6 Social Benefits

Everything is worth what its purchaser will pay for it.

Publius Syrus, (42 B.C.)

CHAPTER SUMMARY. The demonstration in Chapter 5 that the benefits of casinos are described by profits, taxes, distance consumer surplus, consumer surplus, induced capital gains, and elimination of transactions constraints, if any, may surprise some who expected to see jobs ("economic development") figure prominently in the discussion. This chapter elaborates and expands our discussion of economic benefits, followed by numerical estimates. Here, we estimate the benefits of casino expansion in three ways: by using economic theory to construct a bound for measuring benefits using information on how much consumers gamble when they are different distances from the casino; by applying the bound to a rule of thumb about how casino demand drops off with distance; and by simulating the gambling choices of a representative consumer. The three estimates produce similar answers, giving us confidence in the estimates.

VALUE ONCE AGAIN

SUMMARY. Consumers value things that improve their well-being. The benefits in a cost–benefit analysis are the identifiable components of anything that leads to the consumer's improvement in well-being. In the case of casinos, the main benefit to expansion is the value to consumers of closer proximity to casinos.

For a short time in the 1980s, there was a rage surrounding "pet rocks." Customers at retail store checkout counters could find ordinary field stones for sale. The size that would fit into one's pocket or purse, the rocks had names cut into their surface or sometimes happy faces. They were the ideal pet, so the story went, because they required no feeding, no care, and no training, yet their happy demeanor provided love and companionship on demand when removed from one's pocket or purse. Eventually, the fad died away, leaving the interesting question: How did pet rocks represent economic value and what economic benefit did they provide?

The phenomenon of selling apparently worthless rocks provides an interesting parallel to gambling, which many describe as shifting money from one person's pocket to another's without creating anything in the process. It would be easy to dismiss both activities as socially wasteful. Because of their simplicity, however, pet rocks offer a useful object lesson for identifying economic benefits.

Value is a statement about what people want – how they think about a particular arrangement of objects or services. Stones in the field generally have zero value. If a field stone is collected, carved with a face or name, and boxed and distributed to retailers for sale at checkout counters, economic benefits result *if* consumers see the rocks as desirable and are willing to pay for them at least as much as it cost to make them available. For a short time, pet rocks passed this test; therefore, they represented a bona fide part of gross domestic product.

A similar description applies to gambling and popular entertainment, which are services. Services get their value from the worth that people ascribe to them. Passing a cost–benefit test means tallying all of the values from a set of activities and learning that the sum is higher than for the next best set of activities.

Chapter 5 identified increased profits and taxes as two forms that an increase in well-being could take. To be sure that an activity making profit represents a true social gain, we must identify what would have happened if the activity had not been undertaken. In the case of pet rocks, producers could have used their time and resources elsewhere. If their profits in pet rocks were equal to their foregone profits, then their pet-rocks profits did not represent a net gain to society. Other forms that benefits may take must also be considered. For example, a monopoly producer might supplant competitive producers of a good. Competitive firms earn zero profits and a monopolist earns positive profits; however, the monopolist's profits imply losses to consumers in the form of higher prices, so that there is a net social *loss*.

Producers and sellers pay taxes. Government (i.e., all of us collectively) is a beneficiary of business expansion through the additional taxes paid. Again, only the *net increase* in taxes represents additional value (i.e., benefits) to society from the cost–benefit perspective and, as discussed in Chapter 5, only if the taxes are used by government in a constructive fashion. Here, we do not get into the debate about the value of government expenditure, but presume that tax revenues are social benefits.

Some of the benefits in cost–benefit analysis also may take the form of price improvements and greater convenience to consumers. Both can be measured in dollar terms. If you normally pay $1.00 for your morning coffee and then learn that you can get the same coffee for $.80, you are better off by at least $.20 because you can have your coffee and whatever $.20 will buy. Your *consumer surplus* has increased by the savings on your coffee purchases. Consumer benefits also can result from getting the object under more favorable conditions. A grocery store opening nearer your home might sell at the identical prices as one farther away, but you receive value because of the greater convenience – convenience that you would be willing to pay for if it were necessary to guarantee that the grocery store would open nearby. The fact that the opening took place without the need for you to pay means that you retained the increased value. When consumer benefits of either or both type (i.e., price and convenience) are present, they should be summed over all of society. The latter form of consumer benefit, distance consumer surplus, applies to the geographical expansion of an industry such as casinos.

DISTANCE BENEFITS

SUMMARY. Reducing the distance needed to travel to the nearest casino from 500 or more miles to 5 miles generates consumer benefits that are less than $43 per person per year, according to a procedure that produces an upper bound. An exact simulation using a representation of consumer preferences produces a number of $34 per person per year. This figure is adjusted for the fact that one third or more of casino revenues typically come from problem and pathological gamblers.

Adults in the United States have been able to gamble in casinos in Nevada since 1931. What is different in Atlantic City since 1978 and in many other locations since 1990 is the ability to find casinos nearby. Gambling in one casino is much like gambling in another. Typically, 70 percent or more of casino revenues derive from slot machines. Blackjack, roulette, and other table games are also available in most casinos, played according to standard rules. With the exception of destination resort locations, such as in Nevada and Atlantic City – where the reason for travel often has as much to do with the nongambling attractions of world-class entertainment and dining as it does the gambling – the expansion of regional casinos of convenience in the past fifteen years provides comparable gambling opportunities to one another. The primary *gambling-related* benefit of casino expansions to consumers, therefore, takes the form of closer proximity.[182] In this section, we discuss the social benefits to consumers of this improved proximity.[183,184]

The connection between distance and consumer welfare includes many considerations. One consumer might enjoy a moderately long drive to a ski resort, for example, whereas another views it as a burdensome inconvenience. In this chapter, we take the "representative consumer approach," which models the behavior of a single individual whose choices

Distance and Demand

Information about how demand varies with price allows the benefits to the consumer of lower price, *consumer surplus*, to be calculated. Figure 6 shows hypothetical demand for visits to a recreation site as a function of price per visit and distance. The curve labeled $m = 500$ miles is a demand curve. When the distance is 500 miles away, for example, and the price is g_1, the consumer chooses consumption at Point *a*. Lowering price from g_1 to g_2 with no change in distance causes the consumer to choose Point *b*. The benefit to the consumer from the price reduction is measured by the shaded area bounded by the demand curve and the two price levels.[1]

When we consider demand for casino gambling, the amount spent per visit becomes a choice of the consumer, as well as how many visits to make per year. Presuming now that Figure 6 refers to demand for casino gambling, the consumer selects Point *a* when the nearest casino is 500 miles away, Point *c* when the nearest casino is 100 miles away, but Point *d* when it is only 5 miles away. The consumer makes more visits when the casino is closer, spending less per visit but more in total per year.

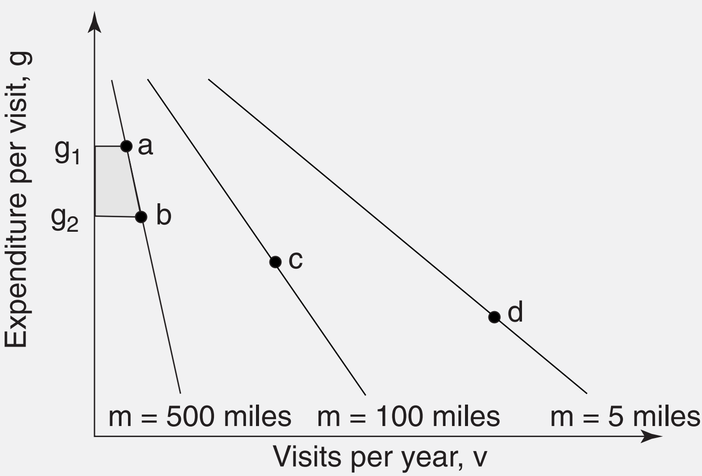

Figure 6.1. Distance and Demand

[1] The demand curve must be what is called an *income-compensated demand curve*, where consumer income is adjusted when the price changes so that consumer utility is held constant.

represent the average consumer's behavior. This approach is common in *macroeconomics*, the study of economy behavior.

Information about how demand for a product varies with distance can be used to infer the value of closer proximity to consumers. A direct approach is generally preferred for measuring the consumer benefits of amenities such as nearness. Bockstael and McConnell (1993) consider a direct approach to measuring the value of water quality at a beach by the way demand for associated private goods (e.g., use of the beach) change with the level of the water quality. This scenario has similarities to measuring the benefits of proximity (distance is an amenity like water quality), but differs from the casino-siting problem because prices for the private good in the Bockstael and McConnell analysis are constant. In gambling, both the number of visits (i.e., quantity) and the amount spent (i.e., price) are choice variables of the consumer. Therefore, we need to allow for differences that apply to gambling.

The skier who anticipates having to make a long trip to enjoy skiing generally plans to ski several days instead of the afternoon he or she might ski if the slopes were a few minutes down the road. Increased distance causes the skier to take fewer trips per year but to do more skiing per trip. We would expect total annual expediture on skiing to be higher for the skier living close by, however. He or she would be more likely to buy a season lift ticket and be on the slopes more frequently. This pattern appears to apply to a large number of leisure activities, whether it is visits to Disney World, hunting and fishing, skiing, or gambling: greater distance leads to longer, less frequent trips and declining total expenditure on the activity.

The consumer benefit of having nearby casinos versus ones farther away is the answer to the question: What would you be willing to pay each year for the benefit of having a casino located nearer to you? The same question could be asked for other recreational sites, such as Disney World or a ski resort. Assuming truthful answers, the average of all such responses would be the per capita **distance benefit** of casino expansion. Such a survey has not been conducted, but by using information on how

TABLE 6.1. Distance and Demand Data: Casinos

Distance (miles) d	Expenditure per Visit g	Vists per Year v	Expenditure per Year gv	Expenditure per Year (2000 s) gv
0–35	$35.31	3.56	$125.70	$166.37
35–75	$62.39	1.56	$97.33	$128.82
75–150	$64.54	0.73	$47.11	$62.36
150–300	$85.45	0.48	$41.02	$54.29
Over 300	$143.01	0.10	$14.30	$18.93

demand for casino services varies by distance from the casino, we can infer how big the benefit is.

Table 6.1 provides data showing gambling expenditures averaged for Las Vegas, Atlantic City, and Illinois casinos.[185] The right-hand column adjusts dollar values for price level changes to 2000. We take advantage of data relating distance and demand in three ways. First, we use it to construct information of the type shown in Figure 6.2. As the distance from the nearest casino is reduced from 500 to 5 miles, it causes the expenditure per visit, g, and the number of visits per year, v, to vary with it. The area of the shaded portion of the figure is a dollar number that is greater than the value to the consumer of reducing the distance to the nearest casino from 500 to 5 miles. Other starting and ending distances would be handled comparably. Thus, constructing a curve of the type DD in Figure 6.2 and calculating the shaded area produces an upper bound for the distance benefits of nearer casinos.

The second way we use the data is to perform an exact calculation of the benefits of closer casinos by simulating consumer behavior for a representative consumer whose choices mimic the data. Results of the simulation are reported in Table 6.2.

The third method uses the rule of thumb that casino demand drops by 30 to 35 percent for each doubling of distance to provide a continuous relation between distance and demand that is consistent with the main

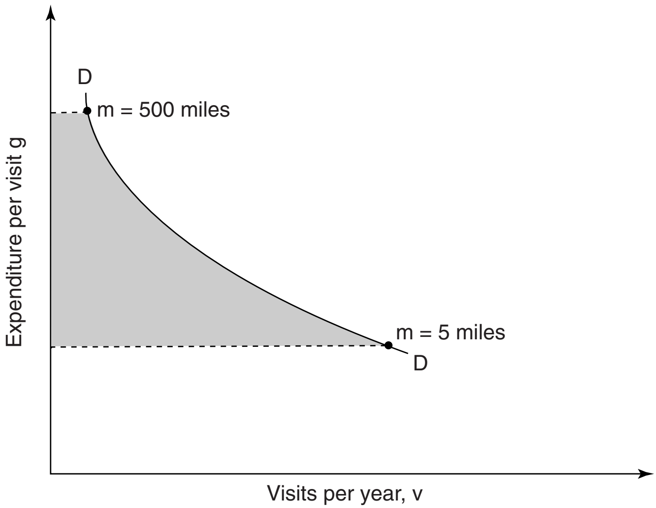

Figure 6.2. Using Demand for Casino Gambling by Distance to Infer the Benefits of Proximity: The Shaded Area Provides a Dollar Upper Bound on the Consumer Benefits of Nearer Casinos

elements of Table 6.1. Table 6.3 was constructed this way. Integrating the area under the corresponding demand schedule produces upper-bound estimates of the distance benefits reported in Table 6.4.

The procedures reach similar conclusions. Rounding to the nearest dollar, the first method suggests that the distance benefit from reducing the distance needed to travel to the nearest casino from 500 to 5 miles is less than $43 per adult annually. The second method based on the exact simulation indicated that the amount is less than $48. The third method finds that the yearly distance benefit of reducing the distance from 500 to 5 miles is less than $41. The distance benefits for other combinations of distance reductions can be seen in Table 6.4.

Taking the highest benefit of the three, $48, and adjusting for the fact that one fourth or more of casino revenues comes from problem and pathological gamblers, suggests that the benefit for *nonproblem and nonpathological* gamblers is less than $34 per adult.[186] For the interested reader, more details about the three methods are provided in the box.

TABLE 6.2. Distance Benefits Estimated by Simulation: The amount by which income can be reduced when $m = 0$, holding utility at its $m = 500$ level, is the distance benefit.

	Variable	Benchmark	Additive		Multiplicative	
	(1)	(2)	(3)	(4)	(5)	(6)
Distance (miles)	m	0	500	0	500	0
Expenditure/Visit	g	$55	$112.96	$55.00	$110.46	$55.00
Visits/Year	v	3.6363	0.1	3.6321	0.1	3.63206
Expenditure	gv	$200	$11.30	$199.77	$11.03	$199.76
Annual Income	Income	$40,000	$40,000	$40,000–$46.63	$40,000	$40,000–$47.36
Utility	u(x,v,E(g,m))	100	99.947	99.947	99.882	99.882

TABLE 6.3. Gambling Demand Implied by Table 6.1 and the 30 to 35 Percent Rule

Distance (miles) d	Expenditure per Visit g	Vists per Year v	Expenditure per Year gv
0	$71.83	10.580	$759.93
3	$71.83	10.580	$759.93
15	$77.59	3.669	$284.63
35	$80.80	2.101	$169.73
55	$82.57	1.560	$128.82
75	$83.81	1.272	$106.61
150	$86.64	0.806	$69.84
300	$89.56	0.511	$45.75
Over 300	$100.36	0.100	$10.05

TABLE 6.4. Distance Benefits Implied by Table 6.3 Gamblers

Starting Distance (miles) \ Final Distance (miles)	2000	1000	500	100	50	20	10	5
3000	$0.25	$0.84	$1.75	$6.14	$9.84	$17.87	$27.74	$42.81
2000	$0.00	$0.59	$1.50	$5.89	$9.59	$17.62	$27.49	$42.56
1000		$0.00	$0.91	$5.30	$9.00	$17.03	$26.90	$41.97
500			$0.00	$4.39	$8.09	$16.12	$25.99	$41.06
100				$0.00	$3.70	$11.73	$21.60	$36.67
50					$0.00	$8.03	$17.90	$32.97
20						$0.00	$9.87	$24.94
10							$0.00	$15.07
5								$0.00

Estimate 1: Using Data on Distance and Gambling Demand to Find a Bound on Distance Consumer Surplus

The connection between data on distance and demand and the value to consumers of the greater convenience of gambling nearby is established as follows. Assume that there are two goods: casino visits, v, and a composite good, x, which represents consumption of all other goods. All else held constant, assume that the enjoyment derived from a casino visit combined with traveling a shorter distance is greater than the enjoyment for the same visit coupled with traveling a longer distance.[7] For fixed distance, assume that the enjoyment per visit rises with expenditure per visit. The overall quality of a visit – the enjoyment factor – is a function of both distance and expenditure, $E = E(g, m)$, where E rises with the amount gambled on the visit g and falls with the distance traveled in miles, m. We represent satisfaction in terms of *utility*, which depends on the quantity of x, the number of gambling visits, and the enjoyment factor

$$u = u(x, v, E(g, m)) \tag{6.1}$$

where $\frac{\partial u}{\partial x} > 0$, $\frac{\partial u}{\partial v} > 0$, $\frac{\partial u}{\partial E} > 0$. If consumers adjust their number of visits and amount gambled in such a way that visit for visit, the enjoyment attached to visits coming from farther away are nondecreasing in distance, then we can show that

$$\frac{\partial e}{\partial m} dm \leq v dg. \tag{6.2}$$

In other words, the area under the curve relating number of visits and the amount gambled per visit that was created by varying the distance to the nearest casino provides an upper bound on the consumer benefits of reduced distance. This is what Figure 6.2 shows by relating demand and distance information to consumer benefits.

The construction of the bound in Equation 6.2 is as follows. Let $e(p, m, u) = p_x x + gv$ be the minimal expenditure needed for the consumer to achieve utility $u = u(x, v, E(g, m))$ when the price of goods x is p, m is the number of miles to the nearest casino, v is the number of casino visits, and $E(g, m)$ is the enjoyment factor associated with a casino visit. We assume that $\frac{\partial E}{\partial g}$ and $-\frac{\partial E}{\partial m}$ are both positive.

The Lagrangian associated with the minimization problem forming e is

$$L = px + gv + \lambda[u - u(x, v, E(g, m))] \tag{6.3}$$

where λ is the Lagrangian multiplier, interpreted as the marginal cost of an additional unit of utility. The first-order conditions to the minimization are as follows:

$$\frac{\partial L}{\partial x}: \quad p = \lambda u_x \tag{6.4}$$

$$\frac{\partial L}{\partial v}: \quad g = \lambda u_v \tag{6.5}$$

$$\frac{\partial L}{\partial g}: \quad v = \lambda u_E E_g \tag{6.6}$$

where subscripts denote partial derivatives. Applying the envelope theorem to expenditure,

$$\frac{\partial e}{\partial m} = \frac{\partial L}{\partial m} = -\lambda u_E E_m. \tag{6.7}$$

Equation 6.7 shows that expenditure rises with distance to hold utility constant because u_E and λ are positive and E_m is negative. Presuming that $v(m)$ and $g(m)$ are the optimizing choices of v and g, $E(g(m), m)$ varies according to

$$\frac{dE}{dm} = E_g \frac{dg}{dm} + E_m. \tag{6.8}$$

Substituting into Equation 6.7 gives

$$\frac{\partial e}{\partial m} dm = -\lambda u_E E_m dm \tag{6.9}$$

$$= -\lambda u_E \left(\frac{dE}{dm} - E_g \frac{dg}{dm} \right) dm \tag{6.10}$$

$$= \lambda u_E E_g \frac{dg}{dm} dm - \lambda u_E \frac{dE}{dm} dm \tag{6.11}$$

$$= v dg - \lambda u_E dE \tag{6.12}$$

$$\leq v dg \tag{6.13}$$

where the last inequality follows from the behavioral assumption that $\frac{dE}{dm}$ is nonnegative, meaning that the enjoyment connected to a visit for which the consumer spent more because he or she had to travel a greater distance is more than the enjoyment attached to one of frequent short visits where the distance traveled was short. Adding up all of the values vdg, which is what taking the area to the left of the curve in Figure 6.2 does, produces the desired upper bound for distance consumer surplus.

[7] We assume this because it is the usual case. For some individuals, of course, traveling to a resort location might become an enjoyment in its own right. The fact that most people use airplanes rather than cruise ships or cars, however, suggests that time in travel is minimized.

Estimate 2: Simulating the Benefits of Distance

Exact simulation is an alternative to the method of constructing an upper bound on distance consumer surplus. This chapter reports results of a simulation for an indivual whose utility, $u = u(x, v, E(g, m))$, depends positively on the number of casino visits, v, and on $E(g, m)$, an enjoyment factor that depends positively on the amount gambled, g, and negatively on the miles needed to travel to the casino for each visit, m. It also depends on the consumption of other goods, x. We benchmark the consumers' preferences so that they make their choices in a way that represents the behavior we observe in Table 6.1.

We report simulations for two versions of utility,

$$u = c_0 \left[c_1 x^{\frac{\sigma-1}{\sigma}} + c_2 v^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}} + E(g, m) \tag{6.14}$$

$$u = c_3 \left[c_4 x^{\frac{\sigma-1}{\sigma}} + E(g, m) v^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}} \tag{6.15}$$

where $E(g, m)$ is a polynomial in m of the form $c_5 g^2 + c_6 g + c_7$ and the c's are parameter constants. Both Equations 6.14 and 6.15 are modifications of the widely used constant elasticity of the substitution utility function. In Equation 6.14, $E(g, m)$ enters additively and in Equation 6.15, it enters multiplicatively on the gambling visits term. In Equation 6.14, for example, a change in distance from the nearest casino does not influence the marginal utility that the consumer receives from an additional visit to a casino. Both Equations 6.14 and 6.15 are natural ways to modify the standard constant elasticity of the substitution utility function.

We choose constants c so that the consumer has \$40,000 annual income,[8] gambles \$55 each visit to the casino, visits 3.64 times per year, for a total gambling expenditure of \$200 when the casino is next door (\$198.84 was lost to casinos by the average adult living within zero to 35 miles of Atlantic City casinos in 1991. See Deloitte & Touche (1992), pp. 137, 162. Mirage Hotel (1993) also uses $200 as its estimate of demand for spending by adults near the casino), and generates benchmark utility of 100. Moreover, when the casino is 500 miles distant, the consumer visits 0.1 time per year, matching the visit frequency for the over-300 distance (bottom row) of Table 6.1. Without loss of generality, we also assume that the price of goods x is 1. These requirements are enough to specify the parameters of Equations 6.14 and 6.15 and to generate interior solutions for the consumer's optimization problem. Certain restrictions apply to the range over which the polynomials for $E(g, d)$ apply. Details are in Grinols (1999a).

After constructing a gambler who makes choices about how much to gamble in a representative way, we adjusted the consumer's distance from the casino to see what the resulting utility value was of having the casino at $m = 0$ miles versus $m = 500$ miles. The numbers computed this way will be exact, not upper bounds. Table 6.2 reports the results.

Columns (1) and (2) list the variables of interest: the consumer has $40,000 annual income, visits the casino 3.63 times per year, and spends $200 gambling when casinos are zero miles away. Columns (3) and (4) show what happens when the casino is 500 miles away and zero miles away for the additive version of the utility function. The key calculation is shaded in the income row. The consumer would be willing to give up $46.63 to have the casino at zero distance rather than 500 miles away. Performing the same experiment for the multiplicative version of the utility function (Equation 6.15) reveals that the consumer would be willing to give up $47.36.

[8] This nearly perfectly matches median household income in 1999, which was $39,657.

Estimate 3: The 30 to 35 Percent Rule

A general rule of casino demand is that it falls by about 30 to 35 percent when the distance from the casino is doubled.[9] Table 6.3 used this information, for example, to construct a distance and demand schedule in which each doubling of distance, m, reduced expenditure by 34.5 percent. In the constructed table, consumers 35 to 75 miles away from a casino have average expenditures per year of $128.13; those 150 to 300 miles away have average expenditures of $54.29, which closely approximate the figures in the right-hand column of Table 6.4.

For very small or very large distances, the general rule that demand declines by 30 to 35 percent for each doubling of distance, or increases by 43 to 54 percent for each halving, is not credible. For example, such consumers would have average gambling losses of more than $1,485 if they were 1 mile from the casino, and this supposedly would rise to $5,283 if they were 220 yards away. In Table 6.4, we reported advantages to the consumer of reducing proximity of the casino to 5 miles in the right-hand column, other distance combinations are to the left. Large distances do not present as much of a problem. The amount gambled falls quickly for large distances because people take fewer trips and so the estimates do not matter much to the comparisons in which we are interested. The last row of Table 6.3 reports the averages for consumers 300 or more miles away (actually, 300 to 6,400 miles). At those distances, visits per year match the figure in Table 6.1.

[9] Christiansen Capital Advisers, LLC (2000): "The 'distance factors' estimated for these models are, technically, the 'elasticities' of spending with respect to distance. Based upon survey data from several jurisdictions, rates of casino visitation appear to decline in proportion to about the 0.5 to 0.6 power of the distance to the casino, yielding distance factors of about 0.5 to 0.6." (p. 5) Let us use the midpoint, 0.55. In other words, if demand is proportional to $m^{-0.55}$, where m is distance, then demand at twice the distance is $(2m)^{-0.55} = 0.683m^{-0.55}$, or 31.7 percent less.

PROFITS AND TAXES

SUMMARY. The form that economic benefits such as profits and taxes takes depends on market structure. If we assume **perfect competition**, the profits of the casino industry will be competed to the same level as other businesses in general. When the net increase in profits and taxes from a new industry is zero, it does not imply that there are no social benefits; it just means that social benefits appear in a different form.

The most direct way to discuss casino profits and taxes would be to tally the profits of all casinos, estimate and subtract the reduction in profits to other businesses that are due to the presence of casinos, and produce a net profit figure. Because many casinos do not need to report their profits to anyone – American Indian tribal casinos are generally in this category

– such an approach is doomed from the beginning. Fortunately, there is an alternative that we can motivate in terms of the underlying theory.

Recall that we are interested in comparing two situations. One is the situation in which gambling is allowed to expand to the point of market saturation. *Market saturation* is a nontechnical term for a market in which casinos are free to enter and the market has reached equilibrium where the number of casinos and the amount of gambling present are not expanding. Saturation implies that the profits of casinos have reached ordinary business levels so that no further entry is desired. The second is the situation in which casinos are banned, as they were in all but two states before 1990. These alternatives provide a good comparison because casino benefits are at their maximum level in the first alternative. The two extremes are also easier to evaluate well in economic terms.

Apart from government regulation, most economists would agree that the casino industry would be a *free-entry* industry, meaning that the barriers to entry and exit would be small. Free entry and exit – competition *for* the market as distinct from competition *in* the market – is one of the most important attributes that characterizes perfect competition. Casinos tend to offer a similar product – another primary condition of perfect competition. Perfect information, a third characteristic of perfect competition, describes the casino industry in the sense that information is not a significant impediment to competition, either to buyers or sellers. In places where government has allowed it – such as the Gulf Coast of Mississippi; Deadwood, South Dakota; Atlantic City, New Jersey; and Nevada – casinos have continued to enter the market until profits have been reduced by competition to ordinary business levels and no further casinos seek entry. In Atlantic City, for example, the number of casinos has been stable at twelve for many years.

In short, apart from the current regulatory environment, the casino industry would likely be characterized by perfect competition with many entrants. In 1994 congressional testimony, I reported that "apart from government control, gambling is a free-entry activity. It requires little knowledge or high technology to offer gambling. This means that it is physically and economically possible to introduce gambling anywhere.

Gambling could be franchised on every street corner in the nation, like McDonald's hamburger stands."[187] The same sentiment was echoed by the National Gambling Impact Study Commission in its 1999 final report:

> With little stretch of the imagination, it is conceivable that someday gambling enterprises may be franchised and, at least in part of the country, become as common as fast-food outlets are today.[188]

Few economists would disagree.

The end result of perfect competition is that profits converge to the ordinary level of profits. In the United States, manufacturing profits as a percent of sales averaged 8.8 percent in 1999[189] and as a percent of stockholder equity, 5.9 percent. In that event, the best estimate of the *net* increase in profits and taxes caused by casino expansion is zero. This does not mean that casinos in a perfectly competitive regime provide no benefits. Rather, it means that the benefits they provide have been maximized and that all of the benefits will be captured by consumers as price-related benefits, consumer surplus, and distance benefits.[190]

THE OTHER BENEFITS

SUMMARY. As described in Chapter 5, some of the benefits of casinos may appear as price effects, such as consumer surplus and capital gains. The ability of casinos to reduce consumer constraints such as unemployment relative to what they would have been is another potential benefit. This benefit is temporary because, in the long run, the economy can have full employment with or without casinos present.

In general, the terms on which casino gambling is offered are the same in different locations. We have already noted that EGDs in one location are much the same as in another, and the rules of roulette, poker, blackjack, and most games are the same. To a first approximation, therefore, the spread of casinos does not alter the prices to consumers of gambling.[191] In most cases, casinos are not large enough relative to the economy to affect many other prices, nor do they pay well enough that they regularly raise the level of wages for the entire labor market. In other words, price effects tend to be small or negligible except in special cases, implying that consumer surplus and capital-gains price effects are approximately zero. In cases where we are looking at regional effects only, the consumer surplus and capital gain-related benefits are captured in the $0 to $1,500 value per job numbers from the major-league sports teams literature.

This leaves the potential role of casinos as eliminators of consumption constraints. When short-term unemployment is present, for example, it is theoretically possible that there may be a period during which the introduction of a particular type of product or activity leads to a transitory reduction in unemployment compared to what would have happened otherwise. The U.S. economy has experienced full employment in the past without casinos and almost surely can do so again in the future. Thus, unless we believe that full employment in the long term requires the presence of casinos, unemployment reduction is a short-term benefit that is not captured in the list of other benefits. As noted previously, I am aware of no study at the time of writing that makes this claim about unemployment and estimates the value to existing residents of its temporary reduction.

CONCLUSIONS

SUMMARY. If one compares an economy where casinos are prohibited to the same economy where casinos are legalized and casino entry is free, the long-term benefits appear to be on the order of $34 per adult per year. These benefits take the form of distance consumer surplus. From a narrower regional perspective, benefits also may include price-related elements: consumer surplus and capital gains to residents. These benefits vary with circumstances, but are on the order of $0 to $1,500 per job added regionally. In the short term, some benefits may take an additional form: casinos may help eliminate unemployment faster. There are no figures available on the value of this temporary benefit to the existing residents of the region.

To some degree, any generalized estimate of the economic benefits of casinos must remain partly unsatisfactory for two reasons: (1) First, benefits take different forms depending on market structure and other considerations that vary with conditions. If casinos are granted regional

TABLE 6.5. Regional Annual Casino Benefits for the Entire Economy: Compares an economy with no casinos to the same economy with free entry of casinos

	Regional (Short Term)	Regional (Long Term)	Economy (Long Term)
Profits and Taxes	$\frac{\$0}{\text{adult}}$	$\frac{\$0}{\text{adult}}$	$\frac{\$0}{\text{adult}}$
Distance Consumer Surplus	$\frac{\$34}{\text{adult}}$	$\frac{\$34}{\text{adult}}$	$\frac{\$34}{\text{adult}}$
Consumer Surplus and Capital Gains	$\frac{\$0-\$1,500}{\text{job}}$	$\frac{\$0-\$1,500}{\text{job}}$	$0
Transactions Constraints and Temporary Unemployment Reduction	?	$0	$0
TOTALS	$\frac{\$0-\$1,500}{\text{job}} + \frac{\$34}{\text{adult}} + ?$	$\frac{\$0-\$1,500}{\text{job}} + \frac{\$34}{\text{adult}}$	$\frac{\$34}{\text{adult}}$

monopolies, for example, the list of benefits includes positive net profits and taxes, but distance consumer surplus would be diminished relative to the alternative where casinos are introduced in a regime of free entry. The largest benefits to the economy are generated if free entry of casinos is permitted. In this case, competition limits net profits and taxes, but increases distance consumer surplus. (2) Second, the price effects – consumer surplus and capital gains – and the transactions constraint benefits are intrinsically difficult to estimate. We have borrowed our estimates for price-related benefits from the literature on major-league sports teams. There, recognizing that the number could be negative under certain conditions, it was found that an additional job in a region tended to provide benefits to existing residents of between $0 and $1,500 per job added to the region. Casinos can be the cause for both additional jobs and a decline in jobs in a region, depending on how the net export multiplier mechanism functions (see Chapter 4). Table 6.5 condenses the discussion of benefits of this chapter into the entries shown.