Ethical Trading Initiative
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Wages and Purchasing Theories

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Income derived from human labour. Technically, wages and salaries cover all compensation made to employees for either physical or mental work, but they do not represent the income of the self-employed. Labour costs are not identical to wage and salary costs, because total labour costs may include such items as cafeterias or meeting rooms maintained for the convenience of employees. Wages and salaries usually include remuneration such as paid vacations, holidays, and sick leave, as well as fringe benefits and supplements in the form of pensions or health insurance sponsored by the employer. Additional compensation can be paid in the form of bonuses or stock, many of which are linked to individual or group performance.

Wage theory

Theories of wage determination and speculations on what share the labour force contributes to the gross domestic product have varied from time to time, changing as the economic environment itself has changed. Contemporary wage theory could not have developed until the feudal system had been replaced by the modern economy with its modern institutions (such as corporations).

Classical theories

The Scottish economist and philosopher Adam Smith, in *The Wealth of Nations* (1776), failed to propose a definitive theory of wages, but he anticipated several theories that were developed by others. Smith thought that wages were determined in the marketplace through the law of supply and demand. Workers and employers would naturally follow their own self-interest; labour would be attracted to the jobs where labour was needed most, and the resulting employment conditions would ultimately benefit the whole of society. Although Smith discussed many elements central to employment, he gave no precise analysis of the supply of and demand for labour, nor did he weave them into a consistent theoretical pattern. He did, however, prefigure important developments in modern theory by arguing that the quality of worker skill was the central determinant of economic progress. Moreover, he noted that workers would need to be compensated by increased wages if they were to bear the cost of acquiring new skills—an assumption that still applies in contemporary human-capital theory. Smith also believed that in the case of an advancing nation, the wage level would have to be higher than the subsistence level in order to spur population growth, because more people would be needed to fill the extra jobs created by the expanding economy.

Subsistence theory

Subsistence theories emphasize the supply aspects of the labour market while neglecting the demand aspects. They hold that change in the supply of workers is the basic force that drives real wages to the minimum required for subsistence (that is, for basic needs such as food and shelter). Elements of a subsistence theory appear in *The Wealth of Nations*, where Smith wrote that the wages paid to workers had to be enough to allow them to live and to support their families. The English classical economists who succeeded Smith, such as David Ricardo and Thomas Malthus, held a more pessimistic outlook. Ricardo wrote that the “natural price” of labour was simply the price necessary to enable the labourers to subsist and to

perpetuate the race. Ricardo's statement was consistent with the Malthusian theory of population, which held that population adjusts to the means of supporting it.
Subsistence theorists argued that the market price of labour would not vary from the natural price for long: if wages rose above subsistence, the number of workers would increase and bring the wage rates down; if wages fell below subsistence, the number of workers would decrease and push the wage rates up. At the time that these economists wrote, most workers were actually living near the subsistence level, and population appeared to be trying to outrun the means of subsistence. Thus, the subsistence theory seemed to fit the facts. Although Ricardo said that the natural price of labour was not fixed (it could change if population levels moderated in relation to the food supply and other items necessary to maintain labour), later writers were more pessimistic about the prospects for wage earners. Their inflexible conclusion that wages would always be driven down earned the subsistence theory the name "iron law of wages."

Wages-fund theory

Smith said that the demand for labour could not increase except in proportion to the increase of the funds destined for the payment of wages. Ricardo maintained that an increase in capital would result in an increase in the demand for labour. Statements such as these foreshadowed the wages-fund theory, which held that a predetermined "fund" of wealth existed for the payment of wages. Smith defined this theoretical fund as the surplus or disposable income that could be used by the wealthy to employ others. Ricardo thought of it in terms of the capital—such as food, clothing, tools, raw materials, or machinery—needed for conditions of employment. The size of the fund could fluctuate over periods of time, but at any given moment the amount was fixed, and the average wage could be determined simply by dividing the value of this fund by the number of workers.

Regardless of the makeup of the fund, the obvious conclusion was that when the fund was large in relation to the number of workers, wages would be high. When it was relatively small, wages would be low. If population increased too rapidly in relation to food and other necessities (as outlined by Malthus), wages would be driven to the subsistence level. Therefore, went the speculation, labourers would be at an advantage if they contributed to the accumulation of capital to enlarge the fund; if they made exorbitant demands on employers or formed labour organizations that diminished capital, they would be reducing the size of the fund, thereby forcing wages down. It followed that legislation designed to raise wages would not be successful, for, with only a fixed fund to draw upon, higher wages for some workers could be won only at the expense of other workers.

This theory was generally accepted for 50 years by economists such as Nassau William Senior and John Stuart Mill. After 1865 the wages-fund theory was discredited by W.T. Thornton, F.D. Longe, and Francis A. Walker, all of whom argued that the demand for labour was not determined by a fund but by the consumer demand for products. Furthermore, the proponents of the wages-fund doctrine had been unable to prove the existence of any kind of fund that maintained a predetermined relationship with capital, and they also failed to identify what portion of the labour force's contribution to a product was actually paid out in wages. Indeed, the total amount paid in wages depended upon a number of factors, including the bargaining power of labourers. Despite these telling criticisms, however, the wages-fund theory remained influential until the end of the 19th century.

Marxian surplus-value theory

Karl Marx accepted Ricardo's labour theory of value (that the value of a product is based on the quantity of labour that went into producing it), but he subscribed to a subsistence theory of wages for a different reason than that given by the classical economists. In Marx's estimation, it was not the pressure of population that drove wages to the subsistence level but rather the existence of large numbers of unemployed workers. Marx blamed unemployment on capitalists. He renewed Ricardo's belief that the exchange value of any product was determined by the hours of labour necessary to create it. Furthermore, Marx held that, in capitalism, labour was merely a commodity: in exchange for work, a labourer would receive a subsistence wage. Marx speculated, however, that the owner of capital could force the worker to spend more time on the job than was necessary for earning this subsistence income, and the excess product—or surplus value—thus created would be claimed by the owner. This argument was eventually disproved, and the labour theory of value and the subsistence theory of wages were also found to be invalid. Without them, the surplus-value theory collapsed.

Residual-claimant theory

The residual-claimant theory holds that, after all other factors of production have received compensation for their contribution to the process, the amount of capital left over will go to the remaining factor. Smith implied such a theory for wages, since he said that rent would be deducted first and profits next. In 1875 Walker worked out a residual theory of wages in which the shares of the landlord, capital owner, and entrepreneur were determined independently and subtracted, thus leaving the remainder for labour in the form of wages. It should be noted, however, that any of the factors of production may be selected as the residual claimant—assuming that independent determinations may be made for the shares of the other factors. It is doubtful, therefore, that such a theory has much value as an explanation of wage phenomena.

Bargaining theory

The bargaining theory of wages holds that wages, hours, and working conditions are determined by the relative bargaining strength of the parties to the agreement. Smith hinted at such a theory when he noted that employers had greater bargaining strength than employees. Employers were in a better position to unify their opposition to employee demands, and employers were also able to withstand the loss of income for a longer period than could the employees. This idea was developed to a considerable extent by John Davidson, who proposed in *The Bargain Theory of Wages* (1898) that the determination of wages is an extremely complicated process involving numerous influences that interact to establish the relative bargaining strength of the parties.

This theory argues that no one factor or single combination of factors determines wages and that no one rate of pay necessarily prevails. Instead, there is a range of rates, any of which may exist simultaneously. The upper limit of the range represents the rate beyond which the employer refuses to hire certain workers. This rate can be influenced by many factors, including the productivity of the workers, the competitive situation, the size of the investment, and the employer's estimate of future business conditions. The lower limit of the range defines the rate below which the workers will not offer their services to the employer. Influences on this rate include minimum wage legislation, the workers' standard of living, their appraisal of the employment situation, and their knowledge of rates paid to others. Neither the upper nor the lower limit is fixed, and either may move upward or downward. The rate or rates within the range are determined by relative bargaining power.

The bargaining theory is very attractive to labour organizations, for, contrary to the subsistence and wages-fund theories, it provides a very cogent reason for the existence of unions: simply put, the bargaining strength of a union is much greater than that of individuals. It should be observed, however, that historically labourers were capable of improving their situations without the help of labour organizations. This indicates that factors other than the relative bargaining strength of the parties must have been at work. Although the bargaining theory can explain wage rates in short-run situations (such as the existence of certain wage differentials), over the long run it has failed to explain the changes that are observed in the average levels of wages.

Marginal-productivity theory and its critics

Toward the end of the 19th century, marginal-productivity analysis was applied not only to labour but to other factors of production as well. It was not a new idea as an explanation of wage phenomena, for Smith had observed that a relationship existed between wage rates and the productivity of labour, and the German economist Johann Heinrich von Thünen had worked out a marginal-productivity type of analysis for wages in 1826. Economists in the Austrian school made important contributions to the marginal idea after 1870, and, building on these grounds, a number of economists in the 1890s—including Philip Henry Wicksteed in England and John Bates Clark in the United States—developed the idea into the marginal-productivity theory of distribution. It is likely that the disturbing conclusions drawn by Marx from classical economic theory inspired this development. In the early 1930s refinements to the marginal-productivity analysis, particularly in the area of monopolistic competition, were made by Joan Robinson in England and Edward H. Chamberlin in the United States.

As applied to wages, the marginal-productivity theory holds that employers will tend to hire workers of a particular type until the contribution that the last (marginal) worker makes to the total value of the product is equal to the extra cost incurred by the hiring of one more worker. The wage rate is established in the market through the demand for, and supply of, the type of labour needed for the job. Competitive market forces assure the workers that they will receive a wage equal to the marginal product. Under the law of diminishing marginal productivity, the contribution of each additional worker is less than that of his predecessor, but workers of a particular type are assumed to be alike—in other words, all employees are deemed interchangeable—and any one could be considered the marginal worker. Because of this, all workers receive the same wage, and, therefore, by hiring to the margin, the employer maximizes his profits. As long as each additional worker contributes more to total value than he costs in wages, it pays the employer to continue hiring. Beyond the margin, additional workers would cost more than their contribution and would subtract from attainable profits.

Although the marginal-productivity theory was once the prevailing theory of wages, it has since been attacked by many and discarded by some. The chief criticism of the theory is that it rests on unrealistic assumptions, such as the existence of homogeneous groups of workers whose knowledge of the labour market is so complete that they will always move to the best job opportunities. Workers are not, in fact, homogeneous, nor are they interchangeable. Usually they have little knowledge of the labour market, and, because of domestic ties, seniority, and other considerations, they do not often move quickly from one job to another. The assumption that employers are able to measure productivity accurately and compete freely in the labour market is also far-fetched. Even the assumption that all employers attempt to maximize profits may be doubted. The profit motive does not affect charitable institutions or government agencies. And finally, for the theory to operate properly, these ideal conditions must be met: labour and capital must be fully employed so that increased productivity can be secured only at increased cost; capital and labour must be easily substitutable for each other; and the situation must be completely competitive. Obviously, none of these assumptions fits the real world.

Monopolistic or near-monopolistic conditions, for example, are common in modern economies, particularly where there are only a few large producers (such as in the automotive industry). In many cases wages are determined at the bargaining table, where producers negotiate with representatives of organized. Under such circumstances, the marginal-productivity analysis cannot determine wages precisely; it can show only the positions that the union (as a monopolist of labour supply) and the employer (as a monopolistic, or single, purchaser of labour services) will strive to reach, depending upon their current policies.
Some critics feel that the unrealistic nature of its assumptions makes marginal-productivity theory completely untenable. At best, the theory seems useful only as a contribution to understanding long-term trends in wages.

Purchasing-power theory

The purchasing-power theory of wages concerns the relation between wages and employment and the business cycle. It is not a theory of wage determination but rather a theory of the influence spending has (through consumption and investment) on economic activity. The theory gained prominence during the Great Depression of the 1930s, when it became apparent that lowering wages might not increase employment as previously had been assumed. In *General Theory of Employment, Interest, and Money*(1936), English economist John Maynard Keynes argued that (1) depressional unemployment could not be explained by frictions in the labour market that interrupted the economy's movement toward full-employment equilibrium and (2) the assumption that "all other things remained equal" presented a special case that had no real application to the existing situation. Keynes related changes in employment to changes in consumption and investment, and he pointed out that economic equilibrium could exist with less than full employment.

The theory is based on the assumption that changes in wages will have a significant effect on consumption because wages make up such a large percentage of the national income. It is therefore assumed that a decline in wages will reduce consumption and that this in turn will reduce demand for goods and services, causing the demand for labour to fall.

The actual outcomes would depend upon several considerations, particularly those that involve prices (or other cost-of-living considerations). If wages fall more rapidly than prices, labour's real wages will be drastically reduced, consumption will fall, and unemployment will rise—unless total spending is maintained by increased investment, usually in the form of government spending. Then again, entrepreneurs may look upon the lower wage costs (as they relate to prices) as an encouraging sign toward greater profits, in which case they may increase their investments and employ more people at the lower rates, thus maintaining or even increasing total spending and employment. If employers look upon the falling wages and prices as an indication of further declines, however, they may contract their investments or do no more than maintain them. In this case, total spending and employment will decline.

Conversely, if wages fall less rapidly than prices, labour's real wages will increase, and consumption may rise. If investment is at least maintained, total spending in terms of constant dollars will increase, thus improving employment. If entrepreneurs look upon the shrinking profit margin as a danger signal, however, they may reduce their investments, and, if the result is a reduction in total spending, employment will fall. If wages and prices fall the same amount, there should be no change in consumption and investment, and, in that case, employment will remain unchanged.

It should be noted that the purchasing-power theory involves psychological and other subjective considerations as well as those that may be measured more objectively. Whether it can be used effectively to predict or control the business cycle depends upon political as well as economic factors, because government expenditures are a part of total spending, taxes may affect private spending, etc. The applicability of the theory is to the whole economy rather than to the individual firm.

Human-capital theory

A particular application of marginalist analysis (a refinement of marginal-productivity theory) became known as human-capital theory. It has since become a dominant means of understanding how wages are determined. It holds that earnings in the labour market depend upon the employees' information and skills. The idea that workers embody information and skills that contribute to the production process goes back at least to Adam Smith. It builds on the recognition that families make a major contribution to the acquisition of skills. Quantitative research during the 1950s and '60s revealed that aggregate growth in output had outpaced aggregate growth in the standard inputs of land, labour, and capital. Economists who explored this phenomenon suggested that growth in aggregate knowledge and skills in the workforce, especially those conveyed in formal education, might account for this discrepancy. In the early 1960s the American economist Theodore W. Schultz coined the term *human capital* to refer to this stock of productive knowledge and skills possessed by workers.

The theory of human capital was shaped largely by Gary S. Becker, an American student of Schultz who treated human capital as the outcome of an investment process. Because the acquisition of productive knowledge is costly (e.g., students pay direct costs and forego opportunities to earn wages), Becker concluded that rational actors will make such investments only if the expected stream of future benefits exceeds the short-term costs associated with acquiring the skills. Such investments therefore affect one's “age-earnings profile,” the trajectory of earnings over one’s lifetime. Those who leave school early, for example, earn market wages for more years on average than those who take advantage of extended schooling, but those in the latter group typically earn higher wages over their lifetimes. Under certain conditions, however, the total lifetime earnings of the two groups can be the same, even though the highly educated tend to earn higher wages when they work.

Investments in human capital depend upon the costs of acquiring the skills and the returns that are expected from the investment. Families can influence these variables. Wealthier families, for example, can lower the costs of human-capital acquisition for their children by subsidizing their education and training costs. In addition, wealthier and better-educated parents can shape the tastes and preferences of their children by instilling in them a high regard for education and a desire to perform well in school. This translates into a higher rate of return on knowledge and skills relative to that of children from less-advantaged families. Thus, parents and guardians play an essential role in creating advantages for their children by encouraging them to acquire substantial stocks of human capital. Ultimately, it is human capital which has value in labour markets. Becker introduced the important distinction between “general” human capital (which is valued by all potential employers) and “firm-specific” human capital (which involves skills and knowledge that have productive value in only one particular company). Formal education produces general human capital, while on-the-job training usually produces both types. To understand investments in human capital by employees and employers, one must pay attention to the different incentives involved. In all cases, employers are loathe to provide general skills, because employees can use them in other firms. Conversely, employees are less inclined to invest in firm-specific human capital without substantial job security or reimbursement. These issues lie at the heart of many contemporary analyses of employment relations.