MARYLAND INTERINDUSTRY FORECASTING PROJECT

Research Memorandum No. 12

LABOR FORCE STATISTICS
LABOR BALANCE AND LABOR FORCE FORECASTS

by

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In the way the Maryland Interindustry Forecasting Model operates, the labor force projection, and therefore the employment projection, controls the total size of the future economy. Unfortunately, there is no single set of statistics on employment by industry in which the industry employment adds up to the total employment reported in the labor force statistics. Ideally, we would like to have, for each industry, all employees, all self-employed, and all unpaid family workers, for all these are counted as "employed" in the labor force. But we have to settle for less and to use different sources for different industries. The sources are three:

1. Employment and Earnings and Monthly Report on the Labor Force (U.S. Department of Labor). The labor force table shows total employment in agriculture. This total is exactly what we are looking for, because it fits perfectly with the labor force estimates. We divide it between Industry 1 and 2 on the basis of man-hours in livestock versus man-hours in crops and maintenance as given in the Statistical Abstract of the U.S., Table 926 (in 1967 edition) "Farm Labor-Man-hours and Index of Farm Output."

2. National Income Accounts, Tables 6.3, 6.4, and 6.6 (July issues of the Survey of Current Business). This source permits us to include self-employed. It is therefore used where self-employment is important, namely, agricultural services, forestry and fishery, construction, transportation, communication, trade, and all of the service industries. It is also the most convenient source for government enterprises and the government industry. It does not provide sufficient industry detail in Manufacturing and Mining and does not permit adjustments for the length of the work week in productivity calculations.

   By definition, Table 6.6, "Number of persons engaged in production by industry," is derived from Table 6.4, "Number

of full-time equivalent employees by industry," by adding estimates of self-employment by industry. Therefore, we subtract the figures in Table 6.4 from those in Table 6.6 to estimate the number of self-employed by industry. To this estimate, we add the figures in Table 6.3, "Average number of full-time and part-time employees by industry." The reason for counting the part-time employees on the same basis as full-time employees is that they are so counted in the labor force statistics.

3. The same document used for source 1 also provides, in the Establishment Data section, the most detailed information by industry. It was therefore used for all of the manufacturing, mining, and utility industries. A useful historical compilation is found in Employment and Earning Statistics for the United States, 1909-67 (U.S. Department of Labor: October, 1967). (We put employment for SIC 138 under the Petroleum Extraction industry rather than under the Construction industry as specified by the sectoring plan of the I-O table.)

The total employment from these sources for the years 1960-1967 are shown in the line "Total Jobs In Model" in the attached Labor Balance table. Below this line appears the number of persons employed as reported in the labor force statistics (more correctly, this line shows total civilian employment plus military employment derived from source 2). Notice that the total jobs exceed the total employed. The reason naturally lies in the fact that many people hold more than one job. In the labor force, they are counted as one employed person, but in our jobs-by-industry statistics, they necessarily turn up once for each job. To convert our reconciliation adjustment into a true "multiple job adjustment", we add self-employed in manufacturing and unpaid family workers in non-agricultural industries. The result appears in the bottom line of Table I.

The recent growth in multiple job holding accounts for a strikingly large share of total growth in the economy, as Table II shows. A quarter of the last three years' growth in the number of jobs has, apparently, come from an increase in moonlighting, which has increased 56 percent during these years. Since such a development seems unlikely to continue, we have projected the reconciliation factor to remain at 4 million, a figure between the 1966 and 1967 values. This projection holds our model to lower levels of GNP than those reached by aggregate models that implicitly project a continuation of the recent rise in this adjustment.

TABLE II. INCREMENTS IN JOBS AND RECONCILIATION ADJUSTMENT

		1964-65	1965-66	1966-67	1964-67
1.	Increment in Reconciliation Adjustment	521	1115	306	1942
2.	Increment in Jobs in Model	2316	3346	2048	7710
3.	(1) as a percent of (2)	22	33	15	25
4.	Increment in Multiple Jobs	557	1023	260	1840
5.	(4) as a pervent of (2)	24	31	13	24

TABLE I. LABOR BALANCE: 1960-1967
(in 1000's)

Source *	1960	1961	1962	1963	1964	1965	1966	1967
1 Agriculture	5,458	5,200	4,944	4,687	4,523	4,361	3,979	3,844
2 Agricultural Services, Forestry & Fisheries	305	310	315	318	316	325	325	330
3 Mining	712	672	650	635	634	632	625	613
2 Construction	3,596	3,560	3,632	3,715	3,836	3,990	4,079	4,042
3 Manufacturing	16,796	16,326	16,853	16,995	17,274	18,062	19,186	19,339
2 Transportation	3,045	3,002	3,062	3,140	2,675	2,713	2,797	2,844
2 Communication	844	833	829	831	853	885	933	971
3 Utilities	615	614	610	610	615	623	628	639
2 Trade	13,818	13,729	13,904	14,072	14,510	15,021	15,550	15,924
2 Finance & Insurance	2,977	3,047	3,111	3,191	3,271	3,348	3,436	3,549
2 Services	11,580	11,952	12,343	12,663	13,111	13,485	14,013	14,505
2 Government	11,276	11,592	12,163	12,407	12,722	13,211	14,451	15,450
Total Jobs in Model	71,022	70,837	72,416	73,264	74,340	76,656	80,002	82,050
Persons Employed	68,294	68,344	69,502	70,485	72,025	73,820	76,051	77,793
Reconciliation Adjustment	2,728	2,493	2,914	2,779	2,315	2,836	3,951	4,257
Unpaid Family Workers (outside agriculture)	529	661	577	574	554	591	500	455
Self-employed in Manufacturing	413	413	410	407	403	402	401	400
Multiple Job Adjustment	3,670	3,567	3,901	3,760	3,272	3,829	4,852	5,112

* For explanation of source numbers, see text.