

DETERMINANTS OF SALARY IN NONPROFIT ORGANIZATIONS:
A STUDY OF EXECUTIVE COMPENSATION IN
SYMPHONY ORCHESTRAS

by

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ABSTRACT

This thesis presents the development of a demand equation for symphony orchestras and a three equation, simultaneous model examining factors which influence nonprofit executive compensation. Results from the demand equation demonstrate that nonprofit orchestras operate in the inelastic portion of the demand curve. Thus, ticket sales generate negative marginal revenues and attendance is increased at the expense of profit. If total revenue is less than total cost, the orchestra must be subsidized by contributions from private and public sectors. The compensation model indicates that salary is positively correlated with the ability to increase contributions and improve organizational quality. Therefore, administrators seeking to enhance income and marketability would do well to focus their energizes on these two critical areas. Additionally, private contributions and quality respond positively to executive pay. Organizations seeking to enhance their reputation by increasing their level of service will bid up the salary of superior managers.

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CHAPTER 1

CHARACTERISTICS OF NONPROFIT ENTERPRISES

Traditional microeconomic theory assumes that firms seek to maximize profits. In order for a firm to achieve this enviable position, it must be managed by executives with the same objective. Thus, conventional wisdom holds that the salaries of corporate executives should be tied directly to their firm's profitability. In this manner, executives are provided with a strong, sure motivation to maximize the firm's profits, since these gains are highly correlated with their own under a properly structured compensation scheme.

While tying executive salaries to profitability may suffice in the corporate world, how are levels of compensation established in enterprises without a profit motive? How does one keep score when the game is neither won nor lost on the basis of total revenue minus total cost, return on investment, or earnings per share? How does one determine whether or not a nonprofit firm is successful? Indeed, if profit were no longer a motive, then what new criteria should be established in order to objectively judge executive performance and thus set a corresponding level of compensation?

First, what organizations are part of the nonprofit sector? Not-for-profit enterprises provide services to the community without seeking a profit. Copeland and Smith describe such concerns as "the performing arts, museums, hospitals, libraries, universities, churches, volunteer health organizations, research organizations, credit unions, labor unions, fraternal organizations, professional societies, farm collectives, and foundations"¹ to be typical examples of nonprofit organizations.

Three areas exist in which profit and nonprofit enterprises differ: tax status, goods and services, and sources of income. Of these three areas, one stands out as the primary distinguishing feature between profit and nonprofit businesses: sources of income. In contrast to private and governmental agencies, nonprofits garner a substantial percentage of their income from external, voluntary contributions.

This dependence on contributions for income in a particular nonprofit organization has an effect on the nonprofit executive's decision-making process. The greater the percentage of revenue coming from contributions, the greater the executive's desire to maximize his benefactor's utility. When someone makes a contribution, he surrenders

¹Thomas E. Copeland and Keith V. Smith, "An Overview of Nonprofit Organizations," Journal of Economics and Business, Vol. 30, No. 2, (Winter 1978), p. 147.

claim to that favor in return for an anticipated increase in his own utility. Thus, if the executive desires to maintain a healthy operation over the long term, he must search for those projects that will simultaneously appeal to current benefactors and attract potential contributors. Indeed, it is hard to imagine a successful manager of a symphony orchestra who does not schedule performances with his contributors in mind. Therefore, in contrast to the executive of a profit-seeking corporation who constantly strives to maximize profits on behalf of his shareholders (a utility maximizing policy for firm owners), the executive in a not-for-profit firm seeks to maximize the utility of his patrons.

The nature of financial management found within not-for-profit firms is also fundamentally different from its private sector cousins. First, we discover that the methodology used for counting "beans" differs between a profit-oriented company ($\text{assets} = \text{liabilities} + \text{equity}$) and a nonprofit one ($\text{assets} = \text{liabilities} + \text{funds}$, where the expression "funds" liberally defines one source of possible organizational financing). We discover in these two equations a fundamental difference in ownership. A private company has a direct claim to a share of its assets via its equity position; a nonprofit firm does not. The nonprofit firm replaces equity with "funds" to indicate the source of its life's blood, financing, usually in the form of public

donations, ticket sales, and/or membership fees. One may argue that the profit motive found in the private sector is replaced in nonprofit businesses by the fund-raising motive.

Many nonprofits display an effort on behalf of management to increase the foundation of subscriber support. However, this process carries its own set of risks to be balanced against possible rewards. What if management embarks on a policy which results in one group of supporters withdrawing its support while another group increases its contributions. Is this policy efficient? The answer depends on the goals of the organization. Since no shares are traded in an open market, as is the case with publicly traded firms, non-traded partnerships, and sole proprietorships, management lacks a short term feedback apparatus to gauge the effects of its policy decisions. As a result, management could implement policies which are inefficient and reduce subscriber utility, and ultimately, contributions.

A nonprofit firm may also operate under certain fiduciary restrictions. Whereas private companies may use their profits at the discretion of management, i.e. dividends, research and development, upgrading facilities, additional marketing, expansion into other markets, or even increased salaries for themselves, nonprofits may be constrained by stipulations placed upon donations. Gifts to nonprofit entities are often made conditionally, with, for

instance, restrictions on how they may be used. Perhaps the gift is earmarked for a new building or for the endowment of a scholarship to assist the underprivileged. As the scenario is repeated, the nonprofit finds itself with various "fund" classifications in its budget, i.e. building fund, capital fund, purchasing fund, membership fund, and advertising fund. Thus, while the nonprofit may appear to have adequate capital reserves to meet high priority goals or unexpected disasters, it may not have the freedom to allocate these reserves effectively.²

In this thesis, the factors which determine executive compensation in the not-for-profit sector are studied. Using symphony orchestras as an example of a nonprofit industry, a model of these factors is developed and tested. The study proceeds as follows: Chapter 2 reviews the literature; Chapter 3 discusses the development of the model; Chapter 4 describes the data used; Chapter 5 analyzes the empirical findings; and, Chapter 6 offers conclusions.

²Ibid., pp. 147-152.

CHAPTER 2

REVIEW OF THE LITERATURE

Is the level of pecuniary compensation the only motivating factor in the life of a nonprofit executive? If one believes current headlines, executives in the profit oriented sector of American business seek to maximize their own net worth, sometimes even at the expense of the companies for which they work. What objective does a manager in the nonprofit world seek to maximize, if not personal income? Perhaps nonprofit firms attract nonprofit managers, those who are more concerned with providing what they perceive to be a valuable service to their communities rather than merely increasing their level of disposable income.

Anne Preston suggests that nonprofit executives accept positions at below market wages in exchange for the opportunity to deliver goods and services with social externalities. Thus, the motive to maximize income is replaced with the desire to maximize one's contribution to the enrichment of society.

Preston drew three fundamental conclusions from her empirical research: (1) the not-for-profit industrial sector is primary a low wage sector; (2) the difference

in wages, which may be as much as 20%, is not completely explained by differences in the individual's human capital, geographical location, or the presence of compensating differentials found in similar occupations between the two sectors; and (3) that a negative nonprofit differential results from the differences between the level of social benefits provided by for-profit and nonprofit companies.

Viewing a nonprofit firm as a provider of private and social benefits, she establishes a total benefit function for the industry as:

$$TB(x) = \phi(x) + SB(x), \quad \phi'(x) > 0, \quad SB' > 0 \\ \phi''(x) \leq 0, \quad SB'' \leq 0$$

where

$$TB(x) = \text{total benefits generated by consumption of } x; \\ \phi(x) = \text{private benefits;} \\ SB(x) = \text{social benefits.}$$

Social benefits are defined as "social externalities, benefits enjoyed by parties external to the transaction, or, more specifically, by society as a whole."³ Nonprofit orchestras, as an example, thus supply benefits in the form of personal entertainment to those purchasing tickets, while simultaneously providing social benefits in the form of cultural awareness and increased educational opportunities.

³Anne E. Preston, "The Nonprofit Worker in a For-Profit World," Journal of Labor Economics, Vol. 7, No. 4, (October 1989), p. 440.

Nonprofits, in contrast to profit-orientated firms, furnish services which may provide significant social benefits, otherwise for-profit firms would choose to supply them.

Realizing that nonprofit organizations have the right to solicit tax deductible donations from companies, foundations, and individuals, Preston incorporates a donation function into her model. These donations reflect the organization's social benefits as well as its efficiency:

$$D = D[SB(x), E], D_{SB} > 0, D_E > 0$$

where

D = aggregate supply of donations and
E = organizational efficiency.

In the labor market, the executive chooses between the profit and nonprofit firms based on his own utility function:

$$U[SB(x), w], U_w > 0, U_{SB} > 0$$

where

U = utility and
w = wages.

Thus, the executive's utility is a positive function with respect to wages and the level of social benefit created by his employment. In this function, executives place a positive value to increasing social well-being and are

willing to exchange wages for expanded social benefits, a labor donation.

In developing her wage model, Preston states that:

because workers have heterogeneous preferences, each nonprofit firm faces a pool of potential workers with varying tastes for social welfare. The minimum wage necessary to attract the required number of nonprofit workers will be less than the for-profit wage if the pool of workers who receive utility from provision of social benefits is at least as great as the number of workers demanded by the firm:⁴

$$w_{\min} = w' - LD(l_D, SB), \quad LD_{l_D} \leq 0, \quad LD_{SB} \geq 0$$

where

w' = competitive wage in the profit sector;
 LD = aggregate supply of labor donations;
 l_D = firm's labor demand.

Inasmuch as the disposition of these "labor donations" rise simultaneously with increases in social benefits, those companies which bestow a greater contribution in terms of social benefits will be able to pay less in wages, ceteris paribus.

Applying comparative static analysis to the model discloses two interesting predications concerning behavior in a nonprofit framework. (1) The labor donations supplied by executives eager to work for those firms producing services which benefit society result in a downward pressure upon their own wages. (2) The greater the correlation

⁴Ibid., p. 442.

between the level of donations and the efficiency of the organization, the greater the pressure will be for nonprofit executives to utilize their financial resources effectively. So, even if an executive wished to use a portion of his firm's surplus to increase his salary, he could not do so above the market-clearing level without running the danger of losing donor support.⁵

Another segment of the economy which possesses characteristics similar to the nonprofit industry is the public sector. The politician (a public executive) replaces the motive to maximize profit with the desire to maximize his probability of winning reelection to either his current office, or perhaps even to a higher one. As William H. Anderson notes:

The role of the elected public official (or the would-be office holder) in the process of collective choice corresponds to that of the entrepreneur in the private sector. We would not be far off base if we say that the politician seeks to maximize his own utility by maximizing his "political" profits," namely, his voter support and political influence. Just as the private sector "punishes" an entrepreneur who fails to satisfy the desires of his customers ... so the political process "punishes" competitors for office who fail to gain enough support either to win or retain office.⁶

⁵Ibid., pp. 438-443.

⁶William H. Anderson, *Financing Modern Government: The Political Economy of the Public Sector* (Boston: Houghton, 1973), p. 41, quoted in James E. Annable, Jr., "A Theory of Wage Determination in Public Employment," The Quarterly Review of Economics and Business, Vol. 14, No. 4, (Winter 1974), p. 46.

James Annable states that the probability of someone currently holding public office successfully seeking reelection is a function of his ability to generate loyalty among his constituency. This loyalty is determined by two primary factors: (1) his support for low levels of taxation combined with (2) his capacity to generate high levels of service. Failure to achieve support from one's constituency results not in an economic loss, but instead in an increased level of public dissatisfaction, stemming from increasing taxes and/or deteriorating services. As in the nonprofit sector, the executive's continued employment and his level of compensation is dependent upon his ability to effectively manage his resources and satisfy his customers.⁷

⁷Annable, pp. 43-46.

CHAPTER 3

DEVELOPING THE MODEL

The first step in developing an executive compensation model is examining the market environment of the orchestras. For all practical purposes, any given symphony orchestra exerts monopolistic control within its sphere of influence, i.e., metropolitan area. Clearly, each orchestra examined in this study fits the definition of a monopolistic enterprise: (1) each major population center has one primary symphony orchestra; (2) an absence exists of current or potential rivals due to the unique qualities of the organization's services, i.e., live concerts and recorded productions of classical music; and, (3) these goods have no close substitutes. If one desires to experience a concert production, little choice exists except to attend a local performance. Each orchestra sells a unique product, its own individual rendition of the written music.

Since we are dealing with a monopolistic industry, supply curves are not well defined and characterization of a suitable demand function is all important. Employing a log-linear demand equation, where exponents are interpreted as the elasticities of the dependent variable with respect

to the independent variables, we establish the following:

$$Q_d = aP^{b_1}QA^{b_2}TNOC^{b_3}PCI^{b_4} \quad (1.1).$$

where

Q_d = quantity demanded measured in annual per capita attendance;
 P = ticket price;
 QA = quality of performance;
 $TNOC$ = total number of annual concerts;
 PCI = per capita income for metropolitan area.

Consumer purchasing patterns follow the law of demand; the quantity demanded of a product or service will be inversely related to its price, ceteris paribus. Accordingly, the demand function employs attendance as a measure of quantity. Attendance should be negatively related to ticket price and be positively related to performance quality, the number of concerts during a season, and per capita income.

Also, if orchestra services were supplied by a profit orientated monopoly, demand would be price elastic. Imperfectly competitive firms will produce their output in the elastic portion of their demand curves so that marginal revenue is greater than zero. In this case, since marginal cost is not negative, the profit-maximizing condition of marginal revenue equals marginal cost exists only when demand is unitary price elastic or when the auditorium is filled to capacity. Thus, the orchestra's price elasticity of demand is important.

However, what type of elasticity can be anticipated

for a nonprofit environment? An orchestra setting its ticket price in the inelastic portion of the demand curve experiences negative marginal revenues. Normally, this price structure would severely damage a business enterprise. However, as a nonprofit concern, the losses resulting from ticket sales are compensated by way of private donations and public grants. An orchestra which sets its ticket prices at a level lower than the profit maximizing rate expands its customer base, allowing those who could not otherwise afford a ticket the chance to attend, and its level of service to the community. Therefore, an inelastic price level would suggest that orchestras do not seek to maximize profits and would confirm that we are dealing with a genuine nonprofit industry. So, the price elasticity of demand is expected to be negative and between 0 and -1.⁸

Having examined those factors which influence demand for an orchestra's services and confirm the nonprofit nature of its business activities, the determinants of executive compensation may be examined. The following relationship is based on a theoretical model of not-for-profit compensation. The system of equations is as follows:

$$\text{Salary} = f(\text{QA}, \text{PF}) \quad (1.2)$$

$$\text{QA} = f(\text{Salary}, \text{PU}, \text{TNOC}) \quad (1.3)$$

$$\text{PF} = f(\text{Salary}, \text{PU}, \text{POP}, \text{COU}, \text{ADV}) \quad (1.4)$$

⁸Thomas M. Carroll, *Microeconomic Theory: Concepts and Applications* (New York: St. Martin's Press, 1983), pp. 397-399.

where

Salary = executive compensation;
 QA = quality;
 PF = level of contributions from private
 donations;
 PU = level of contributions from public
 funding;
 TNOC = total number of annual concerts;
 POP = metropolitan area population;
 COU = dummy variable for country (0 = U.S.A.
 and 1 = Canada);
 ADV = advertising expenses.

Within this model, the endogenous variables are salary, quality, and private funding while the exogenous variables are public funding, number of annual concerts, metropolitan area population, country, and advertising expenses. Consequently, we observe that the salary and quality equations are overidentified and the private funding equation is exactly identified.

In this model the dependent variable, salary, has a feedback effect on the independent variables, quality and private funding. While compensation is influenced by the executive's ability to increase the quality of his organization and to generate private support, the orchestra's level of excellence, i.e. prestige, and the level of private funding also depend upon his level of administrative and political expertise. Clearly, a simultaneous relationship exists between those factors (quality and private donations) an executive may enhance to improve his own financial status and those same factors an organization seeks to improve by hiring highly skilled

administrators.

In the quality function, salary and the level of public funding are expected to have a positive effect on the orchestra's quality. A higher salary might indicate a more competent executive who would naturally be able to improve the quality of his product. Greater public support would generate the additional income necessary to employ higher caliber musicians. Increases in the number of concerts during a season would have a detrimental effect on the orchestras quality, as fatigue, limited practice time, and an overly broad repertoire would eventually effect the musicians' performance.

Executive compensation and advertising expenses will have a positive influence on private funding. Again, a more seasoned executive will exhibit greater interpersonal communication skills, leading to better public relations and increased donations. The orchestra's ability to generate contributions from the public is also related to the amount of resources designated for advertising expenses. In other words, "It does pay to advertise." On the other side, the amount of public funding and the area's population have a negative impact on fundraising efforts. Public funding serves as a substitute to private funding. As the level of public support increases, private support decreases. People have a tendency to contribute less if they believe government will provide adequate support, i.e. the "free

rider" problem. Additionally, the greater the population, the more likely individuals will believe that others will contribute to maintain an organization which provides services they may only occasionally wish to consume.

CHAPTER 4

THE DATA

The data utilized in this study were obtained from the American Symphony Orchestra League in their publication, Comparative Statistical Report (1987-88 Season). This report contains information about forty metropolitan orchestras with expenses in excess of \$3,500,000. (See Table 1.) These data are placed on a per capita basis.

Unfortunately, among the 214 variables available for study, one was missing: executive compensation. In place of this missing element, the salaries of administrative staff were used, since one may assume that a high degree of correlation exists between executive and staff salaries.

As quality is a central issue in this research, a variable was necessary to serve as a useful measure concerning relative differences in the levels of excellence between symphonies. Given the presence of a free and efficient market for musicians and conductors, those with superior talent would naturally gravitate towards organizations offering superior wages. As the level of talent increased within a given orchestra, so too would the quality of its product. Thus, orchestra and regular conductors salaries were used as the basis of the quality

variable. This variable was then adjusted for the number of concerts per season. (See Table 2.)

As revenue data were not available for ticket sales at each price level, an average ticket price was generated by dividing total concert income by the total attendance. Also, a dummy variable was utilized in order to differentiate between American and Canadian orchestras, where American symphonies were designated with a "0" and Canadians with a "1."

The typical orchestra in this study services an North American community of approximately 2.4 million people with a per capita income of \$10,657. Its season consists of 167 concerts, drawing in nearly 453,616 attendees. Advertising costs during the year amount to \$860,545, or about \$1.90 for each ticket sold. Administrative salaries account for \$474,534. Salaries paid to the orchestra members average \$23,816 per concert. In addition to the revenue generated from concert ticket sales (average ticket price is \$11.40), income is also raised from private contributions (\$2,976,337) and public funds (\$1,677,168). (See Table 3.)

TABLE 1
ORCHESTRAS WITH EXPENSES OVER \$3,500,000
1987 - 1988

Boston	Los Angeles
Cleveland	Chicago
Pittsburgh	New York
San Francisco	Philadelphia
Cincinnati	Minnesota
Toronto	Saint Louis
Montreal	Atlanta
National	Detroit
Baltimore	Dallas
Houston	Rochester
Indianapolis	Milwaukee
Denver	Buffalo
National Arts Center	Seattle
Oregon	San Diego
New Jersey	Columbus
Utah	Phoenix
Syracuse	Saint Paul
Vancouver	Honolulu
Pacific	Alabama
Phil. Orchestra, Florida	Winnipeg

TABLE 2
 VARIABLES: NAMES AND DEFINITIONS

Q _a	Quantity demanded measured in annual per capita attendance.
Attend	Total concert attendance/metropolitan area population.
P	Price, computed as total concert income/attendance.
QA	Quality proxy, computed as (orchestra & conductor's regular salaries/metropolitan area population)/ total number of concerts.
TNOC	Total number of annual concerts.
PCI	Per capita income from SMSA.
Salary	Administrative salaries/metropolitan area population.
PF	Total private support/metropolitan area population.
PU	Total public support/metropolitan area population.
ADV	Total marketing expenses/metropolitan area population.
POP	Metropolitan area population.
COU	Dummy variable for country: 0 = U.S.A. and 1 = Canada.

TABLE 3
 VARIABLES: DESCRIPTIVE STATISTICS

Variable	Mean	S.D.	Maximum	Minimum
Admin. Salaries	474534.6	339358.1	1470717.0	120407.0
Quality	23816.7	9274.1	43540.0	5814.0
Private Funding	2976337.0	1750880.6	6650255.0	48000.0
Public Funding	1677168.1	2198187.9	10777790.0	39250.0
Number of Concerts	167.4	54.1	343.0	54.0
Population	2411637.6	1827871.4	8473400.0	625304.0
Advertising	860545.0	475054.9	2335523.0	193138.0
Country	0.1	0.3	1.0	0.0
Attendance	453616.2	256608.9	1095963.0	182094.0
Ticket Price	11.4	3.2	18.5	5.7
Per Capita Income	10657.9	1765.3	13575.0	6494.0

CHAPTER 5

THE EMPIRICAL RESULTS

This chapter provides results from the demand equation and the simultaneous salary model. The demand equation will provide an organizational perspective and verify the nonprofit nature of the symphony orchestras. The compensation model will provide a managerial viewpoint and examine the relationship between salary and executive performance.

Applying logarithms on both sides of the demand equation (1.1) yields a linear functional form where the slope coefficients are interpreted as elasticities:

$$\begin{aligned} \text{Log}_e \text{Attend} = & -7.6 - .75981(\text{log}_e P) + .90126(\text{log}_e \text{QA}) + \\ & (-3.20)** \quad (-5.53)** \quad (10.06)** \\ & 1.2984(\text{log}_e \text{TNOG}) + .546(\text{log}_e \text{PCI}) \quad (2.1) \\ & (7.77)** \quad (2.33)** \end{aligned}$$

$$R^2 = .87; \quad F\text{-statistic} = 37.9; \quad N = 28;$$

where the t-ratios are given in parentheses and conventional levels of significance are employed, utilizing a one-sided t-test (1% [**] and 5% [*]). The sign of the ticket price coefficient is consistent with our expectations that concert attendance follows the law of demand, as it is negative, suggesting an inverse relationship between price and attendance. Additionally, it is significantly greater than

-1,⁹ thereby supporting the theory that the orchestras function as nonprofit enterprises. Furthermore, the R-squared of .87 and the F-statistic of 37.9 indicate that this model is useful in predicting orchestra attendance at any conventional level.

If orchestra attendance were on the elastic portion of the demand curve, then it could be that orchestras are maximizing profit. If so, development of a compensation model would be unnecessary, as economic literature offers extensive coverage concerning the relation of executive salary to the firm's profit. As this study examines a nonprofit industry shown to be operating on the inelastic portion of the demand curve, development of a new model for executive compensation is essential, since apparently profit maximization is not the firm's goal.

Turning to executive compensation, the system of equations from Chapter 3 is transformed into the estimating forms:

$$\text{Salary} = B_0 + B_1(\text{QA}) + B_2(\text{PF}) \quad (2.2)$$

$$\text{QA} = B_0 + B_1(\text{Salary}) + B_2(\text{PU}) + B_3(\text{TNOC}) \quad (2.3)$$

$$\text{PF} = B_0 + B_1(\text{Salary}) + B_2(\text{PU}) + B_3(\text{POP}) + B_4(\text{Country}) + B_5(\text{ADV}) \quad (2.4)$$

As stated above, this system of equations contains a feedback loop in which not only is the salary variable

⁹ Since $t_c = (-.75981 - (-1)) / .1373 = 1.75^*$.
I also computed the midpoint elasticity for a linear equation:
 $n = -.01256 (11.37 / .19352) = -.73$.

effected by quality and private funding, but also that the quality and private funding variables are effected by salary. The two-stage least squares technique, a method applicable to simultaneous equations which are either overidentified or exactly identified, is employed to overcome this problem.

Since the salary equation (2.2) represents the principle component of the above system, its results will be reviewed in detail. As may be seen in Table 4, the fitted data from the salary equation support the expectation that an executive's salary increases in proportion with his ability to increase the quality of his orchestra and raise capital from private sources. The constant provides the base salary for an administrator on a per capita basis (base salary = coefficient x population). Thus, an executive's compensation is positively affected by his city's population. Nonprofit organizations in larger metropolitan areas pay more than those in smaller ones, ceteris paribus. The quality coefficient indicates that each dollar spent on orchestra personnel per capita, per concert ($(\$1.00/\text{population})/\text{number of concerts}$) results in an increase in executive salary corresponding to that ratio multiplied by \$8.10. The coefficient for private funding reveals that each dollar gained through an administrator's fundraising activities results in a 6.7 cent increase in his salary on a per capita basis.

TABLE 4
ESTIMATES OF THE STRUCTURAL EQUATIONS

	Dependent Variable		
	Salary	Quality	Private Funding
Constant	0.023 (.446)	0.015** (6.861)	0.924** (2.792)
Salary		0.046** (5.607)	3.722* (1.732)
Quality	8.105** (3.017)		
Private Funding	0.067** (2.390)		
Public Funding		0.001* (1.881)	-0.268* (-2.159)
Number of Concerts		-7.895E-05** (-6.753)	
Population			-9.558E-08* (-1.773)
Country			-1.022** (-2.603)
Advertising			0.527 (.620)
R ²	.366	0.751	0.545
F-statistic	9.061	34.776	8.430
Number	40.000	40.000	40.000

Note: t-ratios are given in parentheses.
 ** significant at the 1% level.
 * significant at the 5% level.

Examination of the quality equation (2.3) reveals that quality is a function of a manager's ability, if one argues that salary is a gauge of competence. So that, superior administrators will seek to continuously improve the quality of their service, providing benefits not only to themselves in the form of greater salaries, but also to their audiences in terms of exceptional performances.

The private funding equation (2.4) discloses a positive relationship between salary and the level of charitable contributions. Thus, a solicitor with exceptional interpersonal qualities has a significant affect upon his organization's funding campaigns. Analysis of the public funding and population variables unveils the presence of the "free rider" problem with nonprofit organizations. As evident from the inverse relationship, public funding serves as a substitute for private donations. Therefore, the more government agencies become patrons of the arts, the less individuals will contribute to their maintenance. Perhaps, if one were to realize that his (and everyone else's) tax dollars were already supporting the arts, he would be less inclined to part with his after-tax income. Furthermore, as the population increases, per capita charitable donations decrease. As a population grows, so too the incentive to free ride: individuals are willing to let others contribute to the ongoing upkeep of local nonprofit institutions.

In conclusion, the evidence supports the theory that executive compensation is based on the ability to present a quality product and to raise financial support from the public. However, we also find that the orchestra's quality and fundraising efforts are influenced by the ability of the administrator it attracts.

CHAPTER 6

CONCLUSIONS

A great deal of research and experimentation has been conducted by economists concerning the nature of financial compensation found within the business community. However, much of this effort has been focused upon the private, profit-oriented sector of the economy with comparatively little emphasis on nonprofit organizations. Indeed, even the most casual reader of today's press could not help but notice the controversy regarding the seemingly outlandish compensation packages bestowed upon Fortune 500 Chief Executive Officers.

This study follows a different path, as it examines those factors which influence the salary levels of nonprofit administrators. By assuming a holistic approach towards model development, this thesis focuses upon both the quantitative aspects of administrative performance and the qualitative nature of individual character. Thus, the results provide a guide for those managers wishing to increase their value in the nonprofit marketplace, as well as for organizations seeking to upgrade their level of service and prestige.

Data about financial activities and economic

environments of forty metropolitan symphony orchestras were collected. A preliminary demand model was developed to insure that the sample orchestras did, in fact, behave as nonprofit enterprises.

Results from the demand equation yield significant information. First, concert attendance for symphonies follows the law of demand: as prices increase attendance decreases. Second, prices are set in the inelastic portion of the demand curve, resulting in the generation of negative marginal revenues from ticket sales. Thus, a nonprofit firm faces the challenge of collecting enough funds to remain operational while simultaneously losing money on each sale.

A three equation, simultaneous model was then developed to examine the quantitative nature of executive compensation. The two-stage least squares technique was applied to correct for simultaneous-equation bias resulting from the recursive relationship between the dependent variable salary and independent variables for quality and private funding.

Results from the fitted data support the theory that an executive's compensation is in part based upon his ability to generate donations and to positively influence the quality of his organization's service. A superior administrator generates enough funds through charitable donations to compensate for the income lost through ticket sales, allowing his organization to survive on the inelastic

portion of the demand curve. Not hampered by the necessity to realize a profit, the efficient manager allocates excess revenue towards improving his orchestra's level of quality, resulting in greater service to the community. Thus, an administrator's ability to effectively manage these two critical areas increases his own wealth and his attractiveness as a potential employee to other nonprofits.

A nonprofit institution may also utilize this model to improve its own standing within the community. As stated in the demand equation, attendance is a function of quality and ticket price. A superior executive will increase an organization's quality, resulting in increased attendance. Additionally, a first-rate manager will increase the level of contributions, allowing for a decrease in ticket prices, again resulting in increased attendance. Thus, a nonprofit organization may enhance its own reputation by hiring an exceptional administrator.

Anne Preston's wage utility model provides an insight into the qualitative nature of executive compensation. As stated earlier, nonprofit organizations attract nonprofit managers. These administrators are willing to trade-off a portion of their salary in the form of a "labor donation." This labor donation is positively linked to the satisfaction they derive from providing a social good. Therefore in theory at least, those organizations perceived as providing a greater social good should be able to attract higher

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