	128
Sub Total	145	139	112	170	119	131	128	128
Spring: G								
FT	29	8	16	14	15	10	8	6
PT	138	154	138	136	123	123	118	113
Sub Total	167	162	154	150	138	133	126	119
Total:	312	301	266	320	257	264	254	247
TOTAL:	4328	4419	4696	4351	3807	3990	3877	3769

UAL AND PROJECTED STUDENT HEAD COUNT, FY 1968-1969 TO FY 1978-1979

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
2058	1936	1767	1855	1835	1816	1796	1777	1758
230	194	119	148	135	122	109	96	83
2288	2130	1886	2003	1970	1938	1905	1873	1841
1854	1746	1518	1570	1513	1457	1400	1344	1287
288	155	146	153	140	127	115	102	89
2142	1901	1664	1723	1653	1584	1515	1446	1376
4430	4031	3550	3726	3623	3522	3420	3319	3217
12	20	13	8	3	---	---	---	---
100	150	106	123	125	128	130	133	135
112	170	119	131	128	128	130	133	135
16	14	15	10	8	6	3	1	--
138	136	123	123	118	113	109	104	99
154	150	138	133	126	119	112	105	99
266	320	257	264	254	247	242	238	234
4696	4351	3807	3990	3877	3769	3662	3557	3451

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Business Administration:								
Fall: UG								
FT	435	402	466	492	560	573	607	641
PT	35	25	27	10	17	8	2	---
Sub Total	470	427	493	502	577	581	609	641
Spring: UG								
FT	395	359	417	504	523	561	601	641
PT	33	35	37	21	46	38	39	40
Sub Total	428	394	454	525	569	599	640	681
Total:	898	821	947	1027	1146	1180	1249	1322
Fall: G								
FT	---	---	11	11	16	21	25	29
PT	251	249	203	203	161	146	123	101
Sub Total	251	249	214	214	177	167	148	130
Spring: G								
FT	1	3	14	13	3	11	12	14
PT	258	242	210	178	169	139	115	91
Sub Total	259	245	224	191	172	150	127	105
Total:	510	494	438	405	349	317	275	235
TOTAL:	1408	1315	1385	1432	1495	1497	1524	1557

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
466	492	560	573	607	641	675	709	743
27	10	17	8	2	---	---	---	---
493	502	577	581	609	641	675	709	743
417	504	523	561	601	641	681	721	761
37	21	46	38	39	40	42	43	44
454	525	569	599	640	681	723	764	805
947	1027	1146	1180	1249	1322	1398	1473	1548
11	11	16	21	25	29	33	38	42
203	203	161	146	123	101	78	56	33
214	214	177	167	148	130	111	94	75
14	13	3	11	12	14	15	17	18
210	178	169	139	115	91	66	42	18
224	191	172	150	127	105	81	59	36
438	405	349	317	275	235	192	153	111
1385	1432	1495	1497	1524	1557	1590	1626	1659

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Education:								
Fall: UG								
FT	82	80	57	101	23	39	29	19
PT	270	367	306	257	178	187	158	128
Sub Total	352	447	363	358	201	226	187	147
Spring: UG								
FT	84	164	57	56	47	27	9	---
PT	319	226	179	354	252	264	263	263
Sub Total	403	390	236	410	299	291	272	263
Total:	755	837	599	768	500	517	459	410
Fall: G/P								
FT	20	31	20	21	23	22	22	21
PT	86	82	170	155	178	212	237	263
Sub Total	106	113	190	176	201	234	259	284
Spring: G/P								
FT	21	7	13	17	18	16	16	17
PT	100	173	107	176	140	165	173	181
Sub Total	121	180	120	193	158	181	189	198
Total:	227	293	310	369	359	415	448	482
TOTAL:	982	1130	909	1137	859	932	907	892

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
57	101	23	39	29	19	10	--	--
306	257	178	187	158	128	99	69	40
363	358	201	226	187	147	109	69	40
57	56	47	27	9	---	---	---	---
179	354	252	264	263	263	262	262	261
236	410	299	291	272	263	262	262	261
599	768	500	517	459	410	371	331	301
20	21	23	22	22	21	21	20	20
170	155	178	212	237	263	289	314	340
190	176	201	234	259	284	310	334	360
13	17	18	16	16	17	17	18	18
107	176	140	165	173	181	189	198	206
120	193	158	181	189	198	206	216	224
310	369	359	415	448	482	516	550	584
909	1137	859	932	907	892	887	881	885

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Evening College: UG								
Summer								
PT	1453	1299	1019	696	696	398	186	--
Sub Total	1453	1299	1019	696	696	398	186	0
Fall								
FT	537	513	353	309	314	210	145	80
PT	1115	1379	1265	716	543	462	281	100
Sub Total	1652	1892	1618	1025	857	672	426	180
Spring								
FT	513	373	393	316	295	231	181	132
PT	1009	1363	762	714	634	477	337	197
Sub Total	1522	1736	1155	1030	929	708	518	329
TOTAL:	4627	4927	3792	2751	2482	1778	1130	509

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
1019	696	696	398	186	--	--	--	--
1019	696	696	398	186	0	0	0	0
353	309	314	210	145	80	15	--	--
1265	716	543	462	281	100	--	--	--
1618	1025	857	672	426	180	15	0	0
393	316	295	231	181	132	83	33	--
762	714	634	477	337	197	57	--	--
1155	1030	929	708	518	329	140	33	0
3792	2751	2482	1778	1130	509	155	33	0

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Law: P								
Summer								
PT	29	33	41	110	218	223	268	333
Sub Total	29	33	41	110	218	223	268	333
Fall								
FT	210	208	296	433	492	565	643	722
PT	129	153	208	214	252	284	314	345
Sub Total	339	361	504	647	744	849	957	1067
Spring								
FT	204	197	303	420	480	554	631	709
PT	108	129	185	195	224	258	288	318
Sub Total	312	326	488	615	704	812	919	1027
TOTAL:	680	720	1033	1372	1666	1884	2144	2427

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
41	110	218	223	268	333	359	405	450
41	110	218	223	268	333	359	405	450
296	433	492	565	643	722	801	880	959
208	214	252	284	314	345	376	406	437
504	647	744	849	957	1067	1177	1286	1396
303	420	480	554	631	709	786	864	941
185	195	224	258	288	318	347	377	407
488	615	704	812	919	1027	1133	1241	1348
1033	1372	1666	1884	2144	2427	2669	2932	3194

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974 1975	1975-1976
Nursing: UG								
Fall								
FT	333	344	363	385	415	430	450	471
PT	18	16	21	19	26	26	27	29
Sub Total	351	360	384	404	441	456	477	500
Spring								
FT	324	331	346	364	396	406	423	441
PT	18	29	24	42	37	46	51	56
Sub Total	342	360	370	406	433	452	474	497
TOTAL:	693	720	754	810	874	908	951	997
Science:								
Fall: UG								
FT	549	609	585	620	677	689	715	742
PT	36	31	78	47	26	42	42	41
Sub Total	585	640	663	667	703	731	757	783
Spring: UG								
FT	504	504	531	583	632	652	685	719
PT	43	60	59	52	74	74	79	85
Sub Total	547	564	590	635	706	726	764	804
Total:	1132	1204	1253	1302	1409	1457	1521	1587

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974 1975	1975-1976	1976-1977	1977-1978	1978-1979
363	385	415	430	450	471	491	512	532
21	19	26	26	27	29	31	33	35
384	404	441	456	477	500	522	545	567
346	,364	396	406	423	441	459	476	494
24	42	37	46	51	56	61	66	71
370	406	433	452	474	497	520	542	565
754	810	874	908	951	997	1042	1087	1132
585	620	677	689	715	742	769	795	822
78	47	26	42	42	41	41	40	40
663	667	703	731	757	783	810	835	862
531	583	632	652	685	719	752	786	819
59	52	74	74	79	85	90	96	101
590	635	706	726	764	804	842	882	920
1253	1302	1409	1457	1521	1587	1652	1717	1782

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CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1975	1974-1975	1975-1976
Science:								
Fall: G								
FT	4	7	1	2	3	2	1	--
PT	14	8	4	15	30	26	29	33
Sub Total	18	15	5	17	33	28	30	33
Spring: G								
FT	--	1	2	2	2	3	3	4
PT	16	6	16	21	16	20	21	23
Sub Total	16	7	18	23	18	23	24	27
Total:	34	22	23	40	51	51	54	60
TOTAL:	1166	1226	1276	1342	1460	1508	1575	1647
Summer Session:								
U: PT	1684	1656	1655	1596	1671	1627	1618	1610
G/P: PT	499	489	541	692	434	553	560	567
TOTAL:	2183	2145	2196	2288	2105	2180	2178	2177

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1975	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
1	2	3	2	1	--	--	--	--
4	15	30	26	29	33	37	41	45
5	17	33	28	30	33	37	41	45
2	2	2	3	3	4	4	5	5
16	21	16	20	21	23	24	26	27
18	23	18	23	24	27	28	31	32
23	40	51	51	54	60	65	72	77
1276	1342	1460	1508	1575	1647	1717	1789	1859
1655	1596	1671	1627	1618	1610	1601	1593	1584
541	692	434	553	560	567	574	582	589
2196	2288	2105	2180	2178	2177	2175	2175	2173

CHART NO. 4: CONTINUED

COLLEGES AND SCHOOLS/COURSE LEVEL/TERM	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Totals: UG								
UG: FT	7383	7439	7480	7412	7167	7243	7193	715
UG: PT	6422	6844	5950	4873	4465	3950	3358	279
Total:	13805	14283	13430	12285	11632.	11193	10551	995
Totals: G/P								
G/P: FT	516	500	688	953	1065	1212	1364	152
G/P: PT	1746	1819	1923	2245	2051	2272	2371	249
Total:	2262	2319	2611	3198	3116	3484	3735	401
Totals: FT								
UG	7383	7439	7480	7412	7167	7243	7193	715
G/P	516	500	688	953	1065	1212	1364	152
Total:	7899	7939	8168	8365	8232	8455	8557	868
Totals: PT								
UG	6422	6844	5950	4873	4465	3950	3358	279
G/P	1746	1819	1923	2245	2051	2272	2371	249
Total:	8168	8663	7873	7118	6516	6222	5729	529
TOTAL:	16067	16602	16041	15483	14748	14677	14286	1397

CHART NO. 4: CONTINUED

1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
7480	7412	7167	7243	7193	7159	7131	7153	7216
5950	4873	4465	3950	3358	2798	2508	2400	2348
13430	12285	11632	11193	10551	9957	9639	9553	9564
688	953	1065	1212	1364	1522	1680	1843	2003
1923	2245	2051	2272	2371	2496	2578	2684	2786
2611	3198	3116	3484	3735	4018	4258	4527	4789
7480	7412	7167	7243	7193	7159	7131	7153	7216
688	953	1065	1212	1364	1522	1680	1843	2003
8168	8365	8232	8455	8557	8681	8811	8996	9219
5950	4873	4465	3950	3358	2798	2508	2400	2348
1923	2245	2051	2272	2371	2496	2578	2684	2786
7873	7118	6516	6222	5729	5294	5086	5084	5134
16041	15483	14748	14677	14286	13975	13897	14080	14353

CHART NO. 5: COMPARATIVE ESTIMATED CHANGE IN STUDENT MIX,

FY 1972-1973 AND FY 1978-1979

A: FY 1972-1973

	UNDER-GRADUATES	GRADUATES/ PROFESSIONAL	TOTAL/ PERCENT
FULL TIME	7167 (49%)	1065 (7%)	8232 (56%)
PART TIME	4465 (30%)	2051 (14%)	6516 (44%)
TOTAL/ PERCENT	11632 (79%)	3116 (21%)	14748 (100%)

B: FY 1978-1979

	UNDER-GRADUATES	GRADUATES/ PROFESSIONAL	TOTAL/ PERCENT
FULL TIME	7216 (50%)	2003 (14%)	9219 (64%)
PART TIME	2348 (16%)	2786 (20%)	5134 (36%)
TOTAL/ PERCENT	9564 (66%)	4789 (34%)	14353 (100%)

CHART NO. 6: REGRESSION ESTIMATES OF SELECTED FINANCIAL INDICATORS, FY 1973-1974

FINANCIAL INDICATORS	REGRESSION EQUATIONS	MEAN OF FINANCIAL INDICATOR Y	STANDARD ERROR OF ESTIMATE	RHO	COEFFICIENT OF DETERMINATION	FINANCIAL INDICATOR REGRESSION ESTIMATE: Y FY 1973-74
FTE Enrollment#	Y = 5013 + 2.1X	5017.8	85.26	.05	*	5026
Income: $	Y = 8,990,938 + 990,433X	11,467,019	310,785	.99	.98	14,933,536
Expenditures:$	Y = 9,774,867 + 960,815X.	12,176,906	618,473	.96	.91	15,539,757
Accounts Receivable: $	Y = 381,085 + 51,516X	509,374	211,187	.45	.21	690,181
Accounts Payable: $	Y = 339,108 + 14,779X	376,057	54,741	.49	.24	427,782
Inventory: $	Y = 170,454 - 10,863X	143,298	27,383	-.64	.41	105,276
Bad Debts: $	Y = 40,830 + 4,017X	106,091	63,491	.80	.64	64,932

*Less than .01.

#Fall enrollment

CHART NO. 7: ACTUAL AND PROJECTED SELECTED FINANCIAL INDICATORS, FY 1968-196

	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972	1972-1973+	1973-1974	1974-1975	
Enrollment:# FTE	4930	5006	5119	5037	5026	4939	5026	5028	
Income:	8,894,636	10,146,082	10,612,424	12,331,000	13,116,000	13,702,000*	14,933,536	15,923,969	1
Income/ FTE Student:	1,804	2,027	2,073	2,424	2,610	2,774	2,971	3,167	
Expenditures:	9,404,311	10,451,382	12,117,772	13,501,000	13,657,000	13,930,000	15,539,757	16,500,572	1
Expense/ FTE Student:	1,908	2,088	2,367	2,654	2,717	2,820	3,092	3,282	
Accounts Receivable:	298,513	351,476	540,446	706,967	808,841	350,000	690,181	741,697	
Accounts Rec/ FTE Student:	61	70	106	140	161	71	137	148	
Bad Debts Reserve:	19,385	29,556	59,335	105,423	272,848	150,000	64,932	68,949	
Accounts Payable:	284,885	440,182	354,865	356,058	420,352	400,000	427,782	442,561	
Inventory:	146,383	205,052	139,026	124,198	122,168	123,000	105,276	94,413	

+Pre-audit estimates: Mr. D. Evans, Comptroller, Office of Business and Finance.
*Includes Jesuit scholarships' gift of $150,000.

ND PROJECTED SELECTED FINANCIAL INDICATORS, FY 1968-1969 TO FY 1978-1979

1970-1971	1971-1972	1972-1973+	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
5087	5026	4939	5026	5028	5030	5032	5034	5036
2,331,000	13,116,000	13,702,000*	14,933,536	15,923,969	16,914,402	17,904,835	18,895,268	19,885,701
2,424	2,610	2,774	2,971	3,167	3,363	3,558	3,754	3,949
3,501,000	13,657,000	13,930,000	15,539,757	16,500,572	17,461,387	18,422,202	19,383,017	20,343,832
2,654	2,717	2,820	3,092	3,282	3,471	3,661	3,850	4,040
706,967	808,841	350,000	690,181	741,697	793,213	844,729	396,245	947,761
140	161	71	137	148	158	168	178	188
105,423	272,848	150,000	64,932	68,949	72,966	76,983	81,000	85,017
356,058	420,352	400,000	427,782	442,561	457,340	472,119	486,898	501,677
124,198	122,168	123,000	105,276	94,413	83,550	72,687	61,824	50,961

r, Office of Business and Finance.

*Fall enrollment

CHART NO. 8: REGRESSION ESTIMATES UNDERGRADUATE TUITION AND FEES, FY 1969-1970 TO FY 1978-1979

Regression Equation: $Y = 1271 + 179X$

Correlation Coefficient: $r = .99$

Coefficient of Determination: $r^2 = .98$

FISCAL YEARS	UNDERGRADUATE TUITION AND FEES
1969 - 1970	$1232
1970 - 1971	1504
1971 - 1972	1632
1972 - 1973	1792
1973 - 1974	1982
1974 - 1975	2166
1975 - 1976	2345
1976 - 1977	2524
1977 - 1978	2703
1978 - 1979	2882