Towards a Working Definition of Compensation

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Workers receive more than wages in exchange for their services. Labor costs consist of compensation—wages and benefits received by employees from employers in exchange for their services—as well as other costs associated with maintaining and supporting a staff. As capital and labor costs have become increasingly intertwined, distinguishing between them has become problematic. This has rendered the job of estimating the full cost of labor ever more difficult. At the same time, the advent of new benefits has made measuring compensation costs more complicated.

Prior to the twentieth century, virtually all compensation was paid in wages, so wages were a fair measure of compensation. Workers had no employer-provided benefits, or non-wage compensation, such as health insurance, sick leave, or retirement pensions. At the same time, there was a clearer distinction between capital costs and labor costs. Since workers required little formal training from their employers, the concept of labor cost was not encumbered by investments in training. Because of this, wages traditionally were used to measure total compensation and as a proxy for labor costs. The complexity of today's employer-employee exchange requires a detailed look at how we measure compensation and how we define labor costs.

Measures of total labor cost and compensation serve diverse purposes. They are used in the analysis of inflation and are examined for interindustry and interarea comparisons. Firms use these measures to determine factors in a variety of business decisions, such as how many employees to hire and where to locate the business establishment, and what level of compensation should be provided to employees.

This article identifies some of the major changes in labor costs, developments in compensation practices, and alternative concepts of labor cost and compensation. At the same time, the article attempts to relate these concepts to a working definition to be used by the Bureau of Labor Statistics (BLS) in its data series on compensation measures. This working definition reflects two contrasting perspectives of compensation, a dichotomy that arises because the value an employee places on compensation received need not equal the employer's expenditures. However, given the measurement problems inherent in determining the employee's value of compensation that are described here, the employer expenditures series serves as the best available proxy.

Major developments in labor costs and compensation practices

The definition of labor costs has

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become more complex as our economy has evolved. In an agrarian economy, most people worked on small farms and performed jobs that required little formal training, and compensation was often payment in kind (in the form of food and shelter). The trend toward monetary payments for labor corresponded with the genesis of the industrial era, when workers were paid a wage for their efforts, and employers incurred few other costs in hiring labor. With the development of an industrial economy, workers were required to perform duties that required the use of complex tools and skills, necessitating formal training that was frequently firm specific.

As the nature of work evolved, so did compensation practices.[1] Until the 1930s in the United States, most workers received compensation only for straight time worked or units produced, and were responsible for their own long-term economic security. Although some pension plans had been in existence since the latter part of the nineteenth century, generally employees had to deal with the risk that income would be cut off because of sickness, accident, unemployment, or infirmity in old age. In the rare instances where workers were given pensions, the practice was viewed as charity, at the discretion of the employer, not a right of the employee to something earned. "Fringe" benefits, as their name implied, were relatively insignificant, and available to the privileged few.

The growth of benefits in this country can be traced to many factors including:

- The advent of legally required benefits;
- Unionization;
- Preferential treatment under Federal personal and corporate income tax laws;
- Group purchase savings; and
- Employer efforts to reduce turnover.

Legally required benefits. The Great Depression was the catalyst to the launching of a host of federally mandated benefits paid by employers. The New Deal established two Federal programs that provided employee protection against financial insecurity—Social Security and unemployment insurance. Other income protection, such as worker's compensation, became available through State laws. These benefits are financed through employers' contributions to specific funds.

Unions. Because the labor shortages of World War II put wages at risk of inflation, the War Labor Board imposed a ceiling on wage rate increases. This encouraged negotiation for new and improved benefits, such as paid vacations and holidays, insurance, and pension coverage, that were exempt from the restrictions placed on wage increases. After the war, these benefits continued as part of collective bargaining agreements between labor and management. Many benefits that first showed up in union contracts were later extended to nonunion workers as well.

Taxes. Generally, both employers and employees have an incentive to choose increasing amounts of benefits over wages alone even though benefits are valued differently by employers and employees. Since the employee pays taxes on wages but not on all benefits, there is a greater net gain in compensation to the worker at no additional cost to the employer when the employee receives benefits in lieu of wages. For instance, some benefits (like paid leave) are taxed, others are tax-deferred. And, corporate tax rules provide employers with an additional incentive to offer benefits in lieu of wages.[2]

Group-purchase savings. By purchasing benefits for groups of employees, employers can negotiate with insurance companies for a lower cost for life and health insurance than individual workers would pay for the same benefit. The benefit provider is able to offer the same benefit at lower rates because of savings in administering the plan for large groups and spreading the risk over a larger group.

Reduce turnover. In their efforts to limit the costs of recruiting and training new workers, employers seeking to reduce labor turnover often design benefit packages that are worth more the longer employees stay. An example of this is paid vacations, the amount of which is usually directly associated to length of employment with the firm.

Deferred compensation is a particularly effective way to reward continuous service. Defined benefit pension plans, a form of deferred compensation, give employees an incentive to remain with their firm, since the amount of money received upon retirement is correlated to length of employment with a firm.

The current compensation picture

Prior to the New Deal, benefits comprised about 1.7 percent of total compensation;[3] by 1995, this had jumped to 28.4 percent. The growth in legally required benefits only partially explains the continued growth of benefits over time. The benefits portion of total compensation varies by industrial group, occupational characteristic, full- and part-time employment, union status, and size of establishment. (See table 1.)

While compensation packages are diverse, legally required benefits on average account for about one-third of all benefit costs. Health insurance accounts for over one-fifth of total benefit expenditures and has been rising steadily. From 1965 to 1991, employer contributions to private health insurance premiums increased from $4.9 billion to $152.7 billion annually.[4] (See table 2.)

Table 1. Benefit costs as a percent of total compensation, March 1995

All private industry	28.4
Industry group:	
Goods producing	32.7
Service producing	26.5
Occupational characteristic:	
White-collar workers	27.0
Blue-collar workers	32.4
Service workers	24.3
Full-time/part-time employment:	
Full-time workers	29.5
Part-time workers	20.1
Union status:	
Union workers	35.7
Non-union workers	26.8
Size of establishment:	
Small establishments (1-99 employees)	25.9
Large establishments (500+ employees)	30.1

SOURCE: Employer Costs for Employee Compensation, March 1995, USDL 95-225, June 22, 1995.

Table 2. Components of benefits, all private industry, March 1995

	Percent
Total benefits	100.0
Legally required benefits	32.8
Insurance	23.7
Health insurance	21.9
Life insurance and sickness and accident insurance	1.6
Paid leave	22.5
Supplemental pay	9.7
Retirement and savings	10.7
Other	.6

SOURCE: Employer Costs for Employee Compensation, March 1995, USDL 95-225, June 22, 1995.

The emergence of new benefits, changes in some legally mandated ones, and an increase in the prevalence of others present unique measurement problems. One example is reimbursement accounts,[5] for which the employer cost is limited to expenses incurred in administering the benefit. Deductions are made from employee pay based on the individual's annual assessment of future child-care and medical needs. These deductions are excluded from taxable income, and are reimbursed to the employee by the employer after receipts for these expenditures are filed. The employee receives a tax advantage by reducing taxable income, while the employer's cost is restricted to processing the account.

In sum, the growing complexity of compensation practices highlights the difficulty in defining and developing measures of total labor costs and compensation. Stephen A. Woodbury points out that "the problem of measuring total real compensation has increased as a smaller fraction of compensation has been taken in an easily measured form such as wages."[6]

Defining the "cost of labor"

Before the advent of this vast array of benefits, the idea of the "wage" as the "price of labor services" was deeply embedded in economic thought.[7] However, this concept is being reëxamined in light of the need to develop measures of labor costs and the price of labor services that capture increasingly complex compensation practices.

The following is a discussion of two different concepts of labor costs. The first, "full labor cost," includes all employer outlays associated with the utilization of labor services. The second, "labor exchange rate," is a subset of full labor cost, restricted to costs incurred by the employer and received by employees in exchange for labor services. The evaluation of this exchange rate from the employer's perspective is not necessarily equal to the value the employee places on the compensation package.

Full labor cost

Inherent in the definition of full labor cost is that compensation includes not only the pay received by employees, but also all items associated with hiring and using labor as a factor of production. The idea underlying this definition of labor cost is the inclusion of the several types of expenses, not just wages and benefits, which are necessary for the employment of labor. Using this model, the costs of labor include the costs associated with administrative overhead, such as the expenses incurred in processing payroll and providing personnel services. The concept of full labor cost does not represent the exchange rate in the labor market, but an extremely complex set of inputs.

The development of the labor cost concept stemmed from an analysis of the demand for labor and the inflationary pressures arising from the cost of employing labor. Turnover and hiring costs are recognized as part of total labor costs that vary for different classes of workers.[8] Turnover among workers who have specific skills needed by a firm is very costly, because new workers require training before they perform at the same level as experienced workers. These costs are included in the full cost of employing labor and are determinants of the demand for labor. These costs have been used to explain employers' decisions to lay off or recall workers, as well as the employment patterns of groups of workers with varying skills.

Training costs present a myriad of measurement problems. Some training is unique to the firm (i.e., the use of particular equipment) and is of little use to the employee outside the establishment; costs for this training (typically performed on the job) include the time and lost productivity of the trainer. Other training aimed at increasing productivity also provides portable skills that employees can use elsewhere (e.g., remedial reading, word processing). Employers have the option of providing training to current staff on these portable skills, or hiring workers who have previously mastered them. Furthermore, some employers reimburse workers for classes that are totally unrelated to their work. Even when the total dollar amount spent on training may be known, there are still problems in determining the extent to which the training is job related.

In broad terms, the concept of full labor cost entails capturing all costs related to maintaining staff, including some expenditures typically classified as capital costs. Therein lies the difficulty of measuring labor costs using this method, if it is to serve as a basis for programs aimed at measuring compensation. The additional cost of heating or air conditioning a facility so that employees can work in comfortable conditions, and the cost of providing wheelchair access for handicapped workers are examples of this measurement problem. Although these elements of the production function have some value to the worker, they can also be viewed as capital expenditures.

The inclusion of such capital costs in a labor cost measure clouds the very concept of the price of labor services. Furthermore, the interpretation of the behavior of a labor cost measure defined so broadly would be impossible to evaluate, because its movements would be influenced by the capital and intermediate inputs necessary for hiring and supporting the work force. Employing such a measure would also pose a practical difficulty: making data collection, at best, problematic.

Exchange rate

Employees sell their services to employers in exchange for compensation. The concept of the compensation exchange rate differs from that of the full labor cost because it includes only those items that employees receive. Compensation includes direct payments to the workers or to a third party for the benefit of a worker, making compensation the transaction price between employers and employees in the labor market. The compensation exchange rate reflects the expenditures employers incur that are associated with something the employee receives, but it excludes costs for doing business that are included in the full labor cost concept.

Compensation, is a joint agreement between employer and employee as to the value of the labor services. The employee receives wage and benefit compensation in return for labor services to the employer; on the other hand, the employer receives labor in exchange for payments to the employee.

In return for their labor, workers receive rewards that include not only traditional pecuniary items in the form of wages and benefits but also nonpecuniary items. These nonpecuniary items may add or detract from the work relationship. Positive nonpecuniary working conditions include: Safe and healthy working environments, job amenities such as attractive office surroundings, freedom from arbitrary supervisory practices, and training and advancement opportunities. Obviously, the absence of these factors can be considered negative job characteristics. The employer may be able to offer lower rates of compensation if job conditions are perceived as above average, or the employer may need to pay higher rates to offset substandard or hazardous conditions.

Efforts to set a value on nonpecuniary job characteristics have been explored in the hedonic labor market literature.[9] From a practical point of view, however, it is difficult to place a value on these nonpecuniary factors. Thus, measures of compensation that are more narrowly focused on wages and payments for benefits are more statistically useful. The compensation exchange rate is at the same time a cost to the employer and income to the employee. However, as described below, the expenditures incurred by employers can differ from the value the employee places on what is received.

Exchange rate from the employer's perspective

Compensation costs from the employer's perspective consist of expenditures in the form of cash wages and benefits. Although limited to payments to employees in money or for the purchase of benefits, and excluding nonpecuniary items, the compensation exchange rate still reflects a diverse set of items. It includes compensation in the form of wages and salaries, premium pay for overtime and shift differentials, paid leave (holidays, vacations, sick leave, and other hours paid for but not worked), insurance costs (health, life, sickness, and disability), and legally mandated costs. Deferred income, in the form of employer's contributions to pension and other retirement plans, is also part of the compensation package.

Compensation, defined in this manner, captures the exchange rate for labor services from the employer's perspective. It reflects the employer's expenditures for providing compensation for workers in terms of immediate payments as well as the costs for future obligations. It does not, however, measure the compensation package from the employee's point of view.

Exchange rate and its value to employees

From the employee's perspective, the exchange rate of total compensation consists of wages paid and the value of payments for benefits. Even when restricted to pecuniary items, it is difficult to measure the employee value of the compensation package because each employee attaches a different value to each benefit component. The reasons for this are that employer expenditures on benefits do not equal the market price to the employee of these benefits (they are in fact often lower because of group purchasing) and that individual employees have different preferences.

The labor force is heterogeneous, comprised of individual employees with distinct preferences. These individual workers value the same benefits differently and may prefer to substitute one benefit for another. For example, workers closer to retirement may place a greater value on pension benefits than their younger colleagues, while workers with young families might be more interested in maternity and orthodontic benefits than those without dependent children.

Employers provide benefit packages that generally are most beneficial to the "average" employee. Employees who differ from the average may receive benefits they don't care to have and lack benefits they wish to receive. As a result, benefits may be offered by the employer but have little or no value to an employee because, for example, they duplicate benefits provided to a working spouse. While some employers offer flexible benefit (or cafeteria) plans, which allow employees to choose among benefit options, workers typically cannot tailor the benefit package to meet their individual needs. According to the Employee Benefits Survey, only 6 percent of all employees are offered flexible benefit plans.[10]

In other circumstances, workers with the same benefits can derive different value from them. For example, Ann C. Foster points out that in defined benefit pension plans, "Benefits generally are based on salary and years of service with the employer sponsoring the plan. If a 'vested' employee leaves a job before retirement, the final salary at the time of leaving is used to determine retirement benefits. For the employee who stays at the same job until retirement, benefit calculations are based on pre-retirement salary levels, most often the highest salary."[11] In addition, these high earnings are multiplied over more years of employment. For example, when the pension calculation calls for a pension of 1 percent of the annual salary earned in the last year on the job for each year of service, individual A (who stayed with the firm for 30 years) receives a higher pension than individual B (who had changed jobs after 15 years).

	Individual	
	A	*B*
Starting salary	$ 10,000	$ 10,000
Salary after 15 years	20,000	20,000 Changed jobs
Salary after 30 years	40,000	40,000
Annual pension benefit:		
First employer	12,000 (1 percent of $40,000 for 30 years)	3,000 (1 percent of $ 20,000 for 15 years)
Second employer	—	6,000 (1 percent of $ 40,000 for 15 years)
Total annual pension benefit	$ 12,000	$ 9,000

Measurement issues. Melissa Famulari and Marilyn Manser posed the following three conceptual questions in illustrating why the exchange rate does not have the same value for employers as it does for employees:[12]

- What would an employee have to spend to acquire the mix of benefits wanted, if all benefits were to be purchased outside the workplace?
- What would an employee have to spend to acquire the exact mix of benefits currently received at work, regardless of the desire for that mix of benefits?
- What is the least amount of money an employee would be willing to accept to forgo the benefits now received?

Famulari and Manser also point out specific measurement problems. Difficulties arise because individual preferences are not easily identified and estimates of value are based upon hypothetical as opposed to actual choices. Individuals must choose among a limited number of wage and benefit packages and are not always able to obtain the desired amount of a given benefit. Furthermore, the current compensation package may not resemble past or future ones.

Further complicating any attempt to measure employee value for their labor services is the need to reflect not only what is received in the form of compensation (the exchange rate) but the costs incurred in order to work. For example, the opportunity cost of lost leisure time, and specific expenditures associated with working (i.e. day care, transportation, clothing) counterbalance wage and benefits receipts.

Despite the difficulties in acquiring realistic measures of employee benefit values, Famulari and Manser concluded that the exchange rate from the employer's perspective (what they term as "employer cost") is a limited but useful estimate of the employee value of total compensation. They suggest that for some purposes, however, using employer cost as a proxy of the "median worker's value of non-legally required benefits seems to be a reasonable approximation to employee value."[13]

In sum, various concepts of labor costs have been developed. Full labor costs include all expenditures associated with hiring and maintaining a labor force, but present problems in differentiating between capital and labor expenditures. The exchange rate includes both pecuniary and nonpecuniary forms of compensation and has different values from the employer and employee perspectives. Measurements of nonpecuniary items are not feasible; similarly, difficulties are encountered in setting a value on the exchange rate from the employee's perspective. Thus, employer expenditure measures are the best available information to approximate employee value.

In conclusion, a "working definition of compensation" is restricted to pecuniary items reflecting the transaction price between employers and employees for labor services. Components of this definition include items that:

- Are part of the "exchange rate" between employers and employees;
- Have pecuniary value; and
- Are measurable.

BLS compensation measures

BLS publishes two broad-based series that track developments in compensation—the Employment Cost Index (ECI) and the Employee Benefits Survey (EBS).[14] The ECI, which was introduced in 1976, provides a measure of employer outlays for labor, or the "exchange rate," from the perspective of the employer. As noted earlier, the exchange rate from the employee's point of view is difficult to evaluate. Nevertheless, the EBS studies provide insights on the incidence and detailed characteristics of the benefits received by employees.

Employment Cost Index. The ECI is a measure of change in the transaction price of labor defined as compensation (employer costs) per hour worked. The index includes costs incurred by employers for employee benefits in addition to wages and salaries. It is designed to measure the obligations employers incur when using labor.

The ECI does not include items that are part of the cost of doing business, (such as payroll processing or parking facilities) nor nonpecuniary items. Capital costs that are components of full labor costs are excluded. Nonpecuniary items are not readily measurable. The ECI does, however, capture the costs incurred by employers for wages or to purchase benefits.

The ECI reflects changes in the transaction price in the labor market, using standardized occupational units of observation. The index holds the distribution of employment among industries and occupations constant in order to measure change unaffected by changes in employment. It shows the change in a fixed set of labor costs, that is not affected over time by changes in the composition of the labor force.

Employee Benefits Survey. While conceptual difficulties preclude the calculation of a measure of employee value of compensation, the EBS provides data on the incidence and characteristics of the benefits received. The EBS provides a picture of compensation practices, with details on specific benefits. Examples of the detailed characteristics include: Participation requirements; employee contributions, when required; health care deductibles; pension benefit formulas; and paid leave provisions.

Both EBS and ECI data are available by size of establishment, as well as various employer and employee characteristics. For instance, separate data are published by major industry groups, full-time and part-time employment, and union/nonunion status.

Recent developments in compensation statistics

The ECI and EBS surveys were initially developed as independent programs. From the onset, they were intended to address different questions and needs. Until recently, little effort had been made to link the programs so that data users could track changes in costs to trends in specific benefit plans.

Recently, however, efforts have been undertaken to merge these surveys. As a first step, a set of common terms and definitions have been compiled. In the past, both the EBS and ECI collected data on a broad category of retirement benefits, but used different titles and definitions. The EBS provided detailed data on a variety of items classified as retirement plans, while the ECI collected cost data on either pension or savings and thrift plans. Under the revised common definitions used by both EBS and ECI, there are two broad retirement benefit categories: One is limited to defined benefit pensions, and the other includes a variety of defined contribution plans (such as deferred profit-sharing plans, employee stock ownership plans, money purchase pension plans, savings and thrift plans, simplified employee pensions, and stock bonus plans).

In a continuing effort to improve compensation surveys, BLS has undertaken a major initiative, COMP2000, to link the surveys providing wage and benefit data. This is not limited to the use of common definitions and terms but involves all the steps in production of the surveys, including data collection, compilation, and dissemination. The mission of COMP2000 is to design, organize, and implement a single compensation program that encompasses the existing data series on levels and trends in compensation while minimizing respondent burden. The goal is to create of a link between ECI and EBS measures, so that employer expenditure data will be a better proxy of employee value.

—ENDNOTES—

[1] See for example, Alvin Bauman, "Measuring Employee Compensation in U.S. Industry," *Monthly Labor Review*, October 1970, pp. 17-24.

[2] Woodbury, Stephen A., "Substitution Between Wage and Nonwage Benefits," The American Economic Review, Vol. 73, March 1983, p. 167.

[3] Alvin Bauman, "Measuring Employee Compensation..." p. 19.

[4] Cowan, Cathy A. and Patricia A. McDonnell, "Business, Households, and Governments: Health Spending, 1991," *Health Care Financing Review*, vol. 14, no. 3, 1993, p. 228.

[5] Percent of full-time employees eligible for reimbursement accounts have increased from 5 percent in 1986 to 52 percent in 1993 in medium- and large-sized private establishments. See *Employee Benefits in Medium and Large Private Establishments, 1986*, Bureau of Labor Statistics Bulletin 2281, June 1987, p.91; and *Employee Benefits in Medium and Large Private Establishments, 1993*, Bureau of Labor Statistics Bulletin 2456, November 1994, p.10.

[6] Woodbury, Stephen A., "Substitution Between Wage...." p. 166.

[7] In this case, wage means a payment by the employer to the employee in return for labor services. In effect, "wages are the price of labour." See, J.R. Hicks *The Theory of Wages*, second ed., London: MacMillan and Co. Ltd., 1963, p. 1.

[8] Oi, Walter Y., "Labor As a Quasi-Fixed Factor," *The Journal of Political Economy*, December 1962, pp. 538-555.

[9] See for example, Sherwin Rosen, "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy*, v. 82, 1974, pp. 34-55.

[10] See *Employee Benefits in the United States, 1992-93*, Bureau of Labor Statistics, Washington, DC, March 1995, table: "Percent of employees eligible for selected benefits, by private and public sectors and full-time and part-time status, United States, 1992-93."

[11] Foster, Ann C., "Portability of Pension Benefits Among Jobs," *Monthly Labor Review*, July 1994, p. 45.

[12] Famulari, Melissa and Marilyn E. Manser, "Employer-provided Benefits: Employer Cost Versus Employee Value," *Monthly Labor Review*, December 1989, pp. 24-32.

[13] Ibid.

[14] BLS publishes other more limited series relating to compensation. The Occupational Compensation Surveys Program and Employment and Earnings are limited to wages, while the series on compensation changes negotiated through collective bargaining uses a definition of compensation based on employer expenditures.

[15] The compensation levels series, however, is benchmarked to current industry employment.

[16] For descriptions of ongoing efforts by the Bureau of Labor Statistics to ensure that these measures reflect changes in compensation practices, see for example, Douty, H.M., "A Century of Wage Statistics: The BLS Contribution," *Monthly Labor Review*, November 1984, pp. 16-28; and Janet L. Norwood, "Measuring the Cost and Incidence of Employee Benefits," *Monthly Labor Review*, August 1988, pp. 3-8.