In selecting indicators of German business cycles I was guided primarily by the list of roughly coincident indicators for the United States, i.e., indicators that have been found to turn at about the same time as business cycles. Since our concern is the determination of historical business cycle turning points, not the forecasting of future ones, indicators characterized by long leads at business turns are not included as a rule. This explains the exclusion of such cyclically sensitive series as orders, business intentions, etc.

A very large number of German economic time series is currently available. But, unfortunately, most are not in the shape required for my purposes. Many do not reach back as far as 1950 and those that do usually have breaks at the time of the incorporation of the Saarland into Western Germany and again at the time of the incorporation of West Berlin.

Analysis of the period at the beginning or end of a series is unavoidably surrounded by considerable uncertainty. Therefore coverage back to 1950 is indispensable for our purposes. The eighteen-year span that this provides is a minimum. Using a series in two or more segments is also out of the question. This would bring ends of series into the middle of the period and thus would greatly reduce the reliability of results that we obtain with continuous series for most of the period.

Thus, several series that would otherwise have been included in our list had to be omitted either because they were too short or because splicing factors for their various segments could not be found. The final selection consists of the twenty-one indicators, thirteen monthly and eight quarterly, listed in Tables 1, 3, 4 and 5, and shown in Appendixes A and B. All quarterly series are from the national income accounts and are interpolations in semi-annual official data, prepared and published by the German Institute for Business Cycle Research.16

The omission of the unemployment rate from the list of indicators deserves a word of comment since it would usually be regarded as one of the most significant series. In Germany, however, the rate remained almost

16In two instances where comprehensive measures of important activities are available only quarterly, we have supplemented them by monthly measures with narrower coverage. This goes for the national income accounts series, Investment in Equipment, which is supplemented by the component of the industrial production index, Production of Investment Goods. It goes, further, for the national accounts series, Income of Employees, supplemented by Industrial Wages and Salaries. In both instances the heavier weight given to these measures in this fashion was deemed appropriate.
constant (at a very low level) over much of the period. This is evidently due to the fact that variations in the demand for labor were absorbed by variations in the rate of immigration of foreign workers and therefore are not reflected in the unemployment rate. The number of unemployed is one of our indicators, however.

German official sources as well as the German Institute for Economic Research have only recently begun to adjust their series for seasonal variations. For the most part, they base their analyses on same-month-year-ago comparisons despite of the shortcomings of this method. The Organization for Economic Cooperation and Development (OECD) publishes some German series in seasonally adjusted form but only beginning with 1955. Thus all nineteen out of the twenty-one series which do exhibit seasonal fluctuations were adjusted at the NBER.17

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17 The adjustment is made by the X-11 Variant of the Census Method II. This seasonal adjustment program provides a "modified seasonally adjusted series" which is the one we have used in adjusting the German indicators. The modification consists in replacing the extreme values of the series with the corresponding values of a smoothed version (a Henderson curve) of the series. The method is described in Julius Shiskin, Allan H. Young and John C. Musgrave, The X-11 Variant of the Census Method II Seasonal Adjustment Program, Technical Paper No. 15, Bureau of the Census, February 1967.