

Techniques for Estimating the Cost of Living at the WPA Maintenance Level for Families of Differing Composition

By Lelia M. Easson and Edna C. Wentworth *

IN ITS tenth annual report the Social Security Board declared that "the adequacy of an insurance system must be judged by the extent to which its benefits, in conjunction with individual resources, provide a reasonable degree of security for the large majority of beneficiaries."¹ To apply this criterion of adequacy to the benefits paid under old-age and survivors insurance, it is necessary to devise some method of measuring the resources of the beneficiaries against a standard which can be accepted as describing a "reasonable degree of security."

Facts concerning the resources of aged persons and widows with dependent children who are beneficiaries under the system are available in schedules collected in 1941-42 by the Bureau of Old-Age and Survivors Insurance from 3,529 beneficiary families in 4 surveys conducted in 7 large cities.² The schedules include information on the age and sex of the beneficiaries and those with whom they live, as well as on their employment status and income during a 1-year period.

In determining a standard of "security" for comparison with the spendable funds of these beneficiaries, it must be remembered that old-age and survivors insurance was devised for the limited objective of providing economic security through replacement of a portion of lost income. Because old-age and survivors insurance is based on a pay-roll tax and represents a compulsory allocation of the national income, the standard should be modest—the lowest that is socially acceptable.

One way of defining the minimum requirements for economic security is

to list the goods and services that will provide the lowest level of living that is generally acceptable. Such a list, or budget, will include goods and services of such quantity and quality that health can be maintained and limited participation in social activities can be possible. If physiological needs are met but only a modicum of social ends served, the budget is often described as "minimum adequate" or "maintenance."

A maintenance budget may therefore be considered to describe minimum economic security, and the spendable funds of a beneficiary group³ may be compared with the cost of such a budget to determine whether the group is able to command a corresponding level of living. By these means it is possible to measure the extent to which the insurance benefits, in conjunction with individual resources, provide a reasonable degree of security. An evaluation of this kind was undertaken by the authors as part of the analysis of the resources of old-age and survivors insurance beneficiaries in 1941-42.⁴

At any given level, budgets vary with the maker's intent and understanding, the extent to which current consumption habits and standards are known, the climate, goods available, and the price levels at the time and place to which the budgets apply. When this work was undertaken, the Works Progress Administration maintenance budget⁵ appeared to lend itself better to the purposes in hand than others, then available, which also represented maintenance levels. Compared with the others the WPA budget made neither the highest nor

lowest allowances for living. It was described as furnishing less than the health and decency level which the skilled workers may hope to obtain, but more than a "minimum of subsistence" level, which provides only for urgent current needs and which will not maintain health over a period of time. Moreover, for the seven large cities in which beneficiary surveys were made, the cost of the WPA budget had been published for dates near the midpoints of the survey years.

At the request of the Seventy-ninth Congress, the Bureau of Labor Statistics of the Department of Labor has been working on a budget for a family of the same composition as that represented in the WPA budget (employed man, wife, boy aged 13, and girl aged 8). While the BLS was working on the standard budget for the 4-person family, the Social Security Administration undertook the task of applying parallel techniques and procedures to the preparation of budgets for certain other types of families, with initial efforts devoted to a minimum standard budget for elderly couples living by themselves. Since these budgets were not available when the methods and procedures described here were developed and carried into effect, they were not among the budgets studied for possible use in connection with the proposed analysis.

Since the WPA budget was constructed for a single family type, its use in appraising the adequacy of resources of the beneficiaries and their spouses and children, living by themselves or with others, involved establishing the cost of living of each beneficiary group at a level corresponding to that described for the 4-person family in the WPA maintenance budget. This conversion was accomplished by the use of requirement scales, either computed by the authors or based on published scales of other agencies. This paper explains the method used in estimating the cost of the budget at the WPA maintenance level for families of differing composition.

Estimating Cost of Living for Beneficiary Groups

For persons in different age, sex, and activity groups, requirement

*Bureau of Old-Age and Survivors Insurance, Analysis Division.

¹ *Annual Report of the Federal Security Agency: Section Five, Social Security Board, for the Fiscal Year 1945*, p. 37.

² Philadelphia and Baltimore combined; St. Louis; Birmingham, Memphis, and Atlanta combined; and Los Angeles.

³ The "beneficiary group" includes the primary beneficiary, his or her spouse, and unmarried children under age 18, or the widow and unmarried children under age 18.

⁴ See the *Bulletin*, July and September 1943; January, April, May, September, November 1945.

⁵ Works Progress Administration, *Intercity Differences in Costs of Living in March 1935* (Division of Social Research Monograph XII), 1937.

scales—or relatives—were adopted or constructed covering the expenditure categories of food, clothing, and miscellaneous items. These scales were adapted to 40 classes of individuals. An allowance was also made in the food budget for buying disadvantages in families of fewer than 4 persons. Housing costs, including rent, most household operation expenses, and the cost of household furnishings and equipment were based on the WPA budget allowance prorated equally to each member, with adjustments for families of different size. Thus, for each beneficiary group included in the surveys, amounts appropriate to each member of the group were combined to derive a maintenance-level estimate for the group. An estimate for any other persons in the family was obtained in the same way. The application of these techniques as they relate to the budget estimates in the several categories of consumption was, in general, as follows.

Food.—The relative food scale used (table 1) was based on low-cost food budgets compiled by the Bureau of Human Nutrition and Home Economics, Department of Agriculture, and priced in December 1944.

The employed man's share of the cost of food allowed in the WPA budget for the particular survey area under consideration at approximately the midpoint of the survey year⁶ was first determined. From this base, a food budget was calculated for each class of persons. For example, the food budget for the WPA 4-person family in St. Louis on June 15, 1941, was \$517.39. The number of food-requirement units in this family, according to the food scale adopted, is 3.74. Since the cost of food requirements of a man aged 21 through 64 was taken as 1.00, the cost of his food requirements was obtained by dividing the family food budget of \$517.39 by 3.74, which gave \$138.34 as his food budget.

The food budget for each of the other classes of persons was obtained by multiplying the cost of food for the employed man by the food-requirement relative of the class. The

⁶ The data collected from each beneficiary group covered a period of 1 year, ending the last day of the month preceding the date of the interview.

food relative for a man over 65 is 0.90, for example; the food budget of such a person in St. Louis at the specified time, therefore, was \$138.34 multiplied by 0.90, or \$124.51.

In accordance with a procedure approved by the Bureau of Human Nutrition and Home Economics, allowances were made in the individual food budgets to compensate for buying disadvantages in small families:

| Number of persons in family | Percent added to food budget |
|-----------------------------|------------------------------|
| 4 or more..... | 0 |
| 3..... | 10 |
| 2..... | 20 |
| 1..... | 35 |

Clothing.—The clothing-requirement scale adopted was derived from the cost-of-consumption scale for clothing used by the BLS in connection with its study of money disbursements of wage earners and clerical workers in 1934-36.⁷ Since the analysis by age, sex, and activity was more detailed than was necessary for this study, relatives for certain age intervals were averaged and a single weighted-average relative was obtained to take the place of the two occupational relatives given by the BLS for employed men and women.

The value of 1.00 for clothing needs was derived in the same manner as that for food. The clothing budget of the WPA 4-person family in St. Louis in the middle of June 1941 was \$165.13. Since there are 2.88 clothing-requirement units in the WPA family,⁸ the value of 1.00 became \$165.13 divided by 2.88, or \$57.34. By applying to this amount the clothing scale adopted, the clothing budgets for all classes of persons were derived.

Miscellaneous items.—As far as possible, the requirements scale for miscellaneous items was based on the components of this category in the original WPA maintenance budget. However, two categories of expense,

⁷ Bureau of Labor Statistics, *Money Disbursements of Wage Earners and Clerical Workers, 1934-36, Summary Volume* (Bulletin No. 638), 1941, p. 364.

⁸ In computing the total number of clothing-requirement units in the WPA family, the relatives added were taken directly from the BLS relative clothing-expenditure scale with occupational weighting for the husband. Thus the units added were: husband, 0.90; wife, 0.88; boy of 13, 0.63; and girl of 8, 0.47. The husband and wife were assumed to be aged 40 and 36, respectively.

not classified as "miscellaneous" in the original budget but included in the group in subsequent BLS studies of the cost of the WPA maintenance budget, have been added. These two categories are "household supplies, refuse disposal, and unspecified essentials" and "personal care."

The average cost of miscellaneous items, including the two added categories, for the 59 cities in the original WPA budget (March 15, 1935) were allocated to the different members as shown in table 2. Life insurance premiums allowed for individual family members were those given in the budget. Transportation funds were allocated on the basis of probable need, 78 percent of the fund going to the wage earner. School costs were charged to the children. Recreation expenses were arbitrarily distributed

Table 1.—Requirement scales for food, clothing, and miscellaneous items, for persons of differing age, sex, and activity¹

| Age, sex, and activity | Food | Clothing | Miscellaneous |
|------------------------|------|----------|---------------|
| Young children: | | | |
| Under 3..... | 0.55 | 0.28 | 0.20 |
| 4-6..... | .66 | .40 | .29 |
| 7-9..... | .78 | .50 | .38 |
| 10-12..... | .92 | .60 | .39 |
| Boys, in school: | | | |
| 13-15..... | 1.08 | .71 | .45 |
| 16-17..... | 1.20 | .88 | .61 |
| Girls, in school: | | | |
| 13-15..... | .97 | .85 | .47 |
| 16-17..... | .90 | 1.01 | .60 |
| Boys, employed: | | | |
| 13-15..... | 1.08 | 1.02 | .45 |
| 16-17..... | 1.20 | 1.02 | .61 |
| Girls, employed: | | | |
| 13-15..... | .97 | 1.08 | .47 |
| 16-17..... | .90 | 1.08 | .60 |
| Men, employed: | | | |
| 18-20..... | 1.20 | 1.09 | 1.00 |
| 21-26..... | 1.00 | 1.09 | 1.00 |
| 27-35..... | 1.00 | .98 | 1.00 |
| 36-47..... | 1.00 | .87 | 1.00 |
| 48-59..... | 1.00 | .74 | 1.00 |
| 60-64..... | 1.00 | .62 | 1.00 |
| 65 and over..... | .90 | .62 | 1.00 |
| Men, unemployed: | | | |
| 18-20..... | 1.20 | .62 | .74 |
| 21-26..... | 1.00 | .62 | .74 |
| 27-35..... | 1.00 | .45 | .74 |
| 36-47..... | 1.00 | .42 | .74 |
| 48-59..... | 1.00 | .38 | .74 |
| 60-64..... | 1.00 | .35 | .74 |
| 65 and over..... | .90 | .35 | .70 |
| Women, employed: | | | |
| 18-20..... | .90 | 1.60 | .91 |
| 21-26..... | .88 | 1.60 | .91 |
| 27-35..... | .88 | 1.43 | .91 |
| 36-47..... | .88 | 1.21 | .91 |
| 48-59..... | .88 | .93 | .91 |
| 60-64..... | .88 | .71 | .91 |
| 65 and over..... | .83 | .71 | .91 |
| Women, unemployed: | | | |
| 18-20..... | .90 | 1.04 | .61 |
| 21-26..... | .88 | 1.04 | .61 |
| 27-35..... | .88 | .97 | .61 |
| 36-47..... | .88 | .83 | .61 |
| 48-59..... | .88 | .63 | .61 |
| 60-64..... | .88 | .40 | .61 |
| 65 and over..... | .83 | .40 | .61 |

¹ The sources from which the scales are derived are discussed in the text.

Table 2.—Allowances for miscellaneous items in the 1935 WPA budget, all cities combined, allocated to family members

| Item | Total amount | Family member | | | |
|--|--------------|---------------|-----------|------------|------------|
| | | Employed man | Housewife | Girl age 8 | Boy age 13 |
| Total..... | \$301.42 | \$123.68 | \$75.83 | \$46.40 | \$55.51 |
| Medical care..... | 52.32 | 13.08 | 13.08 | 13.08 | 13.08 |
| Transportation..... | 53.96 | 42.00 | 5.04 | 2.28 | 4.64 |
| School attendance..... | 7.37 | | | 2.46 | 4.91 |
| Recreation..... | 75.18 | 26.78 | 26.78 | 9.12 | 12.50 |
| Life insurance..... | 46.40 | 23.00 | 13.00 | 5.20 | 5.20 |
| Church and other contributions..... | 15.40 | 3.85 | 3.85 | 3.85 | 3.85 |
| Household supplies, refuse disposal, unspecified household essentials..... | 23.38 | 5.85 | 5.85 | 5.84 | 5.84 |
| Personal care..... | 24.87 | 8.08 | 7.60 | 4.17 | 5.02 |
| Taxes..... | 2.54 | 1.04 | .63 | .40 | .47 |

to the 4 persons in the family; each child was given an allowance for movies and incidentals, and the 13-year-old boy was charged with a small amount for club memberships and one-fifth of the newspaper cost; the rest of the recreation allowance was divided equally between the parents. Medical expenses, contributions, and the household supplies were prorated on a per capita basis. Expenses for personal care were prorated as nearly as possible in accordance with allowances in the quantity budget published in connection with the study of intercity differences in cost of living.⁹ Taxes were assumed to be chargeable in the same proportion as all other miscellaneous expenses combined.

Miscellaneous expenses of persons not members of the WPA family were budgeted for in accordance with their age, sex, and assumed activities, on a scale commensurate with allowances of a similar kind made for family members in the WPA budget. From this schedule of amounts, a requirement scale was constructed, using the amount for the employed man as 1.00. This scale was then adopted for the purpose of estimating the cost of requirements in the "miscellaneous" category for the different classes of persons at the time of the surveys.

In St. Louis on June 15, 1941, the WPA budget for "miscellaneous" items for the 4-person family was \$326.60. The family's total number of requirement units of this category, according to the scale adopted, is 2.44.

⁹ Works Progress Administration, *Quantity Budgets for Basic Maintenance and Emergency Standards of Living* (Division of Social Research Bulletin No. 21), table III, parts 1 and 2, p. 26.

The value of 1.00 (\$133.85) was obtained by dividing the WPA family "miscellaneous items" budget of \$326.60 by 2.44. The amounts budgeted for miscellaneous items for each class of persons in St. Louis were obtained by multiplying \$133.85 by the miscellaneous items requirement unit of the class. The relative for an unemployed man over age 65, for example, is 0.70; his budget in this category, therefore, was \$133.85 multiplied by 0.70, or \$93.70.

Joint expenses.—The categories designated as "joint expenses" are housing; ice, fuel, and electricity; and furniture and furnishings. The cost of requirements for "joint expenses" has been distributed on a per capita basis without regard to the age or sex of the family members.

To estimate the variation in per capita joint expenses for families larger or smaller than the WPA 4-

person family, assumptions were made as to the number of persons per room and cost of the rooms. The point of reference was the WPA 4-person family in a 4.5-room dwelling at the cost shown in the WPA maintenance budget for the survey area and date under consideration. Regardless of their use, the joint expense attributable to each of the various rooms in the dwelling was assumed to be the same (joint expense divided by 4.5 rooms for the WPA 4-person family).

With the addition or subtraction of one family member, half of the allowance per room for joint expense was added to or subtracted from the 4-person allowance,¹⁰ except that the amount allowed for a person living alone was arbitrarily taken as two-thirds of the 2-person budget. The cost per person in the 4-person family (\$107.82 in St. Louis on June 15, 1941) was taken as 1.00 and a scale constructed (table 3). To obtain the amounts per person to be budgeted for joint expenses in families in the other three survey areas, the St. Louis scale was applied to the per capita joint expenses in the WPA budgets

¹⁰ The allowances for rent, fuel, electricity, furniture, and furnishings are all assumed to vary in the same ratio with addition or subtraction of rooms, but the same assumption cannot be made about ice. Its inclusion among joint expenses therefore constitutes an inconsistency. The amount involved, however, is small and does not significantly affect the results.

Table 3.—Joint expenses¹ at the WPA maintenance level and relative per capita scale, by size of family, St. Louis, June 15, 1941

| Number of persons in family | Cost of joint expenses | | Relative scale per person (per capita cost in family of 4=1.00) |
|-----------------------------|-------------------------|------------|---|
| | Per family ² | Per person | |
| 1..... | \$223.62 | \$223.62 | 2.07 |
| 2..... | 335.43 | 167.72 | 1.56 |
| 3..... | 383.35 | 127.78 | 1.19 |
| 4..... | 431.27 | 107.82 | 1.00 |
| 5..... | 479.19 | 95.84 | .89 |
| 6..... | 527.11 | 87.85 | .81 |
| 7..... | 575.03 | 82.15 | .75 |
| 8..... | 622.95 | 77.87 | .72 |
| 9..... | 670.87 | 74.54 | .69 |
| 10..... | 718.79 | 71.88 | .67 |
| 11..... | 766.71 | 69.70 | .65 |
| 12..... | 814.63 | 67.89 | .63 |

¹ Joint expenses include the following categories of the WPA maintenance budget as published by the U. S. Bureau of Labor Statistics for June 15, 1941: housing; fuel, electricity, and ice; and house furnishings.

² With the addition or subtraction of 1 family member, an adjustment in joint expenses was made by adding or subtracting from the 4-person allowance

half the cost per room, or \$431.27/2=215.64. The WPA family was assumed to occupy 4.5 rooms. An exception was made in the case of the person living alone, whose expense for these items was arbitrarily taken as two-thirds of the 2-person allowance.

Table 4.—Budgets for persons of differing age, sex, and activity, by size of household, St. Louis, June 15, 1941

| Number of persons in household | Adults | | | | | Children | | | | |
|--------------------------------|---------------|-----------|-------------|-----------|---------|--------------|-----------|----------------------|-----------|----------------------|
| | Age | Men | | Women | | Age | Boys | | Girls | |
| | | Em-ployed | Unem-ployed | Em-ployed | At home | | Em-ployed | At home or in school | Em-ployed | At home or in school |
| 1..... | 65 and over.. | \$561 | \$505 | \$541 | \$483 | | | | | |
| 2..... | 18-20..... | 564 | 502 | 531 | 459 | Under 3..... | | \$302 | | \$302 |
| | 21-26..... | 531 | 469 | 528 | 456 | 4-6..... | | 340 | | 340 |
| | 27-35..... | 524 | 459 | 518 | 452 | 7-9..... | | 377 | | 377 |
| | 36-47..... | 518 | 457 | 505 | 444 | 10-12..... | | 408 | | 408 |
| | 48-59..... | 510 | 455 | 489 | 432 | 13-15..... | \$466 | 448 | \$454 | 441 |
| | 60-64..... | 504 | 453 | 477 | 419 | 16-17..... | 508 | 500 | 460 | 456 |
| | 65 and over.. | 487 | 431 | 468 | 411 | | | | | |
| 3..... | 18-20..... | 507 | 446 | 479 | 407 | Under 3..... | | 255 | | 255 |
| | 21-26..... | 477 | 415 | 476 | 404 | 4-6..... | | 290 | | 290 |
| | 27-35..... | 471 | 405 | 466 | 399 | 7-9..... | | 327 | | 327 |
| | 36-47..... | 464 | 404 | 453 | 391 | 10-12..... | | 355 | | 355 |
| | 48-59..... | 457 | 401 | 437 | 380 | 13-15..... | 411 | 394 | 401 | 388 |
| | 60-64..... | 450 | 400 | 425 | 367 | 16-17..... | 451 | 443 | 408 | 403 |
| | 65 and over.. | 435 | 379 | 417 | 359 | | | | | |
| 4..... | 18-20..... | 470 | 408 | 446 | 374 | Under 3..... | | 227 | | 227 |
| | 21-26..... | 443 | 381 | 443 | 371 | 4-6..... | | 261 | | 261 |
| | 27-35..... | 436 | 371 | 433 | 367 | 7-9..... | | 295 | | 295 |
| | 36-47..... | 430 | 369 | 421 | 359 | 10-12..... | | 322 | | 322 |
| | 48-59..... | 422 | 367 | 405 | 347 | 13-15..... | 376 | 358 | 367 | 354 |
| | 60-64..... | 416 | 365 | 392 | 334 | 16-17..... | 414 | 406 | 375 | 371 |
| | 65 and over.. | 402 | 346 | 385 | 327 | | | | | |
| 5..... | 18-20..... | 458 | 397 | 434 | 362 | Under 3..... | | 215 | | 215 |
| | 21-26..... | 431 | 369 | 431 | 359 | 4-6..... | | 249 | | 249 |
| | 27-35..... | 424 | 359 | 422 | 355 | 7-9..... | | 283 | | 283 |
| | 36-47..... | 418 | 357 | 409 | 347 | 10-12..... | | 310 | | 310 |
| | 48-59..... | 411 | 355 | 393 | 335 | 13-15..... | 364 | 346 | 355 | 342 |
| | 60-64..... | 404 | 353 | 380 | 322 | 16-17..... | 402 | 394 | 363 | 359 |
| | 65 and over.. | 390 | 334 | 373 | 315 | | | | | |
| 6..... | 18-20..... | 450 | 388 | 425 | 353 | Under 3..... | | 206 | | 206 |
| | 21-26..... | 422 | 360 | 423 | 350 | 4-6..... | | 240 | | 240 |
| | 27-35..... | 416 | 351 | 413 | 346 | 7-9..... | | 275 | | 275 |
| | 36-47..... | 409 | 349 | 400 | 338 | 10-12..... | | 301 | | 301 |
| | 48-59..... | 402 | 347 | 384 | 327 | 13-15..... | 355 | 338 | 346 | 333 |
| | 60-64..... | 395 | 345 | 372 | 314 | 16-17..... | 393 | 385 | 354 | 350 |
| | 65 and over.. | 381 | 326 | 365 | 307 | | | | | |
| 7..... | 18-20..... | 444 | 383 | 420 | 348 | Under 3..... | | 201 | | 201 |
| | 21-26..... | 417 | 355 | 417 | 345 | 4-6..... | | 235 | | 235 |
| | 27-35..... | 410 | 345 | 407 | 341 | 7-9..... | | 269 | | 269 |
| | 36-47..... | 404 | 343 | 395 | 333 | 10-12..... | | 296 | | 296 |
| | 48-59..... | 397 | 341 | 379 | 321 | 13-15..... | 350 | 332 | 341 | 328 |
| | 60-64..... | 390 | 339 | 366 | 308 | 16-17..... | 388 | 380 | 349 | 345 |
| | 65 and over.. | 376 | 320 | 359 | 301 | | | | | |
| 8..... | 18-20..... | 440 | 378 | 416 | 343 | Under 3..... | | 197 | | 197 |
| | 21-26..... | 412 | 351 | 413 | 341 | 4-6..... | | 231 | | 231 |
| | 27-35..... | 406 | 341 | 403 | 337 | 7-9..... | | 265 | | 265 |
| | 36-47..... | 400 | 339 | 391 | 329 | 10-12..... | | 292 | | 292 |
| | 48-59..... | 392 | 337 | 374 | 317 | 13-15..... | 346 | 328 | 337 | 323 |
| | 60-64..... | 385 | 335 | 362 | 304 | 16-17..... | 384 | 376 | 344 | 340 |
| | 65 and over.. | 372 | 316 | 355 | 297 | | | | | |
| 9..... | 18-20..... | 437 | 375 | 412 | 340 | Under 3..... | | 193 | | 193 |
| | 21-26..... | 409 | 347 | 410 | 337 | 4-6..... | | 227 | | 227 |
| | 27-35..... | 403 | 338 | 400 | 333 | 7-9..... | | 262 | | 262 |
| | 36-47..... | 396 | 336 | 387 | 325 | 10-12..... | | 288 | | 288 |
| | 48-59..... | 389 | 334 | 371 | 314 | 13-15..... | 343 | 325 | 333 | 320 |
| | 60-64..... | 382 | 332 | 359 | 301 | 16-17..... | 381 | 373 | 341 | 337 |
| | 65 and over.. | 368 | 313 | 352 | 294 | | | | | |
| 10..... | 18-20..... | 435 | 373 | 410 | 338 | Under 3..... | | 191 | | 191 |
| | 21-26..... | 407 | 345 | 408 | 335 | 4-6..... | | 225 | | 225 |
| | 27-35..... | 401 | 335 | 398 | 331 | 7-9..... | | 260 | | 260 |
| | 36-47..... | 394 | 334 | 385 | 323 | 10-12..... | | 286 | | 286 |
| | 48-59..... | 387 | 331 | 369 | 312 | 13-15..... | 340 | 323 | 331 | 318 |
| | 60-64..... | 380 | 330 | 356 | 299 | 16-17..... | 378 | 370 | 339 | 335 |
| | 65 and over.. | 366 | 311 | 350 | 292 | | | | | |
| 11..... | 18-20..... | 432 | 371 | 408 | 336 | Under 3..... | | 189 | | 189 |
| | 21-26..... | 405 | 343 | 405 | 333 | 4-6..... | | 223 | | 223 |
| | 27-35..... | 398 | 333 | 396 | 329 | 7-9..... | | 258 | | 258 |
| | 36-47..... | 392 | 332 | 383 | 321 | 10-12..... | | 284 | | 284 |
| | 48-59..... | 385 | 329 | 367 | 310 | 13-15..... | 338 | 320 | 329 | 316 |
| | 60-64..... | 378 | 328 | 354 | 296 | 16-17..... | 376 | 368 | 337 | 333 |
| | 65 and over.. | 364 | 308 | 347 | 289 | | | | | |
| 12..... | 18-20..... | 430 | 369 | 406 | 334 | Under 3..... | | 187 | | 187 |
| | 21-26..... | 403 | 341 | 403 | 331 | 4-6..... | | 221 | | 221 |
| | 27-35..... | 396 | 331 | 393 | 327 | 7-9..... | | 255 | | 255 |
| | 36-47..... | 390 | 329 | 381 | 319 | 10-12..... | | 282 | | 282 |
| | 48-59..... | 383 | 327 | 365 | 307 | 13-15..... | 336 | 318 | 327 | 314 |
| | 60-64..... | 376 | 325 | 352 | 294 | 16-17..... | 374 | 366 | 335 | 331 |
| | 65 and over.. | 362 | 306 | 345 | 287 | | | | | |

for the other survey areas and dates under consideration.

Combining the amounts for the several categories according to family composition.—The expenses of each person living in families of 12 different sizes were obtained by adding the amounts budgeted for food, clothing, miscellaneous items, and joint expenses. For example, the budgets of an unemployed man over age 65 living with 1 other person and those of a similar individual living in a family of 5 are as follows:

| Item | In a 2-person family | In a 5-person family |
|--------------------|----------------------|----------------------|
| Total..... | \$431.38 | \$334.24 |
| Food..... | 149.41 | 124.51 |
| Clothing..... | 20.07 | 20.07 |
| Miscellaneous..... | 93.70 | 93.70 |
| Joint expense..... | 168.20 | 95.96 |

The total amounts of the budgets for persons in 40 different age, sex, and employment classifications, and in 12 different size-of-family classifications in St. Louis, June 15, 1941, are given in table 4. This table was used as a work sheet in making the budget estimate for each beneficiary group in St. Louis. Corresponding tables were prepared for each of the other three survey areas for use in budgeting for the beneficiary groups covered by the surveys in those areas.

To compute family or sub-family budgets, the appropriate size of family was selected from table 4, and the amounts budgeted for each individual in the family or sub-family were added. For example, an aged couple, both unemployed, living by themselves in St. Louis during the survey year ending October–November 1941, would presumably have lived at a maintenance level during the survey year if their living had cost approximately \$842—\$431 for the man and \$411 for his wife. The same couple living in a 5-person household would have required only \$649 for the same level of living, because of the saving in food and housing expenses. The budgets for two sub-families of specified composition, living as a joint household, were computed as follows:

| Type of family | Budget |
|--------------------------------------|---------|
| Total household..... | \$1,724 |
| Beneficiary group..... | 649 |
| Unemployed man, aged 65 or over..... | 334 |
| Housewife, aged 65 or over..... | 315 |
| Others in family..... | 1,075 |
| Employed man, aged 42..... | 418 |
| Housewife, aged 40..... | 347 |
| Child, aged 10..... | 310 |

Conclusion

The employment of the techniques described has made possible a study of the economic security of old-age and survivors insurance beneficiaries interviewed in 1941-42. The findings will be published in a later issue of the *BULLETIN*. The techniques themselves are not new. Several studies have been made in which comparison of the level of living of families of varying composition has been made possible by the use of scales indicating the relative consumption requirements of persons of differing age, sex, and activity. So far as is known to the authors, however, at least some of the scales in such studies have been far less detailed. Miscellaneous expenditures generally have been prorated merely on a per capita basis. The scale for adjusting the amount of the rent allowance for families of varying size is probably one of many efforts in an area about which little has been published. As is the case with all research of this nature, however, the resulting scale is only tentatively

offered until a better one can be found to take its place.

Family income has likewise been compared with a standard budget to evaluate the adequacy of income, particularly in connection with minimum wage legislation and other wage negotiations. The standard budgets used in such cases, however, were for families of a given composition, such as an employed man, his wife at home, a girl aged 8, and a boy aged 13. To analyze the security of the 3,529 groups of old-age and survivors insurance beneficiaries whose resources were being evaluated, hundreds of different budgets were quickly constructed.

Thus by combining two tested procedures, incomes of families of varied composition have been compared with maintenance-level budgets constructed especially for each family. The method used is practical at any time, although advances in knowledge may impel adoption of different scales or a different basic budget. It should be borne in mind that the scales adopted for modifying the basic

budget in accordance with family composition should be appropriate to the level of living described by the budget.

New information on consumption habits or scientifically determined requirements may become available which will suggest that relationships different from those used for this analysis exist between the costs of requirements of one type of individual and those of another at a maintenance level. Moreover, information of this sort already available is being utilized in making new standard budgets which could be used as norms. Such changes would not affect the usefulness of the method described. If the budget has not been priced in the cities in which the families to be studied live, one or two steps not required in the present analysis would be necessary. The content of the budget might need adjusting to take into consideration differences in climate or market availability, and an index of intercity differences in the cost of living would have to be employed.

Age Distribution of Workers in Industries Under Old-Age and Survivors Insurance

By George H. Trafton *

IN RECENT NEGOTIATIONS with management, organized labor has increasingly stressed proposals for health, welfare, and retirement funds. By 1946, provisions of this kind were already in effect in a few industries, and in that year the creation of an industry-wide fund became a critical issue in the labor-management dispute in the coal industry. The agreement signed in May by the Secretary of the Interior and the president of the United Mine Workers provides for both a welfare and retirement fund and a medical and hospital fund for the entire bituminous industry. A similar agreement, setting up a health and welfare fund for workers in the anthracite-mining industry, was signed in June. Labor organizations in other industries, including steel, have indicated that they will soon ask that similar funds be established for the protection of their members.

*Bureau of Old-Age and Survivors Insurance, Analysis Division.

In planning the benefit provisions and estimating the probable disbursements of an industry health and retirement fund, the age distribution of the workers employed in the industry will need to be considered. Some indication of the extent of industry differences in age composition is provided by tabulations of sample data derived from the wage records maintained by the Social Security Administration under old-age and survivors insurance. The most recent year for which such tabulated data are now available is 1944.

The industry data for 1944 have been obtained from a 1-percent sample of all workers receiving wages in that year in employments covered by the insurance system.¹ Each worker in the sample was classified in the

¹ Covered employment includes any services performed by a worker for an employer within the United States, including Alaska and Hawaii, or on or in connection with an American vessel, with

industry group, or one of the industry groups, in which he worked in his last calendar quarter with wage credits in 1944, as indicated by employer reports of taxable wage payments. Industry groups were determined on the basis of industry information obtained from employers between the fall of 1942 and the spring of 1945. In the tabulations, each worker has been classified in only one industry group even though he may have worked in more than one during the year. Usually, the industry group indicated represents the worker's last covered employment in 1944.

The basic punch cards contain industry codes permitting a much more detailed grouping by industry than that shown in the tables accompany-

certain exceptions. The major exclusions are self-employment, agricultural labor, domestic service in a private home, employment by the Federal Government or a State or local government, railroad employment, employment in certain types of nonprofit organizations, family employment, and casual employment not in the course of the employer's trade or business.