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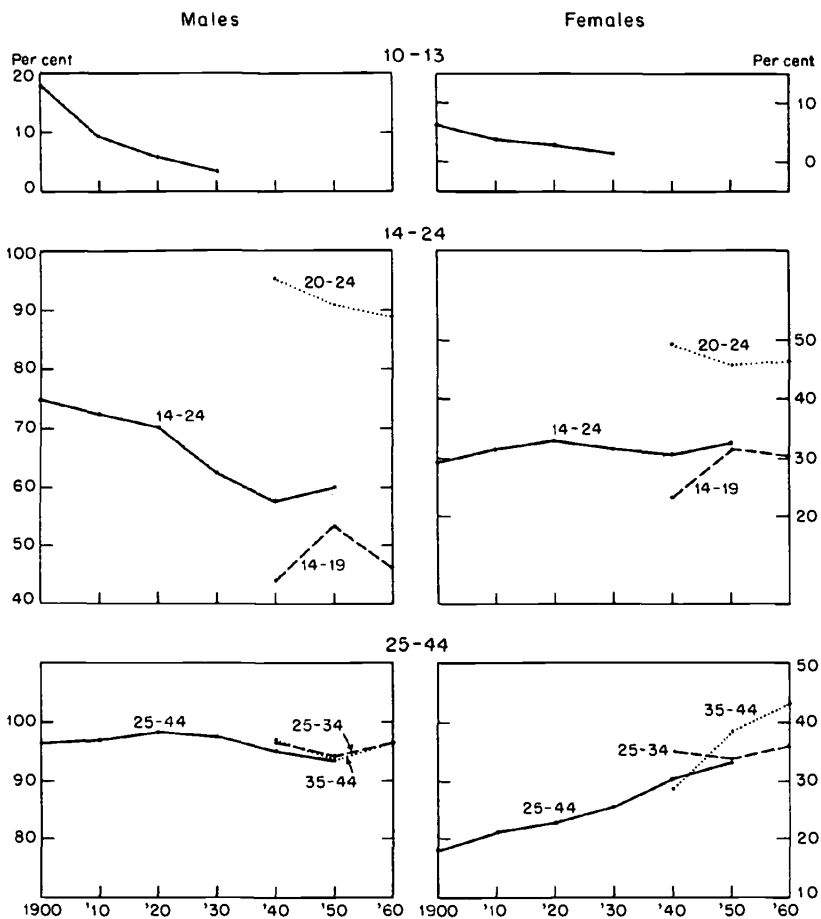
CHAPTER 7 / DIFFERENTIAL CHANGES IN SEX-AGE SPECIFIC PARTICIPATION RATES

Participation-rate changes in any given period differ both in sign and magnitude among the various sex-age groups of the working age population, and, over time, for any given sex-age group. The change in total labor force attributed to participation-rate movements is, therefore, an aggregate in which the shares of the various sex-age groups are unequal and changing over time. In the preceding chapter, the object of study was the magnitude of the aggregate itself. The problem of this chapter is the following: Assuming one knew the total contribution which participation-rate changes would make to labor force growth, could the sex-age structure of these changes be correctly predicted? (It will be noted that the sequence in which the issues of aggregate vs. sex-age specific changes are taken up in this Part is the opposite of that employed in the official projection technique, where estimates for individual sex-age groups are first made and then summed to obtain the estimate for the total labor force.) The most challenging recent observation calling for explanation is the remarkable rise in the rates of older women. As elsewhere in this study, an attempt is made to develop a model which can consistently explain both past and recent experience, and then to use this model to appraise current projections.

An important research tradition bearing on this question has grown up in demography, one which emphasizes the influence of changing population *composition* on participation rates, changes such as those in color-nativity, marital status, and rural-urban distribution [cf. 12, 52, 95, 218]. This work has contributed important insights into relevant secular factors, though it has generally led to the conclusion that "compositional" factors, as they are often termed, have not played a predominant role in the observed changes [12, p. 43; 52, Chapter 3;

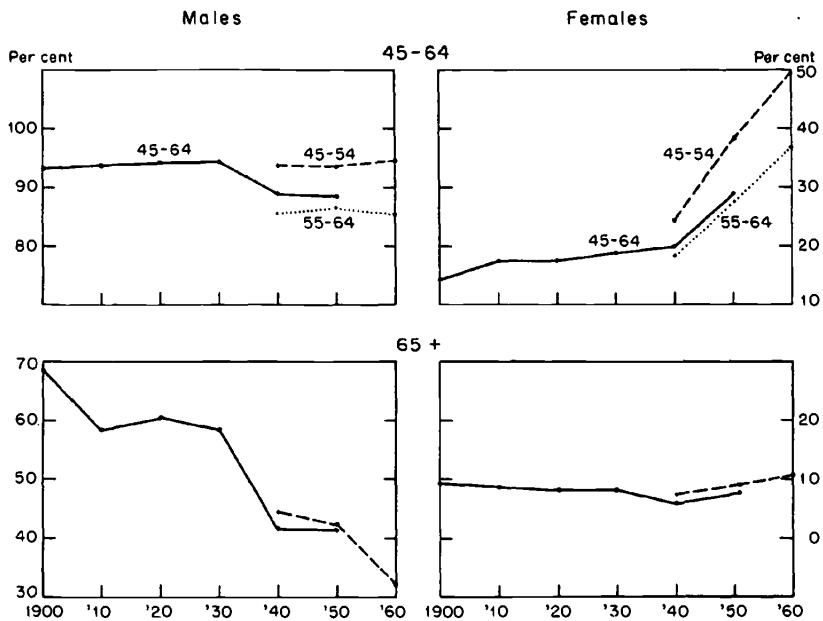
FIGURE 49

LABOR FORCE PARTICIPATION RATE, BY SEX-AGE GROUP, DECENNIALLY, 1900-60



95, p. 295]. More recently, in several of the studies on the relation of employment conditions to participation rates cited in the previous chapter [35, 48, 150, 154, 155], the effect of market pressures on labor force participation of individual sex-age groups has been explored, but no attempt has been made to take systematic account of secular

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NOTE: Values for 1900-50, from Census; overlap values, 1940 on, from CPS.
SOURCE: Table G-1.

factors.¹ In the explanatory model developed in this chapter I attempt to incorporate both sets of influences.

The record of participation-rate changes by sex and age since 1900 is first summarized. Then, the analytical model is presented, and applied, first, to interpretation of past experience, and then to appraisal of the official projection to 1970.

¹ Mincer's review of these studies and the relevant evidence concludes:

"To sum up: positive cycle sensitivity . . . is readily discernible in the annual behavior of the secondary labor force. . . . But powerful trend factors and institutional changes continue to dominate the behavior of labor force groups. Much more attention should be paid to these factors and changes" [127, p. 100].

Reference should also be made to the important contributions to this subject by Lebergott and Long [110, 116].

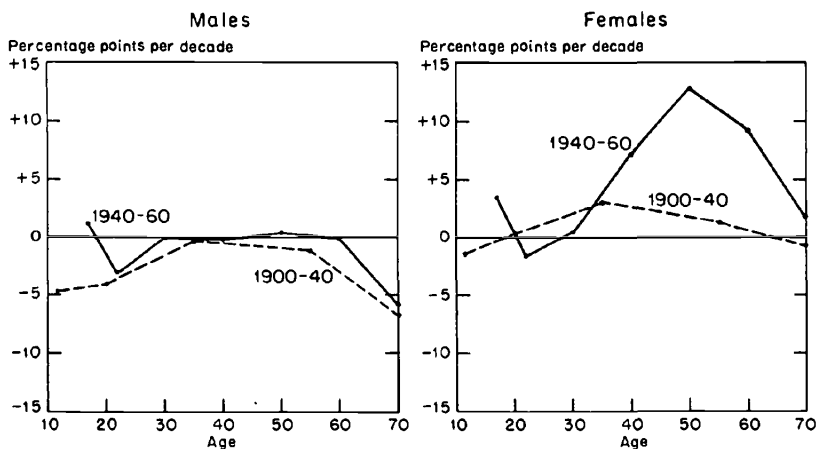
THE RECORD

Figure 49 presents at decennial intervals from 1900 to 1960 the participation rates for the individual sex-age groups covered by this analysis. The variety of experience is readily apparent. Since our interest is in the rate *changes* in each decade, these are themselves plotted in Figure 50 in the form of age profiles. To facilitate summarization the four decade changes 1900-40 have been averaged, as have the two decade changes, 1940-60. Important deviations from the average within these two broad periods will be noted in the course of the discussion.

The principal features of the rate changes suggested by Figure 50 are as follows:

1. There is an important difference by sex in the direction of the rate changes. Both in the pre-1940 and post-1940 periods, the rate

FIGURE 50
AGE PROFILE OF CHANGE IN LABOR FORCE PARTICIPATION RATES, BY SEX: AVERAGE OF DECADES 1900-40 COMPARED WITH THAT OF DECADES 1940-60



NOTE: Values are plotted at center of each age group, except for 65+, where they are plotted at age 70. For 1900-40, age groups are: 10-13 (1900-30 only), 14-24, 25-44, 45-64, and 65+. For 1940-60, age groups are: 14-19, 20-24, 25-34, 35-44, 45-54, 55-64, and 65+. Values for 1900-40, from Census; 1940-60, from CPS.

SOURCE: Table G-2.

changes for males are almost always around zero or below; for females, around zero or above. This means, of course, that where the over-all contribution to labor force growth of participation-rate change has been positive, this has been largely accomplished through higher female participation which has more than offset reduced male participation.

2. Both pre-1940 and post-1940 age profiles for males show relatively small rate changes from ages in the mid-twenties through mid-fifties, a feature reflecting the hard-core nature of this group in the labor force. In these age periods almost all males are in the labor force all of the time. A mild dip in the rates for those between 25 and 45 did occur between 1940-50 but was recouped in 1950-60 (Figure 49).

It is at the extreme ages, both lower and upper, that the negative rate changes of males have occurred. Thus, to the extent that increased female labor force participation has offset reduced male participation, it has done so primarily for the youngest and oldest males, as Long has particularly emphasized [116]. Post-1940 experience displays one exception, a positive change for males aged 14-19. Actually, as Figure 49 shows, this was confined to the 1940-50 decade, and was virtually eliminated by a return to the historical downtrend in 1950-60.

3. It is for females that the most striking difference occurs between the age profiles for the two periods. Before 1940, the female profile, like that for males, shows negative rate changes at the extreme ages, though of smaller magnitude. For the intervening age groups, however, and particularly for younger women, rate changes are positive. In the decades since 1940, rate changes for females between 20 and 34 have dropped to zero or negative levels, while those for older females have risen to unprecedentedly high positive levels. For females aged 14-19, the rate change has shifted from negative to positive, though, as in the case of males, the positive change was in fact confined to the 1940-50 decade (Figure 49). In general, these patterns signify that it is older females who have been largely responsible for the large rise in the contribution of participation-rate change to labor force growth in the last two decades, though youths aged 14-19 made some contribution in 1940-50.

The principal observations calling for explanation may now be

summarized. First, there is the generally higher level of the rate changes for females than for males. Second, there is the tendency toward negative changes at both ends of the age profiles. Third, and most striking with regard to recent experience is the shift in the roles of younger and older women, and the amazingly high rate increases shown by the latter.

ANALYTICAL MODEL

The growth in total labor force attributable to participation-rate changes may be viewed as representing a "net requirement" for workers arising from the balance of aggregate demand and supply forces through a mechanism of the type described in Chapter 6. Given this net requirement, the question is, how would one predict the participation-rate changes for individual sex-age groups?

The model developed here rests on two basic ideas. First, the net requirement is transformed into a "gross requirement" through the addition of an estimate of the net withdrawal of workers due to compositional factors. Second, the share of any given sex-age group in supplying the gross requirement is taken as proportionate to its share in the domestic working-age population outside the labor force, after the latter is adjusted by eliminating several groups assumed to be unresponsive to pressures for labor market entry. These groups are persons aged 10-24 (14-24 from 1940 on) enrolled in school, persons aged 65 and over, and females aged 14-44 with dependent children under 6 years old. For any given sex-age group, the observed change in its participation rate reflects the net balance between the relevant compositional factors making for withdrawal, on the one hand, and market pressures making for entry (the group's share in supplying the gross requirement), on the other.

The key assumption, that the domestic working-age population outside the labor force may be divided into two groups, one wholly unresponsive to market pressures and the other uniformly positive in its response, is an extreme one. As shall be seen, such a simple assumption does not do badly in providing a basis for explaining actual experience—indeed, it serves surprisingly well—but the model could be improved by introducing more realistic variants.

Table 10 illustrates the technique in fuller detail for the 1940-50 decade:

The observed increase in total labor force due to participation-rate change, 2,731 thousand persons, is entered in the "both sexes" row of column 3. This is the "net requirement," the sex-age distribution of which is to be estimated by the model.

Next, the effect of each compositional factor on relevant individual sex-age groups is estimated. Three compositional factors are considered: (1) for youths aged 14-24, changes in school enrollment status, (2) for females aged 14-44, changes in marital and child dependency status, and (3) for males aged 55 and over, changes in OASDI status. For the first factor, the population in a given sex-age group was broken down into those enrolled in school and those not enrolled for each date, and the proportionate distribution calculated. The implications for participation-rate change of the changing proportions were then obtained by weighting them by participation rates specific to each enrollment class, usually fixed at the period average. Similar techniques were used for the second and third factors. No estimate was developed for the second factor before 1940-50 because of scarcity of data, but it is likely that the magnitude involved would have been small.

Columns 5 through 7 give the estimated magnitudes, in thousands of persons, of the effect of these compositional factors on each sex-age group. In every case, the direction of effect is toward withdrawal from labor force activity.

The combined effect of the three compositional factors on each sex-age group is then found by summing horizontally columns 5 through 7. The results (column 4) are totaled to obtain, for the working-age population as a whole, the net labor force withdrawal attributable to compositional factors. This is estimated at 2,079 thousand persons (cf. "both sexes" row of column 4).

The estimated net withdrawal due to compositional factors, 2,079 thousand persons, is added to the "net requirement" of 2,731 thousand persons, to obtain the "gross requirement" to be supplied via market pressures, 4,809 thousand persons (cf. "both sexes" row of column 8).

The next step is to estimate the sex-age distribution of this gross

TABLE 10. ILLUSTRATION OF PROCEDURE FOR PREDICTING PARTICIPATION RATE CHANGE BY SEX AND AGE, 1940-50
(all columns in thousands, except column 1, percentage points)

| Sex-Age Class | Predicted Change in Participation Rate (col. 3 + col. 2) (1) | Domestic Working Age Population 1950 ^a (2) | All Factors ("Net Requirement") (3) | Labor Force Growth Due to Participation Rate Change Arising from | | | | Market Pressures ("Gross Requirement") (8) |
|-------------------------|--|---|-------------------------------------|--|-----------------------|---|-----------|--|
| | | | | All (4) | School Enrollment (5) | Marital and Child Dependency Status (6) | OASDI (7) | |
| Both sexes, 14 and over | n.a. | n.a. | 2,731 | -2,079 | -429 | -1,465 | -185 | 4,809 |
| Males, 14 and over | n.a. | n.a. | -167 | -601 | -416 | n.a. | -185 | 434 |
| 14-19 | -2.9 | 6,439 | -188 | -212 | -212 | n.a. | n.a. | 24 |
| 20-24 | -3.6 | 5,666 | -204 | -204 | -204 | n.a. | n.a. | 0 |
| 25-34 | 0.3 | 11,386 | 31 | 0 | n.a. | n.a. | n.a. | 31 |
| 35-44 | 0.7 | 10,414 | 70 | 0 | n.a. | n.a. | n.a. | 70 |
| 45-54 | 1.3 | 8,569 | 109 | 0 | n.a. | n.a. | n.a. | 109 |
| 55-64 | 3.0 | 6,677 | 201 | 0 | n.a. | n.a. | n.a. | 201 |
| 65 and over | -3.2 | 5,792 | -185 | -185 | n.a. | n.a. | -185 | 0 |
| Females, 14 and over | n.a. | n.a. | 2,897 | -1,478 | -13 | -1,465 | n.a. | 4,375 |
| 14-19 | 2.1 | 6,300 | 132 | -26 | -13 | -13 | n.a. | 158 |
| 20-24 | -6.6 | 5,714 | -377 | -474 | 0 | -474 | n.a. | 97 |
| 25-34 | -2.5 | 11,892 | -299 | -785 | n.a. | -785 | n.a. | 486 |
| 35-44 | 9.1 | 10,738 | 973 | -193 | n.a. | -193 | n.a. | 1,166 |
| 45-54 | 15.7 | 8,607 | 1,348 | 0 | n.a. | n.a. | n.a. | 1,348 |
| 55-64 | 16.9 | 6,640 | 1,119 | 0 | n.a. | n.a. | n.a. | 1,119 |
| 65 and over | 0 | 6,429 | 0 | 0 | n.a. | n.a. | n.a. | 0 |

NOTE: n.a. = not applicable.

SOURCE: See text and Appendix C.

^a Actual population in 1950 less survivors of net immigration, 1940-50.

TABLE 11. PERCENTAGE DISTRIBUTION BY SEX AND AGE OF 1950 DOMESTIC WORKING-AGE POPULATION NOT IN LABOR FORCE ^a

| | Males | | Females | |
|-------------|--------------|---|--------------|---|
| | Total (1) | Total Excluding Specified Groups ^b (2) | Total (3) | Total Excluding Specified Groups ^b (4) |
| 14 and over | 18.5 | 9.0 | 81.5 | 91.0 |
| 14-19 | 7.2 | 0.5 | 9.6 | 3.3 |
| 20-24 | 0.5 | 0 | 5.8 | 2.0 |
| 25-34 | 0.8 | 0.6 | 15.3 | 10.1 |
| 35-44 | 0.7 | 1.4 | 15.2 | 24.2 |
| 45-54 | 1.0 | 2.3 | 13.0 | 28.0 |
| 55-64 | 1.9 | 4.2 | 10.8 | 23.3 |
| 65 and over | 6.4 | - | 11.8 | - |

SOURCE: See text and Appendix G.

^a Assumes no participation-rate changes, 1940-50, except those due to compositional factors.

^b Excluding persons 65 and over, youths 14-29 in school, and females 14-44 with dependent children under 6.

requirement. Columns 1 and 3 of Table 11 shows for 1950 the sex-age composition of the domestic working-age population ² outside the labor force that would have prevailed in the absence of participation-rate changes other than those due to compositional factors. This is the "pool" from which the gross requirement must be supplied. From this are eliminated persons over 65, persons 29 or under enrolled in school, and females aged 14-44 with dependent children under 6 years old, on the grounds that such persons are less likely than others to enter the labor force, because of poorer job qualifications as viewed by employers or higher opportunity costs in the sense of child-care responsibilities or educational opportunities foregone. The resulting distribution of this reduced pool (Table 11, columns 2 and 4) is used to distribute the gross requirement total for both sexes (Table 10, column 8, top line) among the individual sex-age groups. Since older women make up such a large share of this pool, a correspondingly large share of the gross requirement is assigned to them.

² The population of 1950 less survivors of net immigration, 1940-50.

The sex-age distribution of the net requirement total in column 3 is then obtained by horizontal summation of the corresponding distributions in columns 4 and 8, since the net change for any given group reflects the balance between the effect of compositional factors on the group and its share in supplying the gross requirement.

For each sex-age group the net requirement in thousands of persons is converted to the implied change in participation rate by dividing by the population total for that group (Table 10, columns 1 and 2).

Table 12 brings together the totals of columns 3 through 7 obtained by this procedure for the various decades. Column 1 is the observed change in labor force in each decade attributed to participation-rate change. As can be seen, this "net requirement" was positive in all decades but two, 1920-30 and 1930-40. Columns 2 through 5 show the individual and combined effect of the compositional factors. In the periods studied, each operated to produce labor force withdrawal. As a result, the algebraic value of the "gross requirement" in column 6 exceeds that of the net requirement in column 1 and is posi-

TABLE 12. LABOR FORCE GROWTH DUE TO PARTICIPATION-RATE CHANGE, BY SOURCE, 1900-10 TO 1960-70 (thousands)

| | All Factors ("Net Requirement") (1) | Compositional Factors | | | Market Pressures ("Gross Requirement") (col. 1 - col. 2) (6) | |
|---------------|-------------------------------------|---------------------------|-----------------------|-------------------------------------|--|-----------|
| | | All (cols. 3 + 4 + 5) (2) | School Enrollment (3) | Marital-Child Dependency Status (4) | | OASDI (5) |
| <i>Census</i> | | | | | | |
| 1900-10 | 104 | -372 | -372 | | 476 | |
| 1910-20 | 254 | -442 | -442 | | 696 | |
| 1920-30 | -684 | -1,411 | -1,411 | | 727 | |
| 1930-40 | -1,736 | -539 | -539 | | -1,197 | |
| <i>CPS</i> | | | | | | |
| 1940-50 | 2,731 | -2,079 | -429 | -1,465 | -185 | 4,809 |
| 1950-60 | 2,048 | -2,222 | -814 | -874 | -534 | 4,270 |
| 1960-70 | 843 | -2,145 | -898 | -266 | -981 | 2,988 |

SOURCE: See text and Appendix G.

tive in all decades except 1930-40. Thus, after allowance for compositional influences, market forces were exerting pressures for entry on those outside the labor force in all decades but one. Before 1930 the magnitude involved was fairly small, but since 1940 it has been quite large.

The negative figure for 1930-40 in column 6 raises a special problem since it implies that in this decade market forces were operating not to pull new workers into the labor force but to push out some of those already in. Since the question thus becomes one of the sex-age incidence of the market pressures for *withdrawal*, a question to which the present model is not applicable, 1930-40 has been excluded from the subsequent analysis.

RESULTS

Past Experience

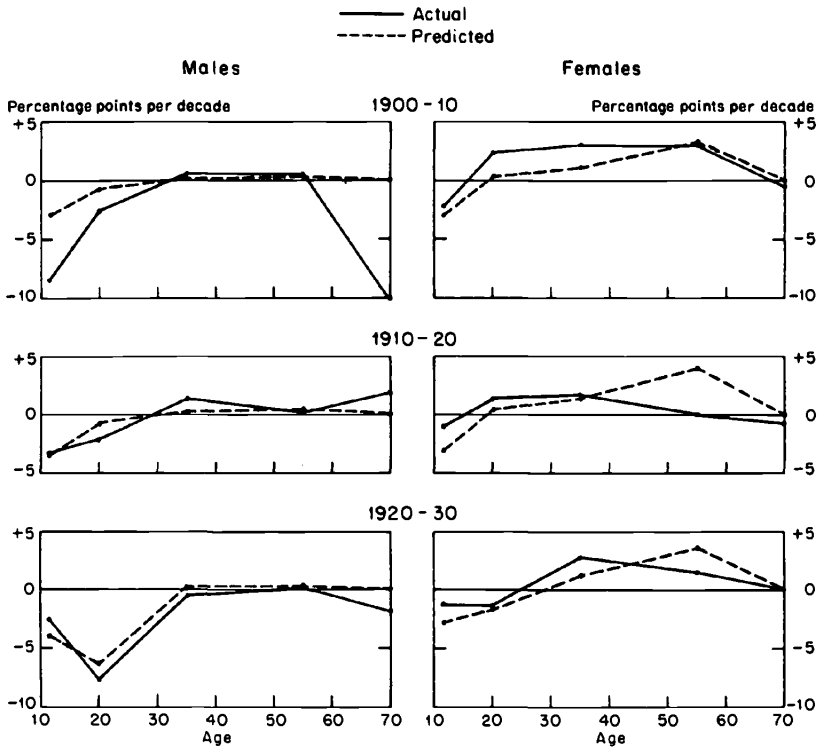
For each decade except 1930-40, a comparison of the actual age profile of rate changes with that predicted by the present analysis is given in Figure 51. How well does the model anticipate the actual changes?

1. The tendency for the average level of rate changes for females to lie above zero and that of males below is correctly anticipated. According to the model, this difference arises primarily from the overwhelming share of females in the "pool" from which added labor requirements must be supplied. This may be seen for the 1940-50 decade by reference to Table 10. For both sexes the effect of compositional factors is to depress the rates for certain age groups and consequently in the aggregate (column 4). However, the offsetting positive change induced by market pressures redounds very largely to the benefit of females because of their disproportionate share in the number available to satisfy these requirements (Table 10, column 8, and Table 11, column 4). As a result, the negative influence of compositional factors predominates in the male rates, and the positive influence of market pressures in the female rates (Table 10, column 3).³

³ As shown in Table 12, the 1940-50 decade is exceptional in that the negative effect of the change in marital and child-dependency status of females was unusually high. Before 1940 the compositional factors considered here tended to depress the rates for males more than those for females.

FIGURE 51

PREDICTED AND ACTUAL AGE PROFILE OF CHANGE IN LABOR FORCE PARTICIPATION RATES, BY SEX, DECENNIALLY, 1900-60^a

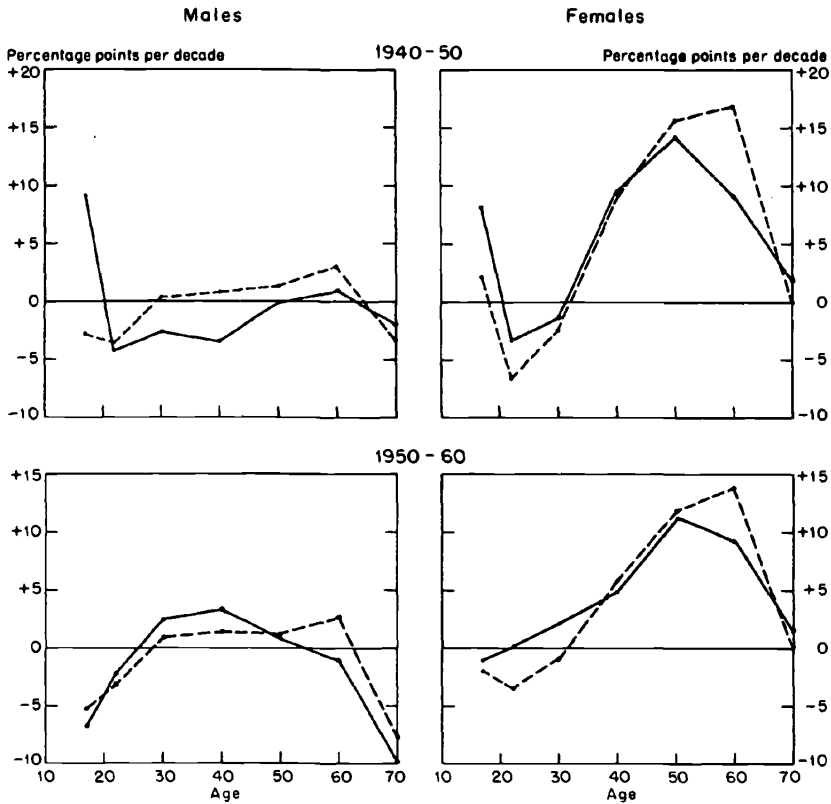


2. For males the shape of the predicted curve in each decade reproduces fairly well that of the actual curve, showing negative changes at the younger and (after 1940) older extremes and little change for the intervening age groups. This reflects basically the impact on these extremes of the compositional factors, respectively, of school enrollment and OASDI (cf. Table 10, columns 4, 5, and 7).⁴

Aside from those aged 65 and over in 1900, there are two noticeable differences between the actual and predicted values. First for the 14-19 group in 1940-50, the shift of the rate change from negative to positive is not anticipated by the model. This reflects chiefly the

⁴ Valuable analyses of the impact of OASDI appear in [74, 135].

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NOTE: See note to Figure 50.
 SOURCE: Table G-3.
^a Except 1930-40.

assumption underlying the model that those in school do not share in the opportunities for higher labor force participation induced by market pressures. The other discrepancy is the failure of the model to predict the 1950 dip in the rates of those between 25 and 44. As Gertrude Bancroft points out, this was due largely to the temporary impact of unusual educational opportunities for this group in the early post-World War II period created by the G.I. Bill; this influence is excluded from the model since the compositional effect of school enrollment is confined to those under 25 [12, p. 29].

3. For females, the predicted curve also provides a fairly good

approximation to the actual one. Particularly noteworthy is the fact that the model correctly anticipates the change in the shape of the profile between the pre-1940 and post-1940 periods. Further, it predicts the persistence into 1950-60 of the high increases for older females and the disappearance of such increase for the 14-19 group.

According to the model, the change after 1940 in the shape of the age profile is due to the influence of exceptionally high market pressures making for positive participation-rate change, coupled with the removal of younger females to an unusual extent through a rise in child dependency (cf. Table 10, columns 6 and 8, and Table 12, columns 4 and 6). As a result, the incidence of the market pressures falls very largely on the older females who comprise the bulk of the remaining labor reserve (Table 11, column 4).

The most noticeable departure of predicted from actual values is a tendency for the model to overestimate the change at older ages and underestimate it for younger ages. Possible reasons for this come readily to mind. Younger females are better educated than older. Also, employers may consider the oldest group among females over 35 a poorer investment as regards their prospective period of service than those that are younger. Neither of these circumstances is provided for in the model. Nor does the model allow for the possibility that females in school or with dependent children might share at least in part in the opportunities for higher labor force participation induced by market pressures, as has in fact been the case in the two recent decades.

All in all, the model does provide a picture of the structure of rate changes roughly consonant with the actual course of experience, including some of the startling departures in recent decades. Further experimentation—particularly with regard to the assumptions governing the shares of various groups in the opportunities for higher labor force participation induced by market pressures—would probably eliminate some of the remaining discrepancies.

In general, what interpretation does this analysis suggest regarding the principal factors which have governed differential participation-rate changes? On the one hand the spread of education has operated persistently to reduce labor force participation at younger ages. More recently, the growth of OASDI has tended to reduce that of older men. Offsetting, partly or wholly, the tendency of these factors to withdraw

persons from the labor force, however, have been the labor requirements arising from market pressures. The principal beneficiaries of such requirements have been females, largely for the reason that they comprise by far the largest share of those not in the labor force. In recent decades, when the withdrawal of young females from the labor force occurred to an unusual extent because of the baby boom, the impact of these requirements fell largely on older females.

How does this compare with Clarence Long's interpretation [116]? First, it rejects the idea that females pushed youths and older men out of the labor force. According to the model the trends for youths and older males can be largely explained by school enrollment and OASDI without reference to females entry into the labor force. On the other hand, it does imply that the withdrawal of youths and older men accentuated the pressure for female entry, and to that extent the former contributed to "pulling" the latter in. But it further indicates that in most decades the general aggregate demand-supply situation exerted pressures for entry on both males and females. This is an influence largely disregarded by Long because of his preoccupation with the supposed stability in the over-all labor force participation rate. Moreover, in the last two decades, when the rise in female labor force participation has been greatest, it is this factor which has been the most important one.

In another study, Jacob Mincer has explained the trend toward rising labor force participation of married women in terms of the price alternatives with which they are confronted [128]. There is no contradiction between his results and the present model. Rather, his results may be viewed as illustrating the market mechanism by which the underlying demand and supply influences considered here induced the necessary changes.

Projected Rate Changes

The implications of the present model as to rate changes for 1960-70 can be compared with the changes projected by BLS [35]. For this purpose, the contribution to labor force growth implied by all participation-rate changes combined is taken at the level officially projected.

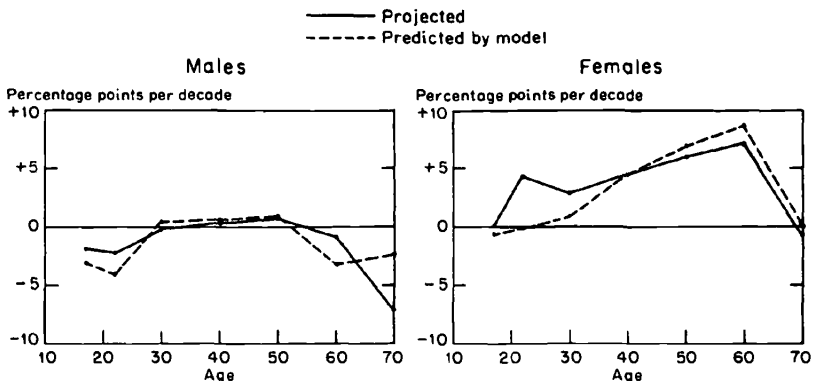
In general, the age profiles predicted by the model are fairly close

to the projected ones (Figure 52). A continued growth in the rates for older females is predicted, though not as great as in the two preceding decades. Where the changes projected by BLS differ from those predicted by the model, they generally differ in the same direction as actual experience in the past deviated from the model's prediction, suggesting that any shortcomings are more likely to rest with the model. As in Chapter 6 therefore, the present analysis provides general support for the official projection.

The most noticeable discrepancy between projected and predicted changes is for females 20-24, where an upward kink appears in the BLS projections. This kink, which virtually reverses the 1940-50 situation for this group (cf. Figure 51), did not appear in the BLS projections published in 1959 and 1962 [192, 193]. It reflects the sudden rise since 1960 observed in the rate for this group [cf. 53, p. 388]. In Chapter 5, it was shown that within the 20-24 group, this rise has chiefly characterized married women with dependent children, a change excluded, of course, from the predictions of the present model by virtue of its underlying assumptions, and it was suggested that this phenomenon reflects the recent weakening of the labor market for young men. Since the latter situation would be moderated by a return

FIGURE 52

PROJECTED AND PREDICTED AGE PROFILE OF CHANGE IN LABOR FORCE PARTICIPATION RATES, BY SEX, 1960-70



SOURCE: Table G-4.

to a 4 per cent general unemployment rate such as that assumed in the projections, one might consider this in part a transient phenomenon. There are, however, features pointing to the persistence of rate changes for younger women higher than in the 1940-60 period. Comparing the rate changes since 1940 for females aged 20-24, one observes a gradual disappearance of the negative effect caused by the shift to a high fertility pattern and associated rise in child dependency (Figures 51 and 52). Moreover, if the speculations advanced in Chapter 5 regarding prospective fertility are correct, the predictions of my model here do not provide sufficiently for a reversal of this fertility pattern, because they are based, as are the official projections, on the Census B series rather than the more probable (and lower fertility) C series. If the C series had been used, predicted participation rate changes for women aged 20-34 would be higher than those foreseen by my present model.

More generally, compared with the profiles for previous decades, the new BLS projection (though not the earlier ones) can be viewed as presenting a situation intermediate between the pre-1940 picture, when rate changes for younger females exceeded those for older, and the 1940-60 picture, when those for older females soared to levels much above those for younger. Thus, if one focuses not on the kink at age 20-24 itself but views it in terms of the profile as a whole, the new projection implies in some measure a shift back toward (though not a complete return to) the pre-1940 pattern. The likelihood that a shift of this type will occur is supported by the succession of age profiles predicted by my model.⁵

SUMMARY

The most tantalizing development in this century in sex-age specific participation rates has been the sharply accelerated increase in the rates for older women since 1940; the question of its prospective continuation is equally provocative. Also of interest is the generally higher level of rate changes for females than for males, and the tend-

⁵ This holds true even more when one takes account of the model's persistent tendency to underestimate rate changes for younger women relative to those of older.

ency toward negative rate changes at both younger and older ends of the working-age span for each sex.

The model developed here takes as given (by considerations such as those discussed in Chapter 6) the aggregate growth in total labor force attributable to participation-rate changes. It seeks to predict the contribution to this of individual sex-age groups, first, by taking account of "compositional factors" of the type traditionally analyzed by demographers (specifically, school enrollment status, marital and child-dependency status, and OASDI status), and, second, by assuming that the domestic working-age population outside the labor force may be divided into two groups, one wholly unresponsive to market pressures (youths in school, females with small-child-care responsibilities, and persons aged 65 and over) and the other uniformly positive in its response.

Although this assumption is patently extreme, the model does not do badly in anticipating the striking recent developments involving rates for older females as well as the longer-run differentials by sex and age. Specifically, it implies that the rate declines for youths are due to changes in enrollment status, and those for older men to changes in OASDI status. Partially or entirely offsetting the tendency for these factors to withdraw persons from the labor force have been market pressures for labor force entry on the working-age population; the principal beneficiaries of this have been females, chiefly because they comprise the largest share of those not in the labor force. Since 1940 the impact of these market requirements, which were exceptionally high in this period, fell particularly on older women because of the unusual withdrawal of younger females associated with the decline in age at marriage and accompanying baby boom. As for prospective changes through 1970, the model tends to support the BLS projection, which suggests a shift back in the direction of the pre-1940 pattern, with rate changes for older women still above those of younger, but by a smaller amount.

