

Significant other State increases also took place in engineering employment; it tripled in Florida, rose by four-fifths in Maryland and by two-thirds in Texas.¹⁴

It is interesting to note that the Department of Labor recites the U.S. Government as one of the primary causes for this shift in employment. The reason given is increased spending for research and development and the great increase in spending for modern weapons systems. In fact, it was learned that 42 percent of all manufacturing in the Los Angeles area was defense connected.¹⁵

The third shift is a change in the type of goods being purchased by the Defense Department, as highlighted by the fact that in 1953 missile purchases accounted for only 0.5 percent of the hard goods delivered in that year, while in 1961 they had taken up 33.6 percent. There has also been a significant increase in the proportion of electronic equipment being purchased. Perhaps one of the most significant shifts in Government purchases is in the field of tank-automotive, weapons, ammunition, and production equipment, which has gone from 50.09 percent of the goods delivered in 1953 down to 12.4 percent of the goods delivered in 1961. Also highly significant is the increase in contracts for research, development, testing, and evaluation (R.D.T. & E.). In 1961 these contracts totaled \$6 billion and constituted about one-fourth of all prime contracts awarded in the United States. These facts make it clear that this shift in spending by the U.S. Government has caused the second shift relating to engineering employment.¹⁶

The fourth shift has to do with the location of Government awards of prime contracts. It is startling to learn that the Mountain and Pacific States during World War II received only 13.5 percent of the prime contract awards, but by 1961 this had increased to 32.6 percent. The geographical locations of R.D.T. & E. contracts were even more closely concentrated than the contracts for hard goods. California alone accounted for 41.3 percent of such contracts let by the Defense Department. A report issued by the Department of Labor, Office of Manpower, Automation, and Training, entitled Manpower Report No. 1, states that California in 1961 received a total of \$2.5 billion in R.D.T. & E. contracts from the U.S. Government, which constituted two-fifths of this budget. Some interesting comments in connection with these shifts are to be found in a document entitled "The Changing Patterns of Defense Procurement," issued by the Office of the Secretary of Defense, June 1962, concerning the geographical shift in contract awards. In that document, it is stated that—

Michigan, for example, obtained 10.5 percent of military prime contract awards during World War II and 9.5 percent during Korea; yet had only 2.7 percent of the smaller fiscal year 1961 contract total. The States of Illinois, Ohio, Indiana, and Wisconsin, combined, had 21.9 percent of the total in World War II, 17.8 percent during Korea, and only 9.1 percent in fiscal year 1961.

It is difficult to translate dollar prime contract awards into employment figures, because of variations in products, subcontracting, wage levels, and indirect labor ratios. Nevertheless, it is plainly evident that the drop in annual prime awards in the East North-Central area from \$8.7 billion during Korea to \$2.6 billion in fiscal year 1961 had a severe economic impact. *Under any system of translation, the loss of \$6.1 billion per year in defense contracts means hundreds of thousands of jobs. It is not surprising that many communities in these five States have encountered recurrent unemployment problems.* During World War II, and Korea, these

¹⁴ Hearings, p. 31.

¹⁵ Hearings, p. 8.

¹⁶ Hearings, pp. 171-172.