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A State Lottery for Indiana: The Voters Decide

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Introduction

On November 8, 1988, Indiana voters will decide whether to allow the legalization of a lottery and parimutuel betting in the Hoosier state. A referendum will ask whether the state Constitution should be amended to eliminate the section that prohibits lotteries. Article 15, Section 8 of the Constitution, reads "No lottery shall be authorized; nor shall the sale of lottery tickets be allowed." If the referendum is approved by a majority of voters, in 1989 the Indiana General Assembly may consider bills to create a state lottery. If such a bill becomes law, lottery ticket sales would likely begin in late 1989. The legislature could also legalize parimutuel betting on horse racing, as well as casino gambling, if the referendum is approved. Voters should remember, however, that passing the referendum does not legalize any form of gambling. It would remove the Constitutional language prohibiting the legislature from legalizing a lottery, parimutuel betting or casino betting.

This publication assembles information that will be useful to Indiana voters in making their lottery decisions. Among the topics covered are the recent history of state lotteries in the United States, the sales growth and administrative costs of lotteries, whether the lottery is a regressive tax, and the relationship of lotteries to crime and compulsive gambling. The revenue potential of an Indiana lottery is estimated. The issues surrounding parimutuel betting on horse races are also considered.

State Lotteries in the United States

Twenty-six states and the District of Columbia operated lotteries as of February 1988. A majority of the population of the United States now lives in lottery states. Gross lottery sales topped $11 billion in 1986.

Early Problems. New Hampshire began the first modern state lottery in 1964, and New York State followed in 1967. These early attempts at lotteries were not successful. Revenue fell short of predictions, and sales declined after the first year of operation. In spite of this poor performance, New Jersey entered the lottery business in 1971, and sales exceeded all but the most optimistic projections. New Jersey's success prompted ten more states to set up lotteries by 1975.

The New Jersey lottery succeeded because its design appealed to the betting public. Tickets cost only 50 cents, compared to $1 in New York and $3 in New Hampshire. Drawings were held once a week rather than monthly as in the New York and New Hampshire games (Watson, 1973). In addition to low ticket prices and frequent drawings, lottery officials found that customers preferred many chances to win and large grand prizes (Bird, 1972). States establishing lotteries between 1970 and 1975 followed the 50 cents, once-a-week drawing pattern, and New Hampshire and New York redesigned their lotteries with these features.

In spite of the weekly lottery's initial successes, sales tended to decline after the novelty wore off. To maintain sales, it was necessary frequently to change prize structures, game themes, and types of drawings (Brooks, 1975). In the early 1970's, national lottery sales grew because new states entered the lottery business. Within states, lottery revenues did not increase significantly. Sales declined in Connecticut and New York in 1974, and in New Hampshire and New Jersey in both 1973 and 1974 (Commission on Gambling Policy, 1976).

New Game Types. The rapid lottery sales growth in the late 1970's and 1980's began with the advent of the numbers, lotto, and instant games. These three games now account for almost all state lottery sales. The older weekly lotteries have been largely discontinued (Knapp, 1983).

The numbers game is similar to the game operated illegally in many urban areas in the U.S. (Kaplan and Maher, 1970). The bettor chooses a

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three- or four-digit number and bets that some combination of the chosen digits will turn up in the nightly drawing. The odds of choosing the correct three-digit number are one in 1,000, and the prize awarded on a one dollar bet is usually $500 or $600.

Lotto games have generated more publicity than any other type of lottery game because the prizes can become so large. New York and Illinois have awarded prizes of more than $40 million in a single drawing. The details of the lotto games vary somewhat, but in general a series of numbers is chosen from a larger field, six chosen numbers from 1 to 44 in Illinois, for example. In Illinois, the odds against matching all six numbers and winning the grand prize are 7 million to one. If no one has bet on the winning number series, the prize money is added to the next drawing's jackpot. Prizes in the tens of millions accumulate when there is no winner for several consecutive drawings.

The states operate a great variety of instant lottery games. Generally, the bettor scratches a latex coating off a game card, which reveals "instantly" if he or she has won. The likelihood of winning a small prize — 2 dollars, 5 dollars, a free lottery ticket — is relatively high. The prizes in instant games are usually less than $1 million.

Recent Growth. Lottery sales and net revenue for 1986 are shown in Table 1. Lottery sales nationally have grown from $2.4 billion in 1980 to $11 billion in 1986, an average of 32 percent per year. This rapid growth has resulted both from new states adopting lotteries and from increasing lottery participation within states.

In 1980 the combined population of states with lotteries was 86 million; by 1986 it was 138 million. New states begin lottery operations for a variety of reasons. Many adopt to prevent the loss of revenue to neighboring states, which helps explain why new adoptions often occur in states adjacent to those which already have lotteries. Many other states are attracted by the prospect of raising new revenue without increases in traditional taxes. Large segments of the public support lotteries for their entertainment value (Mikesell and Zorn, 1986).

Lottery sales per person grew from $25 in 1980 to $81 in 1986. Clearly, within states that have lotteries, more people are buying more tickets. Much of this growth is due to the replacement of the weekly lotteries with numbers, lotto, and instant games. This choice of three game types appeals to the preferences of bettors mentioned above. The time between ticket purchase and drawing is one week or less for lotto, one day for the numbers, and "instant" for the instant games. Numbers and instant games provide many chances to win small prizes, while lotto offers very large grand prizes. In addition, one social psychologist has suggested that games which allow choice by the bettor — as lotto and the numbers do by allowing the bettor to choose a number — create the impression of an increased

Table 1. Sales and revenue data for state lotteries, 1986.

State	Sales*	Administration	Prizes	Net revenue
		Millions of dollars		
Arizona	114	16	55	42
California	1676	102	889	686
Colorado	102	15	62	26
Connecticut	407	23	218	166
Delaware	38	2	20	16
Illinois	1200	23	632	545
Iowa	77	12	39	26
Maine	36	2	20	14
Maryland	690	29	337	323
Massachusetts	911	54	539	318
Michigan	931	47	481	403
Missouri	197	20	96	80
New Hampshire	34	7	17	10
New Jersey	937	36	485	416
New York	1205	39	599	567
Ohio	888	44	463	381
Oregon	83	16	46	21
Pennsylvania	1234	33	662	539
Rhode Island	50	3	27	21
Vermont	12	3	6	3
Washington (State)	182	27	90	65
West Virginia	53	5	26	22
U.S. Total	11,055	557	5808	4690

*Excludes commissions to vendors, which average around 6 percent of sales.

SOURCE: U.S. Bureau of the Census, *State Government Finances, 1986.*

chance of winning. Langer (1975, p. 323) found that players given choices in a lottery "...came to behave as though they had the illusion of control over the outcome." The sense of participation and control fostered by the lotto and numbers games helps explain their popularity.

Lottery sales in the small New England states of Maine, New Hampshire, and Vermont saw particularly rapid growth in 1986 (see Table 2). Sales increased because these three states combined their lotto operations into Tri-State lotto. The larger combined population allowed lotto prizes large enough to compete with the Massachusetts lotto game. Delaware will soon join Tri-State lotto, and six other smaller states are planning to offer a combined lotto game, Lotto America, to generate larger jackpots and larger sales.

The rapid growth in lottery sales cannot continue indefinitely. If lottery sales keep growing at the current rate, by the year 2015 the U.S. population's entire entertainment budget will be spent on lottery tickets — clearly an impossibility (DeBoer, 1986b). In fact, sales growth appears to be slowing among the older state lotteries. Illinois lottery sales growth averaged 25 percent per year between 1975 and 1985, but increases in 1986 and 1987 averaged only 6 percent (Davidson, 1987). The larger, older lotteries in Michigan, New Jersey, New York, Ohio, and Pennsylvania also showed lower growth rates in 1986

(see Table 2). It may be that the older lotteries have "saturated the market," as one Illinois official said. Mikesell (1987) found that lottery sales tend to peak after about 10 years of operation, and then level off or decline.

Lottery Revenues and Costs

Lottery sales receipts are divided among commissions to lottery vendors, prizes paid to winners, operating costs of lottery administration, and net revenue for the state. In Illinois, for example, 6 percent of lottery sales revenue is paid to ticket vendors, 50 percent goes to winners as prizes, 2 percent is used for lottery administration, and the remaining 42 percent is net revenue for the state (Davidson, 1987).

Revenue. After prizes, commissions and administration, lotteries raised $4.7 billion in net revenue in 1986. While this is a considerable sum, it is small relative to the total revenue requirements of state governments. In no state, in fact, is net lottery revenue as much as 5 percent of total state revenue (see Table 2).

In many states, lottery revenue is "earmarked" for particular government programs. Of the 23 lotteries operating in 1986, nine applied lottery revenue to the general fund (i.e., it was available for any program), while 14 assigned the revenue to particular

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Table 2. Selected data on state lotteries, 1986.

State	Per capita sales	Per capita revenue	Administrative percent of sales	1985-86 revenue growth	Lottery revenue percent of total state revenue
	Dollars			Percent	
Arizona	34	13	14	139	0.9
California	62	25	6	—	1.4
Colorado	31	8	14	4	0.6
Connecticut	128	52	6	30	2.6
Delaware	60	25	6	14	1.0
Illinois	104	47	2	6	3.3
Iowa	27	9	15	—	0.6
Maine	31	12	7	218	0.7
Maryland	154	82	4	22	4.2
Massachusetts	156	54	6	34	2.6
Michigan	102	44	5	12	2.4
Missouri	39	16	10	—	1.3
New Hampshire	33	10	21	150	0.8
New Jersey	123	55	4	7	2.9
New York	68	32	3	-1	1.4
Ohio	83	35	5	13	2.4
Oregon	31	8	19	—	0.5
Pennsylvania	104	45	3	-5	3.0
Rhode Island	51	22	5	17	1.1
Vermont	22	6	25	233	0.3
Washington (State)	41	15	15	38	0.8
West Virginia	28	11	9	—	0.7
U.S. Total	81	34	5	34	1.9

SOURCE: U.S. Bureau of the Census, *State Government Finances, 1986.*

programs. In five states lottery revenues supported public education.

Whether lottery revenues actually increase the funding of earmarked programs is an open question. Lottery money may be extra revenue for earmarked programs, or it may replace other tax and nontax revenue sources. Mikesell and Zorn (1986) found no evidence that lottery revenue actually increased spending in earmarked programs. Public finance experts tend to frown upon lottery earmarking (Brooks, 1975). If lottery revenue merely replaces other revenue sources, then it is incorrect to claim to the public that lottery dollars increase spending on earmarked programs. And if lottery money actually increases earmarked spending, then presumably worthwhile programs are tied to the volume of betting. If people decide to gamble less, less will be spent on education or aid to the elderly. For these reasons most public finance experts favor treating lottery revenues like sales and income taxes, devoting them to the general fund.

Lottery revenue tends to be unstable from year to year. Table 2 shows that states varied greatly in the percentage growth in revenue between 1985 and 1986, from Maine's 218 percent rise to Pennsylvania's 5 percent decline. During the 1980's, most of the uncertainty has been over the amount of annual increase in lottery revenue. However, since state budgets are based on revenue projections, a shortfall in growth can be as much of a problem as an actual revenue decline.

Administration. The percentage of after-commission sales devoted to operating lotteries varies widely from state to state (see Table 2). Illinois pays less than 2 percent of its sales for administration, while Vermont spends nearly 25 percent of its sales to run its lottery. Lotteries generally show "economies of scale," meaning larger lotteries require a smaller percentage of sales for administration (DeBoer, 1985). The average administrative cost percentage for the eight lotteries with sales less than $100 million was 13.3 percent; for the eight lotteries with sales greater than $800 million, the average was 4.2 percent.

There are several reasons for economies of scale in state lotteries. A lottery needs certain personnel — a director, a security chief, and so on — no matter what its size. The salaries of the staff become a smaller percentage of sales as the lottery's size increases. Once an on-line computer system is established to distribute lottery tickets, it can handle large increases in sales without significant increases in costs. Furthermore, states with high sales tend to be more urbanized. Fewer lottery outlets per bettor are necessary to cover these more densely populated areas.

Viewed as a pure tax, lottery revenue is expensive to collect compared to other state tax sources. Administrative costs for state taxes average around one-half cent per dollar of revenue, while the national average for lotteries is 12 cents per dollar of revenue. For example, in 1986 Ohio raised $381 million in lottery revenue at a cost of $44 million, or about 12 cents per dollar of revenue. If this same $381 million had been raised using a sales or income tax, at 1/2 cent per dollar the administrative cost would have been only $1.9 million.

On the other hand, administrative costs of the lottery include not only the collection of a tax, but also the operation of a business. Sales taxes also would be expensive to collect if the state had to pay the cost of running retail stores. Lotteries are about as expensive to operate as wholesale and retail businesses (Weinstein and Deitch, 1974).

How Much Do Hoosiers Bet In Other States' Lotteries?

When Indiana residents play lotteries in other states, they support the public services of Indiana's neighbors. There are no definitive estimates of the amount of money Indiana residents spend on the Illinois, Michigan, and Ohio lotteries. Mikesell and Zorn (1987) estimate that lottery states with nonlottery neighbors have per capita sales higher than states with no nonlottery neighbors by $16, or 20 percent. Presumably this is due to purchases of tickets by out-of-state residents. If 20 percent of Illinois, Michigan, and Ohio sales are apportioned to Indiana based on Indiana's share in surrounding state population, Hoosiers are estimated to have purchased nearly $140 million in lottery tickets in 1986. About half of this total would be returned to Indiana residents as prizes. While this is admittedly a very rough estimate, it does indicate that the sales of lottery tickets to Indiana bettors must be substantial.

Research indicates that sales of existing lotteries are reduced when neighboring states establish their own games (Mikesell and Zorn, 1987), though bettors continue to play out-of-state lotteries (Weinstein and Deitch, 1974). Some Illinois officials blame new lotteries in Iowa and Missouri for their slower sales growth and fear that new lotteries in Wisconsin and (potentially) Indiana could erode sales further (Davidson, 1987).

The Lottery as Regressive Taxation

It is sometimes argued that the lottery is not a tax, but rather a voluntary payment for a consumer product. Lottery tickets are similar to hamburgers or movie tickets in this view — goods voluntarily purchased, not taxes. A more realistic view, however, is that a lottery ticket is a new consumer product, which may be voluntarily purchased. States then tax its sales. The tax on lottery purchases must be paid by bettors just as sales taxes on shoes are paid along with their purchase price. The purchase of the product is voluntary, the tax is not.

To see this point, suppose the state provided an untaxed lottery. The 42 percent of lottery sales

4

which becomes net state revenue would be returned to the bettor in prizes. This would mean an increase in prize money of about 80 percent. Instead of betting one dollar for a chance to win $500, as in a numbers game, the prize would be $920. The lottery is a tax because nearly half of the potential prize money is taken by the government as revenue.

If lower income persons pay a larger percentage of their incomes to a tax than do higher income persons, the tax is usually defined as regressive. An example of a regressive tax would be a sales tax on food. Lower income persons generally spend a greater portion of their incomes on food, and thus would pay a greater percentage of their incomes in sales taxes than higher income people. If higher income people pay a greater percentage of their incomes on a tax, the tax is progressive. The federal income tax rate structure is progressive. Apart from exemptions and deductions, the higher one's income, the greater the percentage paid in income taxes.

Several studies have shown that middle income persons buy a greater share of lottery tickets, while lower income persons buy a smaller share (Lottery Journal, 1984). The average income of lottery players is usually estimated to be above the average for the population as a whole (Knapp, 1983). In spite of these facts, most researchers conclude that the lottery is a regressive tax. Lottery purchases as a percentage of income decline as incomes rise, meaning the poor pay a higher percentage of their incomes in lottery taxes than do middle and upper income groups. Lotteries meet the standard definition of regressivity (Clotfelter, 1979; Clotfelter and Cook, 1987; Suits, 1979).

The claim that more lottery players are middle and upper income earners does not conflict with the claim that the lottery tax is regressive. As peoples' incomes rise, lottery spending increases, but less than proportionally. The $30 thousand earner, with an income three times the $10 thousand earner, may spend twice as much on lottery tickets. But as a percentage of income, the poorer person spends more.

If the lottery tax is regressive, the consumer benefits of the lottery likely are progressive. A lottery ticket is an inexpensive form of entertainment that apparently appeals to lower income people. Clotfelter and Cook (1987) show that a lower takeout rate (the percent of sales not returned as prizes) will enhance lottery consumers' well-being, to the benefit of lower income people. Lower takeout rates could mean less revenue for state governments, although it is possible that the resulting larger prizes or better odds could generate enough extra sales to increase state revenue (DeBoer, 1986c).

Social Problems

The argument that lotteries enhance consumer well-being, by providing a desirable entertainment product, assumes that lotteries have no adverse effects on society, and that bettors make well-informed choices. If the lottery increases crime or encourages compulsive gambling, the consumer benefits of lotteries will be reduced.

Crime. Lottery adoption has mixed effects on crime. It is sometimes thought that creating a state lottery will reduce illegal gambling, especially betting on the illegal numbers games common in large urban areas (Kaplan and Maher, 1970; Commission on Gambling Policy, 1976). Evidence suggests that while lottery adoption reduces illegal sports and horserace gambling, it is associated with increases in illegal numbers betting (Hybels, 1979).

One reason that state lotteries do not eliminate illegal gambling is that illegal games have some competitive advantages. Illegal winnings are hidden and thus tax free. The illegal games often allow betting on credit, and the illegal prizes are sometimes higher than the state numbers game prizes. It may be that advertising for state games widens the appeal of all gambling, increasing legal and illegal participation (Commission on Gambling Policy, 1976).

A recent study by Mikesell and Pirog-Good (1987) shows a relationship between state lottery adoption and property crime. Lottery states have 3 percent more burglary, larceny, and auto theft, on average, than nonlottery states. The reason for this relationship is unclear. Perhaps lotteries increase the taste for all risky activities, including crime, or perhaps the publicity about newly rich lottery winners contributes to feelings of relative deprivation, leading to more crime. It is less likely, however, that higher illegal gambling receipts are used by organized crime to fund other illegal activities. Evidence shows that many illegal lottery operators are independent entrepreneurs, not associated with criminal organizations (Reuter and Rubinstein, 1983).

Compulsive Gambling. Compulsive gambling is a psychological disorder. People afflicted with this disease lose the ability to control their gambling behavior. There can be little doubt that the legalization and promotion of any gambling activity increases the incidence of compulsive gambling. However, few compulsive gamblers use state lotteries for their gambling. Most focus their activities on casinos, horseracing, illegal sports betting and the stock and commodities markets (Custer, 1987). Lotteries are not very addictive because they offer such a small probability of winning and because no skill is involved (Helm, 1987). While adoption of a state lottery would probably increase compulsive gambling, the increase likely would be quite small.

Revenue Estimates
For an Indiana Lottery

Average per capita lottery revenue nationwide was $34 in 1986 (see Table 2). Multiplied by Indiana's population of 5.5 million, this figure yields a revenue

estimate of $187 million. The lottery industry — firms that supply game equipment and expertise — often uses this method to estimate potential revenue for nonlottery states. Table 3 shows estimates for 1986 based on the national per capita revenue figure, and on per capita revenue for Indiana's lottery neighbors. If Indiana's lottery is like Illinois', the state will realize $259 million in net lottery revenue.

There are two reasons to believe that these revenue estimates are overly optimistic. First, lotteries are more popular in urban areas than they are in rural areas. A survey taken in 1974 by the Commission on the Review of National Policy toward Gambling found that 28 percent of urban residents and 39 percent of suburban residents purchased lottery tickets in that year, compared to only 19 percent of rural residents. The seven lottery states with more than 90 percent of their populations in urban or suburban areas in 1986 had average per capita sales of $106, while the eight states with urban percentages under 75 percent had sales of only $34 per person. Indiana's urban percentage is 68 percent: it thus seems likely that Indiana's per capita lottery sales will be less than the national average.

The second reason to be relatively pessimistic about Indiana's lottery revenue potential is that smaller lotteries tend to spend a higher proportion of their sales on administrative costs. As noted above, lotteries exhibit economies of scale. This means that the relatively small Indiana lottery will probably need to spend a higher-than-average part of sales on administration, leaving a smaller-than-average percentage for net revenue.

A statistical procedure known as regression can be used to incorporate the urban and administrative cost factors into lottery revenue estimates. Regression equations can show the relationship between the urban percentage and sales, and between sales and administrative cost percentages, existing for the 22 lottery states in 1986.

The equation relating per capita lottery sales (PCSALES) to the percentage of a state's population living in urban areas (URBAN) for 1986 is

$$PCSALES = -29.4 + 1.34 \times URBAN.$$

Inserting Indiana's urban percentage into this equation yields per capita sales of $62. Since Indiana's population is 5.5 million, total sales are estimated at $341 million for 1986.

The equation showing the relationship of the administrative cost percentage of sales (COST) and total lottery sales (SALES) is

$$COST = 13.3 - 0.008 \times SALES.$$

Inserting the total sales estimate of $341 million into this equation gives a cost percentage of 10.6 percent. If Indiana returns 50 percent of its post-commission sales receipts as prizes, 39.4 percent of

Table 3. Lottery revenue estimates for Indiana.

Estimation method	Revenue estimate (millions)	Per capita revenue
Indiana population times U.S. per capita revenue	$187	$34
Indiana population times Illinois per capita revenue	$259	$47
Indiana population times Michigan per capita revenue	$242	$44
Indiana population times Ohio per capita revenue	$193	$35
Regression equation, accounting for urbanization and administrative costs	$134	$24

sales will be net revenue. The net revenue estimate is thus $134 million (39.4 percent of $341 million). This would be about 1.8 percent of the state's total general revenue.

The regression estimate is considerably smaller than any of the per capita estimates shown in Table 3, because it takes account of Indiana's relatively small urban population, and the relatively higher costs of operating small lotteries. The regression estimate is consistent with the net revenue estimates published by Stover (1987), who projects Indiana net revenue between $107 and $162 million. It should be noted that an Indiana lottery cannot begin operating before mid-1989, while these revenue estimates are based on 1986 data. By 1989, nationwide per capita lottery sales and revenue will likely be higher, and this will increase the revenue estimates derived from any of the methods used here.

Parimutuel Wagering

Parimutuel wagering is a system of gambling where the prizes paid to winners are determined by the total amount bet (the "handle"). The parimutuel wagering system is used in the United States primarily for betting on horseracing, but also for dog racing, off-track betting in New York and Connecticut, and jai-alai in Connecticut and Florida. Thirty-one states collected parimutuel taxes in 1986, raising a total of $647 million.

In March 1977, the Indiana General Assembly overrode the Governor's veto and passed a bill legalizing parimutuel wagering on horse races. In January 1979, however, the Indiana State Supreme Court declared the parimutuel law unconstitutional. The court cited the antilottery section in the state Constitution, deciding that the element of chance in parimutuel wagering made it an illegal lottery. Thus, a decision to eliminate the antilottery section of the Constitution will allow the legalization of horserace wagering as well.

The Racing Industry. About 80 percent of total state parimutuel revenue comes from ontrack betting. Considerable revenue variation exists among states. The three largest racing states, California, New York and Illinois, account for over 60 percent of total racing revenue; the remaining states average under $10 million each. Parimutuels are much smaller revenue producers than are state lotteries.

The racing industry has faced economic difficulties in recent years, and this has been reflected in state revenue collections. Racing revenue peaked in 1976 at $715 million, and has since declined by about one percent per year. Track attendance is declining. At the seven New York State harness tracks, for example, attendance fell from 9.3 million in 1970 to 4.7 million in 1983 (deSeve Economics Associates, 1984). Horseracing in New England has suffered similar declines (Johnson and Norris, 1976). One reason for this decline is competition from other leisure activities, including other forms of gambling. State lotteries may be particular culprits: the introduction of lotteries is estimated to reduce horserace betting in lottery states by more than one-third (Simmons and Sharp, 1987).

Parimutuel Revenue Potential. Among the determinants of state parimutuel revenue are the takeout rate, the state tax rate and the number of racing days. Each of these is set by state racing commissions. The takeout rate is the percentage of the handle (total dollars bet) not returned as winnings to bettors. It usually ranges from 15 to 20 percent, meaning in the long run an average bettor will receive 80 to 85 cents in winnings per dollar bet. By comparison, the takeout rate for lotteries is usually between 40 and 60 percent. The lower is the takeout rate, the more attractive is horse race wagering, and the more money is bet.

The state tax rate is the percentage of the handle paid to the state, and is included in the takeout rate. Given the takeout rate, the higher is the tax rate, the more revenue the state receives. Tax rates average around 4 percent. The number of racing days is also set by the state. A maximum is set on the number of days a track may operate. Racing days are usually allocated so that nearby tracks are never in direct competition.

Taking these factors into account using a regression equation, Indiana's potential parimutuel revenue falls between $3 and $14 million (see Table 4). The 1977 parimutuel law set the takeout rate at 17 percent and the state tax rate at about 4 percent. Racing meets were limited to 60 days, and 3 or 4 tracks were expected to operate statewide. This implies revenue of $4.8 to $6.5 million, depending upon the number of racing days (DeBoer, 1986a).

Economic and Social Impact. Like state lottery revenue, parimutuel wagering taxes are regressive, meaning lower income people pay a higher percentage of their incomes to parimutuel taxes than do higher income people. Parimutuel taxes are not as

Takeout rate	Tax rate	Racing days	
		180	240
Percent		Millions of dollars	
20	4	2.9	4.0
	6	4.2	5.7
17*	4*	4.8	6.5
	6	6.9	9.4
15	4	7.0	9.5
	6	10.2	13.8

Table 4. Estimated revenue from Indiana parimutuel wagering.

* Rates from 1977 Indiana parimutuel law.

SOURCE: DeBoer (1986a).

regressive as lottery taxes, however (Suits, 1977).

A much larger proportion of compulsive gamblers bet on horseraces than bet on the lottery (Custer, 1987). This is because parimutuel wagering has more frequent payoffs at better odds, and because it requires the bettor's skill. The introduction of parimutuel wagering is likely to contribute more to increased compulsive gambling than is the lottery.

Parimutuel gambling on horseracing would likely have a greater positive impact on state and local economic development than would a lottery. This is because the major production activity in lottery operation, ticket printing, usually takes place out of state, while race tracks would operate in Indiana. One way to calculate the economic effect of racing is to consider the aftertax revenue earned by the tracks. If the tax rate is 4 percent and the takeout rate is 17 percent, track earnings are 13 percent of the handle, or $15 to $21 million, according to our estimates. These earnings are spent on purses to winning horse owners, wages and salaries to track employees, and purchases of goods and services for operation. If the statewide economic multiplier is 2, meaning each dollar of track earnings generates another dollar in economic activity, the ultimate economic impact of racetrack operation is between $30 and $42 million.

This impact does not include the effect of spending from added state tax revenue, and the augmented tax base at the local level. In addition, racing may provide horse breeders with an additional incentive to produce in Indiana. On the other hand, betting at the track may occur at the cost of other leisure activities. Part of the $30 or $40 million generated by horseracing may represent a shift in resources from one industry to another, and not new jobs and income. Only to the extent that unemployed people are hired, unused land and equipment finds a use, new people and businesses are attracted to the state, and Hoosiers and others who formerly bet out-of-state attend Indiana tracks, will horseracing add to economic development.

7

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