The Cost-of Living in Austria: 1874-1913

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I

The formation of a solid statistical base for the systematic analysis of economic development in nineteenth-century Austria is in its early stages.[1] Although progress is apparent, significant gaps remain. Perhaps the most obvious is the lack of a reliable index for measuring price trends in the important decades of the late nineteenth-century Austrian economy. Price indices are indispensable tools for converting time series data from monetary to real terms. This study represents an initial step toward the measurement of price behaviour in nineteenth-century Austria by developing a cost-of-living index for the period 1874-1913.[2]

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[1] See in particular NACHUM GROSS, *Economic Growth and the Consumption of Coal in Austria and Hungary, 1831-1931*, « Journal of Economic History », XXXI (1971), 899-916 and *Industrialization in Austria in the Nineteenth Century* (Unpublished Ph.D. Thesis, University of California, Berkeley, 1966); RICHARD RUDOLPH, *Austria, 1800-1914*, in Rondo Cameron, ed., « Banking and Economic Development » (Oxford: New York, 1972) and *The Role of Financial Institutions in the Industrialization of the Czech Crownlands* (Unpublished Ph.D. Thesis, University of Wisconsin, 1968).

[2] The index developed in the present paper was used in my study of economic growth in late nineteenth century Austria, *Stagnation and "Take-Off" in Austria, 1873-1913*, « Economic History Review », 2nd Ser. XXVII, No. 1, February, 1974, pp. 72-87. The present paper is a more comprehensive explanation of the data and techniques underlying the construction of the cost-of-living index. The index shown in Table 1 shows some year to year differences when compared to the index used in the study of economic growth in Austria. In the Table 1 index a three-year average, 1895-97 was used as the base period while the earlier study used a single year base, 1896. Also the Table 1 index does not use the estimate of potato prices before 1891 which was a part of the earlier study of Austrian growth.

II

The only existing price series for Austria is a wholesale index constructed by Bela von Jankovich before World War I.[3] This index has wide geographic coverage since prices were collected for a number of cities throughout the Monarchy and it extends over a substantial part of the nineteenth century. Unfortunately it is inadequate in two fundamental respects.

First, wholesale prices, the basis of the Jankovich index, tend to experience much sharper short-term fluctuations than do retail prices and are therefore less reliable indicators of trends in the cost-of-living. Second, and more important, the individual prices are aggregated into a single index without quantity weights. This means that in the final index the prices of commodities whose share in total production was large received no more weight than those commodities which represented a small share in total production.[4] The index which I have developed attempts to cope with these deficiencies.

Reasonably continuous coverage of retail prices is available for Vienna in the case of twenty commodities for the four decades before World War I.[5] For thirteen commodities: beef, horsemeat, chicken, eggs, milk, butter, lard, flour, dark and white bread, coal, beer and wine, prices at retail are available for all years between 1874 and 1913. For four commodities: sugar, coffee, salt, and fuel oil, no retail prices were reported for Vienna prior to 1901. For the earlier years retail prices from the cities of Prague and Olmütz were collected and spliced on to the existing Viennese series.[6] Retail prices were also unavailable for potatoes before 1891 and for veal and pork before 1882. In these cases data from other cities were either deficient or completely lacking so that an estimate of prices in Vienna before these dates was not feasible.

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[3] Bela von Jankovich, *Index von 45 Waaren in der österreich-ungarischen Monarchie, 1867-1909*, « Bulletin de l'Institut International de Statistique, XIX, 3 (1911-13), 136-56.

[4] Nachum Gross found the Jankovich index so deficient that he elected to use an index of wholesale prices for Germany in his study of Austrian industrialization. Gross, *Industrialization*, pp. 62-3. The German index is from Alfred Jacobs and Hans Richter, *Die Grosshandelspreise in Deutschland von 1792 bis 1934*, « Vierteljahrshefte zur Konjunkturforschung, Sonderheft 37 (Berlin, 1935), pp. 82-3.

[5] The prices were reported in the official statistical publication of the city of Vienna *Statistisches Jahrbuch der Stadt Wien*, Wien, 1884-1913. In this preliminary examination of price trends in Austria, the conditions in Vienna are assumed to be representative of those in Austria as a whole. While this assumption may be unjustified, price information from other cities was not as plentiful as in the case of Vienna. The cost of wider geographic coverage would be a smaller sample of prices.

[6] *Statistisches Handbuchlein der königliche Haupstadt Prag*, Bd. 3-8, Prag, 1875-1881; *Statistisches Handbuch der königliche Haupstadt Prag*, Bd. 1-21, Prag, 1882-1904 and *Die Statistischen Jahrbücher der königliche Haupstadt Olmütz*, Bd. 1, 3 and 4, Olmütz, 1888, 1901 and 1905.

For each commodity two prices were reported in the official statistics — the high and low retail price prevailing in trade during that year. To compute the index for an individual commodity in a given year the average of these two prices was used as the price for that year. The three-year period 1895-97 was chosen as the base period because 1896 marks the dividing line between a secular deflation and a secular inflation. The average price in the three-year base period received a value of 100. The index for any given year was found by dividing the price of that year by the base year average price. In mathematical notation the formula is:

$$I_{ij} = P_{ij} \;/\; P_i\,95\text{-}97$$

I_{ij} = price index for the ith commodity, i = 1 to 20 in the jth year, j = 1874-1913.
P_{ij} = price of the ith commodity in the jth year.
P_i 95-97 = average price of the ith commodity, 1895-97.

The indices derived for each of the 20 commodities in the sample are displayed in Table 1.

III

The 20 individual price indices were combined into a composite index for a single measure of price behaviour over the entire thirty-nine year period. These separate indices had to be aggregated in such a way that each received a weight in the total index proportional to its importance in the market basket of consumers. Evidence of consumer consumption patterns in pre-1914 Austria is contained in a budget study conducted by the Ministry of Trade in the years 1912-14.[7] Detailed records of consumption were maintained throughout this period by 119 working class families in Vienna. The distribution of income within this sample of families was quite unequal. Since expenditure patterns tend to vary widely among consumers in different income brackets, a smaller sample of families whose income experience approximated to the average income level prevailing in Austria had to be used. Table 2 displays the budget expenditure pattern of the 42 families from the total sample of 119 which earned between 2300 and 2900 crowns per family. For this income bracket the average income per head was approximately 530 crowns which is quite close to the national average of 520 crowns per capita.[8] The budgets of these forty-two families are therefore assumed

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[7] Arbeitstatistisches Amt im Handelelsministerium, *Wirtschaftsrechnungen und Lebensverhältnisse von Wiener Arbeiterfamilien in den Jahren 1912 bis 1914*, Sonderheft zur « Sozialen Rundschau », Wien (1916).

[8] « Österreichs Volkseinkommen 1913 bis 1963 », *Monatsberichte des Österreichischen Institutes für Wirtschaftsforschung*, 14. Sonderheft, Wien, 1965, p. 31. The average income per consuming unit was 898 crowns. Since the average number of consuming units per family was 2.9, average income per family was 2064.2 crowns. The average family had 4.9 members so the average income per head in this income bracket of the budget sample was 531.3 crowns. Data from *Wirtschaftsrechnungen*, p. 52.

THE COST OF LIVING IN AUSTRIA; 1874-1913:

	Beef	Pork	Veal	Horsemeat	Chicken	Eggs	Milk	Butter	Lard	Bread Dark
1874	87.0	—	—	61.1	89.5	120.0	127.3	83.7	124.5	178.4
1875	83.7	—	—	61.1	89.5	106.2	127.3	112.7	126.8	141.1
1876	92.7	—	—	74.4	100.0	149.2	127.3	120.9	130.6	125.5
1877	89.4	—	—	74.4	84.2	95.4	136.4	99.7	121.5	132.8
1878	92.7	—	—	74.4	121.1	143.1	136.4	88.5	110.1	124.5
1879	88.6	—	—	74.4	86.8	98.5	145.5	90.6	95.7	128.6
1880	89.4	—	—	79.7	86.8	109.2	127.3	97.1	106.3	132.8
1881	91.9	—	—	79.7	84.2	101.5	118.2	95.0	116.2	134.9
1882	93.5	—	—	79.7	89.5	103.1	118.2	103.6	123.8	128.2
1883	105.7	101.7	104.7	85.0	89.5	113.9	118.2	111.4	120.0	117.0
1884	105.7	101.7	104.7	85.0	84.2	103.1	118.2	99.3	106.3	113.3
1885	97.6	105.5	104.7	85.0	71.1	103.1	113.6	95.0	96.4	104.6
1886	93.5	100.5	104.7	85.0	86.5	120.0	104.5	90.5	91.1	109.5
1887	93.5	100.5	97.7	79.7	79.0	87.7	104.5	90.6	93.4	102.5
1888	89.4	100.5	97.7	79.7	89.5	106.2	104.5	90.6	98.7	101.7
1889	89.4	103.6	97.7	79.7	100.0	107.7	104.5	99.3	104.8	103.7
1890	89.4	103.6	97.7	79.7	81.6	107.7	104.5	90.6	100.2	111.6
1891	97.6	103.6	97.7	85.0	86.8	107.7	104.5	92.8	100.2	117.4
1892	97.6	94.2	97.7	90.3	92.1	101.5	100.0	99.3	97.2	111.2
1893	100.8	94.1	97.7	91.6	68.4	106.2	100.0	99.3	98.7	112.5
1894	108.1	94.2	97.7	93.0	81.6	96.9	100.0	99.3	97.2	112.5
1895	104.9	111.7	111.7	101.9	92.1	104.6	100.0	97.1	98.0	105.0
1896	92.6	87.9	104.7	101.9	81.6	98.5	100.0	101.4	98.7	95.4
1897	97.6	100.5	83.7	98.3	126.3	96.9	100.0	101.4	103.3	100.0
1898	97.6	100.5	83.7	101.9	105.3	95.4	100.0	110.1	103.3	121.2
1899	97.6	100.5	83.7	95.6	100.0	124.6	100.0	112.2	100.2	117.8
1900	97.6	100.5	83.7	101.9	94.7	106.2	100.0	112.2	100.2	107.1
1901	97.6	92.9	83.7	87.7	94.7	113.9	100.0	112.2	100.2	105.0
1902	100.8	92.9	86.5	87.7	68.4	104.6	100.0	112.2	109.3	99.6
1903	97.6	92.9	83.7	87.7	92.1	124.6	100.0	112.2	126.0	95.4
1904	97.6	100.5	111.7	90.3	71.1	110.8	100.0	142.2	120.0	102.9
1905	110.6	125.6	118.6	103.6	100.0	123.1	113.6	146.7	120.0	104.6
1906	117.9	131.8	118.6	114.2	113.2	113.9	113.6	129.5	126.8	103.3
1907	117.9	121.2	132.6	127.5	92.1	121.5	127.3	116.5	126.8	102.9
1908	113.8	119.3	125.6	130.2	89.5	132.3	136.4	127.3	123.0	119.1
1909	117.9	113.0	111.7	122.2	105.3	150.8	127.3	129.5	129.1	139.4
1910	122.0	125.6	132.6	135.5	102.6	143.1	118.2	136.4	150.3	129.1
1911	130.8	131.8	132.6	135.5	107.9	161.5	129.5	146.7	180.7	120.3
1912	154.5	130.6	139.6	143.4	100.0	169.2	118.2	151.1	157.9	124.1
1913	154.5	138.1	146.6	143.4	97.4	146.2	118.2	151.1	157.9	129.5

Sources and Notes:

Prices are for retail trade in Vienna, the average of the highest and lowest prices reported during the year as quoted in *Statistischen Jahrbuch der Stadt Wien* (1884-1913). When retail prices were not available for Vienna two alternatives were selected: retail prices in other cities and wholesale prices in Vienna. In four cases these alternatives were used:

Sugar: 1874-76, Prague; 1877-1901, Olmütz.

TABLE 1

THE TOTAL INDEX AND ITS COMPONENTS

White Bread	Flour	Potatoes	Sugar	Salt	Coffee	Beer	Wine	Oil	Coal	Total
164.1	155.2	—	134.2	—	83.6	119.2	101.9	—	136.1	126.5
130.7	122.7	—	148.9	—	80.8	111.5	81.7	—	130.2	118.4
133.7	144.4	—	134.2	—	88.6	115.4	80.6	—	125.1	121.0
133.7	158.8	—	154.8	107.0	92.1	107.7	80.6	143.5	120.9	120.8
121.6	144.4	—	128.6	100.0	90.0	100.0	80.6	108.7	111.6	115.6
118.5	148.0	—	123.8	100.0	92.6	100.0	80.6	104.3	113.3	113.9
129.8	155.2	—	128.6	100.0	91.8	100.0	80.6	104.3	116.7	114.3
132.2	151.6	—	131.0	100.0	88.6	100.0	80.6	95.7	108.2	112.8
133.7	144.4	—	131.0	100.0	87.4	107.7	80.6	108.7	104.8	113.8
130.7	137.2	—	123.8	100.0	87.7	107.7	89.6	126.1	104.8	112.6
123.8	130.0	—	111.9	100.0	89.8	107.7	89.6	126.1	109.9	109.8
120.7	115.5	—	102.4	100.0	85.6	107.7	89.6	121.7	101.4	104.6
117.9	108.3	—	97.6	100.0	87.2	107.7	89.6	121.7	97.2	102.6
111.9	111.9	—	90.5	100.0	89.3	107.7	89.6	121.7	88.8	99.9
105.8	101.1	—	95.2	100.0	92.7	107.7	89.6	113.0	88.7	99.8
113.7	108.3	—	95.2	100.0	95.2	107.7	89.6	108.7	93.4	101.7
114.0	115.5	—	90.5	100.0	97.8	107.7	89.6	108.7	95.5	102.0
117.9	119.1	—	95.2	100.0	100.3	107.7	98.5	100.0	101.4	104.5
112.5	122.7	80.8	100.0	100.0	103.1	100.0	103.0	100.0	96.4	101.1
106.4	108.3	63.1	102.4	100.0	107.8	100.0	103.0	108.7	95.5	100.7
107.6	97.5	75.8	83.3	96.2	109.1	100.0	103.0	100.0	98.9	100.1
98.8	93.9	85.9	100.0	100.0	108.0	100.0	103.0	100.0	98.9	101.9
98.8	97.5	123.2	100.0	100.0	97.1	100.0	98.5	100.0	98.1	97.8
102.4	108.3	90.9	100.0	100.0	94.9	100.0	98.5	100.0	103.1	100.3
118.2	130.0	80.8	100.0	100.0	88.2	100.0	98.5	104.3	99.8	103.5
108.5	122.7	70.7	109.5	100.0	87.2	100.0	98.5	100.0	102.3	103.5
93.3	97.5	83.8	109.5	107.7	85.3	100.0	147.8	104.3	126.0	102.3
91.8	93.9	68.6	109.5	103.8	88.1	100.0	145.5	104.3	125.5	101.1
88.1	93.9	64.8	109.5	103.8	88.1	100.0	145.5	90.1	115.0	99.8
83.9	86.6	60.9	99.5	103.8	88.1	100.0	145.5	94.8	113.3	100.0
85.4	101.1	60.9	95.0	103.8	99.5	100.0	145.5	106.7	112.4	103.0
88.2	104.7	99.0	97.5	103.8	105.2	103.8	147.8	107.9	113.3	111.8
86.6	104.7	60.9	95.0	103.8	108.0	107.7	143.3	107.9	116.6	112.7
92.4	111.9	83.8	90.2	111.8	104.1	107.7	143.3	94.8	127.6	114.5
104.9	126.4	91.4	97.5	111.8	102.3	107.7	143.3	94.8	130.8	118.8
104.3	158.8	91.4	110.7	111.8	102.3	107.7	143.3	92.4	130.6	122.2
103.3	137.2	91.4	102.3	111.8	102.3	107.7	152.2	80.7	132.9	121.9
102.2	130.0	114.3	111.9	111.8	119.4	115.4	147.8	85.4	132.9	129.3
107.3	130.0	152.4	112.9	107.7	127.9	115.4	125.4	90.1	136.5	130.6
107.0	126.4	91.4	107.1	107.7	125.1	115.4	143.3	90.1	140.2	129.9

Coffee: 1874-84, 1893-1901, Prague; 1885-87, Olmütz.
Salt: 1877-92, Olmütz; 1893-1901, Prague.
Fuel Oil: 1877-1901, Olmütz.

For these cases the following sources were used: *Statistisches Handbuchlein der königliche Haupstadt Prag*, Bd. 3-8, Prague (1875-81); *Statistisches Handbuch der königliche Haupstadt Prag*, Bd. N.F. 1-1, Prague (1882-1904); *Die Statistisches Jahrbücher der königliche Haupstadt Olmütz*, Bd. I-V, Olmütz (1888-1911).

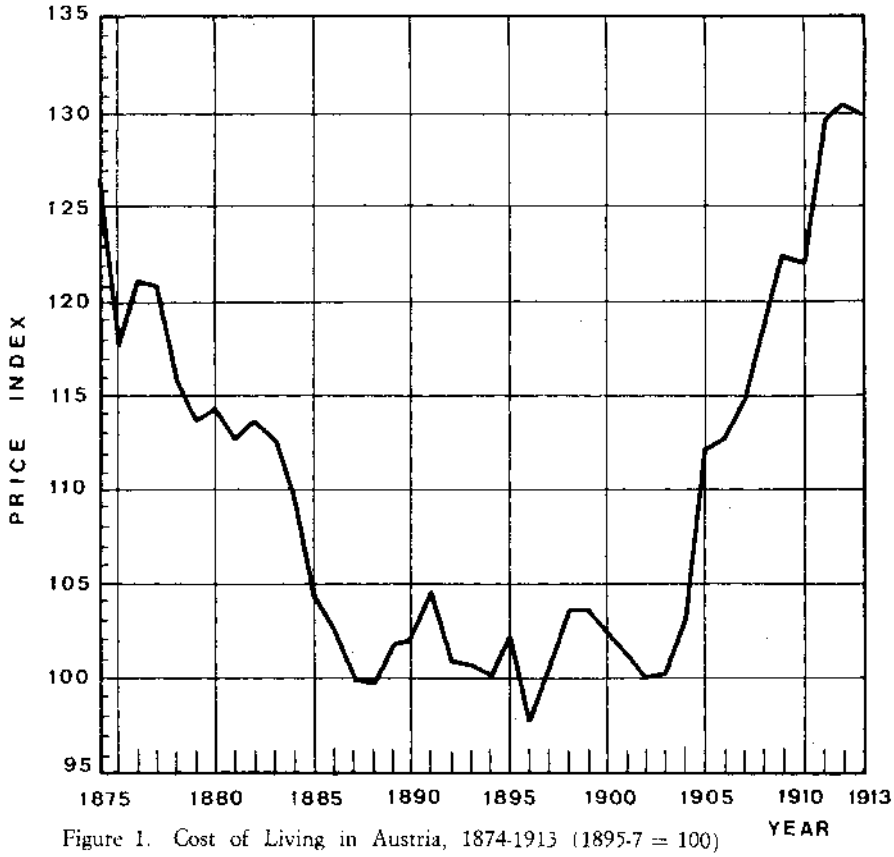

Figure 1. Cost of Living in Austria, 1874-1913 (1895-7 = 100)

Source: Table 1, Above

TABLE 2

DISTRIBUTION OF EXPENDITURE FOR FAMILIES WITH ANNUAL INCOMES FROM 2300-2900 CROWNS PER FAMILY*

Expenditure Component	As Percent of Total Budget
Meat	13.4
Other Food	37.4
Housing	12.8
Heat and Light	4.4
Clothing, Laundry and Linen Expenditures	9.5
Luxury Expenditures	6.5
Entertainment, Education, Hobby and Other	16.0
All Expenditures	100.0

* The families in this income class had a range of 800-1000 Crowns per consuming unit. Since there were an average of 2.9 consuming units per family in this class, then the range of family income was roughly 2300-2900 crowns.

Source:

Arbeitstatistisches Amt im Handelsministerium, *Wirtschaftsrechnungen und Lebensverhältnisse von Wiener Arbeiterfamilien in den Jahren 1912 bis 1910*, Sonderheft zur "Sozialen Rundschau", Vienna (1916), Übersichte 66, 70, 78, 82 and 84.

TABLE 3

DERIVATION OF WEIGHTS FOR INDIVIDUAL COMPONENTS OF THE COST-OF-LIVING INDEX

Item	Budget Study Proportions	Weight in the Index
Food		
1. Beef	5.6	10.7
2. Pork	5.5	10.6
3. Veal	0.8	1.5
4. Horsemeat	0.1	0.2
5. Chicken	0.5	1.0
6. Eggs	1.6	3.1
7. Milk	7.7	14.8
8. Butter	1.7	3.3
9. Lard	3.6	6.9
10. Flour	2.5	4.8
11. Salt	0.9	1.7
12. Dark Bread	4.8	9.2
13. White Bread	2.2	4.2
14. Potatoes	0.9	1.7
15. Sugar	2.5	4.8
16. Coffee	1.8	3.5
Heat and Light		
17. Oil	1.2	2.3
18. Coal	3.2	6.1
Luxury Expenditures		
19. Beer	4.5	8.6
20. Wine	0.5	1.0
21. Total	52.1	100.0

Source:

Same as Table 2. The individual commodity weights for the index were found by dividing each budget study proportion into line 21.

to provide a rough approximation of the consumption behaviour of the typical Austrian family.

Not all the major expenditure categories could be represented in the cost-of-living index since prices for some of these items were often unavailable. Table 3 shows a complete breakdown of the shares of the individual components where prices were available in the budgets of the 42 families. Prices were found for all the components under meat and other food and for the category heat and light. Under the component luxury expenditures (*Genüssmittel*) prices were reported for beer and wine but not for tobacco or cigarettes. No price information was available for clothing, laundry and linen expenditures. Only limited rent data were uncovered, so the housing

TABLE 4

THE COST OF LIVING IN GERMANY AND AUSTRIA: 1874-1913

Year	Austria 1895-97=100	Germany 1895=100	Year	Austria 1895-97=100	Germany 1895=100
1874	126.5	120.5	1894	100.1	100.3
1875	118.4	112.7	1895	101.9	100.0
1876	121.0	108.7	1896	97.8	99.8
1877	120.8	107.3	1897	100.3	102.1
1878	115.6	100.1	1898	103.5	103.9
1879	113.9	98.9	1899	103.5	101.8
1880	114.3	104.0	1900	102.3	106.4
1881	112.8	104.0	1901	101.1	107.1
1882	113.8	102.6	1902	99.8	108.0
1883	112.6	100.0	1903	100.0	108.0
1884	109.8	99.2	1904	103.0	108.2
1885	104.6	98.6	1905	111.8	112.4
1886	102.6	97.7	1906	112.7	115.1
1887	99.9	97.8	1907	114.5	118.7
1888	99.8	97.3	1908	118.8	121.2
1889	101.7	103.8	1909	122.2	123.3
1890	102.0	102.2	1910	121.9	124.2
1891	104.5	105.8	1911	129.3	125.3
1892	101.1	104.8	1912	130.6	131.3
1893	100.7	100.9	1913	129.9	129.8

Source:
Austria: Table 1, above.
Germany: Ashok Desai, *Real Wages in Germany, 1871-1913* (Oxford: Clarendon Press, 1968), p. 117.

component of the family budgets is not represented in the final index.[9] The twenty commodities of the cost-of-living index accounted for 52.1 per cent of the total budget expenditures for the 42 families with an average income per capita of 530 crowns per year. In column 2 of Table 3 the proportional representation of each commodity in the 20 commodity budget sample was calculated. These shares were used to weight the individual price indices in deriving the total cost-of-living index.

This weighting scheme is definitely an improvement over Jankovich's unweighted aggregation of individual prices yet these weights are still inadequate from the point of view of economic theory. Over time consumption patterns change not only because of changes in relative prices but because of changes in consumer tastes and incomes. For example, as income rises consumers are expected to substitute relatively more expensive items such as meat for relatively cheaper staples such as bread and potatoes, even if the relative prices of these goods remain unchanged. For this reason the price

[9] See footnote 13, below for an assessment of the impact of the rent omission on the total cost-of-living index.

weights based on the 1912-14 budget study become less and less representative of the relative importance of each item in the total market basket as one moves backward to 1874. Unfortunately no comparable budget study exists for an earlier period and a backward projection of consumption patterns would be subject to a large margin of error. This refinement is a task for future research.

The computation of the composite index of twenty commodities was made according to the following formula:

$$T_j = \sum_{i=1}^{20} I_{ij} \, W_i$$

T_j = total cost-of-living index in the jth year.
I_{ij} = price index for the ith commodity in the jth year.
W_i = share of the ith commodity in the total value of the 20 commodities as reflected in the 1912-14 working class budget (Table 3, column 2).

The total cost-of-living index for Austria shown in the last column of Table 1 and in Figure 1 has the characteristic pattern of deflation and inflation which is now familiar to students of late nineteenth-century economic history. From 1874 to the mid-1880's the index exhibits its sharpest rate of decline. From the mid-1880's to the late 1890's the index shows some slight deflation but in general a fairly high degree of price stability. After the turning point in the secular trend in 1896 came the period of sharply rising prices with the major upsurge coming after 1904. During the long deflation prices fell at an annual average of 1.1 per cent per year. In the subsequent inflation prices rose at a rate of 1.6 per cent per annum.

In Table 4 is a comparison of the cost of living in Austria and Germany for the period 1874-1913. The indices show roughly parallel trends for the two neighbours. While there are a number of year-to-year differences in price movements, both indices turn up in 1896 after the long deflation and both experience roughly the same degree of secular price change. This parallelism is not altogether surprising. For most of the late nineteenth century cyclic movements in the Austrian economy were apparently quite dependent upon trends in the German economy.[10]

Since housing costs amounted to almost 13 per cent of the average Viennese working class budget in the 1912-14 study, some speculation on the possible effect of excluding this important category is in order. No rent data are available for Vienna. Scattered data for Prague seem to indicate

[10] Rudolph, *Czech Crownlands*, pp. 63, 65, 67, and 72-3. Even as late as 1910 Germany accounted for about 40 per cent of the exports from the Austro-Hungarian Empire and 30-40 per cent of imports into Austria-Hungary. It is likely that the shares for Austria alone were even higher. Rudolph, *Czech Crownlands*, pp. 463-4.

a pattern of rising rents over the entire 39-year period — quite gradual before 1896 with a sharp acceleration after this date.[11] This pattern conforms to that of Germany according to the rent series of A. Desai.[12] If the Prague data are reasonable proxies for conditions in Austria as a whole, then the exclusion of rent means that the composite cost-of-living index in Table 1 overstates the degree of deflation in the early period but has little effect on the index in the immediate decade and a half before World War I.[13]

IV

As an indicator of trends in the cost-of-living in late nineteenth century Austria, the twenty commodity composite index is an improvement over the only existing index. Of course, much more research needs to be done. Prices should be collected for a wider geographic area, since Vienna may not be representative of Austria as a whole. A rent series should be developed since this category accounts for a large proportion of budget expenditures. To account for the effect of changes in income on consumption over the period a different set of weights should be developed for the earlier years in the series. Eventually the index should be extended back in time to capture price behaviour in the period immediately preceding the depression of 1873. However, these refinements await more extensive research and new sources of data.

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[11] Data are available for three separate samples of houses in the Prague area. Below are rent indices for the three samples at three points in time where 1895=100. The indices were calculated on the basis of rent yield per square meter of living surface.

	Area I	Area II	Area III
1875	101.5	87.1	94.9
1895	100.0	100.0	100.0
1901	109.1	110.3	103.5

The indices were derived from data in Wilibald Mildschuh, *Mietzinse und Bodenwerte in Prag in den Jahren 1869-1902*, « Wiener Staatswissenschaftliche Studien, Bd. IX, Hft. 1, Vienna, pp. 199-201.

[12] Ashok, Desai, *Real Wages in Germany, 1871-1913*. Oxford: Clarendon Press, 1968, Appendix A, p. 117. The corresponding figures are: 1875=96.5, 1895=100.0 and 1901=109.3.

[13] Since rents rose before 1895, they would act as a break on the rate of price decline in the composite index during this period of falling prices. From 1895 to 1901 the increase in Prague rents is roughly similar to the rent increase shown in Desai's index. See Table 1 and footnote 12 above. If rents in Austria had continued to conform to the German pattern, they would have experienced a degree of inflation from 1901 to 1913 which approximated the rate of change in the 20 commodity composite index. Therefore, including rent in the index would have little impact on the rate of change in prices after 1896, although some year-to-year differences might occur.