

AMERICAN INSTITUTE for ECONOMIC RESEARCH

RESEARCH
REPORT
SUPPLEMENT

November 13
1939

54 Dunster Street, Harvard Square - Cambridge, Mass.

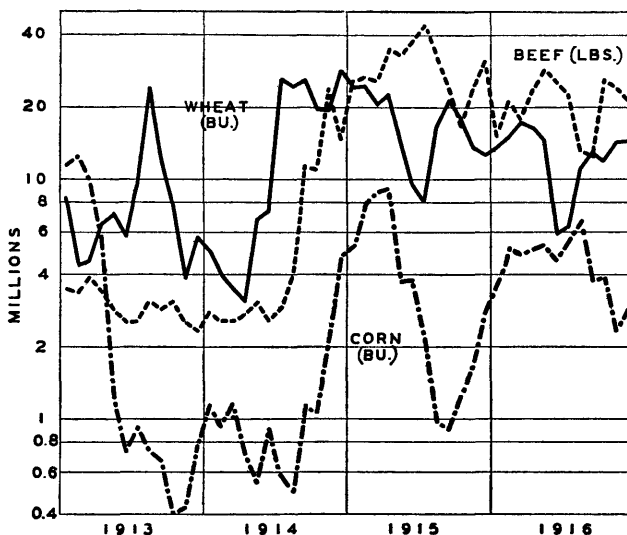
WARTIME ECONOMIC TRENDS

(Continued)

the last World War would make comparisons on a value basis less instructive.

Referring now to the first of the charts, which shows exports of important food products, several features are of interest. Wheat exports increased in the summer of 1914 somewhat in advance of the seasonal gain which is more clearly shown in the 1913 data; and, instead of the usual decline thereafter, were maintained at a relatively high level for nearly a year. A general declining trend followed, but wheat exports were obviously much greater than the pre-war totals. Incidentally, the total value of this export product increased to a far greater extent than the physical volume figures indicate, because the price of wheat increased from 82 cents in July of 1914 to \$1.81 in November, 1916. (The subsequent rise to \$3 per bushel in May, 1920, reflected the war-time inflation here in the United States, rather than the earlier war purchases by England and France.)

EXPORTS OF FOOD PRODUCTS



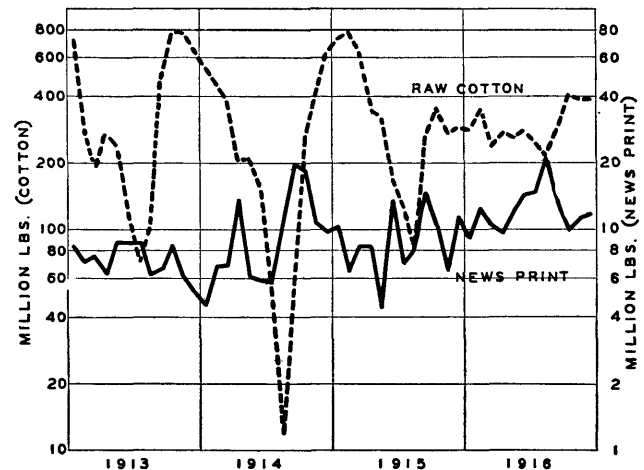
Exports of beef increased to an even greater extent than did our exports of wheat. By the middle of 1915, monthly exports were approximately 10 times the totals reported during the latter part of 1913. There was a decline from this high level during 1916, but the average remained nearly 6 times greater than the 1913 figure.

Exports of corn followed a highly erratic course and did not reach the highs reported for early 1913 in either

1915 or 1916. However, the total volume during both of the early war years was substantially greater than that for the 12 months just preceding the war.

The second chart shows exports of raw cotton and news print. Earlier in this series of articles we described the effect on the South of the virtual cessation of cotton exports shortly after war was declared. However, as the chart clearly shows, exports were soon resumed on a substantial scale; and, although they did not reach the pre-war totals, were nevertheless in sufficiently great volume to relieve the South of the fears which were so widespread during the late summer and early fall of 1914. Cotton also increased greatly in value during the early war years. From the low of less than 8 cents per pound recorded in the dismal fall months of 1914, cotton advanced to 20 cents per pound by November, 1916.

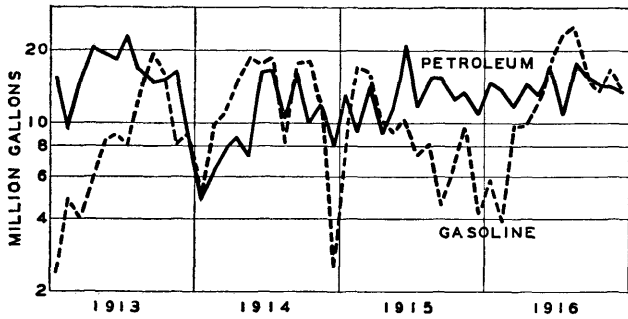
EXPORTS OF COTTON AND NEWSPRINT



Exports of news print increased only moderately during the early years of the first World War. Its price increased approximately 50 per cent by the latter part of 1916, however; therefore the value data for exports would tell a different story.

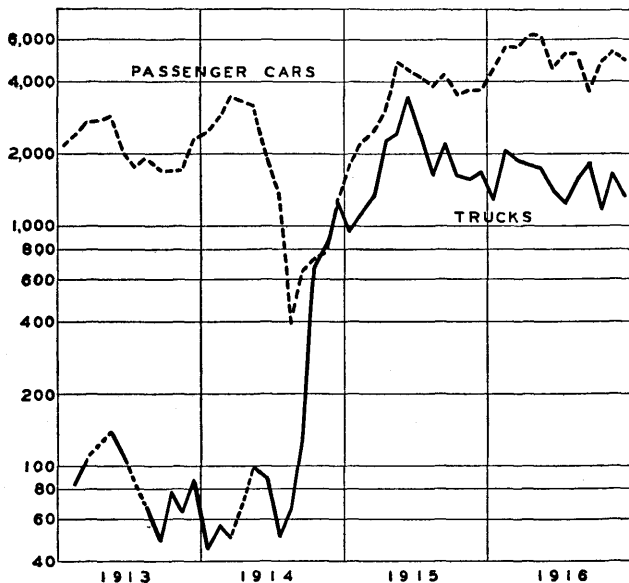
The chart showing exports of crude petroleum and gasoline is especially interesting because it reflects the minor degree to which the armies of Europe were mechanized in 1915. Exports of crude petroleum were virtually unchanged from the 1913 level throughout both 1915 and 1916. Exports of gasoline even declined rather sharply until early 1916, when this trend was suddenly altered. In view of the great change in the requirements of modern armies, it seems probable that this record will not be useful as a guide to what may be expected during the next few months.

PETROLEUM EXPORTS



The fourth chart in the series shows exports of both passenger cars and trucks. It will be observed that there was a great decline in monthly exports of passenger cars immediately after war was declared in Europe, and the subsequent recovery to higher levels than ever before recorded may seem surprising in view of the war conditions. There are probably three factors responsible for this seemingly paradoxical situation. In the first place, taxes were not greatly increased at the beginning of the last World War, and the slogan in both England and France was "business as usual." The inflationary procedures, followed by the Governments of those two countries, soon made possible windfall profits for business, with the result that many individuals were able to afford luxuries that they had not previously enjoyed. During the early years of the first World War some of these fortunate individuals probably purchased automobiles. Another factor accounting for part of the gains recorded was the fact that the automobile industry throughout the world was then in its infancy and was just beginning to experience that remarkable long-term growth which was in evidence until the latter part of the 1920's. A third factor, which may have been more important than the other two, was the fact that many vehicles classified as passenger cars were used for war purposes; reconnaissance, for transportation of officers and other personnel, and for ambulances.

AUTOMOBILE EXPORTS

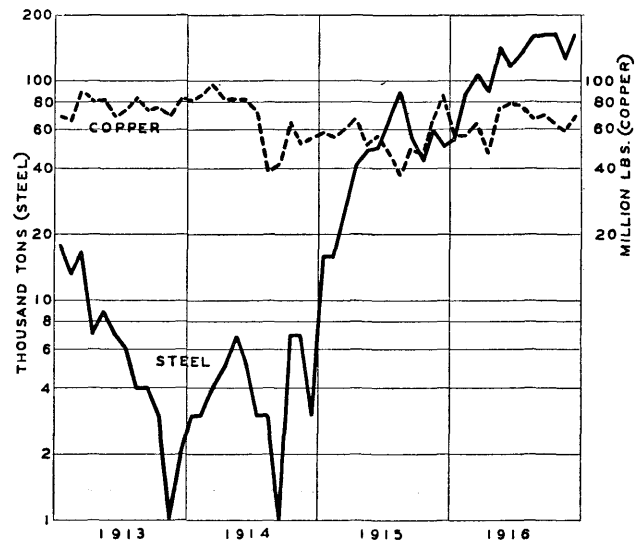


The change in the volume of truck exports was much greater than that recorded for passenger cars, and it was

not preceded by as drastic a slump. At the peak in 1915, truck exports were nearly 70 times greater than they averaged at the lows of 1913 and 1914. The high level at which such exports continued throughout 1915 to 1916 was nearly 20 times the 1913-1914 average.

Exports of copper and steel are shown in the fifth chart. It will perhaps surprise many readers to observe that exports of copper were at a substantially lower level during both 1915 and 1916 than they had been in late 1913 and early 1914. Changes in the value of this metal accounted for the substantial increase in exports which is indicated by the dollar totals that are ordinarily presented in discussions of this character.

EXPORTS OF COPPER AND STEEL



Exports of steel were especially great during 1915 and 1916. By late 1916 the monthly totals were approximately 50 times the average of those recorded during late 1913 and 1914.

In addition to the data shown in the chart, there are a few additional facts pertaining to the earlier World War period which it is desirable to fix in mind. Practically all of our exports of munitions at that time were to the allied nations. The value of exported products falling in this classification increased from slightly less than \$10,000,000 in 1914 to nearly \$1,000,000,000 in 1917 (that is, for the 12 months fiscal periods which ended in June of the years stated). The value of aircraft sold abroad increased during the 1914-1916 period from \$226,000 in the former year to more than \$7,000,000 in the latter.

Our total export trade with England, France, and Canada combined, increased from slightly less than \$1,000,000,000 in the 12 months which ended in 1914 to slightly more than triple that amount in the third year following. Our exports to these nations in the period which began with July, 1915 (about 6 months after the war boom started in the United States) and ended June 30, 1916, totalled approximately \$2,600,000,000.

Finally, the data for our total exports to all countries should not be overlooked. During the years just preceding the last World War the total value was approximately \$2,000,000,000, and three years later it had been increased to more than \$6,000,000,000. In other words, the dollar value of our exports during the

earlier portion of the last World War approximately tripled in value; but, as we have already pointed out, the increase in physical volume was not nearly so great because of the substantial price changes which occurred during that period.

Recent Exports to Great Britain and France

In the accompanying table the principal United States exports to Great Britain and France are shown. In most instances total value has been used, but the number of items has been stated for passenger cars and trucks. In the belief that the 1936-37 average reflected more nearly normal circumstances, we have used those data in preference to that for earlier or later years.

PRINCIPAL UNITED STATES EXPORTS TO FRANCE AND THE UNITED KINGDOM (1936-37 AVERAGE) (Millions of Dollars)		
	France	United Kingdom
Wheat	0.7	6.9
Meat Products	0.3	15.2
Tobacco, etc.	3.6	91.9
Raw Cotton	46.0	85.0
Petroleum, etc.	24.0	34.0
Machinery	20.7	71.6
Automobiles	8.7	14.2
	1,250 Passenger Cars	8,337 Passenger Cars
	3,942 Trucks	2,872 Trucks
Aircraft	0.7 ¹	2.0 ²
Copper	11.0	14.7
Iron and Steel and Manufactures	3.0	19.1
	4,060 Tons ³	26,400 Tons ³
All Other	25.2	127.7
Total	143.9	482.3

¹ In 1938, the total was 6.4 millions of dollars

² In 1938, the total was 28.9 millions of dollars

³ Estimated

Source: Foreign Commerce and Navigation of the United States

Before proceeding to deal with the various classes of exports in an attempt to estimate the probable increases as a result of the war, it is necessary to point out that the situation today is somewhat different from that which existed in 1914. Both France and Great Britain have been preparing for the present war during the past several months. They have substantial quantities of foodstuffs on hand, and Great Britain's overseas dominions are in a far better position to provide the mother country with food products than they were in 1914.

The situation with respect to iron and steel is also substantially different from that which existed shortly after the World War began in 1914. The rapid advance of the German armies soon took from France some of her most important iron and steel producing areas as well as coal mines which were essential to the iron and steel industry. The net result was that France's output of iron and steel during the first World War dropped far below what it otherwise would have been. Conditions are quite the reverse today, especially inasmuch as France now possesses iron and coal resources in Alsace-Lorraine which were in Germany's hands even before the last World War began. These changed conditions will, in some degree at least, offset the greater requirements of matériel which is one of the marked features of modern warfare.

Probable Wartime Demands

At this point it becomes necessary to start guessing. Use of the word "guess" rather than "estimate" will perhaps prevent readers from being misled regarding

the accuracy of the data set forth. Actual exports for war purposes by England and France will depend on many factors which it is simply impossible to foresee at this time. However, our guesses will not be wholly without foundation because we have the background of experience during the earlier World War, substantial knowledge of present-day military requirements, and the first indications in the form of purchases and inquiries recently made, all of which will be of considerable assistance. Nevertheless, it must be emphasized that the data which follow at best indicate only the probable magnitude of the changes to be anticipated.

In view of the great increase of wheat production in both Canada and Argentina during the past few decades, it seems improbable that wheat exports from the United States to Great Britain and France will increase during the next several months to an extent comparable to the expansion which occurred during the early months of the last World War. Furthermore, it now seems improbable that the price of wheat will rise as rapidly as it did at that time. Some gains will probably occur, but we do not expect them to result in much higher wheat prices and a great expansion of acreage under production here in the United States.

Meat products are also available to Great Britain from various other countries than the United States in much greater quantities than they were 25 years ago. Therefore it seems improbable that we shall witness an increase in our exports paralleling that which occurred in late 1914 and early 1915. However, there probably will be some gain. Instead of multiplying 10 times, our guess would be that the increase would perhaps double or triple recent exports to France and Great Britain. This would be perhaps 75 to 100 per cent of our total exports of packing house products. However, even that amount would be only 3 to 4 per cent of our total production. There is no doubt that such an increase in demand would somewhat stimulate the packing industry, but it would hardly lead to a boom of substantial proportions.

Because both England and France will especially desire to continue their exports of textiles, in so far as that is practicable, and will also need substantial quantities for war purposes, it seems probable that our exports of raw cotton to those two countries will at least be maintained at recent levels. It is even possible that some increase may occur, but such enormous quantities are available in government warehouses that a markedly stimulating effect on the price of cotton is probably not to be expected.

Exports of petroleum and its products did not increase greatly during the last World War, but we expect the situation to be substantially different this time. Mechanized armies will require tremendous quantities of gasoline; and, even though the air forces may not be used as much as was originally feared, it will still be necessary to carry on extensive training, and gasoline will therefore be consumed on an unprecedented scale.

There are other regions of the world which can furnish some of England's and France's petroleum requirements. Therefore, it is exceptionally difficult to guess the magnitude of our increase in exports. If the warfare on the Western Front becomes more active, with resultant greater need for transportation of ammunition in motor vehicles and much greater use of gasoline by airplanes, we would expect that the amount of petroleum and its products exported to Great Britain and

France might be multiplied 8 or 10 times. Such an increase would, in effect, double our total exports of petroleum products. Inasmuch as the increased exports would be between 15 and 20 per cent of our total production of refinery products, there is no doubt that such an increase would have a marked stimulating effect on the oil industry. Prices would probably rise, refinery facilities would be increased, and the search for crude petroleum sources would be expedited. In this connection, it is also important to note that the activities of the British fleet must result in a much higher consumption of fuel than would normally be the case in peace time.

That our exports of machinery to Great Britain and France will increase greatly is a foregone conclusion. Again it is difficult to guess the magnitude of the change which will probably be involved, but it certainly would not be surprising if such exports were doubled or tripled. The value of the products of our machinery industry, exclusive of transportation equipment, has recently been in the neighborhood of \$4,000,000,000 annually. Obviously, therefore, even a doubling or tripling of the recent exports to France and Great Britain would only increase demand for the domestic industry's products by about 5 or 6 per cent. However, this is a substantial amount, especially because much of the increase will probably accrue to the benefit of particular subdivisions of the industry, including the tractor manufacturers, the machine tool makers, and to a lesser extent the foundry and machine shop operators. The machine tool manufacturers can confidently expect capacity production at profitable prices during the entire period of the war in Europe.

There is every reason to believe that our exports of automobile trucks will increase fully as much as they did during the World War. In the first place, armies today are more mechanized than ever before, and their transportation requirements are vastly greater than they were 25 years ago. The automobile industry in both France and Great Britain is relatively small in comparison with ours, and in order to obtain the needed vehicles Great Britain and France must buy here.

Exports of trucks to Great Britain and France combined have recently numbered nearly 7,000 units a year. It would not be unreasonable to expect that this amount will be multiplied 15 to 30 times by exports during the next several months. If France and England purchase from 100,000 to 200,000 trucks during each of the next two or three years, our automobile industry will be substantially benefited. Recent truck production, including chassis, has been in the neighborhood of 750,000 units annually. An approximately 20 per cent increase in demand would mean great prosperity for much of the automobile industry.

It seems improbable that demand for passenger cars by Great Britain and France will increase any more rapidly during the present World War than it did last time. Military requirements will be greater, but the heavy tax burden (which was substantially increased immediately after the present war began) will insure a curtailment of purchases by private users. Such increases in exports of passenger cars as now seem probable will not have an important effect on the domestic industry. We produce so many more passenger cars each year per capita than does any other nation of the globe that only a very small percentage of our production would be enough to provide any nation with more

additional automobiles than it could find skilled drivers to operate.

There is no doubt whatsoever that the aircraft industry will be the principal beneficiary of the war boom. It is impossible to guess what the demand for its products by England and France may be. Probably exports will be limited by the industry's capacity to produce, rather than by the willingness of England and France to buy. Under those circumstances it is obvious that the aircraft-producing industry in this country faces a period of prosperity which will make it the leader of those profiting from the war.

The situation with respect to copper has already been clarified to some extent. England apparently has large quantities of the metal in storage, and in addition has made arrangements with some of the leading foreign producers to take all of their output at prices to be agreed upon from time to time. Presumably, France will participate in the expected benefits from these arrangements. Therefore, the experience of our copper producers during the present World War may be similar to their experience during the last World War with this exception: that prices will probably not rise so rapidly. Under such circumstances, the direct stimulation of the copper industry as the result of purchases by France and England will be relatively small. On the other hand, the indirect gain may be large, especially if the war boom in this country results in a general and prolonged expansion of our capital facilities.

We have already mentioned that France will not be in such desperate need of iron and steel as she was after the German army had overrun northern France during the early part of the last World War. Of course it is possible that Germany will again wrest important areas from France, but that does not now appear to be probable. Another factor of importance is that the type of war that has thus far been waged on the Western Front does not require the huge volume of munitions which were used during the last World War, particularly during some of the important drives which were made on extensive fronts and which were accompanied by heavy artillery preparations.

On the other hand, it is obvious that the mechanized armies of today require vastly greater quantities of iron and steel products than did the marching millions of 25 years ago. We therefore believe it probable that the iron and steel-producing capacity of Great Britain and France will not be sufficient for wartime needs. The question is whether the increases in our exports of steel will consequently approach the enormous gains recorded during the period 1914-1916. If such gains actually occur, our exports of iron and steel and their manufactures to Great Britain and France may increase by approximately 1,000,000 to 1,500,000 tons. This would mean a 30 to 40 per cent increase in our exports of steel based on England's and France's war needs alone. The gain would be much less important in relation to domestic production, however, inasmuch as our steel ingot capacity is something more than 50,000,000 tons annually at present. Nevertheless, even a 3 per cent increase would be most welcome to an industry characteristically prince and pauper, but mostly pauper for the last 10 years.

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