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How Economics Instructors Can Teach Entrepreneurship: Lessons from the "Cradle of Political Economy"

This article draws on insights from the historical scholarship in economics to motivate a classroom discussion of the role of entrepreneurs in the market process. Richard Cantillon's description of entrepreneurial risk-taking can be joined with the descriptions of market integration and the law of one price that we find in the historical scholarship of Adam Smith to demonstrate the importance of the entrepreneur in the development of markets. In doing so, instructors can provide students with an important and vivid illustration of how to join historical scholarship to modern theory and then to use both to understand real-world patterns.

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1. Introduction

The ‘undertaker’ – today we would use the term ‘entrepreneur’ – played a pivotal role in much of classical economic scholarship. Indeed, it is hard to imagine the markets so vividly described by scholars as important to the discipline as Richard Cantillon and Adam Smith without the central functions performed by the entrepreneur; yet the entrepreneur is conspicuously absent from much of modern economic theory. A review of recent textbooks suggests that the topic plays, at most, a limited role in most undergraduate instruction (Kent and Rushing 1999). Textbooks by Mateer and Coppock (3rd edition, 2021), Krugman and Wells (2019), and Goolsbee, Levitt, and Syverson (4th edition, 2024) make no specific mention of entrepreneurs. Mankiw’s bestselling textbook (10th edition, 2024) does not even define entrepreneurship. In its most recent 3rd edition, the free online OpenStax Principles of Microeconomics textbook mentions entrepreneurship or entrepreneurs a few times, but only in briefly noting that entrepreneurs are those who make production decisions and create businesses – all in the context of a formal production function. This approach to entrepreneurship is typical of books that define the term.[1] Baumol’s (1968) decades old claim, that “The theoretical firm is entrepreneurless – the Prince of Denmark has been expunged from the discussion of Hamlet,” (p. 66) seems as relevant today as when he wrote it.[2]

This is not to say that contemporary economists fail to acknowledge the role of entrepreneurship entirely. For example, there is quite a lot of scholarship on the importance of this role in transition and developing economies including well known studies by McMillan and Woodruff (2002), and de Soto (2000). More recent work by Munyo and Veiga (2024) found that entrepreneurship contributed to economic growth in their study of South American economies. Hessels and Naudé (2018) provide some perspectives on how to integrate the separate strands of scholarship on entrepreneurship and development economics, pointing out that there is “no unified scientific approach towards the role that entrepreneurship plays in economic development” (p. 11).

Åstebro et al (2014) provide some interesting insights into entrepreneurship from a behavioral economics perspective. As they describe, the risk-adjusted returns from entrepreneurship are low, yet many Americans pursue entrepreneurial ventures, including the 40 percent who experience at least one period of self-employment during their careers. While some of this is no doubt due to differences in risk aversion, the authors explore the role of overconfidence and nonpecuniary factors in motivating decisions to enter and persist in entrepreneurial roles.

In his paper modeling entrepreneurial choice, Lazear (2005) said that the “entrepreneur is the single most important player in a modern economy.” If this is so, the apparent relative lack of interest in our textbooks (and presumably in many of our classrooms) for this important player is even more striking.

Baumol’s important 1968 paper on the lack of a formal role for entrepreneurship in economic theory remains relevant today. In that paper, Baumol argued that after mathematical

[1] See Cowen and Tabarrok (2023), McConnell, Brue, and Flynn (2023); Gwartney et al (2017); and Case, Fair, and Oster (2017) for examples of principles textbooks that include at least some limited discussion of the entrepreneurial function. Komlos (2019) also briefly addresses entrepreneurship, albeit from a heterodox perspective.

[2] One could argue, as Botelho, Fehder, and Hochberg (2021) do, that entrepreneurship following Schumpeter’s description of creative destruction shows up in the equilibrium accounts of endogenous growth that rely on the role of entry by new firms. But even so, there is little evidence that the explicit role of entrepreneurship is widely taught to undergraduates.

optimization methods became the foundation of the discipline, theory could not adequately analyze the entrepreneurial role. As Holcombe (2007) explained, "The problem, then, is not that no economists recognize the role of entrepreneurship, but rather that entrepreneurship remains outside the basic framework of mainstream economic analysis…" (5). In his more recent work, Holcombe (2021, pp. 1-2) reiterates the problem, noting that "Economic theory, as it has developed through the second half of the twentieth century, has drawn attention away from entrepreneurial activities. The general equilibrium framework that Samuelson (1947) said lays the foundations of economic analysis, depicts an economy devoid of entrepreneurial opportunities, making it an ill-suited framework for studying entrepreneurship." As such, it also remains largely outside mainstream economic instruction.[3]

There was a time in economic theory when entrepreneurship was more prominent, so the history of economic thought gives us some effective ways to introduce the topic, even as it falls mostly outside the modern theoretical framework around which most economics teaching is organized. In this paper, I describe how historical perspectives drawn from the rich classical economics literature presents instructors with an opportunity to introduce and highlight various aspects of the entrepreneurial function. I focus primarily on one of the great though often-unappreciated scholars in the history of economics, Richard Cantillon. This focus is partly motivated by Cantillon's insightful work, but also by a practical necessity to narrow the definition of entrepreneurship from the twelve different definitions found in the historical economics literature (Hébert and Link 2009). I emphasize in this paper the risk-bearing nature of entrepreneurship and then discuss how the scholarship of other historical figures like Adam Smith can be used to motivate a discussion of the market integration that is a result of entrepreneurial activities.

In 1755, Cantillon's Essay on the Nature of Commerce in General was posthumously published. Nearly 130 years later, W.S. Jevons referred to it as "the cradle of political economy." Cantillon's work, while not as widely known as other scholarship in the history of the discipline, was extraordinary for its time, and influenced some of the most important scholars of the 18th and 19th centuries including the Physiocrats and Adam Smith.

Drawing on historical scholarship to illustrate important concepts for students has several benefits. For one, it allows us to present aspects of the topics that go beyond the standard mechanistic textbook models in a much richer way. Historical approaches to economic instruction can add a layer of institutional richness and context that is often missing in the standard textbook models (and in the present case, it allows us to introduce topics that are not even generally included in standard textbook treatments). There is great benefit to working through those models, and students obviously need to master them, but, as I demonstrate in this paper, the standard models can easily be joined with insights from the history of economics to provide a more vivid and illuminating account of the market process. Students also appreciate being able to place their chosen subject into some historical context; it is not uncommon to hear students say that they had no idea that the concepts they learn in their classes had such a long history. If nothing else, providing historical context allows us to avoid the "intellectual poverty [that comes with knowing] only one's own time and place" (Boulding 1971, p. 234).

The approach outlined in this paper can be effectively integrated into microeconomics

[3] Gunter (2012) provides an exception to this general claim with a simple model of entrepreneurship that can be used in the classroom, but he also makes the point that entrepreneurs remain largely absent from undergraduate economics instruction. Of course, business schools typically offer a wide variety of courses in entrepreneurship, but those are different in nature than the economic theory classes to which I refer in this paper.

or macroeconomics principles classes at the undergraduate level.[4] It might also be useful in other more specialized courses, including economic history, the history of economic thought, and economics courses in MBA programs. Generally, it works well incorporated into the section of a microeconomics class on production and costs. Some textbooks identify entrepreneurs as a person who brings together the factors of production to produce goods or services, so it makes sense to include this more detailed discussion of entrepreneurship in that section. Entrepreneurial responses to potential profits could also work well in the typical discussion of entry and exit in competitive or monopolistically competitive markets. In a macroeconomics class, the entrepreneur can generally be integrated into discussions of gross domestic income as it is measured by wages, interest, rents, and profits. Depending on how one approaches it, discussions of technological change/productivity growth in the context of economic growth models are another way to introduce these concepts.

2. A Brief History of the Entrepreneur in Economic Scholarship

Given the general hostility with which ancient and medieval scholars viewed profit-seeking activities, it is not surprising that the earliest scholarship had little to say about entrepreneurial activity, other than to condemn it. So, it was not until the early 18th century that the entrepreneur took on a prominent role in the scholarship. Richard Cantillon (1680-1734) was the first economist to highlight the central role of entrepreneurship in the market system, although some previous scholars clearly understood that it was an important function. [5]According to Cantillon, the undertakers — or entrepreneurs — are in fact the very source of market coordination. He explains, for example, how merchants from various sectors perform entrepreneurial functions, defined by their willingness to bear risks in the hope of remuneration. The farmer produces food on land for which he owes a fixed rent but without any assurance that his crop will be successful, or that, even if it is, it will fetch an adequate price in the market. [6]Others establish themselves as arbitrage merchants, buying products at a certain price with the intention of reselling it at an uncertain price.[7]

Entrepreneurs have no guaranteed income, earning income instead on perceived, but risky, opportunities for arbitrage. In their willingness to take on these risks, entrepreneurs provide a valuable service. The result is a linking together of previously separate markets. Combined, these two points make for an interesting, historically motivated classroom application.

There were of course other important contributions to the scholarship on entrepreneurs after Cantillon. Adam Smith was less clear on the role of the entrepreneur than Cantillon – Hébert and Link (2009) claim that he confounded the roles of entrepreneur and capitalist. Smith saw the entrepreneur as the person who formed business organizations. In some respects he was less clear than Cantillon had been, but it is reasonable to assert an implied role for the

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[4] This content can also be effective in helping instructors who are looking for way to move away from traditional "chalk and talk" teaching since it typically opens opportunities for substantive in-class discussion. See Harter, Chambers, and Asarta (2022) for a discussion of the 2020 national quinquennial survey on teaching and assessment methods in undergraduate economics courses.

[5] If you want to add a bit of intrigue to classroom discussion, you might mention Cantillon's unfortunate demise. He died under mysterious circumstances but appears to have been killed by a disgruntled employee who also burned his house down in 1734.

[6] It is fair to say that Cantillon's theory identifies anyone whose income is uncertain as an undertaker/entrepreneur.

[7] As Hébert and Link (2009) noted, Cantillon's theory of the entrepreneur emphasizes function rather than personality.

entrepreneur in the division of labor that was so central to Smith's theory of economic growth.

In the early 19th century, Jean-Baptiste Say linked the entrepreneur to the capitalist in that he saw entrepreneurs as owning at least a portion of the firm in which they work. Like Cantillon's conception, the entrepreneur in Say's analysis shifts economic resources from lower to higher yielding uses and plays a central role in the market economy. But as Hébert and Link (2006) point out, risk is only incidental to Say's conception of the entrepreneur, who performs essentially managerial or administrative functions; in other words, Say's entrepreneur works inside the black box of what is now called the production function.

Later in the 19th century, John Stuart Mill linked the risk-bearing functions that had been highlighted in Cantillon's work with the managerial functions and thus provided a starker distinction between entrepreneurs and business owners who may well assume risks, but who do not perform managerial functions.

The entrepreneur fell out of economic theory partly because of the changing conception of competition and equilibrium in the 19th century. Beginning with Augustin Cournot's 1838 Mathematical Principles of the Theory of Wealth, the classical concept of competition as discovery process – in which the entrepreneur had a clear and important role – shifted to an end-state conception in which the entrepreneur was passive.[8] In the end-state conception, which continues in orthodox economics to this day, perfect competition implies a market structure rather than a discovery process. As McNulty (1968, p. 644) explained, "Although Smith and the classical economists generally acknowledged that competition was more effective with a larger number…of competitors, competition was viewed as a price-determining force operating in, but not itself identified as, a market." There is no real role for the entrepreneur in a market structure defined by perfect information and price-taking firms.

Despite this shift in the theoretical constructs, there was important scholarship on entrepreneurs in the early 20th century. Frank Knight (1921) carried Cantillon's insights into the nature of entrepreneurial risk-bearing a step further, arguing that entrepreneurs are willing to bear risks by providing fixed wage contracts to more risk-averse workers in the hope of earning profits.

Joseph Schumpeter placed a great deal of importance on the entrepreneur, although his conception of the entrepreneur's function differs from Cantillon's in an important way: Cantillon's entrepreneur is attentive to profit-opportunities and is willing to face risks to capture profits while Schumpeter's entrepreneur is primarily an instinctive innovator (the risk-bearing function is performed by the capitalist in Schumpeter's model).[9] Finally, Israel Kirzner's work on entrepreneurship is perhaps the closest modern-day intellectual descendent of Cantillon's 18th century scholarship.[10] According to Kirzner's theory of entrepreneurial alertness, their primary function is discovering opportunities for satisfying consumer demands. McCloskey (2010; 2011) emphasizes creativity, innovation, and a Kirzenerian entrepreneurial alertness to explain how economies broke out of the poverty that defined most of human history.

Despite the work of Knight, Schumpeter and Kirzner, the perfectly competitive market structure that is at the core of modern economics has no explicit role for the entrepreneur; nevertheless, there are simple ways in which instructors can still incorporate the classical

[8] See Blaug (1992) for more on the end-state and process-conceptions of competition in the history of economics.

[9] See Schumpeter (1942).

[10] See, for example, Kirzner (1997).

insights without straying from the traditional classroom material, as I describe in the next section.

3. Bringing the Undertaker Back into the Classroom

There are two main takeaway points for students in learning about entrepreneurship. The first, which is directly motivated by Cantillon's work, is that while "entrepreneur" may imply numerous functions, the most critical one is the willingness to bear risks. Instructors can easily illustrate these risks by first showing students what Cantillon wrote about entrepreneurs and then working through a very basic graphical illustration of entrepreneurial arbitrage. The second point for students to take away is less explicit in Cantillon's work, but is quite clear in later scholarship, most famously in Adam Smith's Wealth of Nations: that entrepreneurial responsiveness to profit opportunities is the engine that drives market integration. Of course, the law of one price is the natural consequence of entrepreneurial arbitrage and that process can also be easily illustrated in the classroom.

The first lesson – entrepreneurial risk bearing and arbitrage – can be effectively conveyed through original quotations and some short discussion, followed by a graphical illustration. Cantillon explains that the entrepreneurial function emerges in response to a market need; specifically, the merchants who carry food from the country farms to the city cannot reasonably stay there until their products are sold:

> *The Undertaker or Merchant who carries the products of the Country to the City cannot stay there to sell them retail as they are consumed. No City family will burden itself with the purchase all at once of the produce it may need, each family being susceptible of increase or decrease in number and in consumption or at least varying in the choice of produce it will consume.*
>
> *For this reason many people set up in a City as Merchants or Undertakers, to buy the country produce from those who bring it or to order it to be brought on their account.*

But the key point is that these entrepreneurs, who emerge in response to the needs of the market, face price risks:

> *They pay a certain price following that of the place where they purchase it, to resell wholesale or retail at an uncertain price.*

Those risks emerge because of the unpredictability of demand, which means that entrepreneurs must therefore try to estimate the state of the market:

> *These Undertakers can never know how great will be the demand in their City, nor how long their customers will buy of them since their rivals will try all sorts of means to attract customers from them. All this causes so much uncertainty among these Undertakers that every day one sees some of them become bankrupt.*

This is an important point to emphasize for students – even if the entrepreneur knows the current market conditions in the city with certainty, those are current conditions, and they may well change by the time the entrepreneur tries to sell into the market. Entrepreneurs are not merely responding to existing conditions, instead they are seeking to discover information, or at least form perceptions, about what conditions in that market will be at some future date.[11]

Cantillon also points out that people in a variety of trades perform these entrepreneurial

[11] Kent (1989, p. 158) makes this same point albeit without reference to Cantillon.

functions – the key is that these various tradesmen face similar risks:

> *The Manufacturer who has bought wool from the Merchant or direct from the Farmer cannot foretell the profit he will make in selling his cloths and stuffs to the Merchant Taylor. If the latter have not a reasonable sale he will not load himself with the cloths and stuffs of the Manufacturer, especially if those stuffs cease to be in the fashion.*
>
> *The Draper is an Undertaker who buys cloths and stuffs from the Manufacturer at a certain price to sell them again at an uncertain price, because he cannot foresee the extent of the demand. He can of course fix a price and stand out against selling unless he gets it, but if his customers leave him to buy cheaper from another, he will be eaten up by expenses while waiting to sell at the price he demands, and that will ruin him as soon as or sooner than if he sold without profit.*

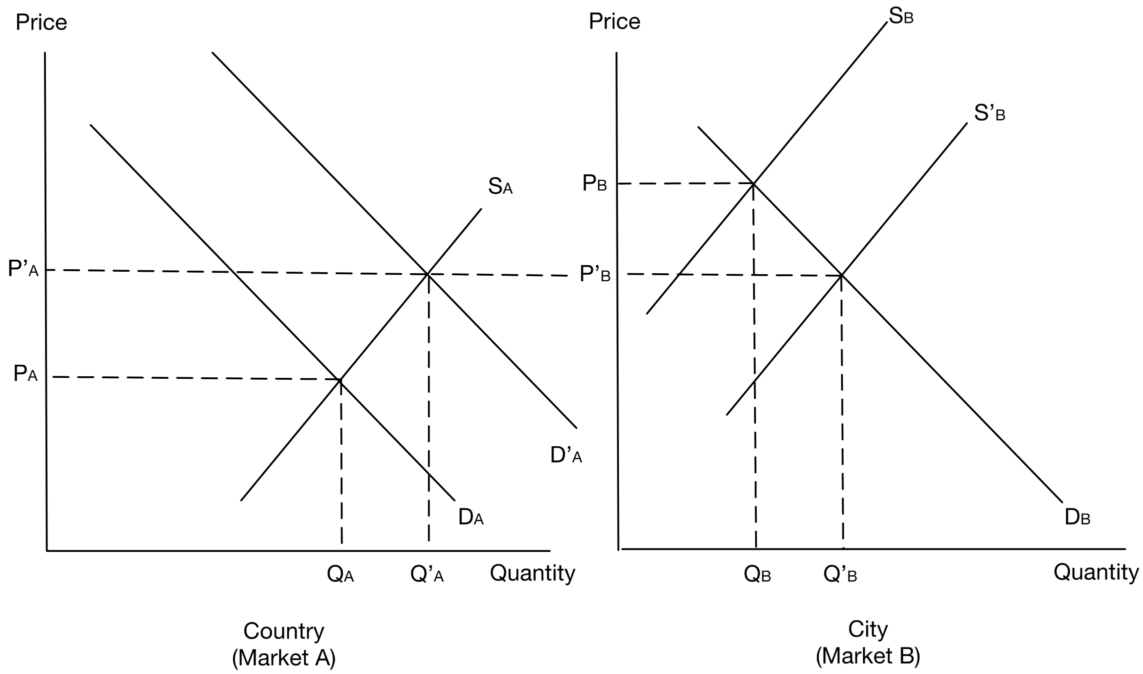
Even if the price in the city is high enough to make the transaction worthwhile, Cantillon's point remains: the entrepreneur faces risks that entail a less-than-certain profit. It is the presence an unknown payoff that requires a certain willingness to bear risks.

The second lesson is that this entrepreneurial arbitrage is the source of market integration, which is a critically important part of the maturation of markets over time. The undertakers are effectively linking together what were initially two isolated markets.[12] In so doing, they not only promote the expansion of markets that was at the center of Adam Smith's theory of growth, but they also can reduce the damage done by any given shortfall in agricultural output in one area, a point that Ó Grada (2002) made (and one that often resonates with students looking for a reason why this matters). In effect, entrepreneurs are the vehicles by which the "extent of the market" – which was to be so critical in Adam Smith's theory of economic growth – is expanded. Another way to think about this process is that they are really creating new (and larger) markets that did not previously exist in any meaningful respect.

This idea is readily illustrated with a set of basic supply and demand graphs as in Figure 1. Here, an entrepreneur sees a profit opportunity in the price differential between Markets A and B. He exploits that opportunity by purchasing units in Market A, transporting them to Market B (again, based on an uncertain estimate of future demand there), and selling them into the higher priced market. As this happens, the supply in Market B increases.

[12] Instructors who want to illustrate how this has worked in practice need only consult the work of economic historians or the scholarship on globalization. See, for example, Williamson (1996).

Figure 1: Illustrating Market Integration



The law of one price, of course, emerges from this process as PA converges to P'A and PB converges to P'B. However, if entrepreneurs (or potential entrepreneurs) face sufficiently high price risks, entrepreneurial arbitrage activities will be limited or non-existent, and the process of market integration breaks down. Instructors can easily add a bit more complexity by assuming nonzero transportation costs, in which case any long-run price differential reflects those costs.

Cantillon explained the law of one price in in the context of international markets. Over time, we get a "constant and uniform rule of exchange" in which exchange rates, after adjusting for "costs and risks of transport from one place to another," were equalized.[13] The French economist Anne Robert Jacques Turgot made this point in 1766, and Adam Smith did so ten years later in the Wealth of Nations (1776). Here is how Smith described the reallocative process that leads to the law of one price in labor markets:

> *The whole of the advantages and disadvantages of the different employments of labour and stock must, in the same neighbourhood, be either perfectly equal or continually tending to equality. If in the same neighbourhood, there was any employment evidently either more or less advantageous than the rest, so many people would crowd into it in the one case, and so many would desert it in the other, that its advantages would soon return to the level of other employments. This at least would be the case in a society where things were left to follow their natural course, where there was perfect liberty, and where every man was perfectly free both to chuse what occupation he thought proper, and to change it as often as he thought proper. Every man's interest would prompt him to seek the advantageous, and to shun the disadvantageous employment.*

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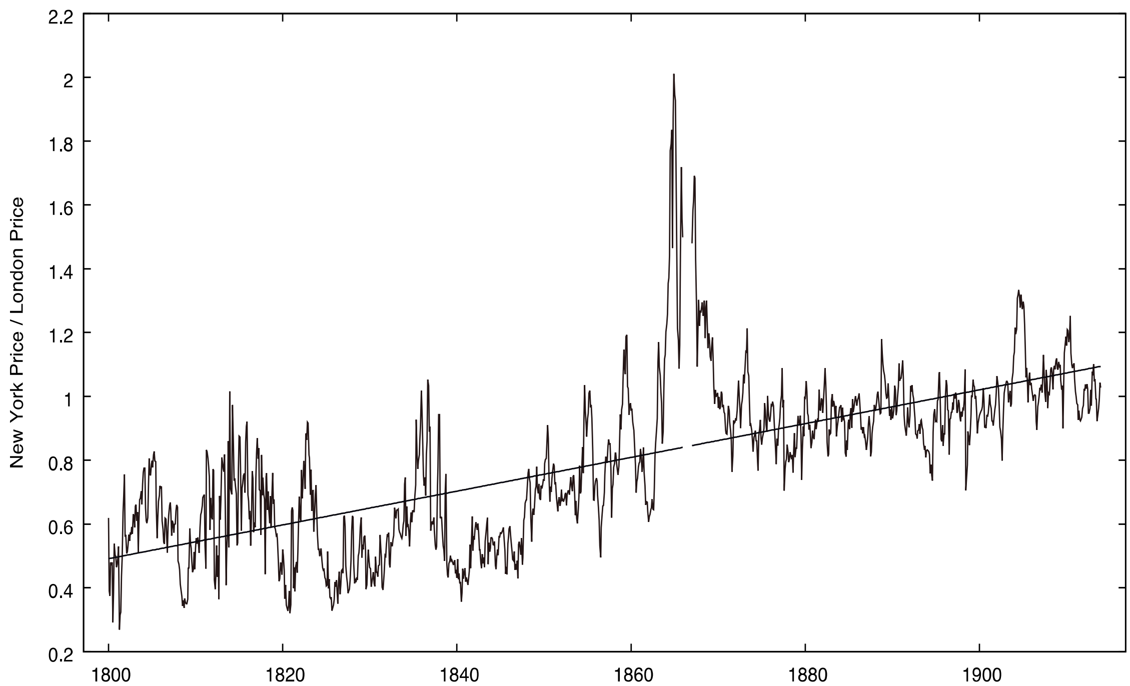
[13] John Law had previously described this basic mechanism in his 1705 Money and Trade Considered, but Cantillon more clearly developed the idea. See Murphy (1986).

Smith's labor market version resonates with students who readily grasp the notion of gravitating toward higher wage markets.

So does all this work in practice? Evidence from economic history studies can provide some compelling evidence in classrooms. There are many such studies, but the data on wheat prices summarized in Figure 2 provide one such illustration. There are of course many other illustrations one could use, and some instructors may also find it useful to have students suggest contemporary or historical examples that could be examined for a similar pattern of price convergence.[14]

Figure 2: Ratio of Monthly Wheat Prices in New York to London, 1800-1913



Source: Author's calculations from data in Jacks (2006).

Even introductory level students easily see that market integration and the law of one price implies a U.S/London price ratio of approximately 1 (depending on the per unit costs of transportation). Over the course of the 19th century, we see prices in the two markets converging, as suggested by scholars like Cantillon (1755/1959) and Smith (1776). The price spike during the U.S. Civil War also helps make the point and is one reason this historical example is useful – students see the rapid return to the long-run trend after the disruptions of the war have dissipated. Of course, this convergence toward one price does not happen automatically but depends on the type of entrepreneurial arbitrage Cantillon described in the early 18th century.

4. Conclusion

The history of economics is rich with opportunities for classroom instruction, but it often seems to go unexploited for these purposes. Not only can the great scholarship of the past

[14] Poitras (2010) gives some other historical examples of arbitrage that might be useful.

be fruitfully mined for contemporary gems, but students are often surprisingly appreciative of getting glimpses into the rich history of their subject, particularly given the limited course offerings in the history of economic thought.

Classroom economics is sometimes necessarily abstract, but there are opportunities to connect what we teach to the reality of the economy around us. Placing greater emphasis on the role of the entrepreneur is one good opportunity to do this, and the insights of scholars like Cantillon and Smith can help us provide both the motivation and the substance.

In this paper, original insights from historical economists are pulled into a modern classroom setting using simple supply and demand models. The example presented here can effectively convey both the importance of entrepreneurial arbitrage and the defining characteristic of the entrepreneur – a willingness to face the risk of uncertain prices in the arbitrage transaction.

Perhaps of equal importance, linking the theoretical predictions to the empirical historical reality (in Figures 1 and 2) provides students with an important illustration of how to join historical scholarship to modern theory and then to use both to understand real-world patterns.

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Appendix

Plan for integrating into the classroom.

- Ideally, this work would be introduced in an undergraduate introductory microeconomics classroom, although it might be useful in certain upper division classes that focuses either on history of political economy or entrepreneurship. The subject matter also works well in a business/managerial economics course.

- It is most effective to introduce this material at the beginning of the section on production. The textbooks that do include mention of entrepreneurship include it there, which is most effective in making connections to the traditional topical coverage in a principles of microeconomics class.

- The material does not require extensive preparation or reading, since it can easily be covered in class. However, some instructors may find it helpful to assign the following excerpt from Cantillon's original text before class (those who do not should distribute the excerpt to students during the class discussion about this topic):

  Cantillon describes here how markets are created as a result of entrepreneurial activity:

  > *There are some villages where markets have been established due to the interest of a landlord or a royal courtier. These markets, held once or twice a week, encourage several small entrepreneurs and merchants to establish themselves there, where they can purchase commodities in the market brought from the local villages, in order to transport and sell them in the cities.*

In Part 1, Section 13 of his Essay on the Nature of Commerce, Cantillon writes extensively about how entrepreneurs are present throughout the economy. While this excerpt is long, it gives rich detail that some instructors may want to provide to students and/or discuss in class (from Part I, Chapter XIII):

> *The city consumes more than half of the farmer's commodities. He brings them to the market there, or he sells them in the nearest town, or else some others become entrepreneurs by acting as carriers. The latter have to pay a fixed price for the farmer's commodities, which is the daily market price, in order to sell them in the city at an uncertain price, which nevertheless must cover the cost of transport and leave them a profit for their business. The daily changes in the urban prices of commodities, however, though not considerable, make their profit uncertain.*
>
> *The entrepreneur or merchant who transports the countryside's commodities to the city cannot stay there to retail them as they are consumed. No city family will commit itself to buying immediately all the commodities that it needs. The size of each family may vary, as may its consumption, or the family may sometimes change the type of commodities that it will consume. Except for wine, families rarely stock provisions. In any case, most of the city's inhabitants live on a day-by-day basis and yet, as the largest consumers, are not in a position to stock commodities coming from the country.*
>
> *For this reason several urban dwellers emerge as merchants or entrepreneurs to buy the country's produce from those who bring it, or have it brought on their account. They pay a certain price for it depending on the place where it is bought, in order to resell it, either wholesale or retail, at an uncertain price.*

These entrepreneurs are wool and cereal wholesalers, bakers, butchers, manufacturers, and merchants of all types who buy the country's products and materials to work and resell accordingly as the inhabitants require them for their consumption.

These entrepreneurs are never in a position to know the consumption expenditure of their city, nor for how long their customers will buy from them, given that their rivals will use all sorts of ruses to take their customers. All of this causes so much uncertainty among these entrepreneurs that it causes daily bankruptcies among them.

The manufacturer, who bought wool from the merchant or directly from the farmer, does not know the profit that he will make in his business by selling cloth and materials to the merchant draper. If the latter does not have reasonable sales, and to a lesser degree if these garments become unfashionable, he will not stock the manufacturer's clothes and garments.

The draper is an entrepreneur who buys cloth and materials from the manufacturer at a certain price to sell at an uncertain price, because he cannot predict the quantity that will be consumed. It is true that he may fix a price and refuse to sell below this, but if his customers leave him so as to buy at a better price from another draper, he will face mounting bills while waiting to sell at his proposed price, and this will ruin him as soon as or sooner than if he had sold the goods without profit.

Shopkeepers and retailers of all kinds are entrepreneurs who buy at a certain price to sell in their shops, or in the market, at an uncertain price. These types of entrepreneurs are encouraged and maintained in a state by consumers who, as their customers, prefer to pay a little more for the ready ability to purchase small quantities rather than having to stock goods, given that most of them do not have the means to store such stocks by purchasing them at first hand. All of these entrepreneurs reciprocally become consumers and customers between one and another, the wine merchant with the draper and vice versa. They proportion themselves in a state to their customers or to their consumption; if there are too many hatters relative to the number of hat buyers in a city or in a street, some with the least business will be made bankrupt. If there are too few, it will be an advantageous business, which will attract some new hatters to come and open up shops. In this way all types of entrepreneurs adjust themselves to risk in a state.

- Discussion questions that might be used for either a full group discussion or small group conversations include:

    1. The data in Figure 2 shows that the ratio of the New York price to the London price was around 0.5 in 1800. What does this mean?
    2. What does it mean if the price ratio is greater than 1?
    3. Can you explain the large fluctuations we see in the 1860s?
    4. If transportation costs between New York and London are non-zero, what would this mean for the analysis? (Alternatively, instructors might want to use this as a departure point for more detailed discussions of the important role of transactions costs).

- One effective strategy is to present the data in Figure 2 to the students and have a general discussion about it, perhaps guided by the above sample questions. Then, ask students to illustrate what is shown in Figure 1 on their own. Instructors could ask students to illustrate, using a basic supply/demand graph, what is happening in New York and, separately, what is happening in London if entrepreneurs are purchasing wheat in New

York and selling it in London. Since Cantillon highlights the risk-bearing activities of entrepreneurs, asking students to comment on the types of risks this activity entails is also productive.

- For instructor reference, the full text of Cantillon's *Essay on the Nature of Commerce* is available online here: https://www.econlib.org/library/NPDBooks/Cantillon/cntNT.html
- Finally, instructors who want a brief historical overview of Cantillon's scholarship, with a clear focus on his theory of entrepreneurship, will want to read Brown and Thornton (2013). They provide a nice overview of Cantillon's work on entrepreneurship, arguing that his theory of entrepreneurship is fundamental to the rest of his work, which would fail without the foundational element it provides.