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MONTANA BUSINESS QUARTERLY

Volume 26, Number 4

Winter 1988



SNOWMOBILING IN MONTANA



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Cover photo by John F. Patterson

LARRY GIANCHETTA
Dean, School of Business
Administration

PAUL E. POLZIN
Director, Bureau of Business
and Economic Research

MARY LOGAN LENIHAN
Editor

SHANNON H. JAHRIG
Production Editor

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University of Montana
Missoula, MT 59812



Photo by John F. Patterson

Snowmobiling in Montana: An Economic Study

By Paul E. Polzin
and Tat P. Fong

Although the flurry and buzz of snowmobiles in and around Yellowstone Park, Cooke City, and on other trails across the state is a testament to the widespread popularity of snowmobiling in Montana, no one had ever actually measured this popularity. Who are these snowmobilers, and where do they come from? How much revenue does snowmobiling generate for Montanans? How important is snowmobiling to Montana's travel and tourism industry?

To answer these questions, the Montana Snowmobile Association; the Montana Department of Fish, Wildlife and Parks; and the Montana Institute of Travel and Tourism contacted the Bureau of Business and Economic Research to study the impact and activity of snowmobilers in Montana.

The Bureau initially conducted separate surveys of resident and nonresident snowmobilers to obtain basic information about their snowmobiling activities and expenditures. Bureau researchers used the survey data to determine the economic and demographic characteristics of snowmobilers and their attitudes toward various snowmobiling facilities and policies. This survey information was also used to calculate the nonresidents' 1987-88 expenditures in Montana and the associated labor income and employment of Montanans.

The survey results indicated that nonresident snowmobilers were typical of the "upscale" recreationists that visit Montana — they were relatively young, with above-average incomes and education. Resident snowmobilers, on the other hand, were similar to most Montanans in terms of age, income, and education — they were generally older with lower incomes and less education than nonresident snowmobilers.

Nonresidents took an average of 1.5 snowmobile outings in Montana during 1987-88 and snowmobiled about 3.6 days during each outing. Montana residents averaged 8.6 outings in the same period, with 2.6 days of snowmobiling per outing.

The largest number of nonresident snowmobilers came from the nearby states of Wyoming, Utah, and Idaho, but people from nearly fifty states and Canada came to snowmobile in Montana. Most nonresidents had previously snowmobiled in Montana. Seeing Yellowstone National Park in the wintertime, and the state's mountains, scenery, and wildlife were the main attractions for these out-of-state visitors.

During each 1987-88 outing, nonresidents spent an average of \$410 in Montana for food, lodging, clothing, and other related expenses. In addition, they spent about an additional \$152 in 1987 on other snowmobile-related articles that they bought from Montana merchants. Montanans spent less on their snowmobiling outings, but far more for snowmobiles and related equipment. Residents spent an average of \$74 per outing, but approximately \$1,488 for snowmobiles, trailers, recreational vehicles, and similar items.

■ *In 1987-88, nonresident snowmobilers in Montana numbered about 20,000 and they spent approximately \$15.3 million in the state.*

The expenditures of nonresident snowmobilers are part of Montana's travel industry and a component of Montana's economic base. In 1987-88, nonresident snowmobilers in Montana numbered about 20,000, and they spent approximately \$15.3 million in the state. Most of these expenditures were concentrated in southwestern Montana — primarily

in the West Yellowstone and Cooke City areas. In turn, these expenditures by out-of-state snowmobilers generated labor income of about \$3.8 million for Montanans working in the nonresident travel industry. In 1987-88, this translated into approximately 350 full- and part-time jobs.

Snowmobiler Characteristics

This section presents the findings of the surveys of resident and nonresident snowmobilers. Bureau researchers used this information to create a profile of the typical snowmobiler. The details of this profile may help focus snowmobiling promotion and improve any snowmobile-related decisions of public and private officials. The snowmobiler profile also helped Bureau researchers calculate the total amount of expenditures by snowmobilers.

The sample of resident snowmobilers was selected from the list of people who had registered their snowmobiles with the Montana Department of Motor Vehicles. The Bureau researchers sent these people questionnaires and asked them to respond even if they did not snowmobile during the 1987-88

season. The sample of nonresident snowmobilers was chosen from the list of people who completed registration cards at motels and lodging places in snowmobiling centers such as West Yellowstone. Questionnaires were initially mailed to these groups in February and March 1988, and mail reminders, with duplicate instructions and questionnaires, were mailed several weeks later to the people who had not yet responded.

Personal Characteristics. Age, education, and income summaries of the respondents to the snowmobile surveys are presented in Table 1. This information should be interpreted cautiously because it refers only to the people who completed survey questionnaires, and does not reflect all

persons in the snowmobiling parties. To put this information into a wider perspective, corresponding information for all Montana adults is also presented.

Approximately one-half (53 percent) of the resident and nonresident snowmobilers who responded were between thirty-five and fifty-four years old. On the average, the nonresident respondents were younger than the Montana respondents: nearly 29 percent of the out-of-state snowmobilers were twenty-five to thirty-four years old, compared to 14 percent for residents. By contrast, about 14 percent of the nonresidents were fifty-five or older, and approximately 30 percent of the Montana respondents were in this category.

There were slightly more high school graduates among the Montanans who responded to the snowmobile survey than among Montanans as a whole (88 percent vs. 85 percent), but a lower number of people who had attended or graduated from college (39 percent vs. 56 percent). The nonresident respondents had higher levels of education than residents—about 64 percent said they attended or graduated from college.

The amount of money snowmobilers invested in equipment, clothing, and other items suggested to Bureau researchers that snowmobiling was an activity for the relatively affluent. The survey responses confirmed this conjecture: nearly 37 percent of the Montana respondents reported 1987 household incomes of \$35,000 or more, compared to approximately 29 percent for the entire adult population of Montana. Out-of-state snowmobilers had higher incomes yet; about three-fourths of these visitors (about 72 percent) said their 1987 household income exceeded \$35,000.

The personal characteristics of the typical nonresident snowmobiler suggest that he/she is relatively young, well-educated, and has a high income — a profile that applies to many tourists coming to Montana resorts. Although income and education levels of resident snowmobilers are not as high as most out-of-state snowmobilers, they are not significantly different from the Montana average. For example, about 37 percent of them report household incomes of

\$35,000 or more, while approximately 29 percent of all Montanans report similar incomes.

Other Snowmobiler Characteristics. Additional information about the geographic origin, education, age, income and snowmobiling activity were derived from the surveys of resident and nonresident snowmobilers and are presented in Table 2. These figures should be interpreted cautiously because some are based on a small

Table 1
Selected Characteristics of
Snowmobile Survey Respondents
and Montana Residents
By Place of Residence
1987-88
(Percentages)

	All Montana Adults	— Survey Respondents — Montana Residents Non- Residents	
Age distribution:			
18 - 24	15	3	4
25 - 34	25	14	29
35 - 44	19	24	25
45 - 54	13	29	28
55 and older	28	30	14
Highest level of education:			
Some high school or less	15	12	4
High school graduate	29	49	32
Some college	31	20	25
College graduate	25	19	39
Household income (1987):			
Under \$15,000	28	12	4
\$15,000 - \$34,999	43	51	24
\$35,000 or more	29	37	72

Sources: University of Montana, Bureau of Business and Economic Research, Survey of Resident and Nonresident Snowmobilers, unpublished data (Missoula, MT, 1988). *The Great Falls (Montana) Tribune* and the University of Montana, Bureau of Business and Economic Research, the Montana Poll, unpublished data (Missoula, MT, 1988). U.S. Department of Commerce, Bureau of the Census, *State Population and Household Estimates with Age, Sex and Components of Change: 1981-86, Current Population Reports, Series P-25, No. 1010*, (Washington, D.C., 1987).

number of responses. As a whole, however, this data helped Bureau researchers create useful profiles of these recreationists.

The largest number of non-resident snowmobilers came from the nearby states of Utah, Idaho, and Wyoming. Nonresident snowmobilers who came from more distant areas were most often from Michigan, California, and Minnesota. As might be expected, the snowmobilers' expenditures were directly related to the distances they traveled. The visitors from Utah, Idaho, and Wyoming reported per person expenditures of \$230 or less for their most recent Montana outing. By contrast, the per person expenditures of snowmobilers from Michigan, California, and Minnesota were approximately \$489, \$879, and \$333, respectively.

Table 2
Characteristics of Snowmobilers by Place of Residence
1987-88

	Percent of Total	Age (Years)	Some College Education or More (Percent)	Household Income of \$35,000 or More (Percent)	Total Years (Number)	Years in Montana (Number)	Snowmobiling Activity With Club and/or Tour Group (Percent)	Expend per Outing Per Person
Montana residents ^a								
Missoula	8	44	32	37	12	N/A	8%	\$ 74
Bozeman	7	45	70	31	13	N/A	6	101
Kalispell	5	44	36	37	12	N/A	9	86
Great Falls	4	47	37	41	12	N/A	5	25
Billings	4	41	44	45	13	N/A	6	56
Butte	4	46	47	42	14	N/A	5	167
Helena	4	47	60	42	13	N/A	11	100
Nonresidents ^a	100%	41	64%	72%	8	3	24%	\$410
Utah	24	41	75	74	6	3	16	229
Idaho	9	32	48	40	9	4	3	211
Michigan	7	42	60	72	12	2	76	489
Wyoming	6	45	56	52	10	7	4	151
California	5	43	85	85	5	2	10	879
Washington	5	46	68	68	10	5	5	400
Minnesota	5	41	50	94	13	4	38	333
Georgia	4	53	87	93	2	2	75	767
Indiana	3	49	58	58	4	1	75	610
Illinois	3	39	90	80	8	1	30	706
Wisconsin	3	34	70	90	8	1	70	679
Canada	3	34	60	70	14	5	0	557

^aIncludes respondents from regions other than those listed.

N/A denotes not available.

Sources: University of Montana, Bureau of Business and Economic Research, Survey of Resident and Nonresident Snowmobilers, unpublished data (Missoula, MT, 1988).

In general, snowmobilers are not novices. Residents reported that they have snowmobiled an average of twelve years; nonresidents have snowmobiled an average of eight years. Most nonresident snowmobilers are repeat customers: about 46 percent had previously snowmobiled in Montana, and they had taken an average of three snowmobiling trips in Montana.

Table 3
Selected Characteristics of
Snowmobile Groups and
Snowmobile Outings by
Snowmobiler's Place of Residence
1987-88

	Montana Resident	Out-of-State Nonresident
Snowmobile groups:		
Persons	5.0	6.0
Respondent household members in group	2.0	2.0
Snowmobile outings:		
Number of outings in Montana during 1987-88	8.6	1.5
Days per outing	2.6	4.5
Days snowmobiling per outing	2.6	3.6

Sources: University of Montana, Bureau of Business and Economic Research, Survey of Resident and Nonresident Snowmobilers, unpublished data (Missoula, MT, 1988).

Snowmobile groups and outings

This section summarizes the selected features of a recent snowmobile outing and the snowmobile party, as reported by the respondents to the snowmobile surveys.

Snowmobiling is typically a group activity. As presented in Table 3, both resident and nonresident snowmobile parties averaged about five to six persons. In addition, snowmobiling is often a family activity, and typically two family members of the same household were present in each group.

The difference between residents' and nonresidents' snowmobiling is revealed in the statistics concerning snowmobile outings. Montana respondents took an average of 8.6 outings during 1987-88, and each outing lasted about 2.6 days. Nonresidents reported fewer snowmobile outings, but their trips were longer in duration. On the average, nonresidents took about 1.5 outings in 1987-88, and each lasted approximately 4.5 days. In addition, the out-of-state visitors did not spend their entire time in Montana snowmobiling. Of the 4.5 days they spent on the entire outing, nonresidents snowmobiled an average of 3.6 days.

Snowmobiler Expenditures

Outing-related expenditures. Survey respondents were asked to report the amount of money they spent in Montana during their most recent snowmobile outing. The residents' and nonresidents' expenditures for the entire outing and for specific categories are

presented in Table 4.

The typical nonresident spent about \$410 per snowmobile outing in Montana. Montanans, on the other hand, averaged about \$74 per outing. Based on the nonresidents' average of 1.5 and the residents' average of 8.6 outings per year, nonresidents spent a total of about \$615 per person snowmobiling in

1987-88; residents spent approximately \$637 per person in the same time period.

Nonresident snowmobilers often traveled as a group—about 24 percent said they traveled with a club or tour group. Many of these visitors purchased travel packages that included transportation, lodging, rentals, and other items.

Table 4
Snowmobile Outing Expenditures in Montana
by Category and Snowmobiler Residence
(Average Per Person Per Outing)
1987-88

Expenditure Category	Montana	
	Resident	Nonresident
Snowmobile travel package (includes transportation, lodging, rental fees, etc.)	\$ 7	\$178
Snowmobile dealer, rental, or repair shops	15	34
Eating and drinking places	11	73
Automobile/truck service stations, garages, or dealers	11	16
Lodging places (hotels, motels, campgrounds, etc.)	9	44
Food, grocery, or convenience stores; liquor stores	9	12
Other retail stores (apparel, department, discount, and drug stores; gift shops; etc.)	3	27
Transportation to/from the area (airfare, bus fare, etc., paid in Montana)	2	14
Entertainment or other recreation places	1	7
Other places or types not listed above	6	5
TOTAL, all outing expenditures	\$74	\$410

Source: University of Montana, Bureau of Business and Economic Research, Survey of Resident and Nonresident Snowmobilers, unpublished data (Missoula, MT, 1988).

Because the amounts spent on these specific items cannot be separated from the travel package, they are not included in the expenditure estimates for the individual categories in Table 4. Nevertheless, there are some dramatic differences in the estimated expenditures of residents and nonresidents, which indicate that snowmobiling is a more casual recreation for Montanans than it is for their nonresident counterparts. For example, Montanans spent about \$3 per outing in other retail establishments, such as apparel and drugstores, while the corresponding figure for nonresidents was \$27. Montanans spent \$1 per outing for entertainment, and nonresidents spent \$7 per outing. Airfare, bus fare and other transportation expenditures were \$2 per outing for residents and \$14 per outing for out-of-state visitors.

Other snowmobile expenditures. Respondents were requested to estimate their 1987 snowmobile-related purchases in Montana that were not necessarily associated with a specific outing or trip. These responses were tabulated and are presented in Table 5.

Although the 1987 expenditures listed in Table 5 are presented on an annual, per person basis, the typical snowmobiler is not likely to spend this amount each year because items like snowmobiles, trailers, and recreational vehicles are not purchased annually. Therefore, the \$682 that is reported for residents' annual snowmobile purchases does not mean that each resident spent this amount on a snowmobile in 1987-88. Instead, this is the average of the annual

purchases that were made by all snowmobilers. In fact, those who did purchase a snowmobile in 1987 paid an average of about \$2,000, which is in the ballpark considering the prices of new and used machines.

The snowmobilers' largest non-trip related expenditures in Montana were for snowmobiles and associated recreational vehicles during 1987-88. Residents spent an average of \$682 for snowmobiles and \$481 for related recreational vehicles (both figures include snowmobilers who did not make a purchase in 1987-88). Nonresidents spent an average of \$75 for the former and \$28 for the latter while they stayed in Montana. Clothing and equipment expenditures averaged about \$75 per year for residents, and \$14 for nonresidents.

Table 5
Other Snowmobile Related Expenditures in
Montana
by Category and Snowmobiler Residence
(Per Person)
1987

Expenditure Category	Montana Resident	Nonresident
Snowmobiles	\$ 682	\$ 75
Snowmobile trailers	70	3
Recreational vehicles for use with snowmobile (camper, pickup, 4WD, etc.)	481	28
Clothing (suit, gloves, etc.)	45	10
Other related equipment (helmet, tools, sled, etc.)	30	4
Snowmobile parts and repairs	100	20
Registration, license, taxes, etc.	41	1
Other	39	11
TOTAL, all items	\$1,488	\$152

Source: University of Montana, Bureau of Business and Economic Research, Survey of Resident and Nonresident Snowmobilers, unpublished data (Missoula, MT, 1988).

The Economic Impact of Snowmobiling

Snowmobile-related expenditures are just one measure of how snowmobilers value their sport. Because the snowmobilers make these expenditures outside of the communities in which they normally live, these figures are a part of the nonresident travel industry and a component of the economic base of the area where they were made. This section presents the estimates of the number of nonresident snowmobilers in Montana during the 1987-88 season, which were combined with the expenditure data from the surveys, to compute the total spending in Montana by nonresident snowmobilers. The distribution of this statewide total

among the major snowmobiling centers is also presented.

How many snowmobilers are there? There were no reliable statistics for the number of snowmobilers in Montana. Unlike hunters or fishermen, snowmobilers are not required to obtain permits or licenses, and there are no entrance gates and few trailhead counters to monitor the snowmobile traffic.

As part of this project, Montana Snowmobile Association volunteers conducted fifty-four on-site traffic counts at selected trailheads on various days of the 1987-88 season. The volunteers recorded the number of snowmobiles on the

trail, the snowmobilers' home states, and whether or not each snowmobile was registered in Montana.

Although Montana Snowmobile Association representatives received instructions and tally sheets for all major snowmobile trails in the state, the returns suggested that some of the locations may not have been surveyed and that coverage at other locations may have been spotty. Therefore, the trailhead tally sheets were not a reliable basis for estimating total snowmobile traffic.

The trailhead tallies were complete enough, however, for the Bureau to estimate the number of nonresident snowmobilers. The mail surveys indicated that most nonresidents snowmobiled at a few specific locations, and these were the sites with the most complete tallies. The trailhead traffic counts at West Yellowstone, for example, were the most comprehensive; they

Table 6
Nonresident Snowmobiler
Expenditures in Montana
by Category
1987-88

Expenditure Category	Expenditures
Snowmobile travel "package" (includes transportation, lodging, rental fees, etc.)	\$ 5,340,000
Snowmobile dealers, rental, or repair shops	1,020,000
Eating and drinking places	2,190,000
Automobile/truck service stations, garages, or dealers	480,000
Lodging places (hotels, motels, campgrounds, etc.)	1,320,000
Food, grocery, or convenience stores; liquor stores	360,000
Other retail stores (apparel, department, discount stores, drug stores, gift shops, etc.)	810,000
Transportation to/from the area (airfare, bus fare, etc., paid in Montana)	420,000
Entertainment or other recreation places	210,000
Other places or types not listed above	150,000
SUBTOTAL, all outing expenditures	\$12,300,000
Snowmobiles	\$ 1,500,000
Snowmobile trailers	60,000
Recreational vehicles for use with snowmobile (camper, pickup, 4WD, etc.)	560,000
Clothing (suit, gloves, etc.)	200,000
Other related equipment (helmet, tools, sled, etc.)	80,000
Snowmobile parts and repairs	400,000
Registration, license, taxes, etc.	20,000
Other	220,000
SUBTOTAL, other items	\$ 3,040,000
TOTAL, all items	\$15,340,000

Source: Survey of resident and nonresident snowmobilers, University of Montana, Bureau of Business and Economic Research, unpublished data, 1988.

covered both weekends and weekdays, as well as days with special events.

To estimate the number of nonresident snowmobilers, the Bureau derived averages from the trailhead tallies for the nonresidents' weekend and weekday traffic. These figures were then multiplied by the number of weekend and weekdays in the 1987-88 season. The Bureau's calculations yielded an annual 1987-88 figure of about 108,000 nonresident snowmobile activity days. Based on the data reported in Table 3, each nonresident snowmobiles about 5.4 days in

for purchases directly related to the snowmobile outing, and roughly \$3 million for other items.

Snowmobile travel packages — which included transportation, lodging, rental fees, and other items — accounted for approximately \$5.3 million, or almost 35 percent of nonresident snowmobilers' total expenditures. The amounts for individual items in the package could not be derived from the package total and allocated to the individual expenditure categories, such as transportation, rental fees, and lodging. Thus, if a nonresident paid his transportation costs as

economic impact of snowmobiling. Approximately 25 percent of the nonresident spending becomes direct labor income for Montanans — income earned by persons who work in lodging places, eating and drinking establishments, and other businesses serving tourists. The remaining percentage is spent on film, processed food, clothing, and other items that must be imported into Montana for sale.

To arrive at a conservative estimate of the number of full- and part-time jobs that are supported by the nonresident snowmobilers' spending, the estimated direct labor income is divided by an annual

■ The spending of out-of-state snowmobilers generated labor income of about \$3.8 million for Montanans working in the nonresident travel industry. This translates into about 349 full- and part-time jobs.

Montana ($1.5 \times 3.6 = 5.4$). When the number of nonresident snowmobile activity days (108,000) is divided by the 5.4 days nonresidents snowmobile in Montana, it yields a total of about 20,000 nonresident snowmobilers ($108,000/5.4 = 20,000$) in 1987-88.

Nonresident expenditures

The nonresident snowmobilers' total outing expenditures in Montana during the 1987-88 season were derived by multiplying the nonresident spending per person shown in Table 4 by the number of outings per person and then by the estimated number of out-of-state snowmobilers. Other snowmobile expenditures were calculated by multiplying the spending per person shown in Table 5 by estimated nonresident snowmobilers. These calculations are summarized in Table 6.

Nonresident snowmobilers spent about \$15.3 million in Montana during the 1987-88 season. These visitors spent about \$12.3 million

part of a package, these costs are not included in the separate category labeled transportation. This also means that the amounts in many of the expenditure categories are understated.

Most nonresidents take their snowmobiling trips in southwestern Montana. Out-of-state recreationists spent about \$12.5 million in the West Yellowstone area, almost 82 percent of the total amount nonresidents spent in Montana. The Cooke City area was second most popular, with expenditures of approximately \$769,000, or 5 percent of the total. Bozeman was in third place, accounting for about \$412,000 in spending, or roughly 2.7 percent of the statewide total.

Income and employment attributed to snowmobiling

The labor income and employment created by nonresident spending is another measure of the

income per worker of \$11,000 — although this income level is slightly above the reported average for lodging places and eating and drinking establishments. The spending of out-of-state snowmobilers generated labor income of about \$3.8 million for Montanans working in the nonresident travel industry. This translates into about 349 full- and part-time jobs. Most of this labor income and employment were centered in southwestern Montana — West Yellowstone had about \$3.1 million in labor income and roughly 284 jobs that were attributable to nonresident snowmobiling. □

Paul E. Polzin is director of the Bureau of Business and Economic Research and professor of management, School of Business Administration, University of Montana, Missoula.

Tat P. Fong is a research associate at the Bureau.

Montana's Forest Products Industry Today

By Charles E. Keegan III

The Bureau of Business and Economic Research recently initiated the Natural Resource Industry Research Program. The natural resource industries are a vital part of Montana's economy. The Bureau established this new program to monitor those industries and to provide information about their roles in the state and local economies.

The first project completed through this program, with the cooperation of the Montana Department of State Lands, Division of Forestry, is a

report on the current status of Montana's forest products industry. Included in this report is a concise look at the industry's structure and its current economic health. We thought this information would interest Quarterly readers, so we are including part of the report here.

Forest resources are an integral part of Montana. The elegant Douglas-fir, the stately ponderosa pine, and the heavily timbered slopes of lodgepole pine form the

pictures and playgrounds we associate with Montana. Trees are also vital to one of the largest and most important industries in Montana: the forest products industry.

One of Montana's major basic industries, the forest products industry produces a wide array of valuable products from paper to plywood, lumber to posts and poles, and particleboard to turpentine. The forest products industry is Montana's largest manufacturing activity with \$900 million in sales in 1987. During the 1980s, labor income in the wood and paper products industry approximately equaled labor income in agriculture, which is the number one industry in the state. Montana's forest products industry supplies 4 percent of the softwood lumber produced in the United States, and 3 percent of the nation's softwood plywood.



Photo by Don Dodge

Structure of the Industry

Montana currently has 200 to 250 primary forest products plants that produce a wide variety of products including:

- Lumber and sawn products.
- Plywood.
- Pulp and paper.
- Particleboard and fiberboard.
- House logs.
- Utility poles, posts, and tree props.
- Cedar products.
- Wood by-products such as tall oils and turpentine.

In 1987, the forest products industry in Montana had sales of \$900 million. Most of these sales were in three major areas.

Sawmills. Plants producing lumber and other sawn products accounted for the largest share of sales in Montana's forest products industry. Out of the \$900 million in total 1987 sales, sawmills generated \$420 million or 46 percent

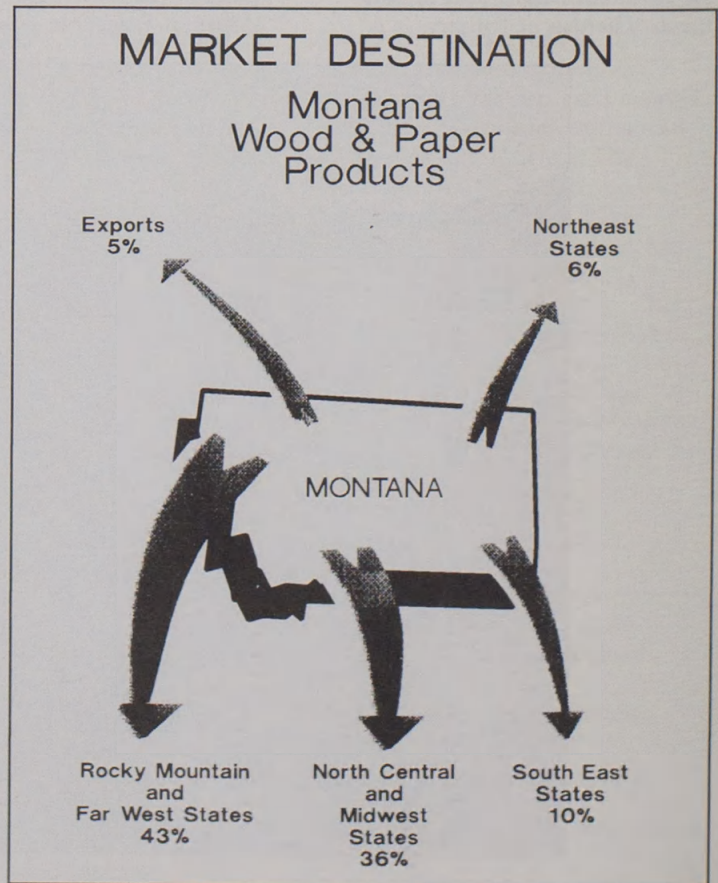
Wood Residue Products. These are products based primarily on wood residue from sawmills and plywood plants. Residue-related products come from three plants in Montana: a linerboard plant, a particleboard plant, and a

fiberboard plant. Some electricity is also generated using wood residue. These residue-related products accounted for approximately \$320 million in sales, or about 35 percent of the 1987 total.

Plywood. The plywood industry had sales of \$130 million in 1987, nearly 14 percent of the total sales of Montana's forest products industry.

Other manufacturers. Manufacturers that produced a variety of products such as houselogs, cedar products, utility poles, and small roundwood products accounted for 3 percent of the total in 1987, or an estimated \$30 million in sales.

■ *Montana mills market their products throughout the world, but the largest markets are concentrated in the north central and western states.*



Uses of Montana's Timber Harvest

In the past, sawmills and plywood plants have used more than 95 percent of Montana's commercial timber harvest. The sawmills and plywood plants, in turn, provide wood residue which is an input for the pulp and paper, particleboard and fiberboard industries. The house log, cedar products, utility pole and small roundwood product manufacturers have used approximately 3 percent of the harvest. In years of low lumber production, mill residue has been in short supply, and the pulp and paper industry has used substantial volumes of timber for pulp chips.

Secondary Wood Products Manufacturing

Of the products Montana's forest industry produces, more than 90 percent are shipped out of state for use in construction or for further processing.

Much of the remainder is used by Montana's construction industry or by plants within the state that manufacture secondary wood products such as: cabinets, cut stock, and mouldings; laminated beams; wall paneling; roof and floor joists; pre-fabricated homes; mobile homes; and furniture.

Market Areas

Mills in Montana market their products throughout the world, but the largest markets are concentrated in the north central and western states. In recent years, more than three-quarters of all Montana wood products have been shipped to those regions.

The shipments of Montana wood products outside the United States make up a small percentage of total sales, but these shipments have recently increased.

Forest Products and Montana's Economy

The forest products industry has had a tremendous impact, directly and indirectly, on Montana's economy. Because the forest products industry makes virtually all of its \$900 million in sales to consumers outside of Montana, the forest products industry is a basic or export industry. As forest products are shipped out of Montana, the \$900 million flows into the state and much of it is spent on Montanans and Montana businesses.

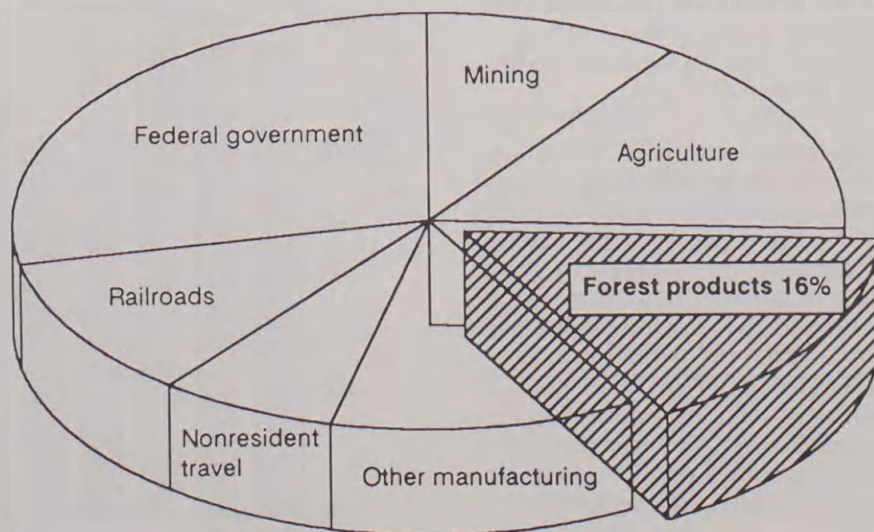
Within the state, the forest products industry employed more than 10,000 workers in 1987 and paid \$260 million in labor income to these workers. As money that the forest products industry brings into the state is spent and re-spent in the local economies, it creates

employment in the derivative sectors — sectors like retail trade, medical services, auto repair, and restaurants. The forest products industry gives rise to an additional 20,000 jobs in these derivative sectors, and these workers earn an additional \$400 to \$500 million in annual labor income. There are also several thousand public employees who are directly involved in forest management activities but are not included in the estimates above.

The importance of the forest products industry to Montana's economy can also be measured by comparing the total labor income of basic industries — industries that bring money into the state or local area.

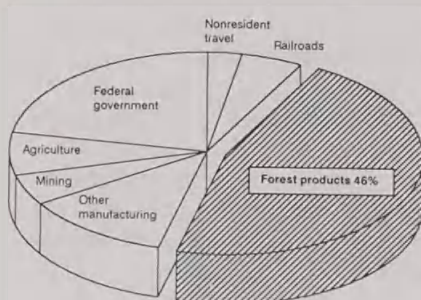
In the last five years, the forest products industry has accounted for 16 percent of the state of Montana's economic base. In the seven western Montana counties — Flathead, Lake, Lincoln, Mineral, Missoula, Ravalli, and Sanders —

The Forest Products Industry in Montana's Economic Base 1982-1986



the industry provided 46 percent of the economic base. The forest products industry is also significant in central and southwestern Montana. In a number of counties, it comprises from 5 to 35 percent of the economic base.

**The Forest Products Industry
in Western Montana's Economic Base
1982-1986**



Changes in the Forest Products Industry

The 1970s and 1980s were decades of extreme contrast for Montana's forest products industry. In the late 1970s, the forest products industry experienced some of the best market conditions ever. Prices of wood products soared, mills operated on expanded shifts, and profits were high.

The boom was followed by a six-year period from 1980-1985 that was the most difficult extended period for the forest products industry since the Great Depression. First there was a sharp drop in the U.S. housing and construction industries, beginning late in 1979 and lasting through most of 1982. From 1983-1985, market conditions were seemingly contradictory. Although the U.S. consumption of wood products hit record levels in 1984 and 1985, prices were very low. The high

value of the U.S. dollar severely affected not just lumber, but virtually all wood and paper products. This happened because the exchange rate made it difficult for U.S. producers to export their products and easier for foreign producers to market their products.

In 1986 and 1987 markets improved over 1985 levels. Production and sales of Montana's forest products increased and actually exceeded the levels of the late 1970s.

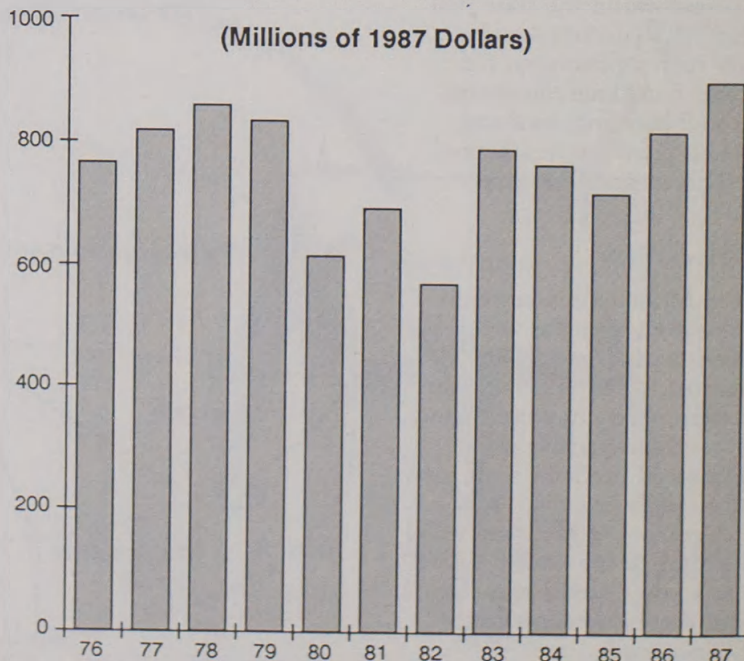
On the other hand, employment in Montana's forest products industry had declined by approximately 2,000 workers from 1979 to 1987. The industry's employment was reduced by increased mechanization and, to a degree, by changes in product mix to less labor-intensive products — especially the shift from large-log to small-log processing facilities.

In spite of these job losses, the forest products industry made a

greater contribution to Montana's economic base in the 1980s than it did in the 1970s, primarily because of the large losses in other major components of Montana's economic base — specifically agriculture, mining, and transportation.

There are some positive long-term ramifications of the shift to a less labor-intensive industry. The very technological advances that precipitated this shift have also made Montana's forest products industry a lower-cost producer. These changes also have made it possible for the industry to use timber that was considered unmerchantable in the past. Although the changes that occurred since 1979 have been painful, they have helped ensure the long-run survival of the industry. The forest products industry of the 1980s is better able to use Montana's timber resources than ever before.

Sales Value of Wood and Paper Products Montana 1976-1987



Products Available

Lumber

Montana sawmills produced over 1.6 billion board feet of lumber in 1987. The lumber was almost entirely softwoods. The species most commonly used were Douglas-fir, lodgepole pine, ponderosa pine, Engelmann spruce, western larch, subalpine and grand fir, western hemlock, western red cedar and western white pine. All grades of lumber normally produced from these species can be found in Montana. High quality select and shop grades are available from old growth trees, particularly ponderosa pine.

Approximately 80 percent of the lumber produced in Montana is dimension lumber. Douglas-fir and western larch are used to produce much of the larger dimension lumber, such as 2x10s and 2x12s. Montana's lodgepole pine, spruce and true firs are now recognized for the high quality smaller dimension and stud lumber they produce.

Panel Products

The panel products produced in Montana are plywood, particleboard and medium density fiberboard.

Total 1987 production of plywood in Montana was 715 million square feet on 3/8 inch basis. The plywood is primarily from Douglas-fir and western larch, although Engelmann spruce, lodgepole pine and ponderosa pine are sometimes used for inner veneers. The plywood produced in Montana can be placed in two general categories: plywood that is suitable for industrial uses, and

plywood that is used for construction purposes. The industrial plywood is touchsanded and generally plugged, and it is commonly used for manufacturing recreation vehicles, boats, van liners and carpet strips.

The only particleboard plant in Montana is operated by the Louisiana Pacific Corporation in Missoula, with a current annual capacity of 150 million square feet on a 3/4-inch basis. It produces industrial grade particleboard of both 45 pound and 55 pound per cubic foot density.

The Plum Creek Timber Company operates a medium density fiberboard plant in Columbia Falls, Montana, with annual capacity of 76 million square feet on a 3/4-inch basis. It produces fiberboard in three densities: 48, 55 and 60 pounds per cubic foot.

Linerboard

Stone Container Corporation owns and operates a large pulp and paper mill near Frenchtown, Montana. The primary finished product produced at the mill is unbleached kraft linerboard that is used in the manufacture of corrugated containers. The grades of linerboard vary by weight from 26 pounds per 1,000 square feet up to 90 pounds per 1,000 square feet. The major weights include 26, 33, 42, 69 and 90 pounds, and weights in between can be produced upon request. A special grade called mottled white is produced in 33, 42 and 69 pound weights. This linerboard has a white exterior which makes a more attractive corrugated container.

Other Wood Products

Montana is one of the major producers of log homes in the country. Basic types of house logs produced in Montana are: hand crafted logs, sawn logs (which are surfaced on two or more sides), and lathe sized logs.

Several million pieces of utility poles, posts, rails, and tree props are manufactured annually in Montana. Lodgepole pine trees supply more than 95 percent of these roundwood products.

In addition to cedar lumber, cedar utility poles and cedar house logs, Montana mills also produce "cedar products" such as shakes and shingles and split-rail fencing. □

Charles E. Keegan III is director of forest products industry research, Bureau of Business and Economic Research, and research associate professor of management, School of Business Administration, University of Montana, Missoula.

Montana Taxation and Expenditures: Issues, Concerns, and Observations

By Bruce R. Beattie
Douglas J. Young

A number of concerns and issues prominent in the ongoing Montana taxation and spending reform debate were addressed at the First Annual Burton K. Wheeler Center Conference at Montana State University. MSU's Wheeler Center was established as a forum for the exploration of Montana issues. During their presentations, MSU economists Bruce Beattie and Douglas Young raised a number of points based on research conducted at MSU and elsewhere. The following is excerpted from the published version of Beattie and Young's remarks—see Montana Taxation and Expenditures, Issues and Options, Burton K. Wheeler Center Monograph 1988, 42p. Single copies available without charge upon request from the: Office of Vice President for Academic Affairs, Montana State University, Bozeman, MT 59717.

As Montana's fifty-first Legislative session unfolds, the impact of taxation and public-sector spending on the state's economy loom as dominant issues. Taxation and government spending have always been controversial issues which frequently generate heated debate at local, state, and national levels. To determine the best policy for the state, Montanans should be knowledgeable of tax and spending issues and of the consequences of alternative proposals.

This article identifies some key issues and concerns about taxation and spending and offers some recommendations.

The Issues Overall

Government finances in Montana have not yet adjusted to the **changed economic circumstances** of the state. The Montana economy suffered a dramatic reversal in the first half of the 1980s as agriculture, energy production, and the wood products industry were affected by drought, low prices, and the national recession. Although agriculture has recovered substantially despite the continuing drought, oil and gas markets remain severely depressed. The wood products industry has also recovered, but with a reduced labor force. State population

declined in 1986 for the first time in many years, presumably because opportunities were greater elsewhere.

Poor economic performance inexorably translated into poorer than expected performance for government revenues. The decline in oil and gas revenues is having a particularly large impact on those local governments which are dependent on the net proceeds portion of the property tax. The Montana Legislature has responded with a series of temporary solutions—salary freezes, across-the-board expenditure cuts, a surtax on the income tax and spending from

trust funds. Many legislators have acknowledged that these actions do not represent a long-run solution because the trust funds will not last forever. Thus, the problem of how to achieve a lasting adjustment to Montana's changed economic circumstances remains.

A second and closely related issue is: **How high or low should Montana's taxes and expenditures be?** In the past few years, Montanans have become increasingly concerned about the total levels of tax and expenditure in the state. High taxes allegedly place an excessive burden on residents and discourage economic development. At the same time, Montanans expect high quality services such as the best education for their children, better roads, and care for the needy. All of these services are expensive, of course. How should Montanans resolve the tension between the expenditure and revenue sides of the budget?

Montanans are also concerned about the **fairness** of the overall fiscal structure. Does the system of revenue sources — all the various taxes, user fees and other sources of funds — equitably distribute the burden of paying for public services? Likewise, is the manner in which public services are distributed fair?

Expenditure Issues

Is spending on **education** at the local level too high, too low or appropriate? Most Montanans consider local education a high priority government service.

Expenditures for elementary and secondary education are the largest single component of combined state-local spending. The state's spending per capita on elementary and secondary education increased 59 percent between 1970 and 1986 (in inflation-adjusted dollars).

Clearly, spending for public education at the local level requires the government to levy taxes. Should more or fewer resources be devoted to public education?

Spending on **welfare** has increased sharply in recent years. The legislature has attempted to change aspects of the welfare system, but some of these changes conflict with the Montana Constitution. Whatever the resolution of the legalities, the appropriate level of spending on welfare will remain a contentious issue.

■ **Montanans are concerned about the state's increasing taxes, yet they expect the best education for their children, better roads, and care for the needy.**

Revenue Issues

Property taxes are an important issue among Montanans. Dissatisfaction with the current system led to CI-27, an initiative to completely eliminate the property tax. More than 40 percent of Montana's voters supported that initiative at the polls in 1987, despite widespread predictions that eliminating the property tax would severely affect the funding of local education.

Many Montanans object to the property tax on a number of grounds. Many homeowners believe that the burden on residences is too high. Personal property taxes, especially business-related personal property, allegedly harms Montana's competitive position,

and the cost of administration (per dollar of tax revenue collected) is significantly higher than for other forms of property. The many separate tax rates, created by the classification system, may create inequities and adversely affect resource allocation. Other Montanans claim that the administration of the property tax is unfair. While most taxable values are in principle based on market values, property owners are not convinced that this principle bears much relation to practice.

The property tax is the primary source of revenue for local education. Because the property tax base varies a great deal among districts with similar enrollments, some districts can support relatively high expenditure levels with relatively low tax rates, while other districts must enact relatively high tax rates to achieve a relatively low level of funding. Although the state-run foundation program partially offsets these inequalities, many Montanans are concerned that the state's method of funding conflicts with its commitment to provide equal educational opportunities. In January of 1988, a court ruled that the inequality is so great that it violates the Montana Constitution. If the court decision stands, Montanans will face the difficult issue of reforming the funding system.

The 1980s have seen the revival of another old issue: the desirability of a **sales tax** to raise new revenue or to offset possible reductions in other taxes. The most contentious aspect of a sales tax appears to be distributional equity—the question of whether a sales tax unfairly burdens the poor. Other sales tax issues include the possibility of garnering significant revenues from tourists and, if used for property or income tax relief, the effects on the business climate.

Montana's **income tax**, including the surtax, now levies one of the nation's highest rates upon "upper income" people. The high taxes may deter entrepreneurs from locating or developing businesses in the state. The effectiveness of high marginal rates in raising revenue is also debatable. On the other hand, many Montanans appear to regard a system of graduated tax rates as a key element in creating an equitable distribution of the tax burden.

Resource taxation has been a significant subject of debate since the 1970s. Two major issues encompass the debate. First, to what extent do resource taxes lower the level of economic activity, hurting employment and the economic base in the state? Second, to what extent are resource taxes "exported" to out-of-state consumers, mine owners and others, thereby creating a windfall for Montanans? Supposing that the answer to both questions is "to some extent," the relevant issue is how to balance the desirable and undesirable effects of these taxes.

Specific Concerns

Participants in taxation and spending debates use many criteria to evaluate public expenditure projects and programs. Five concerns or evaluation criteria, which Montanans frequently express and are highly visible in tax and public expenditure discussions are:

Fairness or equity: Montanans would like the tax burden and provision of public services to be distributed fairly and equitably among all citizens.

Economic growth, competitiveness and business climate: Most Montanans would like our

■ **Montana's income tax, including surtax, now levies one of the nation's highest rates upon "upper income" people. The high taxes may deter entrepreneurs from locating or developing businesses in the state.**

tax system and public services to foster, or at least not adversely affect, the economic growth, competitiveness and business climate of our state.

Economic stability: Montanans desire a tax system and public service sector that enhances the prospects for a stable but growing economy. Experiences with a boom and bust economy have not been pleasant in the past.

Economy of administration: Montanans would like a cost effective tax collection process and a public sector that is "lean, mean and highly productive."

Exportation of tax burden: Being perfectly rational human beings, Montanans would not mind if as much of our tax burden as possible could be exported to "outsiders," while the benefits of our taxpayer-supplied public services are realized principally by Montanans.

The following section discusses each criterion and introduces related principles and terminology.

Fairness or Equity

Clearly, Montanans are concerned that our tax system and provision of public services should be fair and equitable. For example, people often say that the sales tax is unfair because it hits hardest our low income residents; or, that the property tax is unfair to our older citizens who live on fixed incomes.

Recently, the court has declared that the state's method of financing elementary and secondary education is unfair because it does not provide equal educational opportunity for all children.

Fairness or equity is a highly emotional issue fraught with conceptual difficulties. Everyone has a different definition of what is fair. Although political consensus is unlikely, it might be helpful to come to a common understanding about fairness and equity.

Two general approaches govern fairness in taxation, namely, tax according to *benefit received* and tax according to *ability to pay*. Financing the cost of public services, by charging a fee to users, is the operational form of the benefit-received principle. This approach seems appealing when the service in question has characteristics similar to those goods and services commonly provided by the private sector.

Benefit received: In Montana, as in many other states, a good example of the benefit-received principle is motor fuel taxes. Most gasoline taxes are earmarked for roadway construction and maintenance. Presumably, those who purchase fuel at local service stations are the principal users of the roadways. Because they pay taxes on the gas, they are largely responsible for paying for roadway construction and maintenance. In

the case of motor fuels, the fee is called a tax. In other cases, the term user fee is adopted. The entrance to Yellowstone National Park, tuition at Montana State University, and the livestock brand recording fee are all user fees. Although these fees or taxes are less than the full cost of the service, they are based on the ideas that all or some of the service cost should be borne by those directly benefiting from the service.

Many public services such as elementary and secondary education, a sizeable share of higher education, police and fire protection, welfare and certain human services, and the penal system are not financed through user fees. The rationale for not charging users is often what economists refer to as either externality, "public good," humanitarian, or the redistributive aspects of such services. When the principal motivation for a particular government program—for example, Aid to Families with Dependent Children—is humanitarian, a user charge defeats the intended purpose. Similarly, when the objective of a public program is to redistribute income or opportunity to a target group, user fees would be self-defeating.

Finally, when providing services to a particular individual has significant positive spillover effects on others, then full-cost financing, based on the principle of benefit received, may result in less than the socially optimal service level. One example is higher education. Certainly, there are clear economic benefits to be gained by students from enhancing their marketable skills; thus, payment of tuition seems appropriate. On the other hand, we all may benefit from having a well-educated populace. Since there are positive spillover benefits to all of us from higher

education, perhaps it is appropriate that we collectively help bear the burden of that investment.

In situations where the benefit received idea (user charges) is an inappropriate method of financing public services, there seems to be political consensus that financing via taxation, in accordance with ability to pay, is the preferred method. So, how can we come to grips in some quantifiable and objective way with the concept of ability to pay? What should be the basis for judgment; and how might we sort out actual from perceived ability to pay and tax incidence?

Ability to pay: Equity in taxation, based on ability to pay, is generally defined as being either *proportional, regressive or progressive.*

A proportional tax requires taxpayers in all ability-to-pay categories to pay the same *percentage* of whatever is used as the measure of ability to pay. For example, suppose I possess 10 "ables" and you have 100 "ables." If the tax collector demands 1 "able" from me and 10 from you, then the effective tax rate on both of us is 10 percent, and the tax is proportional.

On the other hand, if I must contribute 2 "ables" and you 10 "ables," then the tax is regressive because my effective tax rate is now 20 percent—yours remains at 10 percent—and I have the lesser ability to pay.

Finally, if I pay 1 "able" to the tax collector and you must pay 15 "ables," then the tax is progressive because the person with the greatest ability to pay has the highest *effective* tax rate.

The term "effective" is emphasized because often there can be considerable difference between apparent and actual tax rates on

taxpayers with similar and differing ability to pay.

Probably the most difficult matter in coming to grips with a workable concept of equity is: What is the best operational measure of ability to pay? Most federal, state and local tax systems have components that are based on measured wealth, income or consumption of the taxpaying public. Most economists would probably agree that all three, to varying degrees, are related to ability to pay. In Montana, property and severance taxes are wealth-based taxes; personal and corporate income taxes are income-based; gasoline and liquor taxes are consumption-based.

Of these three possible measures of ability to pay, Montanans seem to think in terms of income as the preferred measure of ability to pay. For example, the regressivity arguments raised in opposition to a sales tax suggest that income should determine how much people pay in taxes. Wealth, as measured by the market value of real or personal property or units of natural resources extracted, is fraught with difficulties as a measure of ability to pay. Some people argue that consumption, rather than income, is the ethically superior basis for judging ability to pay because consumption taxes are based on what an individual "takes from" society, whereas taxes based on income pertain to what one "gives to" society in terms of his or her talents, labor and other resources. Although strong arguments exist for each component, income is probably the most commonly used measure of ability to pay.

Fortunately, other criteria for evaluating taxation and expenditure programs are not nearly as subjective, value laden and burdened with confusing jargon as fairness and equity.

Economic Growth, Competitiveness and Business Climate

The interrelated ideas of economic growth, competitiveness, and business climate can be considered as a single category or criterion. The central concern is that we design and institute a tax system and provide those public services and infrastructure that will be conducive to maintaining a healthy economic environment, so that Montana might attract new businesses and create new jobs.

Most Montanans are aware of the difficulty of providing opportunity for their children, funding essential public services, and otherwise maintaining the attractiveness of Montana as a place to live and work in the face of a shrinking economy. Montana's tax system and the quality of the state's infrastructure and public services influences our business climate and potential for economic recovery and growth. This criterion will and should remain a front-burner consideration in the Montana taxation and spending reform debate.

Tax policy relates closely to economic efficiency and growth. One of the inherent problems with all forms of taxation is that the effective prices, or cost of taxed resources and goods and services, become distorted and no longer reflect true "scarcity or market

value." For example, if a high tax is placed on wage or salary income — say a high marginal personal income tax rate as is the case in Montana — then workers might be discouraged from earning additional income. They might even choose to move to another state where income is not taxed at such a high rate. If a high tax is placed on gasoline, but not on diesel fuel, energy consumers will invest in diesel-powered vehicles rather than gasoline-powered vehicles. Or, if one business activity is taxed but another is not, the business that is taxed will produce and consume less than the untaxed activity. In such cases, society is getting a smaller economic pie than it might otherwise have if taxes were levied in a less discriminatory manner.

Economic Stability

The idea of economic stability is to keep severe swings in the economy under control. A nice, steadily-improving economy is usually superior to a pattern of recurring boom and bust. Certain individuals may thrive on "shooting the works" or "going for all the marbles," but such a strategy seems ill-advised for governments or society as a whole. Rapid growth, however, seems to concern us less than the possibility of rapid and severe downturns — an unpleasant thought that most Montanans can relate to rather easily at the moment.

In formulating tax policy and

In Montana, a particularly disturbing feature of our tax system is that many different categories and rates make up the state's property tax system. Currently, there are twenty different categories of taxable property in Montana, all assessed and taxed at different rates. While unequal tax rates can sometimes be justified because of spillover effects or differences in resource mobility, a hodgepodge of unequal treatment is bound to create distortions in economic incentives; for example, distorted relative prices and costs of holding and using different kinds of property. These distortions due to unequal tax treatment should be avoided because the resource misallocation negatively affects all Montanans.

prioritizing and funding public services, being attentive to the stability of the system is an important consideration. For example, a tax system that generates relatively stable flows of revenue for funding public services is preferable to a system characterized by booms and busts. Executive and legislative branches of government may "cave in" to special-interest groups and over-expand and over-commit in the good times. In bust periods when inevitable shortfalls occur, across-the-board budget reductions are frequently employed rather than a rational process of prioritization and differential budget and programmatic reductions.

Economy of administration

Economy of administration is a concern in the operation of any costly venture, whether that venture is a private-sector business, a household, a tax collection system, or the provision of a

public-sector service. Such concern is clearly warranted—it is wise to organize activities so they can be accomplished in the most cost-effective manner. For example, it is in society's best interest that schools produce educated children, that the highway department produces adequate and well-

maintained roads, and that police and fire departments provide quality protection in a manner that is not wasteful of scarce resources. It makes sense that we develop a tax and user fee system that produces the needed revenue at the least cost. The cost effectiveness of tax collection is important to →

Exportation of tax burden

The possibility of exporting sizeable amounts of our tax burden to nonresidents has always had considerable appeal to many Montanans—at least secretly, if not openly. This idea was surely in peoples' minds when the 30 percent coal severance tax was instituted several years ago. Sales tax proponents openly argue that one of the desirable characteristics of sales taxes is the potential for tapping nonresident tourists. Montana's recent "bed tax" was motivated in part by such considerations. One can be sure that Montanans' desire to "export the burden" is no different than that of residents of other states.

One of the problems with tax exportation is the possibility of unintended deleterious effects on business activity and employment. For example, did Montana's 30 percent resource severance tax have a negative impact on the energy production sector in the state? In the process of exporting taxes, did we manage to export jobs and income to Wyoming, the Dakotas and elsewhere? The idea of tax exportation must be approached judiciously.

It is also not surprising that Montanans, like others, are interested in targeting the benefits of our tax-supported public services to residents rather than nonresidents. A good example of this strategy is the differential

tuition rates charged resident and nonresident students attending Montana universities. Residency requirements are commonly used in allocating human services and other tax-supported public services in most states.

Some Observations

We have addressed a number of concerns and issues prominent in the ongoing Montana taxation and spending reform debate. A thorough look at Montana's taxes and expenditures is beyond the scope of this article, as is a technical look at the myths and theories surrounding each issue and concern. However, based on our analysis of several specific issues, we offer the following observations:

1. Montanans seem concerned that their tax system and the provision of public services be fair and equitable, foster a positive business climate and economic growth, and be cost effective.

2. In 1986, Montana ranked twentieth among the fifty states and the District of Columbia in terms of state and local revenues per capita; however, the state ranked seventh when revenue was measured as a percentage of state income.

3. In 1986, Montana ranked twenty-ninth among the states in terms of total taxes paid per capita.

We were ninth in terms of property taxes paid per capita, but this is somewhat misleading because about 20 percent of our property tax came from taxes levied on natural resources. Montana ranked thirty-fourth in terms of income taxes paid per capita; but our ranking has probably increased in the last few years because of the surtax and the effects of Federal Tax Reform. We are one of only five states that does not levy a general sales tax.

4. Expenditures on elementary and secondary education in Montana are the fourth highest in the nation on a per capita basis; on the other hand, per capita expenditures on higher education are less than the national average. Per capita expenditures on highways are, not surprisingly, the second highest in the United States. Welfare expenditures are less than the national average.

5. Contrary to popular perception, retail sales taxes are not necessarily regressive; that is, falling disproportionately on those with the least ability to pay. Whether or not sales taxes are regressive depends importantly on two matters—whether exemptions are made for the "necessities of life" and what is used as a basis for calculating ability to pay.

6. While a sales tax has certain advantages, shifting a sizable share of the burden to nonresident tourists is not one of them. Not more than 3.5 to 4 percent of sales tax receipts would come from

taxpayers, as well as to the Montana Department of Revenue and the County Assessor Offices. The compliance costs (bookkeeping costs, attorney and accountant fees, frustration and other costs) imposed on taxpayers are real and relevant costs that should also be minimized insofar as possible in our tax reform efforts.

A related issue is the possibility for privatization and/or contracting out selected services that are currently provided through the public sector. If a government service can be provided at lower cost by contracting with the private sector then such opportunities should be considered. However, this option is probably pursued less

often than it might be. Privatization often involves the transfer of economic activity away from a bureaucracy and a change from general revenue financing to a user charge method of financing. What beneficiary interest group would not resist such a move with all the economic and political clout it could muster?

nonresident tourists, given that Montana already levies taxes on motor fuels and motel and hotel lodging, and assuming groceries would be exempt.

7. Federal and state income taxes tend to be progressive throughout most income classes. However, they are often effectively proportional or even regressive at the highest income levels due to tax avoidance activity that reduces the tax base. With our surcharge, Montana now levies the highest marginal tax rate (12.1 percent) in the nation on top-bracket taxpayers. Our high top-bracket tax rates likely encourage high income taxpayers to engage in tax avoidance activities, effectively reducing the tax base and thus tax collections. Accordingly, Montana's income tax is probably less progressive than commonly believed.

8. The evidence that state and local taxes have an impact on economic growth and business climate is mixed. While earlier studies frequently found little connection between overall tax levels and business location, recent studies have found a negative relationship between *relative* state and local tax burden and business location when a multi-year adjustment period is considered.

9. While there seems to be little empirical evidence, other than opinion polls, to suggest that the structure of the tax system has an impact on business climate, Montana's many classes of personal property and the greatly varying effective rates levied against business assets are not conducive to a positive business climate. High, top-bracket, marginal personal income tax rates probably have a deleterious effect on Montana's business climate as well.

10. Taxes on natural resources have allowed Montana to export some of its tax burden to nonresidents, but probably at the cost of some jobs and other tax

revenues. The exact dimensions of this trade-off are not clear, but opportunities to export taxes in the future will almost certainly be less than in the recent past, because of declines in energy markets.

11. Recent growth in welfare expenditures seems more related to economic hard times than to relaxed eligibility criteria or increased benefit levels. It seems likely that this burden will decline as Montana begins to experience economic recovery.

12. Expenditures for elementary and secondary education in Montana are the fourth highest in the nation on a per capita basis (point 4 above). Expenditures per pupil rose 160 percent (in inflation-adjusted dollars) between 1960 and 1985, compared with a 155 percent rise for the nation as a whole. Much of this is seemingly due to increases in voted levies at the local level. A recent court order requiring greater equalization of expenditures per pupil among districts, if it stands, will effectively require a redistribution of the burden of supporting Montana local education—from wealthier districts to poorer ones; or from higher income to lower income areas; or from high business activity counties to lower ones, depending on whether equalization is accomplished through property taxation, income taxation or sales taxation.

We conclude this review of Montana taxation and spending issues and implications with some ideas on how we might work toward achieving long-term fiscal balance. The Montana economy in the 1980s has been very different than it was during the 1970s. Between 1971 and 1981, for example, per capita income increased about 2.5 percent per year. While the energy boom

continued into the early part of the 1980s, agriculture fell on hard times — mainly because of the drought, high interest rates, and weak world markets for grain. After bottoming out in 1985, agriculture made an impressive recovery and the outlook is fairly good, even with the 1988 drought. By no means, though, do we expect agriculture's growth to approach the sensational.

In the meantime, the collapse of oil prices has substantially reduced exploration and development in the oil and gas sectors, and to a lesser extent depressed production. Although oil prices are notoriously difficult to predict, we see little reason to believe that a return to boom times is likely in the near future. The wood products industry also suffered through several very bad years and has now rebounded, though with 2,000 fewer employees.

Other sectors of the Montana economy have shown a mixed record, with some other mining developments showing particular promise. But the net effect of these trends is a record for personal income that stands in sharp contrast to the 1970s. Rather than growing about 2.5 percent per year, per capita income in 1987 was about the same as in 1981. Montana's performance was even more disappointing in relative terms; our per capita income fell from 90 percent of the U.S. average to 80 percent over this same time period. While we do not expect continued declines, neither do we expect a return to the robust growth of the 1970s.

Alice Rivlin, Montana State University's 1988 Wheeler Lecturer and a distinguished economist, talked about the importance of income growth. When income is growing, it is possible to provide additional funding for higher quality public services and for Montana citizens to take home a larger after-tax paycheck. Without that growth in income, public

budgets become very tight and taxpayers become less willing to give up more of their incomes to fund increased levels of public services.

Montana has not yet fully come to terms with the new reality of its economic situation. The Montana Legislature has responded with a series of temporary solutions, including salary freezes, across-the-board expenditure cuts, a surtax on the income tax, and spending from trust funds. These actions clearly do not represent a long-run solution.

minerals—taxes that we believed were largely exported to out-of-state customers and mine owners. In the last three years, revenues from natural resource taxes have fallen 35 percent, and our ability to export our tax burden has been significantly reduced. All this means that Montanans will have to bear a larger share of the burden for paying for public services.

Our final recommendation is that Montanans must make every effort to avoid across-the-board cuts. We are well aware that this is perhaps the most difficult task facing policy

the adjustments to be made are not of the wholesale kind. No program needs to be cut in half in the name of fiscal crisis, although some perhaps should be on other grounds, and certainly there is no reason for large tax increases. Our call instead is for a series of reforms which, although all involve winners and losers, will ultimately put the fiscal system in Montana on a track that will provide quality public services financed in ways that will enhance Montana's economy and the opportunities provided its citizens. □

■ *The coal trust funds were intended for a "rainy day," and most of us would agree that it has been raining, if not hailing, on the Montana economy in recent years.*

So, what is the appropriate course of action for public finance in Montana? First, we believe that spending from the coal trust funds is appropriate. These funds were intended for a "rainy day," and most would agree that it has been raining, if not hailing, on the Montana economy in recent years. Second, we believe that Montana's reduced ability to pay for government services translates into a reduced willingness to pay, and that this should be respected by policy makers. When forced to tighten one's belt, one tends to take a little bit out of all sorts of places, not just one part of the waist. Thus it is reasonable for Montanans to expect that part of the belt tightening will be in the form of reduced government services, as well as reductions in their private purchases.

The decline in energy markets is a particularly important reason for belt tightening. Only a few years ago, 20 percent of the property tax, for example, came from taxes on

makers—the sorting out of priorities and the determination that this or that program is less important or less cost effective than another. But it is entirely necessary. We urge policy makers to remember that most cuts will be made at the margin—reductions or smaller increases rather than outright abandonment. Therefore, we need to discover which programs can retain most of their effectiveness with slightly less or not much more money, and which programs can provide additional benefits to Montanans that exceed their extra costs.

Although the prospects for the Montana economy are not fantastic, they are far from hopeless. We can, we think, reasonably expect that the worst is behind us and that moderate, but positive, rates of economic growth are our future. Similarly, while we believe that government finances have not yet fully adjusted to our changed economic circumstances,

Bruce R. Beattie and Douglas J. Young are professors in the Department of Agricultural Economics and Economics at Montana State University, Bozeman.

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1989 Economic Outlook Seminars

Cavanaugh's Motor Inn, Kalispell.....	Monday, January 23
War Bonnet Inn, Butte.....	Wednesday, January 25
Village Red Lion, Missoula.....	Friday, January 27
Northern Hotel, Billings.....	Tuesday, January 31
Rainbow Hotel, Great Falls.....	Thursday, February 2
Colonial Inn, Helena.....	Friday, February 3

Programs will include the state and local outlook for 1989, a panel of local business leaders, and a special luncheon presentation. All sessions -- 8:30 a.m.-1:15 p.m. \$50 includes lunch and all registration materials.

*For further information, contact
Bureau of Business and Economic Research
School of Business Administration
University of Montana
Missoula, MT 59812
(406) 243-5113*

Bureau of Business and Economic Research

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Dean, School of Business Administration

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The Bureau's Economics Montana forecasting system is an effort to provide public and private decision makers with reliable forecasts and analysis. It is made possible by a generous grant from U.S. West. These state and local area forecasts are the focus of the annual series of Economic Outlook Seminars, cosponsored by the respective Chambers of Commerce in Missoula, Billings, Great Falls, and Helena.

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The Montana Poll, a quarterly public opinion poll, questions Montanans about their views on a variety of economic and social issues. It is cosponsored by the *Great Falls Tribune*. In addition, the Bureau conducts contract survey research and offers a random digit dialing program for survey organizations in need of random telephone samples.

The Forest Industries Data Collection System, a census of forest industry firms conducted approximately every five years, provides a large amount of information about raw materials sources and uses in Montana, Idaho, and Wyoming. It is funded by the U.S. Forest Service. The Montana Forest Industries Information System collects quarterly information on the employment and earnings of production workers in the Montana industry. It is cosponsored by the Montana Wood Products Association.

Readers of the *Montana Business Quarterly* are welcome to comment on the *MBQ*, request economic data or other Bureau publications, or to inquire about the Bureau's research capabilities.

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