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Symphony Musicians and Symphony Orchestras

Robert J. Flanagan
Graduate School of Business
Stanford University
Flanagan_robert@gsb.stanford.edu
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By the standards applied to profit-seeking organizations, symphony orchestras have been a declining industry in the United States over the past two decades. Performance (earned) revenues fall short of performance expenses by ever-increasing amounts, and attendance per concert is declining for virtually all types of concerts, despite steady increases in the proportion of the population with a college education (the demographic most likely to attend concerts). Like universities, symphony orchestras and other performing arts organizations have almost always required contributed support and investment income from endowments to offset the gap between performance revenues and expenses, but in the past 20 years there have been indications that these traditional sources of nonperformance income often fail to achieve overall financial balance for orchestras.

Symphony orchestras are also one of the last bastions of union representation in the United States. The working conditions of musicians in all but two of the top 60 orchestras are governed by collective bargaining agreements, and the two exceptions are labor cooperatives. This paper investigates the relationship between these two facts: the extent to which the economic difficulties faced by symphony orchestras reflect collectively bargained wage increases and work rules. But the setting also provides an opportunity to address much broader questions, including the nature of collective

bargaining when the employer is a not-for-profit organization and the role of unions in declining industries.

The paper begins with a review of recent developments in the financial position of symphony orchestras in section I that is followed by a discussion of the evolution of collective representation for symphony musicians in section II. The specialized needs of symphony musicians received little attention from the American Federation of Musicians until the late 1960s and early 1970s, when special caucuses representing the interests of symphonic musicians emerged within the union. At about the same time, the Ford Foundation began a significant matching grant program to most large symphony orchestras, motivated in part by a desire to improve the professional lives of symphony musicians. In the wake of these developments, musicians' wages and employment security increased, while artistic costs to a large extent were transformed from variable to fixed costs. Section III reviews the evolution of working conditions that occurred during this period.

These advances occurred during a period of growing interest in symphonic music that contrasts with the experience of orchestras over the past 20 years. An important question is how well institutional arrangements developed in a period of industry growth serve the industry in a period of decline. The question is particularly interesting in the symphony setting, since most collective bargaining agreements for symphony musicians now provide both wage and employment guarantees. The analysis of union wage differences between orchestras and over time in Section IV addresses this question.

I. Symphony Orchestra Finances

Symphony orchestras earn *performance revenues* from their concerts, broadcasts, and sales of recordings. The portfolio of concerts offered by most orchestras is now quite broad and includes regular season, pops, summer, and educational concerts along with concerts by smaller chamber and ensemble groups from within the orchestra. The presentation of these concerts generates significant *performance expenses*—for artistic personnel, concert production, marketing, administration, and the education of potential future audiences.

Since at least the beginning of the 20th century, performance revenues have invariably fallen short of performance expenses, yielding a *performance income gap*. Moreover, the gap has increased over time. Writing in 1940, Grant and Hettinger report that by the late 1930s the three most successful major symphony orchestras earned “only an average of 85 percent of their total budgets, while...the whole group averages about 60 percent” (Grant and Hettinger 1940, p. 21). By the beginning of the 21st century, the performance revenues of the three largest orchestras covered only 59 percent of their total expenses. More broadly, the median performance revenue of 32 large orchestras declined from 52 percent to 45 percent of performance expenses between 1987 and 2000. Performance revenues earned by individual symphony orchestras ranged from 23 to 77 percent of their performance expenditures in 2000 (Flanagan 2007). In short, no symphony orchestra would meet the private sector survival test of non-negative profits. All symphonies must attract significant nonperformance revenues to survive.

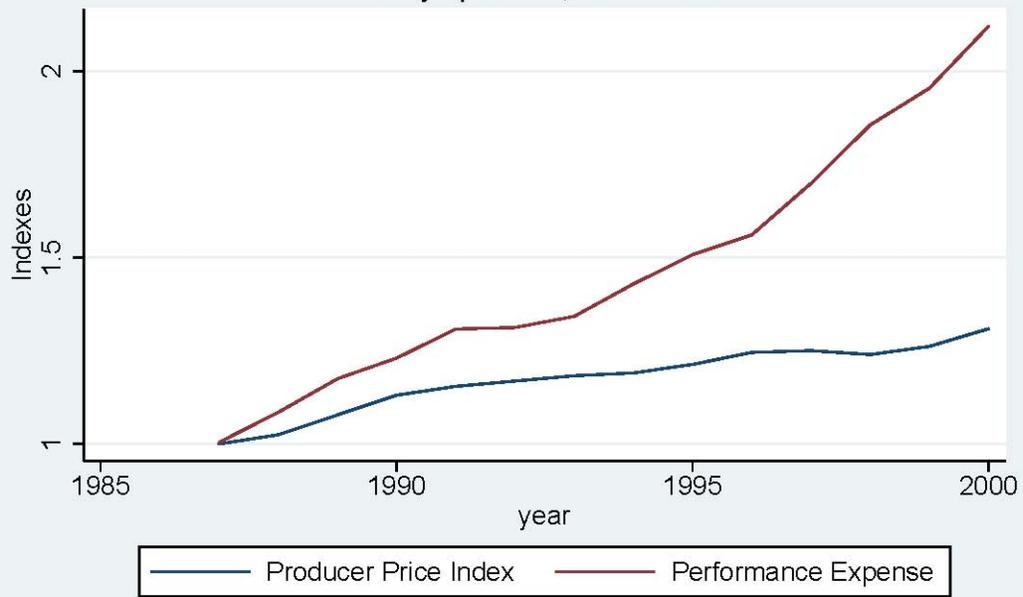
The economic mechanism underlying deteriorating performance balances has been well-understood since at least 1966, when William Baumol and William Bowen

noted the inexorable cost pressures in industries that compete for personnel in national labor markets but have limited opportunities for improving productivity. The basic idea is that in long-run equilibrium, pay increases in the goods-producing sector tend to follow comparatively rapid productivity increases in that sector, producing little change in unit labor costs. Those pay increases to some degree spill over into other sectors, including the performing arts, in which productivity does not increase as rapidly. The latter sectors experience increasing unit labor costs, and a performance income gap inevitably develops and grows (Baumol and Bowen 1966, Chapter 7). The ongoing cost pressure on symphony orchestras is apparent in Figure 1, which compares the evolution of performance expenses for 32 large orchestras with the prices of finished goods as they leave factories (the Producer Price Index) at the end of the 20th century.

There are several potential strategies for financing the gap. Baumol and Bowen noted that the underlying economic mechanism implied an increasing relative price for symphony orchestras and other performing arts (Chapter 9). Since the demand for symphony orchestra performances appears to be price inelastic, increased ticket prices should raise performance revenues (Seaman 2005 Flanagan 2007). But the own-price elasticity is not zero (-.5 seems more like it), so increasing ticket prices shrinks attendance to some degree. Reduced attendance may diminish nonperformance revenues, since concert patrons constitute an important part of an orchestra's donor base.

In practice, all orchestras must address their operating deficits by relying on three principle sources of nonperformance income—private philanthropy, government support, and investment income. As not-for-profit organizations, symphonies may receive tax-deductible private contributions from individuals, businesses, and foundations. To obtain

Figure 1. Symphony expenses and producer prices
32 symphonies, 1987-2000



Source: American Symphony Orchestra League, U.S. Bureau of Labor Statistics



these contributions, however, orchestras must incur fundraising costs that could be avoided if performance revenues exceeded performance expenditures. Between 1987 and 2003, there were significant increases in support from all three sources of private contributions, as well as increases in fundraising costs. Private support increased much more rapidly than fundraising and development costs, however. The annual increases in private contributions countered part of the growing performance income gap.

To achieve this result, the growth in private support had to more than offset a decline in government support since 1989. Many orchestras receive grant support from various levels of government, but aggregate government grant support has been declining, with no reversal in sight. The case for government support of the arts has always been uneasy. Many politicians view support for the arts as elitist support for the interests of individuals at the upper tail of the income distribution. On this issue, political attitudes in the United States differ sharply from attitudes in other countries, where the government provides primary support for the arts. In the United States, government support for symphony orchestras and other performing arts flows indirectly, through the tax expenditures resulting from the general tax deduction for contributions to not-for-profit organizations.

Symphony orchestras also rely on investment income, consisting of interest from investments, gain or loss from the sale of securities, and income from the endowment. Most orchestras now have policies that permit annual draws in the range of 5 to 7 percent of the market value of the endowment. An interesting feature of symphony endowments is the wide range of investment returns and endowment draws of individual orchestras. Although all endowments are invested in the same national and international capital

markets, the highly dispersed returns on investment indicate that individual orchestras clearly follow very different investment strategies. Excessive endowment draws to cover short-run expenses threaten the use of endowment to provide long-term financial stability.

If philanthropy, government support, and investment income more than offset the performance income gap, an orchestra's overall financial balance shows a surplus. If nonperformance income falls short of the gap, there is an overall deficit. Between 1987 and 2000, 46 of the 62 largest orchestras ran overall deficits on average, while 17 ran surpluses. The average financial balance for all 62 symphony orchestras was negative (deficit) but the experience of individual orchestras was widely dispersed. Most orchestras achieved their strongest financial position during 1997-99, with the sustained growth of private contributions during the strong economy of the late 1990s.

In the last decades of the 20th century, U.S. symphony orchestras increased the number of concerts offered each year in an effort to raise total concert attendance and to accommodate efforts to increase the work year and annual income of symphony musicians. (See section III for details.) Attendance did not keep pace, resulting in a precipitous decline in attendance per concert that contrasted sharply with increased attendance per concert in the 1960s and 1970s. The decline was broad-based, ranging from the regular season concerts that historically have attracted the most dedicated patrons to concert halls to the educational concerts designed to build future audiences (Figure 2). No type of concert experienced a trend increase in attendance per concert. All this occurred during a period when the proportion of the population with a college education—the key demographic predicting attendance at performing arts events—has

been growing. Clearly, successive cohorts of college graduates are less drawn to the performance arts. Indeed, an analysis of National Endowment for the Arts surveys found that attendance by college graduates at classical concerts declined by 30 percent between 1982 and 2002 (DiMaggio and Mukhtar 2004).¹

The demise of several orchestras over the past 20 years further signals the financial pressures on the industry. Bankruptcies included the Florida symphony (1991) and symphonies in Birmingham, Alabama (1993), Louisville, Kentucky (1996), Oakland, California (1994) Sacramento (1996), San Diego (1996), Tulsa, Oklahoma (1998), Orlando, Florida (2002), and San Jose (2002). Some of these orchestras eventually reorganized and reopened—usually with a different name. Two other orchestras, Denver and New Orleans, also entered bankruptcy and later reformed as labor cooperatives—the Colorado and Louisiana symphony orchestras, respectively. The average financial balance of surviving orchestras has been slightly negative over the period.

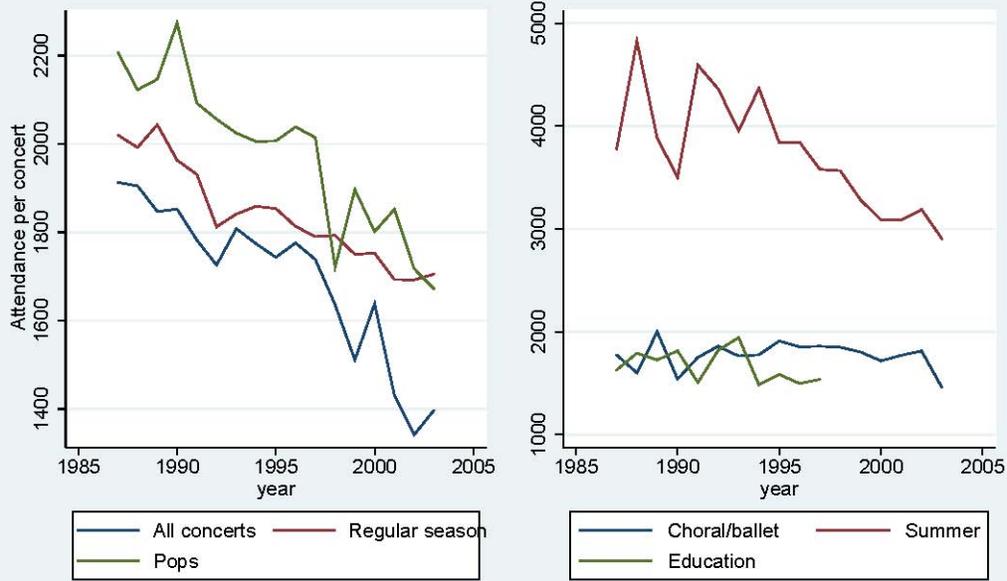
II. The Symphony Musicians' Labor Market

Major symphony orchestras are now one of the last bastions of union representation in the United States outside of the public sector. Yet, for most of the history of U.S. symphony orchestras, opportunities for effective collective action by symphony musicians were too limited to produce upward cost pressures.

The oldest symphony orchestra in the United States, the New York Philharmonic Society, was established in 1842. Like the New York Philharmonic, many early orchestras were organized as musicians' cooperatives. After acceptance into an orchestra, players paid an initiation fee and an annual charge, chose their conductor, hired rehearsal

¹ Of all the performing arts, the only increases in attendance noted for college graduates were in jazz concerts and art museums.

Figure 2. Attendance per concert
 Median, 32 symphonies, 1987-2003



Source: American Symphony Orchestra League



and performance venues, and accepted a share of the net proceeds as their compensation. As the residual claimants, they bore most of the economic risk of early musical ventures and had to divide their time between artistic and management activities. Some musicians mitigated the risk by giving preference to outside paid performances over symphony rehearsals. The cooperative structure of some early symphonies gave musicians a property right in their positions, which proved a barrier to personnel changes needed to upgrade orchestra quality (Caves 2000). By the 20th century, the performance revenues of orchestras no longer exceeded performance expenses. Indeed, operating deficits became a way of life (Grant and Hettinger 1940). Moreover, orchestras required a different organizational form if they were to improve performance quality.

Several major orchestras then acquired individual “angels” or groups of committed wealthy citizens, who pledged funds to cover the ubiquitous operating deficits. With this support, major symphonies were able to expand in size from around four-dozen to almost 100 musicians, to lengthen seasons somewhat, and to guarantee musicians a weekly salary for the season. Those who pledged the funds also took over or arranged for the management of symphony activities, and musicians were able to focus on their art.

The development of a musician’s art begins with advanced training in musical performance on one or more instruments (doubles). The instrumental performance ability developed at these institutions is a general skill that can in principle be applied at any symphony orchestra. As a general skill, the cost of training is borne by the musician. The supply of aspiring symphony musicians is huge: Between July 2005 and June 2006, for example, music schools in the United States graduated 3671 students who majored in

performance on a symphonic instrument (NASM 2006). Even this figure understates the new supply of potential symphony orchestra musicians, as it does not count performance graduates from music “departments” in colleges and universities that do not specialize in music. While some graduates may move directly into symphony orchestra positions, most teach and accept a variety of other performance opportunities while waiting for vacancies for their instrument to arise in symphony orchestras. The number of annual vacancies is very small—about one or two per year at top orchestras—relative to the annual number of music performance graduates.

Since 1964, vacant positions at top orchestras have been advertised in the *International Musician* (published by the American Federation of Musicians), and each vacancy can produce hundreds of applicants—both new graduates in performance and established musicians at other orchestras. Symphony orchestras use audition procedures to select from among the generally trained applicants for vacant positions. The design of audition procedures influences the extent to which merit triumphs over favoritism in the selection of musicians. (Until recent decades, the sometimes arbitrary tastes of a symphony’s music director (conductor) were the dominant factor in selection.) The many unsuccessful applicants move into positions as freelance musicians, private teachers and educators. A significant fraction eventually abandons musical performance as their primary source of income.

Once hired by an orchestra, a musician develops specific skills (e.g., playing with a particular mix of musicians and accommodating personal performance to the style of the orchestra’s regular conductor) over time via rehearsals and performances. The gradual development of such specific skills provides the basis for wage differentials based on

seniority (discussed further in section III). Seltzer (1989, pp. 187-88) provides a revealing portrait of the work of symphony musicians:

“For members of major orchestras, their commitment to the orchestra means seven or eight services (either rehearsals or concerts) per week with special provisions for unusual situations and out-of-town engagements. Since each service is usually two and one half hours in length, a work week of twenty-some hours might sound quite easy to the uninitiated. It isn’t. Because major orchestra players are at the top of their profession, they are expected to produce music at that level every rehearsal and concert, every week...despite some inadequate conductors and with occasional physical or mental stress.... [P]erformers are expected to know the symphonic (or operatic) literature well enough that programs can be presented with a minimum of rehearsal even with guest conductors and unknown soloists.”

In this setting, even accomplished classical musicians face significant labor market risks. Until recent decades, symphony musicians did not have full-year positions and resorted to multiple job-holding (e.g., teaching and chamber music performance) to increase their annual income. The very real threat of bankruptcy noted earlier also limits the employment security of symphony musicians.

Collective Representation of Symphony Musicians

In the face of such challenges and employment insecurity, symphony musicians sought collective representation. The American Federation of Musicians (AFM) was founded in 1896, but the historical relationship between the AFM and symphony

orchestra musicians has been decidedly uneasy. Most early members of the AFM played theater, dance or parade music. The AFM political and bargaining agenda was dominated by the interests of these members and included reducing competition from foreign musicians, military bands, and traveling musicians. With the development of sound movies, which reduced the demand for theater musicians, and electronic recording techniques, which reduced the demand for live music on radio and later television, attention focused on techniques for sharing the rents from these technologies with nonsymphonic musicians.

For decades, both the national AFM and its locals were inattentive to the needs of symphony musicians. Bargaining authority rested with local unions, in which symphony musicians were always a distinct minority. Local union officials would negotiate symphony labor contracts, which were ratified by the local union executive board. Symphony musicians did not participate in either the negotiation or ratification processes.

“...nonsymphonic musicians provided the major source of funding for the AFM, as well as the votes for union officers and initiatives. Union leaders were primarily concerned with the majority of their membership and had little knowledge of or interest in the symphonic musician.

Board presidents and administrators of American symphony orchestras made contract and wage agreements with the local union officials behind closed doors. Local union officers were unfamiliar with the working conditions that comprised professional orchestra life. They often listened with considerable sympathy to the pleas of financial hardship that boards and managers put forth.” (Ayers 2005, pp. 31-2)

In this environment it seems unlikely that collective bargaining provided significant upward pressure on the wages and working conditions of symphony musicians during the first 70-75 years of the American Federation of Musicians.

Frustrated with the failure of the AFM to address their needs, symphony musicians from several locals met and formed the International Conference of Symphony and Orchestra Musicians (ICSOM) in 1962. The immediate reaction of the AFM was to accuse ICSOM of “dual unionism.” In 1969, however, the AFM agreed to formally affiliate ICSOM within its structure.² ICSOM members—the musicians in 52 member orchestras with budget sizes of \$5 million and higher— hire their own legal counsel and conduct their own local negotiations. In 1984, musicians in smaller orchestras formed a similar organization, the Regional Orchestra Players Association (ROPA) and received a similar affiliation with the AFM. The AFM also established a Symphonic Services Division to provide technical services to symphony musicians.

At the time that these organizations formed, symphony orchestra musicians had a long list of concerns (Seltzer 1989, p. 99). Their objectives included:

- Representation by symphony musicians in negotiations with symphony management;
- The right to ratify proposed collective bargaining agreements;
- Improved job security, including more transparent hiring (audition) and dismissal procedures;
- A guaranteed work year;
- Health and hospitalization insurance;

² According to the AFM website, the national union “recognized the International Conference of Symphony and Opera Musicians (ICSOM) as an organization representing orchestral musicians within the union.”

- A pension plan.

Orchestra musicians also had concerns about the treatment of musicians while on tour and the availability of strike funds to provide benefits to musicians in the event of a work stoppage.

Collective bargaining negotiations occur between *local* orchestra musicians and orchestra management. Currently the national organizations (ICSOM, ROPA, Symphonic Services Division of AFM) provide negotiation assistance and information on other settlements in the industry to unions involved in these local negotiations. Beyond these services, the national labor organizations do not exert substantive influence on local bargaining objectives.

Bargaining Role of Symphony Management

The managers and boards of symphony orchestras (and other nonprofit organizations) have a remarkable degree of autonomy. Nonprofit organizations do not have owners or shareholders whose interests the board is required to represent and to whom the Board is accountable. Boards are not even legally obligated to pursue the objectives of donors, although the membership of most boards includes some large donors. Boards are rarely subject to election, and takeovers are not a disciplining factor. These features of symphony orchestra governance are unlikely to provoke the strength of bargaining resistance normally found in the private sector.

The boards and professional managers of symphony orchestras direct the activities of organizations that fail private-sector survival criteria, but through their nonprofit status acquire certain advantages in countering their operating deficits by raising nonperformance income. Their efforts to raise nonperformance income are

assisted by the favorable tax treatment of donations and the fact that not-for-profit status may raise the confidence of prospective donors that their funds will be used to pursue the organization's central mission (Hansmann 1996).

Access to nonperformance revenue can create ambiguity about the true budget constraint faced by symphony orchestras. Labor representatives may view the budget constraint as "soft" or "elastic" given the access of orchestras to nonperformance income from private contributions from individuals, businesses and foundations, from government support, and from investment income and endowment draws. If contributed support is viewed as continually responsive to fundraising activities, labor may adopt wage objectives that exceed what they would seek if facing less ambiguous budget constraint. In this scenario, philanthropy and government support drive union wage demands, and wage increases absorb increases in nonperformance income, undermining its potential contribution to financial stability. Alternatively, if symphony management and boards of directors have rational expectations about how much nonperformance income they can raise, the fundraising capacity may drive the wages that management is willing to accept in collective bargaining agreements. These scenarios each stress the crucial role of nonperformance income in determining wage settlements, but disagree over the lead actor. While it will not be possible to sort out the dominant scenario, the comparative influence of nonperformance income will be assessed in regression analyses in section IV.

Several factors create an inelastic demand for the services of symphony musicians. In most cities, the possibilities for substitution in consumption in response to wage (and associated ticket-price) increases are limited. Most orchestras have local

monopoly power. While consumers have the option of shifting their consumption to other performing arts, the limited evidence to date finds very small cross-elasticities of substitution (Flanagan 2007). Possibilities for substitution in production also seem limited. The number of musicians and the mix of instruments used by an orchestra are determined by the orchestral literature and can only be altered by limiting the range of music that an orchestra performs. (For example, the music of the Baroque and early Classic periods generally requires fewer musicians than the music of the late romantic period and the 20th century.) To the extent that specific skills are a small factor in musician quality, an orchestra might substitute junior for more expensive senior players on some parts.

The Ford Foundation Program

In 1965, midway between the formation of ICSOM in 1962 and the AFM's formal recognition of ICSOM's role in representing symphony musicians within the union structure in 1969, the Ford Foundation announced a program of major support for symphony orchestras. The coincidence of this grant with the formation and recognition of ICSOM greatly complicates efforts to assign responsibility for subsequent collective bargaining outcomes in the late 1960s and 1970s. The Foundation's program, which emerged during a period of *increasing* symphony concert attendance, provided about \$85 million dollars (i.e., over \$450 million in year 2000 dollars) to sixty-one orchestras in an effort to secure three related objectives. The primary objective was to improve the economic lot of musicians. The Foundation was quite forthright that orchestra musicians were "one of the most underpaid professional groups in American society" and believed that enabling more musicians to devote their major energies to symphony work would

raise the artistic quality of American orchestras (Ford Foundation 1966). Increasing audiences through longer seasons and a more diversified portfolio of concerts constituted a second objective, and supported the first objective by providing more work to musicians. (Prior to this program, only two orchestras provided musicians with 52 weeks of employment and most symphonies had concert seasons running less than six months.) Finally, the Foundation hoped to attract more young people to orchestra careers by increasing the income and prestige of the players. It is not clear that the Foundation appreciated the tension created by a program that increased both the demand for and supply of musicians.

To implement these objectives, the Ford Foundation designated three-quarters of its fund for endowments and required the orchestras receiving these funds to match them at least dollar-for-dollar within five years. In addition, special “developmental funds” were provided to 25 orchestras with the shortest concert seasons and the weakest financial resources. These funds could be used to match outside salary offers to musicians that an orchestra wished to retain, to encourage superior musicians to reduce their multiple job holding and specialize in symphony work, etc. The awards to individual orchestras were highly significant. At one extreme, fourteen large orchestras received a total of \$2.5 million (about \$13.5 million in 2000 dollars); at the other, seven smaller orchestras received \$ 325,000 (about \$ 1.75 million in 2000 dollars). The remaining orchestras received grants between these extremes.

The Ford Foundation program effectively reduced the bargaining resistance of symphony management even further. Even without the inherent advantages that a union may have in bargaining with not-for-profit organizations and the specific advantages in

bargaining with symphony management, the new program loosened budget constraints. Although the Foundation's intention was to encourage a revolution in long-term orchestra strategies, there was considerable pressure from the union side to capture the largesse in immediate wage gains, which musicians (supported by the Foundation's very public analysis of the industry) viewed as long overdue.

III. Evolution of Symphony Musicians' Working Conditions

The coincidence of the formation of coalitions within the AFM supporting the interests of symphony musicians and the emergence of the Ford Foundation grant transformed the working conditions of symphony musicians. The Ford Foundation program effectively reduced the bargaining resistance of symphony management by providing financial support to obtain longstanding objectives of symphony musicians, while the formation of the coalitions improved the effectiveness of the collective representation of symphony musicians. In contrast with the first 75 years of AFM representation, unionized symphony musicians seemed poised to make substantial collective bargaining gains by the end of the 1960s.

There is no reliable way to estimate how much less would have emerged from collective bargaining in the absence of the Ford Foundation Program or how much slower changes would have occurred without the formation of ICSOM and ROPA. The dramatic changes in the working conditions of symphony musicians that followed these two developments are very clear, however.

Growth of Musicians' Salaries

Data for 25 large orchestras that affiliated with ICSOM permit a comparison of the evolution of minimum annual musicians' salaries before and after the institutional

changes in the 1960s.³ (Three of the orchestras do not report data for 1962.) The post-1969 rise of inflation, which reached double-digit rates in 1974, 1979, and 1980, motivates the study of *real* minimum annual salaries for orchestra musicians.

The evolution of real annual minimum salaries for the median orchestra and orchestras at the 10th and 90th percentiles appears in Table 1. Over the decade preceding the formation of ICSOM, the real annual minimum salary at the median orchestra increased by 73.5 percent. Lacking data on weeks worked, one cannot determine the respective contributions of increasing weeks and increasing weekly salaries in this development. The literature contains little discussion of why salaries increased so rapidly during this period. During 1962-72, a decade that includes the influence of the Ford Foundation grant program, the median real salary advanced more rapidly, but then dropped to about 20 percent per decade for the next 20 years. In short, the Golden Era of real annual salary advances for musicians in the top symphony orchestras was in the 1950s and 1960s. Toward the end of the 20th century, salary advances were slower than in the period before the formation of ICSOM, although still more rapid than salary growth for most other labor force groups, as will become apparent.

The data reveal a similar evolution of musicians' salaries in both tails of the distribution. Also visible in the data is a tendency for salaries in the lowest-paying orchestras to advance more rapidly than salaries in the highest-paying orchestras, both before and after the rise of ICSOM. Changes in the coefficient of variation of real annual salaries among orchestras confirm the narrowing dispersion of salaries among this group of top orchestras during the last half of the 20th century. A more revealing picture of the

³ Data on symphony musicians' annual salaries between 1952 and 2002 are from the official ICSOM newspaper, *Senza Sordino* ("without mute"), March 2001. The archives of this newspaper are at <http://www.icsom.org/senzarchive.html>.

Table 1. Real Minimum Annual Salaries for Symphony Orchestra Musicians.

(Year 2000 dollars)

Decade Rates of Increase

	<u>1952 level</u>	<u>52-62</u>	<u>62-72</u>	<u>72-82</u>	<u>82-92</u>
Mean	15,917	71.9%	68.5%	14.2%	20.11%
Maximum	32,226	56.0	39.9	28.0	-11.0
Minimum	6,800	-23.1	63.0	136.4	30.1

Coefficient of Variation

<u>1951</u>	<u>1962</u>	<u>1972</u>	<u>1982</u>	<u>1992</u>
.469	.415	.361	.360	.288

Source: *Senza Sordino*, March 2001, pp. 8-9

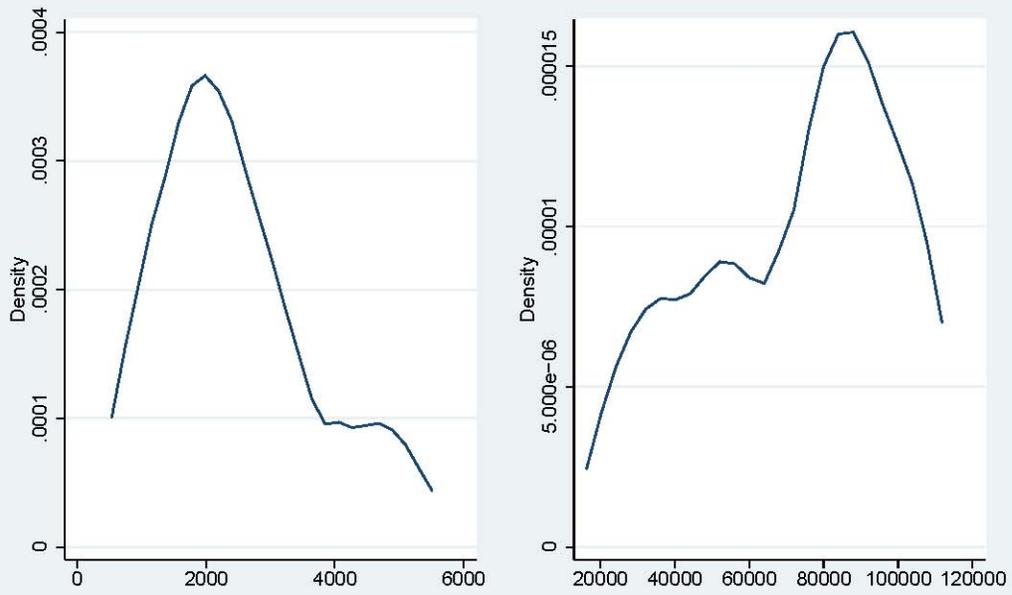
changing distribution of symphony musicians' salaries appears in the kernel density distributions in Figure 3. In 1952, before ICSOM was formed, the distribution of salaries among orchestras was bimodal. Most orchestras paid annual salaries within \$1000 of the large mode. A small group of high-salary orchestras constituted a thick upper tail. By 2002, the distribution had shifted distinctly to the right, with a pronounced high-salary mode and a decidedly secondary mode of orchestras paying low salaries.

The institutional influence is again unclear, not only because the salary dispersion begins to narrow before the formation of ICSOM, but also because a pause in the narrowing of the salary dispersion occurs in the decade (1972-82) in which the effects of ICSOM's formation and the Ford Foundation grant should have continued to register. Moreover, in comparison to national unions in other industries, ICSOM appears to lack both motivation and bargaining tools to implement an egalitarian policy. Most symphony musicians are not threatened by performances by distant symphony orchestras that may be produced at lower costs. Given the large labor supply of potential symphony musicians, the challenge for union representatives was instead to prevent wages and annual incomes from falling.

From Variable to Fixed Artistic Costs

Since 1970, collective bargaining agreements signed by symphony musicians and management have gone a long way towards transforming the compensation of musicians from a variable to a fixed cost. At one time, orchestra musicians were mainly hired on a "per service" basis. (A service is generally either a rehearsal or a concert performance.) Per service contracting offers the greatest flexibility in labor costs to management and the greatest income insecurity to musicians. Modern collective bargaining agreements

Figure 3. Distribution of Musicians' Annual Salaries
25 symphonies, 1952 and 2002



Source: Senza Sordina, March 2001



usually specify the number of regular musicians in the orchestra. These musicians are entitled to various benefits specified in the contract. Depending on the number of regular musicians, orchestras may hire additional musicians on a per service basis, either regularly or for performances requiring an unusually large orchestra.

The guaranteed number of annual weeks of employment for symphony musicians also increased. During the 1993-94 concert season, musicians in 40 percent of the ICSOM orchestras were guaranteed 52 weeks of employment. By the 2003-2004 concert season, the distribution of guaranteed weeks had shifted to the right. While there had been no increase in the number of orchestras providing full-year guarantees, collective bargaining agreements negotiated over the intervening years had increased the guaranteed weeks for musicians at other orchestras.

With these developments in the work-year came a shift from pay per service to pay per week. Weekly pay combined with a guaranteed number of weeks per year eliminated a musician's uncertainty about their minimum annual salary. (In order to lock in an "effort wage," however, collective bargaining agreements also limit the number of services per week. The modal contract sets an average maximum of 8 services per week and limits the number of weeks in which the average can be exceeded.)

The transformation of musicians' pay into a fixed cost has been furthered by the development of Electronic Media Guarantee (EMG) payments. For those orchestras that have an EMG, the collective bargaining agreement specifies a guaranteed amount against which electronic media work at union scales can be charged. Examples electronic media work include TV broadcasts, CD recordings or National Public Radio broadcasts. When an agreement includes an EMG, it still must be paid to the orchestra's musicians even if

the electronic media activities do not occur. Effectively, it is a salary supplement. In the 2003-2004 concert season, agreements for 18 out of 51 ICSOM orchestras provided an EMG. EMG payments for these orchestras ranged from \$553 to \$6760 with an (unweighted) average payment of just under \$2300. For individual orchestras, the EMG raises the fixed minimum annual salary from two to eight percent.⁴

Wage Supplements

In addition to transforming labor costs from variable to fixed expenses, collective bargaining agreements between musicians and symphony management establish the pay structure of an orchestra. The main influences on the relative wage of individual musicians are provisions for seniority and for “over scale” payments. The specific skills developed while playing with a symphony orchestra provide a basis for pay differentials based on seniority. Virtually all orchestras provide seniority increments to the minimum salary, but the exact formulae used to determine seniority pay vary widely across individual orchestras. In a typical arrangement, musicians accrue an additional increment to their weekly salary per year of service, but the seniority pay is usually earned in 5 year increments. For example, a collective agreement may provide for musicians to receive a weekly salary increment of \$10 per year of service, but orchestra musicians will not be paid a seniority increment until they have been with the orchestra for five years. After five years, the increment is “earned” and \$50 per week in seniority pay will be added to the contractual minimum salary. Seniority accrual will continue and musicians completing 10 year with the symphony will then receive an additional \$50 increment, for

⁴ Most collective bargaining agreements also provide for musicians’ health care and pensions. There are a variety of health-care arrangements, with 100 percent of the contributions usually paid by the symphony employer. Orchestras used to have a variety of private defined benefit plans. Over time most orchestras have shifted to the plan run by the American Federation of Musicians.

a total of \$100 per week in seniority pay. The majority of symphony collective bargaining agreements set a limit to the number of years over which seniority increments can accrue.

Over scale pay consists of salary payments above the minimum scale and seniority increments to compensate musicians with titled positions (e.g., “first-chair” or “principal”) for their more prominent roles and musical leadership responsibilities. In larger orchestras, over scale payments are negotiated between management and individual musicians. Collective bargaining agreements for smaller orchestras tend to specify the percentage over scale for key players. There is a relatively recent development in the largest orchestras whereby each musician who does not have an individually negotiated contract receives a standard amount of over-scale pay.⁵

Collective bargaining agreements covering symphony orchestra musicians also define certain working conditions. Most agreements regulate dismissal of musicians and specify audition procedures. Agreements for orchestras that tour may specify a maximum number of services per tour or per tour week, the length of rest periods between the end of a tour and the next home service, and details pertaining to the treatment of musicians and their instruments during the tour.

Implications

Most collective bargaining agreements in the U.S. specify the wage requirements of the contract in considerable detail but leave employers with considerable discretion in setting employment levels. Contracts are likely to state how economic opportunity is to be allocated (e.g., by seniority), while leaving employment levels to employers. In

⁵ One symphony musician related a conversation in which a musicians’ negotiating committee was asked why this procedure was not simply described as an increase in the minimum scale salary. The response was: “Then we wouldn’t get any over-scale pay.”

contrast, labor agreements with symphony orchestras effectively fix both the price and quantity aspects of the bargain. Orchestra management may acquiesce with some regulation of employment levels, because the symphonic music literature largely determines the labor input. Neither the number nor the portfolio of instrumentalists employed by an orchestra may be altered in response to wage costs without circumscribing the music that the orchestra may perform.

Contractual guarantees regarding the length of the work year are more constraining, notwithstanding the employment security that they provide to symphony musicians. In the short run, work-year guarantees restrict the ability of symphony orchestras to reduce expenses in the face of declining revenues. Reduced flexibility of labor costs contributes to significant cyclical variation in the performance income gap. In the long run, work-year commitments encourage the growth of concerts in the face of declining attendance per concert and total attendance. Together, these provisions also insulate insider musicians from the vast number of outsiders seeking a symphonic position.

These contractual provisions emerged in the wake of the Ford Foundation grants to U.S. symphony orchestras during a period of rising demand for symphony performances. But many of the collective bargaining provisions underpinning improvements in the financial and employment security of musicians limit the ability of orchestras to adjust artistic costs in response to financial pressures that emerge during periods of declining concert attendance, such as the late 20th century. The next section of the paper examines evidence on the extent to which symphony musicians' salaries evolve

independently of underlying economic fundamentals including the financial condition of their orchestras.

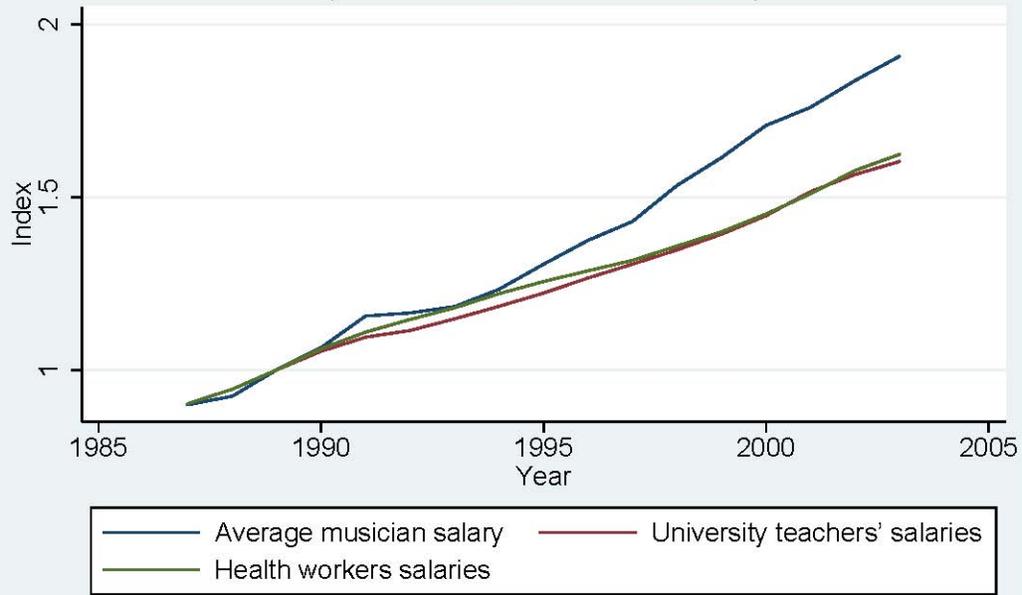
IV. Wage Determination in Symphony Orchestras

Despite weakening demand for symphony performances in the last decades of the 20th century, wage growth for symphony musicians exceeded that of most other groups in society. Minimum and average weekly salaries of musicians grew at an annual rate of about 3.9 percent, significantly exceeding wage and salary increases of 3.5 percent per year for all union workers. Between 1987 and 2003, the salaries of symphony orchestra musicians also increased more rapidly than the wages and salaries of white-collar, blue-collar, and service workers.⁶ Figure 4 shows that the same is true of comparisons with more narrowly defined white-collar, professional service groups. Figure 5 shows that one small, exclusive, nonunion occupation in the symphonic music world—conductors—did experience more rapid pay increases than the musicians that they direct.

These broad comparisons provide only weak inferences that contractual provisions established in a period of industry growth may not suit a period of declining attendance and increasing financial pressure. For a more direct appraisal of the links between musicians' wages and financial balance, we turn to an analysis of an unbalanced panel of 62 orchestras from the 1987/88 through the 2003/04 concert seasons. (For some variables, data are only available through the 2000/01 concert season.) The dependent variable in the analysis (w_{it}) is the (natural logarithm of the) minimum weekly salary of musicians in symphony i during year t . For most orchestras, musicians perform 7-8 services per week. This wage is established in collective bargaining between symphony

⁶ The analysis of trends in union wages for broader groups uses Employment Cost Index data available at the U.S. Bureau of Labor Statistics website.

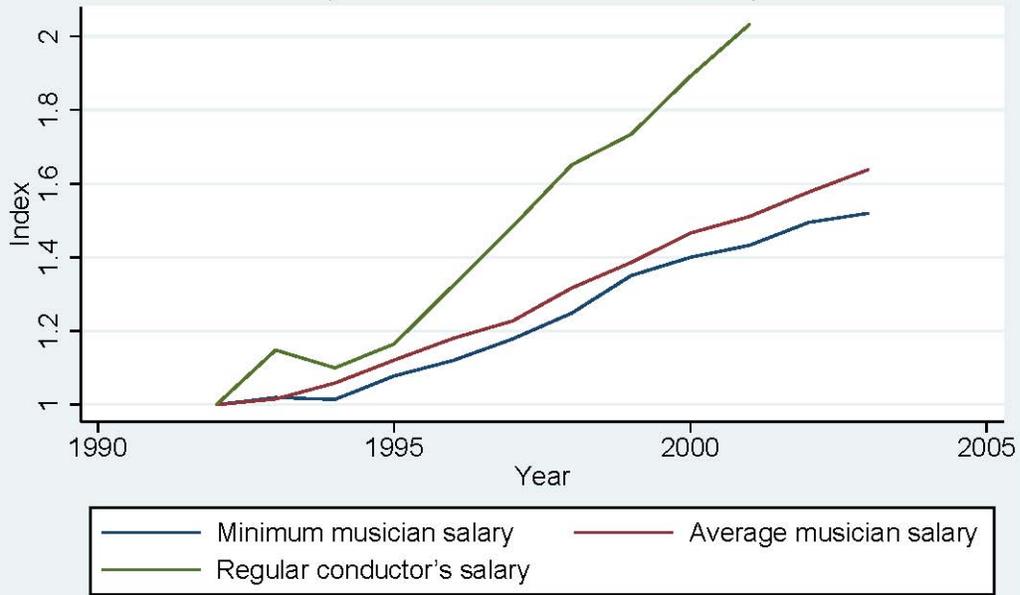
Figure 4. Musicians' Salaries and Outside Wages
(Indexes: 1989=1 for all variables)



Source: American Symphony Orchestra League and U.S. Bureau of Labor Statistics



Figure 5. Musicians' and Conductor's Salaries
(Indexes: 1992=1 for all variables)



Source: American Symphony Orchestra League



musicians and symphony management, and serves as the base wage for all regular musicians in the orchestra.

The analysis examines the sensitivity of musicians' wages to alternative measures of financial strength of symphony organizations, both across orchestras and within orchestras over time. The broadest measure of economic strength is overall financial balance ($BALANCE_{it}$), total revenues minus total expenses, which captures the extent to which nonperformance income offsets operating deficits. In the case of not-for-profit organizations, it can be informative to disaggregate the overall financial balance in order to examine the respective roles of "mission" and "nonmission" financial balances in union wage determination. Taking this approach, financial strength is decomposed into the performance income gap ($PIGAP_{it}$)—the gap between performance-related revenues and expenses as a percent of performance expenses—and contributed support from private and government sources, also as a percent of performance expenses. This approach permits tests of the hypothesis that wage increases absorb increases in contributed support, leaving an orchestra's financial capacity and balance unchanged. The argument implies that the elasticity of musicians' salaries with respect to the PIGAP and contributed support ($SUPPORT_{it}$) are different—a testable hypothesis. A third approach ignores the revenue side of economic balance and tests the sensitivity of wages to the size of the (nonartistic) budget.⁷

The analysis also checks for the independent influence of general economic conditions, as captured by the local area rate of unemployment (RUN_{it}). Some effects of

⁷ The League of American Orchestras (formerly the American Symphony Orchestra League) provided data on the finances of their members in exchange for a promise to preserve the confidentiality of the information for individual orchestras.

changing cyclical conditions should already be reflected in the measures of each orchestra's financial strength, since concert attendance and contributions decline when unemployment increases. Expenses may also decline, although perhaps not as rapidly. The main question is whether the influence of cyclical conditions on musicians' salaries is limited to impacts on an orchestra's economic balance.⁸ The independent variables are often lagged one year, under the assumption that relative wage and financial comparisons from the recent past influence current negotiations.⁹ Cross-section, random effects, and fixed effects estimation will be used to examine the questions raised.

Table 2 provides descriptive statistics on the key variables used in the analyses for three years spanning the 1990s. Minimum weekly salaries are somewhat skewed toward a few high-paying orchestras, but the coefficient of variation indicates a stable distribution of musician salaries across orchestras. The weekly salaries paid by U.S. symphony orchestras are highly dispersed, however. The minimum weekly salary paid by the most remunerative orchestra was almost 10 times higher than the salary paid by the least remunerative orchestra in 1990, for example.

Many symphony orchestra musicians receive supplemental salary payments based on their seniority or special leadership role in an orchestra, and in some orchestras, musicians also receive the electronic media guarantees. These pay supplements, discussed more fully in section III, raise the average weekly salary of symphony

⁸ Local area unemployment rate data are from the website of the U.S. Bureau of Labor Statistics, <http://www.bls.gov/>

⁹ The League of American Orchestras provided data on symphony minimum weekly salaries, average weekly salaries, and other provisions of collective bargaining agreements. Information on musicians' wages and other contract details for a smaller sample of orchestras is available from the archive of *Senza Sordino*, the official ICSOM newspaper, available at <http://www.icsom.org/senzarchive.html>. A comparison of the weekly salary data from the two sources indicates only occasional small differences in reported salaries. The inter-orchestra correlation for the alternative measures of minimum weekly salaries exceeds .99 for each year, providing confidence that the more comprehensive League data may be used for the analyses.

musicians above the contractual minimum. For the median orchestra the average weekly salary, which includes the pay supplements, is about 14 percent higher than the minimum weekly salary. Eighty percent of the orchestras in the sample pay average wages between 7 to 22 percent higher than the minimum. More importantly, the relative size of pay supplements for symphony musicians has remained quite stable. The data reveal no upward drift in the ratio of average to minimum salaries during 1987-2003.

Between 1960 and the late 1980s, the number of symphony orchestras offering full-year schedules to their musicians increased from two to 46. The data in Table 2 show no discernable increase in weeks worked during the last years of the 20th century. Advances in the annual incomes of musicians during this period resulted from increases in weekly salaries. Preliminary regression analyses revealed no trend between 1987 and 2003 in the number of weeks worked per year by symphony musicians. During the same period, the minimum weekly salary increased about 3.9 percent per year. Extensions in the annual number of work weeks for symphony musicians—one of the objectives of the Ford Foundation grant—had apparently halted by the mid-1980s, and subsequent increases in the annual salaries of symphony musicians solely reflect higher weekly salaries.

The rest of Table 2 describes the data on alternative measures of the economic strength of symphony orchestras. Depending on the year, the median financial balance is negative or approximately zero, indicating the tendency for the surplus on nonperformance activities to offset the performance income gap or deficit. One can also see that the financial balance among orchestras is highly dispersed. The performance income deficit clearly worsens at the end of the 1990s. The final entries show the

Table 2. Descriptive Statistics

		<u>1990</u>	<u>1995</u>	<u>2000</u>
Minimum Weekly Salary:	Median	624	761	892
	Mean	688	894	1065
	Coef. Var.	.40	.38	.40
Ratio of average to minimum Salary:	Median	1.14	1.14	1.13
	Mean	1.15	1.14	1.14
	Coeff. Var.	.08	.06	.04
Weeks worked:	Median	42	42	42
	Mean	43	43	44
	Coeff. Var.	.18	.20	.15
Financial Balance:	Median	-2.9	0.1	0.0
	Mean	-3.7	2.2	-1.4
	Coeff. Var.	-2.0	4.3	-3.2
Performance income gap:	Median	-53.8	-52.0	-56.7
	Mean	-52.6	-52.2	-55.8
	Coeff. Var.	-.22	-.23	-.17
Private support ratio:	Median	35.6	39.7	45.0
	Mean	36.2	41.4	42.7
	Coeff. Var.	.33	.36	.27
Govt. Support ratio:	Median	7.4	4.9	4.3
	Mean	10.9	10.0	6.3
	Coeff. Var.	.85	1.46	1.01

Note: See text for definition of variables.

Sources: League of American Orchestras, U.S. Bureau of Labor Statistics

expansion of private support and contraction of support to orchestras from (all levels of) government in the 1990s. The comparatively high coefficients of variation signal the variety of nonperformance income models used by individual symphony orchestras.

Cross-Orchestra Wage Variation

Efforts to explain the considerable variation in collectively bargained wages across symphony orchestras reach simple conclusions. First, minimum weekly salaries are not significantly correlated with current and lagged measures of the financial balance of orchestras. Neither variation in the overall financial balance nor the gap between performance revenues and expenses explain inter-orchestra wage differentials. This outcome may reflect the considerable inertia in wage levels and the comparative annual volatility of most measures of organizational financial balance.

Instead, minimum weekly salaries are very tightly correlated with differences in the size of the (nonartistic) budgets of orchestras. Variations in total expenditures account for 63-86 percent of the wage differences between orchestras in the years between 1987 and 2003, with an elasticity of weekly salaries with respect to nonartistic budgets of about .45. In this preliminary look at the data, scale of operations appears to be a more important determinant of wages than recent or current financial strength. From the perspective of individual orchestras, however, cross-orchestra correlations provide a poor guide to how wage levels may change in response to the changing financial circumstances of individual orchestras. Fixed-effects analysis of a panel of orchestras provides a stronger test of the sensitivity of union wage policy to financial balance.¹⁰

¹⁰ Fixed effects analyses also “difference out” ongoing differences in reporting practices and other persistent measurement errors between orchestras.

Panel Analysis of Orchestra Wages

The analyses reported in this section take the analysis of wage determination down to the level of organizations by examining the role of alternative measures of financial strength on wages using fixed effects analysis.¹¹

The statistical model is:

$$W_{it} = a_0 + a_1 \text{BALANCE}_{it} + a_2 \text{SUPPORT}_{it} + a_3 \text{RUN}_{it} + \varepsilon_{it}$$

Alternative measures of economic strength, contributed support, and wage comparisons may be substituted for each of the independent variables. (Regression results appear in Table 3.) Although the dependent variable is (the logarithm of) a wage *rate*, rather than a measure of total wage payments to musicians, there may be remaining ambiguity about the direction of causation between the dependent variable and measures financial balance (which include aggregate payments for musicians' services). In an effort to address this concern, current and lagged measures of financial balance are tested in alternative regressions.

A positive, statistically significant relationship between the minimum weekly salaries of symphony musicians and current measures of overall financial balance (regression (1)) and the balance between performance-related revenues and expenses (regression (3)) disappears when the measures of balance are lagged (regressions (2) and (4)). In contrast, private support from individuals, businesses and foundations (as a percent of total and performance expenditures respectively) is significantly positively correlated with the contractual minimum salary whether or not it is lagged. The results support an interpretation of a bargaining process in which unions and symphony

¹¹ Each of the orchestras included was one of the top 50 orchestras (ranked by budget size) for at least two years during the sample period, 1987-2003.

management agree to wage increases consistent with changes in private support, quite apart from the overall financial balance of an orchestra. There is a clear causality question here: Does contributed support determine union demands, or do collective bargaining agreements determine fundraising activities (and hence, contributed support)? The significance of lagged values of the private support ratio supports the interpretation that wages are responding to nonperformance revenues. In this scenario, what then happens when rising wages prevent increases in private support from offsetting an orchestra's performance income gap? Effectively, the orchestra must rely on endowment draw to fill in the gap.

The local area unemployment rate influences wages in an expected way. Holding financial balance constant, orchestras in markets with relatively high unemployment rates have lower wages. On the other hand, government support, whether current or lagged always has a statistically significant negative correlation with musicians' wages. At this stage, a substantive interpretation of why private and government support to orchestras should have opposite effects on musicians' wages is elusive. It is possible that government support, which declined over the period, is taking the role of a time trend during a period when musicians' wages rose. Finally and as expected, regression analyses of pay supplements (the ratio of average weekly salary to minimum weekly salary) found no significant correlations with the independent variables. These supplements (mainly seniority and over scale payments) depend on characteristics of an orchestra's musicians (e.g., seniority and the number of section leaders) and hence should not be sensitive to the financial conditions of orchestras.

Table 3. Fixed Effects Analysis of Musicians' Minimum Weekly Salary.

		<u>Minimum Weekly Salary</u>			
<u>Independent Variables</u>		<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>
Financial Balance					
	Current	0.00026			
	Lagged		-.00071**		
Performance Income					
	Current			.00251**	
	Lagged				-.00035
Private Support Ratio					
	Current	.00190*		.00212*	
	Lagged		.00286*		.00200*
Govt. Support Ratio					
	Current	-.01712*		-.01523*	
	Lagged		-.01563*		-.0162*
Unemployment Rate		-.03198*	-.01445**	-.0229*	-.0186*
	R ²	.16	.14	.15	.14
	Observations	821	758	739	739

* p-value<.01

** p-value<.05

*** p-value<.10

Sources: League of American Orchestras, U.S. Bureau of Labor Statistics

V. Conclusions

The precarious economic health of symphony orchestras reflects the relentless increase in costs in an industry with limited opportunities for productivity growth. This paper has examined links between institutional arrangements and the development of labor costs, which average about 40 percent of the total expenses of symphony orchestras. The unionization of major orchestras is complete, but the roots of union power are somewhat mysterious. Unions do not limit the supply of new classical musicians, and that supply is huge relative to the number of positions available. Moreover, for much of the history of symphony orchestras in the U.S. the American Federation of Musicians did little to advance the wages and employment security of symphony musicians. While unions have some inherent bargaining power, flowing from the limited possibilities for consumer or producer substitution for musicians' services, that power was not effectively exploited for many years.

Instead, the income and employment security gains eventually accorded symphony musicians appear to flow from inherent bargaining weaknesses of the management of not-for-profit organizations and a striking historical intervention by a major foundation, which for a limited time provided resources that further reduced management resistance in bargaining. The bargaining weakness of nonprofit management is traceable in part to the considerable ambiguity over the identity of their principals and hence their objectives. The Ford Foundation grants, which were intended in part to support long-run financial stability in orchestras by building up endowments, further undermined management bargaining resistance at the cost of diverting some potential endowment funds to achieve immediate labor objectives. In the wake of this historical

event, the industry was left with collective bargaining agreements that specify both the wage and the labor input, limiting the ability to adjust labor costs in the face of financial challenges. With the labor input more or less fixed, collective bargaining focuses on wage determination, but there is no incentive to shape wages to standard measures of organizational performance. Since the late 1980s, the wages of symphony musicians increased more rapidly than the wages of most other workers, and were not strongly correlated with either the performance income gap or the overall financial balance in orchestras. Instead, musicians' wages are strongly positively correlated with private contributions to orchestras. That a wage policy that ignores measures of organizational economic strength has serious consequences is clear from the large number of orchestra bankruptcies over the past 15 years. In cases in which bankrupt symphonies are reconstituted, musicians' wages are considerably lower in the successor organization. The story of symphony orchestras and symphony musicians provide an intriguing example of how an isolated historical event (the foundation intervention in this case) can have long-lasting and sometimes unintended effects.

If explored further, certain themes might provide additional insight on the role of collective bargaining in adverse economic conditions. Situations of extreme financial distress, such as the bankruptcies of several symphony orchestras, may provide an even sharper perspective on how collective bargaining policies respond to adversity. An analysis of the pre-bankruptcy behavior of wages and working conditions for failing orchestras could be very revealing, as would analysis of how the management of labor and other orchestra inputs changed in cases in which bankrupt orchestras eventually reformed. The analysis in this paper also largely ignored distributional motivations that

might influence the wages of symphony musicians. An analysis of the possible role of “coercive comparisons” with the salaries paid to musicians in other orchestras might enhance our understanding of the apparent tension between institutional and organizational performance influences on musicians’ wages.

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