

## Consumption Expenditures in the Post-War Japan

### 1. Introduction

In estimating the total consumption expenditures as a part of gross national expenditures, there are generally two methods: one is to make use of the family expenditure surveys, which are usually done on the sample basis, and the other is to estimate directly the volume of sales of consumption goods and services. In the post-war Japan both of these methods have been attempted by the government statistical agency concerned (the National Income Unit of the Economic Stabilization Board) and have shown a fairly wide discrepancy between the results obtained. For example, for the year 1948, the first method gave rise to a sum which is only 85 percent of that obtained by the second method. Although there exists yet no consistent series of official character covering the entire post-war period, the Japanese government now places greater emphasis on the "volume of sales" method in estimating consumption expenditures. The following is the summary of our attempt at constructing a consistent series of consumption expenditures mainly on the basis of the governmental research which has thus far been either published in scattered forms or remained unpublished.

### 2. Summary Figures

The following table gives the summary of consumption expenditures of the post-war Japan, from 1946 to 1950 (calendar years), first in current prices and then in constant prices (the base year being 1948):

#### In current prices (in billion yen)

	1946	1947	1948	1949	1950
Total	225.9	698.1	1,711.2	2,587.3	2,678.5
Food	159.4	468.8	1,162.2	1,681.0	1,642.0
Clothings	11.6	53.4	72.2	108.5	117.3
Light & Fuel	9.4	29.1	69.6	88.8	96.6
Housing	11.1	29.9	69.1	132.8	132.2
Miscellaneous	34.4	116.9	338.1	576.2	690.4

#### In constant prices (in billion yen of 1948 prices)

	1946	1947	1948	1949	1950
Total	917	1,238	1,631	1,878	2,066
Food	561	733	1,088	1,252	1,365
Clothings	39	100	73	81	110
Light & Fuel	49	64	69	69	68
Housing	41	51	70	103	101
Miscellaneous	227	290	331	373	422

If we calculate per capita real consumption on the basis of the above table, the result is as follows:

1946	12,520 yen	1949	22,930 "
1947	15,840 "	1950	24,860 "
1948	20,350 "		

In other words, there has been almost two-fold increase within five years after the end of the war.

### 3. The Method of Estimate

For the period 1946-1948, the figures cited above are those of the National Income Unit, whereas for the last two years we have made our own modification on the basis of the estimate by the N. I. U. For the earlier period, the procedure followed divides itself into three steps, as follows:

- a. Estimate consumption expenditures in 1946 by item at official prices for each

quarter of the year.

- b. Revalue the above figures by effective prices.
- c. Use the figures for the fourth quarter of 1946 as base, and utilizing appropriate indices, extend these base figures to each quarter in 1947 and 1948.

In this procedure the first step is really a gigantic task. Circumstances favored this procedure, for Japan had at the time a fairly extensive network of economic controls and supply figures of various commodities could be estimated directly through appropriate control agencies. However, it must also be admitted that the character of this procedure had the effect of underestimating the actual consumption in a number of ways. For example: (1) Consumption by producer himself, especially as regards staple food, vegetables, fishery products, and fuel, tended to suffer underestimate. (2) All those items for which tax returns were used as basis for estimate also suffered underestimate. This is especially true as regards entertainment and service at restaurants. (3) Actual house rent at the time was expressed more in the form of "key money" than in monthly payments. Therefore, the estimate on the basis of the latter involves gross underestimate.

There are also other limitations in this procedure in so far as the supply figure of new commodities does not reflect accurately the pattern of consumption. This is especially true as regards the consumers' purchases of clothings. In the immediate post-war period, there was a dearth of supply in new clothings; and at the same time, many people sold their old clothes in order to supplement their income. Thus the supply figure of new clothing does not reflect at all the extent of actual purchases by consumers. In fact,

purchases of clothings by consumers as estimated on the basis of family expenditure surveys give us for the year 1946 the figure of 24.8 billion yen, whereas the same category if estimated on the basis of the new supply, even at effective prices, totals only to 11.6 billion yen. Depending on the index we use in extending the series from 1946 into the later periods, such a situation can involve a sizable underestimate in the consumption of clothings.

The second step of revaluing the original figures by effective prices is also a hazardous one. The National Income Unit did this in a rather sweeping way by calculating conversion coefficient for each of the five broad divisions of consumption expenditures. This was done on the basis of the so-called "Consumer Price Survey" which did not begin until July 1946. For the two divisions, however, "Housing" and "Miscellaneous," they did not feel it necessary to revalue the original value figures; and, of course, this assumption is questionable.

The third step of extending the figures of the fourth quarter of 1946 on the basis of other indices involves a statistical problem, even aside from the problem of adequacy of the indices utilized for the purpose. The fourth quarter is a year-end quarter, and is likely to have a seasonal characteristic. If the indices utilized for extending purposes do not have a parallel seasonality as the 1946 data which are known, the results obtained by extrapolation may suffer from artificial distortions.

The above considerations give us sufficient warning as to the tentative character of the N. I. U. estimate on consumption expenditures based upon the supply figures of consumers' goods and services. By way of a check it is



interesting to compare this with another estimate by the same office done on the basis of family expenditure surveys. If we express the latter estimate as percentages of the former, we obtain the following table:

	1946	1947	1948
Total	94	98	85
Food	78	89	76
Clothings	214	156	217
Light & Fuel	129	141	125
Housing	112	134	140
Miscellaneous	112	87	67

Divergences are quite unsystematic and in certain cases inordinately large. Some of the divergences have already been accounted for in the course of the discussion above. And still, we would have expected a better degree of correspondence between the two types of estimates. Another check can be supplied by taking the ratio of consumption expenditures to the total of individual income which has been estimated independently by the same government office. The ratios obtained are 74.5 percent for 1946, 76.2 for 1947, and 89.2 for 1948 (using the figures of consumption expenditures estimated on the basis of supply statistics). Such a trend is also rather surprising, for the Japanese economy was in a most destitute condition in and around 1946 and gradually recovered since then. And it is more normal to expect the ratio of consumption to income to be higher in the period of low income level than in that of high one. The trend shown here is exactly the reverse of this expectation, and naturally makes us suspect all the more that the figures for the later years suffer a greater degree of underestimate.

For the last two years, namely 1949 and 1950, the National Income Unit made a few conceptual improvements, such as the inclu-

sion of imputed rent of owner-occupied houses and also of imputed interest presumably enjoyed by individual consumers. But basically, the method of estimate is the same as in the earlier three years. In other words, they took the figures for the first quarter of 1949 obtained through exactly the same method as for 1947 and 1948 and then extend these base figures to later quarters on the basis of appropriate indices. The appropriate indices they used in this case are those of consumption expenditures for each broad division calculated on the basis of family expenditure surveys. What we have done is simply to correct the choice of base in order to avoid the distortions due to the special seasonality of the first quarter of 1949. Using also the figures of consumption expenditures calculated from family expenditure surveys, we took relatives of each quarter of 1949 to the corresponding quarter of 1948 (and similarly for 1950) and then applied these relatives to the known quarterly figures of 1948 which are presumably on the supply figure basis. The results thus obtained are given in the earlier table and actually come out to be about seven percent higher than those estimated by the National Income Unit. However, it must be admitted that in any case the entire series from 1947 to 1950 rests upon the original estimate of supply figures for the fourth quarter of 1946 and that therefore whatever inaccuracies involved in the original estimate are carried over or aggravated in the later periods.

In obtaining the consumption expenditures in constant prices, we have made use of the so-called "consumer price index" which is fortunately given in terms of the same subdivisions as in our table. Here, the total is obtained by adding real consumption fi-

gures of five broad divisions for each year. We can see from the table of real figures that the supply of consumers' goods and services rose quite rapidly in all fronts in the course of five years after the end of the war. But there are certain irregularities which strike our eyes and furthermore run counter to our common-sense expectations. For example, "Light & Fuel" remain almost constant from 1947 to 1950, which fact is hardly consistent with the knowledge based upon our experience. The irregular fluctuation of "Clothings" is also a cause for suspicion. All in all, although the estimate of consumption expenditures presented here may be the best we have at present for this country, the degree of reliability is yet extremely low, and it would be extremely dangerous if we tried to use this estimate as basis for any economic analysis.

#### 4. The Problem of "Cost-consumption"

There is a peculiar characteristic in the Japanese society which calls for a special mention in connection with the estimate of consumption expenditures: that is, the purchase of consumers' goods and services not out of individual income but on establishments' account, that is, out of cost. We shall call this category "cost-consumption." The welfare services which companies give to their employees may also be considered as a part of this category; but they should and actually are estimated separately and are usually added both to the income side and the expenditure side of consumers. But there are large expenditures by corporations in particular for the purpose of entertaining those persons from whom they wish to obtain special considerations. The entertainment of this character is generally on a very lavish scale and is considered as cost by the cor-

porations concerned. The fact that such an entertainment is necessary for the smooth operation of business may be a reflection of backwardness and irrationality of the Japanese business world. But for our purpose this is beside the point; the fact that it exists in a sizable amount presents a problem to us in estimating the aggregate consumption expenditures.

Unfortunately, there exists no accurate estimate of "cost-consumption" for the country as a whole. But the order of its magnitude can be guessed at from a number of scattered information. One of these is various discrepancies which we can find between the results of different methods when we try to estimate the consumption of such commodities as alcoholic drinks and tobacco, the items which are likely to occupy important place in the kind of entertainment referred to. For example, the consumption on tobacco and cigarettes as estimated from family expenditure surveys amounted to 70.8 billion yen in 1949. But the estimate on the basis of supply for the same year gives us 200.4 billion yen, almost three times as much. Of course, the entire difference cannot be attributed to "cost-consumption," but there is little doubt that a fairly large part of this difference must have been purchased as "cost-consumption." And once we know roughly the order of magnitude of "cost-consumption" in tobacco and alcoholic drinks, we can guess at the total value of "cost-consumption" from the fact that the expenditure on these items occupies a fairly stable percentage of the kind of entertainment referred to. It may not be too far from the mark if we say that the total volume of "cost-consumption" now amounts at least to 300 billion yen.

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