

Appendix A5

Expenditure Classification Schemes and Imputation Prices

Two living expenditure classification schemes are available to derive the basket weights in 1990. The early classification scheme (with data available until 1992) consists of slightly fewer categories than the later classification scheme (adopted by the NBS in 1993, with data for earlier years available retrospectively), but keeps services in a strictly separate category, i.e., does not mix them with goods. This is of advantage because absolute price data are only available for specific goods, and not services. With goods and services kept separately, a price level of all goods can be ascertained relatively accurately, while the separate, small category of services is estimated using other data. The early classification scheme is used in the construction of the per capita rural living expenditure basket in 1990. The later classification scheme is used in the derivation of the adjusted rural CPI because it has more of the needed data on the sub-categories of foods in the case of *monetary* living expenditures. The two classification schemes, with expenditure categories and their values in 1990, are reproduced in sections A vs. B and C in the table below.

The expenditure values of foods and clothing, the only two identically labeled categories in the two classification schemes, differ slightly in the two classification schemes (section A vs. B of the table). The reason, in all likelihood, is the different treatment of services in the two classification schemes. Services related to foods and clothing are included in the “service” category in the old classification scheme, but are included in the foods and clothing categories, respectively, in the new classification scheme.

The 1990 rural household survey following the early classification scheme comes with two sets of in-kind expenditure figures, one published in the *Statistical Yearbook 1991*, and the other published in the *Statistical Yearbook 1992*. The latter one uses different (higher and, as claimed, more accurate) imputed prices for rural household consumption of self-produced-self-consumed goods.¹ In 1990, 78.0% of the difference in rural living expenditures between the two sets is accounted for by different imputation prices for rural living expenditures on grain (and 94.76% by foods). The new imputation prices result in an 8.74% higher value of per capita rural living expenditures in 1990.

We use the rural living expenditure data based on new imputation prices, for two reasons. First, as the most recent choice of prices of the NBS, they are more likely to be appropriate than those which the NBS abandoned. Second, the official price index of 1991, which will later be used to obtain a 1991 price level for rural living expenditures, appears to not incorporate the rise in imputation prices (and neither does the 1990 price index).² Since it

¹ For details on the switch in imputation prices see Liu Chengxiang, Liu Ke, and Jin Zhaofeng, 2000, pp. 129f. Rural household survey data for 1990 following the new classification—and rural household survey data for all later years (independent of classification scheme)—are based on the newly-defined imputation prices. Further, downward revisions to imputation prices occurred in 1998 and 1999.

² In more detail, the argument is as follows. Rural per capita consumption of grain (*liangshi—yuanliang*) in 1990 was 262.08 kg and in 1991 255.58 kg, i.e., fell by 3.95%. Rural per capita living expenditures on “staples” (*zhushi*), i.e., grain, based on new imputation prices, in the same period fell by 1.93%, while the nationwide price indices for the agricultural procurement of various grains also fell by a few percentage points (and the rural retail price index of staples fell by 0.1%). These data match well (based on the relationship: living

does not incorporate the rise in imputation prices, using the old imputation prices in 1990 would bias all later price levels downward. The table below, in sections A and B vs. C, presents the value data for 1990 following new and old imputation prices.

expenditures divided by quantity equals price), with any inconsistencies likely to be in the lower or middle single-digit percentage range. On the other hand, the value of rural living expenditures on staples in 1990 based on the new imputation prices is 36.65% higher than the one based on the old (unknown) imputation prices. The official price index which we use to obtain the price level for 1991 (and later years) thus does not capture the large change in imputation prices; the use of rural total living expenditure data based on old imputation prices would give staples too small a weight in the basket. For the data see *Statistical Yearbook 1991*, p. 298; *1992*, pp. 245, 260, 310, 315.

Rural Living Expenditures, 1990, yuan per capita

	Total (monetary & in-kind)	Monetary	In-kind
A. New classification scheme, new imputation prices			—obtained as residual—
Total	584.63	374.74	209.89
1. Foods	343.76	155.85	187.91
a. Staples	135.47	17.50	117.97
b. Non-staples	146.09	80.29	65.80
c. Implicit residual	62.2	58.06	4.14
2. Clothing	45.44	44.03	1.41
3. Residence	101.37	81.15	20.22
4. Consumer durables and services	30.90	30.74	0.16
5. Health	19.02	18.98	0.04
6. Transport and telecommunications	8.42	8.41	0.01
7. Culture, education, entertainment	31.38	31.33	0.05
8. Others	4.34	4.25	0.09
B. Old classification scheme, new imputation prices			—official, at new imputation prices—
Total	584.63		
I. Goods	544.23		
1. Foods	339.30	151.39	187.91
a. Staples	135.47		
b. Non-staples	146.09		
c. Other foods	49.45		
d. Implicit residual	8.29		
2. Clothing	45.34	43.93	1.41
3. Housing	69.30	68.50	0.80
4. Energy	26.46	7.05	19.41
5. Consumer durables and others	63.83	63.52	0.31
II. Services	40.40		
C. Old classification scheme, old imputation prices			—official, at old imputation prices—
Total	538.05		
I. Goods	497.65		
1. Foods	295.16	151.39	143.77
a. Staples	99.14		
b. Non-staples	138.86		
c. Other foods	48.87		
d. Implicit residual	8.29		
2. Clothing	45.06	43.93	1.13
3. Housing	69.23	68.50	0.73
4. Energy	24.37	7.05	17.32
5. Consumer durables and others	63.83	63.52	0.31
II. Services	40.40		

Sources:

A *Rural Household Survey Yearbook 2003*, pp. 35, 40. In-kind data are not officially available, and calculated as a residual of total living expenditures less monetary living expenditures.

B *Statistical Yearbook 1992*, p. 310.

C *Statistical Yearbook 1991*, p. 298. (Data based on old imputation prices within the new classification scheme are not available.)