

DATA APPENDIX

“The Great Depression in Italy: Trade Restrictions and Real Wage Rigidities”
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ORIGINAL DATA: DESCRIPTION

Note: unless stated otherwise, all series are for Italy and cover the period 1919-1940.

- O.1** Real GDP, United States (index, 1913=100)
- O.2** Real GDP, France (index, 1913=100)
- O.3** Real GDP, Germany (index, 1913=100)
- O.4** Real GDP, Italy (index, 1913=100)
- O.5** Real GDP, United Kingdom (index, 1913=100)
- O.6** Population, United States (thousands)
- O.7** Population, France (thousands)
- O.8** Population, Germany (thousands)
- O.9** Population, Italy (thousands)
- O.10** Population, United Kingdom (thousands)
- O.11** Real Industrial Production, United States, 1920-1938 (index, 1938=100)
- O.12** Real Industrial Production, France, 1920-1938 (index, 1938=100)
- O.13** Real Industrial Production, Germany, 1920-1938 (index, 1938=100)
- O.14** Real Industrial Production, Italy, 1920-1938 (index, 1938=100)
- O.15** Real Industrial Production, United Kingdom, 1920-1938 (index, 1938=100)
- O.16** Real Imports, United States, 1929 and 1932 (index, 1913=100)
- O.17** Real Imports, France, 1929 and 1932 (index, 1913=100)
- O.18** Real Imports, Germany, 1929 and 1932 (index, 1913=100)
- O.19** Real Imports, Italy, 1929 and 1932 (index, 1913=100)
- O.20** Real Imports, United Kingdom, 1929 and 1932 (index, 1913=100)
- O.21** Real Exports, United States, 1929 and 1932 (index, 1913=100)
- O.22** Real Exports, France, 1929 and 1932 (index, 1913=100)
- O.23** Real Exports, Germany, 1929 and 1932 (index, 1913=100)
- O.24** Real Exports, Italy, 1929 and 1932 (index, 1913=100)
- O.25** Real Exports, United Kingdom, 1929 and 1932 (index, 1913=100)
- O.26** Value Added: Commerce (billion 1938 Lire)
- O.27** Value Added: Construction (billion 1938 Lire)
- O.28** Value Added: Credit and Insurance (billion 1938 Lire)
- O.29** Value Added: Electricity, Gas and Water (billion 1938 Lire)
- O.30** Value Added: Building Services (billion 1938 Lire)
- O.31** Value Added: Various Services (billion 1938 Lire)
- O.32** Value Added: Transportation and Communication (billion 1938 Lire)
- O.33** Value Added: Manufacturing (billion 1938 Lire)
- O.34** Value Added: Mining (billion 1938 Lire)
- O.35** Value Added: Agriculture, Forestry and Fishing (billion 1938 Lire)
- O.36** Non-farm net capital Stock (billion 1938 Lire)
- O.37** Total Hours: Services, 1919-1938 (index, full-time equivalent)
- O.38** Total Hours: Industry, 1919-1938 (index, full-time equivalent)

- O.39** Employment: Industry, 1919-1939 (index, 1920=100)
- O.40** Average Monthly Hours: Industry, 1919-1939 (hours)
- O.41** Exports: Total (million Lire)
- O.42** Imports: Total (million Lire)
- O.43** Export Share: Food, Beverages and Tobacco, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.44** Export Share: Seeds, Oils and Waxes, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.45** Import Share: Food, Beverages and Tobacco, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.46** Import Share: Seeds, Oils and Waxes, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.47** Gross Domestic Product (million Lire)
- O.48** Value Added: Agriculture (million Lire)
- O.49** Gross Investment: Total (billion 1938 Lire)
- O.50** Net Fixed Investment: Farm (billion 1938 Lire)
- O.51** Consumption: Total (billion 1938 Lire)
- O.52** Consumption: Food (million Lire)
- O.53** Price Index for Consumption: Food (index, 1938=100)
- O.54** Population (thousands)
- O.55** Price Index for value added: Commerce (index, 1938=100)
- O.56** Price Index for value added: Construction (index, 1938=100)
- O.57** Price Index for value added: Credit (index, 1938=100)
- O.58** Price Index for value added: Electricity, Gas and Water (index, 1938=100)
- O.59** Price Index for value added: Building Services (index, 1938=100)
- O.60** Price Index for value added: Various Services (index, 1938=100)
- O.61** Price Index for value added: Transportation (index, 1938=100)
- O.62** Price Index for value added: Manufacturing (index, 1938=100)
- O.63** Price Index for value added: Mining (index, 1938=100)
- O.64** Price Index for value added: Agriculture (index, 1938=100)
- O.65** Nominal Hourly Wage: Industry (index, 1929=100)
- O.66** Nominal Hourly Wage: Services (million Lire)
- O.67** Cost of Living (index, 1929=100)
- O.68** Nominal return on government bond, 1926-1940 (percent)
- O.69** Consumption: Transportation (billion 1938 Lire)
- O.70** Consumption: Housing (billion 1938 Lire)
- O.71** Consumption: Health (billion 1938 Lire)
- O.72** Consumption: Education (billion 1938 Lire)
- O.73** Consumption: Clothing (billion 1938 Lire)
- O.74** Consumption: Fuels (billion 1938 Lire)
- O.75** Consumption: Furniture (billion 1938 Lire)
- O.76** Consumption: Other goods and services (billion 1938 Lire)
- O.77** Import share: Textiles, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.78** Import share: Wood products, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)

- O.79** Import share: Chemical and medical products, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.80** Import share: Other goods, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)
- O.81** Import share: Non-metallic minerals and ceramics, 1922, 1926, 1929, 1932, 1936 and 1938 (percent)

ORIGINAL DATA: SOURCE

- O.1-O.5** Maddison (1991), Table A.7
- O.6-O.10** Maddison (1991), Table B.3
- O.11-O.15** OEEC (1960), Table 2
- O.16-O.20** Maddison (1962), Table 25
- O.21-O.25** Maddison (1962), Table 27
- O.26-O.35** Ercolani, Table XII.1.1.A
- O.36** Ercolani, Table XII.3.3
- O.37-O.38** Rossi et al., Table 6
- O.39** Zamagni, Table 11
- O.40** Zamagni, Table 4
- O.41-O.42** Rey, Table 5.01
- O.43-O.44** Paradisi, Table A.1
- O.45-O.46** Paradisi, Table A.2
- O.47** Rey, Table 5.01
- O.48** Rey, Table 5.03
- O.49** Rey, Table 5.06
- O.50** Ercolani, Table XII.4.17
- O.51** Rey, Table 5.02
- O.52-O.53** Ercolani, Table XII.4.6
- O.54** Rey, Table 6.01
- O.55-O.64** Ercolani, Table XII.1.1.B
- O.65** Zamagni, Table 3
- O.66** Rossi et al., Table 7.B
- O.67** Zamagni, Table 1
- O.68** Ercolani, Table XII.5.2
- O.69-O.76** Rossi et al., Table 3.B
- O.77-O.81** Paradisi, Table A.2

Notes:

Maddison (1991) refers to: Maddison, A. (1991) *Dynamic Forces in Capitalist Development*, Oxford: Oxford University Press.

OECE refers to: OEEC (1958) *Industrial Statistics, 1900-1957*, Paris.

Maddison (1962) refers to: Maddison, A. (1962) "Growth and Fluctuations in the World Economy, 1870-1960," *Banca Nazionale del Lavoro Quarterly Review*, Vol. XV, No. 61, June 1962, pp. 127-195.

Ercolani refers to: Ercolani, P. (1978) "Documentazione Statistica di Base," in (G. Fua' ed.), *Lo Sviluppo Economico in Italia*, Vol III, pp. 388-472, Milan: Franco Angeli.

Rossi et al. refers to: Rossi, N., A. Sorgato and G. Toniolo (1993) "I Conti Economici Italiani: una Ricostruzione Statistica, 1890-1990," *Rivista di Storia Economica* **10**, 1-47.

Zamagni refers to: Zamagni, V. (1994) "Una Ricostruzione dell'Andamento Mensile dei Salari Industriali e dell'Occupazione 1919-39," in *Ricerche per la storia della Banca d'Italia*, Vol. 5, pp. 348-378, Bari: Laterza.

Rey refers to: Rey, G. (1991) *I Conti Economici dell'Italia: I. Una Sintesi delle Fonti Ufficiali, 1890-1970*, Bari: Laterza.

Paradisi refers to: Paradisi, M. (1976) "Il commercio estero e la struttura industriale," in (P. Ciocca and G. Toniolo eds.), *L'economia Italiana nel periodo fascista*, pp. 271-328, Bologna: Il Mulino.

CONSTRUCTED SERIES: DESCRIPTION

Note: unless otherwise stated, all series are for Italy and cover the period 1919 – 1940

- C.1** Real GDP per capita, US (index, 1929=100)
- C.2** Real GDP per capita, France (index, 1929=100)
- C.3** Real GDP per capita, Germany (index, 1929=100)
- C.4** Real GDP per capita, Italy (index, 1929=100)
- C.5** Real GDP per capita, UK (index, 1929=100)
- C.6** Real Industrial Production per capita, US (index, 1929=100)
- C.7** Real Industrial Production per capita, France (index, 1929=100)
- C.8** Real Industrial Production per capita, Germany (index, 1929=100)
- C.9** Real Industrial Production per capita, Italy (index, 1929=100)
- C.10** Real Industrial Production per capita, UK (index, 1929=100)
- C.11** Detrended real GDP per capita, US (index, 1929=100)
- C.12** Detrended real GDP per capita, France (index, 1929=100)
- C.13** Detrended real GDP per capita, Germany (index, 1929=100)
- C.14** Detrended real GDP per capita, Italy (index, 1929=100)
- C.15** Detrended real GDP per capita, UK (index, 1929=100)
- C.16** Detrended real Industrial Production per capita, US (index, 1929=100)
- C.17** Detrended real Industrial Production per capita, France (index, 1929=100)
- C.18** Detrended real Industrial Production per capita, Germany (index, 1929=100)
- C.19** Detrended real Industrial Production per capita, Italy (index, 1929=100)
- C.20** Detrended real Industrial Production per capita, UK (index, 1929=100)
- C.21** Value added: Industry and Mining (billion 1938 Lire)
- C.22** Value added: Services and Construction (billion 1938 Lire)
- C.23** Value added: Non-farm (billion 1938 Lire)
- C.24** Total Hours: Non-farm, 1919-1939 (index, full-time equivalent)

- C.25** Share of exports: Agriculture (percent)
- C.26** Share of imports: Agriculture (percent)
- C.27** Non-farm Exports, share of Non-farm GDP (percent)
- C.28** Non-farm Imports, share of Non-farm GDP (percent)
- C.29** Investment: Non-farm (billion of 1938 Lire)
- C.30** Consumption: Non-food (billion of 1938 Lire)
- C.31** Price Index: Tradable, including Agriculture (index, 1938=100)
- C.32** Price Index: Tradable, not including Agriculture (index, 1938=100)
- C.33** Price Index: Non-tradable (index, 1938=100)
- C.34** Real Wages: Tradable sector (index, 1929=100)
- C.35** Total Hours: Tradable sector (index, 1929=100)
- C.36** Real Wages: Nontradable sector (index, 1929=100)
- C.37** Real hourly wages (index, 1929=100)
- C.38** Real daily wages (index, 1929=100)
- C.39** Nontradable consumption, 1920-1940 (billion 1938 Lire)
- C.40** Non-farm Tradable consumption (billion 1938 Lire)
- C.41** Non-farm Exports (billion 1938 Lire)
- C.42** Consumption share of non-farm imports (percent)
- C.43** Nontradable investment share of non-farm imports (percent)

CONSTRUCTION OF SERIES

- C.1** O.1/O.6, normalized to 100 in 1929.
- C.2** O.2/O.7, normalized to 100 in 1929.
- C.3** O.3/O.8, normalized to 100 in 1929.
- C.4** O.4/O.9, normalized to 100 in 1929.
- C.5** O.5/O.10, normalized to 100 in 1929.
- C.6** O.11/O.6, normalized to 100 in 1929.
- C.7** O.12/O.7, normalized to 100 in 1929.
- C.8** O.13/O.8, normalized to 100 in 1929.
- C.9** O.14/O.9, normalized to 100 in 1929.
- C.10** O.15/O.10, normalized to 100 in 1929.
- C.11** C.1, detrended by 2% per year.
- C.12** C.2, detrended by 2% per year.
- C.13** C.3, detrended by 2% per year.
- C.14** C.4, detrended by 2% per year.
- C.15** C.5, detrended by 2% per year.
- C.16** C.6, detrended by 2% per year.
- C.17** C.7, detrended by 2% per year.
- C.18** C.8, detrended by 2% per year.
- C.19** C.9, detrended by 2% per year.
- C.20** C.10, detrended by 2% per year.
- C.21** O.33 + O.34
- C.22** O.26 + O.27 + O.28 + O.29 + O.30 + O.31 + O.32
- C.23** C.21 + C.22

- C.24** $0.37 + 0.39*0.40*(0.38_{1919}/(0.39_{1919}*0.40_{1919}))$
C.25 0.43 + 0.44, missing dates linearly interpolated or extrapolated.
C.26 0.45 + 0.46, missing dates linearly interpolated or extrapolated.
C.27 $0.41*(1 - C.25*100)/(0.47 - 0.48)$
C.28 $0.42*(1 - C.26*100)/(0.47 - 0.48)$
C.29 0.49 – 0.50
C.30 0.51 – 0.52/0.53
C.31 $(0.33*0.62 + 0.34*0.63 + 0.35*0.64)/(0.33 + 0.34 + 0.35)$
C.32 $(0.33*0.62 + 0.34*0.63)/(0.33 + 0.34)$
C.33 $(0.26*0.55 + 0.27*0.56 + 0.28*0.57 + 0.29*0.58 + 0.30*0.59 + 0.31*0.60 + 0.32*0.61)/(0.26 + 0.27 + 0.28 + 0.29 + 0.30 + 0.31 + 0.32)$
C.34 0.65/C.32, normalized to 100 in 1929.
C.35 0.39*0.40, normalized to 100 in 1929.
C.36 0.66/C.33, normalized to 100 in 1929.
C.37 0.65/0.67, normalized to 100 in 1929.
C.38 C.37*0.40, normalized to 100 in 1929.
C.39 0.69 + 0.70 + 0.71 + 0.72 + 0.5*0.76
C.40 0.73 + 0.74 + 0.75 + 0.5*0.76
C.41 $0.41*(1 - C.25/100)$, divided by C.32.
C.42 $(0.77 + 0.78 + 0.79 + 0.80)/(100 - 0.45 - 0.46)$, missing dates linearly interpolated or extrapolated.
C.43 $0.81/(100 - 0.45 - 0.46)$, missing dates linearly interpolated or extrapolated.

TABLES AND FIGURES

Figure 1: The series displayed are C.1 through C.5.

Figure 2: The series displayed are C.6 through C.10.

Table 1: The numbers in the table are calculated using series C.1 through C.5 (GDP) and C.6 through C.10 (Industrial Production).

Table 2: The numbers in the table are calculated using series O.1 through O.5 (GDP), O.16 through O.20 (Imports) and O.21 through O.25 (Exports).

Figure 3: The series displayed are O.35, C.11 and C.12.

Figure 4: The series displayed is detrended Nonfarm Total Factor Productivity (TFP), calculated as

$$\log(TFP_t) = \log(Y_t) - \theta \log(K_t) - (1 - \theta) \log(H_t)$$

where Y_t is nonfarm value added (series C.13), K_t is nonfarm capital stock (series O.36) and H_t is nonfarm hours (series C.14). θ is set to 0.45, and the resulting series for TFP is detrended by the factor $(1.02)^{1-\theta}$

Figure 5: The series displayed are C.17 (Exports) and C.18 (Imports).

Figure 6: The series displayed are C.21+C.22 (nonfarm output), C.30 (nonfood consumption), C.29 (nonfarm investment), and C.24 (nonfarm hours), each divided by O.54 (population), and detrended.

Figure 7: The series displayed are C.23/C.21 (including agricultural goods) and C.23/C.22 (not including agricultural goods), normalized to 100 in 1929.

Figure 8: Tradable sector: The series displayed are C.24 (Real Wages) and C.25 (Total Hours). **Nontradable sector:** The series displayed are C.26 (Real wages) and O.37, normalized to 100 in 1929 (Total Hours).

Figure 9: The series displayed are O.65 (Nominal hourly), C.27 (Real hourly) and C.28 (Real daily).

Table 3: The numbers in the table are calculated as averages over the period 1920-1940 of constructed series as follows:

Nontradable ratios	$\frac{C_N}{Y_N} = \frac{C.39}{C.22}$	$\frac{I_{N,N} + I_{T,N}}{Y_N} = 1 - \frac{C.39}{C.22}$	
Tradable ratios	$\frac{C_T}{Y_T} = \frac{C.40}{C.21 + C.41}$	$\frac{I_{N,T} + I_{T,T}}{Y_T} = 1 - \frac{C.40 + C.41}{C.21 + C.41}$	$\frac{X}{Y_T} = \frac{C.41}{C.21 + C.41}$
Import ratios	$\frac{C_M}{M} = C.42$	$\frac{I_{N,M}}{M} = C.43$	$\frac{I_{T,M}}{M} = 1 - C.42 - C.43$