The text below is taken directly from Appendix 1 in
Hassler, J., P. Lundvik, T. Persson, and P. Söderlind (1992), 'The Swedish business
cycle: stylized facts over 130 years', Monograph Series, 21, Institute for
International Economic Studies, Stockholm University,
and has been kindly provided by John Hassler.
For the full list of references, see Hassler et al (1992).

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Appendix 1

Data Sources and Definitions

This appendix gives exact sources for our data and exact
definitions of the variables in our study.

GDP Deflator (Py)
Nominal GDP/Output defined as below.

Inflation (Inf)
First differences of logarithms of the GDP Deflator.

Nominal GDP (Ynom)
GDP in current factor prices

Sources:
1861-1949   Krantz and Nilsson (1975), Table 1.2 col 4
1950-1969   Statistics Sweden, N10 SM8901, Appendix 2-3, Table
               3.1, GDP in factor values.
1970-1988   Statistics Sweden , N10 SM8901, Table H1, GDP in
               factor values.

Money Stock (M2)
Central Bank and private bank (until 1903) notes held by the
public plus demand and time deposits at Commercial Banks

Sources:
1871-1971   Jonung (1975), Appendix A.
1972-1988   Statistical Yearbook, Central Bank of Sweden.

Real Money Stock (M2/Py)
Money Stock divided by the GDP deflator.

Discount Rate (R)
Central Bank Discount Rate

Source:
1861-1988   Statistical Yearbook, Central Bank of Sweden.

Interest rate (R2)
Lowest offered interest rate for loans at the commercial bank
Skandinaviska Enskilda Banken and its ancestors.

Sources:
1867-1911   Sammandrag av solidariska enskilda bankers samt
               aktiebankernas   och   kreditaktiebolagens
               uppgifter,quarterly   publication,   Statistics
               Sweden.
1912-1967   Statistiska meddelanden serie E, Uppgifter om
               bankerna, monthly publication, Statistics Sweden.
1968-1983   Bankerna, monthly publication, Statistics Sweden.
1984-1986   Affärsbankerna, monthly publication, Statistics
               Sweden.
1987-1988   Approximate figure given by Sven Lindström at
               SE-banken. Rates decided upon locally.

Real Discount Rate (R-Inf)
Official Discount Rate minus inflation.

Real Interest Rate (R2-Inf)
Interest Rate minus inflation.

GDP (Y)
Gross Domestic Product in 1985 fixed factor values. From 1950 GDP
at current factor values is deflated by the implicit deflator for
GDP at market values.

Sources:

```
1861-1949    Krantz and Nilsson (1975), Table 3.1
1950-1979    Statistics   Sweden,  N10  SM8901,  Appendix  2-3,
             Tables 3.1 and 3.2
1980-1988    Statistics Sweden, N10 SM8901, Tables H:1 and H:2
```

Private Consumption (C)
Private consumption of goods and services at fixed 1985 prices.

```
Sources:
1861-1949    Krantz and Nilsson (1975), Table 2.3.1.
1950-1979    Statistics Sweden, N10 SM8901, Appendix 2-3, Table
             3:2
1980-1988    Statistics Sweden, N10 SM8901, H2.
```

Public Consumption (G)
Public consumption of goods and services, state and
municipalities deflated with the GDP deflator.

```
Sources:
1861-1949    Krantz and Nilsson (1975), Table 1.1.
1950-1979    Statistics Sweden, N10 SM8901, Appendix 2-3, Table
             3:1
1980-1988    Statistics Sweden, N10 SM8901, H1.
```

Investments (I)
Gross domestic capital formation in fixed 1985 prices.

```
Sources:
1861-1949    Krantz and Nilsson (1975), Table 2.2.1.
1950-1979    Statistics Sweden, N10 SM8901, Appendix 2-3, Table
             3:2, row 5.
1980-1988    Statistics Sweden, N10 SM8901, Table H2.
```

Exports (X)
Exports of goods and services in fixed 1985 prices.

```
Sources:
1861-1949    Johansson (1967), Table 50 col.14
1950-1979    Statistics  Sweden,  N10  SM 8901,  Appendix 2-3,
             Table 3:2
1980-1988    Statistics Sweden, N10 SM 8901, Table H2
```

Imports (M)
Imports of goods and services in fixed 1985 prices.

```
Sources:
1861-1949    Johansson (1967), Table 52 col.14
1950-1979    Statistics  Sweden,  N10  SM 8901,  Appendix 2-3,
             Table 3:2
1980-1988    Statistics Sweden, N10 SM 8901, Table H2
```

Relative Price Private Consumption (Pc/Py)
Private consumption at current prices divided by Private
consumption at fixed prices and the GDP deflator

```
Sources for private consumption at current prices:
1861-1949    Krantz and Nilsson (1975), Table 1.1
1950-1979    Statistics Sweden, N10 SM8901, Appendix 2-3, Table
             3:1
1980-1988    Statistics Sweden, N10 SM8901, H1.
```

Relative Price Investments (Pi/Py)
Gross fixed capital formation at current prices divided by gross
fixed capital formation at fixed prices and the GDP deflator

```
Sources for fixed capital formation at current prices:
1861-1949    Krantz and Nilsson (1975), Table 1.1
1950-1979    Statistics Sweden, N10 SM8901, Appendix 2-3, Table
             3:1
1980-1988    Statistics Sweden, N10 SM8901, H1.
```

Relative Export Prices (Px/Py)
Exports of goods and services at current prices divided by gross
exports at fixed prices and the GDP deflator.

```
Sources for exports at current prices:
1861-1949    Johansson (1967), Table 49 col.14
1950-1979    Statistics  Sweden,  N10  SM 8901,  Appendix 2-3,
             Table 3:1
1980-1988    Statistics Sweden, N10 SM 8901, Table H:1
```

Relative Import Prices (Px/Py)
Imports of goods and services at current prices divided by gross imports at fixed prices and the GDP deflator.

Sources for imports at current prices:
1861-1949   Johansson (1967), Table 51 col.14
1950-1979   Statistics Sweden, N10 SM 8901, Appendix 2-3,
              Table 3:1
1980-1988   Statistics Sweden, N10 SM 8901, Table H:1

Manufacturing Production (Yman)
Value added in manufacturing and mining in fixed 1985 producer prices.

Sources:
1861-1949   Krantz and Nilsson (1975), Table 3.2.1
1950-1962   Statistics Sweden, SM N 1975:98, Table 2A
1963-1969   Statistics Sweden, SM N 1981:2.5, Appendix 4,
              Table 2A
1970-1988   Statistics Sweden, N10 SM8901, Table H:4

Relative Price Manufacturing Production (Pman/Py)
Value added in manufacturing and mining at current producer prices divided by value added in fixed producer prices and the GDP deflator.

Sources for value added in current producer prices :
1861-1949   Krantz and Nilsson (1975), Table 1.3
1950-1962   Statistics Sweden, SM N 1975:98, Table 1A
1963-1969   Statistics Sweden, SM N 1981:2.5, Appendix 4,
              Table 1A
1970-1988   Statistics Sweden, N10 SM8901, Table H:3

Wage rate
Wage in current SEK per 100 hours for workers in manufacturing and mining.

Sources:
1861-1913   Bagge et al. (1935), Table 26, Column "Social
              Science Institute"
1914-1919   Bagge et al. (1935), Table 26, Column "Social
              Board"
1920-1929   Statistics Sweden, Lönestatistisk Årsbok 1929,
              Table 8
1930-1934   Statistics Sweden, Lönestatistisk Årsbok 1938,
              Table 24
1935-1938   Statistics Sweden, Lönestatistisk Årsbok 1940,
              Table 28
1939-1984   Statistics Sweden, Löner 1984, p 58, Table D
1985-1986   Statistics Sweden, Löner och sysselsättning inom
              privat sektor 1988, p 44, Table D

Real Wage (W/Pman)
Wage rate deflated with manufacturing prices.

Real Consumer Wage (W/Pc)
Wage rate deflated with private consumption prices.

Wage Cost (Wc)
Total wage bill in current values to workers in manufacturing and mining divided by total number of hours worked by workers.

Source for total wage bill:
1870-1949   Jungenfelt (1966), p 122 col 5.
1950-1962   Statistics Sweden, Nr N 1975:98, Appendix 98,
              Table 4AA
1963-1969   Statistics Sweden, Nr N 1978:8.4, Appendix 5,
              Table 14.
1970-1979   Statistics Sweden, N10 SM8601, Appendix 5, Table
              5:11
1980-1988   Statistics Sweden, N10 SM8901, Appendix 5, Table
              5:11

Real Wage Cost (Wc/Pman)
Wage cost deflated by manufacturing prices.

Worked Hours in Manufacturing (H)
Total number of worked hours by employees in manufacturing and mining. Between 1870 and 1949 constructed by dividing total wage bill (see wage cost) and wage rate defined as above. Between 1950 and 1959 hours by entrepreneurs ("företagare") is included.

Sources:

1950-1959	Statistics Sweden, Nr N 1975:98, Appendix 5, Table 98
1960-1962	Statistics Sweden, Nr N 1975:98, Appendix 5, Table 92
1963-1969	Statistics Sweden, N 1978:8.4, Appendix 5, Table 92
1970-1979	Statistics Sweden, N10 SM8601, Appendix 5, Table 5:8
1980-1988	Statistics Sweden, N10 SM8901, Appendix 5, Table 5:8

Workers (N)
Average number of workers in manufacturing and mining.

Sources:

1861-1919	Bagge et al. (1935), Table 187
1920-1986	Industri, yearly publication from Kommerskollegium, later Statistics Sweden. Workers ("arbetare and "övriga arbetare") in industrial groups 1-8, 1952-1986 groups 1-11 due to reclassification.

Hours per Worker
Worked hours in manufacturing and mining divided by average number of workers.

Productivity (Pr)
Labor productivity in manufacturing and mining. Value added in manufacturing and mining in fixed 1985 producer prices divided by total number of worked hours.

Wage share (Wshare)
Total wage bill (see wage cost) divided by value added in manufacturing and mining in current prices.

Unemployment (U)
Yearly average of number of unemployed reported to unemployment insurance. ("Arbetslöshetskassor")

Sources:

1911-1956	Silenstam (1970)
1956-1969	Historical Statistics, Arbetsmarknadsstyrelsen, Swedish Labor Market Board.
1970-1988	Arbetsmarknadsstyrelsen, Swedish Labor Market Board.

Current Account (CA)
Current Account in current values.

Sources:

1871-1949	Ohlsson (1969), Table B:1
1950-1962	Statistics Sweden, N 1975:98, Appendix 3, Table 5
1963-1969	Statistics Sweden, N 1981:2.5
1970-1974	Statistics Sweden, N10 SM8601
1975-1988	Statistics Sweden, N10 SM8901, Table VIII,row 8

Net Exports (Nx)
Exports minus imports deflated with GDP deflator.

Terms of Trade (Tot)
Relative export price divided by relative import price.

Foreign Demand (Fy)
Aggregated weighted GDP in Great Britain, Denmark, Norway, (West) Germany, France and United States. Weights calculated as follows:
Unfiltered weights are defined as:

$$\alpha_i = w_i X / Y_i Px$$

where subscript i denotes the countries mentioned above. w_i denotes the share of Swedish exports going to country i, Y_i real GDP in country i and Px is export prices. For years without observations on w_i, linerar interpolations are made. A Whittaker-Hendersson filter with lambda=6400 is then applied to α_i and the trend component $\overline{\alpha}$ (normalized to sum to one) is used as the weight so that:

```
          i


          Fy  =  Sum alfabar Y
                        i i
```

Source for w :
          i
```
1871-1964      Ohlsson (1969), Table B:9
1965-1988      Statistisk Årsbok, Statistics Sweden
```

Output Great Britain (Uk)
GDP of Great Britain in fixed values.

Sources:
```
1870-1949      Maddison (1982), Table A6-A8
1950-1985      Summers and Heston (1988)
1986-1988      OECD, National Accounts
```

Output Denmark (Dk)
      As for Uk.

Output Norway (No)
      As for Uk.

Output Germany (Ge)
      As for Uk.

Output France (Fr)
      As for Uk.

Output United States (Us)
      As for Uk.