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from the Editor's Desk . . .

As we begin our twelfth year of publication of the *Montana Business Quarterly* we would like to reaffirm our purpose to you, our readers.

It is our goal that the *Quarterly* serve as the magazine of Montana affairs, "affairs" being defined by Webster's dictionary as "commercial, professional, or public business." We hope that what we offer you is useful, interesting, and timely. If we fail to hit the mark, please let us know. If you have suggestions we would like to hear them. If our authors' views need refutation, write to us.

We are at your service, for a better Montana.

Joyce Zacek

In This Issue

LAWRENCE K. PETTIT

A Turning Point in Montana Postsecondary Education*

"Changed circumstances in Montana government enhance the possibility of fresh ideas and necessary reform in postsecondary education."

During the next several years the people of Montana have an unusual opportunity. If we have the determination, courage, and open-mindedness essential to the task, we can mold a postsecondary education system that is rational, affordable, and credible. With the right combination of wisdom and fortitude, we can expand educational opportunity and still recognize and nuture *quality*. By *rational*, I mean a system in which each unit does what it can do best and in which the programs of the units are complementary. By *affordable*, I mean a system which does not impose an undue burden on the taxpayers and which is streamlined enough to allow adequate support for each unit. By *credible*, I mean a system in which each unit achieves its mission at a level of quality sufficient to preclude any doubt about the validity or value of its degrees or certificates.

Under the leadership of Governors Anderson and Judge, and with the responsible support of legislators and citizens from *both* parties, Montana has moved to the forefront in most other areas and is possibly becoming a model state government. But our system of education beyond the high school has not yet been put through the same rigors of central coordination and structural reorganization. As we approach the task of reform, we need to understand that we are likely to do more harm than good if we expect to apply to higher education the same formulas and techniques that work in private enterprise or that seem to result in more efficiency and centralized control in state government. While the ends are similar, the means must always be appropriate to the specific goal and must take into account the uniqueness of the institutions involved.

Management responsibility for Montana's university system and community colleges is clearly one of the most challenging jobs in the state. The nine units enroll over 23,000 students; their aggregate annual budget is $55 million; they employ 24 percent of all persons on the state payroll; they manage over 61 percent of the state's bonded indebtedness; and they have a physical plant capitalization of over $120 million at historical cost. The mere existence of the system is a significant factor in Montana's economy. The decisions made in the next several years will not

*Adapted from speeches given by Dr. Pettit at the Great Falls Lions Club, July 24, 1973, and the Billings Kiwanis Club, September 4, 1973.

Dr. Lawrence K. Pettit is Commissioner of Higher Education in Montana.

only set the direction of the state's postsecondary education, but will have far-reaching political and economic ramifications as well. It is quaintly innocent to assume that these three factors—education, politics, and economics—can be separated in the real world as we know it.

Changed circumstances in Montana government now enhance the possibility of fresh ideas and necessary reform in postsecondary education. The new constitution confers on a new Board of Regents broad authority for management and control of the university system. The parameters of that authority are yet to be charted, and the process could be slow and tortuous insofar as the constitutional grant to the board implies a corresponding limitation on the power of others. Whatever the specific case outcomes are to be, it is clear that the new board is intended to be more effective than its predecessor. This suggests two consequences: greater central control of the system, with the control mechanism relatively immune to the vagaries of partisan politics.

My own position, Commissioner of Higher Education, is created by the new constitution, which charges the regents with selecting the commissioner, establishing his term, and defining his duties. The purpose is to create an executive officer on a level equal to that of the unit presidents in the interest of facilitating coordination and enhancing the board's management and policy control over the system.

In addition to the constitutional changes, we shall have, until it expires in January 1975, a Commission on Postsecondary Education. The commission was authorized by the Forty-third Legislative Assembly in response to a request in Governor Judge's first state-of-the-state message. It consists of thirty public members appointed by the governor. They are instructed to study the full range of postsecondary education—from the vo-tech centers through the universites, including private institutions— and to formulate implementation plans as well as recommendations for necessary changes. The commission will report to the regents, governor, and legislature by December 1974.

Meanwhile, day-to-day decisions must be made, and the new constitutional system has to be implemented through my office, under the direction of the Board of Regents. Accordingly, it is appropriate that I share the perspective that I bring to the job.

The Role of Higher Education

Higher education has a complex role to play in society. It first must provide an *opportunity structure* for citizens of all ages. People must have the opportunity to better themselves economically, to achieve greater satisfaction from aesthetic experiences, and to liven their minds with active and rigorous thought. Whether this opportunity is provided at all depends on the state's resources. Whether the opportunity is meaningful depends on our ability and willingness to support a quality faculty, comprised of highly trained scholars and teachers who are not only motivated and enthusiastic, but also authoritative in their subject areas.

Second, part of the justification for maintaining public colleges and universities is that they constitute for their society a resource far beyond their teaching mission. As repositories of expertise, universities provide the essential manpower and facilities for identifying, studying, and solving critical social and technological problems. Society *depends* on universities for the production and application of knowledge. Without researchers and scholars there would be no progress, and in a few years teachers would be conveying erroneous and outdated material in the classroom.

Third, higher education has a dual responsibility to transmit the cultural heritage of world civilizations and simultaneously to play the role of devil's advocate or social critic. The campus is the only sanctuary where new ideas and concepts can be tested freely, and where popular ideas may be challenged and reexamined. To threaten or to remove that prerogative opens the door to an authoritarian society. Because universities of quality readily accept this essential and responsible role, inevitably there is tension between them and the people who support them financially. But I should add that often the threat is invited by the unrestrained zeal of campus rebels themselves.

Fourth, higher education must be accountable to its various clienteles, the taxpayers, and public decision makers. Few persons, on or off campus, would argue against accountability. Disagreement often occurs, however, over the purposes and procedures of accountability. To some, accountability means financial reporting and accounting for the time of employees. To others, accountability implies the evaluation of how an

institution realizes its over-all program *goals*. As a practical matter, we are constantly held accountable at both levels, but the judges are usually different.

It is often necessary to point out that education, like religion, is *not* an enterprise in which the customer is always right. The ultimate test of an institution's accountability is its reputation within the national higher education community.

Such is the way that I view the role of higher education in society. I should like next to examine some of the problems that I perceive in Montana and some of the popular notions which I believe need to be reexamined.

Problems in Montana Higher Education

Is there anyone who does *not* agree that the system in Montana is over-extended? Six university units, three community colleges, and five postsecondary vo-tech centers are simply too great a burden for a state of 700,000 people and an underdeveloped economy. Programs and degrees have proliferated and have been instituted where adequate capability does not really exist. We have *not* had a good system of program evaluation. We have not understood the requirements of a graduated system. We need to have minimum quality standards respecting faculty credentials and library and laboratory resources that must be met before new programs are authorized. We need to recognize differences in units as we move from vo-tech centers to community colleges to four-year colleges to full universities, and to devise different formulas of support for the different kinds of institutions.

At present, resources are dissipated by being spread too thinly, so that in spite of sincere efforts the system is underfinanced. Both faculty and administrative salaries at our two major units are far below those at comparable institutions in virtually every other state. What quality we have had has been largely undeserved, given our support levels, and that quality is now being eroded. Yet the state ranks relatively high—about fifteenth—in financial effort, measured in dollars spent on higher education in relation to personal income. The conclusion is inescapable: *if* Montanans want to provide quality in higher education, significant changes in the structure of the system are mandatory.

There is no doubt that greater central coordination through the Board of Regents and the Helena office is necessary. This can and should be achieved without diluting the power of the presidents on their own campuses. Only insofar as the system is adequately coordinated can it be responsive, as it should be, to the needs of the governor, the legislature, and the people. On the other hand, actual control and management must remain in the hands of the Board of Regents and their agent, the Commissioner of Higher Education.

Communication between academics and nonacademics is a continual need in any state, but sometimes I believe there is an especial need in Montana where we are separated by vast geographic distances as well as different life styles. Faculty, administrators, and others within the university system have made heroic efforts within the past few years, and consequently I don't believe this problem is as severe as it once was. Nevertheless, we need to elaborate on the benefits to society of maintaining colleges and universities. There are plenty of people willing to talk about the *costs*. We need to be able to evaluate and explain accurately the return the taxpayers get on their investment. And, if colleges and universities are to serve the state to their fullest capacity, the psychological barriers between academics and nonacademics will have to be eradicated. This will require more effort on both sides.

Finally, a persistent problem in Montana higher education has been a high degree of provincialism. We have followed our own course, largely unmindful of higher education as a national system. The experience of other states has been essentially unnoticed here. The tradition and practices of great institutions, with a few exceptions, have not touched the administrative leadership of our own institutions. The available expertise and services of national associations in higher education have been underutilized in Montana. Too often recruitment of faculty and administrators reveals little understanding of where the true national centers of talent lie. The need to overcome our provincialism would be patently obvious to any outside observer, but does not enter the consciousness of many within our Montana system.

There are no ready panaceas for Montana's problems in postsecondary education. Our job is

to identify and understand the problems, establish the range of options that are realistically available to us, and work out the solutions over time. The experience of participation surely will modify to some extent the perspectives of all of us who are involved. A year from now I might formulate the problems and questions quite differently.

None of us at this point can enumerate with assurance all that ought to be done. At a minimum, though, we can ask everyone to keep in mind the basic purposes of postsecondary education, and to resist arguments based on assumptions which are contrary to those purposes. The next few years in Montana postsecondary education will be stormy. Hopefully, out of the controversy and travail will emerge a reconstructed system, and we will be better off in the 1980s than we would have been had we misspent these years going on as before.

Editor's note: We are publishing the following membership lists of the Board of Regents of Higher Education and of the Commission on Postsecondary Education to facilitate communication between the people of Montana and the decision makers.

BOARD OF REGENTS OF HIGHER EDUCATION

Name	Home Address and Telephone Number	Business Address and Telephone Number
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Dolores Colburn State Superintendent of Public Instruction (ex-officio member)	P.O. Box 992 Helena, MT 59601 442-3106	State Capitol Helena, MT 59601 449-3654
Lawrence K. Pettit (ex-officio member and Secretary to the Board: serves at the pleasure of the Board)	715 Power Street Helena, MT 59601 442-9841	Montana University System 1231 Eleventh Avenue Helena, MT 59601 449-3024
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John D. French (Attorney-at-Law)	2601 K Ronan, MT 59864 676-2260	2310 Main Ronan, MT 59864 676-4470
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T. T. Heberly (Electrical Engineer)	1170 Oak Drive Havre, MT 59501 265-7218	521 Fourth Havre, MT 59501 265-6741
Ted James (Attorney-at-Law)	2210 Beech Drive Great Falls, MT 59401 453-6105	P.O.Box 1346 Great Falls, MT 59401 727-2311

Wayne O'Brien (Student, MCMST)	1306 East Park Place Butte, MT 59701 723-7018	
Mary Pace (Chairman, English Department, Bozeman Senior High School)	1005 West Durston Road Bozeman, MT 59715 587-3560	Bozeman Senior High School 1211 West Main Bozeman, MT 59715 587-3111

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Name	**Home Address and Telephone Number**	**Business Address and Telephone Number**
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Magnus Aasheim	Antelope, MT 59211 286-4246	
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Mary Craig	602 Burlington Avenue Billings, MT 59101 252-7830	
William F. Crowley	420 Keith Missoula, MT 59801 543-6956	School of Law Univerity of Montana Missoula, MT 59801 243-5821
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Sharon LaBuda	Box 381 Havre, MT 59501 265-4431	265-7821
William Mackay	Roscoe, MT 59071 328-3311	
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Joseph McDowell	Ovando, MT 59854 793-6607	
John L. McKeon	316 East Seventh Anaconda, MT 59711 563-6792	124 Oak Anaconda, MT 59711 563-5206
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John L. Peterson	1244 West Steele Butte, MT 59701 792-4617	27 West Broadway Butte, MT 59701 792-1221
Lawrence K. Pettit	715 Power Helena, MT 59601 442-9841	1231 Eleventh Avenue Helena, MT 59601 449-3024
Linda Skaar	501 South Third Bozeman, MT 59715 587-3220	

Gary South	Box 838 Missoula, MT 59801 243-2352	ASUM Office University of Montana Missoula, MT 59801 601 Missouri Miles City, MT 59301
Joyce Steffeck	801 Stuart Helena, MT 59601 442-2558	
Jessica P. Stickney	2206 Main Street Miles City, MT 59301 232-1100	
William Warfield	Hoffman Route Livingston, MT 59047 333-4429	

JOHN PHOTIADES

Patterns of General State Expenditure in Montana

How the state has spent its general funds from 1951 to 1971

The manner in which state government raises revenue usually attracts more of the public's attention—and hence receives wider publicity—than the way the state disburses the funds it collects. To the public, the cost of raising revenue, particularly through taxation, is direct and obvious; the benefit of state expenditure often seems indirect and dubious.

But since, after all, the *raison d'etre* of raising funds is spending them, the present article aims toward correcting this unfair imbalance in interest and coverage by discussing almost exclusively the expenditure side of Montana's state government finance. At this early stage, the author gives fair warning to the reader that, in offering this general overview, the presentation of statistical data is unfortunately mired by the occasional interspersion of prose.

State government expenditure in Montana comprises insurance trust expenditure (such as retirement benefits of public employees, unemployment compensation, and workmen's compensation), state liquor store expenditure, and general expenditure. General expenditure covers all funds disbursed by the state for the general functions of government and has amounted in recent years to about 90 percent of all state expenditure. The present article describes exclusively general state expenditure; it does not deal with insurance trust and liquor store expenditure. Neither, of course, does it discuss local government expenditure.

From 1951 to 1971 general expenditure by the Montana state government has increased more than fourfold, from $67.5 million, or $114 per capita, to $347.0 million, or $490 per capita. This increase has been about twice as fast as the growth in per capita personal income in Montana.

The rate of growth of state general expenditure in Montana, following the national trend, has tended to accelerate in recent years. Although the rate of growth averaged 7.5 percent per year in Montana from 1951 to 1967, it rose to an average rate of 12.8 percent per year for the 1967-71 period. The recent increase in general expenditure for the fifty states as a whole, however, has been even more rapid. From $53 billion in 1967, it rose to $89 billion in 1971, a jump equivalent to around a 14 percent rate of annual growth. (A higher rate of population growth and personal income nationally as compared to Montana for that period helps account for that difference.)

Not all state government expenditure in Montana is financed through state revenue. Some revenue comes from local governments, while a considerable—and rising—share originates from the federal government. In 1951 total intergovernmental revenue amounted to 32 percent of total general expenditure by the state government in Montana; in 1971 it amounted to 42 percent, that percentage but for two percentage points coming from the federal government. Thus, in 1971, $141 million of general state expenditure was financed by the federal government, $5 million by local

John Photiades is Assistant Professor of Economics at the University of Montana.

government, and $201 million by state revenue sources. For the fifty states as a whole, this dependence on intergovernmental revenue for financing state expenditure is much less. In 1971 it amounted to about 27 percent, all but around 1 percent from the federal government. The difference is wholly due to differences in federal intergovernmental revenue on highways. On the average, state governments received federal funds for highways amounting to about 5 percent of their general expenditure in 1971; but in Montana that percentage was over 21 percent.

Table 1 presents the major functional divisions of general expenditure by the state government of Montana from 1951 to 1971; tables 2 and 3 permit a comparison of expenditure patterns in Montana with those in the other mountain states and in all fifty states in 1971.

Expenditure for Education

In 1971 expenditure by the state government for education amounted to $128 million and accounted for about 37 percent of total general state expenditure in Montana, a share greater than for any other category (table 1). That share is slightly lower, however, than the 39 percent for the fifty-state average, and considerably lower than the 45 percent for the mountain-state average (table 2). In Montana, the share of total general expenditure devoted to education rose quite steadily in the 1951-67 period, growing at an average annual rate of 9.7 percent (table 4). From 1967 to 1971, the average growth rate accelerated to 13.6 percent per year; as a share of total general expenditure, however, after peaking at 40 percent of the total in 1968, expenditure for education has declined slightly in recent years. The growth rate of state expenditure for education in all fifty states from 1967 to 1971 has been about the same as in Montana.

Of the $128 million spent by the state on education in 1971, $22.3 million or about 17 percent came from federal government revenue, the same proportion as in 1967.

Because of the local government units' unhealthy dependence on the property tax as their major source of revenue, state governments have had to play an increasing role in support of school districts. Nationally, such intergovernmental expenditure from state to local government increased from 1967 to 1971 by an average annual rate of 13.0 percent. In Montana, state aid to school districts has increased from $11 million in 1951 to about $38 million in 1967 and about $50 million in 1971; it now accounts for 39 percent of the total state expenditure for education. The increase in state aid to school districts in Montana, although it appears significant, amounts to an average annual rate for the 1967-71 period of 9.7 percent, or about three-fourths the rate of increase recorded by all fifty states.

The major share of state funds for education in Montana is devoted to the support of the state's institutions of higher education. Even though, as noted earlier, the share of total general expenditure devoted to education was lower for Montana than for the fifty states as a whole in 1971, the share devoted to higher education was 38 percent greater than for the fifty states, and only 5 percent less than the eight mountain states combined. These differences in shares devoted to higher education are partly explainable by differential rates of student enrollment, which averaged, per 1,000 of population, about 39 in Montana, 46 in the mountain states, and 31 in the United States as a whole for 1970.

Part of state expenditure for higher education is financed by current charges (i.e., charges to students for tuition, room and board, and athletic fees). In Montana, such current charges grew from $15.5 million or 39.8 percent of state expenditure for higher education in 1967 to $23.2 million or 34.5 percent of state expenditure in 1971 (table 5). For the fifty states as a whole, such charges comprised 29.9 percent of total state expenditure on higher education in 1967 and 32.8 percent in 1971.

State expenditure in support of Montana's state institutions of higher education has grown from $7 million in 1951 to about $39 million in 1967 and to about $67 million in 1971, a more rapid rate of increase than the state government's aid to local school districts. The increase from 1967 to 1971 amounted to a 14.6 percent yearly growth, on the average, for Montana. For the same period, the fifty-state total for higher education showed a slightly lower rate of increase, averaging 12.7 percent yearly. Table 6 presents growth rates of state expenditure on higher education by years for the period 1967 through 1971 for the mountain states and all fifty states. These growth rates may be deceiving, however, unless account also is taken of the growth in student enrollments.

Table 1

State of Montana General Expenditure by Function
Selected Fiscal Years 1951-71
(In Millions of Dollars)

	1951	1953	1955	1957	1959	1961	1963	1965	1967	1968	1969	1970	1971
Total general expenditure	$67.5	$96.6	$79.9	$101.0	$127.6	$135.7	$152.0	$189.7	$214.0	$233.1	$249.9	$299.7	$347.0
Education	17.4	25.3	22.1	27.2	33.5	42.1	44.5	58.9	76.8	92.4	92.5	101.9	127.8
Percentage of total	*25.8*	*26.2*	*27.7*	*26.9*	*26.3*	*31.0*	*29.3*	*31.0*	*35.9*	*39.6*	*37.0*	*34.0*	*36.8*
Highways	19.6	22.0	24.3	37.0	49.1	49.0	63.4	81.3	77.7	71.2	78.1	98.7	109.6
Percentage of total	*29.0*	*22.8*	*30.4*	*36.6*	*38.5*	*36.1*	*41.7*	*42.9*	*36.3*	*30.5*	*31.3*	*32.9*	*31.6*
Public welfare	13.1	13.6	12.8	12.8	13.1	12.6	12.6	12.2	15.6	20.1	23.3	28.7	35.3
Percentage of total	*19.4*	*14.1*	*16.0*	*12.7*	*10.3*	*9.3*	*8.3*	*6.4*	*7.3*	*8.6*	*9.3*	*9.6*	*10.2*
Hospitals and health	5.7	4.7	4.8	5.9	6.7	6.4	6.4	7.2	8.7	10.5	12.1	14.0	15.7
Percentage of total	*8.4*	*4.9*	*6.0*	*5.8*	*5.3*	*4.7*	*4.2*	*3.8*	*4.1*	*4.5*	*4.8*	*4.7*	*4.5*
Police protection and correction	1.4	1.9	2.3	2.5	3.5	3.9	3.7	4.1	5.0	5.8	5.8	6.8	7.8
Percentage of total	*2.1*	*2.0*	*2.9*	*2.5*	*2.7*	*2.9*	*2.4*	*2.2*	*2.3*	*2.5*	*2.3*	*2.3*	*2.2*
Natural resources	5.6	5.4	6.0	7.3	8.2	8.8	8.0	9.2	11.1	12.7	14.0	16.1	16.9
Percentage of total	*8.3*	*5.6*	*7.5*	*7.2*	*6.4*	*6.5*	*5.3*	*4.8*	*5.2*	*5.4*	*5.6*	*5.4*	*4.9*
Financial administration and general control	1.8	2.0	2.2	2.9	3.2	3.7	3.9	4.5	5.7	5.7	7.2	7.7	10.4
Percentage of total	*2.7*	*2.1*	*2.8*	*2.9*	*2.5*	*2.7*	*2.6*	*2.4*	*2.7*	*2.4*	*2.9*	*2.6*	*3.0*
Employment security administration	0.9	1.0	1.0	1.2	1.5	1.7	2.1	2.2	2.6	2.8	3.0	2.9	3.1
Percentage of total	*1.3*	*1.0*	*1.3*	*1.2*	*1.2*	*1.3*	*1.4*	*1.2*	*1.2*	*1.2*	*1.2*	*1.0*	*0.9*
Other	1.9	20.6	4.4	4.2	9.0	7.6	7.5	10.0	10.8	11.9	13.9	22.9	20.6
Percentage of total	*2.8*	*21.3*	*5.5*	*4.2*	*7.1*	*5.6*	*4.9*	*5.3*	*5.0*	*5.1*	*5.6*	*7.6*	*5.9*

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1951-71* (Washington, D.C.: U.S. Government Printing Office, 1952-72).

Note: Because of rounding, detail may not add to totals.

Table 2

State General Expenditure by Function, Eight Mountain States and the Fifty States, Fiscal 1971 (In Millions of Dollars)

	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming	Eight Mountain States	Fifty States
Total general expenditure	$831.3	$1,003.4	$322.4	$347.0	$256.0	$581.2	$545.1	$207.4	$4,093.7	$89,118.4
Education	399.3	449.5	119.6	127.8	91.2	285.1	285.8	72.4	1,830.7	35,091.8
Percentage of total	*48.0*	*44.8*	*37.1*	*36.8*	*35.6*	*49.1*	*52.4*	*34.9*	*44.7*	*39.4*
Highways	160.0	183.9	80.7	109.6	63.1	103.2	100.9	73.7	875.1	14,810.3
Percentage of total	*19.2*	*18.3*	*25.0*	*31.6*	*24.6*	*17.8*	*18.5*	*35.5*	*21.4*	*16.6*
Public welfare	61.9	173.6	29.6	35.3	21.9	71.6	63.6	12.5	470.0	16,278.3
Percentage of total	*7.4*	*17.3*	*9.2*	*10.2*	*8.6*	*12.3*	*11.7*	*6.0*	*11.5*	*18.3*
Hospitals and health	30.5	67.3	14.3	15.7	9.6	18.4	23.2	8.6	187.5	6,151.0
Percentage of total	*3.7*	*6.7*	*4.4*	*4.5*	*3.8*	*3.2*	*4.3*	*4.1*	*4.6*	*6.9*
Police protection and correction	23.7	27.4	9.0	7.8	9.9	12.0	9.3	3.6	102.6	2,122.1
Percentage of total	*2.8*	*2.7*	*2.8*	*2.2*	*3.9*	*2.1*	*1.7*	*1.7*	*2.5*	*2.4*
Natural resources	21.5	30.9	21.6	16.9	11.8	17.6	21.1	13.7	155.1	2,548.6
Percentage of total	*2.6*	*3.1*	*6.7*	*4.9*	*4.6*	*3.0*	*3.9*	*6.6*	*3.8*	*2.9*
Financial administration and general control	18.2	34.1	9.3	10.4	10.5	18.8	11.8	5.0	118.1	1,987.3
Percentage of total	*2.2*	*3.4*	*2.9*	*3.0*	*4.1*	*3.2*	*2.2*	*2.4*	*2.9*	*2.2*
Employment security administration	10.7	9.3	5.4	3.1	6.5	5.2	12.0	2.6	54.8	942.2
Percentage of total	*1.3*	*0.9*	*1.7*	*0.9*	*2.5*	*0.9*	*2.2*	*1.3*	*1.3*	*1.1*
Other	105.5	27.4	33.0	20.6	31.4	49.4	17.3	15.3	299.9	9,186.7
Percentage of total	*12.7*	*2.7*	*10.2*	*5.9*	*12.3*	*8.5*	*3.2*	*7.4*	*7.3*	*10.3*

Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1971* (Washington, D.C.: U.S. Government Printing Office, 1972).

Note: Because of rounding, detail may not add to totals.

Table 3

Per Capita State General Expenditure by Selected Function
Eight Mountain States and the Fifty States, Fiscal 1971

	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming	Eight Mountain States' Average	Fifty States' Average
Total general expenditure	$450	$440	$440	$490	$505	$564	$496	$610	$499	$434
Education	216	197	163	180	180	277	260	213	211	171
Highways	87	81	110	155	124	100	92	217	121	72
Public welfare	33	76	40	50	43	70	58	37	51	79
Hospitals and health	16	29	20	22	19	18	21	25	21	30
Correction	6	7	7	5	11	5	5	6	6	6
Natural resources	12	14	30	24	23	17	19	40	22	12
Financial administration and general control	10	15	13	15	21	18	11	15	15	10
Employment security administration	6	4	7	4	13	5	11	8	7	5
Interest	2	2	2	5	3	5	3	6	4	9

Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1971* (Washington, D.C.: U.S. Government Printing Office, 1972).

Note: Because of rounding, detail may not add to totals.

Table 4

Average Annual Growth Rates in Montana State General Expenditure by Function Fiscal 1951-67 and Fiscal 1967-71

	Average Annual Growth Rates	
	FY 1951-FY 1967	FY 1967-FY 1971
Total general expenditure	7.5%	12.8%
Education	9.7	13.6
Higher education	11.3	14.6
Other	8.4	12.5
Highways	9.0	9.0
Public welfare	1.1	22.6
Hospitals and health	2.6	15.9
Police protection and correction	8.0	11.9
Natural resources	4.3	11.1
Financial administration and general control	7.5	16.2

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1951-71* (Washington, D.C.: U.S. Government Printing Office, 1952-72).

Table 7 presents state expenditure on state institutions of higher education per enrolled student for 1967-68 and 1970-71.

Total state expenditure per student in Montana was $2,291 in 1967-68 and $2,495 in 1970-71, both figures higher than the mountain-state and fifty-state averages for those years. In 1970-71, the state of Montana spent per student over one-tenth more than the average for the mountain states and over one-quarter more than the average for all fifty states. The higher-than-average state expenditure per student in Montana may be partly the consequence of supporting six separate units of higher education, which prevents the spreading of some fixed costs over a large number of students.

From 1967-68 to 1970-71, the average state expenditure for higher education for all fifty states rose by $90 per student, which amounts to a 1.6 percent average annual rate of growth. In the mountain states, the average actually *declined* in that period by $4 per student. Montana's higher education fared better with total expenditure per enrolled student rising by 2.9 percent per year. This rate, however, was still not sufficient to match the rise in prices during that period: from 1968 to 1971, the consumer price index rose by 5.2 percent per annum. Hence, *real* state expenditure per student has declined in Montana, as well as nationally, for the 1967-68 to 1970-71 period. The short-run effect of such growth on the quality of higher education has been minimized by holding down expenditures on physical capital, at least partly perhaps in anticipation of a leveling off in future student enrollments. As table 7 indicates, the growth rates of state expenditure per student for only the current operations of state institutions of higher education are higher than the corresponding rates of growth inclusive of capital outlay, for Montana, the mountain states, and the fifty states combined. In the case

Table 5

Current Charges by State Institutions of Higher Education as a Proportion of Total State Expenditure for Higher Education, Eight Mountain States and the Fifty States, Fiscal 1971

	Total Expenditure on Higher Education ($000,000)	Current Charges	
		Amount ($000,000)	*Percentage of Total Expenditure*
Arizona	$ 155.2	$ 59.5	*38.3*
Colorado	250.8	107.8	*43.0*
Idaho	51.3	15.9	*31.0*
Montana	67.2	23.2	*34.5*
Nevada	24.4	5.6	*23.0*
New Mexico	108.2	37.4	*34.6*
Utah	144.8	46.9	*32.4*
Wyoming	34.7	11.9	*34.3*
Eight mountain states	836.6	308.2	*36.8*
Fifty states	12,447.6	4,078.4	*32.8*

Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1971* (Washington, D.C.: U.S. Government Printing Office, 1972).

Note: Current charges consist of such items as tuition, charges for room and board, and athletic fees.

Table 6

Percent change in Total General Expenditure and in Expenditure for Education, Eight Mountain States and the Fifty States, by Years, Fiscal 1967-71

	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming	Eight Mountain States	Fifty States
Percent change in expenditure, fiscal 1967 to fiscal 1968										
Total general expenditure	1.0	9.0	4.7	8.9	11.2	3.8	6.4	5.4	6.3	13.6
Total educational expenditure	6.4	13.6	4.8	20.3	13.1	4.7	7.4	6.2	9.6	14.4
State institutions of higher education	7.1	18.8	- 0.6	21.6	2.1	4.9	9.1	2.5	8.2	16.2
Current operations	15.3	20.8	19.7	22.6	18.4	9.6	16.4	7.0	16.2	19.3
Percent change in expenditure, fiscal 1968 to fiscal 1969										
Total general expenditure	16.6	8.5	9.9	7.2	7.6	5.3	8.0	6.4	8.7	12.6
Total educational expenditure	33.8	8.5	10.7	0.1	13.8	3.8	7.6	2.8	10.1	11.9
State institutions of higher education	9.1	9.2	17.9	- 5.5	21.4	2.8	11.0	3.4	8.7	11.4
Current operations	12.8	14.9	11.7	3.3	17.0	11.5	12.0	3.3	10.8	14.6
Percent change in expenditure, fiscal 1969 to fiscal 1970										
Total general expenditure	12.9	16.7	23.3	19.9	19.0	13.8	16.3	12.0	16.7	14.2
Total educational expenditure	12.5	19.7	29.2	10.2	17.6	10.8	12.1	16.1	16.0	13.6
State institutions of higher education	17.3	6.0	35.2	4.6	10.1	12.6	9.1	10.2	13.1	10.1
Current operations	15.0	10.9	20.2	14.0	13.3	17.3	16.7	14.6	15.2	12.7
Percent change in expenditure, fiscal 1970 to fiscal 1971										
Total general expenditure	13.3	19.4	13.0	15.8	7.1	11.2	12.0	5.0	12.1	14.8
Total educational expenditure	6.6	14.9	12.1	25.4	1.0	6.9	12.6	2.4	10.2	13.7
State institutions of higher education	- 0.4	18.3	12.7	43.5	-21.2	1.6	16.6	4.1	9.4	13.1
Current operations	19.1	16.6	19.0	28.1	- 6.8	3.7	5.8	6.6	11.5	14.8

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

of the mountain states and the United States, even these rates do not match the general rise in prices during the period from 1967-68 to 1970-71. State expenditure on the current operations of institutions of higher education rose at an average annual rate of growth of only 2.8 percent for the mountain states, 3.9 percent for the fifty states, and 5.1 percent for Montana. Evidence indicates that the trend discussed for the 1967-68 to 1970-71 period is continuing.

Table 7

Student Enrollment in State Institutions of Higher Education and State Expenditure for Higher Education, Mountain States and the Fifty States 1967-68 and 1970-71

	Fiscal Year 1967-68					Fiscal Year 1970-71					*Percent Change in Expenditure per Student FY 1968-FY 1971*	
	1967-68 Enrollment (000)	Expenditure ($000,000)		Expenditure per Student		1970-71 Enrollment (000)	Expenditure ($000,000)		Expenditure per Student			
		Total	Current Operations	Total	Current Operations		Total	Current Operations	Total	Current Operations	*Total*	*Current Operations*
Arizona	77.4	$ 121.7	$ 89.5	$1,573	$1,157	107.9	$ 155.2	$ 138.3	$1,439	$1,282	*- 8.5*	*10.8*
Colorado	79.3	183.1	144.5	2,309	1,821	107.0	250.8	214.6	2,344	2,006	*1.5*	*10.2*
Idaho	20.5	28.6	25.3	1,392	1,232	27.3	51.3	40.4	1,877	1,478	*34.8*	*20.0*
Montana	20.7	47.3	34.9	2,291	1,689	26.9	67.2	52.7	2,495	1,957	*8.9*	*15.9*
Nevada	8.6	23.1	18.3	2,697	2,140	12.9	24.4	22.7	1,894	1,760	*-29.8*	*-17.8*
New Mexico	31.0	92.1	74.1	2,970	2,390	40.5	108.2	100.4	2,674	2,482	*-10.0*	*3.8*
Utah	40.4	102.5	81.8	2,538	2,024	49.6	144.8	113.1	2,918	2,279	*15.0*	*12.6*
Wyoming	12.0	29.2	23.4	2,434	1,951	15.0	34.7	29.6	2,309	1,968	*- 5.1*	*0.9*
Eight mountain states	289.9	627.7	491.8	2,165	1,697	387.1	836.6	711.7	2,161	1,839	*- 0.2*	*8.4*
Fifty states[a]	4,799.1	8,981.5	6,753.4	1,872	1,407	6,343.5	12,447.6	10,009.3	1,962	1,578	*4.8*	*12.2*

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1968* (Washington, D.C.: U.S. Government Printing Office, 1969); *idem, State Government Finances in 1971* (Washington, D.C.: U.S. Government Printing Office, 1972); *idem, Statistical Abstract of the United States: 1968* (Washington, D.C.: U.S. Government Printing Office, 1968); *idem, Statistical Abstract of the United States: 1971* (Washington, D.C.: U.S. Government Printing Office, 1971).

Notes: Enrollment figures are for Fall 1967 and Fall 1970. Expenditures cover fiscal years ending June 1968 and June 1971. Totals and expenditures per student were derived using unrounded numbers. Because of rounding, detail may not add to totals.

[a]Excluding Washington, D.C., possessions, and service schools.

Expenditure for Highways

Highway expenditure is the second largest component of total state general expenditure in Montana. From $19.6 million in 1951, it increased to $109.6 million in 1971 (table 1). From 1951 to 1967, such expenditure grew at an average rate of annual growth of 9.0 percent; in the 1967-71 period, the growth rate has been quite variable, from −8.4 percent in 1967-68 to +26.4 percent in 1969-70, for an average rate of 9.0 percent for the period (table 3).

During the late fifties and early sixties highways commanded the largest share of Montana's total general expenditure, with a peak of 42.9 percent in 1965. Highways yielded first place to education in 1968 (table 1). As table 2 indicates, however, the share of expenditures going for highways in Montana is almost twice as large as the proportion for all fifty states, and is the second largest share among the mountain states, surpassed only by Wyoming. The large geographic areas and small populations of the mountain states, resulting in low population densities, help explain the larger proportion of expenditures for highways.

In per capita terms, differences in highway expenditure are accentuated. As table 3 indicates, per capita state expenditure for highways in Montana was $155 in 1971, an amount $34 greater than the mountain-state average and over twice as high as the fifty-state average. Only four other states in the nation had higher per capita figures than Montana's: Alaska, Vermont, West Virginia, and Wyoming.

Indeed, highway expenditure would constitute Montana's (and the mountain-states') albatross, were it not for federal help. For, as table 8 depicts, 68 percent of Montana's state expenditure for highways is paid for, not by the Montana taxpayer alone, but by the American taxpayer at large. Generally the size of the average federal

Table 8
State Expenditure for Highways and Intergovernmental Revenue from the Federal Government for Highways, Eight Mountain States and the Fifty States, Fiscal 1971

	Total Expenditure for Highways			Per Capita Expenditure for Highways		
	Total Expenditure ($000,000)	Federal Intergovernmental Revenue ($000,000)	*Percentage of Total Financed by the Federal Government*	Total	State Expenditure	Federal Intergovernmental Revenue
Arizona	$ 160.0	$ 62.7	*39.2*	$ 86.51	$ 52.60	$ 33.91
Colorado	183.9	81.6	*44.4*	80.53	44.78	35.75
Idaho	80.7	34.3	*42.5*	110.20	63.28	46.92
Montana	109.6	74.6	*68.1*	154.79	49.39	105.40
Nevada	63.1	29.2	*46.3*	124.48	66.98	57.50
New Mexico	103.2	49.1	*47.6*	100.16	52.44	47.72
Utah	100.9	62.2	*61.6*	91.85	35.22	56.63
Wyoming	73.7	35.8	*48.6*	216.84	111.65	105.19
Eight mountain states	875.1	429.6	*49.1*	120.67	59.54	61.13
Fifty states	14,810.3	4,814.2	*32.5*	72.06	48.63	23.43

Source: U.S. Department of Commerce, Bureau of the Census, *State Government Finances in 1971* (Washington, D.C.: U.S. Government Printing Office, 1972).

Note: Because of rounding, detail may not add to totals.

subsidy for highways in the mountain states is, in relation to their total state expenditure, over twice as large as that for the fifty-state average. For Montana, federal subsidies for the state's highways amounted in 1971 to $105 per Montanan (as compared to $23 per person for the fifty-state average). Only Alaska exceeded Montana's per capita federal subsidy for highways.[1]

If federal help is subtracted from state expenditure on highways, the remaining $49 per capita figure for Montana in 1971 is less than the mountain-state average and only $0.76 more than the fifty-state average. The Montana taxpayer, therefore, has *not* been overburdened relative to his neighbors and fellow Americans in support of his state's highway system. (The last conclusion should in no way imply the author's advocacy of the paving of the state.)

Public Welfare Expenditure

State expenditure for public welfare includes funds given to local government units to finance public welfare programs under local administration (a very small figure in Montana) plus direct state expenditure on categorical assistance programs such as Old Age Assistance, Aid to Families With Dependent Children, Aid to the Blind, and Aid to the Disabled. It also includes vendor payments for medical care and expenditure for state welfare institutions for the care of needy veterans, dependent children, and the aged.

The trend of such state expenditure is quite erratic in Montana and elsewhere. From 1951 to 1965 the absolute amount of such state expenditure in Montana totally stagnated, never reaching $14 million or falling below $12 million (table 1). As a consequence, the share of total general state expenditure devoted to public welfare fell from 19.4 percent in 1951 to 6.4 percent in 1965.

The picture changed drastically, however, during the period 1967 to 1971. State expenditure for public welfare doubled. It increased from $15.6 million in 1967 to $35.3 million in 1971 (table 9). This constitutes an average rate of annual growth of close to 23 percent, higher than for any other major component of the state's general expenditure for that period.

State expenditure on categorical assistance programs grew at over 14 percent per year during the 1967-71 period, from $8.2 million to $14.0 million. But the most rapid growth occurred in state expenditure on vendor payments for medical care, which increased exactly fourfold.

Paralleling the growth pattern of Montana state expenditure for public welfare is that of federal revenue to the state for that purpose. Federal intergovernmental revenue to the state of Montana earmarked for public welfare grew only from $6.2 million in 1951 to $6.9 million in 1965. Given the fact that federal revenue in that period funded about 50 percent of the state expenditure for public welfare, a major part of the source of stagnation can be attributed to federal rather than state financing. From 1967 to 1971, however, again paralleling the growth of state expenditure, federal revenue for public welfare given to Montana's state government grew at a yearly rate averaging 23 percent. In recent years, federal revenue has financed more than one-half of Montana's state expenditure for public welfare.

How does the situation in Montana in the field of public welfare compare with that in the other mountain states and the United States? As table 2 indicates, the mountain-states' share of 11.5 percent of total combined general expenditure devoted to public welfare in 1971 is smaller than the proportion devoted to welfare by all fifty states. Montana's share of 10.2 percent, in turn, is slightly lower than the mountain-state figure.

In per capita terms, Montana's expenditure on public welfare grew from $22 per person in 1967 to $50 per person in 1971 at an average annual growth rate of about 23 percent. The fifty-state average grew at approximately the same rate, from $36 in 1967 to $79 in 1971. Per capita federal financing of state government expenditure for public welfare in 1971 amounted to $29 for Montana as compared to $46 for the fifty-state average.

Montana's lower share of general expenditure for public welfare compared to the fifty-state or even the mountain-state average is most probably related to its low rate of urbanization. As a general rule, the more dense a state's population, the greater the percentage of its state expenditure devoted to public welfare.

[1]Because of the higher-than-average proportion of federal lands in Montana, the state government receives far higher matching funds than the typical state.

Table 9

Public Welfare Expenditure in Montana by Type and Federal Intergovernmental Revenue to the State Government for Public Welfare, Fiscal 1967-71 (In Millions of Dollars)

	Total State Expenditure for Public Welfare					Federal Intergovernmental Revenue	
	Total	Categorical Assistance Programs	Vendor Payments for Medical Care	State Welfare Institutions	Other	Amount	*Percentage of Total State Welfare Expenditure*
1967	$15.6	$ 8.2	$ 3.1	$0.9	$3.3	$ 9.1	*58.3*
1968	20.1	8.7	5.8	1.0	4.6	11.3	*56.2*
1969	23.3	9.1	8.2	1.3	4.7	13.3	*57.1*
1970	28.7	11.5	9.9	1.3	6.0	17.4	*60.6*
1971	35.3	14.0	12.4	1.1	7.7	20.9	*59.2*

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

Note: Because of rounding, detail may not add to totals.

Hospitals and Health Expenditure

Hospital expenditure is defined as state funds expended for the establishment and operation of state hospital facilities devoted to the care of the handicapped and state expenditure for the support of public or private hospitals. For Montana, for the period under investigation, this category includes funds expended on such institutions as the state hospitals in Warm Springs and Galen and the Boulder River School and Hospital in Boulder.

Health expenditure (less than one-third of funds expended under the hospital category for the fifty states and Montana) is defined as state funds for the provision of health services other than hospital care, and includes public health research, nursing, immunization, maternal and child health, and other environmental and general health activities.

From 1951 to 1967 hospitals and health expenditure in Montana increased at the very modest average rate of 2.6 percent annually, or from $5.7 million in 1951 to $8.7 million in 1967 (table 1). From 1967 to 1971, however, the annual rate of growth picked up considerably, averaging 15.9 percent, so that state expenditure for hospitals and health stood at $15.7 million in 1971 (table 10). Given the faster over-all growth rate of total general state expenditure, expenditure for hospitals and health decreased as a share of the total from 8.4 percent in 1951 to a low of 4.1 percent in 1967 and 4.5 percent in 1971 (table 1).

The proportion of all mountain-states' expenditure devoted to hospitals and health in 1971 was the same as Montana's. None of the mountain-states' shares surpassed the fifty-state average of 6.9 percent (table 2). Montana's relative share ranked second among the mountain states, only behind Colorado; on a per capita basis, Montana ranked third behind Colorado and Wyoming, spending $22 per person relative to $30 for the fifty-state average; this despite the fact that federal revenue to the state for this purpose, though not large ($4 per capita) was still higher than the fifty-state average ($2.50 per capita).

In 1971, 72 percent of total Montana state expenditure in this category, or $11.3 million, went for the current operation of state hospitals,

Table 10

State Expenditure for Hospitals and Health in Montana, Fiscal 1967-71 (In Millions of Dollars)

	1967	1968	1969	1970	1971
Total hospitals and health	$8.7	$10.5	$12.1	$14.0	$15.7
Hospitals	7.2	8.8	10.1	11.5	12.0
State hospitals, current operations	6.7	8.0	8.7	9.6	11.3
Mental institutions	5.5	6.8	7.2	8.0	9.7
State hospitals, capital outlay	0.3	0.5	1.1	0.6	0.2
Health	1.5	1.7	2.0	2.5	3.7

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

most of which (62 percent of the total expenditure for hospitals and health) went for mental institution expenditure. Montana's expenditure of $14 per capita for the support of current operations of mental institutions exactly matched the fifty-state per capita average for that year. Since 1967, expenditures for mental institutions have grown at an average annual rate of 15.1 percent in Montana as compared to 11.0 percent for the fifty-state average.

Expenditure for Natural Resources

This category includes state expenditure in the areas of agriculture, fish and game, and forestry and parks. For obvious reasons, the share Montana devoted to natural resources in 1971 (4.9 percent of total general expenditure) exceeded the fifty-state figure (only 2.9 percent), or even the mountain-state figure (3.8 percent). On a per capita basis, the $24 spent by the state of Montana in 1971 was close to twice that for the fifty-state average, and was exceeded only by the per capita amounts spent by Alaska, California, Hawaii, Idaho, Oregon, Vermont, and Wyoming. The growth rate of such expenditure in Montana has averaged 4.3 percent per year from 1951 to 1967, accelerating to an 11.1 percent per year rate from 1967 to 1971. However, since in neither period did these growth rates match those of total state general expenditure, the share of the total devoted to natural resources declined more or less continuously, from 8.3 percent in 1951 to 4.9 percent in 1971 (table 1). The same phenomenon appears to have occurred nationally, the fifty-state share dropping from 3.5 percent in 1967 to 2.9 percent in 1971.

Historically, agriculture has received the greatest share of state expenditure for natural resources in Montana. State funds have gone for the support of such agencies as the Agricultural Experiment Station, Extension Service, Montana Department of Agriculture, Milk Control Board, Livestock Commission, and others. From 1967 to 1971, the share of natural resource expenditure to agriculture declined slightly, to 47.3 percent, even though, in the same period, the combined expenditures of the fifty states registered a mild rise in that share to 40 percent.

The fish and game category in Montana covers state expenditure in support of the Fish and Game Department. The share of state funds for natural resources devoted to it increased slightly from 1967 to 1971 to 31.4 percent in Montana and to 12.2 percent nationally.

Expenditure for Montana's state parks and the office of the state forester as a share of expenditure for natural resources fell from 12.6 percent in 1967 to 10.7 percent in 1971. The fifty-state figure registered an increase from 23.8 percent to 27.3 percent in that period.

Table 11

State Expenditure for Natural Resources in Montana, Fiscal 1967-71 (In Millions of Dollars)

	1967	1968	1969	1970	1971
Natural resources	$11.1	$12.7	$14.0	$16.1	$16.9
Agriculture	5.6	6.1	6.8	7.3	8.0
Fish and game	3.3	3.5	3.8	5.4	5.3
Forestry and parks	1.4	1.5	1.9	2.2	1.8
Other	0.8	1.5	1.5	1.2	1.9

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

Note: Because of rounding, detail may not add to totals.

State expenditure for other natural resources (the Soil Conservation Commission, Oil Conservation Board, and Water Resource Board) has increased as a percent of total natural resource expenditure from 1967 to 1971.

Police Protection and Correction Expenditure

Almost all police protection, nationally as well as in Montana, is in the hands of local government units.[2] Much of state expenditure in this category has been funds for the State Highway Patrol.

State expenditure on correction in Montana has been for such institutions as the Montana State Prison, the Mountain View School in Helena, and the Pine Hills School in Miles City. Correction is mostly in the hands of state government in Montana, employing in recent years six times the number of persons employed for that purpose in local government units. Nationally, the ratio of state to local government employment is only about two to one.

Police protection received $4 million from the state in 1971 or 1.2 percent of total general state expenditure, and correction received $3.7 million, or 1.1 percent. For the eight mountain states, the share is the same for police protection but 18 percent more for correction. The proportion of funds expended for correction in 1971 by all fifty states combined exceeded the proportion in Montana by one-fourth, but was one-fifth lower with respect to police protection.

From 1951 to 1967 expenditure for correction grew at an average annual rate slightly higher than expenditure for police protection; but from 1967 to 1971, while correction expenditure grew at only 5.6 percent annually, police protection expenditure grew by 19.8 percent per year.

Expenditure for Financial Administration and General Control

Financial administration includes all activities by the state government that involve finance and taxation. Examples of such expenditure are funds used for the operation of the offices of the state treasurer, the state auditor, and the Department of Revenue.

From 1951 to 1967 this component grew in Montana from $1.1 million to $3.4 million, at an average rate of 7.3 percent per year, not unlike the rate of growth in total general state expenditure during that period. For the 1967-71 period, the rate of growth of expenditure for financial administration rose to 12.4 percent per year, to match again the higher rate of general state expenditure. As a consequence, the share of total expenditure devoted to financial administration has remained more or less stable, amounting to 1.6 percent in 1971 ($5.5 million), a share about equal to that for the mountain-state average, but about one-fifth higher than the fifty-state average.

In per capita terms, Montana spent $8 on financial administration in 1971; the mountain-state average was $9, and the fifty-state average was $6. As one might expect, a strong inverse correlation exists between total state expenditure per capita and expenditure on financial administration per capita. Such "economies of scale" are explainable by hypothesizing that, as population increases, the increase in the need for state expenditure is greater than the increase in the cost of administering the financial affiars of a state.

General control expenditure spends state funds in three areas: (a) the judicial branch of state government (costs of the Supreme Court, district courts, and county attorneys); (b) the legislative branch (costs of the biennial—and now

Table 12

State Expenditure for Police Protection and Correction in Montana, Fiscal 1967-71 (In Millions of Dollars)

	1967	1968	1969	1970	1971
Police protection	$2.0	$2.2	$2.2	$3.3	$4.0
Correction	3.0	3.6	3.6	3.5	3.7

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

[2]In recent years, local government units in Montana have employed 80 percent of the total police force, slightly lower than the fifty-state average of 87 percent.

Table 13

State Expenditure for Financial Administration and General Control in Montana Fiscal 1967-71 (In Millions of Dollars)

	1967	1968	1969	1970	1971
Financial administration	$3.4	$4.1	$4.7	$5.4	$5.5
General control	2.3	1.6	2.6	2.4	4.9
Judicial	0.8	0.6	0.6	0.8	0.8
Legislative	0.9	0.2	1.0	0.4	2.4
Other	0.6	0.8	1.0	1.2	1.7

Sources: U.S. Department of Commerce, Bureau of the Census, *State Government Finances: 1967-71* (Washington, D.C.: U.S. Government Printing Office, 1968-72).

annual—sessions of the legislature); and (c) costs incurred by the offices of the governor, the secretary of state, and the attorney general.

General control expenditure grew at an average annual rate of 7.7 percent, from $0.7 million in 1951 to $2.3 million in 1967, and by approximately 21 percent annually from 1967 to 1971. (Every other year general control expenditure declined in absolute terms, because of the absence of a legislative session.) The $4.9 million spent on general control expenditure in 1971 together with the $2.4 million in 1970 amount to an average share of general state expenditure for the two years of 1.1 percent, compared to 1.2 percent for the eight mountain states and 0.9 percent for the fifty states.

Employment Security Administration and Miscellaneous Expenditure

The Employment Security Administration (ESA) uses state funds for the operations of the State Employment Service and the unemployment insurance program.[3] From 1951 to 1967 such expenditure in Montana increased from $0.9 million to $2.6 million, amounting to an average rate of annual growth of 6.7 percent (table 1). From 1967 to 1971 such expenditure increased modestly to $3.1 million, for an average annual rate of 4.1 percent as opposed to a 14.7 percent annual rate for the fifty-state average in the same period.

In 1971, Montana devoted 0.9 percent of total general state expenditure on administration of employment security programs as opposed to a 1.3 percent share for the mountain states, and a 1.1 percent share for all fifty states.

State governments also expend funds for miscellaneous commercial activities (Montana provides hail insurance payments for farmers), airports, water transport, housing and urban renewal, general public buildings, veterans' services, libraries, protective inspection and regulation, and interest on general debt. Interest payments came to about $3.9 million in Montana in 1971, up from $2.9 million in 1967, growing at an average annual rate of 7.5 percent. As a share of general state expenditure, interest on general debt has fallen from 1.4 percent in 1967 to 1.1 percent in 1971, a share much lower than the 2 percent figure for the fifty states, but higher than the 0.6 percent for the mountain states.

Summary

Table 4 and figure 1 permit a recapitulation of the major trends observable in Montana's state general expenditure. Three categories (education, highways, and public welfare) accounted for over 78 percent of Montana's general state expenditure in 1971.

Public welfare expenditure has been growing in recent years faster than any other major component of expenditure, partly because of generous federal assistance to the state for that purpose.

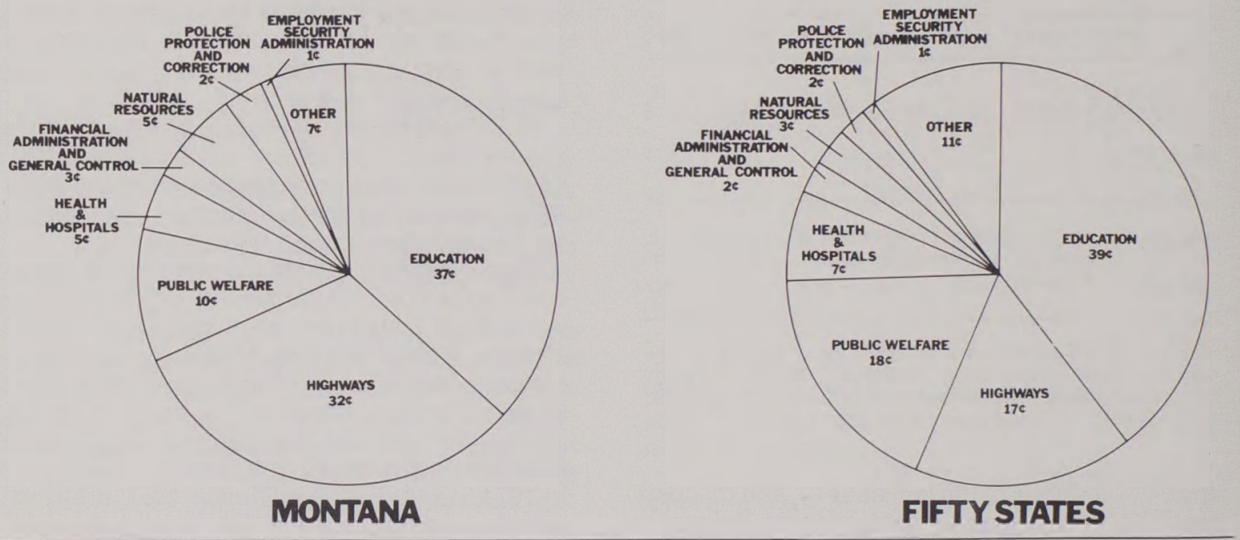
Expenditure for highways in Montana represents a share of total expenditure close to twice that for the national average; however, such expenditure has not been growing as fast as total general expenditure. In relative terms, demand for capital outlay on additional highway projects may have come to the saturation point.

Montana state government spends the greatest share of its funds on education. As a percentage of total state general expenditure, however,

[3]Expenditure for the Employment Security Administration does *not* include disbursements of unemployment insurance benefits. The latter are included in insurance trust expenditure, rather than in general expenditure.

Figure 1

Where Each Dollar of General State Expenditure Goes: Montana and the Fifty States, 1971



Source: Based on figures in table 2.

Note: Detail may not add to $1.00 because of rounding

this share is slightly less than that spent by all fifty states and considerably less than the figure for the eight mountain states.

Breaking state education expenditure into its two major components (for higher education and for elementary, secondary, and vocational education) reveals divergent trends. The rate of growth of expenditure for education other than for higher education has been lower in recent years than for the period from the fifties through the midsixties. This is probably due to the maturation of children born in the postwar baby boom beyond the elementary and secondary school level. As a share of total general expenditure, state funds spent for elementary and secondary education have been decreasing in recent years.

Expenditure for the state institutions of higher education, on the other hand, is the second-fastest growing component of state expenditure, increasing as a share of total general expenditure in recent years. Most of this rise, however, is because of the significant increase in student enrollments in 1967-71. On a per student basis, such expenditure has not kept up with the rate of inflation, so that real expenditure per student in Montana was decreasing even before the most recent relative "freeze" on such state funds. The same trend is evident in the mountain states and nationwide.

Montana's state government appears to be increasingly dependent upon the federal government for financing state expenditure. From 1951 to 1967 such intergovernmental revenue to Montana's state government grew on the average at 9.5 percent per year; from 1967 to 1971 it grew at 13.5 percent per year. Revenue to the state from the federal government in the form of "matching funds" may affect how Montana decides to spend its own revenue. Hence, an increase in the share of state expenditure dependent on such funds implies an increase in the federal government's ability to influence Montana government's decisions regarding resource allocation. Whether such a trend in Montana's patterns of state expenditure is desirable is, of course, a matter of policy. This article has been concerned with showing how Montana's state general fund has been spent over the last twenty years. How it should be spent in the future is another question.

MAXINE C. JOHNSON

What the 1970 Census Tells Us About Earnings in Montana and the United States

If you are a young man in Montana deciding upon a career, if you want to stay in the state and you'd like to earn a reasonably high income, those traditionally well-paid occupations in the legal and medical professions and in management continue to offer the greatest financial rewards. If you are a young woman, things haven't changed much either: the chances are you'll earn more as a teacher than in any other occupation, if you can find a job teaching these days. But whether you are a man or a woman, don't expect to earn as much money in Montana as you might in other parts of the United States.

These not-very-surprising conclusions, along with much other less well-known information, can be found in the pages of the *1970 Census of Population* reports, almost the only source of detailed and complete income and earnings data for states. The data were collected in April 1970 and are for the year 1969. Although incomes may have increased considerably since then, relationships among and between various groups of earners probably have changed very little.

An article in the Spring 1973 issue of the *Montana Business Quarterly* discussed census data on family incomes in Montana. That article indicated that family incomes are substantially lower in Montana than in the United States; that inequality among family incomes, while still substantial, appears to have declined slightly during the 1960s; and that family incomes in Montana are distributed somewhat more equally than in the country as a whole.

Family incomes, of course, often represent the combined income or earnings of more than one person. The earlier *Quarterly* article pointed out that one of the great equalizers in family incomes, and the characteristic which keeps a good many families out of the "poverty" category, is the presence of more than one earner.

For most people, earnings from participation in the labor force are the principal source of income, either in the form of wages and salaries or of income from self-employment. In the census reports, the earnings figures represent money earned before deductions for taxes, Social Security, etc. A little over 86 percent of the total income reported by Montanans for 1969 consisted of earnings. The remaining 14 percent came from property, in the form of interest, dividends, and rent, and from transfer payments—pensions, retirement, public assistance, and veterans' payments, unemployment insurance, and so forth.[1]

This discussion proposes to look at the census figures on the individual earnings of Montanans, with an eye toward differences by occupation and by sex. One of the most significant classifications is excluded: race. In its published reports, the Census Bureau provides data for all males and all females, for Negro males and Negro females, and for "persons of Spanish language" by sex. It ignores Indians, the largest minority group in Montana.

The census figures make it possible to describe how much money people earn and how earnings vary among different groups. Answers to such questions as how the earnings of individuals in various groups have been affected by the individuals' own decisions as to education and training, by their particular abilities and family back-

[1]Derived from U.S. Department of Commerce, Bureau of the Census, *Census of Population: 1970, General Social and Economic Characteristics, Montana*, PC(1)-C28 (Washington, D.C.: U.S. Government Printing Office, 1971), table 57, p. 28-133.

Maxine C. Johnson is the Director of the Bureau of Business and Economic Research at the University of Montana, Missoula, Montana.

ground, by social pressures, or by chance are not provided. Appropriate information is not now available. Yet these are things which we must understand if we are to deal successfully with earnings distribution problems.

The census figures are for one year, and data for one year are not the most satisfactory way of assessing the distribution of earnings. People move up and down the income scale. Lifetime earnings, if available, would give a more useful picture of earnings patterns and problems of inequality.

The discussion which follows, then, is primarily descriptive of earnings in Montana and the United States in one year, 1969, with some analysis of how earnings in the two areas differ and of the relationships among various groups of earners.

The Distribution of Earnings

Table 1 gives an over-all picture of how earnings, before taxes, were distributed in both Montana and the United States in 1969. It shows proportionately more Montana workers of both sexes in the lower earnings brackets and fewer in the upper brackets. Whereas 35 percent of Montana workers earned less than $5,000, only 30 percent of all United States workers were in those very low brackets. And while just over 6 percent of Montana workers earned more than $15,000 in 1969, the comparable figure for the nation was 8.5 percent.

The data in table 1 include only persons fourteen years of age and over who worked year round in 1969 (that is, fifty to fifty-two weeks, counting paid vacation and sick leave). Since the proportion of workers employed for only part of a year varies from one geographic area to another, the exclusion of those workers makes the earnings data more meaningful for comparison purposes. It also means that the earnings of many workers are omitted; in the United States, only 67 percent of all males and 43 percent of all females who were employed during 1969 worked all year; in Montana, the figures were 64 percent for males and 38 percent for females.[2] Many of those who did not work year round were, of course, students, or adults who did not wish to work all the time, or persons entering or leaving the labor force during the course of the year. We have no way of knowing how many persons of either sex would have liked to work longer but could not find a steady job. Historically and in recent years Montana's unemployment rate, both seasonal and cyclical, has been higher than the United States rate.

The comparison would be more exact if the figures included only the earnings of those persons who worked full-time, as well as year round, but separate data on full- and part-time workers are not provided by the census. Table 1 indicates that as of April 1, 1970, 84 percent of male workers and 63 percent of female workers in Montana were employed full-time (thirty-five hours or more per week). Comparable figures for the United States were 85 and 69 percent. We do not know why there are significantly more part-time workers among women in Montana. Perhaps more women prefer to work part-time. The chances are that the existence of more part-time workers also is an indication of more underemployment here than in the nation as a whole. Whatever the reason, the greater percentage of part-time workers makes comparisons difficult and helps explain why the proportion of women workers in the low earnings brackets is higher in Montana than in the United States.

The index of income or earnings concentration (Gini ratio) provides another way of looking at how earnings are distributed. Inequality is measured on a scale of 0.0 to 1.0; the higher the index, the greater the inequality of income distribution. The indexes for Montana and for United States males who worked fifty to fifty-two weeks in 1969 are almost the same. Earnings of Montana females are somewhat less equally distributed than the earnings of American women as a whole:[3]

Index of Concentration

Montana		United States	
Male	0.328	Male	0.329
Female	0.325	Female	0.298

[2]U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population: 1970, Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 195, p. 28-444.

[3]U.S. Department of Commerce, Bureau of the Census, *Census of Population: 1970. Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 195, p. 28-444; *idem, U.S. Census of Population: 1970. Detailed Characteristics. U.S. Summary*, PC(1)-D1 (Washington, D.C.: U.S. Government Printing Office, 1973), table 247, p. 1-851.

Table 1

Percent Distribution of Earnings of Montanans Working Year Round in 1969

Earnings	Montana			United States		
	Male	Female	All Workers	Male	Female	All Workers
Under $999	3.7	7.9	4.7	2.3	4.9	3.0
$1,000-1,999	3.9	10.1	5.5	3.2	7.1	4.3
$2,000-2,999	3.9	12.2	6.1	3.2	9.3	5.0
$3,000-3,999	5.2	21.4	9.4	4.6	16.7	8.1
$4,000-4,999	6.1	17.6	9.0	5.6	18.0	9.3
$5,000-5,999	9.0	12.0	9.8	8.0	15.5	10.2
$6,000-6,999	11.7	8.2	10.8	9.3	11.0	9.8
$7,000-7,999	12.5	4.4	10.4	10.8	7.0	9.7
$8,000-9,999	17.9	4.0	14.3	18.7	6.1	15.0
$10,000-14,999	17.9	1.5	13.7	22.7	3.4	17.0
$15,000-24,999	6.1	0.6	4.6	8.6	0.7	6.3
Over $25,000	2.1	0.2	1.6	3.1	0.2	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of workers employed full-time (April 1970)						
	84.4	63.0	76.9	85.0	68.7	78.9

Sources: U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population: 1970, Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 164, p. 28-331 and table 195, p. 28-444; *idem*, *U.S. Census of Population: 1970, Detailed Characteristics, U.S. Summary*, PC(1)-D1 (Washington, D.C.: U.S. Government Printing Office, 1973), table 215, p. 1-679 and table 247, p. 1-851.

Notes: Includes all persons age fourteen and over working fifty to fifty-two weeks. Percent distributions may not add because of rounding.

The over-all distribution of earnings of year-round workers in Montana is more nearly equal than is the distribution of family income; the index of income concentration for family incomes was .347 in 1969.[4] Varying numbers of earners per family and income from other sources—the property income generally accruing to the more prosperous and the pensions and other transfer payments which usually go to the lower income groups—apparently increase disparities in total family income.

Dividing workers into quartiles provides a vivid illustration of differences in the distribution and amount of earnings. These figures appear in table 2. While the 25 percent of workers with the lowest earnings—either sex, in Montana or the United States—received only 8 or 9 percent of total earnings in 1969, in each instance the 25 percent at the top reported roughly five times that amount. In both areas, when earnings of all workers are combined, the females at the bottom of the scale and males in the upper brackets, the resulting differences are even more pronounced.

The average annual earnings per worker in each quartile which appear in the lower half of table 2 point up the variation in earnings among workers, between the sexes, and between workers in Montana and the United States. The usual differences appear: within each quartile, average earnings are less in Montana than in the United States, and within each quartile, in both geographic areas, the average for women is well below that for men. In table 3, the dollar figures are translated into percentages for easier comparison.

Median Earnings by Occupation and Sex

What a worker does, of course, has a great deal to do with what he earns. Table 4 gives median earnings by occupation. The median is the middle figure; thus, half the workers involved earned less than the median and half earned more. All of the broad occupational groups are included; particular occupations are specified when they are especially important in Montana.

[4]U.S. Department of Commerce, Bureau of the Census, *Census of Population: 1970, Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 200, p. 28-469.

Table 2

Percentage of Total Earnings and Average Earnings by Quartile, Year-Round Workers, Montana and the United States, 1969

	Montana				United States			
	First Quartile	Second Quartile	Third Quartile	Fourth Quartile	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
Percentage of total earnings								
Male	*8.7*	*18.9*	*25.7*	*46.7*	*9.2*	*18.5*	*25.8*	*46.4*
Female	*8.2*	*19.4*	*27.0*	*45.4*	*9.5*	*19.6*	*26.9*	*44.0*
All workers	*7.5*	*17.7*	*26.1*	*48.7*	*8.3*	*17.5*	*25.7*	*48.6*
Average earnings per worker								
Male	$2,972	$6,460	$8,752	$15,908	$3,539	$7,090	$9,867	$17,777
Female	1,408	3,326	4,643	7,787	1,914	3,958	5,436	8,878
All workers	2,235	5,267	7,773	14,474	2,722	5,756	8,455	15,994

Sources: Derived from U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population: 1970, Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 195, p. 28-444; *idem*, *U.S. Census of Population: 1970, Detailed Characteristics, U.S. Summary*, PC(1)-D1 (Washington, D.C.: U.S. Government Printing Office, 1973), table 247, p. 1-851.

Notes: Includes all persons fourteen years of age and over working fifty to fifty-two weeks. Percent distributions may not add because of rounding.

Table 3

Comparison of Average Earnings by Quartile of Year-Round Workers, Montana and the United States, 1969

	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
Earnings of Montana workers as a percentage of United States workers:				
Males	84	91	89	89
Females	74	84	85	88
All workers	82	92	92	90
Earnings of females as a percentage of males:				
Montana	47	51	53	49
United States	54	56	55	50

Source: Based on figures in table 2.

Note: Includes all persons age fourteen and over working fifty to fifty-two weeks.

It is obvious, too, that the sex of the worker has a great deal to do with what he or she earns. Table 4 confirms this. In every occupation, the median earnings of women are substantially lower than those for men. We noted earlier that a large number of part-time workers helps keep women's earnings low. We know, too, that much of the discrepancy is due to differences in work experience. Many women move in and out of the labor force and at any given age have not accumulated as much work experience as men. Differences in education also are a factor; fewer women than men earn bachelor's or higher degrees. The Council of Economic Advisers reports that after adjusting 1971 earnings data for males and females in the United States for differences in work experience and education, as well as for time worked during a given period, an unexplained earnings differential of as much as 20 percent remains.[5]

There are few occupations where workers of either sex reported higher median earnings in Montana than in the United States. Among males, insurance agents, locomotive engineers and firemen, transport equipment operatives, laborers, both farm and nonfarm, and farmers and farm managers appeared to fare better in Montana—but with the exception of the first two categories, all of these occupations are among the lowest-paying in both areas. For Montana women, the pickings were even slimmer. Three groups—transport equipment operatives, farmers and farm managers, and retail clerks—reported higher earnings than their United States counterparts. But very few women are employed in the first group, and the medians for farmers and farm managers, and for retail clerks, although higher that in the United States, were $2,938 and $3,488 respectively.

If one is listing the occupations where men's earnings are highest in Montana, four groups stand out: lawyers and judges; physicians, dentists, and related professions; school administrators (college, elementary, and secondary); and locomotive engineers and firemen. Each of these groups had median earnings of over $12,000 in 1969.

Male workers reporting the lowest median earnings were farmers and farm managers ($5,671) and farm laborers ($4,040). Several comments about earnings in agriculture are appropriate. First, many members of both groups probably enjoyed significant nonmonetary income in the form of housing and/or food. Second, the range of earnings of farmers and farm managers was among the greatest and the most unequal. It also is true that agricultural earnings fluctuate widely from year to year. In 1973, incomes of farmers no doubt will compare much more favorably with earnings in nonfarm occupations.

Based on the information available, the occupation which offers the greatest financial reward for women appears to be secondary school teaching; female high school teachers reported median earnings of $7,166 in 1969, highest among the occupations for which females' earnings were reported. There were so few women employed in many occupations that the Census Bureau did not list them separately. Indeed, 75 percent of all women workers in the state were classified in three occupational groups; service workers, clerical workers, or professional workers (principally teachers and nurses). Certainly this occupational distribution reflects the different educational and work experience patterns of women, whether voluntary or the result of social pressures.

[5]*Economic Report of the President Transmitted to the Congress January 1973 together with the Annual Report of the Council of Economic Advisers* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 106.

Table 4

Median Earnings by Occupation of Members of the 1970 Experienced Civilian Labor Force Who Worked Year Round in 1969, Montana and the United States

Occupation	Montana		United States	
	Male	Female	Male	Female
Professional, technical and kindred workers	$ 9,726	$6,110	$11,752	$6,872
Accountants	10,220	6,029	11,529	6,590
Engineering and science technicians	8,207	NA	9,219	6,278
Engineers	11,829	NA	13,500	NA
Lawyers and judges[a]	15,000+	NA	15,000+	NA
Physicians, dentists, and related practitioners[a]	15,000+	NA	15,000+	NA
Registered nurses	NA	5,902	NA	6,807
Teachers	9,062	NA	10,242	NA
College and university	10,840	NA	13,126	8,638
Elementary and preschool	8,354	6,832	8,738	7,097
Secondary	8,916	7,166	9,501	7,534
Managers and administrators, except farm	9,777	4,813	11,747	6,102
Managers and administrators, salaried[b]	10,050	5,211	12,589	6,536
Managers and administrators, self-employed[b]	8,695	3,468	9,334	4,398
School administrators	12,639	NA	13,622	8,229
Sales workers	8,205	3,456	9,454	3,498
Insurance agents	11,071	5,042	10,688	5,787
Real estate agents and brokers	10,989		11,573	
Retail clerks	6,995	3,488	7,064	3,324
Retail salesmen	7,758	NA	8,621	4,073
Clerical and kindred workers	7,719	4,326	7,973	5,110
Craftsmen and kindred workers	7,977	4,060	8,730	5,277
Construction craftsmen	8,130	NA	8,478	NA
Locomotive engineers and firemen	12,224	NA	11,585	NA
Mechanics and repairmen	7,372	NA	8,019	NA
Operatives, except transport	7,267	3,311	7,439	4,334
Transport equipment operatives	7,769	6,048	7,583	4,730
Laborers, except farm	6,445	3,468	6,135	3,960
Farmers and farm managers	5,671	2,938	5,122	2,580
Farm laborers and foremen	4,040	1,880	3,628	2,440
Service workers, except household	5,782	3,223	6,381	3,465
Private household workers	NA	979	3,118	1,482
All workers	7,669	3,992	8,517	4,715

Sources: U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population: 1970, Detailed Characteristics, Montana*, PC(1)-D28 (Washington, D.C.: U.S. Government Printing Office, 1972), table 175, pp. 28-386-7 and table 176, p. 28-392; *idem*, *U.S. Census of Population: 1970, Detailed Characteristics, U.S. Summary*, PC(1)-D1 (Washington, D.C.: U.S. Government Printing Office, 1973), table 227, pp. 1-766-7 and table 228, pp. 1-772-3.

Notes: Figures in this table differ slightly from those in tables 1 and 2 because different groups of workers are involved. The first two tables include data for all persons fourteen years of age and over who worked fifty to fifty-two weeks in 1969; this table includes data only for those persons sixteen years of age and over who worked fifty to fifty-two weeks in 1969 and were in the labor force in April 1970. NA denotes not available.

[a]Median not computed when over $15,000.

[b]Includes managers in most nonfarm industries except finance, eating and drinking places, health, and nonprofit organizations such as lodges, societies, and unions.

Median earnings of Montana women were very low (less than $5,000) in every occupational group in table 4 except professional workers, where teachers and nurses predominate, and transport equipment operatives. Most of the women in the latter group were bus drivers (there were 158 reported), deliverymen and routemen (82), and truck drivers (81).

When median earnings are computed for all year-round workers in all occupations, the results contain no surprises. The Montana medians are, of course, considerably below the United States figures, and medians for women are just over half the middle figure for men, as the bottom line in table 4 indicates.

The generally lower earnings in most occupational groups reflect in part the failure of the Montana economy to provide enough jobs for its workers—the "job gap" so frequently described in connection with Montana's employment problems. Even though many workers leave the state, the chronic oversuppy of labor which has existed in most parts of Montana throughout the fifties and sixties has kept wage rates from rising as fast as in some other parts of the country.

Lower median earnings also are a reflection of the distribution of employment among the various occupations (table 5). In 1970, 25 percent of all employed persons in Montana were farmers and farm managers, farm laborers and foremen, service workers, or private household workers—the four occupational groups with the lowest median earnings. Among all United States workers, the figure was 14 percent. Obviously, such a concentration of employment in low-paying occupations in Montana pulls median earnings down.

Differences in the occupations of male and female workers, of course, also help explain differences in their median earnings. While 23 percent of male workers in Montana reported occupapations in one of the four groups listed above, 30 percent of females were in those categories, mostly as service workers—hotel maids, waitresses, nurses aides, hairdressers, etc.

Comparing earnings in Montana and the United States raises the perennial questions of differences in living costs among the two areas and of the value attached to nonmonetary income, which is presumed to be greater in Montana, with its less hectic pace and less degraded environment. In its consumer expenditure surveys, the Bureau of Labor Statistics (BLS) does not collect figures for any Montana city, so cost of living comparisons between Montana and other parts of the country are not possible. Based on BLS data for towns in Idaho and Wyoming, it seems doubtful that differences in living costs are anything like as large as the differences in earnings in Montana and the United States

The value of nonmonetary income is extremely difficult to measure. Scenic beauty, uncrowded living conditions, and a more leisurely way of life may be valued quite differently by different people. Similarly, some of the costs of living in a sparsely settled area such as Montana, as represented by the relative absence of art museums, professional theaters, symphony orchestras, and so forth, will be evaluated quite differently by different individuals. Nevertheless, we know that there are many Montanas with a knowledge of the national labor market and with adequate finances to make a move who choose to remain in the state because they value the Montana environment more than the increased money earnings they might receive in other parts of the country. Clearly not all Montanans, particularly those at the lower end of the earnings scale, are able to make so rational a choice.

Is the Pattern Changing?

The 1970 census, then, provides more evidence confirming generally lower earnings in Montana than in the United States and an earnings distribution which is highly unequal in both areas. Two questions seem appropriate. First, given that Montanans were earning less money income than their counterparts in many areas of the United States in 1969, were—and are—they holding their own, falling further behind, or catching up? And second, is the distribution of earnings in Montana and the United States becoming less, or more, unequal?

Valid comparisons as to changes in earnings in Montana and the United States are difficult to make. No earnings figures for year-round workers, such as those used in table 4, were published in previous census reports. Indications are, however, that over the decade of the sixties, earnings per worker in Montana did not increase as much as in the United States. The 1969 median earnings of all male workers in the experienced civilian labor force in 1970, unadjusted for vari-

Table 5

Percent Distribution of Employment by Occupation
Montana and the United States, 1960 and 1970

Occupation	1960			1970		
	Male	Female	All Workers	Male	Female	All Workers
Montana workers						
Professional, technical, and kindred workers	9	16	11	12	17	14
Managers and administrators, except farm	12	6	10	12	5	10
Sales workers	6	9	6	6	7	6
Clerical and kindred workers	5	27	11	5	30	14
Craftsmen and kindred workers	18	1	13	18	1	12
Operatives, except transport	8	4	7	9	3	7
Transport equipment operatives	5	--	4	5	--	4
Laborers, except farm	7	1	5	6	1	4
Farmers and farm managers	15	1	11	11	1	7
Farm laborers and foremen	7	2	5	5	1	4
Service workers, except household	6	22	11	7	24	13
Private household workers	--	7	2	--	4	1
Occupation not reported	2	4	3	4	5	4
All Montana workers	100	100	100	100	100	100
United States workers						
Professional, technical, and kindred workers	10	13	11	14	15	14
Managers and administrators, except farm	11	4	9	11	3	8
Sales workers	7	8	7	7	7	7
Clerical and kindred workers	7	29	14	7	33	17
Craftsmen and kindred workers	20	1	14	20	2	13
Operatives, except transport	13	15	14	13	13	13
Transport equipment operatives	6	--	4	5	--	4
Laborers, except farm	7	1	5	6	1	4
Farmers and farm managers	5	1	4	3	--	2
Farm laborers and foremen	3	1	2	2	--	1
Service workers, except household	6	14	9	8	15	10
Private household workers	--	8	3	--	4	1
Occupation not reported	5	6	5	6	7	6
All United States workers	100	100	100	100	100	100

Sources: U.S. Department of Commerce, Bureau of the Census, *U.S. Census of Population: 1970, General Social and Economic Characteristics, Montana,* PC(1)-C28 (Washington, D.C.: U.S. Government Printing Office, 1971), table 46, p. 28-113; *idem, U.S. Census of Population: 1970, General Social and Economic Characteristics, U.S. Summary,* PC(1)-C1 (Washington, D.C.: U.S. Government Printing Office, 1972), table 81, p. 1-375.

Notes: Includes all persons fourteen years of age and over employed in April 1970. Percent distributions may not add because of rounding. Dash denotes 0.5 percent or less.

ations in length of time worked, show an increase of 65 percent in the United States and 58 percent in Montana. For females, the increases amounted to 62 percent in the United States and 59 percent in Montana. The earnings data for 1959 include fourteen- and fifteen-year-olds; the 1969 figures do not. Thus, these figures provide only a rough comparison of changes in earnings in the two areas.

Montanans earned less on the average in 1969 not only because most occupations provided less income here than in the United States, but because, as we noted earlier, more Montanans were concentrated in the lower-paying occupations, especially in agriculture and the service industries. Some improvement in job distribution had occurred during the 1960s: there were proportionately more professional workers, who earn relatively high pay, and fewer farm workers and farm managers, whose median incomes are typically well below the average. On the other hand there were significantly more clerical workers, with earnings only slightly above the over-all median, and more service workers, with their very low earnings (table 5). The over-all result was that the occupational distribution of Montanans continued to adversely affect earnings in the state.

If earnings of Montana workers failed to keep pace with increases at the national level, what about changes in the degree of inequality? Again, such changes cannot be documented by census data. Figures comparable to the data used in this report were not published in earlier censuses. As readers will recall, the 1969 data indicated that the extent of inequality of earnings is approximately the same in Montana and the United States. Unfortunately, indications are that earnings are becoming more unequal, at least in the United States.

A recent report in the *Monthly Labor Review*, based on unpublished estimates from the Census Bureau, describes a persistent trend toward greater inequality of earnings among United States males, including those working year round and full time, between 1958 and 1970. The trend exists not only among all male workers, but within most occupational groups. The author suggests that several economic factors may help explain this trend, among them (1) the larger numbers of young people entering the labor force in recent years, presumably at the lower end of the earnings scale; (2) the changing occupational structure, reflecting technological change and resulting in a rapid expansion of occupational *groups with high earnings*; and (3) the pattern of earnings increases—the occupations with the highest earnings also have been enjoying the highest rates of increase.[6] The chances are that similar developments, although perhaps to a lesser degree, have taken place in Montana. In addition to young people, the proportionately large number of women entering the Montana labor force appears to have contributed to inequality of earnings in Montana during the 1960s.

For a nation and society increasingly concerned with inequalities, then, the news with respect to the distribution of earnings is not good. The persistent pattern of inequality promises to become a major issue which may call for new national policies. At the same time, Montanans will continue to be concerned, not only with inequalities, but with the fact that their earnings are consistently below national figures in most occupations. Some will regard this as a small price to pay for the privilege of living in the state; others will wish we could increase our money earnings while retaining the psychic, nonmonetary income so important to many of us.

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[6]Peter Henle, "Exploring the Distribution of Earned Income," *Monthly Labor Review*, December 1972, vol. 95, no. 12, pp. 16-27.

KENNETH R. WOODS
MICHAEL F. FORAN

Cost Accounting Concepts in Personal Financial Management

How to make personal and family budgets using cost accounting methods

Many small businessmen adhere to sound accounting practices in their businesses but never apply these practices to their personal finances. They explain that their incomes are too small or that the principles are not applicable. Nothing could be further from the truth. To prove it, this paper will demonstrate the application of some basic cost accounting procedures to personal monetary planning.

A person who takes home $10,000 a year handles $400,000 during a period of forty years. Thus, even modest personal earnings amount to large sums and they deserve more consideration than most people give them. With proper financial management, an individual can pay his bills on time and can also reach many of his future objectives.

Money management is not just a goal for accountants and comptrollers. Everyone should be interested. Proper planning and control will enable anyone to derive full benefit from his or her earned dollars. To achieve proper planning and control, one must use cost accounting methods such as budgeting, contribution margins, cash flow, and variance analysis.

Budgeting

The starting point for personal financial management is an annual budget. The individual begins the budgeting process by determining the amount of money that will be available to him during the coming year. Next, he develops a plan to cover his spending.

Past costs can assist in figuring current expenses. Last year's checkbook, paid bills, receipts, and income tax returns are useful sources. Include a factor for increased costs due to inflation, if it is applicable. Remember that historical costs should be used only to develop expected expenses. The fact that a certain number of dollars were spent last year does not mean that the same amount will be spent in the coming year. The object is to project future expenses, some of which may not have occurred in the past (for example, a child's braces or a car engine overhaul).

Once projected expenses have been roughed out, they should be divided into two main categories: fixed obligations (rent, utilities, insurance, car payments, and so forth) and variable

Captain Kenneth R. Woods, U. S. Air Force, is stationed at Malmstrom Air Force Base, Montana. He received a B.A. degree from Washington State University and is currently participating in the M.B.A. program of the University of Montana Air Force Institute of Technology at Malmstrom A.F.B.

Michael F. Foran is an Associate Professor of Business Administration, A.F.I.T., University of Montana, Malmstrom A.F.B. He received his Ph.D. in Accounting from the University of Washington.

expenses (food, entertainment, vacation, clothing, medical, and the like). This constitutes a crude budget (see table 1).

After completing a crude budget, the next task is to set budget objectives. The goals should be ambitious and should lead to a sense of accomplishment. This will motivate the individual to properly manage his money in order to achieve his objectives.

The goals should be divided into short-, medium-, and long-range objectives. For example, a short-run goal could be a new TV set; a medium goal could be a down payment on a house; and a long-range goal could be a college education for the baby. List objectives and rank them according to personal preference (table 2).

The annual budget is now ready to be made final. Include the future objectives in the budget; then, as necessary, either trim expenses or reduce or eliminate objectives to coincide with total income. This final budgeting process integrates a person's or a family's day-to-day living expenses and future objectives into one financial plan. It is the moment of truth when one must

Table 1

Crude Budget for 19__

Projected expenses		Variable expenses		
Food	$1,300	Food	$1,300	
Rent	2,400	Clothes	900	
Medical bills	240	Medical	240	
Insurance	500	Dental	240	
Entertainment	900	Entertainment	900	
Car payment	1,200	Other	1,000	
Clothes	900			
Dental bills	240	Total variable expenses		$4,580
Utilities	540			
Other	1,000			
Total projected expenses	$9,220	Fixed expenses		
		Car payment	$1,200	
		Rent	2,400	
		Insurance	500	
		Utilities	540	
		Total fixed expenses		4,640
		Total expenses		$9,220

Note: The figures used in this article assume a yearly take-home pay of $10,000. Projected expenses merely facilitate explanation and are not intended to be all-inclusive or representative.

Table 2
An Objectives Statement

Color television	$ 460
New house (down payment)	1,000
Savings for college education	300
Total needed for future objectives	$1,760

Note: This statement is an integral part of the annual budget.

reach the often painful decision of sacrificing objectives or eliminating day-to-day expenses (see table 3).

Contribution Margin

The contribution margin is total take-home pay less variable expenses. This amount is left to cover fixed expenses and to meet future objectives (see table 4). Since fixed costs don't usually change during the planning period, proper money management emphasizes reduction of variable expenses in order to achieve long-term objectives. The use of contribution margins will quickly and vividly show the trade-off between spending today and saving for tomorrow. It leads directly to the job of adjusting variable expenses—this is the management phase of budgeting personal income. In this phase, control procedures are applied to insure that the budget is met.

Cash Flow

Cash flow management insures that a sufficient amount of cash is available to meet current obligations. The first step is to break the annual budget into monthly budgets based on cash flow. Thus, annual variable expenses should be broken down into monthly expenses. Projected seasonal fluctuations such as new school clothes, Christmas parties, and vacations must be accounted for. Then the monthly variable budget must be made congruent with fixed expenses so that a proper cash flow can be maintained monthly. High fixed payments should be matched with months that have high contribution margins and low fixed payments should be matched with months that have low contribution margins. By this method the budget will not have large surpluses in some months and large deficits in other months. By taking advantage of different payment plans, the budget can be arranged so that all fixed obligations will not be payable in any one month. Insurance premiums, for example, can usually be paid monthly, quarterly, or yearly.

Monthly budgets will insure that monthly obligations are met. In addition, the monthly residual amount for future objectives acts as a last resort emergency fund for unforeseen circumstances (see table 5). Monthly budgets also allow analysis and control of actual expenses on a current basis. Large differences between budgeted and actual expenses should be promptly investigated and corrected.

Variance Analysis

A budget expense variance is the difference between what was budgeted and what was spent. Such variances can be either favorable or unfavorable, significant or insignificant. Using the cost accounting concept of management by exception, only significant variances (both favorable and unfavorable) need be analyzed. In analyzing a family budget, the cause of the variance should be determined and arrangements should be made for proper control and adjustments in the remaining budget months.

Careful examination of monthly variances provides feedback which can be used to adjust subsequent total or monthly budgets (see table 6). The possible effects of significant variances in monthly spending on future objectives must be kept in mind. In the management of personal finances, the individual or family is the president, manager, and worker all in one. In this respect, individual budget makers must know themselves and be able to stay within their plans in order to achieve their objectives. Monthly budget variance analysis is a meaningful tool only if it is objectively applied.

Table 3

Adjusted Budget for 19__ after Integration of the Objectives Statement

Variable expenses			
Food	$1,200		
Clothes	400		
Medical	240		
Dental	240		
Entertainment	720		
Other	800		
Total variable expenses		$3,600	
Fixed expenses			
Car payment	$1,200		
Rent	2,400		
Insurance	500		
Utilities	540		
Total fixed expenses		$4,640	
Total expenses		$8,240	
Take-home pay			$10,000
Less expenses (fixed plus variable)			8,240
Total available for future objectives			$ 1,760

Table 4

Contribution Margin Concept

Take-home pay	$10,000
Less variable expenses	3,600
Contribution margin	$ 6,400
Less fixed expenses	4,640
Amount for savings	$ 1,760

Note: The above figures are derived from the budget in table 3. Projected and actual contribution margins should aid in the management of variable expenses.

SUMMARY

Successful personal financial management depends on good planning and control. The heart of planning and control is the conscientious and realistic development of a budget for the year. The budget should be broken down into monthly fixed and variable expenses and should be integrated with an individual's or a family's short-, medium-, and long-range objectives. The cash flow and the contribution margin should be analyzed to insure an adequate coverage of fixed expenses and a sufficient residual for future objectives and contingencies. Monthly feedback should be used to alter planning if necessary. Intelligent use of these cost accounting tools will enable individuals and families to meet their annual budgets and reach their future objectives.

Table 5

Cash Flow Analysis

	December	August	Reason for Difference
Variable expenses			
Food	$120	$ 90	Christmas food costs
Clothes	10	100	Kids back to school
Medical	5	30	School physical
Dental	60	0	Yearly check-ups
Entertainment	90	30	Christmas party costs
Other	100	20	Christmas presents
Total variable expenses	$385	$270	
Fixed expenses			
Car payment	$100	$100	
Rent	200	200	
Insurance	0	125	Quarterly payment
Utilities	45	45	
Total fixed expenses	$345	$470	

Monthly Contribution Margin Analysis

	December	August	Reason for Difference
Take-home pay	$800	$850	Pay bonus
Less variable expenses	385	270	See monthly budget
Contribution margin	$415	$580	
Less fixed expenses	345	470	See monthly budget
Amount for future objectives	$ 70	$110	

Note: Cash flow is planned to even out monthly expenses.

Table 6

Variable Budget Expense Variance Analysis

December

	Actual	Budget	Variance[a]	Explanation
Food	$125	$120	$ 5 (U)	Christmas dinner guests
Clothes	0	10	10 (F)	No purchases
Medical	15	5	10 (U)	Wife got flu
Dental	70	60	10 (U)	Extra charges
Entertainment	80	90	10 (F)	Christmas party reduced costs
Other	105	100	5 (U)	
Total variable expenses	$395	$385	$10 (U)	

August

	Actual	Budget	Variance[a]	Explanation
Food	$ 80	$ 90	$10 (F)	Reduced meat purchases
Clothes	120	100	20 (U)	New football shoes
Medical	0	30	30 (F)	Physical paid by school
Dental	0	0	--	
Entertainment	40	30	10 (U)	Boat trip
Other	20	20	--	
Total variable expenses	$260	$270	$10 (F)	

Note: F denotes favorable variances (actual less than budget); U denotes unfavorable variances (actual greater than budget).

[a]Variable expense control is critical, and detailed analysis will greatly aid personal financial management.

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