

## Ithaca 2018 Abstract Submission

### Title

Top incomes: Evidence from Bordeaux Fine Wine Prices

### I want to submit an abstract for:

Conference Presentation

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### Keywords

Bordeaux fine wines, top incomes, inequalities

### Research Question

We aim to measure income inequality and top income shares using the evolution of Bordeaux fine wine prices over time

### Methods

An original and simple model linking top incomes and top wine prices, with historical series on first growths from Bordeaux

### Results

The evolution of wine prices is compared to Atkinson/Piketty for the 20th century and our measure provides inequality measures much further back in time (early 19th century)

### Abstract

With relatively fixed supply, the evolution of prices of fine wine from Bordeaux must reflect the evolution of relative incomes, i.e. of top incomes who can afford these wines relative to the rest of the income distribution. We use historical data on “grands crus” prices to establish this measure as a novel proxy of top income shares.

The paper will first suggest a simple modelling of the relationship between top wine prices and top income shares. Starting from the determination of prices as  $\text{Log}(\text{price}) = a + b(\text{log of income}) + c\text{Quantity}$ , and assuming the quantity of the “grand crus” stays relatively constant over time, we obtain that fine wine prices reflect the inequality in income since all price effects are demand driven. For instance, the  $\text{log}(80/20)$  in prices would reveal the  $\text{log}(80/20)$  in incomes. Presumably, when considering the prices of first growth, the relevant incomes are those above a certain threshold – some calibration will be needed to assess whether we capture the shares of the top

5%, top1% or top 0.1%. This calibration can be pursued using top income shares series, as collected by Piketty/Atkinson and their coauthors, for overlapping years.

The main contribution of the paper is to extend Piketty/Atkinson series much further back in time, since their series hardly cover the 19th century (and only part of the 20th for the UK, the US and France). We avail of wine prices for most wines among the five groups of 'grands crus' from 1818 until 2010. For the 19th century period, our measure mainly pertains to the income shares of rich British/London consumers, as suggested by Dimson et al (2005) who state that: "At least until the First World War, 'an important quantity' (Simpson, 2011) to 'nearly all' (Penning-Rowse, 1975) of the best Bordeaux wines were sold to British buyers." After the First World War, this is a more composite measure of world top incomes due to the globalization of demand for French fine wines. The comparison with Piketty/Atkinson series is therefore made difficult due to the evolving country composition of world top incomes that underlies our top wine indices - for this, we will use information on the export flows of top wines in the world over time. Our measure will also account for events and variations that are specific to the fine wine sector or can affect wine prices in general: the phylloxera disease around 1865-1890 (prices expected to increase in this period), subsequent overproduction around the turn of the century (prices below long-term trends), price surge during run-up of financial/economic crisis (especially 1929 and 2008), wars (the boom in prices in the 1940s resulted from widespread speculation during World War II), unusual weather conditions (see Chevet et al.), etc.

## Literature

The paper is positioned in the literature on historical trends in top incomes - but also relates to some studies on wine consumption and wine price setting over the long-period, and about price variation in general. None of these literatures addresses the measure of income inequality as inferred from top wine prices.

Using historical price records for Bordeaux Premiers Crus, Dimson et al. (2005) examine the impact of aging on wine prices and the long-term investment performance of fine wine. They collect two types of historical price data: prices realized at auctions in the London sales rooms of Christie's (and W. & T. Restell, an auction house bought by Christie's in the 1960s) and retail list prices at Berry Bros. & Rudd, a London dealer of wines and spirits. Chevet et al. (2011) study the impact of weather conditions on historical price data, using archive data from one of the Pauillac first growths.

For the more recent period, Candau et al. (2017) focus on the demand-side determinants of wine prices, particularly on the effect of importers' GDP per capita. Demand (trade shares) are particularly sensitive to top income shares for countries like China where consumption and investment in wine are concentrated at the top of the distribution. The rapid increase in French fine wine prices between 2001 and 2011 cannot be explained by a decline trade cost or an increase in quality, rather by the sharpened increase in the demand from emerging markets - as confirmed by Cevik and Sedik (2011) and Chevet, Lecocq and Visser (2011).

On how top incomes influence the price of French fine wines, historical investigations are conducted by Hori (2008), which we quote: "In his essay, John Oxenford concluded English society as wealthy judging by the constant consumption of wine at higher prices than before. Conspicuous consumption was the vogue of the day and though there are many items symbolizing it, wine provides a good yardstick whereby to measure the real depth of conspicuousness [...]. The price of wine increased, partly because of increments in tariffs, and against the background of generally deflationary movement in prices, which enable one to sum that actual demand played important role in raising it. This demand came mainly from boisterous London residents whose wealth as well as their consumption pattern was indeed conspicuous."

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