THE ECONOMIC IMPACT OF THREE ADULT-ORIENTED CLUBS IN RANCHO CORDOVA

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November 2005

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PURPOSE OF STUDY

The purpose of this study is to examine the economic impact of three adult-oriented businesses – Gold Club Centerfolds, Pure Gold, and Risky Business (the "Clubs") -- in Rancho Cordova, California. To assess the economic impact of these clubs, we addressed the following research questions: (1) what effect do these Clubs have on surrounding property values? and (2) what effect do the Clubs have on the local economy?

RESULTS IN BRIEF

The existence of the Clubs has no statistically significant effect on property values in the surrounding areas. Data was collected on all sales of residential properties within a two-mile radius of each club. Additionally, data was collected on all sales of commercial and industrial properties within a one-mile radius of each club. This data contains detailed characteristics of each property such as proximity to each club, square footage, age of structure, and the type of property. The data was utilized in a multi-variable statistical test to determine if proximity to the club had any effect on property values. The results indicate that there is no statistically significant relationship between the values of residential, commercial, or industrial property near the Clubs compared to properties that are located further away after accounting for differences in property characteristics and market conditions.

The Clubs have a substantial positive effect on the local economy. The current combined annual revenue of the Clubs is approximately $15 million. Approximately 97 percent of the Clubs' patrons are from outside of Rancho Cordova. These patrons not only spend dollars at the Clubs, they also spend dollars at local businesses. The results of our study on expenditures inside and outside the Clubs show that the Clubs generate approximately $30.5 million of income within Rancho Cordova.

BACKGROUND

Adult-oriented businesses have been criticized as having a negative impact on property values. This criticism stems from a belief that the nature of activities taking place in an adult-oriented business spill over into the local community and stigmatize the area. The stigma associated with property in close proximity to adult-oriented businesses is that the patrons of these establishments will increase crime and conduct other damaging behavior to the surrounding area. These claims have yet to be established in a scientific manner. The critics of adult-oriented businesses tend to rely on anecdotal information and ad hoc reasoning to establish their claims.

The owners of adult-oriented businesses have tended to defend their businesses by invoking their freedom of expression rights under the First Amendment. This protects expression that some people may find objectionable. For example, Supreme Court Justice Anthony Kennedy wrote in U.S. v. Playboy Entertainment Group that the "history of the law of free expression is one of vindication in cases involving speech that many citizens may find shabby, offensive, or even ugly."[1]

This report relies neither on anecdotal or legal claims. It is a scientific investigation into the economic impact of an adult-oriented business utilizing relevant data and examining the data using generally accepted statistical methods. Detailed data on property values based upon characteristics of the property is available. Scientific statistical methods that differentiate between the effects of different variables on property values are available. The effect of proximity to an adult-oriented business on property values can be tested by placing a variable in a statistical equation that accounts for the proximity of property to an adult-oriented business.

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[1] Source: Hudson, David L. "Nude Dancing," www.firstadmendmentcenter.org.

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Utilizing these data and statistical techniques, one can project the effects of adult-oriented businesses on property values.

Economic science is also available to project the effect of the proximity of an adult-oriented business on revenues for local businesses. Businesses can be divided into two categories – base and non-base. Base businesses bring in dollars from outside the local community. An adult-oriented business can be considered a base business if the majority of its revenue comes from patrons outside the local area. Non-base businesses serve the local community by providing goods and services within the local community. Dollars from non-base businesses tend to flow circularly within the community. The dollars that are attracted by base industries enter this circular flow and then multiply. Economists have developed methods to measure the extent of this multiplier effect.

THE CLUBS HAVE NO STATISTICALLY SIGNIFICANT EFFECT ON PROPERTY VALUES

The existence of the Clubs has no statistically significant effect on property values in the surrounding areas. Data was collected from a leading real estate software tool called RealQuest. The data contains information on all sales of residential, commercial, and industrial properties within a two-mile radius of each club for a five-year period. This data was utilized in multi-variable statistical tests to determine if proximity to a club had any effect on property values. The results indicate that after accounting for property characteristics and market conditions, no statistically significant outcome indicates a linear relationship between the values of properties near the Clubs compared to the values of properties that are located further away.

Data & Methods

Data was collected from RealQuest on all sales of residential properties within a two-mile radius of each club from January 1, 2000 to February 28, 2005. RealQuest collects and maintains a comprehensive real estate data information base. This data was separated into two groups: (1) residential property, and (2) commercial and industrial property. For residential properties the data was separated into two categories within both groups: (1) property within one mile of a club and (2) property that is one mile to two miles from a club. The Clubs are in close proximity to each other and some properties could fit both criteria. The properties that fit both criteria were assigned to category one. Thus, category two is a unique group of properties that are only one mile to two miles away from any of the Clubs. For commercial and industrial properties, the categories were: (1) properties within a half a mile from a club, and (2) properties that are a half mile to one mile from a club.

The data from RealQuest were utilized in the statistical models. The variables extracted from the residential property data set are (1) the sale price, (2) age of the structure, (3) square feet of the structure, (4) square feet of the lot, and (5) type of property (single family, duplex, or condominium). The same variables were extracted from the commercial and industrial data set except the type of dwelling was defined as commercial or industrial. A variable in the residential property data set was constructed to account for the general increase in the value of property over time: the median value of home prices for the month of sale.[2] In the commercial and industrial property data set a similar variable was created. A variable to account for proximity to the Clubs was created in both data sets. This variable takes the form of a "dummy" variable in the residential property model meaning it takes on the value of one if it is within one mile of a club and zero if it is within one to two miles of a club. The variable specifying type of property was also constructed as a dummy variable. In the residential data set it took the value of one if it was a condominium and zero if it was a single family home or duplex. In the commercial and industrial data set it took the value of one if the property was industrial and zero if it was commercial.

The statistical model for analyzing the data is multivariate regression. This type of statistical model projects the value of a dependent variable – in this case the sale price of a property – on several independent variables. In other words, the model explains the "dependence" of the dependent variable on several variables. It quantifies the effect of each independent variable on the dependent variable by assigning a numerical coefficient to the variable. The statistical method utilized within the multivariate regression is ordinary least squares (OLS). This method projects the effect of each of the variables on the dependent variable by getting the best "fit" for the model. A measure of the fit of the model is the R^2

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[2] Source: California Association of Realtors.

coefficient. A high R^2 signifies that the variation in the dependent variable is explained by the independent variables (the highest possible R^2 is 1). In an OLS model, each variable will have a projected coefficient that describes the effect of the variable on the dependent variable. The model will also generate a projected statistical significance known as a t-value. It is a commonly held projection among statisticians that a coefficient with an absolute t-value of 1.96 or greater is a statistically significant variable.[3] If a variable is statistically significant, the projected value of its effect on the dependent variable is the value of the coefficient generated by the model. If a variable is not statistically significant, its effect on the dependent variable has not been established. Thus, that variable can be eliminated from the equation as its explanatory value is in question.

The theoretical basis for the specification of the models is derived from microeconomic price theory. This theory examines the price of a commodity (such as a home price) to be dependent on the utility (enjoyment or satisfaction) that the commodity provides to the consumer. The utility derived from the consumption of the commodity can be dependent upon the attributes of the commodity.[4] Examples of attributes, or characteristics associated with houses, are living area, lot size, and age of the property. By incorporating these characteristics in a model to determine an expected home price, the analyst can then distinguish the composition of a home's characteristics from general property appreciation.[5] Economic research has also shown that there is a relationship between home prices and the location of the home.[6]

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[3] An absolute t-value is a positive value greater than 1.96 or a negative value less than -1.96.
[4] Lancaster, K.J., 1996. A New Approach to Consumer Theory. *Journal of Political Economy*, 74: 132-157.
[5] Calhoun, C.A., 2001. Property Valuation Methods and Data in the United States. *Housing Finance International*, 16: 12-23.
[6] Frew, J. and B. Wilson, 2000. Estimating the Connection Between Location and Property Value, Essay in Honor of James A. Graaskamp, Boston, MA: Kluwer Academic Publishers.

Effect of Proximity to a Club on the Value of Residential Property

Two statistical models were specified according to the theory delineated above to test for the effect of proximity to one of the Clubs on residential property prices. Both models relied on the following equation:

$$Y = \alpha + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + X_6\beta_6 + \varepsilon$$

Variable X_1 is the month of purchase in model number 1 and the value of the median home price in model number 2. Variables X_2 to X_6 are the same in both models. The variables are defined as:

Y = sales price (dependent variable)
α = intercept
X_1 = month of sale (model #1) or median home price for the month of the sale (model #2)
X_2 = square feet of the structure
X_3 = age of the structure
X_4 = proximity to one of the Clubs
X_5 = square feet of the lot
X_6 = type of property (condo or single family home)
ε = error term

Table 1 summarizes the results of the first model and table 2 summarizes the results of the second model.

Table 1: The effect of proximity to one of the Clubs on residential property values (Model #1).

Variable	Effect of Variable on Property Values based on Statistical Significance	T-statistic of the Variable (absolute value)
Intercept	Negative	12.20
month of sale (X_1)	Positive	60.89
square feet (X_2)	Positive	37.83
age of the structure (X_3)	Negative	11.95
proximity to one of the Clubs (X_4)	No Significance	1.41
square feet of the lot (X_5)	Positive	36.93
type of property (X_6)	Negative	5.43
$R^2 = .83$		

Table 2: The effect of proximity to one of the Clubs on residential property values (Model #2).

Variable	Effect of Variable on Property Values based on Statistical Significance	T-statistic of the Variable (absolute value)
Intercept	Negative	29.18
median home price (X_1)	Positive	64.08
square feet (X_2)	Positive	38.86
age of the structure (X_3)	Negative	13.95
proximity to one of the Clubs (X_4)	No Significance	1.74
square feet of the lot (X_5)	Positive	38.35
type of property (X_6)	Negative	5.48
$R^2 = .84$		

In each table, the column labeled "T-statistic" indicates the estimated strength of the variables in the model. To evaluate the strength of the regression model, it is necessary to test the hypothesis that the coefficients are equal to zero which would indicate that they have no

effect on property values. In other words, a statistical test must be run on the regression results to project whether the results have significance.[7] The following hypotheses were tested:

- null hypothesis: coefficient = 0 (there is no linear relationship)

- alternative hypothesis: coefficient not equal to 0 (there is a linear relationship)

The t-test is utilized to test the alternative hypothesis. The critical value for the t-test is 1.96. If the t-value is greater than 1.96 then the null hypothesis is rejected at a confidence level of 95 percent.

The results of both models show t-statistics with absolute values that are far greater than 1.96 for variables X_1, X_2, X_3, X_5, and X_6. Thus, the null hypothesis is rejected for each of these variables. The linear relationship demonstrated for each of these coefficients is statistically significant. The median home price in the area, the month of the purchase, the square footage of property, and the square footage of the lot were positively correlated with property values. The age of the structure and the type of property as a condominium were negatively correlated with the property value.

The results of both models show a t-statistic with an absolute value that is less than 1.96 for variable X_4. Thus, we fail to reject the null hypothesis. There is no statistically significant linear relationship identified between proximity to one of the clubs and property values and this variable should be discarded from the model.

The overall results of the model are robust. The R^2 statistic shows that greater than 83 percent of the variation in property values is explained by the model. The combination of a high R^2 and the t-tests lead to the following overall conclusion from the models: after accounting for differences in property characteristics and property appreciation, there is no significant

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[7] Gaynor, P.E. and R. Kirkpatrick. 1994, Time Series Modeling and Forecasting in Business and Economics, New York: McGraw-Hill, Inc. Pindyck, R.S. and D.L. Rubinfeld. 1991, Econometric Models & Economic Forecasts, New York: McGraw-Hill Inc.

difference in the value of residential property near the Clubs compared to property that is located further away.

Effect of Proximity to a Club on the Value of Commercial and Industrial Property

The effect of proximity to a Club on the value of commercial and industrial property was projected using the following equation:

$$Y = \alpha + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + \varepsilon$$

where,

Y = sales price (dependent variable)
α = intercept
X_1 = gross area of the property
X_2 = sale date
X_3 = age of the structure
X_4 = proximity to one of the Clubs
X_5 = type of property (industrial or commercial)
ε = error term

Table 3 summarizes the results of the model.

Table 3: The effect of proximity to one of the Clubs on commercial and industrial property values.

Variable	Effect of Variable on Property Values based on Statistical Significance	T-statistic of the Variable (absolute value)
Intercept	Negative	2.82
gross area of the property (X_1)	Positive	3.98
sale date (X_2)	Positive	2.85
age of the structure (X_3)	No Significance	0.25
proximity to one of the Clubs (X_4)	No Significance	1.04
type of property (X_5)	No Significance	1.38
R^2 = .48		

The same hypothesis testing that was applied to the residential property results was applied to the commercial and industrial property results. The t-statistic on the variable that projects the effect of proximity to one of the Clubs on the value of commercial and industrial property is 1.04. Thus, we fail to reject the null hypothesis -- there is no linear relationship between proximity to one of the Clubs and the value of commercial or industrial property.

THE CLUBS HAVE A POSITIVE EFFECT ON THE LOCAL ECONOMY

Economic science can project how the presence of an adult-oriented business can affect the revenues of other local businesses. Businesses can be divided into two categories – base and non-base. Base businesses bring in dollars from outside the local economy. An adult-oriented business can be considered a base business if the majority of its revenue comes from patrons outside the local area. Non-base businesses serve the local community by providing goods and services that are staples of the local economy. Dollars from non-base businesses tend to flow circularly within the community. The dollars that are attracted by base industries enter this circular flow and then multiply. Economists have developed methods to measure the extent of this multiplier effect.

Data & Methods

Base businesses bring in dollars from outside the local communities. An example of a pure base business is tourism. Tourists bring dollars from outside a local community and spend them at businesses within the community. These dollars not only raise the revenue of the businesses directly serving the tourists, but the dollars also flow to businesses outside the tourism industry – the non-base businesses.

Non-base industries are often referred to as the service or domestic sector. These industries serve local markets and are a staple of the local economy. Examples of non-base industries include retail stores, hair salons, grocery stores, medical services, local government and local financial institutions. Non-base industries rise and fall with the increase or decrease of base industries, as non-base industries simply circulate dollars within the local economy. Therefore, it follows that the local economy is directly tied to the region's production of base goods and services. If the local economy has strong base industries, then extra dollars are generated to purchase imported goods and services. Conversely, if a local economy's base industries are weak, then the local economy will have a difficult time importing the goods and services required to create a strong economic region.

The Clubs generate services that are almost a pure base business. Approximately, 97 percent of patrons of the Clubs are from outside of Rancho Cordova.[8] Thus, the Clubs bring dollars to the local communities that then flow within the local businesses. The amount of income that is generated by these dollars can be approximated by projecting the amount of non-basic employment that is created by base employment. In other words, base employment has a multiplying effect – it brings in dollars from outside the local community and then these dollars transfer into non-basic employment.

The base employment of Rancho Cordova was established using the minimum requirements methodology.[9] Employment data was collected from the Labor Market Information Division ("LMID") of the California Employment Development Department ("EDD"). The LMID provides employment totals for specific industries within all California

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[8] This was established from data gathered at the Clubs on the zip codes of the patrons.
[9] Ullman, E. 1960, The Minimum Requirements Technique Approach to Urban Economic Base, Papers: Regional Science Association. Ullman, E. 1968, Minimum Requirements after a Decade: A Critique and an Appraisal, *Economic Geography*, 44. Ullman, E., M. Dacey, and H. Brodsky. 1969, *The Economic Base of American Cities*, Seattle: University of Washington Press.

counties on an annual basis. The data was utilized to calculate the percentage of employment in

the different industries within each county. Data was compiled on employment in California

counties using LMID's 2002 *County Snapshots* reports. The fraction of employment for each

industry within that county was then compared to all other counties. This determined the lowest

fraction of employment within California for each particular industry. These fractions provide

an estimate of the minimum percentage of total employment that would allow any region to be

self-reliant in that particular industry. Counties were then identified that most closely resembled

Rancho Cordova for each industry in order to establish the minimum fractions necessary for self

sufficiency. The amount that an employment fraction exceeds the self-sufficiency fraction is the

projection of excess employment in that industry. The excess employment is defined as the

estimate of employment in export production. Counties were then identified that most closely

resembled Rancho Cordova for each industry in order to establish the minimum fractions

necessary for self sufficiency. The final step was to calculate, within each industry, the

difference between the percentage employment in Rancho Cordova and the county with the

minimum requirements divided by the percentage employment in Rancho Cordova. The

resulting quotient provides an estimate of base employment in each industry.

Results

Table 3 summarizes the calculations of the regional economy multiplier. This multiplier

projects the effects of base dollars coming into the local economy.

Table 3: The Regional Economy Multiplier for Rancho Cordova.

RANCHO CORDOVA ECONOMIC BASE (2003)						
Employment by Industry	Industry Employment[1]	% of Total	Minimum Requirement[2]	% of Industry in Base Activity[3]	% of Industry Workforce in Base Activity[4]	Base Employment[5]
Agriculture	621	1.85%	0.34%	1.51%	81.58%	507
Natural Resources	37	0.11%	0.08%	0.03%	27.24%	10
Construction	3,013	8.95%	3.53%	5.42%	60.57%	1,825
Manufacturing	6,071	18.04%	5.46%	12.58%	69.73%	4,234
Trade, Transportation and Utilities	7,312	21.73%	16.13%	5.60%	25.76%	1,884
Information	-	0.00%	0.00%	0.00%	0.00%	-
Financial Activities	3,982	11.83%	3.29%	8.54%	72.20%	2,875
Professional and Business Services	4,947	14.70%	3.93%	10.77%	73.27%	3,624
Educational and Health Services	3,730	11.08%	8.99%	2.09%	18.89%	705
Leisure and Hospitality	2,194	6.52%	6.52%	0.00%	0.00%	-
Other Services	976	2.90%	1.44%	1.46%	50.35%	491
Government	769	2.29%	2.29%	0.00%	0.00%	-
Total	33,652	100.00%	51.99%	48.01%		16,155
Regional Economy Multiplier[6]						2.1

1. Source: California Employment Development Department.
2. Projected from counties that are comparable to Rancho Cordova.
3. % of Total – Minimum Requirement.
4. % of Industry Workforce in Base Activity.
5. % of Total x % of Industry Workforce in Base Activity.
6. Total Industry Employment / Total Base Employment.

The annual revenue of the Clubs was projected by the average number of dancer shifts

per month per club, the average dollars earned by each dancer per shift, and the average video

sales per month from each club. Based upon these estimates, the Clubs' projected revenue

ranged from $15 million to $18 million for the most recent twelve months. Taking the low end

of the range and multiplying it by the percent of the patrons at the clubs from outside the area (97 percent), projects the base dollars generated from the Clubs at approximately $14.5 million. The base dollars multiplied by the regional county multiplier of 2.1 projects the total revenue for Rancho Cordova generated by the Clubs at $30.5 million annually.

CONCLUSION

The results of the statistical analysis show that the existence of Gold Club Centerfolds, Pure Gold, and Risky Business does not have a significant effect on residential, commercial, or industrial property values in the surrounding areas. Moreover, these clubs have a positive impact on the economy of Rancho Cordova. These clubs generate approximately $30.5 million dollars of income. Less than half of these dollars are spent directly in the clubs. Thus, the economic benefit from the existence of these clubs does not solely flow to the employees and owners of the clubs. Local business profits and local employment are increased by the existence of these clubs.

TECHNICAL APPENDIX: THEORY OF THE ECONOMIC BASE OF A COMMUNITY

The nature of a local economy has steadily evolved over time. Centuries ago, when travel, communication, and trade were primitive, a local community had to satisfy its material needs exclusively out of its own local resources. As technology has improved, trade has allowed local economies to increase their standard of living. Through trade, localities have become able to gain access to resources outside their borders. In the modern world, a region does not have the resources on its own to acquire the mass of goods of services it has grown to expect and require. Trade is needed to satisfy its full requirements. A local economy with little to trade lacks the means to develop a strong economy with a high standard of living.

For a modern community to sustain a high standard of living, it must continue to produce goods which can be exported to other regions. The value of a community's exportable goods is called its *economic base*.

Base industries are generally in activities such as manufacturing, fishing, logging, agriculture, private colleges, state or federal government activities, and financial services headquarters. Other examples are hotels and restaurants catering to non-residents, wholesalers supplying out of region customers, financial institutions lending to national markets, residents drawing income from outside the region, and consultants or individuals providing services to clients outside the community. The dollars that come in from the outside through the export of base goods and services provide the dollars to purchase items which are not produced from within.

Non-basic industries, often referred to as the service or domestic sector, are made up of businesses which serve local markets, such as retail stores, medical services, legal services, hair salons, grocery stores, local finance institutions, and local government. The size of the domestic

sector depends on the level of base industry. Shopping centers, housing, and real estate agents are created in response to increase in base industry—i.e. the creation of dollars flowing into the community. Domestic industries simply circulate dollars within the community. For a community to buy products and services produced outside of its boundaries, base production is necessary to generate the inflow of dollars to make these purchases. The long-term rise and fall of regional income and welfare shifts with a region's production of base goods and services.

When economists decide to measure the structure of a regional economy, several estimating techniques are available. Three common techniques are the economic base model, the input-output model, and the econometric model. The technique chosen depends on the objective of the study, the data that is available, and the time and/or money available to gather the data.

The technique chosen in this analysis is the economic base model. It provides a technique to measure the current economic structure of the area. A perfect base study requires extensive surveys, but the data presently available generates base estimates which provide meaningful insight into a local area's economy.

The graph shown here (Figure 1, next page) illustrates the essential structure of a regional economy using the base model. The horizontal axis, denoted Y, shows the value of net regional income. Since regional income is generated by payments to resources used in the production process, Y is equivalently equal to the value of production. Hence, Y is also represented on the vertical axis as local production. Note that the line Y goes through the origin and has a slope of one, which indicates the value of local income equals the value of local production.

The other variable shown on the vertical axis is denoted D, the demand for local goods. Mathematically, $D = x + sY$. x is the demand for local goods by entities outside the region—i.e.

export demand. The sale of x provides the initial dollars for local entities to spend on imported goods or their own domestic goods.

The second component of **D**, which is **sY**, sets the relationship between the demand for local goods and local income. As local income rises, there is a concomitant increase in the demand for local goods. This is reflected in the movement along d. As **Y** increases, **D** rises. For each $1 increase in **Y**, **D** will increase by **s**, where **s** is the fraction of a dollar increase in income spent on local goods (Note : $(1 - s)$ is the fraction of a dollar's increase in income which flows out of the region to purchase imported goods.) The objective of a base study is to measure **s** – i.e. (non-basic spending) / (non-basic spending + basic spending).
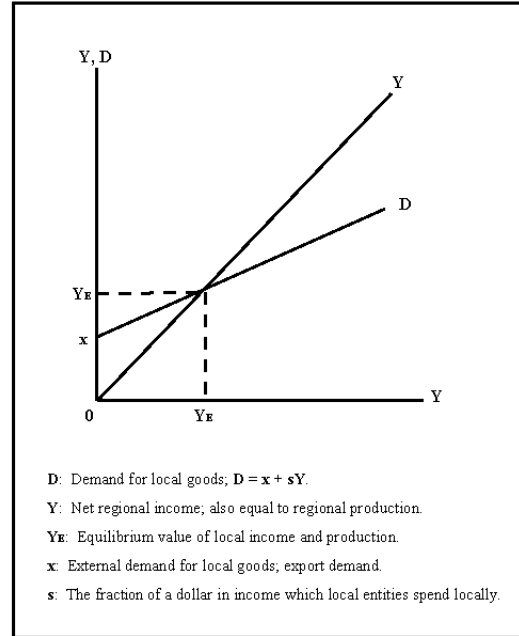

D: Demand for local goods; $D = x + sY$.
Y: Net regional income; also equal to regional production.
Y_E: Equilibrium value of local income and production.
x: External demand for local goods; export demand.
s: The fraction of a dollar in income which local entities spend locally.

Figure 1

Returning to the graph in Figure 1, note that when local production is less than the level at Y_E, **D** (Demand) is greater than **Y** (supply). Local producers will respond by raising production.

Conversely, at those levels of production greater than Y_E, **D** (demand for local goods) is less than **Y** (the supply of local good production). Producers will then experience surplus inventories and respond by cutting back on production.

Only at production level $\mathbf{Y_E}$, will supply and demand converge and reach an equilibrium level of income. Note that export demand (**x**) determines the position of **D**, and hence, the equilibrium level of production and income for the region.

Mathematically, $\mathbf{Y_E}$ can be determined as shown below:

$\mathbf{Y = D}$

$\mathbf{Y = x + sY}$

$\mathbf{Y(1 - s) = x}$

$\mathbf{Y_E} = \mathbf{x} / (1 - \mathbf{s})$, the equilibrium condition.

The equilibrium condition implies that changes in export demand (**x**) will set off changes in local income ($\mathbf{Y_E}$). Interestingly, the change in local income will be some multiple of the change in export demand. This multiple is commonly called the *local spending multiplier* and is equal to : $1 / (1 - \mathbf{s})$.

Recall s is equal to (non-basic spending) / (non-basic spending + basic spending). It can be shown algebraically that the *multiplier*, $1 / (1 - \mathbf{s})$, is equal to (non-basic spending + basic spending) / (basic spending). Stated mathematically, $1 / (1 - \mathbf{s}) = \mathbf{Y_E} / \mathbf{x}$.

The *multiplier* can then be used in forecasting the impact on local income resulting from a change in export (base) demand. The relationship between a region's economic base and the value of regional production and income is quantified by the *multiplier*. For example, if the base production in a community (**x**) is \$1,000 and the total production ($\mathbf{Y_E}$) is \$2,5000, then the *multiplier* is 2,500 / 1,000 = 2.5. This means that an increase in the base production of \$100 will generate a total increase in community income and production of \$100 x 2.5 = \$250.

In summary, the economic base ultimately determines the total production and income of a region. A county is not self-sufficient and must import many of its goods and services. The ability to import products is dependent upon the amount which it exports. The value of imports can not exceed the value of exports for an extended period.

The domestic sector provides the support and services to workers in base industries and to themselves. The relationship between the value of a county's economic base and the base plus the domestic sector is quantified by a number which is defined as the local *multiplier*. The larger the base of exported goods produced in a community, the greater will be the long-term economic wealth and stability of the community. The ability of a community to consistently create income depends on how well it can sustain or enhance its base.