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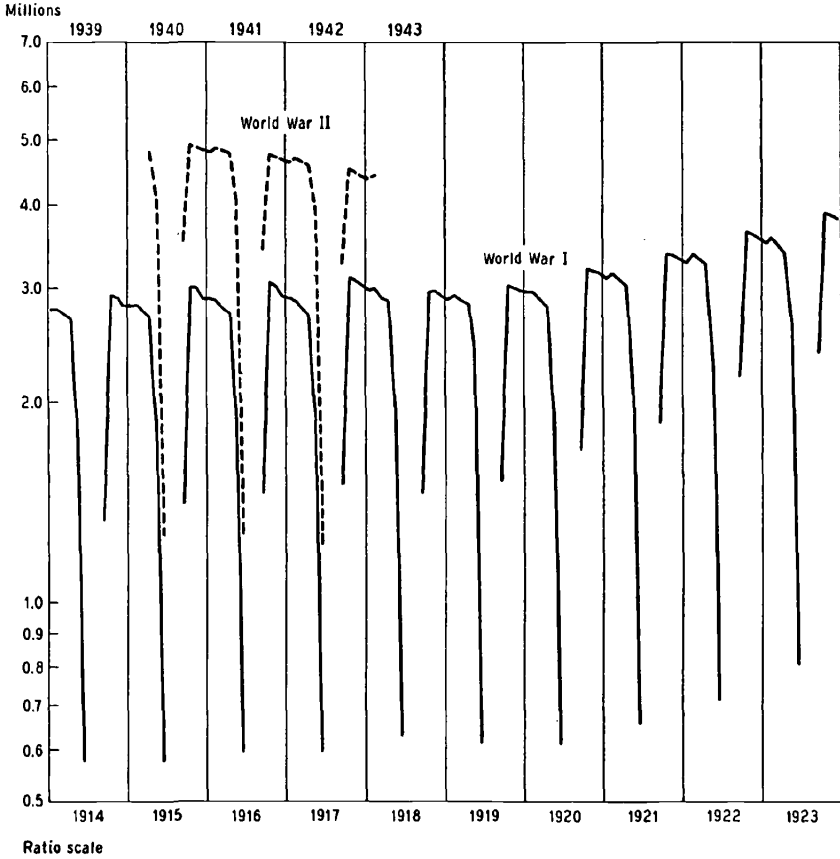
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school enrollment and in the number of married women may reflect some. Whether the normal labor force did get net reinforcements during World War I is treated in Section 7.

CHART 4

Females 14-24 Enrolled in School



3 LABOR FORCE ESTIMATES, 1940-1943

*The 1940 Census and the Monthly Poll*

For each month since April 1940 the nation's labor force has been reckoned by a government agency. The estimates have been made in a fashion similar to that of the Gallup opinion poll. Though the monthly poll was begun late in 1939, the month of initial published estimate (April 1940) was presumably chosen to be the same as that of the decennial census enumeration (actually as of March 24-30). Some account of the method was printed from time to time by the WPA, which had promoted it. In its last official description,

in October 1941, the WPA remarked that "the procedure at the present time is different in some respects from the original plan."<sup>10</sup>

About a year later, the entire survey was turned over to the Census Bureau, which until October 1943 extended the estimates "without change". According to the Census Bureau description, a stratified sample was used consisting of 64 of the nation's 3,000 counties. This sample held the nine counties embracing New York City, Chicago, Philadelphia, Detroit, and Los Angeles; 28 of the nation's 447 urban counties and 27 of its 2,641 rural counties. In picking counties for the latter two sets, urban and rural counties were first sub-stratified, each into three size groups, three location groups, and three economic groups, or twenty-seven groups for each of the two sets of counties. Within these cells, "the selection of counties was random except for a deliberate effort to maximize state coverage."<sup>11</sup> See, however, footnote to Table 4 as well as Appendix C for a discussion of the change in the sampling method instituted in November 1943.

The national estimates of the civilian labor force are given in the monthly releases, but no monthly data on population or the armed services. Consequently, we had first to calculate both, in order next to calculate the total war labor force and the percentage it constitutes of the working-age population (App. B and Charts 1, 2, and 5). Age-sex detail is available monthly since April 1940 in broad age groups 14-24, 25-54, 55 and over; and in narrower age-group detail since June 1941. Occupational detail has not been released at all and industry detail has been released for agricultural and nonagricultural *employment* alone.

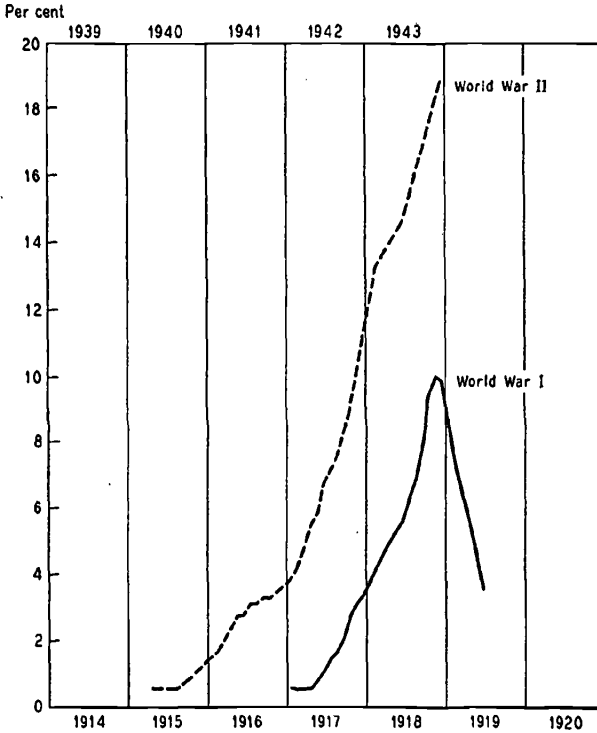
Questions put to the households follow the 1940 census practice. Careful comparison of the poll and census schedules and instructions brings out some differences in arrangement, wording, and detail, but not enough to breed any real differences in the meaning of *labor force* between the two types of survey. Though the labor force of the monthly poll was thus conceived as the lineal descendant of the 1940 census,<sup>12</sup> it nevertheless differed statistically from the census labor force even at birth (Table 3). If the part of the armed forces that was in the continental United States in April 1940 had been

<sup>10</sup> Federal Works Agency, Works Progress Administration, *Sampling Procedures and Method of Operation of the WPA Monthly Report of Unemployment*, Oct. 1941, p. 1.

<sup>11</sup> *Sampling Procedures and Method of Operation of the Monthly Report on the Labor Force* (Bureau of the Census, Nov. 1942), p. 8.

<sup>12</sup> H. B. Myers, Dynamics of Labor Supply, *Journal of the American Statistical Association*, June 1941, p. 177, note.

C H A R T 5  
 Percentages of the Normal Civilian Labor Force  
 in the Armed Services



added to the WPA estimate of the civilian labor force, the total WPA estimate would have been 54,200,000. The corresponding census enumeration was 52,800,000.

The Census Bureau concedes that 400,000 persons from the 'not reported' group outside ought possibly to be reclassified into the labor force.<sup>13</sup> Even if this number is added, however, the adjusted census enumeration still falls short of the adjusted WPA figure by 1,000,000, or nearly 2 per cent. Census and WPA officials

<sup>13</sup> Conversations with Census staff members and letters from J. C. Capt. This estimate was based on a "small but carefully selected sample", which brought out that of the 2,000,000 whose labor force status had not been reported 800,000 were attending school, 200,000 were 65 and older, 400,000 were married women living with husbands; and only 200,000 were men 25-64.

J. D. Durand, however, writes: "Additional evidence of any undercount in the 1940 census figures for persons seeking work can be found in the tabulations by household relationship, which show incredibly small unemployment rates for such groups as wives. I do not think, however, that an absolute undercount for 1940 necessarily means an undercount relative to previous censuses." See note 3 to Table 3.

TABLE 3  
The Labor Force, Census and WPA Poll  
United States, April 1940

	LABOR FORCE	EMPLOYED (excl. those on public emergency work)	UNEMPLOYED (incl. those on public emergency work)
Census			
Final edit <sup>1</sup>	52,800,000	45,200,000	7,600,000
Emergency workers wrongly returned <sup>2</sup>		-400,000	+400,000
Omitted entries <sup>3</sup>	400,000	200,000	200,000
Census adjusted	53,200,000	45,000,000	8,200,000
WPA poll at census date <sup>4</sup>	54,200,000	45,400,000	8,800,000
Excess of poll over census	+1,000,000	+400,000	+600,000

<sup>1</sup> Bureau of the Census, Series P-10, No. 7, Revised June 6, 1942, p. 3.

<sup>2</sup> *Ibid.*, Series P-4, No. 5, April 24, 1941, p. 1. This estimate excludes nearly 500,000 students on the NYA Student Work Program, but includes persons employed on NYA Out-of-School Work Program.

<sup>3</sup> Although the Census Bureau now concedes 500,000 omitted entries, I have allowed the original estimate to stand because to change it at this stage would involve an excessive burden of adjustment, especially in Tables 1 and 2.

<sup>4</sup> The WPA poll estimates have been increased by an estimated number of persons in the armed forces stationed in the continental United States. According to J. D. Durand of the Census Bureau, the poll data contain a considerable though unknown number of NYA student workers.

had not cleared up the discrepancy by the time the poll was turned over to the former. Moreover, the poll estimates are a bit more in line with those of the preceding censuses of gainful workers (Tables 1 and 2 and Sec. 4). The percentages in the labor force at the 1940 census are lower by a bigger margin than could be explained entirely by a tighter definition or even by a decline in labor force propensity. It is, of course, possible that by April 1940, after ten years of small demand for labor and high standards of employability, the percentages for the adult labor force had fallen. But the poll data, if correct, give a simpler explanation: the 1940 census may have missed more workers than preceding censuses.

The fact that the poll is only a sample ought not perhaps to be dismissed so lightly as it has been in this section (see App. C and D). However, sampling errors would ordinarily be rather evenly distributed throughout both employed and unemployed components of the WPA labor force estimate, and most of the excess of the poll over the census figure is in the 'unemployed' components. Indeed the census unemployment figure had been under fire from the very beginning. The Census Bureau itself was aware of at

least one of the defects and early offered a correction for the fact that emergency workers, classed as unemployed, were fewer in the returns than on the rolls of the federal emergency agencies.

But critics have posed still another problem. Most of the 3,900,000 persons in the 'other' and 'not reported' categories classed by the Census as outside the labor force, the critics say, probably ought to have been classed as unemployed in the labor force.<sup>14</sup> With the information available to an outsider, it is naturally difficult to argue the matter. The interagency committee concluded that the discrepancies were

"due largely to differences in response, that is, to the fact that the two groups of enumerators did not always obtain the same replies when asking identical questions of the same persons. Among the possible reasons for differences in response are (1) differences in dates by which the two surveys were completed, (2) difference in training enumerators, (3) the effect of repetitive *versus* single-survey techniques, and (4) differences in the total number of questions asked and in the fields of inquiry covered." (Letter from J. C. Capt)

Concerning reason (1), it may be important that, though both surveys covered the labor status as of March 24-30, 1940, the time when the questions were actually asked differed. The census enumeration required a month and more to complete; many answers in late April to questions about March labor status must have sprung from rather hazy recollections.<sup>15</sup> The monthly poll, on the other hand, was finished early in April, when the memory of their labor status was still fresh in the minds of the respondents. Answers must have been more accurate.

Concerning reason (2), census officials seem ready to grant that the smaller field staff of the WPA was probably more carefully selected and trained to begin with than their huge, often politically chosen, field staff.

Concerning reason (3), it is of some importance that the WPA had started its monthly survey in December 1939. By April 1940 its field staff, rehearsed monthly since the end of the preceding year, was well acquainted not only with the methods of getting information but also with the households themselves, the sample of which was kept unchanged for 4 to 6 months.<sup>16</sup>

<sup>14</sup> Ralph Hetzel, Jr., Memorandum on Census Unemployment Sample (CIO Economic Division, mimeographed), Feb. 17, 1941.

<sup>15</sup> In 1930 the census got around this difficulty by using the last regular working day. This procedure introduced a shifting census date, but undoubtedly made for more trustworthy answers.

<sup>16</sup> A reader has suggested that enumerators may have avoided households where they

These three reasons seem to favor the WPA results. But reason (4) is against them. It has long been suspected that when the country has a relief system a special census of unemployment will find more of what it is counting than will a general census in which unemployment is just one among many questions—about population, occupation, housing, mortgages, and so on. The suspicion gets a little support from the fact mentioned earlier in this section, that most of the excess of the WPA over the census figure lay in the unemployed components of the labor force. One need not suspect a bias in the relief agency making the inquiries: the householders themselves may have given biased answers.

On the whole, reasons favoring both results are plausible, and, no doubt, hold some truth. However, the question whether the poll or the census figure is more nearly correct has not been settled by this discussion. Perhaps greater agreement should not be expected from different statistical methods when the concept is as elusive as that of labor force. In view of this possibility, I decided to use the poll estimates, without adjusting for differences with the census, not because they may be more reliable but because they offer a series for the study of monthly fluctuations in the labor force during World War II, and are a little more closely in line with the gainful worker figures of the 1910-30 censuses.

These censuses of occupation did not, it must be remembered, define labor force in quite the same terms as either the 1940 census or the WPA poll. The chief differences were: (1) The time at which the person was supposed to be attached to the labor market—the 1940 census specified a certain week, whereas the earlier censuses allowed a *customary* attachment. (2) The barring, by the 1930 and possibly earlier censuses, of unemployed workers without work experience. (3) The possible inclusion in the earlier censuses of some permanently disabled persons or, as in 1910, an overcount of unpaid family workers. (4) The exclusion, by the 1910-30 censuses, of persons of unknown occupation and the inclusion of some inmates of institutions. (5) The exclusion, by the 1940 census, of many persons of unknown labor force status.

The effects of these differences in definition have been calculated and the gainful worker figures of the earlier censuses adjusted to

(note 16 *concl.*)

knew it would be difficult to get answers; see, however, conclusions of the interagency committee (App. D).

the 1940 labor force concept (see Tables 1 and 2).<sup>17</sup> The adjustments are sometimes big for individual age-sex groups, but most of them offset one another in the over-all classification<sup>18</sup> and do little to explain the 1940 drop in labor force percentages of the male age groups 25-44 and 45-64, and of female groups below 20 and over 64 (Table 2). Much of the decline for the middle-age groups might, it is true, be explained plausibly in terms of relief and higher employability standards; but at least some may reflect an undercount by the 1940 census. As mentioned earlier, this partial explanation is suggested by the WPA poll data.

#### 4 THE LABOR FORCE IN PEACETIME

The outstanding peacetime characteristic of the labor force is its stability of size relative to the population. Gainful worker propensities computed from decennial censuses have deviated remarkably little from certain trends noted in comparable age and sex groups. These trends themselves have been influenced by rather obvious factors: the rising school attendance; the postponing of the date of marriage; the decline in the average number of children a woman must care for; the easing of household burdens; and the development of insurance, pensions, and charity for the aged. All this was commented on when we discussed the decennial census figures. Three of the four censuses (1910-30) were, it is true, taken at times of rather high cyclical activity. Periods of low activity are not, however, unrepresented. The 1930 census was taken on the downgrade of a cycle, and the 1940 census was taken at a time of considerable unemployment and of far from full utilization of the nation's productive potential.

As already admitted, the labor force propensity in April 1940 seems a little low compared with propensities at preceding censuses, though not so much lower as the over-all propensities might lead us to believe or when measured by the poll estimate. The big rises in school enrollment percentages as well as in old age benefit payments in preceding years explain most of the below-trend drop in the labor force propensities of young and old.<sup>19</sup> The remaining,

<sup>17</sup> Discussion of these adjustments must be reserved for later publication.

<sup>18</sup> There is a large net over-all adjustment but it is the effect of the 1,400,000 adjustment for the 1910 census overcount of child and women workers, not of a net adjustment for definitions.

<sup>19</sup> The rises, of course, may have been in part the political and social consequences of the drop in labor force propensities.