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In This Issue

About the Authors

Mr. Fred Henningsen, Associate Professor of Business Administration, has written a guest article for "From the Director's Desk." Professor Henningsen received his B.A. and M.A. degrees in business administration from the University of Montana. He has been teaching at the University since 1946 with the exception of two and one-half years spent on post-graduate work at the University of Pennsylvania and five years spent in Pakistan as an accounting advisor for the University of Pennsylvania's Karachi Project at the Institute of Public and Business Administration, University of Karachi. He also taught at the Karachi Graduate School of Business Administration under the auspices of the University of Southern California.

Professor Henningsen is a Certified Public Accountant and is currently the executive secretary of the Montana Society of CPA's as well as a member of the American Institute of CPA's and the American Accounting Association. He is also president of the University of Montana Federal Credit Union.

An article by Mr. Henningsen, "An Approach to a Successful Insurance Profession," was published in the *Alico Review*, May 1958, by the American Life Insurance Company. Another article, "Keep Your Checkbook Under Lock and Key at All Times," was published in the Winter 1963 issue of the *Quarterly*. He is currently the editor of the *Montana CPA*, the official publication of the Montana Society of Certified Public Accountants.

Arnold W. Bolle, whose article on the history of the forest products industry in the state marks his first appearance in the *Quarterly*, is Dean of the School of Forestry at the University of Montana.

Dean Bolle received his B.A. degree in Liberal Arts at Northwestern College in Watertown, Wisconsin, his B.S. degree in Forestry from the University of Montana, and his Master and Doctor degrees in Public Administration from Harvard University. He served as a range conservationist and forester with the U. S. Forest Service in Montana, and the U. S. Soil Conservation Service in Wyoming, Washington, Oregon, and Washington, D. C. He joined the faculty of the School of Forestry in 1955 and was named Dean in 1962.

He has published extensively in the fields of forestry education, resource economics and land conservation. The article which appears in this issue of the *Quarterly* is a chapter from a publication entitled *The Forest Products Industry in Montana,*[1] which Dean Bolle co-authored with William K. Gibson, and Elizabeth Hannum (the latter two are affiliated with the research staff of the Forestry School).

Dr. John H. Wicks continues his series of timely articles on state and local taxation with "A Comparison of Taxes: Montana, the National Averages and the Regional Averages." Dr. Wicks is an assistant professor of economics at the University. Information about him appeared in the *Montana Business Quarterly*, Winter 1966 issue.

Dr. William H. Diehl has been the Director of Research with the Montana Board of Equalization in Helena since December of 1964. This is his first article for the *Quarterly* and deals with the subject of the projected impact of recent births and birth rates on future elementary and secondary school enrollment in Montana. Dr. Diehl has a B.S. degree from Montana State University, and M.S. and Ph.D. degrees in agricultural economics from North Carolina State University. He is a member of the Reference Center Study Committee of the Rocky Mountain Development Council. His publications include "Farm-Nonfarm Migration in the Southeast: A Costs-Returns Analysis," February 1966, *Journal of Farm Economics;* "Human Resource Analysis," and "Revenue and Expenditure Projections for Montana State Government" (chapters 4 and 5 respectively of *The Montana Tax Study*).

Mrs. Maxine C. Johnson is the Assistant Director of the Bureau of Business and Economic Research. Since her association with the Bureau began in 1950, she has published numerous monographs and has contributed extensively to the *Montana Business Quarterly*, where her semi-annual Outlook articles are a regular feature. Mrs. Johnson received her B.A. degree in economics from Washington State University and an M.A. degree in economics from the University of Montana. She became the Assistant Director of the Bureau in 1961.

The article on employment opportunities for the business graduate was co-authored by Dr. Lawrence J. Hunt and Thomas G. Armour. Dr. Hunt, who came to the University as an assist-

[1]*The Forest Products Industry in Montana,* (Bulletin Number 31, Montana Forest and Conservation Experiment Station, Missoula, Montana, May 1966.)

ant professor in 1964, received his M.S. degree in retailing from New York University and his D.B.A. from the University of Oregon. Prior to joining the School of Business Administration faculty, he had teaching experience at The Ohio State University and the University of Oregon. The three articles Dr. Hunt has previously contributed to the *Quarterly* have dealt with business simulation, business ethics, and the effectiveness of advertising programs in business.

Thomas G. Armour is a Research Assistant in the Bureau of Business and Economic Research. He is a 1963 graduate of the University of Montana with a degree in general business, and is currently completing work on a M.S. degree in marketing.

From the Director's Desk . . .

FRED A. HENNINGSEN
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This issue of the *Montana Business Quarterly* presents an article by Professor Lawrence J. Hunt and Thomas G. Armour analyzing the alarming statistics on the outmigration of University of Montana students—an outmigration of graduates that, according to the authors' research, is at least partly due to the casualness with which Montana employers view our business school graduates, in contrast to the eager recruiting techniques of firms from out of state who vie for their services. Since many of our readers are potential employers of our graduates, we thought you might be interested in what you are missing. Insofar as one can generalize about a "typical" student, here is a profile of a graduating University of Montana School of Business Administration student who might one day become a major asset to some Montana firm.

Our graduates are survivors of a process which eliminates two out of three of those who enter college. Much of this drastic attrition is probably attributable to University entrance requirements so unrealistically low that any Montana high school graduate is allowed to enter the University regardless of his high school record or the level of his ability to meet the demands of college courses. This low entrance requirement makes for a high failure or dropout rate; the rest of our high attrition rate is probably caused by students' lack of finances, lack of interest, emotional problems, marriage, and transfer to other schools. The important thing to remember is that University of Montana graduates have survived a fairly rigorous process of weeding out incompetents; they have proved themselves through four or more years of concentrated study and preparation.

Up to this point we have been considering college graduates generally, but for the purposes of this discussion our particular concern is the Business Administration graduate and his college background.

The Business Administration graduate will have accumulated at least 180 credit hours of college level study. A credit hour may be defined as one hour of class work per week for at least ten weeks; so we are really saying that he has put in at least 1800 hours in class (assuming fairly regular attendance, which isn't necessarily a valid assumption for all students—but then the non-attenders are also heavy contributors to the drop-out or attrition rate mentioned earlier). In addition to 1800 hours of class time, college level work of "C" quality is generally assumed to require two or more hours of study outside of class in laboratories, libraries, or at a desk, so we are really talking about a person who has been exposed to at least 5,400 hours of fairly concentrated instruction, two-thirds of it basically directed or structured self-instruction. Levels of work necessary to attain higher grades presumably require above normal aptitude and intelligence and/or additional study hours.

If the reader is interested in knowing how those 5,400 odd hours of effort are distributed the following figures are a breakdown of the typical Business Administration student's college work.

Life sciences (Biology, Botany, Psychology, Microbiology, Zoology) 12-15 credits (360-450 hours)

Physical sciences and Mathematics (Chemistry, Geology, Mathematics, Physics) 12-20 credits (360-600 hours)

Social sciences (Anthropology, Economics, Geography, Political Science, Sociology) 12-50 credits (360-1500 hours)

Humanities (Art, Drama, History, Literature, Music, Philosophy, Religion) 12-21 credits (360-600 hours)

It is worth noting that at least 90 credits, or 2700 hours, of our graduate's 5,400 hours of study must be taken in the above areas. In fact, more than 90 credits in the above nonspecialty areas would be the rule, rather than the exception. It is also worth noting that the business graduate leans fairly heavily to the social sciences in his orientation; that is, he *elects* to take additional work in this area. This might indicate that our graduate is fairly well grounded in our culture, even though he is not a liberal arts graduate.

In the area of his specialty, Business Administration, our graduate takes the balance of his work (maximum—90 credits, 2700 hours). Ours is a two-year professional School of Business which means that, technically, all of our students are juniors

and seniors. In fact, the only business courses offered below the junior level in this school are elementary accounting and statistics—courses which all students seeking admission to the school must complete as pre-business requirements. Once admitted to the School of Business our graduate must complete 26 credits (or 780 hours of study) in what we call "core courses" comprising Money and Banking, Marketing, Business Finance, Industrial Organization and Management, Business Law, and Administration and Business Policies. We call these "core" courses because we consider them to be fundamental or basic to any business degree. Beyond this core requirement, each student must select one of six majors: Accounting, Business Education, Finance, General Business, Management or Marketing. This is his area of specialty in which he must complete 25-30 credits (or 750-900 hours of study) in basic courses. Thus our typical graduate has the following broad program:

1) At least 90 credits in the College of Arts and Sciences

2) At least 22 credits of economics and business courses as pre-business requirements

3) At least 26 credits in a "core" area

4) At least 26 credits in his chosen major area in the School of Business

Roughly one-third (62) of the credits must be taken in Business Administration courses, but not more than 90 credits in Business Administration courses may be counted toward his degree. In practice, few students earn more than 70 to 80 Business Administration credits; the remaining 100 or 110 credits are concentrated primarily in the areas of arts and sciences.

This School of Business offers only basic or "theory" courses. We have resisted the temptation to offer such specialties as drugstore accounting, retailing, salesmanship and similar narrow training courses. We make no pretense of training our graduates for particular jobs on the theory that this is best done by industry. Instead we try to provide our graduates with a broad, liberal education—sufficiently oriented to the business world so that our graduates will enter that environment with a solid base of principles on which to build successful careers beneficial to themselves, the firm, and society. In our opinion, graduation means stepping up to another level of education because, for the educated man, education is a lifelong process. We feel that with a broad educational background a man will

grow with his job and become more valuable year by year. In contrast, a "trained" man may be no more valuable at the end of his career than the beginning (depending, of course, on the man). In addition to the formal side of the business graduate's education, there is another, perhaps equally important side—his exposure over his college years to other minds, his social contacts and his personal growth generally—all of which give him more poise and stature as a possible employee.

Employers interested in University of Montana School of Business Administration graduates may help in the future development of these young men and women if they: (1) train them thoroughly and as broadly as possible in the intricacies of their businesses, (2) provide them with the challenge of growth and advancement, and (3) provide them with an environment that has time for reflection and concern for matters beyond the day-to-day routine of running the shop.

We think that employers who view business school graduates as investments vital to their firms' long-term success should be pleased to know that the University of Montana School of Business Administration graduate has *chosen* business as a career, has spent upwards of 5,400 hours of time and an incalculable amount of money and energy to prepare himself to be a contributor to the nation's economy (and, it can be hoped, to Montana's economy). Perhaps this knowledge and the statistics in Hunt and Armour's article on page 52 will start our readers thinking —and recruiting actively.

History and Development of the Forest Products Industry In Montana

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Introduction

The Montana forest products industry today consists of perhaps 400 sawmills (including those not in continuous operation), six plywood and veneer mills, a pulp and paper mill, several pole-treating yards, some 30 or 40 post yards, an active Christmas tree industry, and a shingle mill. The major products are lumber, pulp and paper, and plywood. The lumber mills vary in size from the smallest portable mill, which produces only a few thousand feet of rough lumber annually, to the largest integrated mill at Libby, which manufactures more than 120 million feet of finished lumber a year in addition to plywood, poles, Stractan, and other products. In this study, the sawmills are grouped by volume of annual output into four categories: (1) large—more than 50 million board feet; (2) medium—10 to 50 million board feet; (3) small-medium—one to 10 million board feet; (4) small—less than one million board feet. There are five large sawmills, about 45 each in the medium and small-medium categories, and probably several hundred in the small.

History and Development

The development of Montana forest products industry is part of the pattern of regional timber dominance over the past three centuries. For many years, beginning with colonial times, the center of the nation's timber industry was essentially migratory. Control of United States timber interests was held by the

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Note: This article is adapted from the publication *The Forest Products Industry in Montana*, Arnold W. Bolle, William K. Gibson, and Elizabeth Hannum, (Bulletin Number 31, Montana Forest and Conservation Experiment Station, Missoula, May 1966.)

Northeast until the cutting of the Great Lakes States was completed in the 1890's. The Southeast followed as the foremost timber area and remained so until transcontinental railroads and the Panama Canal allowed comprehensive exploitation of the West Coast. The Pacific States, with the country's largest and most valuable timber supply and special freight rates to the East and Midwest, have maintained leadership from the time the industry was established there. The Rocky Mountain States, including Montana, were the last to develop as a major timber region. They have gradually assumed a position of importance, if not dominance, in the national industry.

Settlement and Early Land Acquisition

Montana's first sawmill was built at St. Mary's Mission in the Bitterroot Valley in 1842, 47 years before the territory joined the Union, with the original pitsaw fashioned from a wagon tire.[1] For the most part, the westward movement of white settlers in North America had leapfrogged the Great Plains and Rocky Mountains. The rugged mountain wilderness of western Montana at first offered little inducement to early homesteaders, and hostile Indian tribes on the territory's eastern plains virtually closed that area to settlement until the 1880's.

The forest products industry probably had its birth in Montana when gold was discovered near Bannack in 1862. This and later finds in the 1860's brought droves of disappointed miners from California into the western part of the territory. Prospectors from the Midwest and throughout the nation soon arrived to take part in Montana's gold bonanza. As ranchers and homesteaders followed the prospectors and settlements mushroomed in the mountain valleys, small sawmills powered by water or man were set up to supply the mines and the domestic needs of the frontier communities. Pack trains from south and west and from Fort Benton, the headquarters of steamboat navigation on the Missouri River, brought other necessities to the pioneer Montana settlements. Montana's first steam-powered sawmill was built at Fort Benton in the 1860's, using cottonwood from the river bottom to provide building materials for the growing town. This last note pinpoints the story of the

[1]L. B. Palladino, *Indian and White in the Northwest*, 2nd ed. (Lancaster, Pennsylvania, Wickersham Publishing Company, 1922).

early Montana sawmills, which repeated decades later the development pattern of the nationwide industry. The power progression from hand to water to steam had taken place in other parts of the country years before; steam was in common use in the East, the Midwest, and on the Pacific Coast by 1820.

From the 1860's to the 1880's Montana's timber industry was basically a service adjunct to the mining frontier. Lumber and mine stulls were the principal manufactured wood products, and as mining expanded, particularly around Butte, the demand grew accordingly. More and more timber was needed for mine construction and for the roasting of ore. The first large-scale logging operations in Montana were in the Butte vicinity.

The completion of transcontinental railroads opened the first national markets for Montana forest products. Until then the infant timber industry had been a purely local operation, with one or several mills in each population center taking care of the area's needs and reaching no further. The railroads took Montana lumber to the Midwest and East. Sawmills were installed far and wide along their routes. The railroads also, by acquiring huge amounts of land, joined the copper kings in taking virtual control of the timber industry and the territory.

The Utah Northern was extended into Butte from the Union Pacific in 1881. The Northern Pacific was completed across Montana in 1883. As land-grant railroads, these two were given alternate sections of land for a 20-mile strip on each side of the right-of-way as a means of supporting capital investment. The Northern Pacific, which was having financial difficulties, was given an additional 10-mile strip on each side and then permitted the selection of further land in another 10-mile strip in lieu of mineral lands in the original strip.

The Northern Pacific made profitable use of its vast holdings, which were more than adequate to supply its own needs and allow sales to a variety of purchasers. Land was sold to settlers outright, or as cleared land after the timber had been sold separately. Thousands of acres were sold to lumber companies and to eastern Montana ranchers. The largest single purchaser of land from the Northern Pacific was the Anaconda Company, which bought enormous tracts in northwestern Montana in the 1890's as a timber source for the Butte mines.

By the time the Great Northern Railroad was built across northern Montana in 1892, the government had repealed its policy of granting land. The company engaged in a vigorous

program of timberland purchase in order to establish its own mills, buying land from the Northern Pacific as well as from settlers and other landowners.

Beginning in 1878, the Free Timber Act went into effect; it legally permitted settlers to cut timber on public land for a variety of purposes without cost.[2] The valley bottoms, where timber was close to settlements and easy to manage with primitive equipment, were extensively cleared during this period. Some of the private companies also took timber from public land. Although commercial cutting of public timber was restricted to material used for manufacturing by the operator, this stipulation was not always observed. In the early years of the Act there were numerous uncontested incidents of illegal logging on public land, but by the 1890's the federal government was attempting to enforce the laws controlling commercial cutting more rigorously than before. One notable example of the power of the great private ownerships of that time was a legal battle involving the Montana Improvement Company. This organization had been formed in 1883 by Marcus Daly, one of the copper kings, and the Northern Pacific Railroad, ostensibly to clear land for farming on areas close to the railroad. In the clearing process the MIC logged vast tracts of public lands, sold the timber to local mills, and was eventually sued by the government for violation of the Free Timber Act. An unusual precedent was established when a Montana Supreme Court judge decided the case in favor of the MIC.[3]

This exploitation of Montana timberlands was restrained by men like Theodore Roosevelt and Gifford Pinchot, and by the far-reaching conservation measures of the turn of the century.[4] The national forests, which include most of the mountain timberlands, were established in 1897 and the years immediately following; the Bitterroot National Forest was the forerunner of eleven in the state. Creation of the national forests and attendant federal controls came at a fortunate time for Montana and the other Rocky Mountain states: unlike the Northeast, the South, the Great Lakes region, and parts of the Pacific Northwest, this area still had the bulk of its timber resource to reserve. The Rocky Mountain bottomlands had been largely

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[2]John Ise, *The United States Forest Policy*, (New Haven, Yale University Press, 1924).

[3]*Ibid.*

[3]Gifford Pinchot, *Breaking New Ground*, (New York, Harcourt Brace and Co., 1947).

cut over by the time the national forests were established, but the developmental and technological lags of this last timber frontier in the contiguous United States had protected its mountain forests for use by later generations.

Twentieth-century Development

The turn of the century saw the beginning of Montana's great logging era. The mines and railroads, particularly the Anaconda Company and the Great Northern through its Somers Lumber Company, dominated the state's timber industry. The years between 1900 and 1930 were the closest to a monopoly period the Montana economy has known. By owning both transportation facilities and a large share of the total timber supply, the mines and railroads in effect controlled the region's market, although numerous independent firms were also engaged in logging and in manufacturing rough lumber for export. Despite some supply problems, new medium mills sprang up rapidly, particularly in the early 1920's, and small mills continued to fill local needs in many communities.

This was the time of the timber boom. Settlement of the plains, including eastern Montana, was at its height, and the wave of immigration provided a burgeoning market for Montana lumber. But in Montana, as opposed to the Great Lakes states, for example, land speculation was not included in the skyrocketing commercial activity. By virtue of the 19th-century acquisition previously noted, most of Montana's accessible timberland was already owned by the large private trusts, and major land sales were, for the most part, intercompany.

Despite the tremendous logging activity, the railroads, mines, and miscellaneous lumber companies were taking very little timber from the national forests during the early decades of the 20th century; the first of the few big public sales was from the Bitterroot National Forest around 1910. The reasons behind the low demand for national forest timber during those years lie in Montana's land ownership pattern and the then-existing species preferences; by and large the accessible bottomlands were (and are) privately owned and the inaccessible mountain areas publicly owned. Ponderosa and white pine (lowland types) were considered the prime species, while larch and Douglas-fir (mountain types) were not highly thought of.

The depression was a time of decline, collapse, and readjust-

ment for Montana's timber industry, as it was nationally. Demand was severely reduced and profits were low or nonexistent. Massive railroad logging almost disappeared—the valley holdings had been thoroughly cut over and technology was still inadequate to log such mountain terrain as the railroads owned. The Somers Lumber Company, which had cut 64,853 thousand board feet in 1920 according to Forest Service archives, diminished its operations, and the railroads generally began to withdraw from the timber business.

Some other mills—small, medium, and large—survived, although many shut down: 23 mills closed between 1928 and 1933. Meanwhile, essential aspects of Montana's timber industry were changing: raw material was becoming costly and difficult to obtain; finished lumber, planed and kiln-dried was replacing rough lumber as the export item; and public agencies were applying concepts of sustained yield and allowable cut more intensively.

Demand rose again, slowly, in the late 1930's, and the Montana industry responded. Technological advances, including the switch from steam to internal combustion engines, improved road-building equipment, truck logging, and tractor skidding, made it feasible to log steep and previously inaccessible areas. The value of fir and larch was increasing, and so, consequently, was the economic importance of national forest timber. The Somers Lumber Company continued to decline, marking a fundamental change in the structure of Montana's timber industry. The shift was away from a virtual monopoly and toward a form of oligopoly in which several independent large mills shared leadership with the mines and railroads or moved ahead of them. The monopoly mills, because of reduced supply of timber on their own holdings and the decline in export, lessened their scale of operations. Now that technology had made supply from public lands available, some of the medium mills expanded. Small mills continued to produce rough lumber for local consumption; but they did not advance in the broader market because finished lumber became the chief export item.

Despite these changes, Montana's forest products industry continued as a lumber business limited for the most part to primary manufacture until after World War II. A period of significant growth began in 1946, and the present diversified pattern of sawmills, plywood mills, and pulp mills is largely a phenomenon of the postwar boom.

This boom period was based on a national backlog of unsatisfied demand for housing and other construction—a lot of people with a lot of money were now able to build. The corresponding expansion of the Montana timber industry can be attributed to two main factors: the price increase for stumpage and lumber resulting from the construction boom of 1946-1957 and the depletion of timber in other regions, particularly on the Pacific Coast. Both influences made the use of Montana timber far more profitable than before, and improved the state's competitive position relative to the Coast.[5]

Growth of the Montana industry came about primarily through immigration of mills (notably plywood) into the state and through an increase in small-log production. Both developments were dependent, of course, on the accelerating rate of innovation in logging technology. Most of the lumber and plywood mills that came into Montana were promoted by operators from the West Coast. This movement occurred after 1950, and the majority of the companies gave a diminishing log supply on the Coast as their main reason for relocation. Some owners, seeking to establish new plants or replace obsolescent mills, also found the availability of credit more favorable in the Rocky Mountain region. Entry of plywood mills in particular was occasioned by the growing interest in western larch as a veneer species as well as by the shortage and rising cost of plywood logs in the Pacific states and the technological advances that made it possible to use small logs profitably. The Missoula pulp and paper plant was established as a pulp mill in the mid-1950's. This entry was an expansion of a Minnesota enterprise and again reflected a decline of available supply in the original local and a heightened interest in Montana's raw material resource.

The number of mills that migrated to Montana represents only a small portion of the total number that moved from the Pacific region, however. Many more West Coast plants relocated to British Columbia than to Montana. Also, in the late 1950's, two sizable Montana operators moved to Canada with their mill equipment, adding to the problems of Canadian competition.

The lumber industry itself changed considerably during the postwar boom. The plywood business not only raised the cost

[5]George R. Armstrong and John A. Guthrie, *The Western Forest Industry, an Economic Outlook*, (Baltimore, RFF by Johns Hopkins Press, 1961).

of large logs but took much of the market for one-inch boards. This change did not materially alter the demand for dimension stock (two-by-fours and larger), which remained relatively strong. The fact that small dimension stock, particularly studs (eight-foot two-by-fours), can be manufactured from small logs encouraged the development of stud mills. Most of the larger companies installed resaw facilities and took part in the overall increase of small-log production.

The same trend encouraged the rapid proliferation of small mills, which utilize second growth on cutover lands, and caused several larger firms to establish plants in the lodgepole areas of eastern Montana, where the timber industry had never attempted to operate before. This particular expansion came at the peak market period of 1956 to 1957; some of the eastern installations were set up after the decline in price had started in 1957. The outlook at that time was toward a return to the favorable prices of the peak period rather than toward the continuing descent into a depressed market that actually occurred.

The postwar boom in the timber industry came to an end in the fourth quarter of 1956; the reservoir of unsatisfied demand from the war years had finally dried up. Prices took a sharp drop and have continued low ever since. Many Montana mills shut down in 1957—in Flathead County alone the number operating fell from 104 to 60 in one year. Most of the plants that closed were small or small-medium, although a few medium operations also folded. Several other mills in the state changed ownership or management.

Since 1957 the consumers of wood products have become more selective, and this trend has had much to do with the successful survival of certain companies during recent years. The few Montana mill owners who knew their markets well were able to divert production to accommodate changes in consumer taste. Many mills, however, were still oriented to the postwar boom when anything they produced could be sold and the main problems were those of production. Most average operators were experienced in handling such problems, but when the emphasis changed to market they were unprepared to cope with the situation.

The pulp and paper mill sector has had a particular impact on the industry during this recent period. Using mill residues for supply, it is a complementary industry to the lumber and plywood mills. Because it provides a steady market for such

residues, including chips and hogged fuel for its steam generation plant, the pulp mill has helped to stabilize the income of lumber mills. Without the steady income from chips since 1957, several medium mills would probably have gone into bankruptcy. Unfortunately, at the same time, increased competition for logs caused some producers to bid away their extra income from mill residues. Advantages from the pulp and paper plant generally accrue to the large and medium sawmills; the smaller ones have been unable to afford the debarking and chipping equipment.

The development of high-speed stud mills has made production of dimension lumber a profitable operation for even the large integrated mills. In the better timber sites of western Montana the integrated mills can bring in small logs as part of their total operations. A number of specialized stud mills have had difficulties, however, especially in the lodgepole areas of eastern Montana. Several mills there have already closed, and others are reportedly planning to do so. They have not been able to solve the problems of costly harvest and transport and the anticipated price rises for finished products have not yet materialized.

The net effect of the changes since 1957 has been modernization and expansion of the larger Montana mills. Most of them have installed additional processing plants within the past six or seven years, and some of the smaller mills that have not shut down have become their subsidiaries. While profits are fairly low for everyone, flexibility and diversification have placed the larger mills in the most favorable position and account for the increased production without increased employment in the state's timber industry.

Relation to Other Areas

As indicated in the foregoing pages, Montana's forest products industry was for many decades little more than a desultory lumber operation. Throughout the late 19th century and up until 1946 its growth was piecemeal, hampered by geographic isolation from population centers. Only since World War II has the state's timber industry moved into a position competitive with the Pacific Coast.[6]

The Coast still dominates the nation's industry, however, and

[6]George R. Armstrong and John A. Guthrie, *Ibid.*

although depletion and rising costs of raw materials there have propelled some segments of the industry eastward to the Rockies, Montana's position is essentially secondary. There is a dichotomy in this relationship: Montana both benefits and suffers from its proximity to the West Coast and its inclusion in the broad regional pattern of the Northwest. It takes advantage of established trade routes and markets, but at the same time Washington, Oregon, and California constitute its foremost national competition. Montana's timber supply is less expensive and labor costs are lower than those of the Coast. On the other hand, the coastal states have better timber and, with the exception of stumpage prices, lower production costs. The West Coast also retains its superiority through access to markets, operational "know-how" derived from long experience, and the numerous services available in a large industrial concentration.

As a subdominant in the national timber industry, the Rocky Mountain region has a healthier structure and potential than the Great Lakes States. There the timber supply has never recovered from the devastation of the 19th-century cut-and-get-out cataclysm, although there is an active pulp industry in Michigan, Minnesota, and Wisconsin, primarily dependent on aspen and spruce, and marginal lumber operators use what they can of the pine and other species that remain.

The Southeast is the nation's greatest producer of pulp and low quality sawtimber. Although its vast quantities of southern pine make it the biggest timber-producing area in the country next to the Pacific Coast, Montana and the other Rocky Mountain states have been able to compete with it successfully thus far.

Conclusion

Marketing will continue to be one of the major problems facing the Montana forest products industry. Distance from market will favor the use of regional brokers in the marketing process, at least for some time, although it appears to be in the best interests of the industry to break away from this arrangement as rapidly as possible. The smaller Montana mills may be able to form partnerships with larger mills in or outside the area that already have marketing organizations. It may also be possible for several medium mills to formalize their own mar-

keting associations. Additional targeted research in marketing will prove profitable.[7]

Montana's forest products industry will probably continue to be an important sector of the economy. It does not appear to offer the growth potential of the 1946-1957 period, but it could increase substantially in pulp and paper, plywood, and other wood products of relatively recent origin. The industry might also gain in the area of traditional products through more efficient competition for existing markets. New technology could produce a period of accelerated growth or, because of added competition, it could lead to a decline.

The concern of forest managers in the past has been toward stability in the industry. The concepts of sustained yield and annual allowable cut were considered to be the answer to the old cut-and-get-out policies of the earlier migratory timber industry. Now, however, with changing technology and changing demand, these concepts may produce conditions that generate community instability even though the resource base is unimpaired. The development of products with a strong market potential may be inhibited by the continued production of others for which the projected demand is low. Stability in the sense of sustained yield of the resource may not be as important as the industry's capacity to adjust to new production and marketing conditions. Unless the industry can function effectively in this way, it may find itself unable to compete on the market. Adaptation to the market has caused and will cause the greatest difficulties for Montana producers.

The wood products industry can expect to face increasing competition for the use of Montana's forestlands. Montana has beautiful mountain scenery, pure streams and attractive lakes, abundant wildlife, and most important, space. These attributes are valued highly by its residents as making the state a good place to live and also as the foundation of a growing tourist industry. Montana communities are becoming more wary of industrial development that will detract from the state's recreational value and will probably require new industry to take all necessary precautions against contamination of water and air. Antipollution laws will become stricter, and industrial costs may therefore become greater.

Forestland uses other than timber production, including rec-

[7]Kent T. Adair and others, *A Profile of Lumber Marketing in Western Montana*, (Bulletin No. 30, Montana Forest and Conservation Experiment Station, Missoula, March 1966.)

reation and water development, will demand greater consideration by the wood products industry. Recreation in particular may reduce the amount of land available for timber production or raise the cost of production. Government agencies will be under increasing public pressure to protect scenic features and improve recreational facilities. Much of the forestland can be used for several purposes—timber harvest and recreation are complementary over a fairly wide range. Conflicts will be inevitable, however, and it will be vitally important for the future of both industries that they work cooperatively toward the solution of land-use problems. Outdoor recreation will continue to grow rapidly and to gain political strength. It has a tremendous potential and may well become the foremost industry in Montana. The forest products industry must recognize this for its own benefit and that of the state's economy.

The problems facing the Montana forest products industry are becoming more and more sophisticated, requiring greater understanding of the entire economic complex and of the relationship of local firms to regional, national, and international competition. In addition, all functions of the industry from harvesting through marketing must be examined in the light of changing trends in land use. Montana owners and operators must respond dynamically to the cultural pressures that confront the forest products industry as a whole. If sophisticated problems are met with sophistication, this last frontier need not become a lost frontier in terms of the forest resource.

A Comparison of Taxes: Montana, the National Averages and the Regional Averages

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Introduction

This is the sixth in a series of articles on taxation which Professor Wicks has written for the Quarterly. *Previous issues have contained the following articles: "The Nature of Retail Sales Taxation"; "Myths and Misconceptions about Montana's State and Local Taxes"; "Taxpayer Compliance Costs from the Montana Personal Income Tax"; "A Primer on State and Local Taxation"; and "A Comparison of Expenditures: Montana, the National State Averages and the Regional Averages." In the following pages he compares taxes in Montana with the national averages and the regional averages.*

Just how high are Montana taxes? And how do they compare with our neighboring states and with other states nationally? These are the questions we shall be answering in this article. The level of a state's taxes can serve as a guide to legislators in evaluating the merits of expenditure programs in relationship to their cost, and also help the general public in evaluating these programs as well as the legislators. If the benefits from expenditures do not exceed the tax burdens necessitated by them, then society would undoubtedly have been better off if the taxes had not been collected to make those expenditures.[1]

[1]A more precise way of evaluating the desirability of a particular government expenditure is to compare the benefit received from the last unit of service provided to the cost of that last unit. If the benefit exceeds the cost, then society comes out ahead as a result of having that last unit of the service; however, if the cost exceeds the benefit, society is giving up more to obtain the last unit than it is gaining from it and therefore would be better off without that last unit. However, in practice it is difficult, if not impossible, to measure benefits and costs of last units.

An examination of recent trends in tax levels may provide a basis for predicting future levels if economic conditions or tax laws remain unchanged.

A comparison of the level of our taxes with the levels in other states may prove a useful factor in evaluating whether we in Montana are spending the right amount, and whether we are getting our money's worth for what we do spend. Some people feel that the level of a state's taxes may influence decisions to locate business firms, but this argument has never been definitely proved.

However, the reader should use information concerning the magnitude and ranking of Montana tax levels to make evaluations only with great care. High taxes may represent high standards of governmental service which the public favors—standards of governmental service (such as quality education in California) which might attract rather than discourage, new industries. On the other hand, a high tax burden may be caused by the fact that a state's economic resources are comparatively low in relation to the need for funds to finance governmental expenditures.

Since certain governmental activities may be financed at either the state or the local level, high or low state taxes may simply reflect the fact that large or small amounts of state aid are being granted to local governmental units. Therefore, a complete picture of taxes in a state requires information concerning state-*plus*-local taxes in addition to state taxes alone. Such data are presented in separate sections of this article. In both of these sections the levels of Montana taxes are compared with the levels in all states, and in the neighboring states of North Dakota, South Dakota, Wyoming, Colorado, New Mexico, Utah, Arizona, Idaho, and Nevada.

However, a simple comparison of the number of tax dollars collected in various states would obviously produce distorted results. Imagine comparing Montana tax collections with New York's. The two most generally accepted bases for comparing taxes are to state them on a per person, or "per capita" basis, or as a percentage of personal income in a state (that is, the income that individuals received during the year). Taxes as a percentage of personal income provide a measure of the portion of a state's economic resources being devoted to taxes.

The following section shows the 1964 levels of various Montana state, and state-and-local taxes; the next sections compare these levels to the national and regional averages. (The

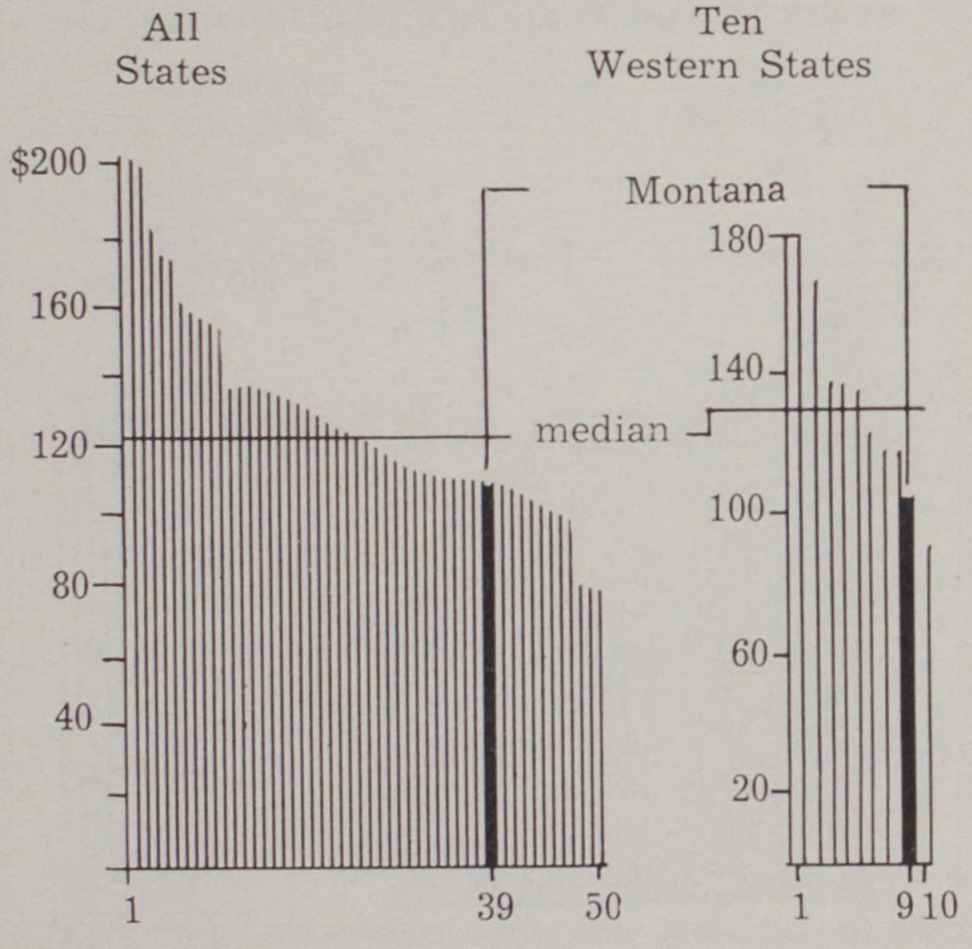
1964 fiscal year is the latest for which complete data are available.) Some of these comparisons are shown graphically for taxes per capita. Graphs comparing taxes as percentage of personal income would appear similar, for they would be based on the same tax collection figures.

Tax Collections by Montana State Government

Our total 1964 Montana state taxes were $107.62 per capita. They amounted to 4.78 percent of personal income in the state. These figures ranked 39th and 36th respectively among the 50 states, and 9th and 10th respectively among the 10 states in the region. Figure 1 shows how our total per capita state tax collections compare to collections in other states.

FIGURE 1

MONTANA'S RANKING ACCORDING TO PER CAPITA TOTAL STATE TAX COLLECTIONS, 1964



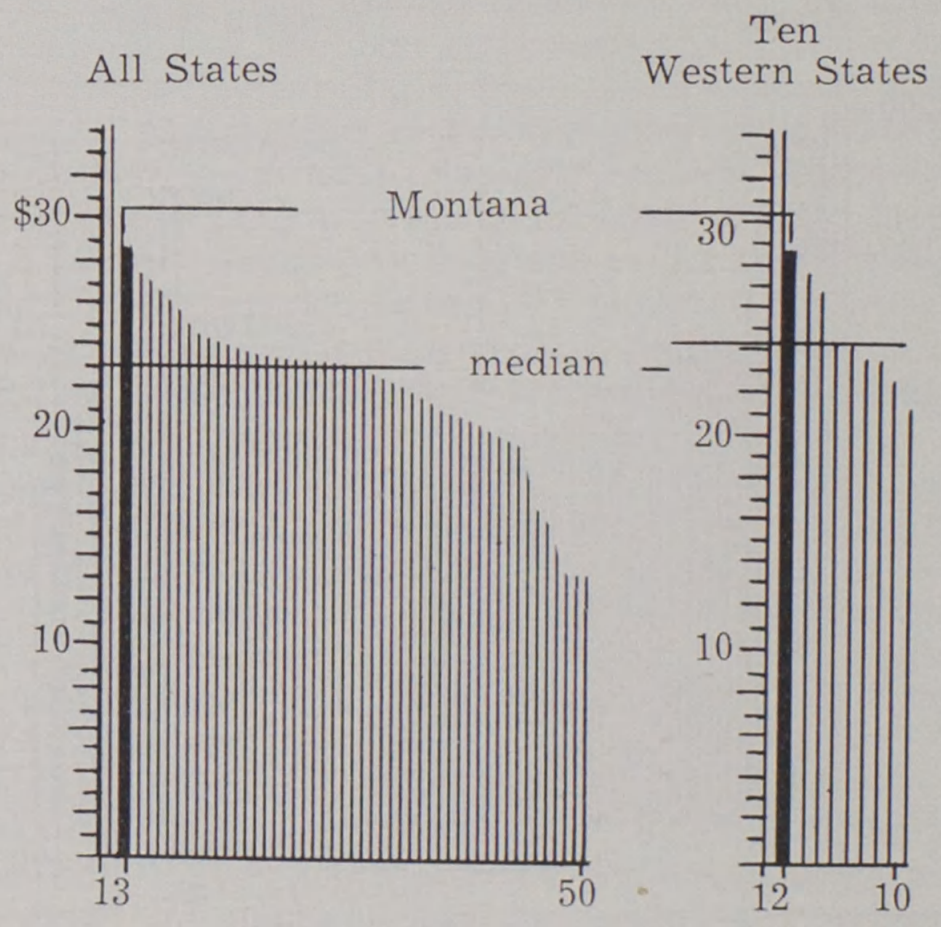
Source: Computations from U.S. Department of Commerce, Bureau of the Census, *Compendium of State Government Finances*, 1964.

The per capita tax burden is simply the average tax per person in a state. However, there are many people, especially minor children, who pay little or no taxes. For this reason, some economists feel it is more meaningful to express tax burden on a per taxpayer basis rather than simply per capita. The primary problem involved in doing this is the determination of who should be classified as a taxpayer and, according to whatever definition of a taxpayer is accepted, just how many taxpayers there are. The number of people who pay Montana individual income tax could provide one rough estimate of the number of taxpayers in the state. Using this basis to estimate the number of taxpayers in Montana, our state taxes were about $379 per taxpayer in 1964. This amount is probably somewhat less than a taxpayer in an average state would pay.

When we break this total tax burden down into the actual kinds of taxes paid, we find that motor vehicle fuel taxes plus

FIGURE 2

MONTANA'S RANKING ACCORDING TO PER CAPITA STATE MOTOR FUEL TAX COLLECTIONS, 1964

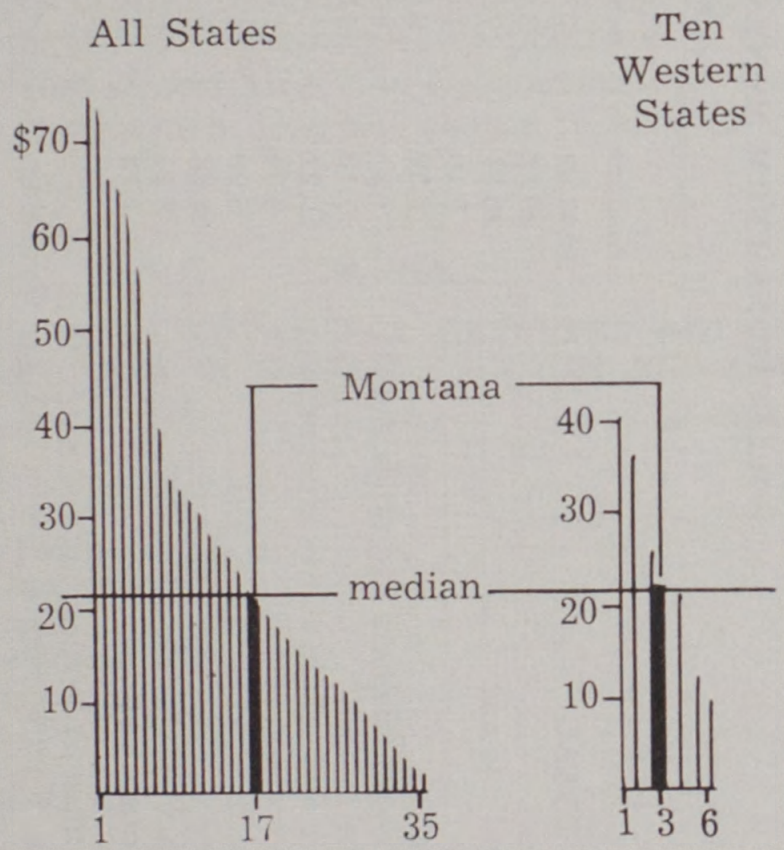


Source: Same as Figure 1.

the individual income tax yield almost one-half of total Montana state tax revenues. Our per capita motor vehicle fuel taxes ranked third and second respectively among the 50 states and among our 10 neighboring states; as a percentage of personal income fuel collections ranked eleventh and second respectively. Montana's individual income tax collections per capita ranked seventeenth among all 35 states which levied this tax, and third among the six states in the region taxing personal income; as a percentage of personal income our income tax ranked seventeenth and fourth respectively. Figure 2 depicts the level of our per capita motor vehicle fuel tax collections in relation to other states, and Figure 3 shows the comparative level of our per capita individual income tax collections.

FIGURE 3

MONTANA'S RANKING ACCORDING TO PER CAPITA STATE INDIVIDUAL INCOME TAX COLLECTIONS, 1964



Note: Only six of the ten western states levy individual income taxes.

Source: Same as Figure 1.

TABLE 1

COLLECTIONS FROM MONTANA STATE TAXES, 1964

	Per Capita			As a Percentage of Personal Income		
		Ranking			Ranking	
	Amount	All States[1]	Ten Western States[2]	Amount (Percent)	All States[1]	Ten Western States[2]
TOTAL	$107.62	39/50	9/10	4.78	36/50	10/10
Motor fuel	29.38	3/50	2/10	1.26	11/50	2/10
Individual income	20.84	17/35	3/6	.93	17/35	4/6
Property	9.10	7/44	5/10	.40	7/44	5/10
Cigarette	8.59	8/48	2/10	.38	8/48	2/10
Miscellaneous business and other license	7.21	14/50	4/10	.32	16/50	5/10
Corporate income	7.16	20/37	3/7	.20	23/37	3/7
Insurance and public utility gross receipts	6.22	30/50	6/10	.28	32/50	6/10
Motor vehicle license	5.94	41/50	10/10	.26	39/50	10/10
Alcoholic beverage	5.90	11/50	2/10	.26	9/50	1/10
Severance	3.88	10/24	4/9	.17	10/24	4/9
Inheritance	3.21	20/49	2/9	.14	19/49	2/9
Vehicle operators	1.18	13/49	2/10	.05	12/49	3/10

[1]Among those states levying the tax.

[2]Montana, North Dakota, South Dakota, Wyoming, Colorado, New Mexico, Utah, Arizona, Idaho, and Nevada.

Source: U. S. Department of Commerce, Bureau of the Census, *Compendium of State Government Finances, 1964.*

However, a considerable number of other taxes provide revenue for state government in Montana; among them are property (in addition to local government levies), cigarette, motor vehicle license, alcoholic beverage, inheritance taxes, a number of levies on business firms including corporate income taxes, insurance and public utility company gross receipts taxes, severance taxes (levied on the extraction of minerals from the ground), and various business license taxes. Table 1 states the amount and the ranking of the collections from the various major types of Montana taxes in per capita terms and as a percentage of personal income. The reader may note that the rankings of our cigarette, alcoholic beverage, inheritance, and motor vehicle operators license tax collections are above the national and regional medians, and that our motor vehicle license tax collections rank below the median.

Another way of measuring taxation in Montana against taxation in other states is to compare the percentages of total tax revenues obtained from various sources. Table 2 compares the percentage of total tax revenues obtained from particular types of taxes in Montana against those in all of the states taken together and against those in the states of the region. As Table 2 demonstrates, we obtain greater portions of our state tax revenues from almost all of the tax sources that we use. However, any state which does not choose to levy all of the taxes

TABLE 2

PERCENTAGE OF TOTAL TAX REVENUES OBTAINED FROM VARIOUS TAXES IN MONTANA AND IN ALL STATES, 1964

Tax	Montana	All States	Ten Western States
Motor Fuel	26.4%	16.7%	18.7%
General Sales		25.1	27.1
Individual Income	19.4	14.1	13.1[1]
Corporate Income	6.7	7.0	5.3[1]
Other Business (Business license, gross receipts, severance)	16.1	13.9	11.3
Property	8.5	3.0	7.4
Tobacco	8.0	4.9	3.5
Alcoholic Beverage	5.5	3.6	2.8
Other	9.4	11.7	10.8

[1]Excluding New Mexico, which does not report individual and corporate income tax collections separately.

Source: Same as Table 1.

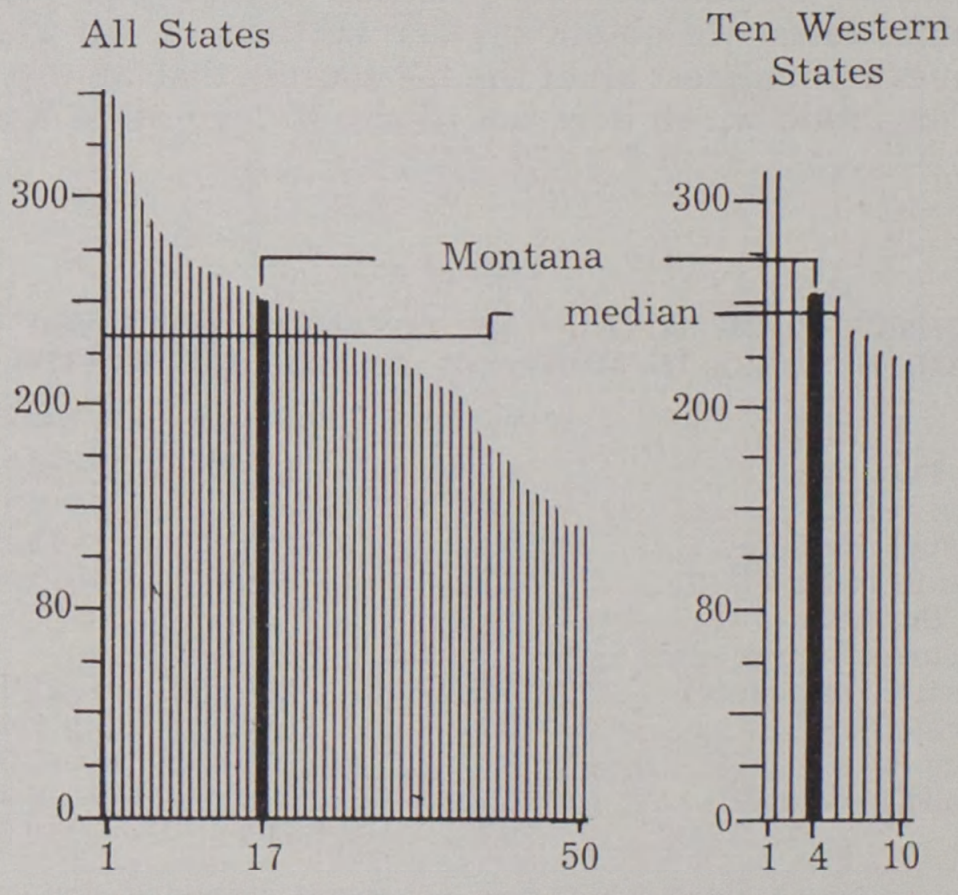
commonly used by other states—Montana, of course, does not levy a general sales tax—will tend to collect a larger-than-average portion of its revenues from the taxes it does use. Levying all of the taxes commonly used by other states is not necessarily a good thing, for administrative and taxpayer compliance costs tend to increase with the number of taxes.

Montana State-plus-Local Tax Collections

In 1964, total Montana state-*plus*-local taxes amounted to $256.87 per capita, or 11.4 percent of personal income in the state. If we again make the assumption that the number of people paying the state individual income tax approximates the number of taxpayers in the state, our total state and local taxes in 1964 amounted to $904.89 per taxpayer.

FIGURE 4

MONTANA'S RANKING ACCORDING TO PER CAPITA TOTAL STATE AND LOCAL TAX COLLECTIONS, 1964



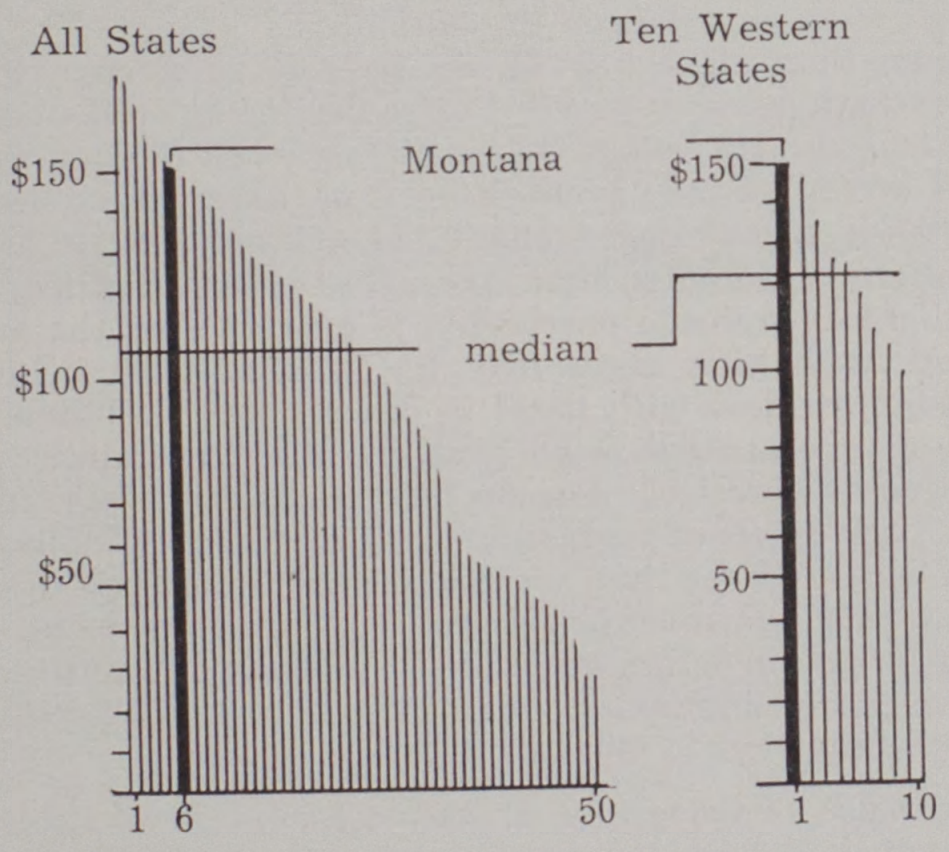
Source: United States Department of Commerce, Bureau of the Census, *Governmental Finances in 1958.*

Our total taxes per capita ranked seventeenth in the nation and fourth in the region. (See Figure 4.) As a percentage of personal income, they ranked fifth and second respectively. When we compare these rankings with the rankings of our state taxes only, it is obvious that we provide much less state aid to local governments than the typical state does. Since our state aid is low, our taxes at the state level can also be low, but this means our local taxes must be very high. Thus, the level of our state-*plus*-local taxes also ranks quite high. The amounts by which the rankings of our total taxes as a percentage of personal income exceed the per capita ranking can, for the most part, be explained by the fact that personal income per capita in the state is lower than the national or regional average.

Property taxation contributes well over half of state-*plus*-local tax revenue in Montana. Our state-*plus*-local property tax

FIGURE 5

MONTANA'S RANKING ACCORDING TO PER CAPITA STATE AND LOCAL PROPERTY TAX COLLECTIONS, 1964



Source: Same as Figure 4.

collections in 1964 were $150.58 per capita, or 6.7 percent of personal income in the state. These collections ranked fifth in the nation and highest in the region on a per capita basis. (See Figure 5.) They ranked second in both the nation and the region as a percentage of personal income.

These high rankings may result from the fact that we rely more heavily on the property tax as a revenue source than the average state, or because there is much more property per person in Montana than in the typical state. Property taxation contributed almost 59 percent of our state and local tax revenues; the national average was 44 percent. The amount of residential and farm property owned per capita in Montana was estimated to be 148 percent of the United States average in 1962.[2]

Concluding Remarks

The figures and comparisons in this article show that the level of our total state tax collections ranks significantly below the national and regional medians, but that our state-*plus*-local taxes rank above the median, nationally and regionally. The level of our state-*plus*-local property tax collections is almost as high as in any state in the nation.

Higher than average taxes in a state do not necessarily indicate extravagance or waste. Public desires or economic conditions may dictate higher than average levels of state services; therefore higher than average levels of taxes will be necessary to finance them. For example, Montana highway user tax collections are higher than average, because highway usage and highway mileage per person is greater than the average. A state with high taxes may be "coming from behind" in matching services with those in other states. Relatively high taxes as a percentage of personal income may indicate a less-than-average level of personal income, as is the case in Montana. High levels of particular taxes may simply indicate that these levies, rather than some alternate tax source, are being used to raise tax revenue. However, if the reader keeps these qualifications in mind, he is likely to find state-to-state comparisons useful in making judgments about our tax system and in exploring ways to improve it.

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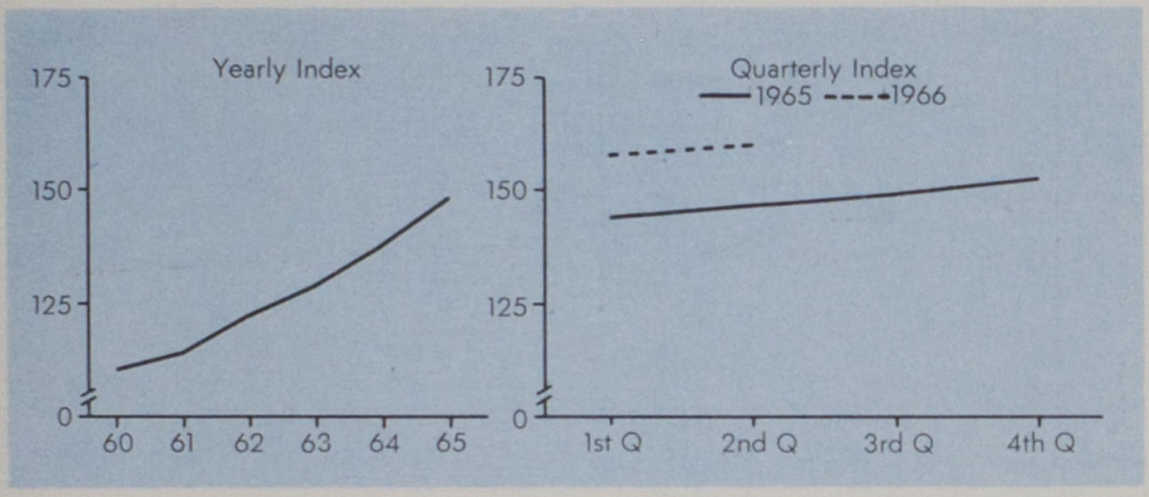
[2]United States Department of Commerce, Bureau of the Census, *1962 Census of Government.*

National Indicators —

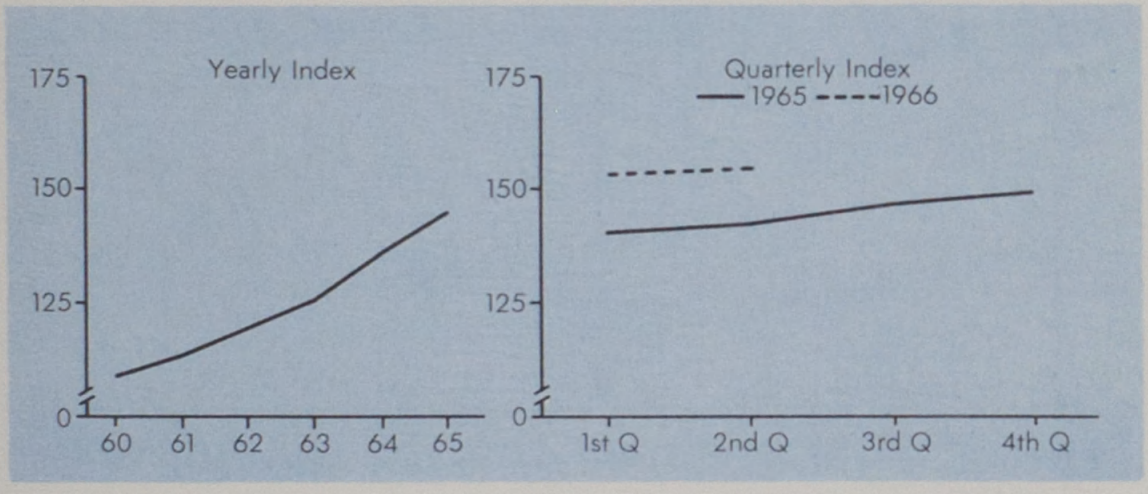
GROSS NATIONAL PRODUCT

1957-59 = 100 — Seasonally adjusted, annual rates



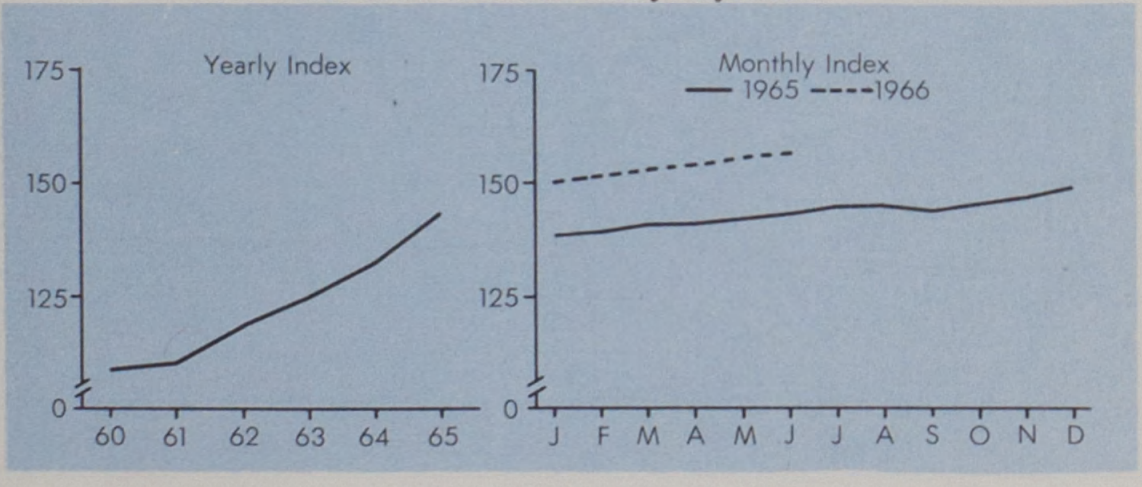
DISPOSABLE PERSONAL INCOME

1957-59 = 100 — Seasonally adjusted, annual rates



INDUSTRIAL PRODUCTION

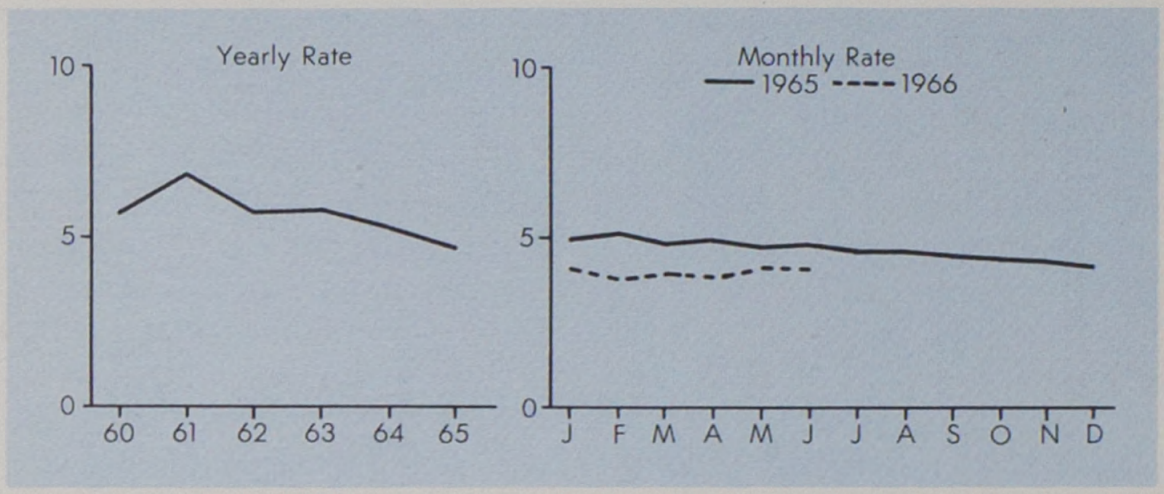
1957-59 = 100 — Seasonally adjusted



National Indicators —

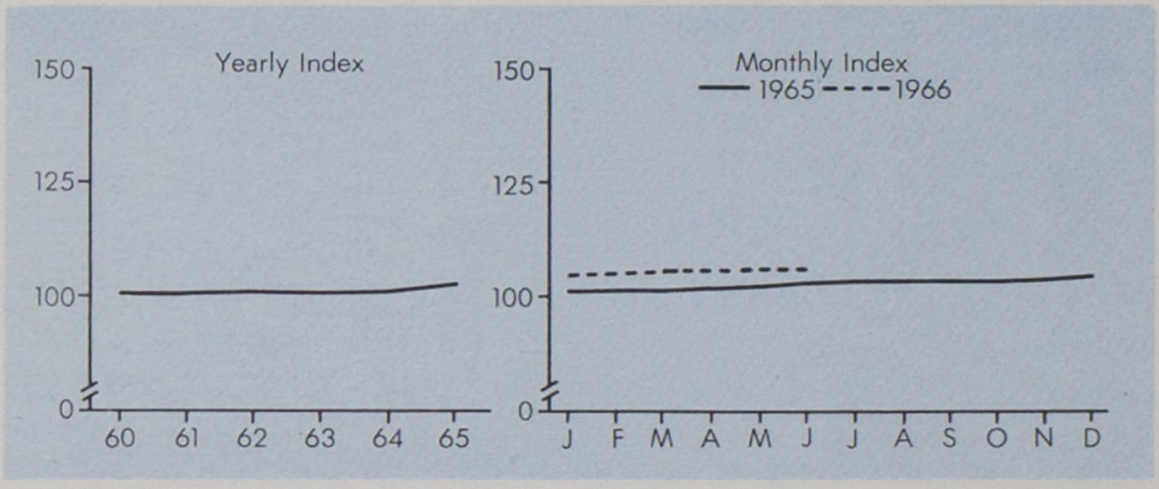
UNEMPLOYMENT AS % OF THE LABOR FORCE

Seasonally adjusted



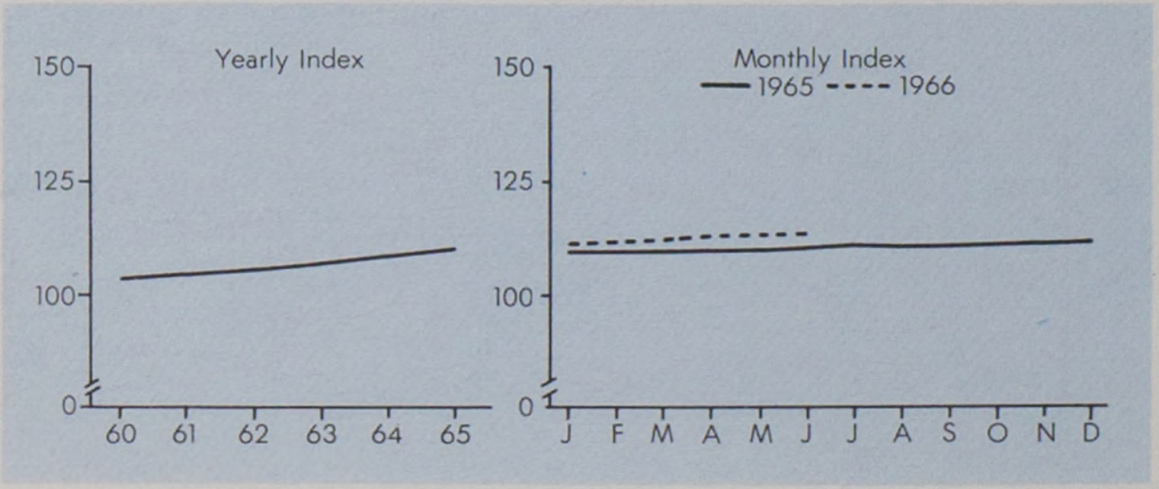
WHOLESALE PRICE INDEX

1957-59 = 100



CONSUMER PRICE INDEX

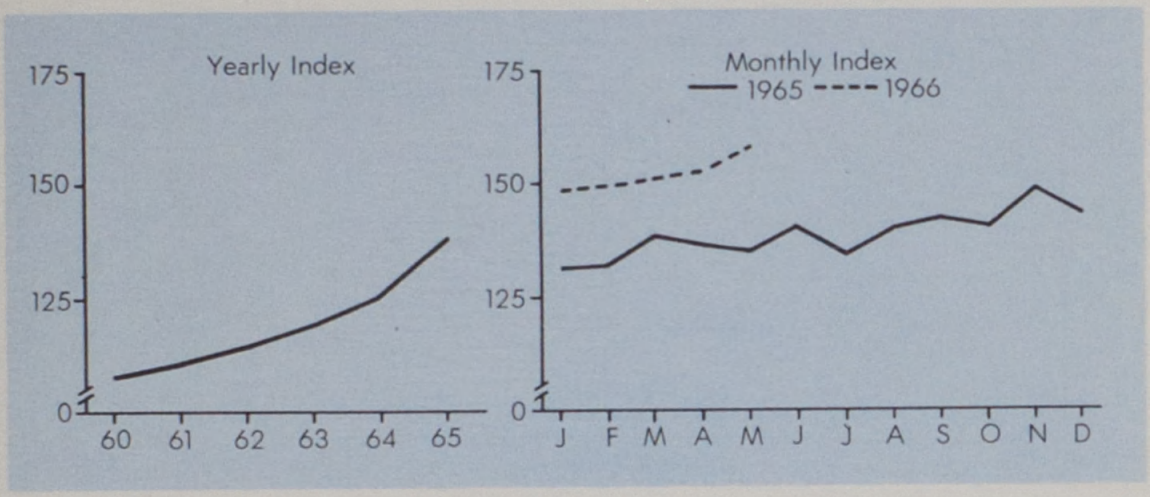
1957-59 = 100



Montana Indicators —

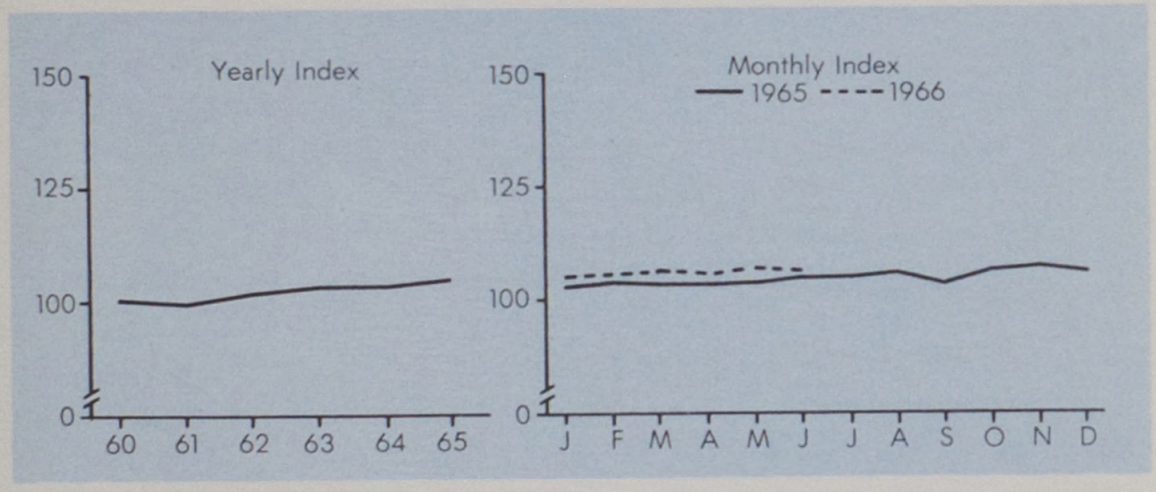
BANK DEBITS

1957-59 = 100 — Seasonally adjusted



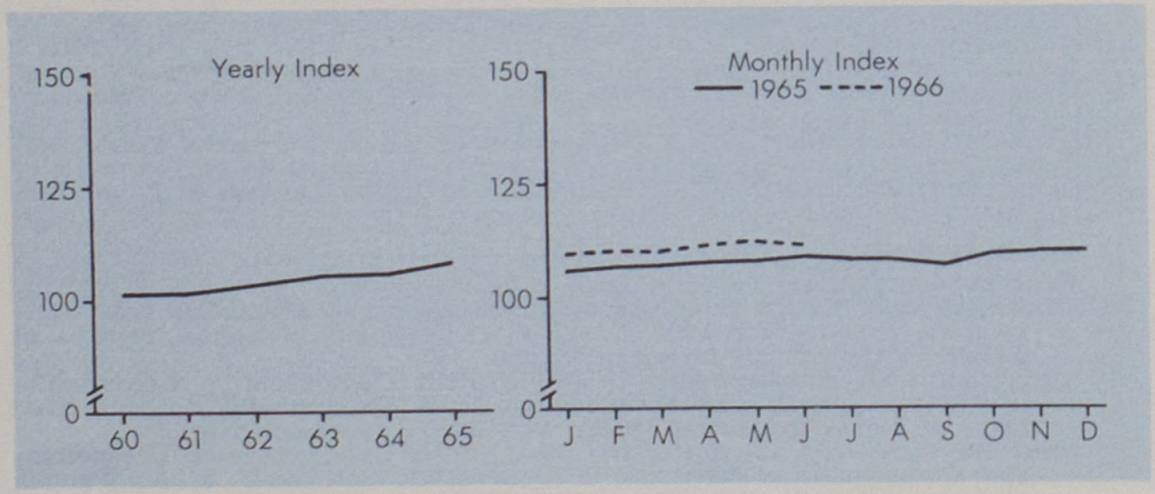
EMPLOYED WORK FORCE

1957-59 = 100 — Seasonally adjusted



NONAGRICULTURAL EMPLOYMENT

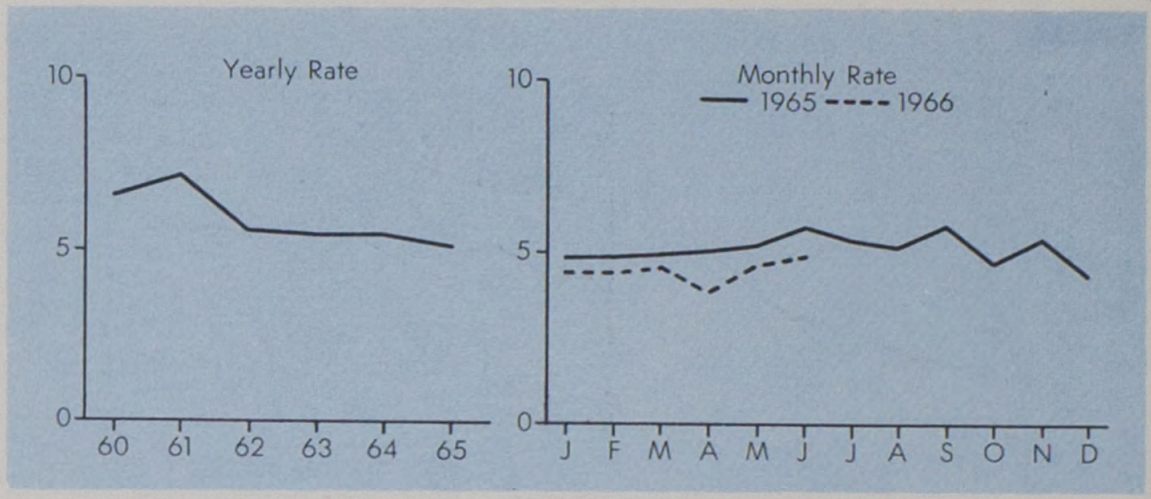
1957-59 = 100 — Seasonally adjusted



Montana Indicators —

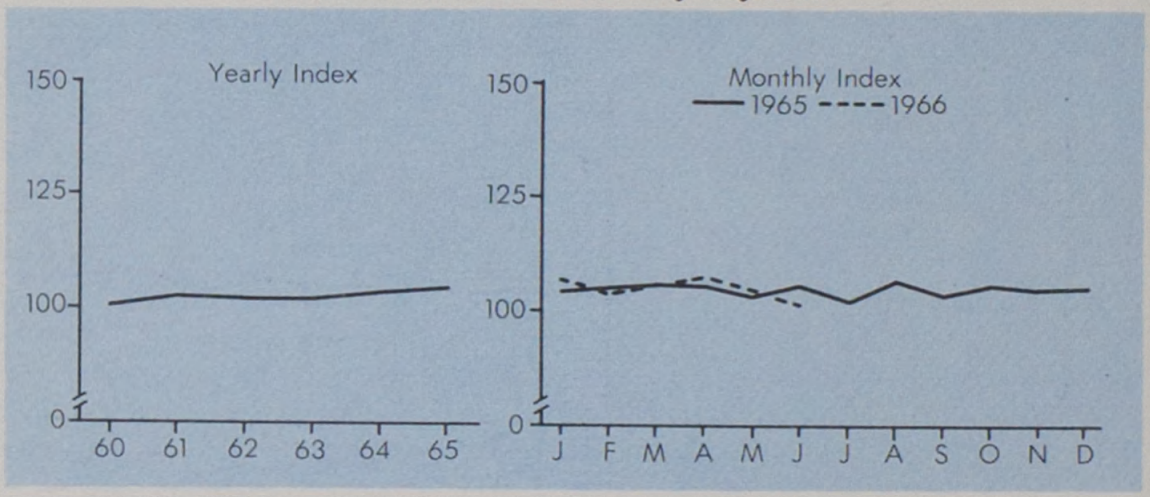
UNEMPLOYMENT AS % OF THE LABOR FORCE

Seasonally adjusted



AVERAGE WEEKLY HOURS, MANUFACTURING

1957-59 = 100 — Seasonally adjusted



SOURCES OF DATA

National Indicators

Gross national product: U. S. Department of Commerce, Office of Business Economics.

Disposable personal income: U. S. Department of Commerce, Office of Business Economics.

Industrial production: Board of Governors of the Federal Reserve System.

Unemployment as a percent of the labor force: U. S. Department of Labor, Bureau of Labor Statistics.

Wholesale price index: U. S. Department of Labor, Bureau of Labor Statistics.

Consumer price index: U. S. Department of Labor, Bureau of Labor Statistics.

Montana Indicators

Bank debits: Federal Reserve Bank of Minneapolis.

Employed work force: Unemployment Compensation Commission of Montana, in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics. Excludes military.

Nonagricultural employment: Unemployment Compensation Commission of Montana, in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics. Wage and salary workers only.

Unemployment as a percent of the labor force: Unemployment Compensation Commission of Montana, in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics.

Average weekly hours in manufacturing industries: Unemployment Compensation Commission of Montana in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics.

Impact of Recent Births and Birth Rates On Future Elementary and Secondary School Enrollment in Montana

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Introduction

During the last five years (1961-1965) the number of babies born in Montana was 78,855. In the previous five year period from 1956 through 1960, 88,291 babies were born in Montana. In 1965 there were 13,641 babies born in Montana whereas in 1957 there were 18,219 babies born in Montana. There has been some discussion about the smaller number of babies born during the past five years[1]—discussion from which one might conclude that there will be a considerable reduction in elementary and secondary school enrollments in Montana and that the difficulties of financing local schools will be relieved. But certain facts about Montana's population do not support these conclusions about school enrollment in some counties in the short run (1967-1971) or statewide in the long run.

While the old method of schoolboards' forecasting school enrollment by a simple neighborhood head count was better than using a crystal ball, a district canvass could only predict school enrollment for the succeeding five or six years. It did not take into account the fact that Susie Smith in the eighth grade will soon be having children who will probably be entering the first grade in the next ten or fifteen years; and that in the longer run, the very six-year-old enrolling this year will have a six-year-old who will enroll in about twenty-six years. This paper provides an analysis of births and birth rates and provides projections of first grade enrollments for the next ten years. The

[1]"Baby Boom a Bust Here, State Also Slumps," *The Great Falls Tribune*, (January 28, 1966), p. 20.

analysis and projections clarify interpretations of recent Montana birth rate experience and their implications for local schools in Montana.

Farsighted educators and taxpayers could use these projections to use school funds more efficiently over the long run.

The Crude Birth Rate Fallacy

The crude birth rate is the total number of live births divided by the total male and female population, multiplied by 1,000. The rate is interpreted as the number of births per 1,000 population. On the basis of trend, the crude birth rate has been falling since about 1950. But, if one studies the data carefully it can be seen that in some years, although the crude birth *rate* fell, the number of births increased. Hence, changes in the crude birth rate do not always indicate changes in the absolute number of births.

Two factors determine the absolute number of births. First, the number of women of child-bearing age, 15-49 years old, is the relevant population determining the number of *potential* births. Second, the age-specific birth rates of women who are 15-49 years old determines the *actual* number of births. The age-specific birth rate is the total number of women in an age class divided into the number of births to women in that age class, multiplied by 1,000. The age-specific birth rate is interpreted as the number of births per 1,000 women in a particular age class.[2]

Table 1 shows the age-specific birth rates for seven age classes for Montana women in 1960 and demonstrates the importance of concentration of women in the younger age classes. In the age classes 20 through 24 years old and 25 through 29 years old, the birth rates are 319.1 and 220.1 births per 1,000 women, respectively. There were 128.1 births per 1,000 women 30-34 years old in 1960. Obviously if Montana finds itself with large numbers of women in the three age classes 20-24, 25-29, and 30-34 years old in the near future, we might expect a large number of births. On the other hand, if there are few women in these age classes, we will have a small number of births.

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[2]The total number of women 15-49 years old divided into the total number of births, multiplied by 1,000 is sometimes referred to as the fertility ratio.

TABLE 1

AGE-SPECIFIC BIRTH RATES OF THE MONTANA FEMALE POPULATION IN SEVEN CHILD-BEARING AGE CLASSES FOR 1960

Age Class	Births Per 1,000 Women[1] 1960
15-19	96.9
20-24	319.1
25-29	220.1
30-34	128.1
35-39	61.4
40-44	18.4
45-49	1.9

[1]Computed from the U. S. Department of Health, Education, and Welfare, National Office of Vital Statistics, *Vital Statistics of the United States,* Volume I, Natality, Tables 2-14, pp. 2-40.

Implications of Births for Periods Subsequent to the Time of Birth

Changes in the absolute number of births have implications for school enrollment in periods after these babies are born. The first and most direct implication is that those born six years earlier will enter the school system at age six. The second implication is that female babies born in a specific year will have children who will enter the school system 26 or more years after the birth of their mothers.

Table 2 shows: (1) the births in Montana in five year intervals, (2) the years in which those born in the various five year intervals will enter school, (3) the years in which the female portion of those born in the five year intervals will become 20 years old (or of child bearing age), (4) the age in 1965 of those born in the five year intervals, and (5) the age in 1970 of those born in the five year intervals. A close look at Table 2 will show the impact of births in one period on later periods.

Thus we can see that the 73,937 births that occurred between 1946 and 1950 explain, in large part, the large increases in school enrollments from 1952 to the present. Those born during the 1946-1950 five year period were six years old and entering school during the 1952-1956 five year period; their children, (those born during the 1956-1960 five year period) have been entering the school system in Montana since 1962.

TABLE 2

BIRTHS IN MONTANA IN FIVE YEAR INTERVALS SINCE 1921 AND PROJECTED TO 1970

Years	Births[1]	Years in Which Those Born in Five Year Intervals Enter School	Years in Which Those Born Will Become 20 Years Old	Age in 1965 Of Persons Born In Five Year Intervals	Age in 1970 Of Persons Born In Five Year Intervals
1921-1925	54,296	1926-1931	1941-1945	40-44	45-49
1926-1930	50,039	1932-1936	1946-1950	35-39	40-44
1931-1935	47,660	1937-1941	1951-1955	30-34	35-39
1936-1940	53,686	1942-1946	1956-1960	25-29	30-34
1941-1945	56,231	1947-1951	1961-1965	20-24	25-29
1946-1950	73,937	1952-1956	1966-1970	15-19	20-24
1951-1955	83,734	1957-1961	1971-1975	10-14	15-19
1956-1960	88,291	1962-1966	1976-1980	5-9	10-14
1961-1965	78,855	1967-1971	1981-1985	0-4	5- 9

[1]Source: Montana State Board of Health, *Annual Statistical Supplement 1963*, p. 3; and from supplementary data furnished by John Wilson, State Registrar.

The female babies born during the intervals 1936-1940 and 1941-1945 are now about 25-29 and 20-24 years old, respectively. The female portion of the high number of births occurring in the intervals 1946-1950 and 1951-1955 will reach the highly fertile age classes of 25-29 and 20-24 years old, respectively, in the intervals 1971-1975 and 1976-1980, respectively. The female portion of births occurring in the period 1956-1960 will reach the highly fertile age classes 20-24 and 25-29 years old in the periods 1976-1980 and 1981-1985, respectively. This might presuppose an awesome increase in enrollments in Montana schools in the early 1980's, but there are other factors to take into account.

Montana Female Population 15-49 by Age Classes, 1950, 1960, and Projected to 1970

In 1950 Montana had 137,030 women 15-49 years old and there were 147,027 women 15-49 years old in 1960. Projections indicate that we might expect 173,431 women 15-49 years old in Montana in 1970. Table 3 shows the number of women in seven

age classes for 1950, 1960, the number projected for 1970, and the percentage that the women in each age class make up of the total.

TABLE 3

FEMALE POPULATION IN MONTANA OF CHILD-BEARING AGE CLASSES FOR 1950, 1960, AND PROJECTED TO 1970

Age Class	Number of Females[1] 1950	Percent of Total 1950	Number of Females[1] 1960	Percent of Total 1960	Projected Number of Females[2] 1970	Percent of Total 1970
15-19	19,940	14.55	25,381	17.26	36,931	21.29
20-24	19,845	14.48	20,025	13.62	31,106	17.94
25-29	21,450	15.65	19,531	13.28	25,454	14.68
30-34	22,235	16.23	20,336	13.83	20,712	11.94
35-39	20,795	15.18	21,334	14.51	19,493	11.24
40-44	17,670	12.89	21,212	14.43	19,940	11.50
45-49	15,095	11.02	19,208	13.06	19,795	11.41
Total	137,030	100.00	147,027	99.99	173,431	100.00

[1]Source: U. S. Bureau of the Census, *U. S. Census of Population: 1960.* Detailed Characteristics, Final Report PC(1)-28D, Table 96, p. 181.
[2]Projections made for each of the 56 counties of the state were added to get the state projection shown here.

The projections were made on the assumption that the rate of net migration of women in the state of Montana would be the same for the 1960-1970 decade as it was for the 1950-1960 decade. The projections also assumed that the death rates of women in the 1950-1960 decade will continue in the 1960-1970 decade.

Since the projections indicate that we might expect a significant increase in the concentration of women in the first three age classes (15-19, 20-24, and 25-29 years old) during the 1960-1970 decade, from 1960 to 1970 we should expect the number of women 15-49 years old to increase by 26,404. More significantly, however, we might expect an increase of 28,554 in the first three age classes because of the large number of female babies born from 1941 through 1955. Declines because of deaths and out-migration of women, are expected in the number of women in the two age classes, 35-39 and 40-44 years old, from 1960 to 1970.

Those women who will be 15-19 years old in 1970 were born during the five year period 1951-1955; those women who will be 20-24 years old in 1970 were born in the five year period 1946-

1950; and those women who will be 25-29 years old in 1970 were born in the period 1941-1945. The number of births in Montana jumped from 56,231 in the 1941-1945 period to 73,937 in the 1946-1950 period, and to 83,734 in the 1951-1955 period.[3] Furthermore, the number of births from 1956 through 1960 was 88,291, or 4,557 more than the previous five year period. Women born during the five year period 1956-1960 will be 20-24 years old during the last five years of the 1970 decade and 25-29 years old during the first five years of the 1980 decade. Thus, we may expect a significant increase in the number of women in the highly fertile age classes in Montana between 1966 and 1975 because of the large number of births that occurred from 1946 through 1955.

Projected Births in Montana in 1970

The number of women in the highly fertile age classes determines the *potential* births. The number of births can be computed through knowledge of the births per 1,000 women in each age class in 1970 or the age-specific birth rates. By multiplying the age-specific birth rate times the projected number of women in each age class and dividing by 1,000, we get the projected number of births to women in each age class in the year 1970. The projected births for 1970, using the projected number of women in each age class in 1970 shown in Table 3 and the age-specific birth rates for 1960 shown in Table 1, is 23,355. This is 5,136 more births than in any other year of record in Montana history.

However, these assumptions fail to take into account the probability that the age-specific birth rates will decline between now and 1970 because of new and more effective birth control measures. This study has made a liberal allowance for this factor by reducing age-specific birth rates fifteen percent, and another projection was made for the purposes of comparison.[4] Table 4 shows projected births to women in the seven age classes using both the 1960 age-specific birth rates and the age-specific birth rates adjusted downward for the presumed decline in birth rates due to new birth control measures.

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[3]Montana State Board of Health, *Annual Statistical Supplement 1963*, p. 3, and supplementary data furnished by John Wilson, State Registrar.

[4]The fifteen percent reduction in age-specific birth rates is an arbitrary figure, since there are no available criteria by which to judge the extent to which the new birth control measures will reduce birth rates.

TABLE 4

PROJECTED BIRTHS TO MONTANA WOMEN USING THE 1960 AGE-SPECIFIC BIRTH RATES AND THE REDUCED AGE-SPECIFIC BIRTH RATES[1]

Age Class	Birth Rate 1960[2]	Births in 1970 Using 1960 Birth Rates	Adjusted 1960 Birth Rates[3]	Births in 1970 Using Adjusted 1960 Birth Rates
15-19	96.9	3,581	82.4	3,046
20-24	319.1	9,924	271.2	8,436
25-29	220.1	5,600	187.1	4,764
30-34	128.1	2,654	108.9	2,254
35-39	61.4	1,196	52.2	1,016
40-44	18.4	368	15.6	311
45-49	1.9	32	1.6	27
		23,355		19,854

[1]Projected births in each county were computed and the projection for each age class in the 56 counties was added to get the state projection shown in this table.

[2]Birth rates are the same as those in Table 1.

[3]The adjusted birth rate in each age class is .85 multiplied by the birth rate in each age class in 1960.

The downward adjustments assume that the simple average of age-specific birth rate will fall 15 percent from 1960 to 1970. Under this assumption, the estimated births in 1970 in Montana will be 19,854, which is still 1,635 births more than the 18,219 born in the year 1957, the year of the largest number of births in Montana history. The lower projection is 3,501 births less than the projection using the unadjusted 1960 age-specific birth rates.

The State Board of Health enumerated 1965 births to be 13,641. If the unadjusted projection is realized, (that is, if 1970 birth rates are the same as those in 1960) annual births in Montana will *grow* from 13,641 in 1965 to 23,355 in 1970, an increase of 9,714 births. If the lower projection is realized (that is, if birth rates fall by 15 percent) annual births will grow to 19,854 in 1970, an increase of 6,213 births from 1965 through 1970.

Using the unadjusted birth rate projection, we might expect 92,488 births during the five year period 1966 through 1970. The lower birth rate projection indicates that we might more credibly expect 83,737 during the five year period 1966 through 1970, or 8,751 births less than the unadjusted birth rate projection.

The 15 percent reduction over the next five years in age-specific birth rates seems to be greater than we could reason-

ably expect. However, it is very difficult to forecast the effect of new birth control measures. In any case, such a reduction is considered a maximum reduction in age-specific birth rates. Even with an extreme reduction in birth rates we can expect to have more births from 1966 to 1970 than we had from 1960 to 1965. (See Table 2).

Expected First Grade Enrollments in Selected Montana Counties for the 1967-1971 Five Year Period

Based on available knowledge of births in Montana during the periods 1956-1960 and 1961-1965 and knowledge of the percentage of those born who will enter the first grade six years later, we can estimate first grade enrollments for the periods 1962-1966 and 1967-1971.

Table 5 shows, for the state and for selected counties: (1) actual births 1956-1960 and 1961-1965, (2) the implied first grade enrollments in 1962-1966 and 1967-1971, and (3) expected changes in first grade enrollments from the 1962-1966 five year period to the 1967-1971 period.

The decline in the number of births of 9,436 from the 1956-1960 five year period to the 1961-1965 five year period is expected to result in 8,776 fewer first grade enrollees from the 1962-1966 five year period to the 1967-1971 five year period. Thus, over the next five years we may expect first grade enrollees statewide to be about 1,755 per year less than they were from 1962-1966. Since the above analysis is for the state as a whole and some individual counties are different than the state, an analysis for selected counties is presented.

Cascade, Lewis and Clark, Missoula, and Big Horn counties are not expected to have a decline in enrollees over the next five years. The largest increase during the next five years is expected in Cascade County which may anticipate an additional 40 first grade enrollees per year from now until 1971. Silver Bow and Yellowstone counties can anticipate 254 and 261 less first grade enrollees per year during the 1967-1971 five year period.

TABLE 5

ACTUAL BIRTHS AND PROJECTED BIRTHS IN FIVE YEAR INTERVALS 1956 THROUGH 1965 ESTIMATED AND PROJECTED ENROLLMENTS IN FIVE YEAR INTERVALS 1962 THROUGH 1971 FOR SELECTED MONTANA COUNTIES

Counties	Births[1]		Estimated Change in Births 1956-1960 to 1961-1965	First Grade Enrollments[2]		Change in Enrollments Projected 1962-1966 to 1967-1971
	Actual 1956-1960	Actual 1961-1965		Estimated 1962-1966	Projected 1967-1971	
Cascade	10,763	10,977	214	10,010	10,209	199
Dawson	1,906	1,414	–492	1,773	1,315	–458
Deer Lodge	2,304	1,426	–878	2,143	1,326	–817
Flathead	3,997	3,534	–463	3,717	3,287	–430
Gallatin	3,162	2,879	–283	2,941	2,677	–264
Hill	3,011	2,221	–790	2,800	2,066	–734
Lewis & Clark	3,470	3,609	139	3,227	3,356	129
Lincoln	1,769	1,647	–122	1,645	1,532	–113
Missoula	5,669	5,724	55	5,272	5,323	51
Park	1,285	1,113	–172	1,195	1,035	–160
Silver Bow	6,390	5,026	–1,364	5,943	4,674	–1,269
Yellowstone	10,150	8,746	–1,404	9,440	8,134	–1,306
Total	53,876	48,316	–5,560	50,106	44,934	–5,172
Big Horn	1,553	1,686	133	1,444	1,568	124
Lake	1,496	1,396	–100	1,391	1,298	–93
Total	3,049	3,082	33	2,835	2,866	31
Remaining Counties	31,366	27,457	–3,909	29,170	25,535	–3,635
Total, All Counties	88,291	78,855	–9,436	82,111	73,335	–8,776

[1]Actual births are taken from Montana State Board of Health, *Annnual Statistical Supplements*, 1956 through 1963, and from supplementary data furnished by John Wilson, State Registrar.

[2]First grade enrollments for 1962-1966 and 1967-1971 were computed by multiplying .93 times births. See *The Research Record*, Vol. 7, No. 2, p. 4, (January-February 1961, School of Education, University of Montana, Missoula). First grade enrollments for the period 1962-1966 are estimates because published data are not available for more recent years.

Expected First Grade Enrollments in Selected Montana Counties for the 1972-1976 Five Year Period

Enrollments in the 1972-1976 five year period will depend on the births that will occur during the 1966-1970 five year period. Births for the period 1966-1970 were projected for each county using the two assumptions regarding birth rates. The "high" projection is made using the 1960 age-specific birth rates of women, whereas the "low" projection was made using 85 percent of the 1960 age-specific birth rates of women. These projections for the state as a whole appear in Table 4. Table 6 shows the expected births during the 1966-1970 period using both birth rate assumptions and enrollments for the period 1972-1976 for selected Montana counties. Expected changes in enrollments from the five year period 1966-1971 to the five year period 1972-1976 are also shown in Table 6.

Enumerated births in the 1960-1965 five year period were 78,855. Using the unadjusted birth rate projection we might expect 92,488 births during the 1966-1970 period or 13,633 births more than the 1960-1965 period. The 92,488 births expected during the 1966-1970 period imply that we will have 86,014 first grade enrollees during the five year period from 1972 through 1976. The expected enrollees of 86,014 during the period 1972-1976 exceed expected enrollees during the period 1967-1971 by 12,679. Thus, using the unadjusted birth rate projection we may expect to have 2,536 first grade enrollees more per year during the 1972-1976 five year period than during the 1966-1971 five year period in the State.

Cascade, Gallatin, Missoula, and Yellowstone counties may be expected (by the unadjusted birth rate) to experience an increase of 2,095, 1,209, 1,756, and 4,113 in enrollees, respectively, from the 1967-1971 five year period to the 1972-1976 five year period. These four counties are expected to account for 72 percent of the statewide increase in first grade enrollments from the 1967-1971 five year period to the 1972-1976 five year period.

If, because of birth control, birth rates fall 15 percent during the 1966-1970 period, we may expect 83,737 births or 4,882 more births during the 1967-1971 five year period than were enumerated statewide during the 1960-1965 five year period. Even if birth rates fall 15 percent, we may still expect 4,540 more enrollees statewide during the 1972-1976 five year period

TABLE 6

EXPECTED BIRTHS 1966-1970 USING TWO BIRTH RATE ASSUMPTIONS, IMPLIED ENROLLMENTS 1972-1976, AND EXPECTED CHANGES IN ENROLLMENTS FROM 1967-1971 TO 1972-1976

Counties	Births 1966-1970		1972-1976[3] First Grade Enrollments		Change in Enrollments From 1967-1971 to 1972-1976	
	1960 Birth Rates[1]	Adjusted 1960 Birth Rates[2]	Implied by 1960 Birth Rates	Implied by Adjusted 1960 Birth Rates	Implied By 1960 Birth Rates	Implied By Adjusted 1960 Birth Rates
Cascade	13,230	11,912	12,304	11,078	2,095	869
Dawson	1,882	1,690	1,750	1,572	435	257
Deer Lodge	1,998	1,788	1,858	1,663	532	337
Flathead	4,022	3,700	3,741	3,441	454	154
Gallatin	4,178	3,722	3,886	3,461	1,209	784
Hill	2,670	2,385	2,483	2,218	417	152
Lewis & Clark	3,945	3,582	3,669	3,331	313	–25
Lincoln	2,090	1,895	1,944	1,762	412	230
Missoula	7,612	6,858	7,079	6,378	1,756	1,055
Park	1,495	1,345	1,390	1,251	355	216
Silver Bow	5,282	4,850	4,912	4,510	238	–164
Yellowstone	13,168	11,782	12,247	10,957	4,113	2,823
Total	61,572	55,509	57,263	51,622	12,329	6,688
Big Horn	1,580	1,468	1,469	1,365	–99	–203
Lake	1,270	1,178	1,181	1,096	–117	–202
Total	2,850	2,646	2,650	2,461	–216	–405
Remaining Counties	28,066	25,582	26,101	23,792	566	–1,743
Total, All Counties	92,488	83,737	86,014	77,875	12,679	4,540

[1]Projected births are computed by multiplying age-specific birth rates of women in 1960 times the projected number of women. See Table 1 for age-specific birth rates in 1960.

[2]Projected births are computed by multiplying adjusted age-specific birth rates of women in 1960 times the projected number of women. See Column 4 of Table for adjusted age-specific birth rates of women.

[3]Enrollments are computed by multiplying .93 times births. The .93 rate allows for parochial school enrollments in addition to the fact that some of the babies who are born in Montana go to another state before they enroll in the first grade. Also, some children die before they reach six years old.

than we expect during the 1966-1971 five year period. In this case, Cascade, Gallatin, Missoula, and Yellowstone counties would account for 122 percent of the state wide increase in first grade enrollees. Lower birth rates will result in reductions in enrollees in other counties by a percentage that more than offsets the increases in those four counties. Notice that six additional counties, Dawson, Deer Lodge, Flathead, Hill, Lincoln, and Park may anticipate increases in enrollment between the 1966-1971 and 1972-1976 five year periods even if birth rates fall fifteen percent.

Summary and Qualifications

During the period 1966-1971 Montana can expect that first grade enrollments will decline statewide by 8,776 enrollees. Missoula, Big Horn, and Cascade counties are not expected to experience a decline in first grade enrollment from 1962-1966 to 1967-1971, but the increases annually are very small. The major reason for the expected decline in enrollment is that, during the period six years previous to 1962-1966, Montana had a relatively small number of women in the highly fertile age classes.

Another reason for the expected decline in enrollment from the 1962-1966 five year period to the 1967-1971 five year period is that birth rates fell and fewer births occurred because of the lower birth rates alone. Both factors (that is, fewer women and lower birth rates) are probably instrumental in the lower births in the state from 1960-1965, but it is highly likely that lower birth rates are a less important factor than the fewer number of women.

The female portion of the higher number of births that occurred during the 1946-1950 five year period will be reaching the highly fertile age classes from 1966 through 1971. This is the most important factor contributing to the expected increase in births from the 1960-1965 period to the 1966-1971 five year period and, hence, the expected increase in enrollments from the 1967-1971 period to the 1972-1976 period. Even if age-specific birth rates decline 15 percent from now to 1971, we may expect more births from the 1967-1971 period than we had from 1960 through 1965, and thus more six-year-olds ready for school in the 1972-1976 five year period than we expect in the 1967-1971 five year period.

Therefore, although we may expect a slight decline in first

grade enrollment during the next five years, the predictable increase in enrollment again in the 1972-1976 period makes it difficult to conclude that Montana's long-run elementary and secondary school financing problems are relieved. Even if birth rates fall 15 percent in the near future, ten counties are expected to have larger enrollments during the 1972-1976 five year period than during the 1967-1971 five year period. If birth rates do not fall between 1960 and 1970, at least twelve counties can anticipate large increases in enrollment. These counties can rely on decreased enrollment for no more than five years (1966-1971); after that, the number of first grade enrollments will become larger than they were during the 1962-1966 period.

Undoubtedly some, but not all, local schools will experience smaller classes or empty school rooms or both over the next five years. This could be beneficial if with fewer children per classroom, substantial increases in the quality of education should be realized. But while empty school rooms may cause some concern on the part of educators and taxpayers, they should recognize that in the early part of the decade of the 1970's these empty rooms will fill again. Worried educators and taxpayers may also recognize that, since building costs are increasing, substantial reductions in, or termination of, local school building programs in response to the anticipated decreases in first grade enrollment during the 1967-1971 five year period are not justified in all counties. More facilities will be needed in the 1972-1976 period. If the new facilities are ready for the anticipated influx of six-year-olds during the 1972-1976 period, the high costs to the students of overcrowding may be eliminated.

If taxpayers and educators would take advantage of the predictability of school enrollments and formulate school building and operating programs in the context of ten or fifteen years into the future, a more efficient use of school funds could be made and improvements in the quality of education could be planned more easily.

The Business Outlook

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The Nation

For more than five and one-half years Americans have been enjoying the longest economic expansion in the history of the United States. During the three months ending June 30, 1966, they produced goods and services at an annual rate of $732 billion.[1] Five years earlier, during the second quarter of 1961, the comparable figure had been $514.9 billion. Even after allowance for price increases, gross national product has been increasing at an annual rate of around 5 percent since 1961. This highly satisfactory growth rate is a tribute both to American businessmen and to government policy-makers, particularly those responsible for the tax cut in 1964. It is worth noting that by far the greater part of the growth since 1961 has occurred in the private economy. In 1965, despite the Vietnam conflict, federal government spending for goods and services made up a smaller proportion of gross national product than at any time since 1950.

If all this makes pleasant reading, it does not mean that the U. S. economy is without problems. While most Americans are more prosperous than ever and fewer are unemployed (only 4 percent of the labor force), economists, businessmen, and government officials, having learned a great deal about recessions in the past, now are concentrating on how to preserve long-term prosperity without excessive price increases.

Despite its unprecedented prosperity, the U. S. economy at midsummer was confronted with the threat of inflation. During both the first and second quarters the prices of all goods and services making up gross national product rose at an annual rate of slightly over 3½ percent. High interest rates, brought about by Federal Reserve action, proved ineffective in slowing

[1]Preliminary estimate, seasonally adjusted annual rate. U. S. Department of Commerce.

over-all business expansion, although some parts of the economy—notably housing—have been affected rather severely. Many experts feel that a moderate tax increase, however unpalatable politically, is the answer to rising price levels.

Preliminary reports indicate that some slowing down in expansion occurred during the second quarter; gross national product increased $10.8 billion, compared to a $16.8 billion rise between the fourth quarter 1965 and first quarter 1966. Much of the slowdown was attributed to a tapering off in the increase in consumer spending for durable goods, notably automobiles. The reason was simple: the rise in consumer disposable income was about half what it had been during the first quarter. Nevertheless, considerable room for rapid expansion remains. With new manufacturing capacity coming into production, a growing labor force, and with prospects of increased defense spending, the remainder of 1966 will surely bring further substantial increases in business activity. The problem for the foreseeable future will remain one of maintaining reasonable price stability in a booming economy.

The State

Montana, of course, has shared in the national economic expansion of recent years. Because of the nature of its economy, which is far more dependent upon natural resources, the growth in the state has been somewhat less. Perhaps the best comparison available is per capita income.

PER CAPITA INCOME[2]

Year	Montana	United States
1960	$2,039	$2,215
1961	1,974	2,264
1962	2,273	2,368
1963	2,263	2,451
1964	2,295	2,574
1965	2,409	2,724

[2]U. S. Department of Commerce, Office of Business Economics.

We can see from the above that personal income growth in Montana has been slightly slower than it has been in the nation at large. However, excluding the recovery in 1962 from the effects of 1961's drought, the increase in the state's per capita

income between 1964 and 1965, amounting to 5 percent represents one of the most satisfactory increases in any recent year. The growth in Montana was attributable to substantial gains in total income both from agriculture (7 percent) and from private nonfarm sources (6 percent).

In midsummer 1966, more Montanans were at work than ever before; the Montana Unemployment Compensation Commission, in a preliminary estimate, placed the state's total employed labor force in June at 267,900. When this figure is seasonally adjusted, it represents an increase of approximately 2 percent over 1965. Unemployment in Montana, estimated at 49 percent of the labor force in June, was higher than in the United States, where the estimated rate was 4.0 percent. The continuing high rate of out-migration from the state has, of course, helped to keep unemployment low. On the other hand, several urban areas in the state report shortages of some types of skilled workers.

Unemployment Compensation Commission figures on the employment of nonagricultural wage and salary workers during the first six months of 1966 and for all of 1965 reveal that three industry groups are responsible for most of the employment gain. Higher employment this year in the wood products industry has boosted manufacturing employment. A small increase in wholesale and retail trade employment reflects higher personal incomes and greater spending in the state. Most of the increase in nonagricultural employment, however, is the result of growing numbers of government employees, especially in state and local government. During the early part of 1966, construction employment exceeded comparable months in 1965. In June, the number of workers in the industry fell below June 1965, apparently reflecting the decline in residential building. As the large volume of commercial, industrial and government construction scheduled for the state gets underway, however, employment in the industry may well return to last year's high levels.

As a result of the over-all gain in nonfarm employment, total nonagricultural income in the state should show a fairly good increase again this year.

While Montana is becoming increasingly urban, agricultural income is still extremely important. The figures on per capita income shown above indicate how farm income can affect the state as a whole; in rural areas and small farm marketing centers it is even more significant. Farm income in 1965 was

fairly high, the result of a very large wheat crop and a good cattle market. Hot, dry weather this year has hurt crop production and created shortages of water for livestock in some parts of the state, particularly in the southern half of Montana. As a result, wheat production is expected to decline. As of July 1, the Montana Crop and Livestock Reporting Service predicted a 1966 wheat crop 13 percent smaller than 1965's abundant harvest, but still 13 percent above the 1960-64 average. Prices, of course, are higher than last year. At mid-June, cattle prices remained slightly higher than a year earlier and the price outlook this fall is considered good. But with farm production costs increasing along with most other costs of doing business, the chances are that agricultural income this year will not repeat the 7 percent increase of 1965. On the other hand, it should be higher than in other recent years.

This brief summary suggests, then, that 1966 will be a good year in Montana, with some increase in nonagricultural income and with farm income continued high. At the same time, of course, the same problems which face the U. S. economy—rising prices, high interest rates, and weaknesses in the housing market—also will confront Montanans. And in addition, the state must continue to search for ways to improve the long-run growth and diversification of its economy.

The University of Montana Business Student: His Employment Acceptance Pattern and Attitudes Toward Employment Opportunities

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Note: This article is based on a Student Employment Acceptance Study which was presented to the School of Business Administration Advisory Council at their spring 1966 meeting.

Introduction

The greatest resource of any community, state, or nation is its young people, especially its educated young people. Without the dynamism of youth a competitive society such as ours will surely slow down and eventually stagnate. This is, perhaps, the principal reason for the concern within the state about what is happening to our educated youth and the uneasy thought that Montana is losing them to other parts of the nation. The loss of college trained students is not a problem unique to the state of Montana. University officials in other Rocky Mountain states have also expressed concern over the high out-of-state migration of their graduates. Arkansas is another state which has regarded this as a problem to the extent of making a thorough study of the emigration of their college trained youth.[1]

[1]Venus, Charles E., *Arkansas College Graduate Emigration* (Industrial Research and Extension Center, College of Business Administration, University of Arkansas, July 1965).

The authors would like to express their appreciation for the cooperation received from the University Placement Center Director, Mr. Charles E. Hood, and his assistant in charge of industrial and government placement, Mrs. Charlotte Risk. We also wish to thank Professor Donald J. Emblen of the Accounting Department for his assistance.

It was with this student emigration problem in mind that the University of Montana School of Business Administration and the Bureau of Business and Economic Research at the University conducted a survey this spring of the post graduation plans of the Business School's graduating seniors and graduate students. The objectives of the survey were to determine the employment decision patterns of business students with respect to geographic location, types of employment and employers, and to describe, if possible, the factors that influence students' employment decisions. It is hoped that this information will result in a better understanding of the competition that exists in the labor market for Montana's college trained people, as well as provide insights which might place the Montana employer in a better position to compete for the services of the Business School graduate.

It was not the intent of this study to deplore the emigration of college trained people. The basic issue involved is the utilization of the state's resources—in this case, college graduates. Specifically the problem is how to retain the number of college graduates necessary for the state's continued economic growth. The demand for college graduates is determined largely by the structure of the state's economy. Compared with more industrialized areas, Montana provides relatively low employment opportunities for the business trained youth. Consequently, in Montana and other similar states there may be less demand for business graduates than the state produces. The important thing, however, is that the business community must utilize college graduates in the appropriate positions. Equally important is that the business community be aware of the competition for graduates to fill these positions—positions that will develop responsibility and leadership which in turn can produce significant contributions to the growth of business and thus to the community and state. The question then is whether or not Montana is providing ample opportunity for college graduates in these positions. If not, then one would expect college graduates to leave Montana for similar positions elsewhere. When this happens, positions that lead to responsibility and leadership must be filled with non-college people or with college trained people from other areas. The authors recognize that interchange of new ideas, methods, and experience that comes with varying backgrounds can be advantageous, but at the same time the Montana business community should make the most of its own resources.

It should be noted, of course, that a high outward migration of University graduates does not necessarily mean that the state is experiencing a net loss of college trained people. Certainly, a number of these students who take employment outside of the state will return and will be even more valuable after they have gained experience. The state also imports many college trained people—an area of investigation beyond the scope of this study. This study focuses only on the 1966 University of Montana School of Business Administration graduating class.

The sections that follow summarize the principal findings of the Student Employment Acceptance Study.

Students' Post Graduate Plans

As everyone well knows, many of today's newly graduating college men are immediately inducted into one of the armed services to meet their military obligations. Their inclusion in the employment acceptance study would have drastically biased the results. Therefore, the first question on the questionnaire (which was given to the School of Business Administration graduating seniors and graduate students) concerned their plans for military service. Those students who were entering the military were then eliminated from further questioning. As Table 1 indicates, 31 percent of the students planned to enter the military on graduation, with 7 percent going on to graduate school, leaving 62 percent of the class available for jobs.

TABLE 1

POST COLLEGE PLANS OF UNIVERSITY OF MONTANA BUSINESS STUDENTS, 1966

	Percent
Military service	31
Graduate school	7
Going to work	62
	100

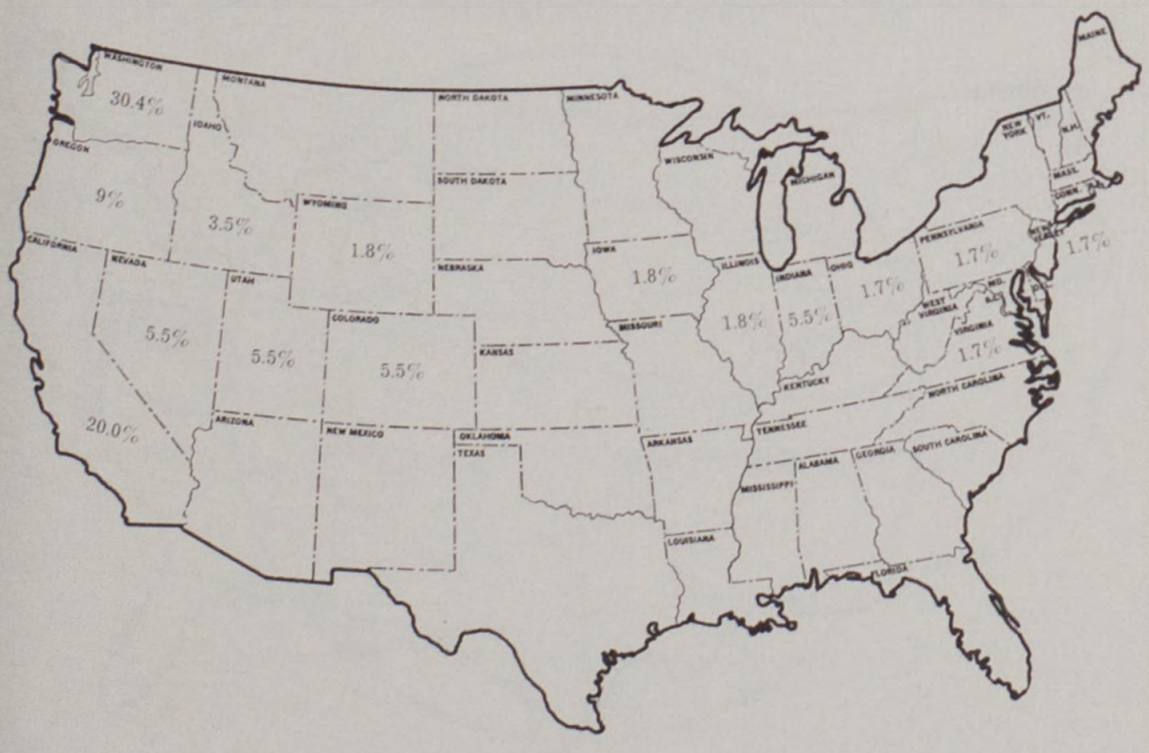
Source: School of Business Administration, Bureau of Business and Economic Research, Student Employment Acceptance Study.

Student Emigration Pattern

The information derived by the employment acceptance study came from the 62 percent of the graduating business students who were available for employment. Not all of these students, however, had accepted employment at the time of the survey; but, of those who had, 74 percent replied that they were taking jobs with firms outside Montana. Twenty-six percent reported they would be employed within the state. We had expected a high ratio of emigration, but not one of this magnitude. Since the survey was completed in early May with some of the students still unemployed, there was a possibility that full student employment would change the student emigration ratio. Consequently, in June, after the completion of the 1966 spring term, the records of the Placement Center were analyzed as a check on the survey results. The Placement Center's employment classification industry and government showed an almost identical percentage of student emigration with *73 percent* taking jobs outside of the state and *27 percent* remaining within Mon-

FIGURE 1

PERCENT DISTRIBUTION OF UNIVERSITY OF MONTANA STUDENTS ACCEPTING EMPLOYMENT IN BUSINESS OR GOVERNMENT OUT OF STATE, 1966



Source: University of Montana Placement Center.

tana. This cross-check conclusively substantiated the high ratio of out-migration of the business student, as well as indicating a strong out-of-state demand for all University students entering industry and government. The emigration pattern of the students placed in jobs through the Placement Center is shown in the following map (See Figure 1).

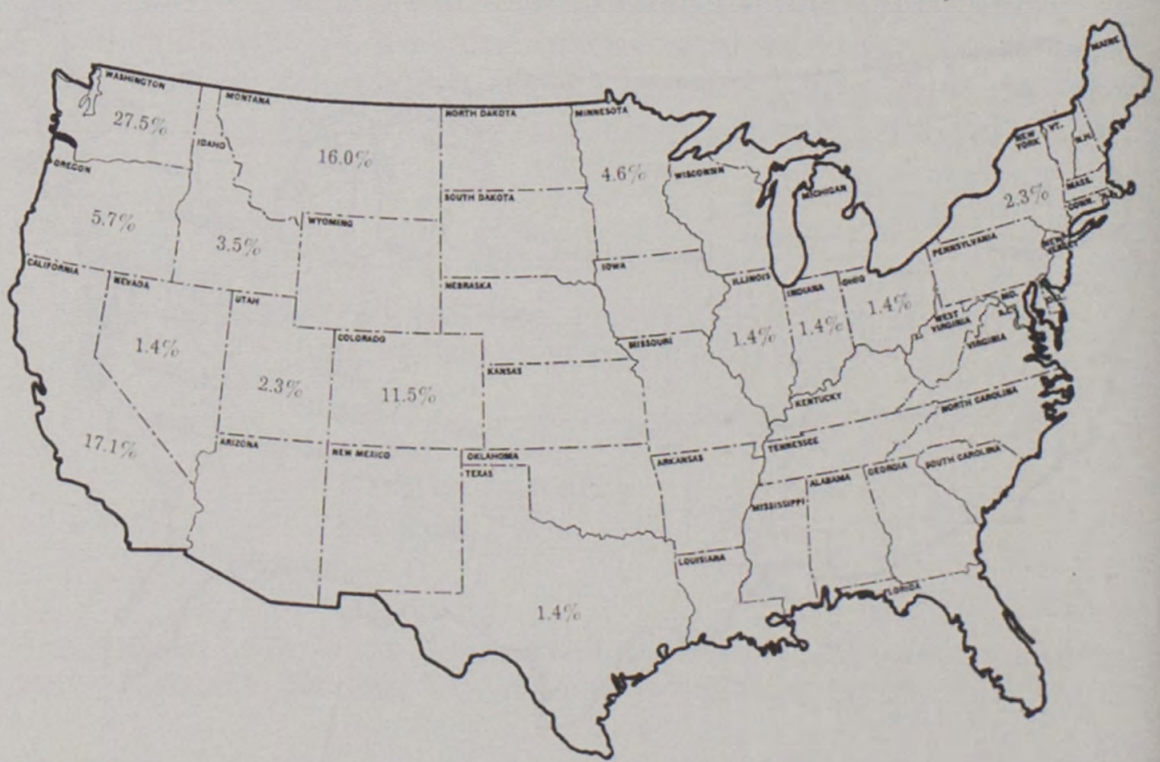
As this map illustrates, the majority of the emigrating students took positions with firms located in the Pacific Coast States; over 59 percent accepted employment on the coast. The group of states receiving the next largest percentage of students were the upper Rocky Mountain States with nearly 22 percent. A belt of states from Iowa east received the remaining 18 plus percent.

On a state-by-state basis Washington far outranks the rest, receiving nearly a third of the emigrating students. California

[2]It should be mentioned that data on the location of all of the students placed by the Placement Center were not available because of the failure of some students to report their locations. However, there is ample reason to believe that those reporting were representative of all employed.

FIGURE 2

PERCENT DISTRIBUTION OF RECRUITERS WHO VISITED THE UNIVERSITY OF MONTANA, BY STATES, 1966

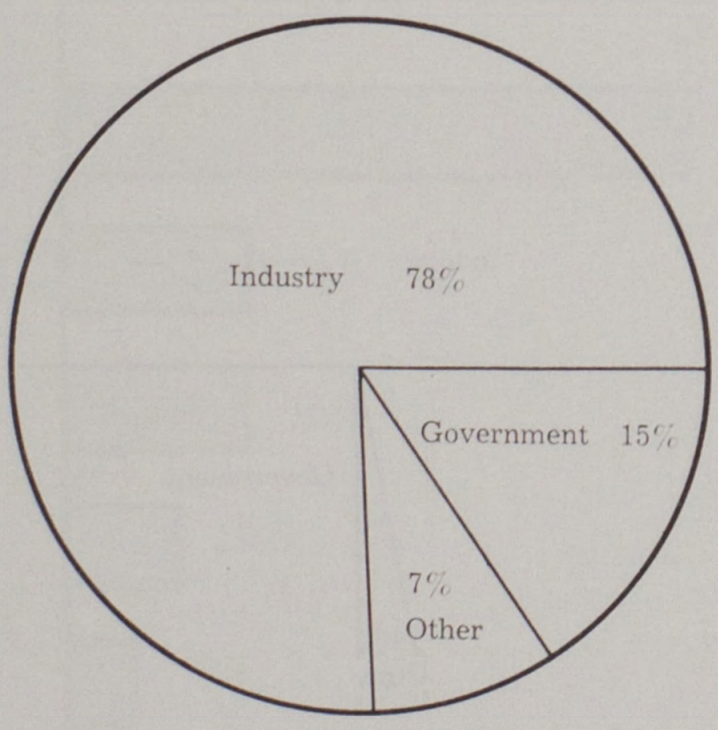


Source: University of Montana Placement Center.

ranks second, receiving a fifth of them. These two states alone employ over 50 percent of the students placed by the University Placement Center in industry and government.[2] An interesting feature of the student emigration pattern is that it almost identically matches the geographic distribution of recruiters who utilized the facilities of the Placement Center. Figure 2, which includes Montana recruiters as well as those from out-of-state, shows that the highest percentage of recruiters came from Washington and California; Montana ranked third. It is also significant to note that the geographic distribution of student out-of-state employment correlates closely with the geographic distribution of recruiters who visited the campus from out-of-state. This similarity implies that the out-of-state recruiters were successful in their efforts to employ University of Montana graduates. Their evident success should be a reminder to the Montana employer that there is a keen demand for the services of the state's college trained youth who enter industry and government.

CHART 1

PERCENT OF BUSINESS STUDENTS ACCEPTING EMPLOYMENT WITH INDUSTRY, GOVERNMENT & OTHER EMPLOYERS, 1966



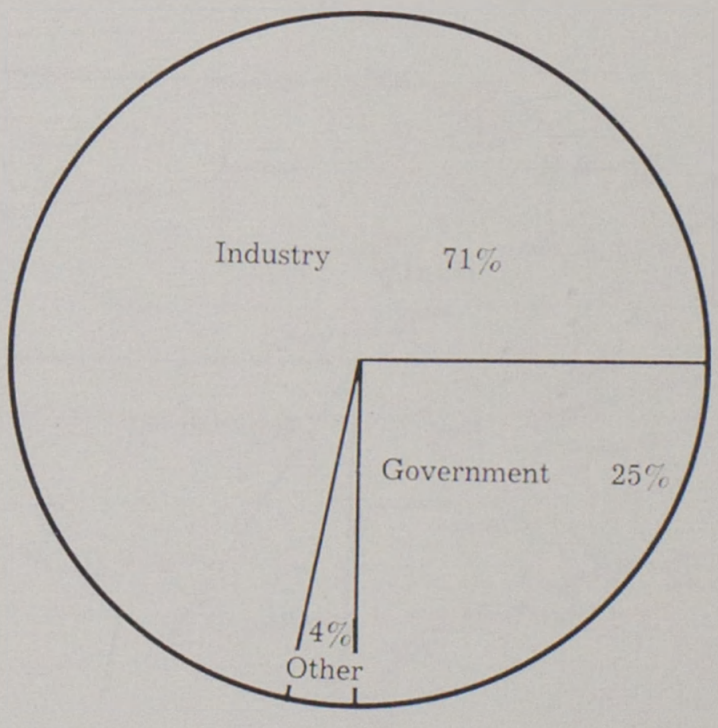
Source: SBA, BBER, Student Employment Acceptance Study.

Student Employment by Type of Employer

Another objective of the Student Employment Acceptance Study was to determine the type of employers who hire our business students. As Chart I illustrates, 78 percent entered private industry, 15 percent took jobs with government agencies, and 7 percent obtained positions outside of these two categories. The Placement Center's records demonstrate that 71 percent of the University students employed under the classification of industry and government went into private industry and 25 percent were employed by government. The four percent "other" category is made up of those students taking jobs with organizations such as the Red Cross and hospitals. The Placement Center employment pattern (Chart II) is somewhat different than that of the Business School largely because of the higher ratio of students entering government. This is explained by the fact that a number of the students placed through the Placement Center are trained in specialized fields in which the preponderance of jobs is with government agencies, such as forestry, wild life management, and public health.

CHART 2

PERCENT OF ALL UNIVERSITY OF MONTANA STUDENTS TAKING JOBS WITH INDUSTRY, GOVERNMENT, AND OTHER EMPLOYERS, 1966



Source: University of Montana Placement Center.

Student Employment by Job Categories

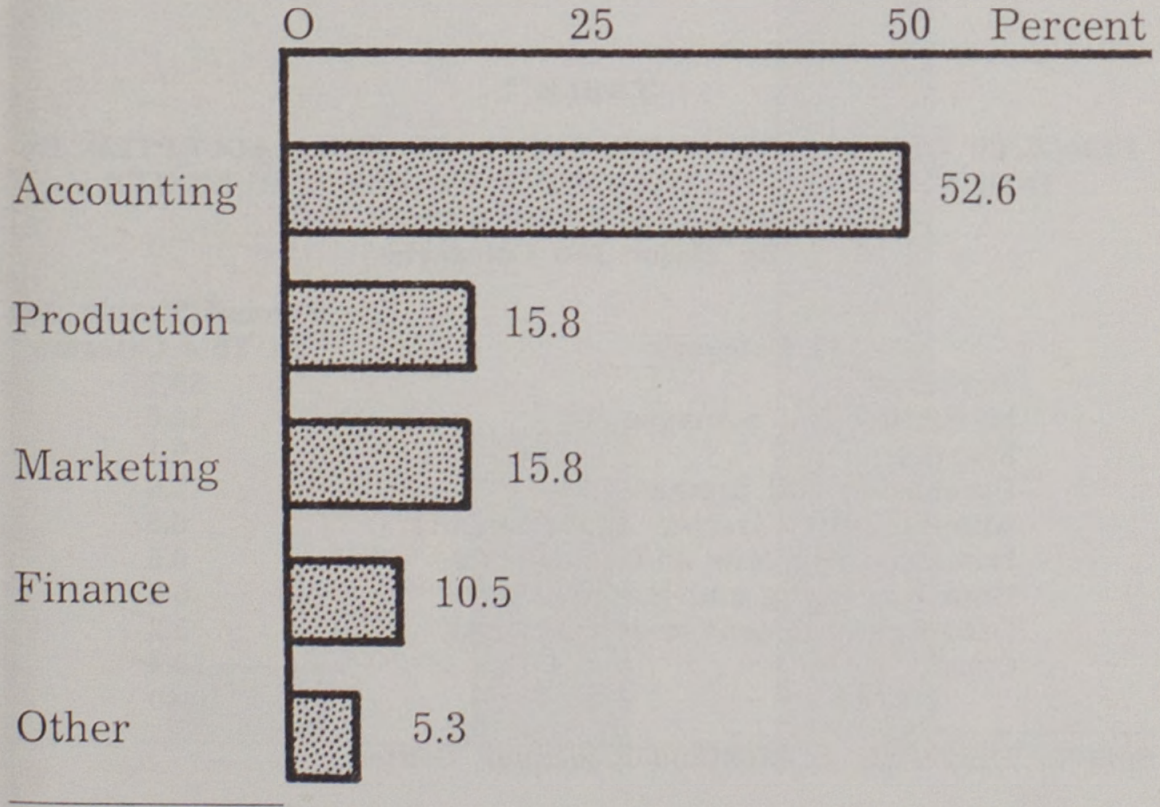
Another aspect of the study was to seek information as to the types of jobs business students were accepting. The students were asked to specify what kind of work they had been hired for. The responses were tabulated and classified according to major job categories. The survey revealed that most business students had accepted jobs in the fields of accounting, production, marketing, and finance, as illustrated in Chart III.

The high ratio of students who had accepted accounting jobs raised a question, since students who majored in accounting comprised only an approximate 34 percent of the graduating business students. Further investigation found that almost all of the accounting students had accepted jobs, whereas a number of students specializing in other fields of business had not yet taken positions.

The survey itself did not reveal the reason for the high rate of accountant employment, but Dr. Donald J. Emblen, Chair-

CHART 3

PERCENT OF BUSINESS STUDENTS ACCEPTING EMPLOYMENT BY MAJOR JOB CATEGORIES



Source: SBA, BBER, Student Employment Acceptance Study.

man of the Accounting Department, attributed it to the great demand for this specialty. These students, because of their specialization, are the target of considerable effort on the part of recruiters seeking them. Dr. Emblen also feels that the School of Business Administration has over the years developed a reputation for turning out good accounting students, and this reputation has enhanced the demand for them.

An examination of the Placement Center's records reveals that during the past few years accountant recruiters are among the first to arrive on the campus and are about the only recruiters to visit the campus several times during the year. They are also increasing in number and are arriving from farther and farther away. Thus, it is evident that the accountants graduated by the School are in strong demand and as a result of their demand are among the first to be employed.

The Placement Center data substantiated the survey results. The accountants remained the largest employment classification with 34 percent of all students entering industry and government taking jobs in this category. (See Table 2) Comparison between the survey results and Placement Center data on employment in the other job categories was difficult to make because the Placement Center utilizes a different and a wider range of employment classification than used in the survey.

TABLE 2

PERCENT DISTRIBUTION OF TYPES OF JOBS ACCEPTED IN INDUSTRY AND GOVERNMENT BY ALL UNIVERSITY OF MONTANA STUDENTS IN 1966
(By Major Job Categories)

Job Category	Percent Taking Job In This Category
Accounting	33.7
Marketing and management	15.6
Finance	9.1
Purchasing and production	7.8
Administrative trainee (government)	6.5
Industrial relations and counseling	6.5
Data processing and mathematics	5.2
Office management and secretarial	5.2
Other	10.4
TOTAL	100.0

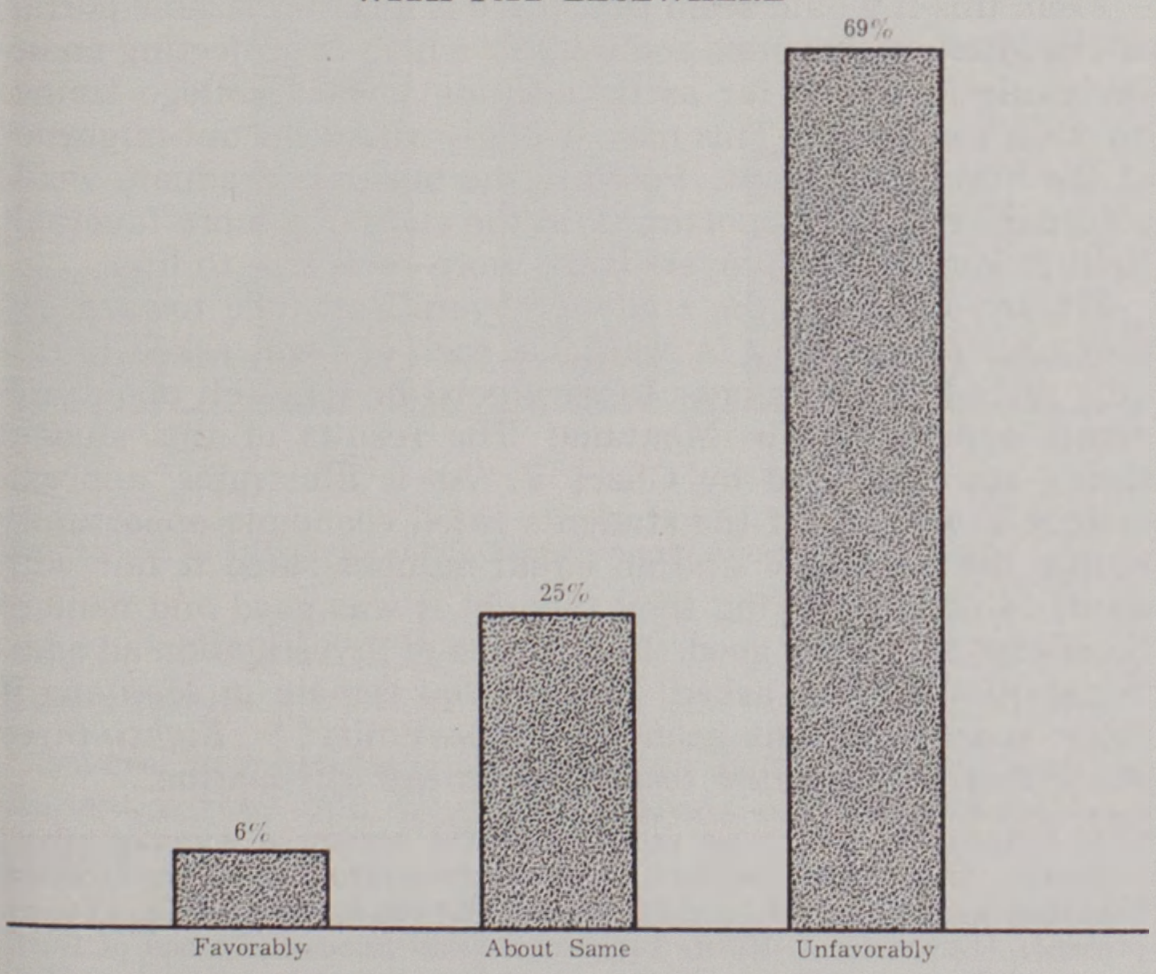
Source: University of Montana Placement Center.

Business Students' Attitudes Toward Jobs And Economic Opportunity in Montana

The high emigration rate of business students indicates that out-of-state employers are more appealing to these students than Montana employers, and that students feel that economic opportunity in general is greater outside of the state. In an attempt to establish what made these out-of-state jobs appealing to the student, respondents were asked to list the four factors which they considered to be most important in considering employment. The answers varied considerably, but several stood out from the rest. Pay was most often mentioned as a factor, with promotion or the opportunity to advance next in importance. Job location, working conditions, and job security then

CHART 4

HOW BUSINESS STUDENTS RATED PAY IN MONTANA WITH PAY ELSEWHERE



Source: SBA, BBER, Student Employment Acceptance Study.

followed in order. In the initial construction of the questionnaire, it was assumed that pay would have considerable priority and could well be one of the principal reasons underlying the expected high emigration rate. To test this theory, the students were asked to rate the pay of Montana employers with the pay of outside employers. The student response was based upon the salaries they had been offered as a result of interviews. As Chart IV illustrates, the majority of the students (69 percent) gave Montana employers an unfavorable rating while only six percent gave a favorable rating.

In an attempt to further evaluate the students' attitude toward economic opportunity in Montana they were asked the question, "Do you feel that Montana employers are as receptive to college graduates as other employers?" Only 30 percent of the respondents replied that they felt Montana employers were as receptive to college graduates as out-of-state employers; 35 percent stated that the receptiveness was about the same; and the remaining 35 percent felt that Montana employers were less receptive.

From this it would seem that there is a rather sizable portion of the Montana business community which is projecting an unfavorable image as far as its attitude toward college trained youth is concerned. This may strongly affect the out-migration of the business student. Possibly the business graduate would consider economic opportunity in the state in a more favorable light if Montana employers were more receptive to him.

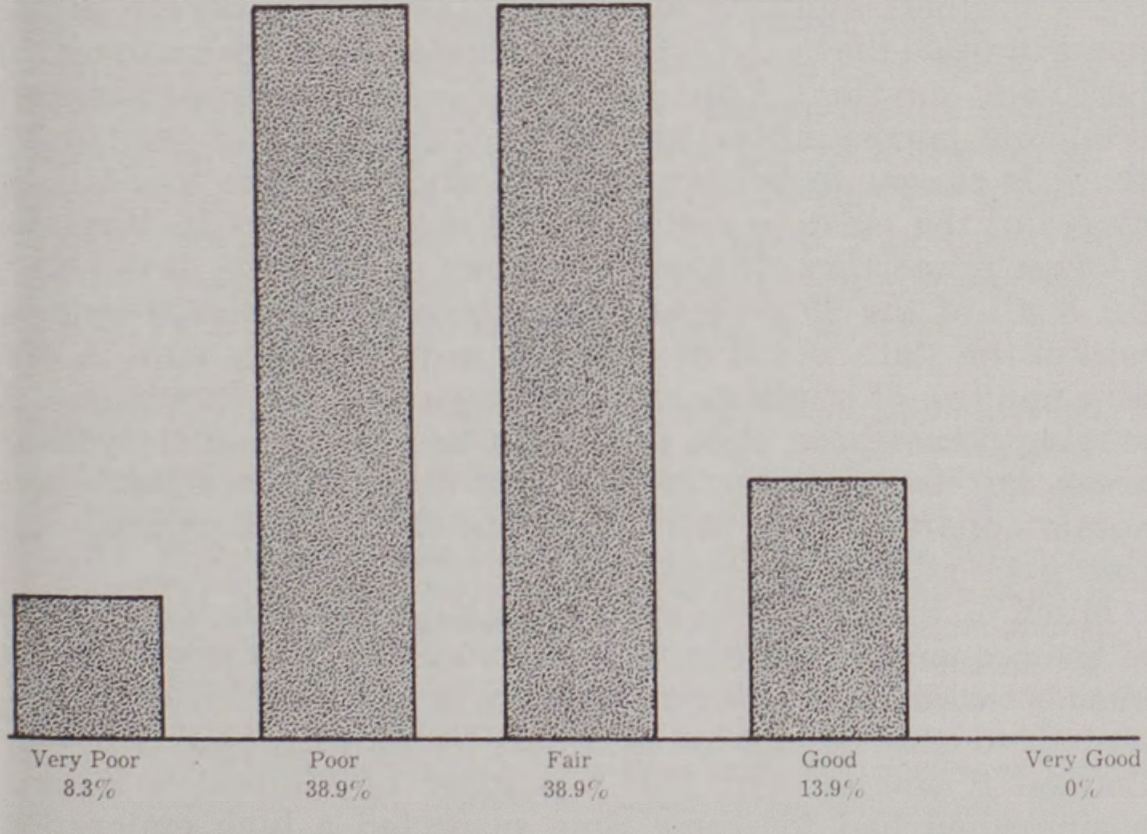
Finally, to obtain the students' overall attitude toward employment opportunity in Montana, each one was asked to rate on a scale from very poor to very good how he felt about economic opportunity in Montana. The results of this student rating are presented by Chart V. As it illustrates, approximately 39 percent of the students rated economic opportunity within the state poor and an equal number rated it fair with about 14 percent saying they thought it was good and none of them reporting very good. In this area of investigation an additional question was asked: "Would you remain in Montana if there were sufficient economic opportunity?"[3] *Eighty-three percent of the students responded in the affirmative.*

[3]This identical question was asked in a 1965 survey of summer school students. Sixty-seven percent of the non-resident students reported that they would like to live in Montana if the economic opportunity were present. (Lawrence J. Hunt, *Summer Session Survey* [Bureau of Business and Economic Research, School of Business Administration, University of Montana, Missoula, 1965, p. 3]).

The data obtained by this part of the survey seem to point out rather conclusively the reason for the high emigration rate of the School of Business Administration graduate. Montana employers are either not providing the opportunities these students seek, or are not properly communicating their opportunities to them.

CHART V

HOW BUSINESS STUDENTS RATED ECONOMIC OPPORTUNITY IN MONTANA



Source: SBA, BBER, Student Employment Acceptance Study.

Conclusions

Several conclusions may be drawn from the results of the student survey and from the analysis of Placement Center records:

(1) Information from both sources reveals that not only business students but the majority of all University of Montana students who take positions with private firms or in government leave Montana.

(2) The survey provided strong evidence that students feel that there is not sufficient economic opportunity in Montana.

(3) If sufficient economic opportunity were present the majority of students would remain in Montana.

(4) The recruiting data indicate that non-Montana employers are making better use of the Placement Center than are Montana employers.

(5) Finally, and perhaps of most significance, Montana employers seem to project a poor attitude toward college graduates.

Is there a lack of economic opportunity in Montana or are these business students who leave the state unaware of the opportunities that exist within the state? This seems to be the pertinent question. Although a detailed evaluation of in-state economic opportunities was beyond the scope of this study, there is reason to believe that, if students were made more aware of the existing and potential opportunities in Montana, a larger proportion of them would stay in the state. It is doubtful if all of the 83 percent who expressed a desire to remain within the state would do so under any circumstances. A certain number of students are hired away by the excitement of moving somewhere else, especially to the large metropolitan areas, but the student attitude that there is not enough economic opportunity in Montana certainly has unfavorable impact upon student emigration.

Much of the responsibility for making these students aware of the economic opportunity in the state lies with the Montana business community. When the results of this study were presented to the School of Business Administration Advisory Council it was evident that a number of the state's leading businessmen had for some time suspected a high emigration rate of Montana's college trained youth and were concerned about the implications it may have on the state's economic growth. Awareness and concern are certainly important in themselves, but what really counts is action. From strictly an academic point of view, it seems that Montana's business community should examine its economic goals, and the resources that are required for meeting these goals. Should this analysis and stocktaking reveal a shortage of college trained youth for the task ahead, then the business community should initiate action to eliminate this shortage. Adequately trained personnel with potential leadership skills are an essential ingredient for economic growth and development.

Recommendations

It seems that Montana employers face two major problems in attracting the University of Montana student. First, there is a communication problem. The existing and potential employment opportunities must be better communicated to the student. Secondly, Montana employers must be competitive in their efforts to obtain the talents of college trained people.

Some specific actions which may be taken by the Montana business community include the following: First, they should generally improve their attitude and receptiveness towards college graduates. Second, they should improve their recruiting techniques. This includes making better use of the University Placement Center. Because so many recruiters utilize the services of the Placement Center, the student automatically turns to it when seeking job opportunities. For the benefit of those employers who are not aware of the services offered by the Placement Center, Mr. Charles E. Hood, Placement Director, was asked to make a statement explaining the services the Center performs. Mr. Hood's statement is as follows:

> The University of Montana Graduate Placement Center services to small business firms in Montana consist of providing contacts between our candidates (seniors and graduates) and the business men who are in need of professionally trained young people in business administration and other fields to fill openings in business and industry. This is done by making available resume sheets and credentials with written recommendations, arranging for interviews on campus, listing and publicizing notices of vacancies, and making available to candidates the employer information provided us.
>
> We are attempting to make Montana employers aware of this service by providing printed Employer Guide information folders which have been distributed through Chamber of Commerce offices in various cities, and on the state level. We have also been providing a program to civic clubs describing these services.

In today's labor market the employer must understand that he is expected to come to the student and explain not only what he has to offer, but why he needs the professional training of the student and how he expects to utilize the student's talents.

Third, Montana employers must be competitive with out-of-state employers with respect to pay, promotion, and responsibility. In most cases, as the study points out, the Montana employer already has the locational advantage. Location alone,

however, will not attract first class employees. By being competitive, we do not mean that pay, for instance, must equal what can be obtained elsewhere, but that it should be in the general range of what other employers are offering for the same talents and services.

If Montana employers perform adequately in these areas, there is no reason why the state cannot retain the necessary qualified young people needed for continuing economic development.

Note: In July the University Placement Center reported that 30 employers had already scheduled interview dates for the coming 66-67 academic year. Of these 30, not one was a Montana employer.