

THE SPENDABLE EARNINGS OF FACTORY WORKERS

by James R. Wetzel *

Since World War II, the American factory worker's gross weekly pay has more than doubled. Purchasing power has risen sharply even though the value of the worker's paycheck has been affected by persistent price increases and changes in effective tax rates.

The Bureau of Labor Statistics publishes monthly estimates of "take-home pay" and "real take-home pay" for production and nonsupervisory workers in mining, manufacturing, construction, and trade.¹ The earnings data for manufacturing workers are used to illustrate significant earnings trends in the postwar period. Nonmanufacturing industries have exhibited similar trends, but there are significant differences.

In manufacturing, the following broad generalizations may be made:

1. Factory production workers' weekly take-home pay rose sharply in the postwar period, reaching a record level of nearly \$100 in December 1965. The rise in take-home pay outstripped advancing prices by a wide margin, bringing an advance of nearly 45 percent in purchasing power.
2. The postwar rise in weekly earnings was due almost exclusively to an upward trend in hourly earnings. Over the same period, the average workweek was steady, fluctuating unevenly between 39 and 41 hours per week and reflecting cyclical changes in business activity.
3. Regardless of the earnings measure employed (i. e., weekly earnings, take-home pay, hourly earnings, etc.), the rate of increase in earnings has tapered off since the late 1940's. There is no evidence of acceleration in the growth rate of hourly earnings; in fact, over the course of the 1961-65 expansion, the rate of increase has been exceptionally stable at a relatively low level.
4. The tax cut of 1964 halted, at least temporarily, the postwar rise in the proportion of gross weekly earnings allocated to pay Federal income and social security taxes.

Trends in Gross Weekly Earnings

Between 1947 and 1965, the average weekly earnings of factory production workers more than doubled, rising from \$49 to \$107. Although earnings rose every year, the magnitude of these increases varied sharply with changes in the business cycle. For example, between 1953, when economic activity hit a peak, and 1954, when it receded into a trough, the rise in weekly earnings amounted to only a few cents. By

*Of the Division of Employment and Unemployment Analysis, Bureau of Labor Statistics.

¹For December estimates see table C-4 on page 88. Net spendable earnings--"take-home pay"--represent the worker's average weekly pay after deduction of social security and Federal income taxes. "Real" spendable earnings represent the buying power of the worker's net spendable earnings after adjustment for changes in the Consumer Price Index. These calculations are made for two representative types of workers--a worker without dependents and a worker with three dependents. The gross average weekly earnings for all nonsupervisory workers are used in the calculations.

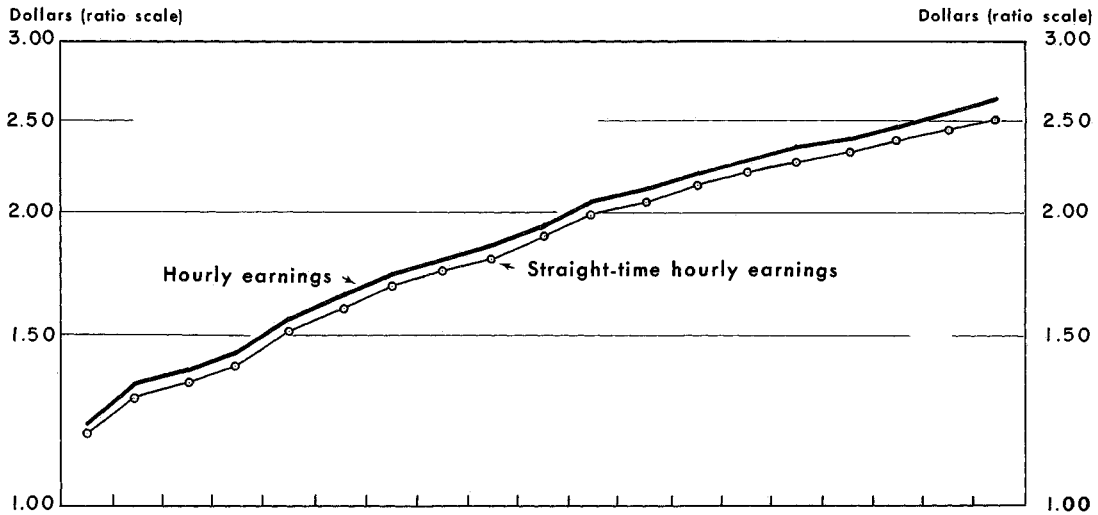
Chart 1.

TRENDS IN FACTORY PRODUCTION WORKERS' EARNINGS

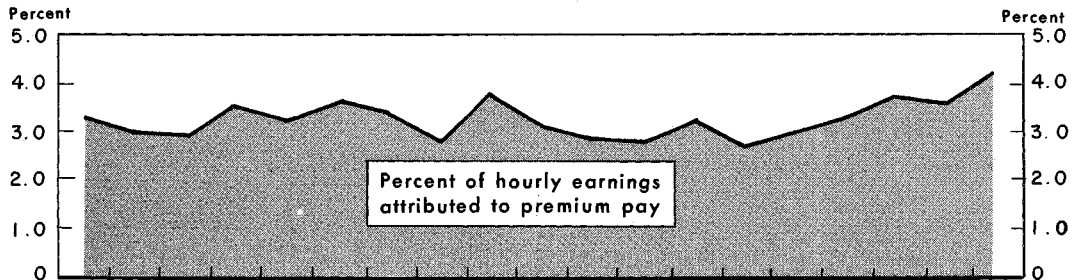
Annual Averages, 1947-65

IN THE POSTWAR PERIOD:

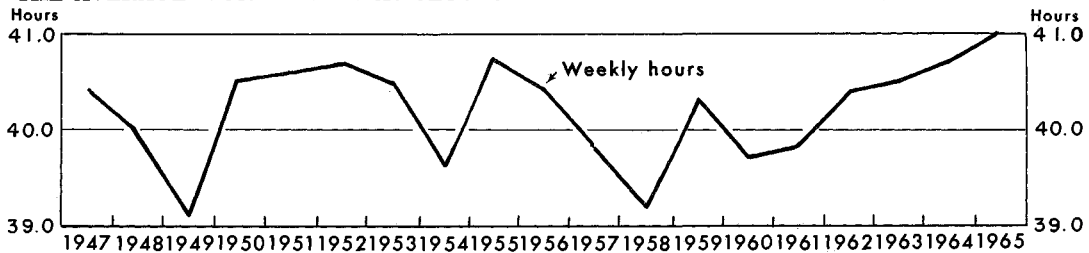
AVERAGE HOURLY EARNINGS HAVE MORE THAN DOUBLED



THE RELATIVE IMPORTANCE OF OVERTIME PAY HAS INCREASED



THE AVERAGE WORKWEEK HAS FLUCTUATED UNEVENLY BETWEEN 39 AND 41 HOURS



contrast, when the economy regained its momentum after the recession, weekly earnings advanced sharply, rising by 7.4 percent between 1954 and 1955. Such variations in the annual growth rate of weekly earnings have risen primarily from cyclical swings in the average workweek. As chart 1 illustrates, there have been significant cyclical variations in the length of the average workweek but no distinct secular trend.² On the other hand, hourly earnings have shown comparatively little cyclical responsiveness, but a persistent secular uptrend. Thus, the postwar advance in weekly earnings is attributable basically to the steady rise in hourly earnings.

As chart 1 shows, the rate of increase in hourly earnings has slowed considerably over the postwar period. In the last 5 years, the annual increase has averaged 2.9 percent, as compared with 4.0 percent between 1956 and 1960 and 5.3 percent between 1951 and 1955. More importantly, there is no sign of an acceleration in the rate of advance over the 5-year course of the current economic expansion. However, in recent periods, factory workers' earnings have been supplemented by employer contributions on their behalf for such benefit programs as pensions, life insurance, and health care, which are not reflected in these measures of earnings. In addition, although there has been no discernible pattern in changes in the standard workweek or in hours of work paid for, workers have gained additional leisure through increases in paid time off--chiefly vacations and holidays.

A 1962 BLS study showed that an estimated 6 percent of gross payroll expenditures in manufacturing industries was for paid leave, 5.8 percent was paid out to meet legally required insurance programs (including social security taxes, unemployment insurance, and workmen's compensation), and 5.4 percent went for private welfare plans.³

Last year, the factory workweek averaged 41.1 hours--its highest level since World War II--and weekly earnings averaged \$107.27. Both figures were up sharply from 1964 levels. Additional time at work accounted for nearly 25 percent of the 1964-65 weekly earnings increase but was responsible for only 1-1/2 percent of the overall postwar advance. The rise in average weekly hours was accompanied by a

Table 1. Average Hours and Earnings of Production Workers in Manufacturing, Annual Averages, 1947-65

Hours and earnings	1965 <u>1</u> /	1964	1963	1956	1947
Gross weekly earnings.....	\$107.27	\$102.97	\$99.63	\$78.78	\$49.17
Average hourly earnings.....	2.61	2.53	2.46	1.95	1.22
Straight-time hourly earnings.....	2.50	2.44	2.37	1.89	1.18
Average weekly hours.....	41.1	40.7	40.5	40.4	40.4
Overtime hours.....	3.6	3.1	2.8	2.8	(2)

1/ Preliminary.

2/ Not available.

²While weekly hours have not shown a distinct trend over the postwar period, they have shown a secular increase relative to employment and to the unemployment rate.

³See Employer Expenditures for Selected Supplementary Remuneration Practices for Production Workers in Manufacturing Industries, 1962, BLS Bulletin 1428, p. 7, table 1.

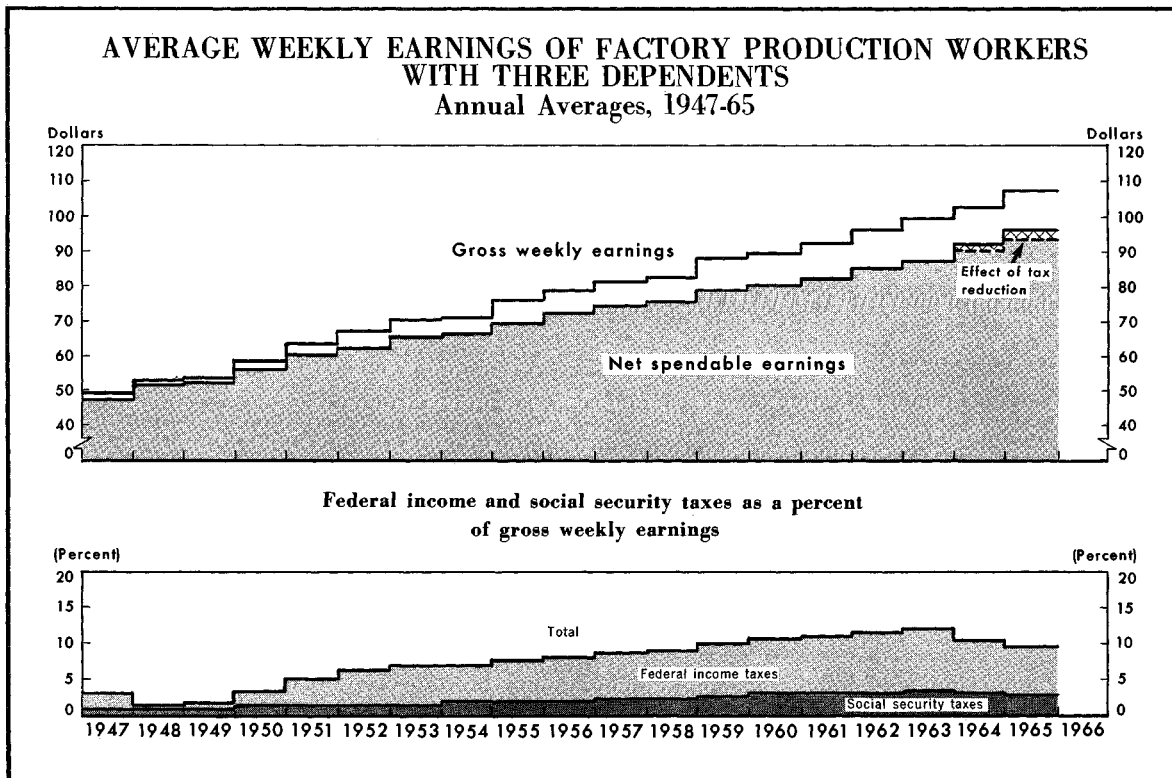
slightly faster rate of growth for average hourly earnings, mainly because of the increased use of overtime. At the same time, average straight-time earnings--a much better indicator of the trend for the hourly wage rate--continued to register small but steady increments. In 1965 weekly earnings moved up more than usual because more hours were worked and because most of these additional hours were paid for at premium rates. Nevertheless, the basic uptrend in wage rates--as indicated by the straight-time hourly earnings data--has not changed significantly over the course of the current economic expansion.

Net Spendable Earnings--Trends and Shifts

Since the end of World War II, factory production workers' net spendable earnings have moved persistently upward, recording an increase of over 100 percent (see chart 2). The increase in take-home pay reflects primarily the steady rise in gross earnings. The improvement was relatively steady and occurred despite the fact that up to 1964, an increasing proportion of weekly earnings were required to pay Federal income and social security taxes.

In 1965, the average factory worker with three dependents was required to allocate approximately \$1 out of every \$10 earned to pay Federal income and social security taxes. By contrast, in 1948, he was required to set aside 15 cents out of every \$10 to meet such taxes. As chart 2 shows, prior to the tax cut of 1964, the ratio of Federal income and social security taxes to gross weekly earnings had risen steadily from 1.5 percent in 1948 to 12.1 percent in 1963. This increased percentage is directly attributable to two significant developments. The first is the relatively moderate impact of legislative changes affecting the size of social security deductions. The second development is the steady rise in weekly earnings taken in conjunction with progressive income taxes.

Chart 2.



Social security taxes. Downward shifts in take-home pay have occurred on several occasions, usually with an increase in social security deductions. Social security taxes rose from 1 percent on the first \$3,000 in 1947 to 3-5/8 percent on the first \$4,800 in 1965. Effective January 1, 1966, the rate rose to 4-1/5 percent on the first \$6,600. Examples of the impact of rising social security taxes are shown in table 2. As an illustration, if a worker with three dependents made \$75 per week in 1948, his take-home pay was \$70.88. If he made the same amount in 1963, his take-home pay was \$68.01--about a \$3 reduction from 1948. The additional money taken from his paycheck represented the cost of rising social security taxes. The 1965-to-1966 increase in social security deductions will have a substantial impact on net spendable earnings, but the net effect will vary with the level of average weekly earnings. The pertinent figures for four representative earnings groups are shown in table 2.

Table 2. Illustrative Changes in Net Spendable Earnings Attributable to Changes in Federal Income and Social Security Taxes for a Worker with Three Dependents

Earnings level and year	Net spendable earnings	Spendable earnings as a percent of gross weekly earnings
Worker with gross weekly earnings of \$50		
1948.....	\$ 49.50	99.0
1963 <u>1/</u>	48.19	96.4
1965 <u>2/</u>	48.19	96.4
1966 <u>3/</u>	47.90	95.8
Worker with gross weekly earnings of \$75		
1948.....	70.88	94.5
1963 <u>1/</u>	68.01	90.7
1965 <u>2/</u>	69.86	93.1
1966 <u>3/</u>	69.43	92.6
Worker with gross weekly earnings of \$110		
1963 <u>1/</u>	96.08	87.3
1965 <u>2/</u>	98.85	89.9
1966 <u>3/</u>	97.58	88.7
Worker with gross weekly earnings of \$135		
1963 <u>1/</u>	116.58	86.4
1965 <u>2/</u>	120.00	88.9
1966 <u>3/</u>	118.02	87.4

1/ Before the 1964 tax cut.

2/ Full effect of the 1964 tax cut.

3/ Increased social security taxes.

Federal income taxes. Advancing earnings bring about an increase in the percentage tax bite because of progressive income taxes. Thus, if a worker's earnings rose from \$50 in 1948 to \$110 in 1963, the proportion of his earnings allocated to meet the Federal income and social security taxes would have risen from about 1

percent in 1948 to 12.7 percent in 1963. As noted above, part of the increase (roughly 3 percentage points) was due to increased social security deductions. The remainder was attributable to graduated income taxes taking a larger proportion of the worker's increased earnings.

The Revenue Act of 1964 cut income taxes significantly and boosted the level of net spendable earnings about 2-1/2 percent. This change increased take-home pay at all earnings levels and brought a sharp upward shift in the growth of spendable earnings. The magnitude of that shift for the average worker with three dependents is illustrated in table 2 and by the dotted lines for 1964 and 1965 in chart 2. The dotted lines denotes the level of take-home pay if the 1963 tax schedule had been continued; the difference between the dotted line and the solid line measures the maximum direct contribution of the tax cut at the given level of earnings. Since the increase in earnings also reflects the lengthened workweek of 1965, which is attributable partially to the acceleration in economic activity resulting from the tax cut, the area slightly understates the total impact of the tax cut.

Real Earnings

The uptrend in take-home pay would have no significance if it were matched by equivalent price increases in the goods and services purchased by factory workers. However, this has not been the case in the postwar period. Prices, as reflected in the Consumer Price Index, moved unevenly upward but generally at a much slower rate than earnings. When spendable earnings are adjusted to compensate for rising prices, the gain in real spendable earnings--or purchasing power--amounted to 44 percent, somewhat less than half the rise in dollar take-home pay. Expressed in 1957-59 dollars, the rise was from \$61 in 1947 to \$88 in 1965.

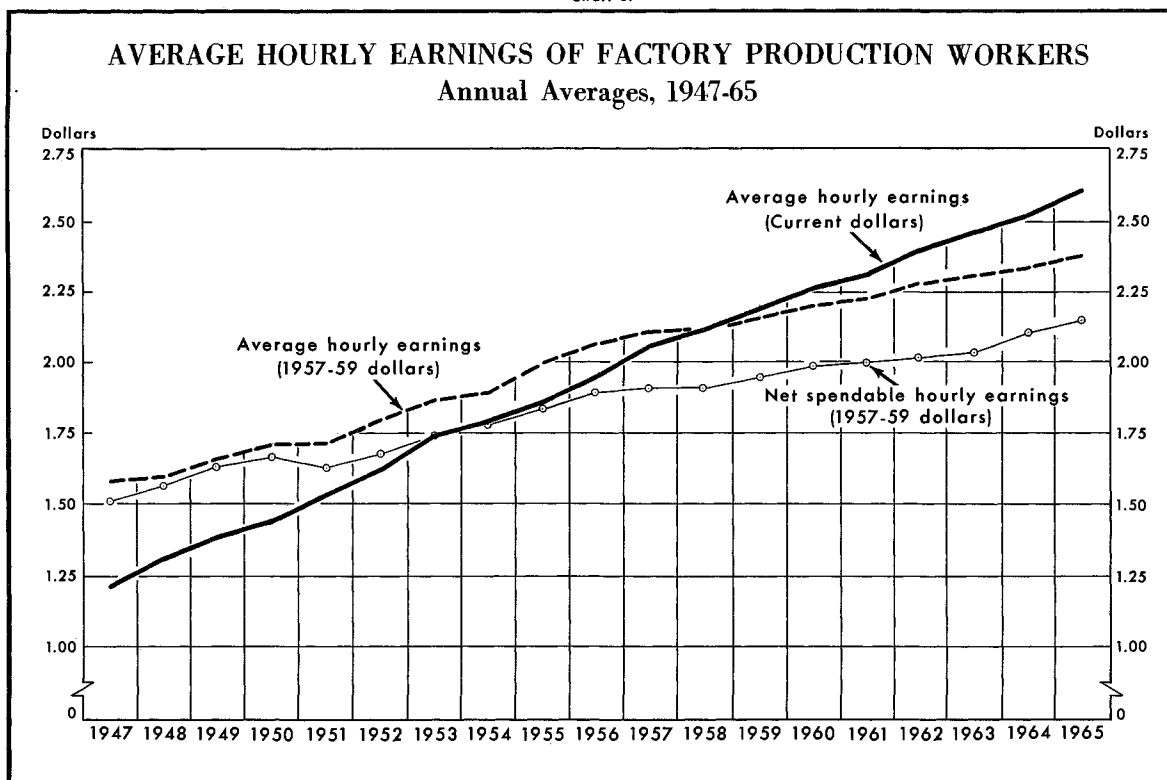
Adjustment of the spendable earnings data to reflect price changes brings out several facts of considerable social and economic importance. For example, while spendable earnings have risen every year during the postwar period, real spendable earnings declined or remained steady for extended periods during recessions. Thus, even though the worker took home more money in his pay envelope, he could not buy the same quantity and quality of goods without reducing savings. It could be argued that these declines in average real spendable earnings--\$1 per week in 1958--were of relatively little consequence; however, when it is borne in mind that such declines measure the approximate experience of some 12-1/2 million factory workers, the importance of even a short recession on national economic well-being becomes more apparent.

The divergence between take-home pay and its purchasing power during a recession arises from three factors. First, weekly hours decline significantly, narrowing the increase in weekly earnings. Second, employment in the high-wage durable-goods industries is more responsive to cyclical cutbacks, also narrowing the increase in average weekly earnings for manufacturing as a whole. Finally, prices continue to rise, and with earnings nearly stable, "real" weekly earnings tend to fall.

In terms of an individual worker's economic welfare, it is of some importance to assess the amount of purchasing power he acquires for each hour worked; for even though weekly earnings are probably the major determinant of his level of living, some increases in welfare may be realized by reducing the number of hours worked while maintaining the level of real weekly earnings.

The basic uptrend in gross real hourly earnings has persisted throughout most of the postwar period. In chart 3, which illustrates this uptrend, the difference between real gross hourly earnings and real net spendable hourly earnings measures the changing impact of taxes. As chart 3 shows, the basic purchasing power obtained by an hour of work has increased unevenly at an average rate of 2 percent per year. Prior to the 1963-65 period when the tax cut brought a sharp advance, the gains in

Chart 3.



real hourly take-home pay had slowed considerably when compared to the postwar and Korean advances. In fact, from 1956 to 1963, the year-to-year increases did not exceed 1.6 percent and averaged 1 percent a year, a significant reduction from the average of 2.5 percent between 1947 and 1956.

Earnings in the Nonmanufacturing Industries

Although earnings data are most complete and extend over the longest span of years in the manufacturing sector, the BLS has extended its coverage over the years to include many workers in the nonmanufacturing industries. Weekly earnings have increased substantially in all industries for which data are collected; however, the gap between the high- and low-wage industries widened in both absolute and percentage terms over the postwar period.

In 1965, construction workers earned \$138 and mining workers \$123. Average weekly earnings are much higher in these two industries than in manufacturing because of the highly seasonal nature of the work, the relatively high skills of the workers, and other reasons. Workers in these industries average fewer weeks of employment throughout the year than in manufacturing in most nonrecession years. In contrast, nonsupervisory employees in trade and finance--industries which include a high proportion of part-time and intermittent workers--earned \$82 and \$89, respectively (see table 3).

Workers in each of these industries have received significant pay increases, but the rate of increase has varied sharply. For example, construction workers' earnings were up 134 percent from 1947, while the trade increase amounted to 100 percent. The earnings trend for factory production workers falls between the two extremes cited.

**Table 3. Gross and Spendable Average Weekly Earnings of Workers
With Three Dependents in Selected Industries, 1/
Annual Averages, 1947-65**

Industry	1965 <u>2/</u>	1964	1963	1956	1947
Contract construction					
Gross weekly earnings.....	\$137.63	\$132.06	\$127.19	\$96.38	\$58.87
Net spendable earnings.....	122.21	116.40	110.18	86.65	55.53
Real net spendable earnings.....	111.20	107.68	103.26	91.50	71.38
Mining					
Gross weekly earnings.....	123.22	117.74	114.40	95.06	59.94
Net spendable earnings.....	110.02	104.40	99.69	85.57	56.42
Real net spendable earnings.....	100.29	96.58	93.43	90.36	72.52
Wholesale and retail trade <u>3/</u>					
Gross weekly earnings.....	82.30	79.87	77.59	61.78	40.96
Net spendable earnings.....	75.82	73.42	70.04	58.65	40.55
Real net spendable earnings.....	68.99	67.92	65.64	61.93	52.12
Finance, insurance, and real estate					
Gross weekly earnings.....	89.15	85.79	(4)	(4)	(4)
Net spendable earnings.....	81.40	78.14	(4)	(4)	(4)
Real net spendable earnings.....	74.07	72.28	(4)	(4)	(4)

1/ For mining and manufacturing, data refer to production and related workers; for contract construction, to construction workers; for wholesale and retail trade and finance, to nonsupervisory workers.

2/ Preliminary.

3/ Data exclude eating and drinking places, which were incorporated into the series in January 1964.

4/ Not available.