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Was industrialization an escape from the commodity lottery? Evidence from Italy, 1861–1939 ☆

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ABSTRACT

The specialization in exporting primary products is frequently deemed harmful for long-run development, because it increases volatility of terms of trade and thus the number and frequency of macroeconomic shocks. One would expect modern economic growth to solve the problem by changing the composition of trade. This paper tests this hypothesis with a new series of Italian terms of trade from 1861 to 1939, a period which spans the first stage of the industrialization of the country. The results do not tally with the hypothesis. The change in composition improved marginally the terms of trade, but it did not help much in terms of volatility.

1. Introduction

In a well-known paper, Sachs and Warner (2001) argue that the abundance of natural resources is a "curse" for LDCs. Their main evidence is a negative correlation between the rate of growth and the share of export of primary products on GDP. Ding and Field (2005) and Brunnschweiler and Nulte (2008) challenge this interpretation: abundance per se is positive, and the "curse", if any, is the specialization of exports in primary products. Their view harkens back to a very long-run intellectual tradition. In the 1950s, Prebisch and Singer (Prebisch, 1950, 1959; Singer, 1950) strongly advised exporters of primary products to change their specialization as soon as they could, because their terms of trade were bound to fall and their income to decline for the combination of stagnant productivity and falling demand for their wares. This hypothesis spawned a huge theoretical (Spraos, 1983) and empirical literature. Diakosavvas and Scandizzo (1991) list 54 works published from 1960 to 1990, and Consigliere (2009) adds 26 further references. Yet, the issue has not been convincingly settled. The results differ according to the period, the sample of countries and commodities, the price series and the statistical methods (Lederman and Maloney, 2007a,b; Razzaque et al., 2007a). Almost all these works cover the period after 1900, but the issue has an obvious historical interest. Hadass and Williamson (2003) show that terms of trade have improved in most countries from 1870 to 1913, thanks to fall in transportation costs, and argue that this trend has had (small) positive effect on growth in Core countries and (small) negative effects on the Periphery. Williamson (2008) extends the data-base further back in time and argues that improvement in terms of trade of peripheral countries had negative effects on their long-run growth. The gains from exports of primary products fostered further specialization in agriculture and mining, away from manufacturing which only guaranteed long-run growth – an early instance of the so-called "Dutch disease" (The Economist, 1977).

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A more recent literature shifts the attention from the negative effects of long-term trends in terms of trade on economic growth to the negative effects of their volatility. Macroeconomic shocks are a major drag on economic growth, and volatility of terms of trade is a major source of those shocks in small open economies (cf. e.g. Turnovsky and Chattopadhyay, 2003; Romero-Avila, 2009; Poelhekke and van der Ploeg, 2009). Indeed, terms of trade volatility comes out to be negatively correlated to rate of growth after World War Two (Mendoza, 1997; Turnovsky and Chattopadhyay, 2003) and also before 1939 (Blattman et al., 2007).[1] This latter paper finds that the negative effect of volatility on growth was very substantial: a 1% increase in volatility reduced growth rate by 0.08 percentage points. They also argue that the problem was more serious for countries in the Periphery than in the Core. Exports from Core countries were more diversified and consisted mainly in manufactures. Diversification by itself would help even if "world" prices for all products were equally volatile, provided that prices of different goods were poorly correlated. A specialization in manufacturing would reduce further volatility as prices of industrial products are structurally less volatile than those for primary products (Jacks et al., 2009). In fact, Blattman et al. (2007) find a positive, albeit not very high (0.38), correlation between volatility of terms of trade and the share of primary products on exports in 1870. This result has an important implication. Modern economic growth should trigger a virtuous circle, to the extent that it causes a country to diversify its exports and increase the share of manufactures (Kuznets, 1967). This change in the trade structure would reduce volatility and the decrease in volatility should foster further growth. The positive effects of this virtuous circle cannot be fully appreciated in the multi-country, cross-section approach which prevails in the current literature. One needs to trace the long-run change for a single country. This paper opens up this line of research.

The case-study is Italy from its political unification (1861) to the eve of World War Two. In those eighty years, the country experienced the first stage of its modern economic growth, which was to be completed its "economic miracle" in the 1950s and 1960s (Zamagni, 1993; Cohen and Federico, 2001). As sketched out in Section Two, the GDP per capita rose, the share of primary production on GDP declined and the composition of Italian exports and imports changed substantially. Not by chance, authors find it difficult to nail Italy down in a simple dichotomy between Core and Periphery: Blattman et al. (2007) list it among the Core countries, alongside with the United Kingdom, while Williamson (2008) demotes Italy in European periphery, with Russia and Spain.

Which effects had this structural transformation on its terms of trade? Did it improve or worsen them? Did it reduce volatility as expected – thereby fostering economic growth- or not? This paper answers to these questions with a new comprehensive data-base of Italian trade, based on the very detailed official sources (*Movimento Commerciale del Regno d'Italia*) from 1863 to 1939.[2] Section Three provides the basic information about the data-base and the construction of the new index of terms of trade and discusses its long-term changes and volatility. Section Four shows that imports mattered as much as exports both for long-term trends of terms of trade and for their short-term volatility. The role of imports is totally neglected in the current literature, which focuses exclusively on the volatility of exports. Section Five explores the effects of changes in the composition of trade – and thus ultimately of modern economic growth- on trends and volatility. Section Six sums us and draws some lessons of general interest.

2. Trade and modern economic growth in Italy: a long-run view

Over the period 1861–1939, the Italian GDP per-capita more than doubled, growing at the yearly rate of about 1.0%.[3] The growth was quite slow after the Unification, accelerated in the 1880s and, after a short set-back in the 1890s, peaked in the 1900s and early 1910s (Graph 1).

The war-time boom is obviously spurious, but Italy enjoyed another short spell of high growth in the early 1920s before being hit by the Great Depression. In spite of these short spells of fast growth, Italy's performance was far from outstanding. As the lower (dotted) line shows, the Italian GDP per capita was about 55% the British one in the 1860s and was still about 55% in the 1930s, after having slid by ten points at the turn of the century.

Modern economic growth did bring about a structural transformation of the economy (Graph 2, solid line). In the 1860s, agriculture and mining accounted for about 80% of the Value Added of the production of tradables (and for about a half of the whole GDP). Their share declined very slowly until the 1890s, but afterwards the trend accelerated and went on quite steadily (but for a spurious collapse in war-time) until the late 1930s. By then, production of primary products was down to a half of the production of tradables (and to slightly above a quarter of GDP).

Trade increased faster than total GDP, at least until the Great Depression. From the mid 1860s to 1929 peak, exports increased by 6.1 times and imports by 7.3, and the degree of openness (Graph 2, dotted line) almost tripled. The depression did cause trade to fall, but even at their historical minimum in 1936, exports and imports were still 3.6 and 3.2 times higher than seventy years before and the degree of openness was substantially higher.

[1] As it is well known, the growth regressions industry suffers of over-determination – too many variables vying for attention. Sala-i-Martin et al. (2004) test the relevance of many of them with a meta-Bayesian approach, but unfortunately volatility of terms of trade is not in their list. The rate of change in terms of trade in the 1960s fares very poorly.

[2] This database (Bankit-FTV) was developed by G. Federico, G. Tattara and M. Vasta in a project supported by Banca d'Italia. See for details Federico et al. (in press).

[3] Data from Fenoaltea (2005) for 1861–1913 and Ercolani (1969 tab XIII 1.1.A) for 1914-1939. As all rates in the paper, this figure is obtained by running a log-linear regression with time, adjusting when necessary for autocorrelation. The preferred specification includes a dummy for war years 1915–1918. Omitting it does not affect results in a meaningful way.