

ductivity gains, with the result that unit labor costs actually fell during the period. This was the only industry in which the absolute level of unit labor costs decreased.¹⁶

In summary, we have found that the direction of relative price movements in most industries can be explained by the *relative* magnitude of changes in demand and the *relative* size of increases in unit labor costs. In a large majority of industries the magnitude of price increases relative to unit labor cost increases, as measured by the movement of gross business incomes per unit, can also be explained by changes in relative demands and the relative magnitude of unit labor cost increases. There is, however, a small minority of important industries in which the behavior of gross business incomes relative to unit labor costs does not conform to the predictions of orthodox price theory.

The behavior of unit labor costs themselves is much more difficult to explain. The relative magnitude of increases in wages and salaries does not appear to be related to the relative magnitude of increases in employment. There does appear to be a weak relationship between the magnitude of increases in output and increases in wage and salary rates over longer periods; but this relationship was not in evidence during the 1955-57 period of rising prices. For most industries differences in the magnitude of productivity gains rather than differences in wage and salary increases explain most of the relative variation in the size of unit labor cost increases. There were, however, five industries in which extremely high or extremely low increases in wage and salary gains provided the major explanation of relative changes in unit labor costs.

UNIT LABOR COSTS AND "PRODUCT MIX"

In estimating changes in unit labor costs for manufacturing industry as a whole, two basic methods of measurement are possible. One may sum the total wage and salary bill for all industries and divide the total by a measure of manufacturing output. Indexes of output are normally derived by weighting quantities produced with price weights. An index of unit labor costs derived by dividing the total wage and salary bill by an index of total output will change if the composition of output shifts toward industries in which labor costs are a larger percentage of price than the average for all industries. Such a unit labor cost index will reflect, therefore, not only changes in unit labor costs in each industry, but also shifts in output from industries with low unit labor costs (as a percent of price) to industries with high unit labor costs, or vice versa. On the other hand, an index of unit labor costs constructed by weighting individual industry cost indexes with constant weights, will reflect only the changes in unit labor costs in individual industries, and will exclude the effects of a shifting composition of output.

We have constructed such a "constant weight" unit labor cost index, using 1947 output to weight the indexes of unit labor cost in each industry. Table 15 compares the change in manufacturing unit

¹⁶ The behavior of relative wages in the five industries named is consistent with the findings on relative wages reported in ch. 5, "Staff Report, Joint Economic Committee, Study of Employment, Growth, and Output." Investigations by Conrad and Levinson showed relative wages to be positively correlated with industry concentration ratios and with profits. The two industries with very high wage increases—primary metals and tobacco—are industries with relatively high concentration ratios. These industries also had very large increases in gross margins over the period in question. Precisely the opposite characteristics are associated with the three industries in which relative wages fell sharply—textiles, apparel, and leather.