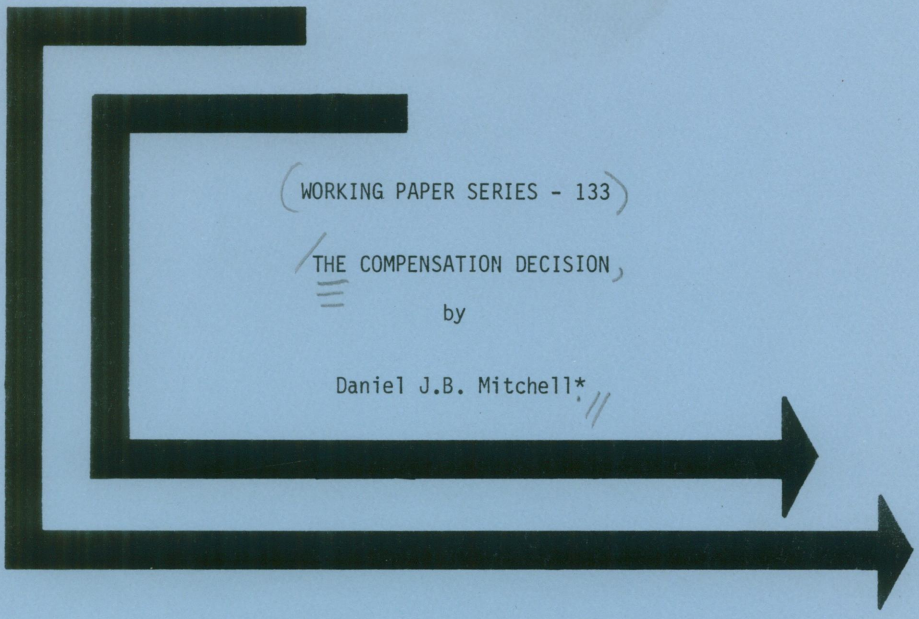
UNIV
SHELF



WORKING PAPER SERIES - 133

THE COMPENSATION DECISION

by

Daniel J.B. Mitchell*

*Daniel J.B. Mitchell
Director
Institute of Industrial Relations
U.C.L.A.
Los Angeles, California 90024-1496
(213) 825-4339

and Professor
Graduate School of Management
U.C.L.A.

DRAFT: August 1987

INSTITUTE OF INDUSTRIAL RELATIONS
UNIVERSITY OF CALIFORNIA
NOV 13 1987
BERKELEY

INSTITUTE OF INDUSTRIAL RELATIONS (Los Angeles)
UNIVERSITY OF CALIFORNIA
LOS ANGELES

CHAPTER 6:

The Compensation Decision

Draft chapter of "Human Resource Management: An Economic Approach"

© Daniel J.B. Mitchell 1987

Chapter 6: The Compensation Decision

I. Pay Where External Information is Available.

II. Obtaining Information.

i. Data from the BLS.

Establishment Wage Data.
Area and Industry Wage Surveys.
Earnings Data from the Current Population Survey.
Other BLS Wage Information.

ii. Other Official Wage Information.
iii. Private Data Sources.
iv. Other Forms of Data Gathering.

III. Setting Pay Where External Information is Not Available.

i. A Pragmatic Comparison Approach.

Job Analysis.
Job Evaluation.
Hedonic Pricing and Job Evaluation.
Job Evaluation and Comparable Worth.

ii. An Alternative to the Comparison Approach.

Quantification of Firm Data.
Human Resource Accounting.
Quantification and Comparable Worth.

IV. Equity and Fairness as Pay Standards.

V. Benefits vs. Wages.

i. Scale Economies and Risk Pooling.
ii. Tax Considerations.
iii. The Union Influence.
iv. The Benefit Lobby.
v. Employer Advantages.

Advantages from Pension Plans.
Employer Advantages from Wellness and Health Benefits.

VI. An Empirical Look at Benefits.

i. Data on Benefit Costs.
ii. Incidence Data.

VII. Looking Ahead.

Chapter 6: The Compensation Decision

When employers make decisions on compensation they face three basic problems. First, for jobs for which there are comparable workers outside the firm, they must decide how to pay in relationship to the external market. Second, for jobs for which it is difficult to find comparable workers externally, employers must try and connect pay levels with other occupations in the firm for which outside comparisons can be made. And third, for all jobs a decision must be made concerning the mix of pay versus benefits. These three decisions are the subject of this chapter.

I. Pay Where External Information is Available.

For most firms, it will be found that many jobs can be compared with an external market. Job titles such as lawyer, chemist, tool and die maker, carpenter, receptionist, secretary, and janitor are well recognized and will have broadly similar duties across employers. This recognition does <u>not</u> mean that all workers in these occupations are identical. In previous chapters, the variation between workers with regard to skill, attitude, and other attributes has been stressed. But it does mean that if the employer advertises for workers in these positions, most of the resulting applicants will have at least

the potential to do the required work. They are likely to be "plausible" candidates.

An important point emphasized in earlier chapters is that the market for labor is quite different from financial and commodity markets. There is no single "going" price for labor. Rather, there is a range of pay rates. The variations will reflect such factors as individual worker differences, alternative pay policies followed by employers, and union pressures and bargaining. In addition, the labor market, as has been noted, does not "clear." Often there is a margin of unemployed workers left over, even when the labor market seems to be in equilibrium. And sometimes there is a shortage, especially for particular occupations.

In a financial or commodity market, it is obvious why a participant (either a buyer or a seller) would want to know what the current market price for an asset was. Although a participant will generally be unable to influence that price, the price information is important in deciding whether or not to transact. A potential buyer in the stock market, for example, might decide -- based on a price quotation -- whether a particular stock was a "bargain" or overpriced. But in the labor market, where there is an array of prices, is there any use in finding out the level of the average wage for an occupation?

The analysis of the previous chapter suggests that such measures can be useful -- indeed, very useful -- to employers. It was noted that at wages below the average, employers can expect to experience relatively high turnover rates and lower worker efficiency. At higher wage levels, the reverse will be true; other things equal, turnover will be low and worker efficiency high. Thus, the employer will need a benchmark from which wage policy can be gauged. The decision to be a high or low payer must be made relative to some measure of central tendency in the relevant labor market.

II. Obtaining Information.

If there is one element of pay setting that is common to employers, it is that external wage data of some type is gathered as part of the pay setting process. Table 1 shows the results of a 1981 survey of employer practices. As can be seen, virtually all employers surveyed obtained outside wage information. Over half characterized the information as "essential/absolutely necessary" to the ultimate pay decision. And many employers had multiple sources of information.

i. Data from the BLS.

Only about one third of the surveyed employers used data available from the U.S. Bureau of Labor Statistics (BLS) as part

Table 1

Use and Evaluation of Wage Surveys by Employers

	Proportion of Surveyed Employers
Proportion Using Wage and Salary Surveys in Setting Pay	93%
Sources of Wage and Salary Data Used[1]	
In-house staff	78%
Outside consultant	35%
Local employer association	50%
Industry association	48%
Other employer in area	36%
Other employer in industry	32%
U.S. Bureau of Labor Statistics	34%
State or local govt. agency	25%
Other	20%
Evaluation of Wage and Salary Surveys[1]	
Essential/absolutely necessary	55%
Very helpful	30%
Of some use as a guideline	15%

[1]Percentages of those employers using wage and salary surveys.

Note: Data based on survey of 183 personnel executives whose employers are members of the Personnel Policies Forum of the Bureau of National Affairs, Inc.

Source: Bureau of National Affairs, Inc., Wage & Salary Administration, PPF Survey No. 131 (Washington: BNA, 1981), p. 3.

of their wage setting process. This lack of use of the BLS as a data source is surprising, since most of its information is available for free or at very low cost. BLS information also tends to be more statistically accurate than private surveys of wages, since the Bureau pays more attention to statistical sampling and data reliability.[1]

On the other hand, BLS data often are more aggregated than most employers would like. Typically, it is the aggregate data that are produced most frequently. Where detailed information is available, there are often publication lags involved. These drawbacks may lead employers to look for other data sources.

Establishment Wage Data.

One of the most commonly cited series from the BLS is the establishment survey reporting average hourly and weekly earnings. These data have a history going back to the early part of this century. Over the years, industry coverage has been broadened so that today available information covers the entire private, nonfarm sector on a monthly basis. Over 200,000 establishments are covered by the survey which is conducted jointly by the BLS and state government agencies.

The establishment survey produces data on employment, hours, and earnings. Earnings data apply to production and related

workers in manufacturing industries, construction trade workers in the construction industries, and nonsupervisory workers in other sectors. Average hourly earnings (AHE) data are obtained by dividing the weekly payroll by average weekly hours "paid for" (AWH). Average weekly earnings (AWE) are obtained by dividing the payroll by the number of employees. Thus, AHE x AWH = AWE.[2] For manufacturing only, average hourly earnings data are adjusted by BLS on the assumption that overtime hours are paid at time and a half to produce an estimate of "straight-time" hourly earnings, i.e., hourly earnings excluding the effects of the overtime wage premium. Sample data from the establishment series are shown on Table 2.

The establishment wage data provides no occupational detail. Because payrolls are used as the measure of compensation, the data exclude payments which employees do not receive directly in their paychecks. Thus, employer contributions to pension plans, health and life insurance, and social insurance programs (Social Security, Railroad Retirement,[3] unemployment insurance, workers' compensation) are omitted. Information is available on earnings by states and metropolitan areas, but only for manufacturing.

Despite these limitations, the establishment survey earnings figures can be used to compare a firm's average wage with that of its industry. Such comparisons will be especially useful if there is reason to believe that the firm has an occupational

Table 2

Selected Data from the BLS Establishment Survey, Production and Nonsupervisory Workers, 1986

Industry	Average Hourly Earnings (AHE)	Average Weekly Hours (AWH)	Average Weekly Earnings (AWE)	Straight-Time Hourly Earnings[1]
Coal mining	$15.42	40.9	$627.59	n.a.
Highway & street construction contractors	11.69	41.1	480.46	n.a.
Fabricated metal products	9.87	41.3	407.63	$9.47
Metal cans	14.13	43.8	619.89	n.a.
Food & kindred products	8.74	40.0	349.60	8.33
Meat packing plants	8.24	41.0	337.84	n.a.
Class 1 railroads	13.86	44.0	609.84	n.a.
Department stores	6.61	28.1	185.74	n.a.
Banking	7.18	36.4	261.35	n.a.
Motion picture production & services	16.98	28.0	602.79	n.a.

n.a. = not available.
[1]Average hourly earnings excluding the effect of overtime wage premiums (at time and a half).

Source: Employment and Earnings, vol. 34 (March 1987), pp. 82-99.

pattern similar to the average for the industry and that it devotes a roughly similar proportion of total compensation to fringe benefits. It should be possible, based on internal firm payroll records, to produce a company estimate of average hourly and weekly earnings using methodology similar to that of the BLS. This internal estimate can be compared with BLS industry earnings data to determine if the firm is a relatively high, average, or low paying employer.

Area and Industry Wage Surveys.

Since pay differs by occupation, firms may want to compare specific occupational wage rates paid internally with those paid by other firms in the area or industry. In the previous chapter, examples of occupational wage data for an area were shown (Table 2 of the previous chapter). As of 1986, area wage surveys were available for 71 standard metropolitan statistical areas. Data apply to selected occupations in the clerical, professional, technical, maintenance, toolroom, powerplant, material movement, and custodial occupational groups. Occupations selected are those common to many employers such as secretaries. Certain information is also included on pay-related practices such as the incidence of paid holidays and other fringes.

Smaller firms with less than 50-100 workers (depending on industry) are excluded from area wage surveys. Since smaller

firms tend to pay lower than average wages, the occupational wage data from area wage surveys are somewhat upward biased. Nevertheless, firms can obtain an idea of their relative wage standing compared with others in their geographical area from area wage reports. The main difficulty with using area wage data is the lag involved in obtaining the figures. Area wage surveys are conducted on an annual or biennial cycle and several months may elapse between data collection and publication.

Industry wage surveys provide substantially more occupational detail than area wage surveys, since the occupations included are those of importance to the industry studied, even if they are not widely found in other sectors. Forty industries were included in the survey program in the mid 1980s. These industries are surveyed on a 3-5 year cycle. Thus, the resulting wage data appear too infrequently for employers to use in annual pay reviews. However, HRM specialists in surveyed industries can take the opportunity -- when relevant surveys do appear -- to compare their company's wage rates with those of the survey. Table 3 presents sample data from a typical industry wage survey.

Earnings Data from the Current Population Survey.

Unlike the data series discussed so far, data from the Current Population Survey (CPS) are obtained from individuals, not employers. The CPS was originally created in the 1940s to

Table 3

Selected Data from an Industry Wage Survey on Men's and Boys' Suits and Coats, June 1984

Occupation and Region	Average Hourly Earnings
Cutters, cloth	
U.S.	$9.02
New England	9.71
Middle Atlantic	10.67
New York City	10.58
Border States	8.17
Southeast	6.55
Southwest	5.52
Fitters, U.S.	7.20
Button sewers, hand, U.S.	6.50

Source: U.S. Bureau of Labor Statistics, BLS Measures of Compensation, bulletin 2239 (Washington: GPO, 1986), pp. 15-16 (reproduced from bulletin 2230).

monitor monthly trends in employment and unemployment. Earnings questions were added to the survey on a regular basis beginning in the 1960s. The 1980s saw a considerable expansion in the gathering and presentation of CPS-earnings information. Almost 60,000 households were involved each month in the CPS as of the mid 1980s.

Respondents to the CPS are asked about the earnings of employed members of their households. For wage and salary earners, i.e., those not self employed, respondents are asked about "usual" earnings per week. Information is also obtained about usual hourly earnings and usual hours per week for individuals who are paid by the hour. "Usual" includes premiums for overtime if these are regularly received, i.e., if the worker usually works overtime. Also included are tips and commission payments.

Certain CPS occupational data for broad classifications were shown in an earlier chapter (chapter 1, Table 2). However, more detailed occupational data are periodically published. Examples of such data are shown on Table 4. As with some of the other series already discussed, publication lags make these data primarily of use for retroactive comparisons. Firms can compare their rates of pay with those of the survey for the previous year to obtain information on their relative pay standing.

Table 4

Median Weekly Earnings for Selected Occupations from the Current Population Survey, 1986 (Full-Time Workers)

Occupations	Median Weekly Earnings
Financial Managers	$584
Accountants & auditors	478
Chemical engineers	721
Registered nurses	460
Economists	704
Editors & reporters	425
Radiologic technicians	383
Cashiers	181
File clerks	239
Telephone operators	315
Bank tellers	231
Police and detectives, public service	478
Janitors and cleaners	247
Office machine repairers	376
Electricians	473
Tool and die makers	506
Bakers	292
Welders and cutters	376
Bus drivers	272
Operating engineers	410
Garbage collectors	286

Source: Earl F. Mellor, "Weekly Earnings in 1986: A Look at More Than 200 Occupations," Monthly Labor Review, vol. 110 (June 1987), pp. 41-46.

Other BLS Wage Information.

Because most employees are covered by mandatory, government-provided unemployment insurance (UI), information on their wages is collected as a byproduct of these programs by BLS. (An unemployed worker's previous wage history plays an important role in determining the weekly unemployment benefit to which he or she is entitled). Data on annual wages per worker and average weekly wages are available by industry and state. Unlike the establishment survey, information is available on state and local government worker wages and on agricultural worker wages.[4] Reports on UI-based wage estimates appear in BLS press releases and annually in bulletins entitled Employment and Wages.

White-collar occupational wages are surveyed annually by BLS as an input into the process of setting pay for federal civil servants. This procedure, known as the National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC) covers medium to large sized private establishments. Information is published in BLS press releases and bulletins showing wages within occupations, e.g., alternative pay rates for different levels of skill and responsibility of accountants or computer programmers.

Because of periodic controversy over whether federal civil servants are overpaid, demands have been made that the survey

should include smaller establishments and state and local governments. These changes -- if implemented -- could be expected to bring down the average salaries reported. Thus, users of the survey need to watch for coverage changes that may occur in the future.

ii. Other Official Wage Information.

Although the BLS is the major government agency in the area of employment and wage statistics collection, other agencies do have useful series. As noted, the BLS earnings data omit the costs of fringe benefits. Employers may want to make comparisons of their pay levels with others in their industry on a "total compersation" basis, i.e., including fringes and payroll taxes for social insurance. Or they may want to compare the proportion of their total compensation bills which go to fringes and payroll taxes with those of other employers.

The only official source of such information is the national income (GNP) accounts published by the Bureau of Economic Analysis (BEA), a component of the U.S. Department of Commerce. On an annual basis, the BEA publishes estimates of the costs of wages and salaries and total compensation on a detailed industry basis. Also provided are estimates of the number of "full-time equivalent" (FTE) employees by industry. (Two half-time workers count as one full-time equivalent).

Dividing wages and salaries or total compensation by FTE yields an estimate of annual pay rates in the industry. These figures appear annually in the Survey of Current Business and related supplementary publications. Table 5 presents an illustrative sample of such data for selected industries.

The national income account data provide information on the pay of government workers as well as private, unlike the pay figures from the establishment series (which are exclusively for private sector workers). However, public employers seeking wage data to use for comparative purposes will probably want geographical and programmatic detail which is not available from the national income accounts. The Bureau of the Census, another branch of the Commerce Department, conducts annual surveys of state and local governments which include information on monthly pay of public workers. Geographic and programmatic breakdowns are available from various publications derived from these surveys.

Every five years, the Bureau conducts a Census of Governments which provides still more detail on pay in the public sector. As in the cases of some of the other sources cited above, the principal difficulty in using these data is the lag between collection and publication. Data from the surveys and

Table 5

Selected Data on Compensation and Wages & Salaries from the National Income Accounts, 1985

Industry	Total Compensation[1] Per Full-Time Equivalent Employee	Wages & Salaries Per Full-Time Equivalent Employee	Other Labor Income[2] as Percent of Total Compensation
Coal mining	$42,886	$33,277	22%
Construction	27,554	22,631	18
Fabricated Metal products	29,329	23,698	19
Food & kindred products	26,882	21,762	19
Railroad transportation	46,052	35,646	23
Retail trade	15,516	13,442	13
Banking	25,559	20,386	20
Motion pictures	31,324	27,364	13

[1]Total compensation = wages and salaries plus other labor income.
[2]Other labor income = employer contributions to social insurance (including workers' compensation), to pension and profit-sharing plans, to group health and group life insurance, to supplemental unemployment benefit plans, and for miscellaneous purposes.

Source: Survey of Current Business, vol. 66 (July 1986), pp. 65-69.

censuses of state and local governments are essentially of use for retroactive comparisons.

Apart from the series so far discussed, employers can find wage information from the decennial Census of Population, the Census of Manufacturing, and specialized data collected by regulatory agencies and state statistical bureaus. Some of the earliest sources of information about the labor market were state agencies in the late 19th century. Today, however, many state statistical bureaus rely on the BLS for their labor market data. Nevertheless, state bureaus often provide convenient tabulations focused on their own jurisdiction. And a few continue to collect their own information.

Index numbers are also available from the BLS which indicate the rate of wage change (but not the absolute wage) over various time periods. And there are data sources which apply only to the unionized sector of the economy. These specialized series will be discussed in later chapters.

iii. Private Data Sources.

Many of the employers covered by Table 1 reported using sources of information other than official government data. Private data suppliers attempt to fill gaps in wage data left by government agencies. Two notable gaps are in the fields of

executive compensation -- particularly for higher echelon executives -- and in salary intention surveys (surveys in which HRM managers are asked what wage adjustments are being planned for next year).[5] The latter will be taken up in the next chapter. However, it is useful to discuss executive compensation at this point.

Executive compensation is a relatively neglected area of official data collection by agencies such as the BLS, because relatively few employees are involved. Although some information on managerial salaries can be obtained from the CPS, the occupational categories used are too broad for use by anyone interested in setting pay for top level executives. An additional problem -- previously noted in an earlier chapter-- is that executive compensation arrangements are complex, often including bonuses linked to company performance as well as various types of stock options.

This complexity of pay arrangements for executives has partially reflected tax considerations; top executives tend to be in a higher tax bracket than the average employee and so tax avoidance strategies attain special significance. Prior to the 1986 tax law modifications, capital gains were taxed at significantly lower rates than other income, creating an incentive to turn current income into capital gains where possible. Also a factor in the complexity of executive pay is a

sense that top executives should have part of their pay tied to company performance. This consideration leads to the adoption of bonus arrangements for executives linked to profitability. The various compensation devices used for executives mean that information on straight salary is of limited utility to those responsible for determining executive compensation levels.

Not all the information available on executive pay is aimed at serious pay setters, however. An annual survey by Business Week magazine, for example, seems designed largely to appeal to the public's appetite for information on the wealthy. In many respects, curiosity about executive pay mirrors that relating to the incomes of professional athletes, movie stars, and other celebrities.

Typically, serious pay setters must rely on survey information provided by management consulting firms such as Hewitt, Hay, and Wyatt. Such private surveys may be available only from expensive publications or made available only to clients.[6] Users must be more cautious about the interpretation of such surveys than they are about data from BLS and other government agencies, since information on the methodology (e.g., the precise questions asked, the occupational definitions) and sampling techniques used by private data sources is often vague.

iv. Other Forms of Data Gathering.

It is evident from Table 1 that employers often use informal methods of gathering wage data. Such methods may involve no more than making a phone call to another firm in the area to acquire anecdotal information. Apart from such self gathering of wage information, employers may find that trade associations to which they belong conduct periodic pay surveys on behalf of their members.

In the public sector, state and local governments may have formal, reciprocal arrangements with other jurisdictions to exchange wage data. Such practices become particularly important for jobs such as police officers which are not found in the private sector. In some cases, public employers may have a legal obligation to pay no less than the level indicated by such wage surveys or -- at least -- to conduct a wage survey before making wage decisions.

Apart from the use of surveyed data as purely an information source, there may be cases in which association surveys help employers exercise "monopsonistic" power in the labor market. As noted in the previous chapter, it may be to the benefit of employers to hold down wages, even if labor shortages are experienced as a result. If, in a geographic area, employers tacitly agree not to pay more than the survey indicates, the

survey becomes a wage coordination device. This mechanism is similar to that sometimes employed in the product market, where price or cost surveys have been known to be undertaken in order to coordinate industry pricing. Like other cartel type arrangements, however, incentives to cheat can thwart the objectives of any wage coordination strategy, particularly since successful coordination will engender labor shortages.

III. Setting Pay Where External Information is Not Available.

There are many jobs in firms which are either unique to the firm or which do not have broad labor markets. In these cases, survey information will not produce quotes of typical market wages. How can pay be set for jobs such as these?

i. A Pragmatic Comparison Approach.

Faced with the need to set pay rates for jobs without obvious outside markets, employers often do the obvious. They find ways of linking pay in such jobs to wages and salaries for other jobs where clearer markets exist. Firms may have hierarchies of job classifications, for example, and may simply place jobs into families of similar positions. Thus, all jobs in "Grade 1" may have the same rate of pay (or the same range of pay rates). Some jobs in Grade 1 may be easily subject to external survey, while others are not. Alternatively, jobs may be

characterized by certain attributes which permit comparisons with other jobs, and pay can be set by placing a monetary value on these designated attributes.

Put another way, where no market quote is available for a particular job, employers nevertheless seek indirect market information. Doing so, particularly in larger firms where many job titles are involved, requires subjective judgments about which market is relevant to which jobs. These subjective elements mean that the pay assigned to many jobs has an arbitrary facet. Pay for a given job title might be set somewhat higher or lower than its actual rate, and still fall within the bounds of reasonableness.

Job Analysis.

Linking non-market jobs to market jobs is an appealing notion in the abstract. But by itself, the notion hardly provide guidance on precisely what to do. Over the years, HRM practices have developed which provide guidance on specific steps which can be followed. Despite the existence of a folk wisdom of common practices, however, the analytical underpinning for the various approaches is often unclear.

For example, HRM departments frequently use job analysis as a first step in evaluating and classifying jobs. Essentially,

job analysis involves the preparation of a detailed description of the position in question, typically obtained by observing what employees in that position actually do. As such, job analysis has an inherent pitfall. As in the case of other HRM techniques, job analysis can provide misincentives and engender conduct not in the employer's best interest.

Employees will realize that job analysis can influence their rates of pay. In particular, they will understand that if their jobs appear complex and demanding to the analyst, they are likely to be more highly compensated. The job analyst thus faces a problem of imperfect and biased information if he or she relies heavily on the employee for information. An alternative approach -- reliance on supervisors for accurate information -- does not necessarily resolve this dilemma. As noted in earlier chapters, principal/agent problems often arise when supervisors are involved.

In particular, it will generally be in the interests of supervisors to demonstrate that their subordinate employees should be highly rated. A supervisor's own pay is likely to reflect the pay of subordinates. There may well be an incentive, therefore, to inflate subordinate job descriptions. Moreover, subordinates may be more cooperative if they are highly paid, which helps the supervisor carry out assignments successfully.

The ability of a supervisor to carry out assignments is still another characteristic which is also likely to be rewarded.

There are no ways to avoid such misincentives and misinformation completely. As a partial insulation against job description inflation, job analysts will often follow elaborate checklists and guidelines. In addition, they are trained to take a skeptical approach to claims of substantial job responsibilities (or of a substantial increase in responsibilities since the previous review).

On the other hand, there are limits to the skepticism that can be brought to bear when jobs are being analyzed. If, for example, a supervisor is insistent that the requirements of a certain job have been upgraded, the cause may be that there has been a problem in attracting candidates into that position. The job analyst may be reluctant to hinder a line supervisor, thus intensifying the line-vs.-staff tension that often prevails. Organizations require a certain level of mutual cooperation. An action which helps or hinders today may be remembered when cooperation is requested tomorrow.

Once jobs are described (accurately or not), comparisons across jobs can be made. Jobs can be put into job families and then placed in pay grades. Or more elaborate job evaluation plans can be undertaken.

Job Evaluation.

In textbooks, job evaluation is usually described as two step process. First, there is a ranking or grading jobs by key job attributes. Second, there is a designation of a monetary unit for each point of the resulting grades. That is, such factors as skill, responsibility, physical strength, etc. are evaluated for each job. Then points are given according to the degree to which each attribute is required. Higher point-valued jobs will receive higher pay.

Such formula type plans can be created internally within the firm by its own HRM department. Or outside management consulting firms, such as Hay Associates, can be brought in to perform the evaluation. Use of outsiders for such purposes is not unusual, although many firms do not find it necessary. One study reported, for example, that almost a third of surveyed employers used outside consultants to establish pay structures for their management personnel and almost one fourth used them for other employees.[7]

Hedonic Pricing and Job Evaluation.

Is there a theoretical justification for job evaluation plans? In certain respects, it can be regarded as a form of what

economists call "hedonic pricing." Hedonic pricing attempts to divide up the value of an item into subvalues which are placed on its attributes or components. Thus, the attributes of a job could be treated as independent factors which carry individual implicit market values. By summing up the values of its attributes, the price of the overall job is determined.

As an example outside the HRM field, consider a portfolio of stocks. If you were offered such a portfolio, you would probably value it as the sum of the values of the individual shares of which it was comprised. Your justification for doing so would be that markets exist for the individual shares which readily specify their values. Once having obtained the portfolio, you would be free to buy or sell individual shares at market prices to change the portfolio mix as you saw fit. Hence, there would be no reason not to price the portfolio simply as the sum of its components.

But although the component approach is easily justified as a method of pricing stock portfolios, it may not be so readily applied in other cases. Consider the price of a home. Homes are more complex to price than stock portfolios because many of their attributes are not independent of the context in which they reside. It might be found -- perhaps through regression analysis -- that the price of a home in a particular real estate market varied with such house attributes as the number of bathrooms, the

number of bedrooms, the overall square footage of the structure, the size of the lot, the proximity to transportation, etc. If the transactions prices of particular houses sold in the market are regressed against measures of these attributes, the resulting regression coefficients would provide an indication of the incremental market values of the attributes. It might be learned, for example, that the market placed a value of, say, $10,000 on an extra bedroom.

However, there is no actual market for bedrooms by themselves; bedrooms come only attached to houses. It could well turn out that a more sophisticated regression analysis would indicated that there are diminishing values placed on successive bedrooms. That is, a three-bedroom house might be valued at $10,000 more than a two-bedroom house, other things equal. But a four-bedroom house might be worth only $8,000 more than an otherwise-comparable three-bedroom house. There would be no more justification for saying in that case that a bedroom is worth $10,000 in the abstract than that it is worth $8,000. The value of the bedroom variable in fact depends on its own magnitude.

Regression analysis might also indicate that there are interaction effects between the explanatory variables. Extra bedrooms might turn out to be worth more in larger houses than in smaller houses. Market participants might prefer that smaller houses devote proportionately more space to common areas (such as

living rooms) than to bedrooms. Again, no unique value of a bedroom would be indicated. A bedroom could be valued only in the context of other key variables.

Finally, the results of a regression analysis for one real estate market might not be valid for some other market. An incremental bedroom added to a standardized house in Detroit might be worth more or less than the same bedroom added to the identical house in Omaha. Tastes of housing consumers, and factor prices facing housing construction contractors might well be different in the two cities.

It should be clear that the real estate example is more relevant to the job market than the stock portfolio example. There is no market for abstract units of "skill" (or responsibility or reliability or physical strength). The value of skill (or other attributes), assuming measurement is possible, may well have diminishing returns at some point. Skills come embedded in people along with other attributes. The presence or absence of other attributes will determine the value of skills. In addition, people fall into different job markets depending on their occupations. And different markets may place different values on skill.

Unlike stock portfolios, it is often not possible to adjust "portfolios" of employees for "imbalances." An investor with a

portfolio weighted "excessively" with stocks of high risk companies can easily acquire less risky shares to mix with the initial endowment. These new shares would correct the imbalance. But it is not necessarily the case that combining, say, a stupid person with a smart one on a job team produces the equivalent of two persons of average intelligence.

Naive application of job evaluation techniques assumes that there is an implicit market for the job attributes being measured, and that somehow it is possible to buy or sell increments of these attributes at a uniform price. Fortunately, most employers who use job evaluation do not apply it so naively. More typically, after jobs are initially priced, a subjective review process leads to "adjustment" of the initial results. Some pay rates designated by the formula may seem wrong. In cases where there is a clear outside market for some of the jobs included, it may be apparent that the formula-specified wage is too high or low. Or managers may simply have a sense that the specified wage is far above (or far below) the level needed to attract and retain labor.

Job Evaluation and Comparable Worth.

There is an empirical tendency for jobs which are heavily female-dominated to pay lower wages than male-dominated jobs. Yet it is not unusual to find that women in female-dominated jobs

have higher educational levels than males in higher paid, male-dominated jobs. Table 6 provides some examples. The table shows that median usual weekly earnings of construction laborers (male dominated) were almost 38% higher than those of hairdressers (female dominated) in 1986. Yet hairdressers had higher educational attainment than the laborers. A similar comparison is made of secretaries and automobile mechanics; both earned the same wages, but secretaries had higher educational attainment.

If a job evaluation plan were applied across broad occupational groups, it is quite possible that female-dominated jobs would be designated for higher pay rates than are often observed in the market place. Whether that outcome would be the result would depend on the weight the plan gave to white collar and education-correlated characteristics. Since some plans do contain such weights, there have been demands for application of job evaluation to raise female pay relative to male.[8]

There is a 1963 federal law known as the Equal Pay Act which requires that employers provide equal pay rates to men and women in the same (or essentially the same) jobs. However, the 1963 Act is quite narrow; it does not apply to comparisons of dissimilar jobs (such as secretaries and automobile mechanics). Advocates of so-called "comparable worth" as a pay setting method usually rely on another law: Title 7 of the Civil Rights Act of 1964 (as amended in 1972). Title 7 applies to virtually all

Table 6

Selected Occupational Wage Comparisons

Occupation	Median Usual Weekly Earnings in 1986[1]	Percent Female in 1986[1]	Percent with Completion of High School in 1980[2]
Hairdressers	$208	85%	80%
Construction laborers	287	3	54
Secretaries	288	99	95
Automobile mechanics	324	2	66

[1]Wage and salary workers who usually worked full time.
[2]Persons 18 years of age and older who worked year-round, full-time in 1979 in the civilian labor force.

Source: Earl F. Mellor, "Weekly Earnings in 1986: A Look at More Than 200 Occupations," Monthly Labor Review, vol. 110 (June 1987), pp. 41-46; U.S. Bureau of the Census, 1980 Census of Population: Earnings by Occupation and Education, PC80-2-8B (Washington: GPO, 1984), Table 1.

forms of job discrimination, such as discriminatory treatment in hiring, promotions, testing, training opportunities, and layoffs. It forbids such discrimination on the basis of race, sex, religion, or national origin.

Comparable worth proponents propose that jobs of comparable worth -- even if dissimilar -- should be paid comparable wages. Job evaluation plans provide a way of making comparisons across diverse jobs. Hence, use of job evaluation has tended to be viewed as the method by which comparable worth could be put into effect.

As a matter of strict litigation victories, comparable worth is at best an unapproved theory. However, some out-of-court settlements have been achieved, particularly in the public sector, which have raised pay in "women's" jobs. The agitation surrounding comparable worth may also have had some impact on employer wage policies in the 1980s (public and private), even in the absence of court approval; women's average pay tended to rise relative to men's during the period from the late 1970s to the mid eighties. A later chapter will discuss this trend and other aspects of equal employment opportunity (EEO) policies. However, at this point, it is useful to note the difficulties facing courts which might lean towards the comparable worth approach.

One problem is that there are many types of job evaluation plans in use. It has already been seen that the analytical foundation of job evaluation is weak. Thus, choosing among plans on a "scientific" basis is not possible. It has also been noted that firms will often use job evaluation as an initial guide, and then flexibly adjust the formula's outcome to fall in greater accord with perceived labor market conditions. Such subjective adjustment would be difficult to defend were job evaluation to be made mandatory. Thus, a flexible pay setting approach might be changed by legal constraint into a mechanical application of a questionable formula.

The fact that job evaluation is arbitrary does not mean that it would be impossible to require employers to use such systems. For example, the Canadian province of Ontario recently enacted such a law in 1987. But there are significant administrative problems entailed in such an approach; undoubtedly the Canadian experience will be watched carefully in the U.S.

American courts have been reluctant to put themselves in the wage setting business, especially in the absence of a clear cut legislative directive to do so. This reluctance does not mean that some form of comparable worth could not be implemented through a court system. A version of comparable worth <u>was</u> applied in Australia in the early 1970s and resulted in substantial relative wage gains for female employees.[7] However,

Australia has something the U.S. lacks: a complex system of wage courts which set minimum pay rates for the vast majority of the workforce and for most occupations. These courts were already in the wage setting business; including comparable worth as a criterion in the wage setting process did not require a major shift in their focus. Such activity would, however, be a major undertaking for the judiciary system in the U.S. context.

Economic theory suggests that implementation of comparable worth might cause job displacement for women.[10] For example, raising the relative wage of female-dominated jobs compared with that of male-dominated jobs might lead employers to substitute "male" jobs for "female" jobs in the production process. Or there might be more pressure to apply automation to replace female jobs, e.g., to substitute word and data processors more extensively for clerical occupations, were female pay to be pushed up.

Although economic theory points toward a direction of effect, it does not indicate the magnitude. In the Australian case, some studies suggested that the growth of women in the workforce was slowed by implementation of the comparable worth approach. But this impact was a relatively mild effect, compared with what many economists would have expected. Really dramatic adverse impacts on female employment were not in evidence.

Some observers argued that this lack of a large effect in Australia was due to limited substitution possibilities. Hairdressers do not make good substitutes for construction laborers, nor do secretaries make good substitutes for automobile mechanics. Concerning technology and automation, there is some evidence that relative wages do not play a major role in machine design and specification.[11] Perhaps these factors explain the Australian results.

ii. An Alternative to the Comparison Approach.

In the previous chapter, it was noted that the level of pay can affect both efficiency and reduce turnover. Profit maximization was associated with an rule which said that wages should be raised until the cost of doing so, e.g., the direct addition to payroll, was just offset by savings resulting from efficiency and turnover. For employers actually to make such calculations, they would need to be able to obtain the relevant cost and savings data. Is it possible for employers to make these computations?

Quantification of Firm Data.

Experiments have been undertaken in some firms to quantify the concept of turnover savings. For example, Table 7 displays the results of a survey conducted by an employer association in

Table 7

Costs of Turnover from an Employer Survey, 1979

	Production & Maintenance	Office & Technical	Salaried Exempt
Separation costs			
Lost production between decision to terminate and effective data	$100.00	$25.00	$200.00
Exit interview	78.50	19.67	13.33
Paperwork processing	54.75	11.00	7.00
Severance pay	--	260.00	1020.00
Replacement costs			
Advertising	$351.25	$288.33	$693.33
Travel of recruiters and/or applicants	27.50	--	6000.00
Administrative (Interviews, reference checks, paperwork, testing)	489.00	182.67	150.00
Medical examination	403.00	270.00	--
Induction procedures	207.75	72.33	22.50
Substandard production of new employees	1000.00	762.50	1550.00
Time spent by supervisors or fellow workers performing on-the-job training	900.00	400.00	700.00
Total turnover costs	$3611.75	$2291.50	$10356.16

Note: Data based on responses of companies which had adequate data to answer detailed questions on turnover costs. A second sample of companies could not answer the questions in detail but provided the following estimates of total turnover costs: production & maintenance, $1029.09; office & technical, $1332.84; salaried exempt, $4260.39.

Source: Merchants and Manufacturers Association, Turnover and Assenteeism Manual (Los Angeles: M&M Assn.: 1980), Section III, pp. 11-12.

the Los Angeles area which requested information on turnover and replacement costs of employees. The study suggests that turnover costs ranged from $2,300 in 1979 to over $10,000 for salaried exempt workers, presumably managers and professionals. If these costs rose at the same rate as wages generally, by 1986, they would have risen by a factor of over 50%.[12] Thus, the range of turnover and replacement costs -- were the study to have been undertaken in 1986 -- might have been $3,500 to over $15,000.

But perhaps the key point is that the study was not undertaken again. It appears that most employers do not attempt on a regular basis to quantify their turnover costs. Moreover, even the data of Table 7 raise substantial questions. It is not clear, for example, what is meant by the cost of "substandard production of new employees." Does this mean the market value of wasted materials which had to be discarded? Or does it indicate that because of initial low productivity, newly hired workers received more in wages than they produced in value of output? As in the case of many private surveys, precise methodological statements are not available.

The study does not provide any estimate of how much turnover (and therefore turnover costs) would decrease if wages were raised. This absence of information is an important gap. A complete understanding of the optimal response to turnover

requires information on turnover costs and and the responsiveness of these costs to wages.

Human Resource Accounting.

Professor Eric Flamholtz of UCLA has been a pioneer in developing human resource accounting techniques with regard to turnover. His approach suggests that Table 7 may omit some important turnover costs, thus widening the possible range of discretion rather than narrowing it. Flamholtz notes that since firms have career ladders, some of the costs of developing an employee to a given level may arise before the employee assumed the job title being studied.[13] Moreover, since some employees leave the firm after being partially developed, but before attaining the studied rank, it may be necessary to develop more than one entering employee to obtain a single "finished product."[14] Flamholtz provides examples, using this career concept of the development costs of two senior accounting positions and finds that the costs of "growing" someone in these positions amounted to $23,000 for one job and $45,000 for another.[15]

While it cannot be argued that these measurements are perfect (what measurements are?), they do indicate that firms can produce useful cost measures relating to turnover.[16] Merely the act of collecting such information on a regular basis can help

make pay setters more sensitive to the turnover implications of their decisions. The substantial spread of computers and data processing capability should permit quantitative studies to be undertaken at lower cost than in the past. And the spread into HRM positions of recent graduates of management schools programs which stress quantitative and computer skills should further encourage such techniques.

Determining the degree to which turnover would decline if pay were raised or determining the efficiency gain from higher pay -- as developed in the previous chapter -- is a more complex task than measuring current turnover costs. However, the barriers to making at least "ball park" estimates are not insurmountable by any means. Since firms change pay only infrequently (say, annually), there may have been periods in which company wages fell behind trends in the external labor market. Examination of such periods might give some clues to the turnover (and, possibly, the efficiency) effect of a relative wage slippage.

Even if competitors are not willing to supply information, impressionistic evidence about turnover might be obtained by observing turnover and productivity of other firms in the area or industry which are low or high payers. (HRM professionals may move from firm to firm, acting as carriers of information when they make career transitions). Apart from the informal

information network, trade associations might be able to survey such information on a confidential basis, providing still another data source. Finally, it is even possible to obtain experimental data within the firm, if the firm has multiple divisions or plants at which pay can be adjusted independently. In a given year, the firm might raise pay at a plant by somewhat more or less than the normal practice would suggest and observe the results.

Quantification and Comparable Worth.

It has been noted previously that the advocates of the comparable worth concept have generally tied it to job evaluation, a subjective and uncertain technique. Usually, the debate over comparable worth on economic grounds is between those who argue that the "market" should set wages and those who argue for the questionable comparative approach. The difficulty with the "market" approach is that it is also subjective. While firms establish pay policies within a market context, they have discretion over whether they will be relatively high or low payers relative to the market averages.

Direct analysis of wage effects on efficiency and turnover is a way of assessing the appropriate "worth" of a job. In the simple classical model, a job is always worth what it receives, since the firm simply expands hiring until wage = marginal

revenue product of labor. The quantitative efficiency/turnover approach of the previous chapter suggests that a given job might be worth more or less to a firm than the average market wage for that occupation.

Of course, there is no guarantee that if a firm studied its turnover and other costs, the ultimate result would be a raising of pay in female-dominated jobs relative to others. Indeed, the data of Table 7 suggested that turnover costs for office and technical positions (which have heavy concentrations of women) were lower than for other occupations. But given the uncertainty surrounding those data, the actual effect of applying the efficiency/turnover approach on relative female pay cannot be predicted. There will be different results in each firm.

In any case, employers who conduct job evaluations and then fail to implement the indicated pay scales risk potentially expensive law suits. They may be called to explain why they did not do what their own job evaluation plan suggested was appropriate. Employers may thus be more reticent in the future about use of conventional job evaluation (unless they are compelled by law to do so).

The alternative turnover/efficiency approach -- if it came into widespread use -- would be less likely to raise this problem. Suppose the approach did indicate that pay of certain

female-dominated jobs should be raised to boost company profits. Why would an employer not want to implement a step which would raise profitability?

IV. Equity and Fairness as Pay Standards.

None of the approaches to pay setting so far discussed involved considerations of "fairness." Yet there certainly is a history of such considerations in discussions of pay. Ideas about the "just wage" for workers go back thousands of years. Usually, the concept of fairness relates to the ability of the wage earner to enjoy a "decent" standard of living. Until the late 19th century and early 20th century, this notion could not be quantified, since information on living costs was not easily available. As the possibility of collecting the needed data became more real, advocates of its use for wage setting purposes became more vocal.

The Australian wage courts -- mentioned earlier -- had their roots in the idea that wages could be set fairly by impartial judges who would consider what minimum income was needed for a worker (with dependents). Periodic attempts were made to collect information on worker budgets to make this minimum income determination. Eventually, the budget information was collected on a regular basis. It was also seen as "fair" that more skilled jobs should be paid more than the basic minimum income. The

judges considered traditional wage differentials (and tended to preserve them as equitable) in making their pay structure decisions.

Australia's motivation in creating wage courts was to reduce industrial unrest and strikes, which were seen in the early part of this century as a threat to the country's social stability. It was felt that if pay setting were made fair, employee discontent would be reduced. Australians still debate whether judicial wage setting has had this intended effect in their country. But in most other western nations, even in the face of industrial unrest, such extensive official intervention in the labor market in pursuit of fairness has not taken place. More typically, some form of minimum wage was imposed at the bottom (such as the American Fair Labor Standards Act of 1938, discussed in the previous chapter). Wages above the minimum were (and are) left to private determination.

However, it should not be assumed that privately set wages do not reflect notions of fairness. The efficiency/turnover model of wage setting suggests that such notions ought to influence wage setting. If employees believe that wages are unfair, they are more likely to leave and they may become less productive and cooperative. Thus, it is the interest of employers to consider employee concepts of fairness in making pay decisions. And, of course, where unions are involved, employees

may have a mechanism of enforcing their views of fair pay practices on the employer.

Concepts of fairness, however, are not independent of actual practice in the workplace. Sometimes practice influences perceptions of fairness. As productivity has raised real wages and living standards, notions of what constitutes a decent minimum income have also risen. The Australian judges who accepted traditional skill differentials as fair were using existing employment standards in their decision making. But even without judges and courts, employers are well aware that changes in traditional pay structure can lead to workplace frictions.

For example, when job evaluation plans are applied, it sometimes turns out that particular jobs are pinpointed as being "overpaid." In cases where the employer elects to lower pay for these jobs, it is a common practice to "red circle" the pay of incumbent workers, i.e., continue to pay existing workers the old wage, rather than cut their pay. Of course, as other wages in the organization generally rise, the incumbents will slip in their position in the wage structure. Eventually their pay will fall to the relative pay level the job evaluation plan says they should receive. But the red circle method is a way of cushioning the impact because immediate and overt pay cuts would be perceived as unfair.

In the previous chapter, it was noted that rational employer practices often lead to long-term employer/employee relationships featuring pay premiums, career ladders, and reward for loyal service. Economists have sometimes referred to such arrangements as "implicit contracts" because they are usually not written down as formal contractual obligations.[17] Only where unions are involved (or in specialized occupations such as professional sports) are written contracts the norm in private employment.[18] Nevertheless, social standards of fairness tend to reinforce the implicit agreement.

For example, employers are usually viewed as having greater obligations to long-service employees than to recent hires. Terminating long-service workers or cutting their pay is more likely to be seen as unfair than if the same policies were applied to junior workers. In the 1980s, for example, when unions negotiated wage concessions, "two tier" wage plans were developed in which incumbent workers retained their old rates of pay, but new hires entered the firm at a lower wage. Senior (long-service) workers were thus protected from market pressures.[19]

Of course, the existence of social standards of fairness does not prevent employers from taking steps which their workers (or customers) regard as unfair. Wages <u>are</u> sometimes cut. Long-service workers <u>are</u> sometimes dismissed without notice. The

point is that the fairness standards have an inhibiting effect on such behavior. Fairness standards are yet another reason why the labor market differs substantially from financial and commodity markets.

The common use of fairness as a decision making criterion in the labor market suggests that there are some circumstances where it may not be used. Labor markets differ from financial and commodity markets because the buyer and seller relationship in the labor market is ongoing. In situations where the employer knows the relationship will not be ongoing, less concern about fairness is likely to be evidenced. The cost of being unfair is much lower. Thus, for example, employment conditions in a plant which management knows will be permanently closed might well deteriorate during its final days.[20]

V. Benefits vs. Wages.

Various forms of fringe benefits are offered by employers as part of their compensation packages for employees. These include pension and retirement savings programs, health and life insurance, group legal services, and many others. Note, however, that such programs are available through sources other than the workplace. Individuals can save for retirement, purchase health and life insurance, and arrange for legal services on their own.

Apart from benefits which can be purchased externally, fringes also include various arrangements which are specifically linked to the workplace. Examples are the various forms of time off (such as vacations, holidays, bereavement leave, jury duty leave), items provided at the workplace (parking, subsidized cafeterias), and miscellaneous benefits such as discounts on company-produced merchandise. Indeed, it is difficult to draw a precise line between benefits and general conditions of work.

Why do employers provide benefits? In the cases of benefits that employees could purchase individually, this question is particularly puzzling. Why not simply pay employees cash wages and let them determine how much, if any, life insurance or health insurance they wish to purchase, or how much to save for retirement? Why should employers undertake to support the expenses and bureaucracy entailed in administering complex benefit programs?

Two answers are usually given to these questions. First, it is argued that there are economies to be obtained in benefit administration by employers. These economies occur because -- at least for larger employers -- fixed administrative costs can be spread over large numbers of people, thus reducing unit costs. And it is also because insurance programs require risk pooling. The second answer has to do with tax incentives for employer-provided benefits.

i. Scale Economies and Risk Pooling.

If an individual applies to an insurance company for a health plan, there is always a possibility that the individual wants the coverage because he or she is already in bad health. Carriers attempt to protect themselves from such risks by requiring medical exams of applicants. But there is still the possibility that individual purchase of insurance will lead to an accumulation of bad risks by the carrier. Medical exams may not catch all high risk applicants. In contrast, if an employer simply enrolls its entire workforce in a health plan, the insurance carrier is likely to obtain a cross section of risks. Thus, the costs of coverage per enrollee will be lower because good risks from the general employee population will offset the bad.

The risk pooling approach helps explain why employers often constrain benefit choices offered to employees. For example, as just noted, the employer may simply enroll every employee in a particular benefit plan, regardless of individual employee preference. There are exceptions to these employer-imposed constraints, but the exceptions can prove to be expensive.

As an example of an unconstrained program, consider arrangements known as "cafeteria plans." Under these plans, the

individual employee is given substantial choice concerning what benefits he or she wishes to select. In its simplest form, the cafeteria plan allocates a pool of benefit dollars to each employee and the employee then distributes the pool across the menu of benefits offered. Thus, some employees might buy dental insurance with their benefit dollars, while others might buy life insurance.

Cafeteria plans are very appealing, since they permit consumer choice. But their drawback is that they encourage "adverse selection." Employees whose children are about to need braces will pick dental insurance. Those employees with serious illnesses in their families will opt for comprehensive health insurance. The premiums for these separate programs will become expensive compared to levels prevailing at firms where everyone must take all of the benefits offered, regardless of preference.

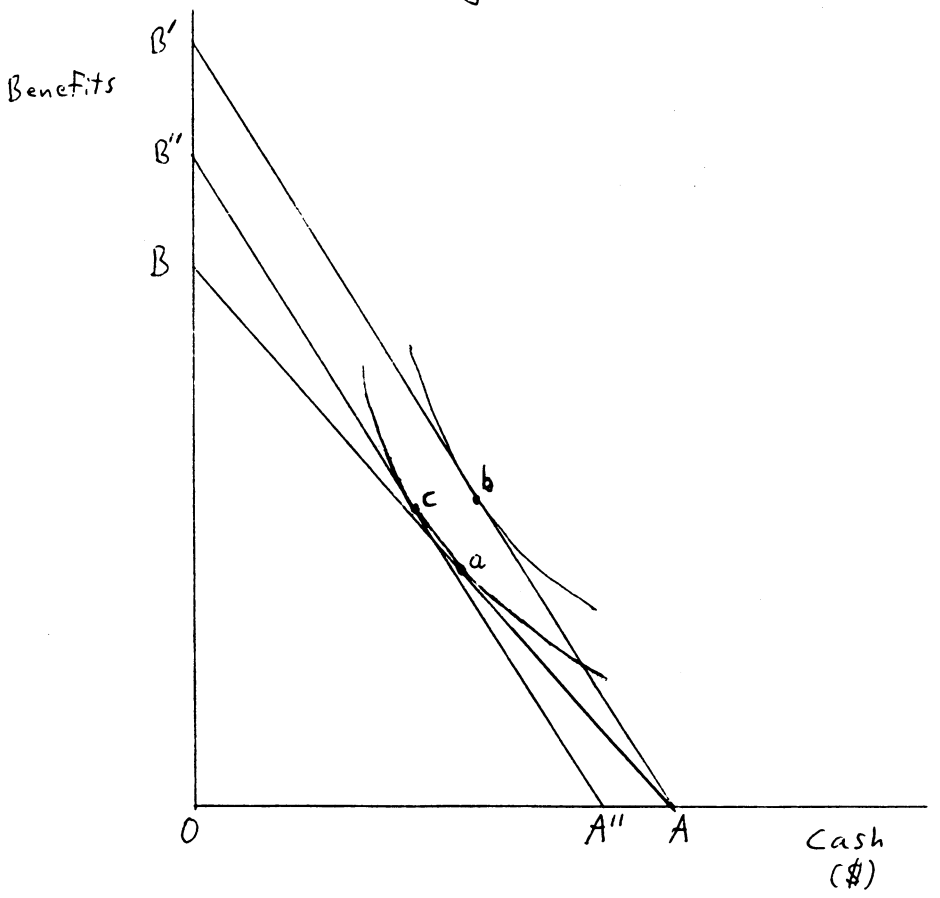
With constrained choices, however, it is likely that there are some economies associated with risk pooling. Although every employee may not be pleased with the benefit package, the average employee receives benefits at a bargain rate. Sophisticated employers will periodically examine their benefit offerings and the desires of their employees to maintain a reasonable matching of employee preference and the compensation package. If the workforce's composition shifts toward parents with young children, for example, the employer might consider offering some

form of child care benefit. As a result of monitoring and reflecting the preferences of the average employee, the employer may be able to economize on labor costs.

Figure 1 illustrates this point. The figure shows indifference curves of an average worker who faces a trade off between cash wages and "benefits." If given only a cash wage income of OA (with no employer-provided benefits), the individual worker would reallocate his or her dollars and purchase benefits along budget line AB in the external market.[21] Thus, at point "a" on Figure 1, the employee depicted maximizes his or her welfare.

If the firm can obtain benefit plans more cheaply than the individual employee and makes such benefits available, the resulting budget line for the worker shown on Figure 1 would rotate in a clockwise direction to a new line such as AB'. The worker would enjoy higher welfare on line AB', by purchasing benefits through the employer at point "b", were the employer to continue to pay out compensation dollars equal to OA. However, there is no need for the employer to provide compensation dollars as high as OA, given the welfare improvement. Compensation dollars can be reduced to OA", leaving the individual with a cash/benefit mix at point "c". At point "c", the individual has the same welfare as at "a", but at a lower cost to the employer.

Figure 1



This analysis suggests that larger employers would be more likely to offer rich benefit packages than smaller employers. Larger employers would have the analysis of scale economies in benefit administration. And, indeed, larger firms do tend to offer richer packages than others. However, the analysis still leaves some basic questions unanswered.

Despite the large firm bias, smaller firms often offer some benefits. Why is this the case if they cannot achieve administrative scale economies?[22] Moreover, the analysis of Figure 1 does not indicate whether it is the employer or the employee who is required to pay for benefits. Determining just who pays for the benefits may not seem important in the analysis just presented, since the employee will end up at point "c" on Figure 1 regardless of who is the payer.[23] But the fact is that employers typically are formally responsible for paying for benefits. Why should this situation be the norm?

Finally, the economies of scale and risk pooling arguments could be applied to any large group, not just a group consisting of employees. Employees might buy benefits through professional organizations, unions, fraternal orders, religious bodies, etc. Yet although some benefits are purchased through such groups, employed individuals are likely to obtain most of their benefits through their employers. It is apparent, therefore, that there

is another influence which tilts preferences toward employer provided and employer paid benefits.

ii. Tax Considerations.

Until World War II, income taxes were not a major consideration for the average person. But with the expansion of government in the 1930s, and the growing use of income taxes as a financing tool for federal expenditures, income taxes became more important in affecting individual and business behavior. During World War II, the federal government grew especially rapidly. And Congress began to discover that it could encourage or discourage activities by providing incentives or disincentives through manipulation of the individual and corporate income tax codes.

A benefit will be discouraged if the employer is not permitted to deduct its cost as a business expense. Making the benefit cost deductible for the employer puts the benefit on an equal footing with cash wages, if the recipient of the benefit must pay current taxes on its value. Permitting the recipient to defer taxes on the benefit beyond the current year provides a net subsidy to the benefit; the employee avoids current taxation, thus earning implicit interest on the taxes saved (and possibly deferring taxation to a future period when he or she will be in a lower tax bracket). A greater net subsidy can be provided if the

benefit is never subject to personal income taxation. It is possible to increase the subsidy even more, if the cost of the benefit can be take as a tax credit by the employer rather than just as a deduction.[24]

The tax treatment of benefits varies substantially. Often, Congress will specify certain attributes the benefit must have in order to be "qualified" for favorable tax treatment. A common rule is that the benefits should be offered in a non-discriminatory manner to employees, i.e., offered to most employees, not just high paid executives. But over the years, Congress has seen fit to incorporate more and more complex requirements into the tax code. Indeed, Congress has tended to view employer-provided benefits partly as a national social welfare program over which it exercises certain oversight authority.

Generally, tax rules for plans which involve saving for retirement (such as pensions) permit employer deductions and employee tax deferral until the benefits are actually paid out. Health and life insurance plans (up to a specified limit) are deductible to the employer and not taxable to the employee. But the precise rules change whenever Congress modifies the tax code. It is the tax code which has provided the greatest incentive for benefit expansion in the post World War II period.

The influence of the tax code can also be seen on Figure 1. Imagine that we start as before with a cash-only wage of OA. If the employer or employee can obtain a tax break by purchasing benefits at work, the effective cost of benefits falls. This fall is reflected in a new budget line AB' which would enable the employee to reach point "b". However, the employer will be able to reduce cash outlays (to OA"), and the employee will maximize welfare at point "c". Congress generally insists that tax breaks will be available only if the employer is the formal payer of the benefits. Hence, employer paid and provided benefits have become the standard practice.[25]

iii. The Union Influence.

Acknowledging the influence of the tax code on benefits raises still another question. What led Congress to use the tax code to stimulate certain kinds of benefits? It is sometimes said that the initial impetus came from a government desire during World War II to stimulate saving rather than consumption.[26] Benefits such as life insurance and pensions are forms of saving. But a close examination of the record reveals that these benefits were not widely available during the War. And really active use of the tax code by Congress was largely a postwar development.

The push for tax-favored fringe benefits seems to have mirrored developments in the union sector. In the late 1930s, various forms of government-operated social insurance benefits (such as Social Security) were adopted as part of the New Deal program of the Roosevelt administration. Unions, particularly those with liberal/left orientations, initially believed that this trend would continue after World War II and that programs such as national health insurance would soon be adopted. But the postwar period saw a more conservative mood in Congress and the expected rapid expansion of social insurance did not occur. Unions -- partly in what they saw as an interim step -- began to try and obtain social benefits directly from employers, rather than wait for the federal government to provide them.

Employers initially resisted fringe benefit demands of unions. Those employers which had such benefits viewed them as symbols of employer goodwill which they wanted employees to appreciate. Employers wanted benefits to be perceived by workers as something which did not arise from unions and bargaining. However, a U.S. Supreme Court decision in the late 1940s declared that employers had to bargain with unions over their benefit offerings.[27] As a result, certain unions became leaders in the innovation of new and expanded benefits.

As unions found themselves more and more in the fringe benefit business, the question of the tax status of these

benefits arose. Unions pushed to have benefits either be exempt from income taxation, or -- at least -- for taxation to be deferred until payments were actually received by workers. In the postwar period, unions were important influences in Congress and so the preferential tax treatment of fringes became ingrained in national policy.

Fringes have special features which appeal to unions. First, they are particularly visible outcomes of bargaining which convince workers of the union's ability to improve conditions. If union bargaining strength is used to obtain, say, another 1-2% wage increase, workers have no way of ascertaining whether such an increase might have been forthcoming in any case. But if the union can come up with a new, highly visible benefit, worker loyalty to the union can be strengthened. The union simply is following the same strategy used often by sellers of consumer products; rather than cut the price directly, the seller relies on visible rebates, coupons, gifts, etc. so that the consumer will appreciate the bargain being offered.

Second, fringe benefit often favor senior workers over juniors. Pension plans, for example, often provide no benefit at all to short service employees who leave the company after a few years. Typically, pension formulas require a significant period of attachment to the firm before benefit entitlement ("vesting") occurs. Actual retirement benefits, even after vesting, are

frequently tilted towards long-service employees in the "defined benefit" plans favored by unions.

As we will see in the chapter on collective bargaining, there are built in political incentives within unions to favor senior workers. Fringe benefits have become a means to this end. Thus, it is not surprising that the union sector provided a substantial impetus for the growth of fringe benefits and for reinforcement of such growth through the tax code.

iv. The Benefit Lobby.

As benefits expanded, unions were joined by other interests in maintaining and enlarging the tax preferences for fringes. Insurance companies and management consulting firms who sold benefit plans became a component of the fringe benefit lobby. And employers, whose compensation system became more and more tilted towards benefits, also joined the effort. Finally, as the number of covered employees rose, these employees themselves became an element in the politics of fringes.

Although Congress has tinkered with the tax treatment of benefits, the basic structure which arose after World War II has remained intact. From time to time, the question of why employers should be the providers of benefits is raised by academics. But the issue has become just that; an academic

question. Modern HRM administrators correctly assume that benefit management will be part of their responsibility indefinitely.

v. Employer Advantages.

In 1929, wages and salaries accounted for 99% of employee compensation in the private sector. That is, fringes (paid by the employer) were virtually non-existent, although some large firms did offer limited -- although well publicized-- benefits.[28] The historical evidence suggests that employers did not rush into the offering of fringes until they were subjected to external pressures and incentives. They did not see an advantage in doing so before the 1930s, 40s, and 50s brought union pressure and tax incentives.

However, the fact that employers probably would not have initiated the proliferation of benefits which is now common does not mean that no advantages from offering fringes accrue to employers. All that can be said is that these advantages were not perceived to exist (or were not perceived as being sufficiently important) for employers to develop modern complex compensation arrangements unilaterally.

Advantages from Pension Plans.

Economic analysis has been applied to the provision of benefits from the employer perspective (apart from the tax, scale, and risk pooling aspects already discussed). The emphasis in this analysis has been on cost savings and productivity improvements resulting from benefit-related turnover reduction and incentives. Generally, these effects have been associated with deferred benefits such as pensions, particularly those for which there is a significant waiting period before benefit eligibility occurs. For convenience, this section concentrates on pension plans as examples.

Pension plans come in two basic varieties: "defined contribution" and "defined benefit." Under a defined contribution plan, the employer regularly contributes a sum on behalf of the employee to a trust fund. The contributed sum is typically fixed by formula and geared to the employee's current wage. When the worker retires or leaves the firm, he or she receives the employer contributions plus whatever has been earned as a return on the investment.

At the time of separation, the funds accumulated under a defined contribution plan can be rolled over into another tax-deferred vehicle (such as an I.R.A. account) by the departing employee or -- at retirement age -- used to purchase an annuity.

In the latter case, the monthly income received from the annuity will depend on actuarial considerations (age and health of the worker) and the relevant market returns on funds then prevailing.[29] The worker has no guarantee concerning the eventual monthly payment which will be received. He or she thus assumes the risk resulting from uncertainty over future market interest rates and over his/her future health condition.

Under a defined benefit plan, in contrast, it is the employer (or, more accurately, the plan) which assumes the risk.[30] The employee's monthly pension is set by a formula. Such formulas typically reflect the wage, years of service to the firm, and age (each of which tends to increase the pension). Under the Employee Retirement Income Security Act of 1974 (ERISA), the employer must put aside sufficient resources today to fund tomorrow's liabilities.[31] But since the actual cost of the obligation will depend on the future course of earnings of the pension fund portfolio, the age composition of the workforce, etc., the amount put aside can only be an estimate.

Defined contribution plans typically do not have prolonged vesting periods. Often, vesting under such plans is immediate. The employee can take whatever is in his or her account upon departure from the firm. Defined benefit plans, however, often do have long vesting periods. Until 1986, a common rule was that vesting would not occur until 10 years of service. This type of

vesting is known as "cliff vesting" because all the vesting occurs on a single date. In 1986, new legislation brought the maximum cliff vesting period down to 5 years in private employment.[32] However, even with a 5-year rule, many workers may enter and leave the firm's employment without picking up any pension entitlement.

Even apart from vesting, the formulas of defined benefit plans tend to discriminate against shorter service employees. If an employee quits soon after the vesting period, he or she will be entitled to something. But that something will probably be less than the discounted value of the future pension, had employment continued. Thus, the combination of significant vesting periods and formulas which discriminate against short service job leavers creates an incentive for workers to stay with the firm. Put another way, defined benefit pension plans tend to reduce employee quits by creating what are poetically called "golden handcuffs." And quits, we know, can be expensive to the employer.

Defined benefit pensions increase in value to the employee as service increases. Thus, they create an incentive for continued productivity (in the presence of imperfect monitoring by the employer's supervisory agents). If a worker were to be terminated for inadequate performance, he or she would "pay" a heavy penalty in terms of partially forfeited pension

entitlements. The pension "right" (which is in fact contingent on satisfactory job performance) functions as a quasi-performance bond.

Note also that the magnitude of the "bond" rises with age and service. This feature ties pensions into efficiency wage theory. Under that theory, as discussed in the previous chapter, employers would adjust wages so that a penalty would be suffered by a worker fired for malfeasance, shirking, or inadequate performance. As a worker approaches the end of his or her working life, the bond must become progressively higher, since lost income associated with job termination could extend for only a few remaining years.

Efficiency wage theory suggests that employers would therefore create upward sloping seniority/wage profiles to make end of working life non-performance sufficiently costly for the employee. Defined benefit pension formulas create similar incentives by establishing a large reward (penalty) for high (low) productivity. Thus, offering a defined benefit pension is a partial substitute for an upward sloping wage profile. It has been found, for example, that unionized employers offer flatter wage profiles than others, but are more likely to have defined benefit pensions. Thus, pension/wage profile substitution may be occurring.

There is still another aspect of efficiency wage theory which links it to employer pension policy. If the earnings profile is tilted upward for reward/penalty purposes, there comes a point late in working life in which the gap between current wage and actual value to the firm becomes "excessive." Older workers will earn substantially more than their current value to the firm -- according to this view -- and the employer will be increasingly tempted to replace them with younger (new entrant) workers.

Simply firing older workers capriciously would violate the implicit contract which underlies the profile. To avoid such violations, some advance understanding about when the contract ends could be included in the implicit arrangement. Thus, efficiency wage and implicit contracting considerations suggest that with an upward sloped earnings profile, the firm will want to specify a mandatory retirement age.

However, what the firm wants, and what it may legally do, can diverge. For various reasons (including fears of inadequate Social Security revenue if too many elderly workers retired and drew benefits rather than paid taxes), Congress has legislated against age-related mandatory retirement. The federal Age Discrimination in Employment Act (ADEA) of 1967 originally forbid mandatory retirement below age 65 for most employees. In the

late 1970s, this floor was raised to 70. And in 1986, ADEA was further amended to forbid mandatory retirement at any age.

Because of these constraints, employers need some device to induce retirement without actually requiring it. A retirement benefit which peaks in value to the employee at the age at which the employer would otherwise want to require retirement may be that device. In this view, then, pensions are an important part of overall HRM policy.

Despite these advantages of defined benefit pensions, nonunion employers more typically offer the defined contribution alternative. The latter is, as already noted, less risky for the employer and cheaper to administer. Moreover, Social Security--which provides defined benefits -- creates strong retirement incentives in the age range around 65 years. Given Social Security incentives, many employers may feel that added inducements from their own plans are unnecessary. They see some advantage from defined benefit plans, but not enough to outweigh the disadvantages.

Although a variety of legal restraints are placed on underfunding of defined benefit pension plans by ERISA, significant underfunding is quite common. Where a plan is underfunded, employees are in effect placing their trust in the ability of the firm to survive in the market place and cover

benefit obligations. By underfunding, in addition, the firm is sharing the risks of the market place with its employees.[33]

Such a situation enhances the stake employees have in the firm and its continuation. There may be an advantage to employers in unionized situations to have this group stake in the firm's economic health accentuated through a defined benefit pension. The union is less likely to take actions which might undermine the firm's economic well-being.[34]

Defined benefit pensions are not the only employee benefit plans which accord some advantages to the employer. But they are the most prominent example. Any many other benefits really do not closely match the efficiency wage/implicit contracting model (although they can be justified by scale/risk pooling/tax incentive considerations). Moreover, the regulation of benefits by Congress makes their use for long term HRM policy difficult. As the history of the ADEA indicates, Congress can easily override employer inclinations. (Congress is already concerned about "excessive" inducements to retire under pension formulas, for example).

Employer Advantages from Wellness and Health Benefits.

The auction market model of the labor market -- in which no ongoing relationship between employer and employee exists -- is incompatible with the phenomenon of employer "wellness" efforts. In an auction world, the employer would always hire those workers who were in adequate health and avoid the others (or pay them lower wages). Since no ongoing employer/employee relationship exists in an auction world, employers would not be concerned about the future health of workers they had on the payroll at a particular moment.

In the real world, however, employers increasingly offer programs to help employees to stop smoking, to end alcohol or drug dependencies, or to resolve family or personal problems via counseling. Today such programs are often known as -- or associated with -- "Employee Assistance Programs" (EAPs). But some observers trace the origins of wellness programs all the way back to the "welfare work" which certain firms undertook early in this century.[35]

Health problems of employees can affect employers adversely in several ways. They may reduce productivity, cause safety problems and accidents, lead to increased absenteeism, or run up health insurance and workers' compensation costs. None of these adverse effects could occur, of course, if the employer felt completely free to terminate any employee whose productivity fell

below standard, assuming such falls could be perfectly and immediately detected. The existence of EAPs is yet another sign of the ongoing employer/employee linkage.

As in many other aspects of HRM practice, the employee wellness area could benefit from a substantial dose of quantification. There are no good data on exactly how many EAPs actually exists, let alone what their effect has been. A study by the Conference Board in 1984 surveyed "senior human resource officers" and found that about one fifth reported significant EAP activity in their firms.[36] Another study reports that a typical EAP has saved employers far more than its operating costs and suggests that employers who don't install them are at best short sighted.[37] Yet, since few studies have been undertaken, it is difficult to accept these conclusions uncritically.

Perhaps the lack of hard data on wellness programs and EAPs should not be surprising. Firms may well be reluctant to provide information on their EAP experience. For example, even if very successful EAP experience has occurred, reports that "we solved our drug problem" risks public disclosure that a drug problem <u>once</u> existed. And concerns about drug usage on the job could make such information damaging.

Despite difficulty in obtaining survey information from other firms, employers can use their own internal data sources to

monitor the before and after effects of EAPs. They can examine records on absenteeism, accidents, and health insurance, for example. (Use of individual employee data, however, poses problems since EAP experts insist that strict confidentiality is a key ingredient of success). EAP operations typically fall within the purview of the HRM department which should be making cost/benefit analyses of all such programs.

VI. An Empirical Look at Benefits.

There are two types of data available on fringe benefits. Cost data provides information on the expense of fringe benefits paid by the employer. Such data are inevitably based on actual, out of pocket expenses. The incurring of unfunded liabilities will not be reflected. In addition to cost data, information is available on the incidence of particular benefits, i.e., the proportion of the workforce covered by various plans. Costs data are available from the national income accounts and a Chamber of Commerce survey. Incidence data appear in reports of the Bureau of Labor Statistics.

i. Data on Benefit Costs.

The national income (GNP) accounts provide only very aggregative information on benefits, as illustrated on Table 8. Table 8 shows that the nonwage element of compensation has

Table 8

Trends in Nonwage Compensation, 1929-85

Year	Nonwage Compensation as Percent of Total Compensation		
	Total	Legally-Required[1]	All Other[2]
1929	1%	n.a.	n.a.
1939	4	n.a.	n.a.
1949	5	2%	2%
1959	7	3	4
1969	10	4	6
1979	15	6	9
1985	17	6	11

Note: Details need not sum to totals due to rounding.

[1]Social Security, Railroad Retirement, unemployment insurance, and workers' compensation.
[2]Private, public, and military pensions, health insurance, life insurance, supplementary unemployment benefit plans, and other.

Source: U.S. Bureau of Economic Analysis, The National Income & Product Accounts of the United States, 1929-76: Statistical Tables (Washington: GPO, 1981), Tables 6.5A, 6.6A, 8.4; Survey of Current Business, vol. 63 (July 1983), pp. 71, 94; Survey of Current Business, vol. 66 (July 1986), pp. 65, 85.

historically risen. Roughly a third of nonwage compensation was "legally required" in 1985. This component includes Social Security taxes paid by the employer, unemployment insurance taxes, and premiums paid to private workers' compensation carriers or state-operated workers' compensation funds. The remainder of nonwage compensation, as defined in the national income accounts, includes such items as payments to pension plans and insurance programs.

While national income account data are useful for pointing to general trends, their lack of detail means that they are of only limited use for benefit planning within the firm. More detailed information on benefit costs is provided in an annual survey conducted by the Chamber of Commerce of the United States covering hourly-rated employees in the private sector. A thousand employers were involved in this survey in 1985. The Chamber's data break out different types of benefits including paid time-off (such as vacations) along with pension and insurance programs.

Highlights from the Chamber's survey are shown on Table 9. As can be seen, the table indicates that over a fourth of labor compensation comes in the form of benefits. This figure is higher than the level indicated by the national income accounts for two reasons. First, the Chamber's report includes more items under the benefits heading. Vacation pay, for example, is a

Table 9

Composition of Compensation Reported by Chamber of Commerce Survey, 1985

Type of Payment	Payment as Percent of Private Compensation	Payment as Percent of Private Benefits
Average hourly earnings	72.6%	--
Legally-required payments	6.9	--
Private benefits	20.5	100.0%
Pensions	3.0	14.8
Life, health, and related insurance	5.2	25.5
Disability insurance	.4	1.8
Dental insurance	.3	1.4
Vacation payments	3.5	17.1
Holiday payments	2.0	10.0
Sick leave	1.0	4.7
All other	5.1	24.7
Total Compensation	100.0	--

Note: Total private benefits = $2.953; legally-required payments = $.994; average hourly earnings = $10.46. Study based on responses from 1,000 employers.

Source: Chamber of Commerce of the United States, 1985 Employee Benefits (Washington: Chamber of Commerce, 1986), pp. 12, 25.

benefit to the Chamber, but is treated as a form of wage payment in the national income accounts. Second, the Chamber's survey may underrepresent small employers who tend to pay less of their compensation bill in the form of benefits.[38] As is often the case with private surveys, detailed information on the nature of the sample and potential biases is not available.

Users of Chamber of Commerce data need to be cautious about casually citing summary data. The Chamber generally reports benefits as a percent of payroll, rather than as a percent of total compensation. Use of the smaller denominator inflates the estimates. Thus, the publicized figure for 1985 from the Chamber's survey was that private and legally-required benefits accounted for almost 38% of payroll (rather than the slightly over one fourth of compensation as shown on Table 9).

Although the reason for the Chamber's peculiar style of presentation is not entirely clear, there may be a public relations factor behind it. Chamber data are often cited to show the great burden (or generosity) which benefits represent to business. Publicizing a large fraction may therefore appear advantageous.

ii. Incidence Data.

In any case, because the design of employee benefits is highly complex, compensation planners will have only limited use for cost data. Such data are mainly useful as a benchmark against which a firm's own overall benefit costs can be measured. And cost data are only a rough guide, since -- due to variations in demographic factors -- the identical benefit may produce different costs at different firms.[39] Of greater interest will be the frequency with which particular plans are offered and the specific formulas embodied in particular plans.

During the 1980s, the U.S. Bureau of Labor Statistics has developed a benefit survey designed to capture information of this type. The survey applies only to medium and large sized firms, thus biasing the sample toward employers likely to have richer benefit packages.[40] It also limits its coverage to full-time workers. (Part timers are less likely to enjoy fringe benefits). Thus, only about a fourth of the private sector workforce is reflected.

A sample of the BLS data is presented on Table 10. As can be seen certain types of benefits -- such as retirement plans and health insurance -- are nearly universal for full-time workers in firms of significant size. But disability plans are less common. An HRM compensation specialist in a firm whose benefit package looked very different from the average might well want to examine

Table 10

Sample Data from the BLS Survey of Employee Benefits in Medium and Large Sized Firms, 1986

Frequency of Plan Incidence

	Percent of Full-Time Employees Receiving Benefit
Retirement plan(s)	89%
Health insurance	95
Short-term disability	49
Long-term disability	48
Paid vacations	100
Paid holidays	99

==========

Replacement Ratios Under Defined Benefit Pension Plans

	Earnings Replacement Ratios for Employee with 25 Years of Service	
Final Annual Earnings	Pension Only	Pension Plus Social Security
$15,000	26%	69%
$30,000	23	53
$40,000	24	46

Source: U.S. Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1986, bulletin 2281 (Washington: GPO, 1987), p. 4 (upper panel), p. 67 (lower panel).

the reasons for the deviation. Is there some motive of corporate strategy which accounts for the difference?

Table 10 also illustrates some of the more detailed information on particular benefit plans available from the BLS survey. For example, one measure of pension "adequacy" is the ratio of initial pension benefit to final year's earnings. This measure -- the "replacement ratio" -- is simulated for various earnings/years of service profiles by the BLS. As the table shows, a worker with 25 years of service can expect to replace roughly half of pre-retirement income from a combination of Social Security and pension.

This replacement ratio represents a potentially drastic fall in income. Thus, a firm hoping to encourage retirements as a way of making a voluntary workforce reduction might meet resistance. Special severance pay arrangements or pension supplements might also be required. Particularly with the outlawing of mandatory retirement, firms might want to consider encouraging employee use of additional savings arrangements.

For example, the BLS study reports that less than a third of the employees within the scope of the survey had available "401(k)" plans (tax-deferred savings arrangements). Savings plans -- such as 401(k)s -- can supplement retirement income from pension and Social Security. Their availability may also help

induce retirements of older workers who can no longer be mandatorily retired.

The complexity of the benefit field poses an empirical problem for those who would provide data and those who would use it. Even the best external surveys can provide only a general guide for internal benefit planning. Ultimately, a firm's benefit package should reflect the needs of its employees and its HRM objectives (such as turnover control or retirement encouragement). What others are doing is useful, but not decisive, information.

VII. Looking Ahead.

In this chapter, the compensation decision was examined from various perspectives. Generally, we looked at questions which need to be asked periodically, but not necessarily every year. The firm must establish its general pay policy: Does it want to be a relatively high, low, or average paying employer? It needs also to establish an internal wage structure, i.e., pay differentials between jobs. And it needs to determine its preferred mix of wages versus benefits.

Once these basic decisions are made, however, general pay adjustments must be regularly considered. Even in a period of low inflation, such as the mid 1980s, nominal wages creep upward.

A firm which failed to take account of this external creep would eventually find its pay level progressively falling behind the outside market. During periods of high inflation, such as the late 1970s, the problem of keeping up with the external labor market is even more acute. Thus, the next chapter addresses the issue of making pay adjustments.

The benefits area, especially, is one of public policy concern. It will be seen in a later chapter that benefit administration is importantly affected by equal employment opportunity policy, for example, and by health care cost containment policy. It is not possible for HRM specialists to make internal benefit decisions without an eye on Congress and the courts.

FOOTNOTES

1. Information on BLS wage data and methodology can be found in U.S. Bureau of Labor Statistics, BLS Measures of Compensation, bulletin 2239 (Washington: GPO, 1986).

2. The earnings, hours, employment, and payroll data apply to the pay period containing the 12th of the month.

3. Railroad retirement is a government-run retirement program for railroad employees which is similar to Social Security. It was established during the Great Depression of the 1930s when private railroad pension plans failed.

4. However, some state and local workers and agricultural workers are not covered by UI and thus are excluded from the data.

5. For information, see Sanford M. Jacoby and Daniel J.B. Mitchell, "Alternative Sources of Labor Market Data" in Barbara D. Dennis, ed., Proceedings of the Thirty-Eighth Annual Meeting, Industrial Relations Research Association, December 28-30, 1985 (Madison, Wisc.: IRRA, 1986), pp. 42-49.

6. An exception is the Top Executive Compensation series published by the Conference Board annually.

7. Bureau of National Affairs, Inc., Wage & Salary Administration, PPF Survey No. 131 (Washington: BNA, 1981), p. 4.

8. See Donald J. Treiman and Heidi I. Hartman, eds., Women, Work, and Wages: Equal Pay for Jobs of Equal Value (Washington: National Academy Press, 1981); Donald J. Treiman, Job Evaluation: An Analytic Review, interim report to the Equal Employment Opportunity Commission, staff paper (Washington: National Academy of Sciences, 1979).

9. For information on the Australian case, see Daniel J.B. Mitchell, "The Australian Labor Market" in Richard E. Caves and Lawrence B. Krause, eds., The Australian Economy: A View from the North (Washington: Brookings Institution, 1984), 127-193.

10. Perry C. Beider, B. Douglas Bernheim, Victor R. Fuchs, John B. Shoven, "Comparable Worth in a General Equilibrium Model of the U.S. Economy," working paper no. 2090, National Bureau of Economic Research, December 1986.

11. Peter B. Doeringer and Michael J. Piore, Internal Labor Markets and Manpower Analysis (Lexington: Mass.: Heath, 1971).

12. The index of compensation per hour for the nonfarm, business sector is used in the text as a guide to wage trends.

13. Eric G. Flamholtz, Human Resource Accounting, second edition (San Francisco: Jossey-Bass, 1985), chapter 12.

14. Some employees may not quit, but may simply not be found capable of rising to the higher position. Or it may turn out that a qualified, lower-level employee is simply not needed in the higher job.

15. Flamholtz, Human Resource Accounting, ibid., pp. 347-378.

16. There is a problem in allocating development costs. For example, an entry level employee may receive some initial training which is partly useful in the initial job, but which also would be useful in the eventual job at the top of the career ladder. The firm may recapture some of the training cost in the entry position, even if the employee quits before rising through the hierarchy.

17. Employers may have personnel manuals in which some of the rules are written down. In some cases, courts have treated these manuals as contractual obligations.

18. Workers in government jobs may be covered by written civil service procedures which act as quasi-contractual protections.

19. Sanford M. Jacoby and Daniel J.B. Mitchell, "Management Attitudes Toward Two-Tier Pay Plans," Journal of Labor Research, vol. 7 (Summer 1986), pp. 221-237.

20. There have been complaints about the absence of notice, or of very short notice, prior to plant closings. Since long advance notice might help workers obtain alternative jobs, absence of notice is viewed as unfair by employees. From the employer perspective, if everyone began to depart -- including the best (and most marketable) employees -- plant operations would suffer in the pre-closing period. The employer advantage in not disclosing the shutdown in advance is not tempered by future employee morale deterioration, since the employment relation is about to end. The plant closing issue will be discussed in a later chapter.

21. The slope of AB is the inverse of the price of benefits.

22. It should be noted that small employers can still offer risk pooling economies to insurance carriers. If employees are automatically enrolled in a benefit program, regardless of preference, adverse selection will not occur. By soliciting business from many small employers, the carrier can achieve a broad cross section of risks. However, dealing with many small employers will raise administrative costs. Particularly where unions are involved, small employers may band together into associations and provide benefits through these groups, thus

reducing administrative costs.

23. Neglecting the tax considerations discussed in the next section, there is no difference in welfare between a $500 per week employee who must contribute $50 to a benefit plan and a $450 per week employee whose employer contributes $50 toward the same benefit. But as we will see, under existing tax law, the welfare difference could be considerable.

24. As noted in a previous chapter, Congress created a benefit know as a PAYSOP plan in the early 1980s under which employees were given stock in their firms paid held by a trust. The stock was to be held for employees for retirement and similar purposes. Employer contributions to the PAYSOP trust were taken as a tax credit, i.e., the employer's tax liability was reduced dollar for dollar for each dollar of stock contributed. Thus, the federal government effectively bought the stock for employees. The employees paid no income tax on shares received until the stock was withdrawn. As a result, the subsidy to PAYSOPs exceeded 100% of their cost. Not surprisingly, Congress decided to end this subsidy as part of tax modifications passed in 1986.

25. Certain qualifications need to be made to this statement. In some cases, employers want to share costs with employees (despite tax incentives) to limit excessive usage of the benefit. This issue arises particularly with regard to health care costs. Employers may feel that if employees pay a deductible or receive only partial reimbursement of medical expenses, they will economize on the use of medical services. Another point is that employers can offer plans under which salaries are reduced for tax purposes and the resulting money diverted into benefits which the employee would otherwise need to fund. The employee thus pays for benefits on a pre-tax basis, blurring the distinction between an employer-paid and an employee-paid benefit.

26. World War II involved a substantial reallocation of production away from consumption goods and toward military output. If consumers saved more, they would spend less on scarce consumer goods, thus facilitating the reallocation, so the argument went. The argument, of course, neglects the possibility that if employees have savings put away from them through work-related benefit plans, they may reduce saving from their own cash incomes. The latter effect could, at the limit, offset the former.

27. Inland Steel Co. v. NLRB (1948).

28. Sometimes, insurance companies saw an opportunity to sell policies to employees of larger firms and would induce the employer to cooperate.

29. Under a Supreme Court decision, an annuity offered through an employer cannot be based on separate actuarial tables for males and females, although women on average live significantly longer than men. This aspect of public policy will be discussed in a later chapter.

30. By law, pension plans are established as independent entities with their own trustees. The employer, however, has liability for underfunding. In potential mergers and acquisitions, the pension liabilities of the target firms are routinely evaluated along with other assets and liabilities. Sometimes, pension liabilities are crucial elements in determining the success or failure of such deals and/or the prices involved.

31. In fact, pension plans are often underfunded. Many plans were not fully funded when ERISA went into effect, and were given time to correct their underfunding. In addition, firms in shaky financial situations can sometimes win approval to delay full funding. Public policy in this area will be discussed in a later chapter.

32. ERISA provides alternatives to the 5-year rule.

33. Rebecca A. Luzadis, "Defined Benefit, Defined Contribution, or No Pension?" in Barbara D. Dennis, ed., Proceedings of the Thirty-Ninth Annual Meeting, Industrial Relations Research Association, December 28-30, 1986 (Madison, Wisc.: IRRA, 1987), pp. 222-225.

34. The risk sharing and stakeholder effects of defined benefit pensions are complicated by the requirement that such plans be insured through a federally-run corporation known as the Pension Benefit Guarantee Corporation (PBGC). The PBGC is supposed to guarantee pension payments of bankrupt plans. However, retirees may not receive 100% of the pensions they would have received from the PBGC. And workers with considerable tenure with the firm, but whose pension plan is terminated before they reach retirement age, will typically suffer a significant capital loss.

35. Donald W. Myers, Human Resources Management: Principles and Practice (Chicago: Commerce Clearing House, 1986), pp. 612-619.

36. Helen Axel, Corporations and Families: Changing Practices and Perspectives, report no. 868 (New York: Conference Board, 1985), p. 49.

37. Bureau of National Affairs, Inc., Alcohol & Drugs in the Workplace: Costs, Controls, and Controversies (Washington: BNA, 1986), pp. 45-49.

38. The average annual wage reported by the Chamber is somewhat higher than the private-sector equivalent reported in the national income accounts, suggesting a larger firm bias in the former. It should be noted that the two surveys differ in that the national income accounts include the public sector, while the Chamber of Commerce survey does not.

39. Workforce demographics will play a role in determining costs. An older workforce, for example, will raise the costs of a health care plan.

40. The size cut off varies from 50 to 250 workers, depending on industry.