

The Hunt For Economic Development

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Recreation and tourism continues to be an important and expanding part of North Dakota's economic base. Recreation and tourism was the fourth largest income generating industry, on average, from 1985 to 1989 in North Dakota (Leistritz and Coon 1990). Direct recreation and tourism expenditures in 1990 were \$694 million (Dean Runyan Associates 1991), of which over half, or \$400 million, came from hunters and anglers.

The amount and distribution of hunter and angler expenditures in North Dakota have some important implications for economic development. First, a large part of those expenditures represents "new money." Second, the outdoor recreation industry is second only to agriculture in its widespread impact on rural areas of the state. Finally, a number of factors may lead to reductions in business activity hunters and anglers generate.

The Study

This article highlights some of the important findings from a survey of resident and nonresident hunters and anglers during the 1990-91 season (Baltezare and Leitch 1992). Data were collected via mail surveys of representative samples of each hunter or angler license type. As many as three mailings to licensees, whose names and addresses came from the North Dakota Game and Fish Department, resulted in over 7000 responses. Response rates ranged from 27 to 89 percent and averaged about 60 percent.

Resident open water anglers reported the highest season expenditures of about \$2,400 each; resident special big game hunters had the highest daily expenditures of just over \$400 each (Table 1). The lowest season and daily expenditures for resident licensees were reported by wild turkey hunters who had gratis licenses, spending only \$63 during the season and \$26 per day. Nonresidents reported spending less than their resident counterparts, both for the season and on a daily basis. One explanation for lower nonresident expenditures is that residents purchase most of their sporting equipment in the state, while nonresidents purchase most of their durable goods (e.g., rifles, boats, tackle, vehicles) in their home areas.

Economic Effect

The economic effect of hunting and angling can be assessed as either the gross impact on economic activity or as the net contribution to an area's economy. The \$400 million in expenditures that hunters and anglers made in North Dakota in 1990-91 came primarily from residents of the state (Table 2).

Gross Impact

The retail trade sector realized \$170 million in sales either directly to hunters and anglers or to those businesses that serve hunters and anglers (Table 3). Overall, \$267 million in personal income was generated from the direct expenditures of \$400 million. Personal income is the money that ends up in the pockets of

Table 1. Average season and daily expenditures, by activity, resident and nonresident hunter/angler survey, 1990-1991.

Activity	Average Days Participation	Expenditure	
		Season	Daily
----- dollars -----			
Residents			
Pronghorn Antelope			
Archery	8	1,096	156
Firearms			
Resident	2	560	325
Gratis	3	278	121
Special Big Game	5	1,458	430
Deer			
Archery	14	706	83
Firearms			
Resident	5	600	173
Gratis	4	138	42
Muzzleloader	4	501	174
Furbearer	12	1,042	208
Small Game			
Waterfowl	11	1,120	97
Upland	13	710	63
Wild Turkey			
Combined ^a	2	156	84
Spring	3	267	182
Gratis	3	63	26
Fishing			
Open Water	13	2,363	213
Ice	11	872	129
Nonresidents			
Pronghorn Antelope			
Archery	7	368	54
Deer			
Archery	8	567	78
Firearms	4	466	118
Small Game	5	562	123
Fishing	6	668	117

^aIncludes early, late, and winter seasons.

Table 2. Total direct resident and nonresident expenditures in North Dakota, by activity, 1990.

Activity	Resident	Nonresident	Total
	----- dollars -----		
Pronghorn Antelope ^a	2,478,000 ^b	24,000	2,502,000
Deer ^a	40,897,000 ^c	508,000	41,406,000
Special Big Game	223,000	0	223,000
Small Game ^d	67,801,000	3,409,000	71,210,000
Wild Turkey	927,000 ^e	0	927,000
Furbearer	23,814,000	0	23,814,000
Total Hunting	136,141,000	3,940,000	140,081,000
Total Fishing	246,030,000	11,018,000	257,048,000
Total Hunting and Fishing	382,171,000	14,958,000	397,129,000
Cost of Licenses	2,698,000	735,000	3,433,000
Grand Total	384,869,000	15,693,000	400,562,000

^aArchery and firearms combined.

^bIncludes gratis hunters.

^cIncludes gratis and muzzleloader hunters.

^dIncludes upland game and waterfowl hunters.

^eIncludes gratis and spring season hunters.

Table 3. Retail trade, personal income, total business activity, and employment generated by resident and nonresident hunter/angler expenditures in North Dakota, 1990.

Group	Retail Trade ^a	Personal Income ^b	Total Business Activity ^c	Secondary Employment
	----- thousand dollars -----			----- jobs -----
Impacts^d				
Residents	163,875	257,316	1,268,754	18,706
Nonresidents	6,414	10,071	50,288	781
Total	170,289	267,387	1,319,042	19,487
Contributions^e				
Residents	65,550	120,926	507,502	7,482
Nonresidents	6,414	10,071	50,288	781
Total	71,964	112,997	557,790	8,263

^aRepresents expenditures at gasoline and service stations, boat and recreational dealers, eating and drinking places, and sporting goods stores.

^bRepresents the amount of money households receive as salaries and wages from hunter and angler expenditures.

^cRepresents the economic activity hunter and angler expenditures generate from "responding" initial expenditures.

^dActual effects of \$355 million in expenditures on the recreation and tourism sectors of the state's economy.

^eLikely real additions to economic activity resulting from hunter and angler activity. Netted out are in-state replacement activities — money that would have been spent in the state anyway.

individuals as household income. Finally, over \$1.3 billion was generated in total business activity. Total (or gross) business activity is a result of the “multiplier” effect. It shows how many times a dollar hunters and anglers spend circulates through North Dakota’s economy — about 3.3 times for recreation and tourism (Coon et al. 1990).

This amount of economic activity is enough to support nearly 19,500 jobs in the various sectors that directly and indirectly serve recreation and tourism. Those jobs may be seasonal, part-time, or permanent full-time, but the sum of all the part- and full-time jobs is equivalent to 19,500 full-time jobs.

Contribution

While the gross impact is a useful indicator of the economic activity generated from hunter and angler expenditures, it is not an accurate measure of the contribution made. Only those expenditures that would not have been made in the state, if hunting and angling opportunities were not available, can be counted as adding to North Dakota’s economy.

A large portion of resident expenditures and all nonresident expenditures can be considered net contributions to the economy. Baltezare and Leitch (1992) estimated that an overall average of about 40 percent of North Dakota resident hunters would go elsewhere if these activities were not available in the state. Therefore, 40 percent of resident expenditures can be considered import substitutions, money spent on locally available products in lieu of imports. Thus, residents’ expenditures contribute \$66 million to retail trade, \$103 million to personal income, and \$508 million to total business activity each year and provide for 7500 jobs in the state (Table 3).

All nonresident hunter and angler expenditures are “new money” to the state. These outdoor recreation “exports” to a variety of other states account for \$6 million in retail trade, \$10 million in personal income, \$50 million in total business activity, and support 780 jobs (Table 3).

Rural Economic Development

Most economic development activities occur in urban areas except for production agriculture and some energy-related activity. However, hunting and angling bring economic activity to rural areas. Much of the money spent in rural areas comes from urban areas of the state as well as from other states. For example, \$8.6 million, or over half of the \$16 million nonresident hunters and anglers spent in North Dakota in 1990-91, was spent in rural areas (Figure 1).

Nonresidents spend additional money in the state not directly related to hunting/angling activities, such as clothing, appliances, and furniture. Collectively, nonresident hunters and anglers

contributed \$5.1 million to the state’s economy in addition to direct hunting/angling expenditures (Figure 1). A portion of these expenditures provide subsequent economic activity to rural areas of the state.

Over half (53 percent or \$203 million) of the \$385 million that North Dakota resident hunters and anglers spent was in rural areas. Again, a distinction could be made between the gross impact and the net contribution made in rural areas. However, the absence of substitute activities in rural areas implies most of the effect of rural spending can be considered a net contribution to those areas, although it may be a gross impact to the state’s economy.

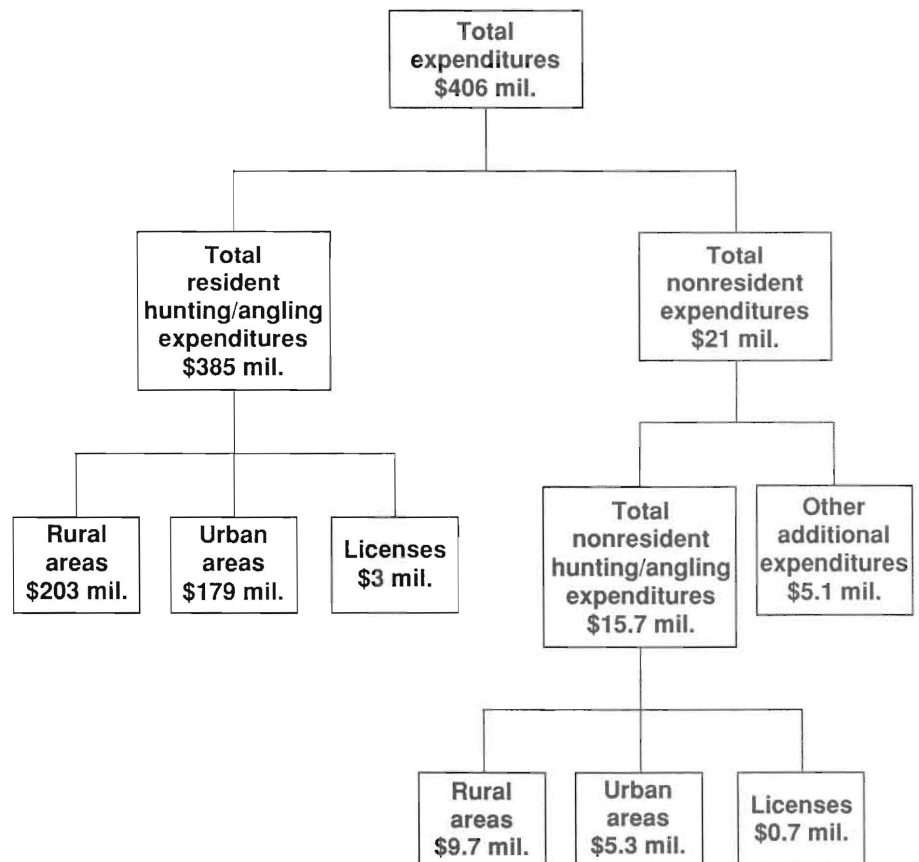


Figure 1. Dollar flow of resident and nonresident hunter and angler expenditures in North Dakota, 1990-91.

License Sales

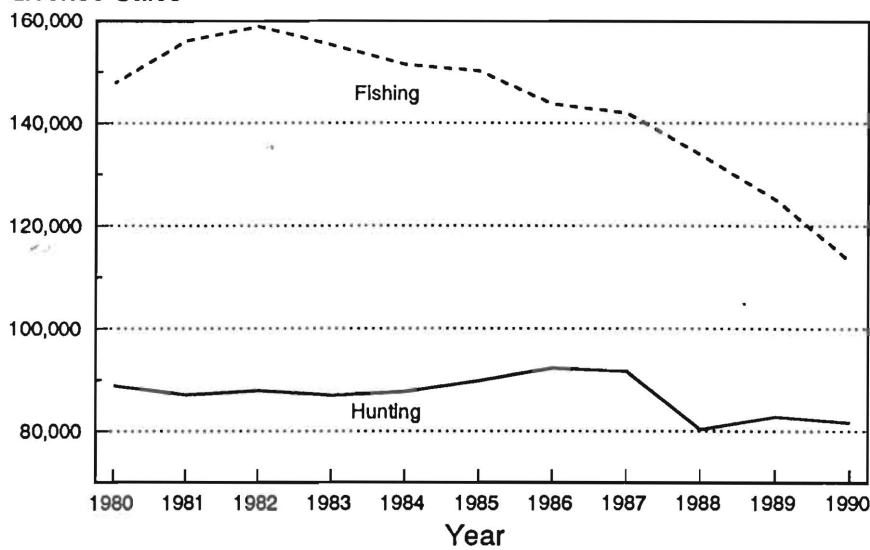


Figure 2. North Dakota resident fishing and hunting license sales, 1980-90.

Reason for Concern

What appears to be a positive factor in North Dakota's rural economy may be only a temporary, albeit gentle, boom. While nonresident hunting and fishing licenses remained fairly stable from 1980 to 1990, resident fishing license sales declined 26 percent and resident hunting license sales declined 8 percent (Figure 2). This represents the potential for reduced expenditures. However, game and fish management revenues generated exclusively by license fees and excise taxes on sporting goods also decline in direct proportion to the drop in license sales.

Real (adjusted for inflation) expenditures grew rapidly, until recently. In real terms, resident spending increased 7 percent from 1986 to 1990 (Table 4). Nonresident spending declined only 3 percent from 1983 to 1990.

There are several possible reasons for the declines in the number of hunting and fishing licenses. Overall economic health can affect expenditures on leisure activities. The availability of game and

fish species affects the number of hunters and anglers drawn in from other regions of the state and from out of state. Leafy spurge can affect the availability of wildlife and, thus, the expenditures of hunters and anglers (Wallace et al. 1992). The state's water resources have suffered from a drought, dampening enthusiasm for fishing. The drought also has affected production of waterfowl, a major attraction for nonresidents. The anti-hunting movement may discourage existing and potential new hunters from hunting. Hunters may find difficulty obtaining access to hunting lands because of landowner posting. More attractive recreational activities in other states may lure both resident and nonresident hunters and anglers away from the state. All of these reasons tend to reduce license sales, which carries over into future years as hunters and anglers become accustomed to other areas and to substitute activities. In addition, youngsters drawn to substitute activities often do not grow up to be avid hunters and anglers.

Table 4. Resident and nonresident total direct expenditures (excluding license fees) 1990 dollars, various survey years.

Survey Year ^a	Residents	Nonresidents
----- million dollars ^b -----		
1976	na	5.3
1982	125.5	na
1983	na	15.5
1986	356.8	na
1990	382.2	15.0

^aSources include Leitch and Scott 1978, Leitch and Kerestes 1982, Kerestes and Leitch 1983, Anderson and Leitch 1984, Baltezare et al. 1987, and Baltezare and Leitch 1992

^bAdjusted to 1990 dollars, using the Gross National Product Implicit Price Deflator.

Summary and Conclusions

Hunting and angling are important economic activities in North Dakota, especially in rural areas with few alternative means to generate income. The annual gross impact of \$400 million in direct hunting and angling expenditures is \$1.3 billion. The actual contribution to the economy is \$558 million, which supports 8,000 jobs. Well over half of the direct expenditures are made in rural areas, contributing to areas of North Dakota most in need of economic activity. A large portion of the jobs also is generated outside of urban areas.

Indications are that hunting and angling may decline from outmigration, decreasing participation rates, and other natural and competing factors. Perhaps programs like Conservation Reserve and Wetland Reserve or more active and intensive game and fish management can maintain, or even increase, the business activity generated through hunting and fishing expenditures in the state. Recreation and tourism is the fourth largest industry in the state, and hunting, fishing, and associated spill-over benefits (e.g., nongame species and habitats) contribute to North Dakota's high standard of living.

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