

# Real wages in the Kingdom of Sicily (1540-1830)

Tancredi Buscemi

(Department of economics, University of Perugia)

Email: [tancredi.busc@gmail.com](mailto:tancredi.busc@gmail.com)

**Keywords:** wages, prices, living standards, regional development, Mediterranean area, economic growth

**JEL Classification:** N33, I30, J3, O10

## 1. Introduction

Since Allen's seminal work (2001), attention towards real wages reconstruction has been growing as a comparison method to depict pre-industrial living standards. It led to several works, which filled research gaps in living standards for different world's areas and periods (e.g., Ridolfi 2019, Lopez Losa and Piquero Zarauz, 2021).

Through the reconstruction of the Sicilian real wages, the contribution of this paper is threefold. First, it speaks to the literature on the timing of the Italian downturn; second, it aims to contribute to the debate on the origins of the Italian regional divide. Third, it fills an adding piece of evidence on the Southern Europe well-being, enforcing the literature on the European little divergence.

The recent literature on pre-unitarian living standards resurged the long-standing debate about the Italian economic downturn, tackling the two-principal theses on the timing of the Italian decline by Cipolla (1952) and Sella (1997). According to Cipolla, the decline of the peninsula occurred during the 17<sup>th</sup> century, a troubled period in which Italian states started to fall. On the other hand, Sella's thesis described the decline of the 17<sup>th</sup> century as an urban phenomenon, which spared rural areas until the 18<sup>th</sup> century. Capasso and Malanima (2012) argued how the Italian downturn, both in urban and rural areas, occurred during the 18<sup>th</sup> century due to the high pace of population growth. Finally, Rota and Weisdorf (2020) found evidence of the 17<sup>th</sup>-century decline of building workers' wages in Rome, enforcing the hypothesis of Cipolla.

On the other hand, the persistence of regional inequalities in Italy has been a long-lived topic of interest, covered by a growing body of historical and economic literature. However, the quantitative reconstruction of regional economic trajectories started mainly from 1861 -the formation's year of the Italian state- and little is known about the pre-unitarian period. Therefore, this paper aims to address the poorly explored topic of Southern regional development before Italy's Unification.

The reconstruction of the Italian regional GDP shed light on the country's regional development dynamics, giving different results within different estimates and arising several methodological issues (e.g., Felice, 2019). Thus, this sparked research on other dimensions of living standards and economic growth to investigate the timing of the Italian divide (e.g. Felice and Vasta, 2015).

Federico et al. (2019) introduced the real wages approach for the Italian regional divide exploration. It is furnishing a tool that overcomes the difficulties of other estimates, exploring a direct channel of economic growth and well-being. Nevertheless, Sicily acts as an outlier, remaining steadily at the centre-north level until the late 19<sup>th</sup> century, when Sicilian wage levels tracked the Southern mainland. The present study explores the path of Sicilian real wages, in the long run, to define whether the findings from 1861 onwards have a long-term path or are only an episode. To this aim, this work provides a novel wage series for the Kingdom of Sicily from 1540 to 1830 following the pooled regression approach originally devised by Clark (2007).

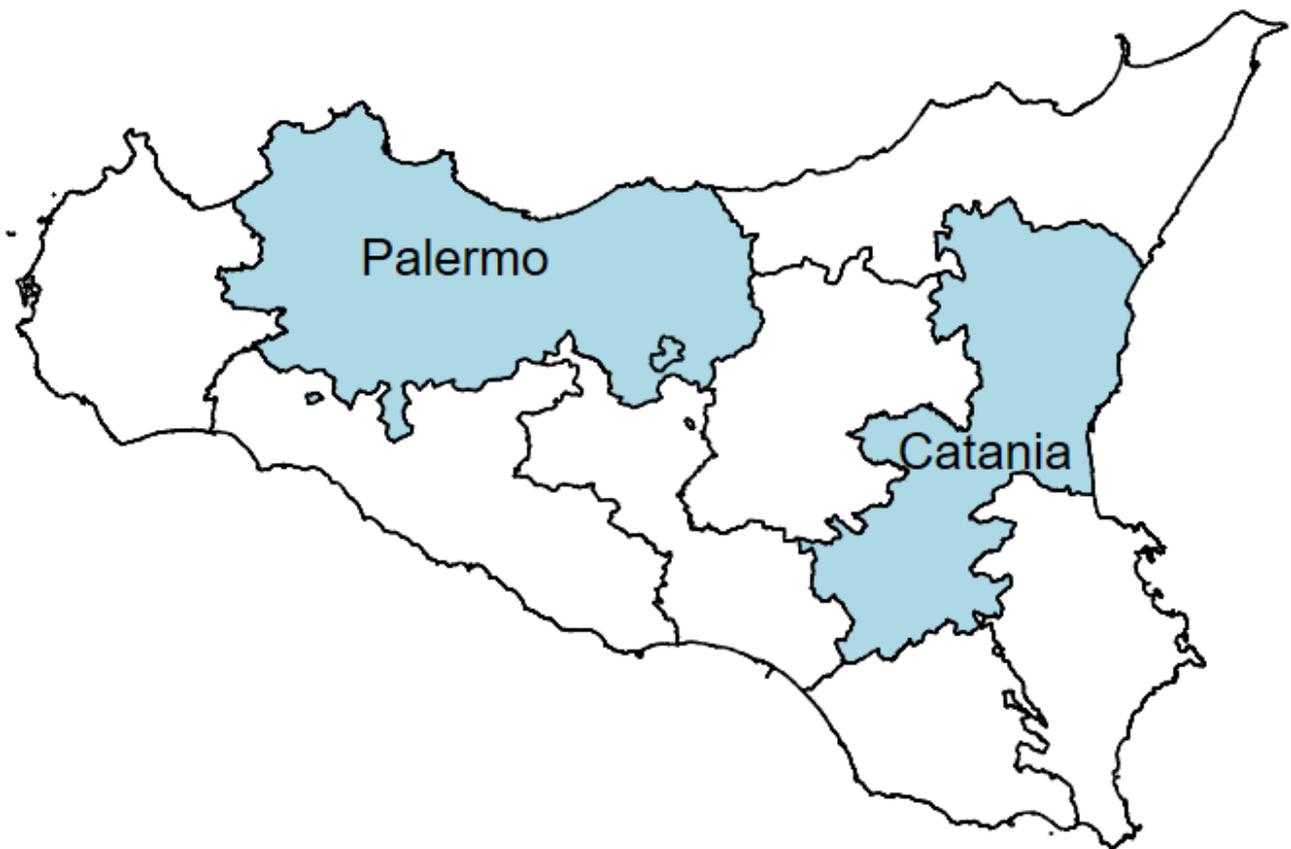
Results confirm the Italian downturn of the 18<sup>th</sup> century hypothesised by some works (e.g., Malanima and Capasso, 2012) with a rising wage trend until the end of the 17<sup>th</sup> and then a decreasing one. Furthermore, the wage levels confirm the evidence of Federico et al. on the period after 1861, showing no differences between Sicily and Northern Italy before the Italian state's birth, posing crucial questions on the timing of the regional divide. Finally, this work putting Sicily in a Mediterranean perspective, compares the Sicilian real wages with the Spanish and Portuguese

recently outlined by Lopez Losa and Piquero Zarauz (2021) and Palma and Reis (2019), respectively.

## 2. Sources and methodologies

The empirical analysis is based on a large body of archival evidence, which reconstructed urban and rural daily wages in the building and agricultural sectors for several occupations. Data are retrieved by the balance sheets of religious institutions and payrolls of building sites. The dataset consists of 21,357 observations for 92,230 working days, covering roughly three centuries (1540-1830). Furthermore, the dataset contains a spatial coverage for the area of Palermo and Catania and their neighbourhood-i.e., the so-called *Conca d'oro* and the Plain of Catania (Piana di Catania), respectively. This choice allows having the more representative areas of Sicily. First, it covers the area of the capital of the Kingdom, Palermo, which has always been the more densely populated and the administrative and political core of the Island. Second, the area of Catania in the modern period became such as a second capital because of the broad spectrum of economic activities concentrated in the place, which have made it an important centre of power.

**Figure 1 Area of Palermo and Catania**



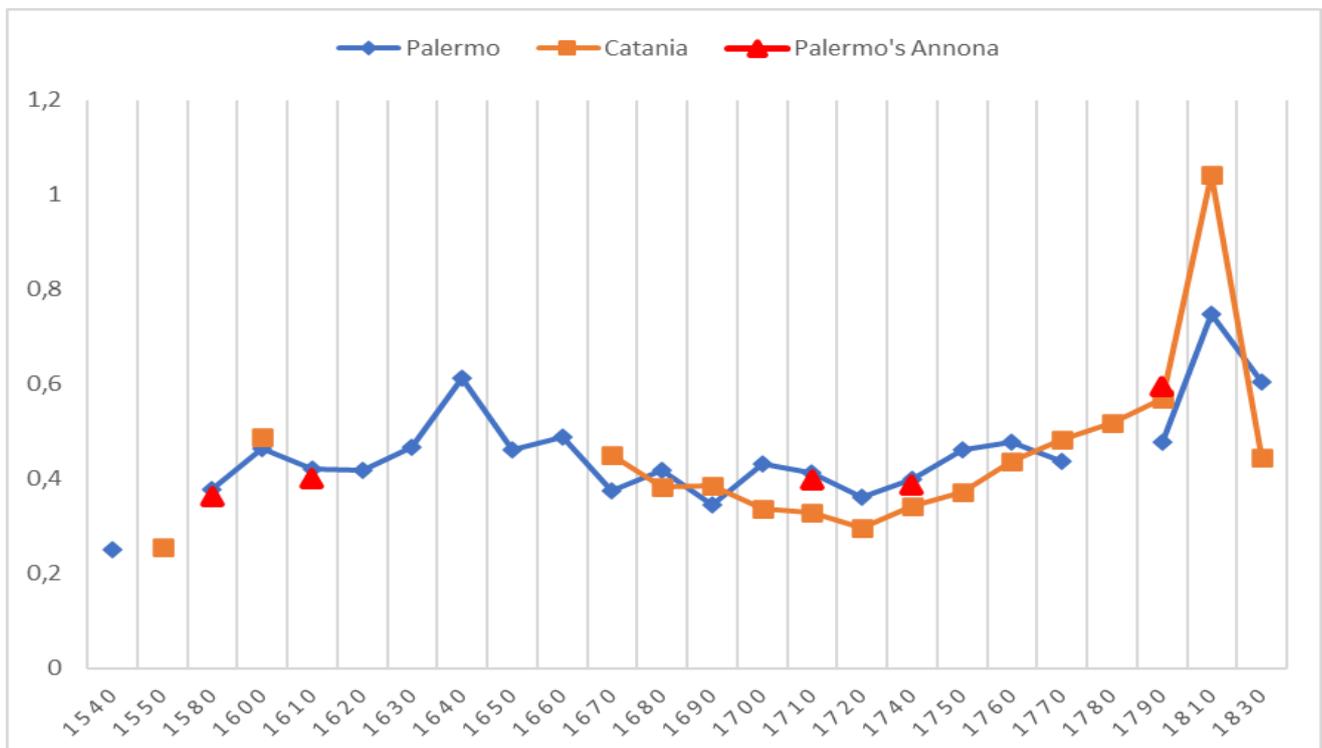
The collection of nominal wages addresses some potential complications and biases in estimation. The wide range of occupations both for construction sector either for agricultural one, the different

areas covered (urban and rural) and the wage variability between seasons need to draw a proper control that is pursued with the regression approach firstly proposed by Clark (2007) and recently refined by other authors (Ridolfi, 2019).

As already highlighted for other parts of the Italian peninsula (e.g., Rota and Weisdorf 2020) and also for Spain (Lopez Losa and Piquero-Zarauz 2021), prices of foodstuffs were regulated by municipal authorities (the *Annona*), which in Sicily not only regulated the internal market of consumption but also, through municipal stores, sold a wide range of foodstuffs and consumption goods directly (Arnolfini, 1962). In Sicily, the regulation of consumptions prices was a regular habit, which Sicilian merchants observed. Moreover, the countryside's prices were similar to the city prices (Arnolfini, 1962, pp. 46-52). Unfortunately, there is a lack of data on municipal prices regulation. Despite this, there are prices for some benchmark years for the *Annona* of Palermo.

On the other hand, to my knowledge, there are no data on municipal prices regulation for Catania, but the prices data from the sources reflect the regulation. Therefore, to verify the reliability of the price series, I have done a cross-check analysis between some benchmark years from which data of prices regulation are available and my price series. Figure 2 shows the cross-check between the daily basket price of Palermo and Catania used to draw the welfare ratios and the daily basket built with the benchmark years.

**Figure 2 Price of the daily basket in tari (1540-1830)**



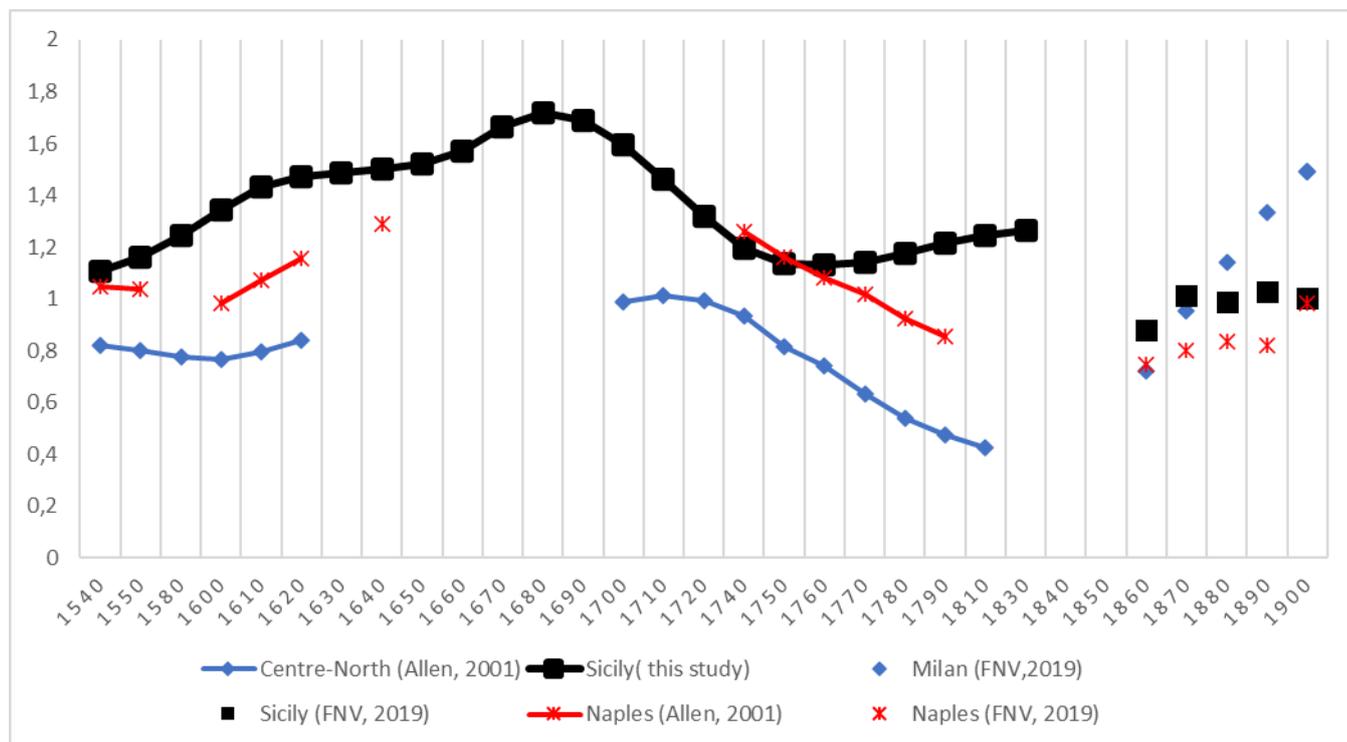
### 3. Sicilian real wages in comparative perspective

In Figures 3 and 4, Sicilian building labourers real wages are compared to Italy first and Southern Europe then. Wages are computed using the conventional assumption of 250 working days per year. The consumption basket is outlined by Federico, Nuvolari and Vasta (2019) for Figure 3 and the cheapest cereal consumption basket of Allen (2015) for figure 4.<sup>1</sup> The “centre-north Italy” series sketched from unskilled workers data by Allen (2001) are for Florence until 1620, Milan from 1700.<sup>2</sup> In addition, I have outlined a series for Naples from the data of Allen with several time gaps.

Figure 3 shows a surprising gap between centre-north and Sicily for the entire period, with a declining trend during the 18<sup>th</sup> century. In general, Sicily was steadier in maintaining subsistence levels. Thanks to the price regulation, the abundance of agricultural products avoided shortages and kept foodstuffs affordable. The recovery of the centre-north and the diverging trend happen during the Unification period. Indeed, like Federico, Nuvolari and Vasta (2019) estimate hints, Milan overcomes Sicily's wages at the end of the 19<sup>th</sup> century, displaying the divide inside the Unification period.

The decline of Sicilian real wages during the 18<sup>th</sup> century challenges the plague explanation for the Italian downturn. Sicily indeed was not hit by plagues. Nevertheless, the trend fits with the Italian downturn hypothesis of Malanima and Capasso (2012), which suggests a less crucial role of the 17<sup>th</sup>-century plagues and a main one of the 18<sup>th</sup>-century population growth.

**Figure 3 Building labourers real wages (1540-1830)**



The Kingdom of Sicily has been a dominion of the Spanish crown for centuries. Nevertheless, the hugest Island in the Mediterranean sea was a prominent player in European trade routes during early modern history, and so it is worth comparing it with Spanish and Portuguese wages (Lopez Losa and

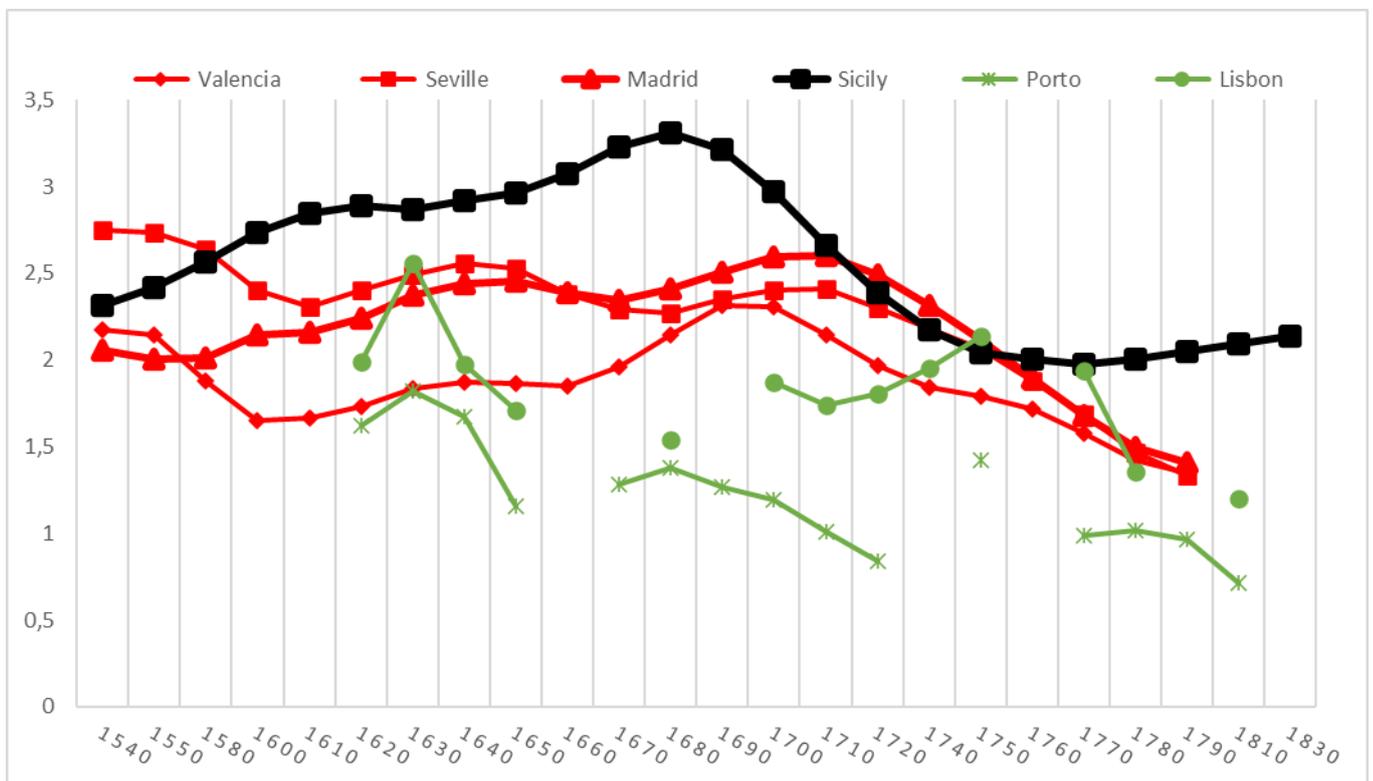
<sup>1</sup> For the baskets and the relative composition, see the working paper

<sup>2</sup> I have not considered the period 1620-1700 estimated in the centre-north series of Allen because the data for prices are from Florence, and wages data are from Milan.

Piquero Zarauz, 2021 and Palma and Reis, 2019) to have a more nuanced frame of living standards in the Mediterranean area.

Figure 4 displays a comprehensive frame of South-Western Europe. Living standards When looking at Seville and Madrid, the two economic cores of Spain in the early modern period, we can see how welfare ratios look very similar to the Sicilian one, except for the boom in the late 17<sup>th</sup> century suggests an integration that drives the fluctuation. When the downturn occurred, the timing of the decline of Spain and Sicily was shared. Notwithstanding, the downtrend of Sicily stops at different wage levels. On the reverse, Porto has levels below the rest of the Mediterranean area for the whole period. Compared with the main cities of Southern Europe context, Sicilian urban living standards show high levels. It underlines how the urban realities of the Island were similar to the most significant urban centres of the Mediterranean.

**Figure 4 Building labourers real wages in South-western Europe with cheapest cereal basket (1540-1830)**



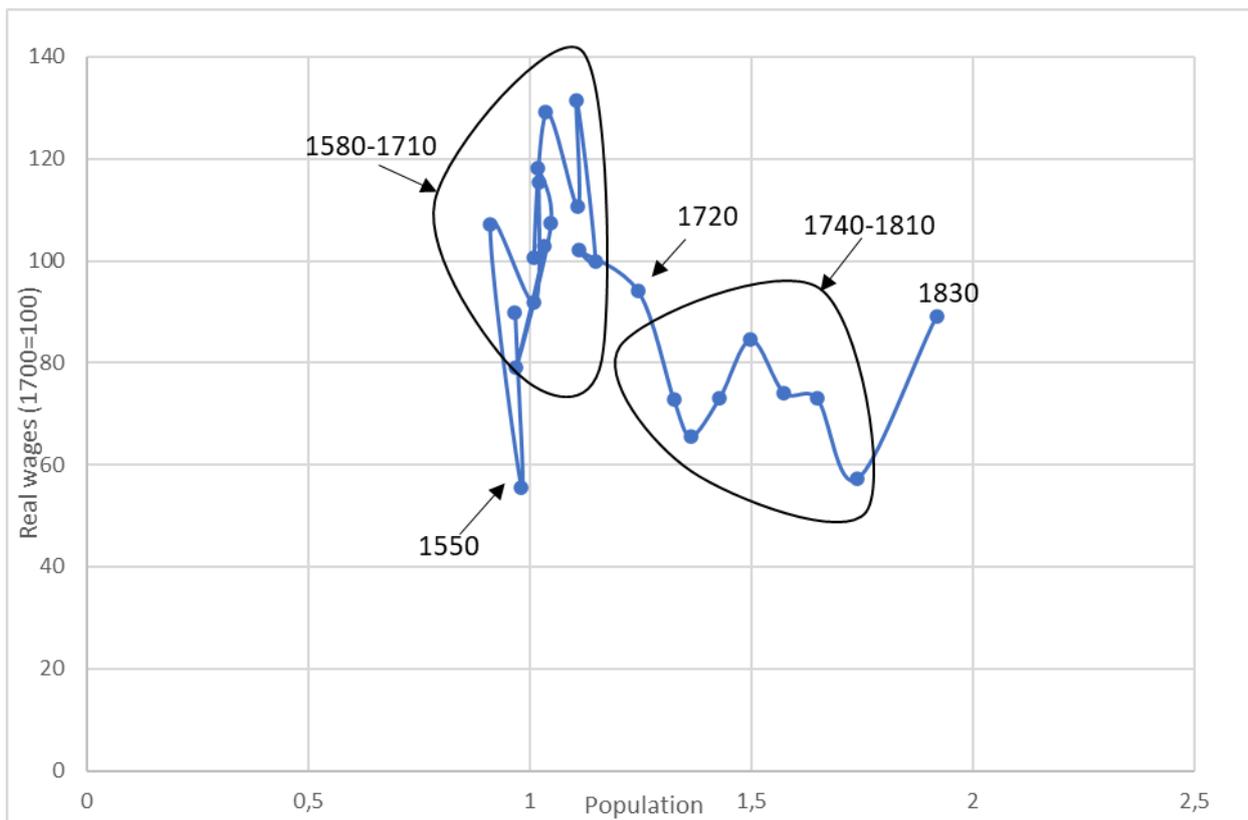
#### 4. The determinants of real wages trends

The explanation of Sicilian real wages is divided into two: the demographic dynamics drove the trend and the favourable agricultural conditions driven levels. Figure 5 displays a scatter between the levels of the population and the levels of real wages. The graph shows how the steady population level until 1710 maintained high welfare ratios. Then, the demographic outbreak pushed down the welfare ratios. The growth of the 17<sup>th</sup> century has two factors that, interacting, provoked the outstanding levels of urban wages. The first one is the great wave of building-sites in big urban centres during the 1600s. Indeed, the explosion of the *Sicilian Baroque* is a well-known architectural phenomenon, which

enriched, during the 17<sup>th</sup> and 18<sup>th</sup> centuries, Sicily of churches and palaces. In particular, Palermo was interested in a big wave of churches construction after the redefining of the urban plan by the viceroy Maqueda during the early 17<sup>th</sup> century. Instead, Catania suffered from an eruption in 1669 and a terrible earthquake in 1693, which triggered the reconstruction of several buildings.

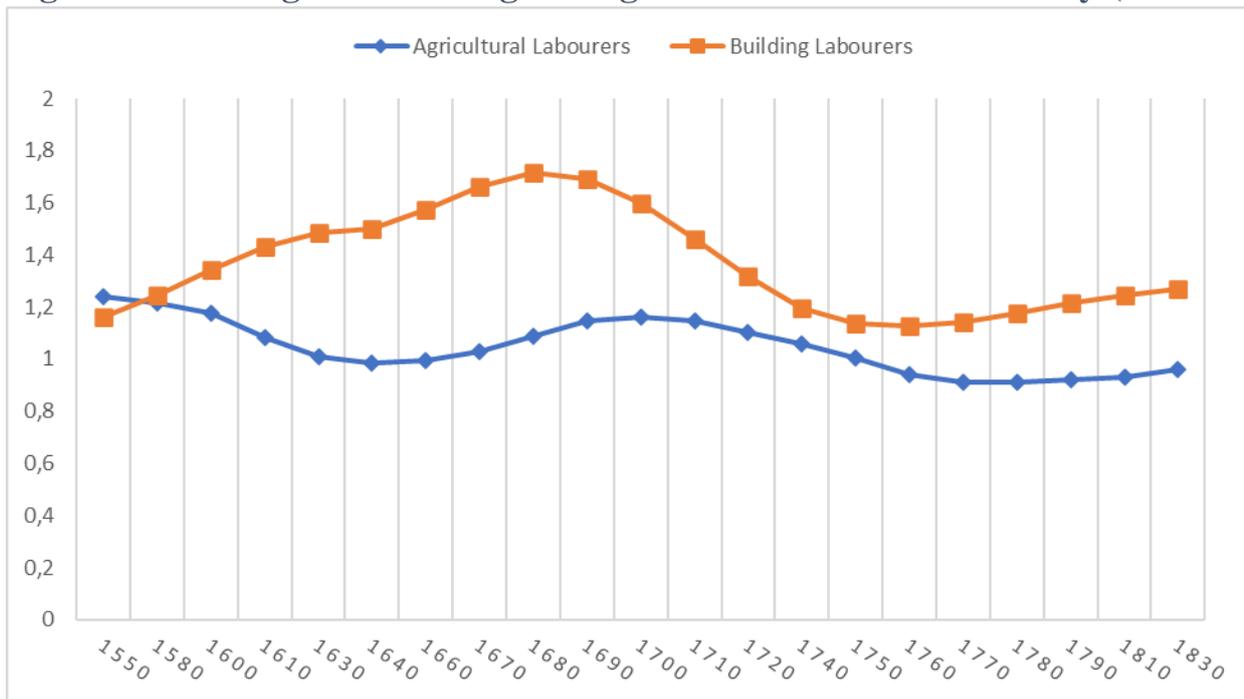
The second point, in line with the literature on Italian ruralisation during the 17<sup>th</sup> century (Rota and Weisdorf, 2021), is connected with the internal colonisation of the Island and the foundation of new villages (e.g., Davies, 1983). These villages built by the feudal landlords aimed to extend the wheat cultivations attracting many families from other areas offering work perspectives.

**Figure 5 Sicilian building labourers real wages and population (1540-1830)**



The combination of the demographic stagnation and the massive workforce request in urban areas pushed up the real wages during the 17<sup>th</sup> century. However, the population outbreak during the 18<sup>th</sup> century broke this equilibrium, which drove the urban wages towards the rural ones, as figure 6 displays. Real wages converged through the channel of the urban downtrend.

**Figure 6 Real wages of building and agricultural labourers in Sicily (1540-1830)**



## 5. Conclusion

A large part of the current studies on the evolution of living standards in pre-unification Italy is based only on casual building workers of centre-north Italy, leaving a shadow both on Southern Italy and on to the rural economy of Italy that is still largely unexplored. The reconstruction of three centuries of Sicilian real wages has offered for the first time a long-run picture of living standards from a Southern Italy perspective, addressing some long-lasting topics on pre-industrial Italy from a different point of view. In addition, this study is a step ahead in reconstructing the origins of the Italian regional divide. Furthermore, this paper explored a heterogeneous picture of workers, recording 64 different tasks, which captures the urban and the rural world of the Island. From the analysis of these new data, three points arise.

First, from this study, Sicily figured out such a dynamic pre-industrial economy, which has been widely highlighted- e.g., by Epstein (1992) and several economic indicators in the first forty years of the Italian Kingdom. In addition, cities overperformed in some periods generating an urban premium on the Island as the baroque boom of the 17<sup>th</sup> century and the railways' construction after 1861 were (Federico, Nuvolari and Vasta, 2019). What comes out is a different dynamic between urban and rural areas, which has been still remarked for the pre-industrial world (e.g. Ridolfi 2019, Rota and Weisdorf, 2021). It claims for a deeper understanding of the rural labour market.

Second, the downturn of Sicilian real wages of the 18<sup>th</sup> century coupled with the high pace of population growth confirms the hypothesis of Malanima and Capasso (2012). Furthermore, the evidence weakens the hypothesis of the 17<sup>th</sup>-century plague as a driver of the Italian downturn in living standards (e.g. Rota and Weisdorf, 2020). Sicily was spared by the plagues of the 17<sup>th</sup> century and declined the century after. Finally, this study is aligned with a hypothesised decline due to the end of the Malthusian cycle still argued at a European level (e.g. Ridolfi, 2019).

Third, this paper addresses for the first time the issue of the Italian regional divergence in living standards before 1861. The evidence suggests no divide in living standards before the Unification between Sicily and Centre-North Italy. Indeed, until the late 19<sup>th</sup>-century living standards of Sicily continued to be higher than the Italian average. Thus, Sicily lost its advantage when the economy turned from a pre-industrial setting to an industrial one because of the Island's lack of modern economic growth determinants. However, the study of Italian economic regional pattern in its pre-unification fragmentation is currently largely unexplored. Therefore, it represents a fundamental issue to reconstruct the historical roots of the puzzled composition of the Italian regional economy.

## References

- Allen, R. C. (2001). The great divergence in European wages and prices from the Middle Ages to the First World War. *Explorations in economic history*, 38(4), 411-447.
- Allen, R. C. (2015). The high wage economy and the industrial revolution: a restatement. *The Economic History Review*, 68(1), 1-22.
- Arnolfini, G. A. (1962). *Giornale di viaggio e quesiti sull'economia siciliana (1768)*, S. Sciascia.
- Capasso, S., & Malanima, P. (2012). Economy and population in Italy (1300-1913). *Popolazione e storia*, 8(2), 15-40.
- Ciccarelli, C., & Weisdorf, J. (2019). Pioneering into the past: Regional literacy developments in Italy before Italy. *European Review of Economic History*, 23(3), 329-364.
- Cipolla, C. M. (1952). The decline of Italy: the case of a fully matured economy. *The Economic History Review*, 5(2), 178-187.
- Clark, G. (2007). The long march of history: Farm wages, population, and economic growth, England 1209–1869 1. *The Economic History Review*, 60(1), 97-135.
- Davies, T. (1983). Changes in the Structure of the Wheat Trade in XVIIth-Century Sicily and the Building of New Villages. *Journal of European Economic History*, 12(2), 371.
- Epstein, S. R. (1992). *An island for itself: Economic development and social change in late medieval Sicily*. Cambridge University Press.
- Federico, G., Nuvolari, A., & Vasta, M. (2019). The origins of the Italian regional divide: Evidence from real wages, 1861–1913. *The Journal of Economic History*, 79(1), 63-98.
- Felice, E. (2019). The roots of a dual equilibrium: GDP, productivity, and structural change in the Italian regions in the long run (1871–2011). *European Review of Economic History*, 23(4), 499-528.
- Felice, E., & Vasta, M. (2015). Passive modernisation? *European Review of Economic History*, 19(1), 44-66.
- Losa, E. L., & Zarauz, S. P. (2021). Spanish subsistence wages and the Little Divergence in Europe, 1500–1800. *European Review of Economic History*, 25(1), 59-84.
- Palma, N., & Reis, J. (2019). From convergence to divergence: Portuguese economic growth, 1527–1850. *The Journal of Economic History*, 79(2), 477-506.

Ridolfi, L. (2019). Six centuries of real wages in France from Louis IX to Napoleon III: 1250–1860. *The Journal of Economic History*, 79(3), 589-627.

Rota, M., & Weisdorf, J. (2020). Italy and the little divergence in wages and prices: new data, new results. *The Journal of Economic History*, 80(4), 931-960.

Rota, M., & Weisdorf, J. (2021). Italy and the little divergence in wages and prices: evidence from stable employment in rural areas. *The Economic History Review*, 74(2), 449-470.