

RESTRICTED

1001

U. S. MANPOWER RESOURCES AND REQUIREMENTS

12 April 1948

L48-116

| CONTENTS   | <u>Page</u> |
|--|-------------|
| SPEAKER: Mr. Robert J. Myers, Assistant Commissioner for<br>Program Planning and Chief of the Employment<br>Branch, Bureau of Labor Statistics ..... | 1           |
| GENERAL DISCUSSION .....   | 14          |

PUBLICATION NUMBER L48-116

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, D. C.

RESTRICTED

## U. S. MANPOWER RESOURCES AND REQUIREMENTS

12 April 1948

**COLONEL BAISH:** Ladies and gentlemen, less than a month ago, just after the President's message to Congress asking for Selective Service, we had a group of officers from the Personnel and Administration Division of the Army General Staff come down to the College to talk to the manpower instructors with respect to Selective Service and manpower resources in the United States. They were confronted with the problem of having to review whatever draft of Selective Service legislation might be proposed.

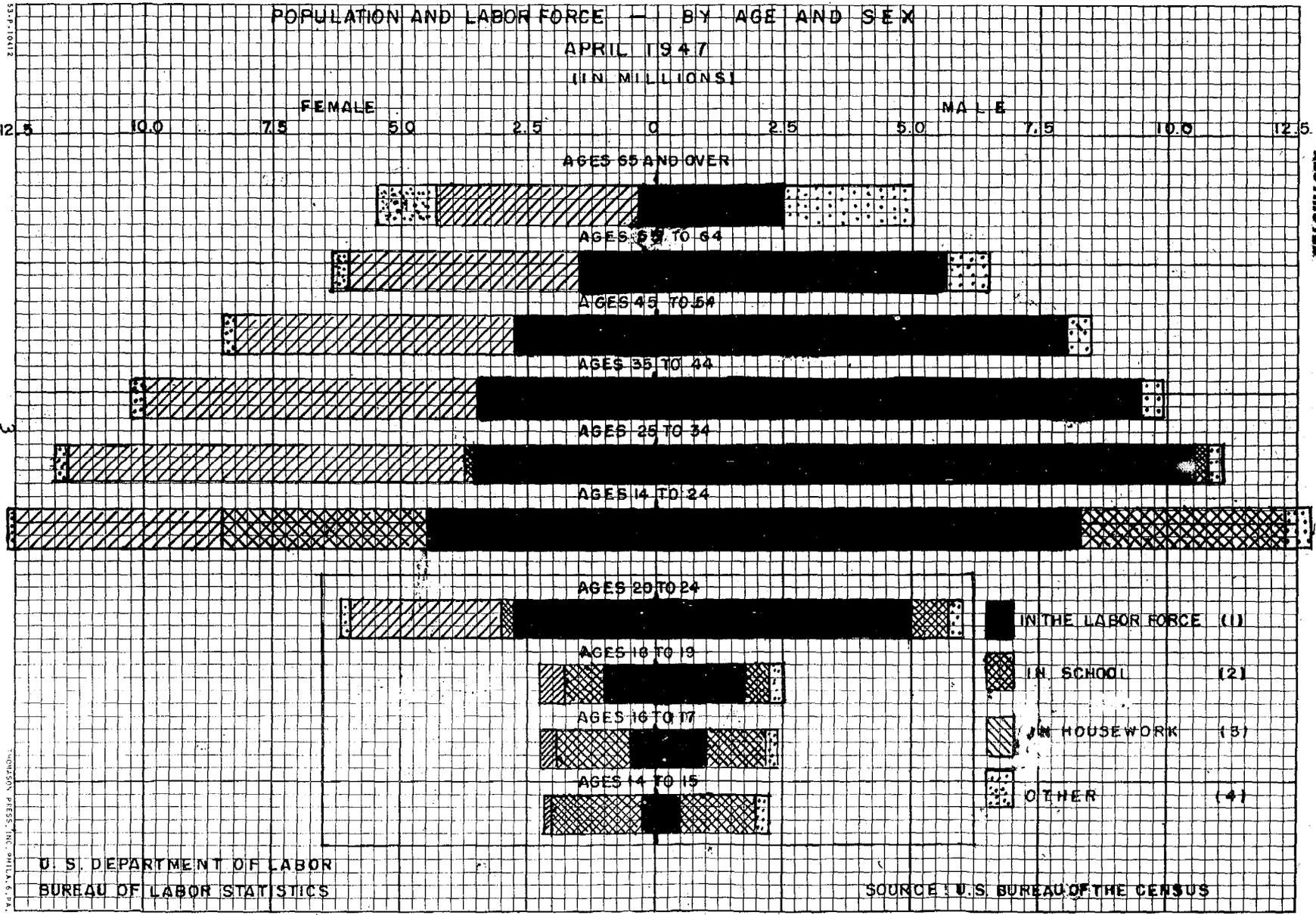
The first facts to be established were all statistical; that is, how many men were needed by the Armed Forces, what age groups would be inducted, what men would be exempted or deferred, could they defer all the veterans, could they defer all the fathers and still stay within the age group of 19 to 25. Those problems have not been settled as yet. They are still being discussed and Congress will give the answers.

But we are fortunate to have with us here this morning Mr. Robert J. Myers, who is Assistant Commissioner in the Bureau of Labor Statistics. He has a wealth of information on the manpower resources of the United States. He is also at this time a consultant of the Manpower Advisory Group to the National Security Resources Board, and they have been working on this very problem. It is a fine thing for us to be able to get him here for the opening lecture in the Manpower Course to give you these statistical data as a foundation on which to build the data for the many problems with which you are going to be confronted. The subject this morning will be "U. S. Manpower Resources and Requirements." To the Industrial College and our visitors it is a great pleasure to introduce Mr. Robert J. Myers.

**MR. MYERS:** Gentlemen, it is a very great pleasure to be able to meet with you this morning and an honor to participate with you in the discussion of this phase of the important subject of manpower.

The enumeration of manpower has not always constituted an approved step in the determination of military preparedness. In King David's day such a move was thought to reflect insufficient confidence in the Lord. As a penalty for taking a census of his 1.5 million fighting men in Israel and Judah, King David was required to choose among three rather uninviting punishments to be inflicted on his people: (a) seven years of famine, (b) three days of pestilence, or (c) three months of flight before the pursuing enemy--literally from Dan to Beersheba.

By now, of course, most people's backsliding has assumed much more complicated and scientific forms, while such simple misdeeds as the enumeration of manpower are mere routine to the sin-hardened bureaucrats in the Census Bureau and the Bureau of Labor Statistics. Today in appraising our country's productive resources, either for war or for



RESTRICTED

RESTRICTED

U. S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

SOURCE: U. S. BUREAU OF THE CENSUS

53-P-1042

In the grim eventuality of early hostilities, how many men and women would be available to work and to fight? We know that we would start out in 1948 with almost 62 million, and that in the two years that might be required to attain full military and industrial mobilization this number would grow, due to normal peacetime causes, to about 63 million. But this is obviously not the maximum attainable, because the combined labor force and Armed Forces climbed to 66 million in 1945.

In the event of war, not only would our Armed Forces be expanded by enlistment and conscription, but patriotism, public opinion, high wages, and other factors would combine to draw students, housewives, and retired persons into the civilian labor force. If we assume the same degree of labor force participation as the maximum attained in World War II, we would reach an aggregate of manpower resources in 1950 of about 68.5 million persons. This is probably close to the maximum number that could be reached in 1950 if the civilian labor force should be recruited on a strictly voluntary basis.

There are many misconceptions regarding the advantages to be gained by drafting workers for industry in the event of another war. I shall not attempt to discuss the gains and costs resulting from the greater control over the labor force. But I would like to point out that the number that could be added through this device would fall far short of common expectations. If the Armed Forces and the labor force together totaled 68.5 million in 1950, a labor draft would yield virtually no men at all, but only women, and boys and girls in school. Assuming conservatively that youths under 16, mothers of very young children, and women over 65 would be exempt, the remaining students and housewives subject to draft would number approximately 20 million. But most of these would be cooking meals and maintaining homes for families. Some would live in remote areas, far from war plants, and because of family responsibilities would be unable to move. It seems doubtful to me whether even a very tough draft could add more than a few million--perhaps three or four--to the labor force. And if we can depend at all on German experience, these would be marginal workers, inept and discontented, with high absenteeism and turnover rates, and a constant drag on morale.

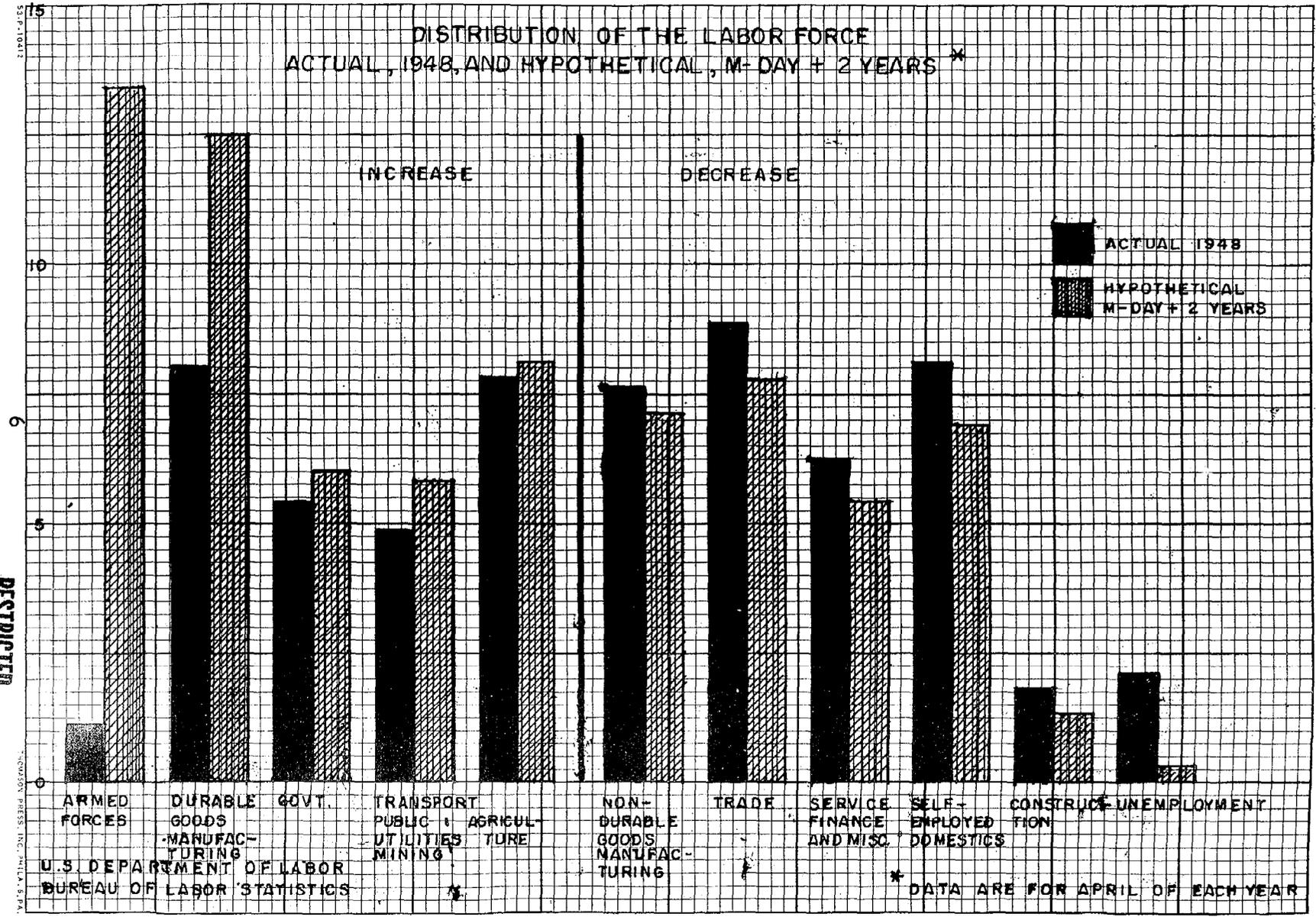
Hours of work.--Another means of increasing the labor force, of course, is to increase the hours of work. From 1940 to 1945 average weekly hours of work in manufacturing industry rose from about 38 to more than 45. Many nonmanufacturing industries also showed large increases. On the whole, increases in hours of work probably augmented the volume of work done by as much as 10 percent.

Since hours of work in manufacturing are currently averaging slightly over 40, the opportunities for expansion are more limited than they were before World War II, but an increase to the earlier peak level would be equivalent to the addition of several million workers. It should be noted that due to turnover, absenteeism, and various interruptions, average hours actually worked are appreciably shorter than scheduled hours of

SEP-1948

### DISTRIBUTION OF THE LABOR FORCE ACTUAL, 1948, AND HYPOTHETICAL, M-DAY + 2 YEARS \*

RESTRICTED



U.S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

U.S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

\* DATA ARE FOR APRIL OF EACH YEAR

RESTRICTED

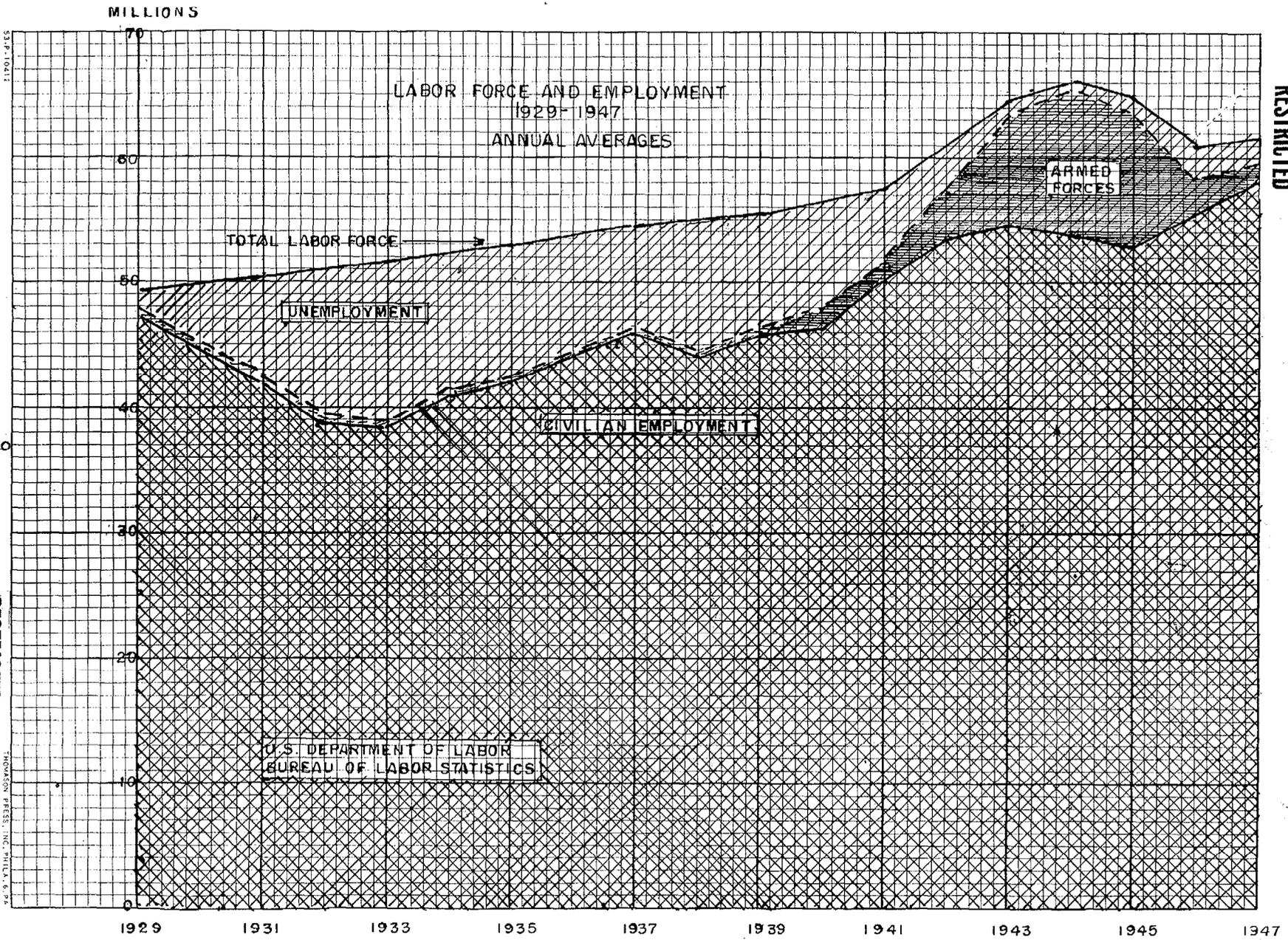
Table 2. Distribution of labor force: Actual, 1948 and hypothetical requirements, M-day  $\neq$  2 years

| Employment status and industry                 | Actual<br>1948 <sup>1/</sup> | Hypothetical<br>Requirements<br>M-day $\neq$ 2<br>years | Estimated<br>change |
|--|------------------------------|---|---------------------|
|  | (millions)                   |   |                     |
| Total labor force                              | 61.8                         | 71.6  | $\neq$ 9.8          |
| Armed Forces                                   | 1.4                          | 13.5  | $\neq$ 12.1         |
| Civilian labor force                           | 60.4                         | 58.1  | - 2.3               |
| Unemployed                                     | 2.3                          | .5  | - 1.8               |
| Employed                                       | 58.1                         | 57.6  | - .5                |
| Agriculture                                    | 7.8                          | 8.1   | $\neq$ .3           |
| Nonagricultural industries                     | 50.3                         | 49.5  | - .8                |
| Employees in nonagricultural establishments    | 43.0                         | 46.1  | $\neq$ 3.1          |
| Manufacturing                                  | 15.8                         | 19.7  | $\neq$ 3.9          |
| Durable goods                                  | 8.1                          | 12.5  | $\neq$ 4.4          |
| Nondurable goods                               | 7.7                          | 7.2   | - .5                |
| Mining   | .9                           | 1.1   | $\neq$ .2           |
| Contract construction                          | 1.8                          | 1.3   | - .5                |
| Transportation and public utilities            | 4.0                          | 4.8   | $\neq$ .8           |
| Trade  | 8.8                          | 7.8   | - 1.0               |
| Finance, service, and miscellaneous            | 6.3                          | 5.4   | - .9                |
| Government                                     | 5.4                          | 6.0   | $\neq$ .6           |
| Self-employed and unpaid family workers        | 6.4                          | 5.3   | - 1.1               |
| Domestic service                               | 1.8                          | 1.6   | - .2                |
| Adjustment for incomparabilities <sup>2/</sup> | - 0.9                        | - 3.5   | - 2.6               |

<sup>1/</sup> Estimates for 1948 are based on data for period December 1947-February 1948, adjusted to an April seasonal level.

<sup>2/</sup> Labor force, employment, and unemployment are estimated by the Census Bureau on the basis of the direct enumeration of individuals. Employees in nonagricultural establishments, by industry division, are estimated by the Bureau of Labor Statistics from reports of employers. The latter estimates have exceeded the comparable Census figures largely because some employees appear on more than one payroll during any given reporting period. To proceed from estimates of the labor force to estimates of employment in different industries, it is therefore necessary to use an adjustment factor which allows for such differences.

U. S. Department of Labor  
Bureau of Labor Statistics



RESTRICTED

HARVARD PRESS, INC. PHILA. 6, PA.  
48 11280

RESTRICTED

Table 3. Estimated total labor force, classified by employment status, by years, 1929-47 <sup>1/</sup>

(Annual averages, in thousands)

| Year | Total Labor Force <sup>2/</sup> | Armed Forces | Civilian Labor Force |              |                 |        | Unemployed |
|------|---------------------------------|--------------|----------------------|--------------|-----------------|--------|------------|
|      |                                 |              | Total                | Employed     |                 | Total  |            |
|      |                                 |              |                      | Agricultural | Nonagricultural |        |            |
| 1929 | 49,440                          | 260          | 49,180               | 47,630       | 10,450          | 37,180 | 1,550      |
| 1930 | 50,080                          | 260          | 49,820               | 45,480       | 10,340          | 35,140 | 4,340      |
| 1931 | 50,680                          | 260          | 50,420               | 42,400       | 10,290          | 32,110 | 8,020      |
| 1932 | 51,250                          | 250          | 51,000               | 38,940       | 10,170          | 28,770 | 12,060     |
| 1933 | 51,840                          | 250          | 51,590               | 38,760       | 10,090          | 28,670 | 12,830     |
| 1934 | 52,490                          | 260          | 52,230               | 40,890       | 9,900           | 30,990 | 11,340     |
| 1935 | 53,140                          | 270          | 52,870               | 42,260       | 10,110          | 32,150 | 10,610     |
| 1936 | 53,740                          | 300          | 53,440               | 44,410       | 10,000          | 34,410 | 9,030      |
| 1937 | 54,320                          | 320          | 54,000               | 46,300       | 9,820           | 36,480 | 7,700      |
| 1938 | 54,950                          | 340          | 54,610               | 44,220       | 9,690           | 34,530 | 10,390     |
| 1939 | 55,600                          | 370          | 55,230               | 45,750       | 9,610           | 36,140 | 9,480      |
| 1940 | 56,180                          | 540          | 55,640               | 47,520       | 9,540           | 37,980 | 8,120      |
| 1941 | 57,530                          | 1,620        | 55,910               | 50,350       | 9,100           | 41,250 | 5,560      |
| 1942 | 60,380                          | 3,970        | 56,410               | 53,750       | 9,250           | 44,500 | 2,660      |
| 1943 | 64,560                          | 9,020        | 55,540               | 54,470       | 9,080           | 45,390 | 1,070      |
| 1944 | 66,040                          | 11,410       | 54,630               | 53,960       | 8,950           | 45,010 | 670        |
| 1945 | 65,290                          | 11,430       | 53,860               | 52,820       | 8,580           | 44,240 | 1,040      |
| 1946 | 60,970                          | 3,450        | 57,520               | 55,250       | 8,320           | 46,930 | 2,270      |
| 1947 | 61,760                          | 1,590        | 60,170               | 58,030       | 8,260           | 49,770 | 2,140      |

<sup>1/</sup> Estimates for the period 1940-47 were adapted from U. S. Bureau of the Census, Labor Force Bulletin Series P-50, No. 2. The estimates of total labor force and of the Armed Forces were adjusted upward to include about 150,000 members of the Armed Forces stationed outside of the continental United States in 1940, and who were not enumerated in the Census of that date.

Estimates for the period 1929-39 were prepared by the Bureau of Labor Statistics.

<sup>2/</sup> Total labor force includes civilian labor force and the Armed Forces.

Prepared by: U. S. Department of Labor  
 Bureau of Labor Statistics  
 Occupational Outlook Branch  
 13 April 1948

needed. We badly need more facts as to how many workers possess certain critical skills. We must develop better plans for selecting men for the Armed Forces without crippling our labor force. We must augment our Employment Service in order that it can locate skilled workers quickly and help them transfer to new industries or new communities as conditions warrant. But with these aids we can make effective use of the most versatile and productive labor force ever developed.

Manpower requirements.--When we shift our focus from the labor supply picture to potential labor requirements, we find we must depend on information that is much less definite. It is obvious that our manpower needs, in the event of another war, will depend to a substantial extent on factors that are most difficult to predict. Moreover, some of these factors are of such critical importance that they could not be disclosed even if they were known. For example:

1. What kind of war will it be? An old fashioned war, an atomic war--or will we master obliteration in the fourth dimension?
2. How large will our Armed Forces have to be--12 million as in the late war, 15 million, 20 million?
3. What kind of military equipment will we require, and how much?
4. How much time will we have to reach our peak strength?
5. What level of living will civilians be permitted to maintain?

When I remind you that these questions and others must be answered before our labor requirements can be estimated, you will realize that only the most foolhardy would ever agree to talk about such a subject.

The Bureau of Labor Statistics has been asked to help estimate manpower requirements in the event of another war by use of the inter-industry relationships technique which it has developed in recent years. This is a technique for translating end products, such as refrigerators, freight cars or tanks, into total requirements for manpower, natural resources, and industrial facilities. It takes account of the fact that an expansion of our airplane output not only requires more workers in our assembly plants, but also means more manpower to produce aluminum, more railway workers, and more miners.

We don't claim that our answers are right, but we have answered most of the questions regarding the nature of another possible war. That is, we have been forced to make assumptions regarding each of them. Some of the assumptions are our own and some have been suggested by other, unofficial sources. Because some of the assumptions may be pretty unrealistic we regard our present conclusions as merely experimental and illustrative of our own method. But I believe they will be of interest and, if they are not taken too seriously, will throw valuable light on our present problem.

RESTRICTED

have to employ half again as many workers. The combined group of transportation, public utilities and mining would increase modestly, and even agriculture would show a small gain. The increases, of course, would be to take care of military needs. There is no doubt whatever that drastic wage and price controls would be necessary, and that our present civilian level of living would decline considerably.

4. Another question raised by the Bureau's study relates to plant capacity. In some industries it is doubtful whether we have the factories and equipment to employ manpower and turn out production on the Gargantuan scale that would be required in event of another war.

Conclusions.--I hope I may be forgiven if my resources and requirements do not exactly coincide. In view of the rather wide margin of error of my estimates and the arbitrariness of some of my assumptions, I am sure you will not object to a discrepancy of a million or two. The chief value of these figures is to indicate the general magnitude of our capabilities and needs. We are, of course, eager to obtain new and correct assumptions from those in position to determine them, and to undertake a revision of our requirement estimates on a more realistic basis.

The chief conclusion that may be derived from my analysis is this: That the mobilization and equipment of armed forces of the general magnitude of 13.5 million by 1950, assuming conditions somewhat comparable to those in World War II, would strain the very maximum of our manpower resources.

I do not conclude from this that military forces in excess of 13.5 million would be unattainable. Undoubtedly we can mobilize 20 million if we want to. But mobilization on this larger scale would seriously threaten our production of military equipment. We would be substituting men for machines. I do not believe that is the kind of war we want to fight.

There is no implication in my remarks that to support armed forces of even 13.5 million would require a labor draft. I have pointed out that conscription of labor would add only a few million housewives and students, inexperienced and in the lower levels of productive efficiency. Before this step would be taken we would certainly want to consider elimination of certain occupations and industries that persisted throughout the late war, and have consequently been retained in the present assumptions. This, of course, would mean a further reduction of civilian levels of living.

It is possible that hours of work could be slightly longer in some industries than we have felt it safe to assume. Perhaps those employed would be more productive than we have estimated--it has seemed unwise to risk over-optimism on this point. A little slack of this kind might permit reconciliation of our estimates of requirements and resources. It is my feeling, however, that any larger estimates of the scale of military operations would carry a heavy burden of proof.

RESTRICTED

One of the important ways of inducing high productivity, of course, has been to pay incentive wages, piece rates, and other types of incentive wages, which our studies have indicated certainly are very effective in getting people to do more work. In World War II, one of the types of inducement that was offered to get greater productivity was to introduce incentive payment systems into many plants that didn't have them. How that would tie in with a system of national mobilization, I don't know. Whether that would rule out incentive payments or not, I can't say, but if it did, it might make it difficult to maintain productivity at the present high levels.

QUESTION: I have a couple of questions. One is on the question of the 8-hour day. I think the 8-hour day is a comparatively recent innovation in our economy. I wonder why you limit our working day to an 8-hour day in this consideration. I wonder whether Great Britain, Germany, and Japan also were confining their efforts to an 8-hour day?

MR. MYERS: Well, the 8-hour day isn't too recent. It goes back a good many years, several decades. But, of course, the 40-hour week is a considerably more recent innovation. I am not assuming a 40-hour week, but a 48-hour week, which is 8 hours a day for 6 days.

QUESTION: Why not a 10-hour day for 6 days.

MR. MYERS: That is a question I was just touching on a little while ago, and on which I admit we have not too much information. In time of war, the reasons for limiting hours certainly should not be because the workers like it better. Certainly it has to be tied in with the national needs. There are a good many studies that show-- and our experience tends to support this--that when you get hours, not for a short time, but for a long period, up as high as 10 hours a day for a 6-day week, absenteeism rates, labor turnover, and other hindrances increase enormously. I would say that certainly at that level of 60 hours a week, productivity, productive efficiency would undoubtedly drop off substantially. We are not quite sure at what point it does drop off. It doesn't seem to be the same point in all industries, but there isn't any doubt that in most industries it drops off amazingly when you get up to 60 hours a week or higher. For that reason in this country during the late war many industrialists-- I think most of them--probably would have thought it unwise or uneconomical to try to maintain such a schedule.

I would like to call your attention to the fact that in Germany, where Hitler certainly had no compunctions about the health and conditions of his workers, they never attained regularly any such schedule, and where Hitler certainly had power to set any kind of work week he wanted to. The highest industrial hours ever attained in Germany during the war was in the neighborhood of 48 hours. And if the German's type of reporting is similar to ours, it may have been as high as 50 hours a week. But it was a little longer work week than we were putting in.

MR. MYERS: Well, over half of the "others" are over 65 years of age. You can see there are a few of them scattered through all of these age groups and in both sexes, but over half of them are over 65 years of age. A breakdown of this group, in so far as we are able to make it, indicates that many of these people in the lower age groups are physically or mentally incapacitated, or in institutions.

When you get into this group there are also quite a number of retired people. Remember this is a peacetime, 1947 breakdown. When we are talking about a 1950 breakdown, in case of war, we are assuming that we have drawn seven million additional persons into the labor force, of whom only one million are due to growth of population, so that number 4 section of chart "Population and Labor Force-By Age and Sex," April 1947 in time of war should be substantially reduced. In other words, we assume that we have drawn out many of the retired persons, those able to work and many of those who are partially incapacitated, but still able to work.

QUESTION: I would like to ask a little more about this matter of labor productivity. You indicated that at the present time it is relatively high with respect to other countries of the world. Nevertheless, in the newspapers and in talking to industrialists, and reading trade magazines, they rate it rather low at the present time compared with prewar productivity. Would you comment on that?

MR. MYERS: Yes, we made studies in productivity, and I believe we have about as many lines in the Bureau of Labor Statistics to get this information on productivity as anybody has, although our own indexes are not strictly up to date. The reason is that we haven't had a census of manufacturers for so long that we have not had anything to give us comprehensive and complete information on productivity. The experience over a long period is that we have averaged three percent a year increase in manufacturing in man-hour output. In the First World War, I mean back in 1917 and 1918, along in there, we had a temporary lull. There was no increase apparently in productivity until the end of the war when there was a sharp upturn which soon made up for all the lost time.

We expected that to happen in World War II. There apparently was a lull or drop when we were working on war production. There was no gain in productivity in civilian production. The upturn at the end of the war has not come so fast as we expected it to. I think that it is not generally believed that productivity is lower than it was at the beginning of the war, but the increase has been somewhat delayed and somewhat disappointing so far. However, I believe what shreds of information we have, contacts we have had with producers, indicate that the picture for 1946-1947 looked considerably better than in the earlier years. The prospects for gains in productivity this year are excellent. We are getting much more optimistic reports now from manufacturers than we did a few months ago. That boils down to saying that apparently there has not been very much increase so far, but it is on the upturn now.

the late war was so terrific it had to be seen to be believed, and our enemies simply wouldn't believe the stories they heard, which turned out to be true, as to our production.

Let me say, to avoid any misunderstanding, when I indicated a moment ago that there had been a lull in productivity in the war period, I was referring only to productivity in civilian production. The record of productivity as far as war material was concerned showed a terrific increase during the period and certainly surpassed all of our fondest hopes at the beginning of the war.

QUESTIONER: But isn't that more--not to discredit the workers--because we standardized on the items we were going to make so we could gear up for near mass production. In peacetime our economy was automobiles, and today our requirements is not in that line, so that you can't get quite the production individually that you can in a wartime economy. There have been statements made to the effect that the individual's productive effort was not so great. Take, for example, the Plymouth plant where it was a completely free wartime effort as compared with making automobiles, the individual productive effort in that case is not so great in wartime as it was in peacetime.

MR. MYERS: Is it as great?

QUESTIONER: I don't know.

MR. MYERS: I don't know very well how you can get an over-all generalization, but I know of a lot of cases where I had pretty close personal contact and the increase in output was simply terrific. One instance I was pretty well acquainted with at one stage was copper and nonferrous metals, the alloy and rolling industry; there was a terrific increase in output due to a large extent, not necessarily to the efforts of the workers, which is usually or often a minor part in this, but due to the fact that there was standardization on a small number of standard items, and that permitted taking advantage of all the economies of large-scale production.

I had some contact with the men's clothing industry, where there was exactly the same experience. The standard items, uniforms, and so forth, much simpler types of suits, also permitted great increase in productivity.

One of the ways I saw that was in watching the figures that came through on earnings of workers working on an incentive basis. They turned out so many more pieces a day, their earnings went up terrifically, and it proved to be one of the great problems of wage control, taking care of these incentive payments to workers. The same thing was true in the shoe industry, and while I can't point to any over-all figures that would show a comparison, I feel confident that the output per worker was much greater, but that was pretty much independent of how hard he