

The Latin American Coffee Commodity Chain: Brazil and Costa Rica¹

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Introduction

For the weeks that preceded July 14 1789 Camille Desmoulin and other Parisian revolutionaries gathered at the Café Foy, the Precope and other political coffeehouses to plot the storming of the Bastille and draft the Rights of Man. They championed liberty and equality in this bourgeois public space as they set in motion the overthrow of the monarchy. But they gave no thought to the contradictions embodied in the coffee they sipped as they discussed grand ideas. Dependent on the dark brew from France's colony of St. Domingue, few contemplated freeing the African slaves who grew the coffee or freeing the colony. A century later the factory and office workers in the United States and Western Europe taking their coffee breaks gave scant thought to the Brazilian slaves or the Guatemalan Mayan Indians who labored in the coffee fields to provide the workers their drinks. The leisure drink in the North demanded strenuous work in the South. This was still largely true in the twentieth century. The NW Ayers advertising company archive has hundreds of ad copy pictures of housewives and husbands making and drinking coffee in their gleaming kitchens.² There is no hint that the coffee came from

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² Smithsonian Museum of American History in Washington D.C.

coffee trees in poor foreign lands. It just appeared in the cans of Hills Brothers. Only decades later did the Colombian Federación de Café introduce their “Juan Valdez” to U.S. coffee drinkers.

Of course in Latin American people are intimately aware of the fact that coffee grows on trees and requires peasant labor. But Latin Americans have often treated the international market as remote. Coffee is grown, picked, processed, brought to port and then is transmuted into money as the freighter sets off across the ocean to supply strangers. The world market is seen as an alien, even pernicious force over which growers have little influence. In most historical studies of the world coffee economy, production and consumption occupy not only different continents and different modes of production, they reside in contrasting mental universes. The agents of the commercial transaction—exporters, shippers, and importers—are ignored in the story. We believe that this is a partial and unsatisfactory way to understand Latin America's caffeinated link to the world.

As with the other studies in this volume, we propose that the study of the coffee commodity chain is a helpful way to understand, historicize, and make transparent the intimate relationship between cultivation, processing, intermediation, and consumption. Coffee is a particularly important commodity for analysis because not only has it been one of the world's most valuable internationally traded goods for the past two centuries, but because Latin America has dominated production. At one time or another in the nineteenth and twentieth centuries coffee was the leading export of nearly half the countries of the Americas and an important secondary crop in a number of others. By 1930 coffee supplied one-fifth of all Latin American exports and is still today a major

export in a dozen countries.³ Latin American growers have been the price makers internationally and have led the way in technological and botanical innovations.

Coffee commodity chains serve as a bi-directional link between producers and consumers worldwide that interconnect local processes with those taking place globally in overseas markets. Historically, there has been an extraordinary diversity in the ways cultivation, harvesting, transport, processing, and export of coffee have been organized. Consumption patterns and especially consumer preferences have changed over time which affect coffee producers through the tropical world in quite different ways.

Coffee commodity chains, like other agroindustrial ones, are dynamic historical constructs which change over time, in terms of both the technical and the social organization of interlinkages among cultivation, harvesting, local transportation, processing, overseas transportation, and distribution abroad. Technological innovations in any phase may substantially alter the dynamics of other links, both 'upstream' and 'downstream'.

Participants in the various aspects of the coffee commodity chain are also involved in broader production systems, social networks and markets. Farmers have often harvested other crops and sometimes raise livestock, many of them allocate their time among several economic activities including off-farm labor, and coffee plays different roles in their livelihood strategies. Growers, processors and traders in coffee actively

³ At one time or another, coffee was the leading export of Brazil, Colombia, Costa Rica, El Salvador, Guatemala, Haiti, Jamaica, Martinique, Nicaragua, Puerto Rico, Surinam, and Venezuela. It has been a leading export in Cuba, the Dominican Republic, Ecuador, Honduras, Mexico and Puerto Rico. For a brief, general comparison see: Steven Topik, "Coffee" in *The Second Conquest of Latin America: Coffee, henequen, and Oil during the Export Boom, 18500-1930* (Austin: University of Texas Press, 2998), pp. 37-84.

negotiate their respective interests amongst each other and with other socioeconomic and sociopolitical actors, whether locally or on a broader scale.

Coffee farmers' responses to changing external conditions have been far from uniform, and cannot be explained merely as passive reflections of world market trends and fluctuations. Although dependency theory, one of Latin America's most original contributions to the world's social sciences stressed that Latin American producers were victims of a foreign-controlled market, this commodity chain analysis will show that New World producers exercised considerably more power and ingenuity than usually has been recognized. This chapter will use the evolution of producers in two quite different production complexes, Brazil and Costa Rica, as a starting point for comparative discussion of interactions between local agro-ecological, economic, social, and political conditions, on the one hand, and changes in the international market for this product, on the other. They demonstrate that even within the same commodity, a range of production systems, market strategies and power relations co-existed since the late eighteenth century.

One of the few commodities that was already important under Early Modern luxury long distance trade, it continues today as a key trade good. But one should not reify the "coffee market." Rather than a continuous, homogeneous institution, the international market has been marked by radical disjunctures and essential transformations as production systems have varied and changed markedly⁴. Coffee continues to enjoy great international importance because the nature of its appeal to consumers has shifted to

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⁴ For an expanded discussion of the development of the world coffee market see: Steven Topik, "The Integration of the World Coffee Market" in *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* (NY: Cambridge University Press, 2003). Also Benoit Daviron, "La crisis del mercado cafetalero internacional en una perspectiva de largo plazo", in Mario Samper (ed.), *Crisis y perspectivas del café latinoamericano* (Heredia, Costa Rica: Convenio ICAFE-UNA, 1994).

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conform to remarkable changes in the societies of the dominant buyers over the past four centuries. The "social life" of coffee, its meaning to producers and consumers changed also. The unity and continuity of the term "coffee" is quite misleading.

For most of the last five centuries during which coffee has been grown in the poorer southern countries mostly for consumption in richer northern ones, control of the trade has undergone major changes. Over time, coffee consumption became increasingly segmented and increasingly a mass drink, balancing between a luxury and a necessity, a status drink and a convenience beverage. Moreover, Latin Americans have come to drink an ever larger share of the coffee they grow so it has become proportionately less an export crop.⁵ The length and complexity of the chain has varied as the nationality, ethnicity, and gender of producers, intermediaries, and consumers has been transformed. As the nature of processing and the end product became more complex, the role of multinational processors and traders expanded greatly as did their share of surplus despite state capitalist efforts by governments in coffee growing countries and the establishment of international agreements⁶. Asian and African growers have enlarged their share of world coffee production, but Latin Americans still dominate.

We explore the coffee commodity chain originating in two of Latin America's first coffee exporters: the largest, Brazil, came to be a price maker and a market shaper because it overwhelmed all other producers with low-priced beans; and one of the smallest continental Latin American growers, Costa Rica, which concentrated on quality rather than quantity. Both key innovators, they wielded quite different degrees of market

⁵ See Steven Topik, "Coffee Consumption in Latin America" in *The Culture of Consumption in Latin America*, Colin Lewis and Rory Miller eds., (London: Institute of Latin American Studies, in press).

⁶ See Mario Samper, "The Historical Construction of Quality and Competitiveness: A Preliminary Discussion of Coffee Commodity Chains" in Clarence-Smith and Topik, *The Global Coffee Economy*.

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power and occupied quite different niches in the world economy. Although both produced arabica coffee for sale in Europe and North America, their production systems, technologies, and trade partners differed and varied within each country. Yet both were successful.

The World Coffee Economy

The nature of the international coffee market has changed dramatically over the centuries. So has control of that market which moved away from the producer to the exporter in the eighteenth century, then in the nineteenth century to the importer, and in the twentieth century the roaster, government institutions, and finally today a few vertically integrated multinational firms. The world coffee market is a conceptual structure, but a malleable, human-constructed structure and was not always dominated by Europeans and North Americans.

Coffee began as an export commodity in Yemen before 1500 where the trade was dominated by Arabs and Indians, not Europeans, for over two centuries. Then the Dutch were able to overtake Mocha and Mediterranean ports to transform Amsterdam into the world's leading coffee entrepot for over a century. Although Europe was still a small luxury market, its demands outstripped Mocha's possibilities. Europeans began planting coffee in their new-won colonies. By 1750 Amsterdam's imports of American production almost matched its purchases of Javanese coffee. Initially the American good was mostly colonial production from Dutch Guyana. But soon the price of French production from St. Domingue (today Haiti) made that island more attractive. Already before the French

Revolution over 80 percent of the world's production originated in the Americas in European colonies⁷.

Only in the middle of the nineteenth century did European states no longer play a major role in the development of coffee production. The French lost their main coffee growing area after the Haitian Revolution. The Dutch preferred to serve as traders and shippers in the Americas, never developing or expanding their small colonies. The British, who saw the mercantilist possibilities in exploiting the Chinese and then the India tea trade, were the only western European power to reduce per capita coffee consumption rather than exploit the coffee-growing potential of Jamaica, Ceylon, or India. The Spanish and Portuguese preferred cacao and tea so that Iberian America had to wait for independence to become significant coffee producers⁸. Even later, once the United States gained the coffee producing colonies of Puerto Rico, Hawaii, the Philippines and effectively Cuba--at a time when the U.S. was the world's greatest coffee consumer--it continued to import overwhelmingly from Latin America in an open market.⁹ They relied instead on growers in independent states with comparative advantages in the world coffee market. The vast expansion of coffee has been a post-colonial phenomenon¹⁰.

⁷ John Crawford, *History of the Indian Archipelago* (Edinburgh: Archibald Constable & Co., 1820), vol.3, p. 374; Steensgaard in James D. Tracy, ed. *The Rise of Merchant Empires* (Cambridge: Cambridge University Press, 1990), pp. 129-130. Latin America's share of world production calculated from José Antonio Ocampo, *Colombia y la economía mundial, 1830-1910* (Bogotá: Siglo Veintiuno, 1984), p. 303.

⁸ Ocampo, *Colombia y la economía mundial, 1830-1910*, p. 303. In 1909 the *Spice Mill* reported on p. 174 that Spanish and Portuguese per capita coffee consumption at .7 and .5 kilos was a fifth to a tenth of that of northern European countries and the U.S.

⁹ *The Spice Mill*, May 1909, p. 299 in an article discussing the limited amount of U.S. investment in Mexican coffee fincas (when U.S. capital was flooding into other Mexican areas) explained "Concerning the increase in the production of coffee, Brazil continues and will continue to have no competitors in the world."

¹⁰ There were rather short-lived efforts by the French and the British to give preferences to coffee grown in their colonies in the twentieth centuries but even in Africa and Asia, leading coffee producers such as the Ivory Coast and Vietnam waited until *after* independence to become major coffee exporters.

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Brazil

Coffee was treated differently than sugar and rubber in the nineteenth century Age of Empire because its low technological demands meant that an independent country richly endowed with the factors of production, Brazil, could begin producing on an unprecedented scale. Cheap fertile land and abundant relatively inexpensive slave labor due to the proximity of Africa and their prior use in the successful sugar industry allowed coffee prices to plummet after 1820 and remain low until the last quarter of the century, widening the global coffee market. Brazilian production not only satisfied world demand, it stimulated and transformed it. Coffee was converted from a noble and then bourgeois beverage to a mass proletarian drink. The slaves of Brazil slaked the thirst of the workers of the industrial countries (except England where tea was the laboring man's fuel) and their own thirsts on the *fazendas*.¹¹ Brazil's exports jumped 75 fold between independence in 1822 and 1899 leading world consumption to multiply more than 15 fold in the nineteenth century!¹²

No African or Asian colonies could compete with Brazil in price nor meet the large new demand in Europe and the United States especially once disease struck their East Indian colonies after the 1870s. The newly independent countries of Spanish America were embroiled in civil wars that deterred coffee cultivation. By 1850 Brazil was producing over half the world's coffee. That figure swelled in the second half of the century since about 80 percent of the expansion of world coffee production in the

¹¹ Stanley Stein in *Vassouras, a Brazilian Coffee Municipio* (NY: Atheneum,) notes that Brazilian slaves even took daily coffee breaks in the fields.

¹² Brazil, IBGE, *Séries Estatísticas Retrospectivas* vol. 1 (Rio: IBGE, 1986), p. 85.

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nineteenth century occurred in Brazil alone!¹³ By 1906 *it produced almost five times as much as the rest of the world combined*. And this was no marginal market. At the dawn of the twentieth century the value of internationally traded coffee trailed only grains and sugar among all global commodities.¹⁴ In 1960 it was still the second largest agricultural export of all. Thus Brazilian production helped to redefine the nature of the consumer market by dropping prices sufficiently to create a mass market.

Although Dependency Theory was largely formulated by students of Brazil's history—Fernando Henrique Cardoso, Florestan Fernandes, Octavio Ianni, Andre Gunder Frank, and Stanley Stein—it failed to predict the malleable nature of coffee cultivation. The historiographic “boom and bust” tradition that traced the rise and fall of dyewood, sugar and gold as Brazil's main export gave scholars intellectual blinders. It is true that Brazilians did not maximize their short-run benefits from coffee. But despite the disappearance of coffee trees in many formerly prosperous areas of Brazil, on a national level the bust still has not come. Brazil has remained the world leader for 150 years while constantly transforming the nature of the coffee industry and diversifying into other crops and industrial products. No other country in the world has maintained such dominance for so long a time in such a lucrative crop.

What made Brazil singularly suitable to grow so much coffee? The conventional view is that economies of scale on slave-worked latifundia allowed Brazil to create millions of coffee-addicts abroad. This is only partially true. The first problem is

¹³ Calculated from Robert Greenhill, "E. Johnston: 150 anos em café" in Marcellino Martins E. Johnston, *150 Anos de café* (Rio: Marcellino Martins & E. Johnston, 1992), p. 308; Ocampo, Colombia, p. 303, Brazil, I.G.B.E. Séries Estatísticas retrospectivas vol. 1 (Rio: IBGE, 1986), p. 84.

¹⁴ Mulhall, *The Dictionary of Statistics* 4th ed. (London: G. Routledge and Sons, 189), p. 130.

assuming that all of Brazilian production was on huge plantations. Although certainly some of the fazendas that developed in São Paulo after the 1880s were among the largest export agro-industrial units in the world, other regions of Brazil had medium to small units. In neither Rio de Janeiro state, Minas Gerais, Espírito Santo, nor later in Paraná was the large estate the rule. Over time the size of the Brazilian coffee estate has steadily declined while productivity has grown. Today the average cafezal is only 9 hectares large.

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We also hesitate to attribute too much of Brazil's coffee dominance to technological improvements alone. There were no revolutions in agricultural production techniques when Brazilian *fazendeiros* burst on the world market after independence.¹⁵ Cultivating, harvesting, and processing continued to be done manually by the same sort of slave labor Brazilian planters had used for sugar. Slave labor was not a Brazilian or even American innovation. Slaves had already been used for coffee cultivation on the African island of Reunion and on a much larger scale in Saint Domingue (now named Haiti) and in Brazil to grow sugar. But the fazendas of Brazil were much larger and industrial-scale picking, which lowered both the cost and the quality of coffee, was developed. The explosion of coffee cultivation in the first half of the nineteenth century came from super exploitation of labor and land, not production machinery.

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Technological change played a larger role in the last decades of the 1800s. Milling (essentially dehulling or depulping and other tasks to prepare and pack the coffee seed for export) was advanced by steam power late in the century. The advent of the railroad and the steamship in South America allowed the rate of export expansion between 1860 and

¹⁵ V.D. Wickizer noted in *Coffee, Teas and Cocoa* (Stanford: Food Research Institute, 1951), p. 36 that "It is sometimes said that no important changes have been made in the coffee production methods in the last 150 years."

1900 to keep step with the torrid pace of the 1830-1860 period.¹⁶ And coffee production grew rapidly despite depending upon an increasingly aging and expensive slave labor force until abolition in 1888. Initially, at least, the expansion was due to vast, easily accessible virgin forests (meaning a sparse indigenous population with no legally recognized rights that could be violently pushed out); proper climate; an export-oriented commercial infrastructure; a large slave force; and relative political peace. Brazil had one of the most peaceful transitions to independence on the American continents and unlike Spanish America was able to not only maintain its colonial unit, but expand it after independence.¹⁷

The railroad, if not key in initiating the export boom, was important in permitting it to continue to expand. Before the iron horse, transport prices had been very expensive. By one calculation, 20 percent of the male slave force was used in mule trains and transport cost one-third of the final price. Moreover, the primitive form of conveyance often damaged the beans.¹⁸ The train reduced tariffs, but not dramatically. Because of relatively little competition, bulk discounts and distance rebates were not offered. In fact, coffee rode for a considerably higher price than domestic staples. By the turn of the twentieth century, rail transport still contributed from 15 to 22 percent of production costs. But quality of coffee was better, and more importantly, cheaper, more fertile lands were now accessible in the interior.¹⁹ In other words, the railroad allowed Brazilians to

¹⁶ Ocampo, Colombia, p. 302.

¹⁷ For a discussion of the relationship between Brazil's export economy and precocious state building see: Steven Topik, "The Hollow State: The Effect of the World Market on State Building in Brazil with Reference to Mexico" in *Studies in the Formation of the Nation State in Latin America* (London: ILAS, University of London, forthcoming.)

¹⁸ Stanley Stein, Vassouras (reprint NY: Atheneum, 1970), pp. 91,94.

¹⁹ On rail costs: Franz Dafert, *Über die Gegenwärtige Lage des Kaffeebaus in Brasilien*. Amsterdam: J.H. de Bussy, 1898. p. 49; Centro Industrial do Brasil, *O Brasil: suas riquezas naturais, suas indústrias*, vol. 2 (Rio: Imp. M. Orosco & Cia., 1908), p. 91. For rising land costs near Rio see Stein, Vassouras, p. 229 ;

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take advantage of their country's natural endowments (sometimes known as "forest rent") and thereby escape the geographic trap that had prevented Yemen, Java, Martinique, Dutch Guyana, and Haiti from qualitatively transforming the world market by taking advantage of economies to scale. By 1890 Brazil had the largest rail network in Latin America, larger than all Africa and all Asia minus India. So coffee brought slavery for manual labor but also state of the art transport and processing technology. The "modern" and the "archaic" were not contradictions, they reinforced each other in a hybrid just as the telephones that some prosperous slavocrats installed on their plantations to coordinate and centralize control of their huge slave crews permitted the concentration of slave-owning. In the short-run, the iron rail revived slavery after the prohibition of the Atlantic slave trade in 1850 seemed to doom it. Over the longer run the railroad fostered the transition to free labor by opening the interior to the predatory cultivation methods of the coastal escarpment and helping attract the third largest influx of European immigrants in the Americas.²⁰ And the railroad did not doom Brazil to an over-reliance on exports; it also opened markets for domestic agriculture and manufactures.

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The shipping revolution contributed as much as the railroad to stimulating the coffee export boom. A great expansion of shipping meant that swelling Brazilian coffee exports could be brought to market without shipping bottlenecks.²¹ This was extremely

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William Summerhill, *Order Against Progress: Government, Foreign Investment, and Railroads in Brazil, 1854-1913* (Stanford: Stanford University Press, 2001) chapter 4.

²⁰ W. Arthur Lewis in *Trade and Fluctuations*, p. 181 points out that Brazil (1.43 million) trailed only the United States (23.4 million) and Argentina (2.5 million) in receiving European immigrants between 1871 and 1915.

²¹ For a discussion of commercial conditions in Brazil at the end of the nineteenth century see: Steven C. Topik, *Trade and Gunboats, the United States and Brazil in the Age of Empire* (Stanford: Stanford Univ. Press, 1997). Also, Robert Greenhill, "Shipping" in DCM Platt, *Business Imperialism* (Oxford: Clarendon Press, 1977); Paul Bairoch, "Geographical Structure and Trade Balance of European Foreign Trade from 1800 to 1970," *Journal of European Economic History* 3:3 (Winter 1974): 606; Douglass North, "Ocean

important because although Brazil was so distant from its markets they were linked by the Atlantic. A host of European steamers began regular service to Brazil where port facilities were slowly improved. Until the end of the nineteenth century, the U.S. market was furnished mostly by European sail ships and then steamers though Brazilian ships dominated the coast-wise trade and came to occupy an important position in trans-Atlantic shipping. International travel was faster and cheaper than overland travel within Brazil so Brazil's great distance from its overseas markets, being maritime, proved to be more an advantage than a handicap. This was true for other Latin American coffee producers as well for whom internal travel was a much greater barrier than international freight.

Railroads and ships, by reducing transportation expenses and transit times, allowed producers to receive a greater share of the final CIF wholesale price while consumers abroad enjoyed lower retail prices. Brazilian coffee helped fuel the Industrial Revolution by intensifying the labor of the industrial working class while Brazil benefited from the wider market and the cheaper finished goods the Industrial Revolution provided. Because imports from abroad became cheaper, Brazil could enjoy steadily improving terms of trade; that is, although coffee's price in dollars did not much change, which encouraged mass consumption abroad, a bag of coffee paid for an increasing volume of agricultural and industrial finished imports into Brazil.²² So the coffee boom delivered the unusual situation of supply growing quickly enough to satisfy and even stimulate

Freight Rates and Economic Development, 1750-1913" *Journal of Economic History* 18 (Dec. 1958): 537-555.

²² Nathaniel H. Leff, *Underdevelopment and Development in Brazil* vol. 1 (London: George Allen & Unwin, 1982), pp. 80-85; C. Knick Harley, "Late Nineteenth Century Transportation, Trade and Settlement" in Harley ed. *The Integration of the World Economy, 1850-1914* vol. 1 (Cheltenham U.K.: Edward Elgar Publishing, 1996), p. 236. Edmar Bacha, "Política brasileira de café" in Martins & Johnston *150 Anos de Café*, p.20.

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continually expanding demand abroad without a jump in price. (While helpful for expanding the world coffee market, this meant that Brazil was essentially exporting some of its natural surplus by keeping prices remarkably low and hence retarding its own industrialization. On the other hand, some of that surplus returned in the form of foreign investment and loans--some of the largest in the Third World.) The fact that Spanish American producers such as Costa Rica, Venezuela, and Colombia began coffee production instead of indigo, tobacco, sugar and cacao demonstrates that the world coffee price was sufficiently high to make it attractive for growers even while low enough to seduce ever more consumers.

The secret of the success of the coffee production system was partly the self-provisioning of slave and then free coffee workers. They were paid mostly by being allowed to grow provisions and graze livestock on small but fertile plots of land rather than being paid much in money. As a result, workers could reproduce and even expand despite very low monetary wages. This was evidenced by Brazil's surging population growth and improving life expectancy.²³ This mechanism has been missed by economic historians who only count the monetarized sector and therefore conclude that coffee exports retarded economic and social development.

The low price of vast, fertile and well-watered land also gave Brazil a competitive advantage especially because planters and state officials ignored the current opportunity costs of their devastating techniques and the depreciation costs that future generations would bear. In a very real sense, the Brazilian coffee boom was financed by

²³ According to the *Séries Estatísticas Retrospectivas* vol. 1 of the Instituto Brasileiro de Geografia e Estatística (IBGE), vol.1 (Rio de Janeiro: IBGE, 1986), p. 3, Brazil's population doubled between 1854 and 1894 and then doubled again by 1921 to 31.5 million inhabitants.

the inheritance of planters' future descendants and the destruction of other creatures' habitats.²⁴

Strikingly, Brazil's coffee boom was slow to lower transaction costs.

Brazilian coffee planters ("fazendeiros") as well as slavocrat growers in Haiti, Jamaica, and Puerto Rico were themselves market-oriented though the slaves who worked for them were little concerned with the demands of the market. But even fazendeiros in the interior were buffered from the market by poor roads and communications until the twentieth century. A complicated web of intermediaries further shielded growers from international prices. Small growers sold to larger growers or mill owners who sold through factors ("commissarios") who often sold to sackers who blended the coffee and then sold to exporters who initially were consignment merchants.²⁵

There were few coffee markets in the interior and no coffee exchange in Brazil until the 1920s so information on prices and on supply were very imperfect and favored the factors. Indeed, many planters were often virtually enumerate.²⁶ Moreover, being quite under-monetarized, the world's largest coffee economy dealt in credits and notes which relied to a great degree on personal reputation and favors, not just on impersonal market forces.²⁷ This meant that Brazilians and Portuguese immigrants predominated in

²⁴For eloquent denunciations of the damage caused by coffee planters' slash and burn techniques see: Warren Dean, *With Broadax and Firebrand* (Berkeley: University of California Press, 2000) and Richard P. Tucker, *Insatiable Appetite, the United States and the Ecological Degradation of the Tropical World* (Berkeley: University of California Press, 2000).

²⁵ For detailed studies of the Brazilian coffee market see: C.F. Van Delden Laerne, *Brazil and Java: Report on Coffee-Culture in America, Asia, and Africa to H.E. the Minister of Colonies* (London: W.H. Allen, 1885); Joseph Sweigart, *Financing and Marketing Brazilian Export Agriculture, The Coffee Factors of Rio de Janeiro, 1850-1888* (NY:); Robert Greenhill, "E. Johnston: 150 Anos em Café" in Marcellino Martins and E. Johnston *150 Anos de Café* (Rio: Marcellino Martins, 1993).

²⁷ Stein reports in Vassouras, p. 83 that "most planters were unwilling to use 'complicated processes of commercial accounting' and preferred to await reports occasionally forwarded by the more zealous commissários." This led to a situation noted by Van Delden Laerne, *Brazil and Java*, p. 212, of commissários "from being the agents of the agriculturalists, became their bankers."

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the interior as property owners because local political influence was important to guarantee property and labor and extended family connections were important in obtaining loans. Over time the more successful leveraged these personalist advantages to take part in the institutionalization of the coffee economy.

Large scale planters were agro-industrialists. In addition to acquiring and overseeing cultivation on their land, they also built their own mills where they processed their own and smaller neighbors' crops, extended credit to dependents in their area, built roads and invested in railroads, sometimes invested in *commissario* (factor) houses and occasionally participated in export houses and banks. Fazendeiros, with their economic and political control of many aspects of the coffee economy, were the axis of the Brazilian sector. Only in the 1890s did the Portuguese immigrant merchants begin intruding on the interior. Other foreign banks and traders moved up country after the turn of the century but successful planters, particularly in the state of São Paulo, participated ever more in the urban infrastructure and the state's dramatic industrialization. Coffee did give birth to something of a national bourgeoisie in Brazil, even if planters were often not the heroic entrepreneurs of Joseph Schumpeter's dreams.

Planters were able to adjust to market conditions, despite coffee's four to six year gestation period, but their responses were quite slow to reduce output or catch up with demand. Great price rises led to rapid expansion and geographic diversification. The Haitian Revolution at the end of the eighteenth century, for example, encouraged planting in other parts of the Caribbean, Venezuela, and Brazil's Rio de Janeiro state. The next rapid jump in prices, in the late 1880s and early 1890s, caused a four fold jump in São Paulo's trees in fourteen years, giving it alone over half the world's production; Costa

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Rica, Colombia, Mexico and other Central American countries also stepped up production. High prices in the 1920s again pushed Costa Rica and Colombia to much greater output and sparked African cultivation. The price rise after the Korean War encouraged Africa and in Brazil the state of Paraná. Since the collapse of the International Coffee Agreement in 1989 Vietnam has become a leading grower while coffee in Brazil has moved to the state of Minas Gerais.

However, coffee production did not only expand while prices were on the rise. In the short run, there was of course the well known staggered effect due to several years' delay between planting and harvest, although this lag diminished with high-yielding hybrid varieties. Since coffee is a perennial crop that involved substantial investment of capital and labor, growers were also reluctant to cut down the coffee and shade trees, and due to cyclical price fluctuations, some planted or replanted while prices were low, in anticipation of better years to come. Furthermore, local/regional dynamics, technological innovations, the decline of other crops, and sometimes colonial or national policies could lead to growth of area planted or of other investments in coffee, quite independently of world market prices.

While inexpensive and plentiful Brazilian production slaked the thirst for coffee of ever more North American and European consumers, its remarkable increase in cultivation did not create a monopoly. Although in 1906 Brazil produced some 80 percent of the world's coffee, the institutionalization of the market with scheduled large steamers, railroads, warehouses, standards, futures market, and—as we shall see—new convenience coffee products—opened North American and European ports to other Latin American producers. Rather than a zero-sum game, this was a situation of mutual gains

for coffee producers. In most years until 1929 all Latin American growers increased output. Large inexpensive Latin American production combined with plentiful sugar production allowed coffee to overshadow its competing caffeinated drinks such as cocoa, tea, mate and substitutes such as chicory and grains. Latin America turned much of the western world into coffee drinkers.

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Costa Rica

Costa Rica was one of the first Spanish American countries to become a major coffee grower. It did not enjoy many of Brazil's apparent advantages. Costa Rica was a poor, rather backward colony of the Spanish, sometimes using cacao beans as money, with few African slaves, a comparatively small indigenous population, relatively few immigrants, mountainous terrain inland rather than near the coast, and little foreign capital. It was nonetheless able to take advantage of the growing demand for coffee Brazil was stimulating. Early political peace which gave the country a head start because of forward-looking municipal authorities, a cartroad to the coast and then a railroad completed by foreign capital, peasant self-provisioning combined with small-scale commercial farming and wage labor on the larger farms, increasingly centralized wet processing and sustained efforts to improve the quality of coffee for export contributed to Costa Rica's ultimate success.

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The early expansion of Costa Rican coffee production in the previously settled central area, before the mid-nineteenth century, took place while international prices were relatively low. When prices began to rise in a significant and sustained manner, the

ground was already prepared for coffee to spread into new mountainous areas together with settlement of outlying regions.

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In Costa Rica, as in Colombia and many other countries, cultivation of coffee was not monopolized by large estates, despite their importance in certain regions and the fact that land tenure was far from egalitarian. The key to control of the coffee business and its grid of social relations was closely associated with how the wet method of processing was organized. In contrast to the cheaper dry method, which was so extensively and economically used in Brazil,--and used on a much smaller scale in certain more marginal parts of Costa Rica as well—Costa Rica’s wet method led to central processing plants (*beneficios*). They were located either on large farms or in towns and cities, with increasingly technical procedures and attention to quality. Such processing had implications for the manner of harvesting (handpicking only ripe cherries rather than Brazil’s more industrial and less discerning style), the development of transportation (first oxcarts, then railroads and trucking), and relations between coffee mill owners and their suppliers of fresh coffee fruit. These ‘client’ networks were not limited to the purchase of cherries, since private credit has played a major role in structuring the flow of funds and harvests, especially before nationalization of the banking system in 1949 but even afterwards. Interactions between *campesinos* and *beneficiadores* in a given place also had other, non-economic connotations. They crafted sociopolitical alliances or confrontations through interpersonal relations exemplified by *compadrazgo* (comaternity), where symbolic kinship expressed both social hierarchy and reciprocity.

Part of Costa Rica’s coffee was still dry-processed in the early to mid-20th century, and even in the late 1970s this was the prevailing method in certain outlying,

rather marginal coffee zones where water was scarce or transportation very difficult. However, “natural” coffee beans, from sun-dried cherries, were also produced in the core coffee-producing region, often from stolen fruit and from green or defective cherries.²⁸ The quality of these “natural coffees” was considered very inferior, and efforts were made for it to be sold only in the domestic market, then called the Bolsa del Café de Consumo Nacional.

Up to the mid-20th century, most processing centers were located on larger farms in the Central Valley and in a few remote coffee-producing regions. Farmers or merchants might take the cherries directly to a nearby *beneficio*, but as competition between the buyers became more intense, in the early decades of the 20th century, the agents of certain processing firms would go meet the oxcarts which brought coffee toward San José. With small scale growers, coffee mills or *beneficios*, not planters were the axis of the Costa Rican coffee commodity chain. ‘Upstream’, they purchased fresh berries from a number of small- to medium-sized farmers, to whom they often lent money, usually requiring a commitment to deliver a specified amount of coffee to that *beneficio*, in addition to other guarantees. ‘Downstream’, several plants might supply a single exporter, whether he owned them or not.

The number of *beneficios* grew during the most of the 19th century, then stabilized at the turn of the century at about 200, but in the course of the 20th century, their numbers have decreased as improved transportation and major technical improvements facilitated centralization. Smaller processing facilities nearly disappeared, and average as well as maximum amounts processed per agroindustrial plant multiplied several times, while

²⁸ Alvaro Jiménez, “Algunas ideas sobre comercialización de cafés naturales y el serio problema del merodeo” (San José: Oficina del Café, 1978).

productivity of labor in wet processing also increased dramatically during the 20th century. Supply networks for each coffee mill, which used to overlap locally within the Central Valley, expanded to cover much larger regions, and recently even bring coffee from several different parts of the country. Clearly, this altered the structural relations between farmers and processing firms, but also affected interactions among processors. Competition for ‘clients’ was often keen, yet at the same time beneficiadores sought to coordinate prices offered to farmers, or at least the advances given upon receipt of the fruit, so as to improve their collective bargaining position.

Since the late 19th century, Costa Rican farmers were becoming better informed on prices overseas through the local newspapers, which in turn received dispatches via submarine cable, instead of waiting for ships to arrive with news as before. During the turn-of-the-century crisis, coffee producers began to object more vocally to joint price-setting by the processing and export firms, “quienes se han coaligado para hacer la guerra, á los pobres agricultores... No hay duda que es un plan preconcebido...”.²⁹ Shortly thereafter, the farmers’ suspicions were confirmed as the press reported an agreement among the main processing firms in the central coffee-producing region to reduce prices in a concerted fashion. Small farmers in at least one major city reacted by rapidly mobilizing and threatening to let their coffee dry on the tree, and a week later the price paid to them had risen considerably.³⁰

At least one attempt was made to eliminate price differentials in favor of coffee farmers in certain specific locations, where quality and recognition abroad allowed

²⁹ “The owners of coffee mills have come together to make war on poor farmers... there is no doubt that it is a preconceived plan...” In: “El café y sus explotadores”, 1898, cited by Naranjo, *La modernización...*, p. 43.

³⁰ Naranjo, *La modernización...*, pp. 47-48.

exporters to obtain exceptionally high prices. When the processing mills attempted to set a uniform price for all coffees in 1903, farmers in that area mobilized and successfully defended their advantage, while also setting a precedent by questioning the *precio corriente* (the current price paid for coffee on the local market).³¹

In the 1920s, larger farmers and owners of processing plants, grouped in the Chamber of Agriculture, set the domestic purchase price of coffee for all *beneficios*, nationwide. Perhaps more than the price level itself, this joint decision irritated small and medium producers because it effectively stopped them from negotiating better prices for their coffee from competing mills. In addition to earning those very distinguished gentlemen the sobriquet of “el Trust de la Cámara de Agricultura”, that decision served as a catalyst for the establishment of an independent association of coffee farmers, which was to play a prominent role in the struggle against unilateral price-setting in the following years.³²

Owners of *beneficios* were perceived by a number of small and medium-sized coffee growers, in early 20th-century Costa Rica, as “el ‘trust’ de los beneficiadores”, or what an economist might call an oligopsonic group. The larger firms certainly did try to set prices among themselves and artificially create a “buyers’ market” situation. As the leader of the Asociación Nacional de Productores de Café stated in 1932, when disputes over the local price of coffee were acute and small farmers were rallying against the processing firms, some of which had also begun to take lands away from debtors unable

³¹ Naranjo, *La modernización...*, pp. 48-50.

³² The mobilization and slogans of this movement has been discussed by V. H. Acuña, “La ideología de los pequeños y medianos productores cafetaleros costarricenses (1900-1961)”, in *Revista de Historia*, Num. 16, July-December 1987, pp. 137-159. With respect to the 1921 agreement and subsequent protests, see Naranjo, *La modernización...*, pp. 233-235.

to pay back their loans in the midst of that crisis.³³ However, elite solidarity was sometimes broken by a newcomer or a renegade *beneficiador* seeking to increase his participation in the processing and export business. One might even reinterpret the laws which subsequently regulated relations between coffee farmers and processing firms, and the very creation of the Instituto de Defensa del Café, as legal and institutional measures which not only de-fused confrontations between those two groups, but also institutionalized price-setting mechanisms and relations among the *beneficiadores* themselves. The government mediated to avoid extreme abusiveness which might, in turn, cause renewed protests by smaller coffee farmers.

In both Brazil and Costa Rica the state (provincial and national in Brazil and national in Costa Rica) came to play an ever larger role in the national and international markets. Because of Brazil's much larger position in the world market, the Brazilian state came to dominate and organize the world market. But Costa Rica was not defenseless. In the Brazilian case the coffee defense plans came to defend national State interests more than planter interests while in Costa Rica the State regulated relations among growers, processors and exporters, seeking to defuse rising tensions and institutionalize mechanisms to determine distribution of the final price.

Mass Consumption

The consumption part of the coffee commodity chain has been as crucial as the production side, if not more so. During its first centuries as a Muslim drink the market had been a narrow luxury one. Coffee had often been traded by pilgrimage caravans;

³³ "The owners of coffee mills have fulfilled their task as wolves." Manuel Marín Quirós, "Discurso ante la Asamblea de Productores de Café, celebrada en el Teatro Júpiter de Guadalupe, en la tarde del domingo 27 de marzo de 1932", in *Revista de Historia*, Num. 16, July-December 1987, pp. 133-136.

transport, taxes and merchant costs were high. When Europeans spread production to their colonies in Java, Reunion, Saint Domingue, and Jamaica, production and transport costs had fallen. But mercantilist-minded colonial governments had insisted on high taxes, maintaining coffee as a bourgeois beverage. Peasants and proletarians had tended to drink chicory and other substitutes for "Bohnenkaffee".

In the 1800s Brazilian slaves made the beverage available to urban workers and even occasionally rural residents. Coffee's heroic nineteenth century occurred not only because of Brazilian production, but also because of United States and Western European consumption. The transportation revolution and lowered transaction costs in consuming countries accelerated the relationship between Brazil and the United States. Coffee, for the first time, became truly a mass product in the U.S.. Brazil's ability to develop transport (the railroad) and marketing economies of scale combined with greatly reduced trans-Atlantic shipping costs and the world's most efficient internal transportation system and marketing network in the U.S. to stimulate per capita consumption to rise rapidly. U.S. government policy also helped. The United States was the only major market to import coffee tax free for all but a decade after 1832. In response, per capita consumption grew from one-eighteenth of a pound in 1783 to nine pounds a hundred years later. A fifteen-fold explosion of the population of the United States in that century meant that total coffee imports grew 2,400 percent! By the end of the nineteenth century the U.S. was consuming thirteen pounds per capita and importing over 40 percent of the world's coffee. (It would grow to over 60 percent after World War II.) Half of the growth in world consumption in the nineteenth century was due to increased United States

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purchases!³⁴(Almost all the rest was in Western Europe.) Coffee producers were very fortunate to find such favor in the country whose GNP was growing the fastest in the world.³⁵ U.S. per capita consumption would continue to grow, with some fits and starts, until the 1960s³⁶.

Coffee's rapid expansion of the nineteenth century was due to peculiar demand conditions as well as Brazil's and then Spanish America's ability to meet that demand cheaply. Demand in the nineteenth century, in both the U.S. and Europe, was initially both income-elastic and price-elastic: The more income U.S. and European consumers earned and the lower the price of coffee, the more coffee they purchased. Interestingly, this is not the case in the twentieth century, despite better quality, more accessible coffee and rapidly expanding discretionary incomes.

The reason for the change is culture. In the early nineteenth century coffee was viewed as a luxury item, a sign of bourgeois distinction particularly to the European immigrants who arrived with a craving for coffee that had been difficult to satisfy in the Old Country. As coffee became available to lower class urban inhabitants and eventually even to rural populations at a relatively low price, they chose it over ersatz coffees and teas they had previously drunk. They were able to do so also because the fall in the price of agricultural staples such as grains in the last decades of the nineteenth century meant wage earners enjoyed greater discretionary income for luxuries such as coffee. So powerful was this appeal that the income-elasticity in developed countries between 1830

³⁴ Calculated from Greenhill, "E. Johnston", pp. 330-331. A. Wakeman, "Reminiscences of Lower Wall St." *Spice Mill*, March 1911: 193.

³⁵ Bairoch, "Geographical Structure", pp. 17-18.

³⁶ Actually the date of the zenith of U.S. coffee consumption is debated because the method of calculating consumption was changed. It may be that coffee consumption in the U.S. has been declining ever since 1949.

and 1900 has been estimated at 1.3, meaning a disproportionately large share of income growth was spent on coffee.

Coffee was one of the few major internationally-traded commodities in the nineteenth century to enjoy a real price increase in the second half of the nineteenth century and still have per capita consumption increase.³⁷ As it became an accepted part of the working class's breakfast, the amount of coffee purchased did not much vary with income or price. Once its status declined in the early twentieth century, its income elasticity did also, though it continued to be a necessity for many.³⁸

Coffee's success both generated institutionalization of the world market and resulted from that institutionalization. The coffee market began to become more globally integrated in 1874 when a submarine telegraph cable tied South America to New York and London. Information about prices and demand and supply and standards of quality became international, strengthening the hands of importers and processors in consuming countries. Merchants replaced the free-standing consignment agents in single countries who had initially formed the world coffee market. Instead, they created firms that traded in several producing and consuming lands and set the prices. Importers and roasters built warehouses that held a substantial share of the world's visible stocks, improving the market position of importers by providing both reserves and information about warehoused stocks. Exporters in Brazil ceased being consignment agents, becoming instead agents of U.S. and European importers who controlled the trade and set the prices. The creation of the New York Coffee Exchange in 1882, followed by Havre, Hamburg, and London, further institutionalized access to information and standardized

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³⁷ Ocampo, *Colombia* p. 302-03; Bacha, "Politica brasileira de Cafe," p. 20.

³⁸ Albert A. Okunade, "Functional Former Habit Effects in the U.S. Demand for Coffee," *Applied Economics*, vol. 24(19912): 1203-1212.

commercial practices. This inspired the emergence of futures markets in which merchants bought the right to buy future crops as hedges against sharp price variations.

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As long as all purchases had been on the spot, specific beans were judged. With the advent of futures, coffee became a more pure commodity in the sense that rights to coffee shipments were now bought and sold on the market floor without the buyer actually seeing the lot in question. Coffees became commodities possessing a bundle of specific, graded attributes. Importers and roasters blended them together to create specific grades.

Two major problems continued to plague the trade after the establishment of exchanges in New York and Europe: difficulty in determining the quality and origins of shipments and information about the size of annual crops. The former threatened to drive away defrauded customers and the latter made longer term price calculations difficult. The quality problem was rectified not by planters and traders, but by government. In 1907 the United States Pure Food and Drug Act decreed that imported coffee be marked according to its port of exit. Thus "Santos" became a specific type of coffee, as did "Java" or "Mocha."

Social practices in the United States very much affected the nature of demand and the ability of roasters to respond to it and shape it. The fact that in the U.S. coffee was consumed in the home where it was roasted by the housewife much more than in coffee houses as was the case in much of Europe, had important implications for the organization of the trade. Coffee in the U.S. was overwhelmingly sold in grocery stores where American consumers were more concerned with price than quality. In response, some grocers founded roasting companies such as the Arbuckles and the Woolson Spice

Company which created brand names for their packaged product, something slower to develop in Europe. But they could not overtake the thousands of grocers and small roasters who sold green beans or custom roasted until they found a way to prevent ground coffee from quickly losing its flavor, a way to win consumer confidence in the quality of packaged beans they could not see, and a stable price. The first problem was easily solved when vacuum sealing was invented in 1900, though it would require two decades for vacuum packing to gain wide acceptance. But the second required taking command of the market away from importers who often adulterated coffee stocks. This was largely done through government interventions. In the United States, the Pure Food and Drug Act of 1907, based upon a British pure food law some thirty years earlier, set standards.³⁹

To protect themselves, roasters created for the first time a national organization, the National Association of Roasters. Under attack from coffee substitute interests who decried coffee on religious grounds (Seventh Day Adventists and Mormons preached against it), health grounds (John Kellogg claimed it was bad for digestion), and moral grounds (caffeine was seen as an intoxicant), roasters joined government agents in enforcing them. Although their standards were apparently less demanding, the French, Germans, and Canadians followed suit with coffee purity laws and international conferences were commenced to establish international standards.⁴⁰

By gaining the confidence of consumers and providing mass-produced roasted coffee through advances in roasting technology, transport, and marketing, large industrial

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³⁹ Oscar E. Anderson, *The Health of a Nation, Harvey W. Wiley and the Fight for Pure Food*; Lawrence M. Friedman, *A History of American Law* (NY: Simon and Schuster, 1973), 400-405.

⁴⁰ *Spice Mill*, Nov. 1909: 702; Jan. 1911: 30; Oct. 1912:857. *Tea and Coffee Trade Journal*, Jan. 1911:34.

roasting firms began to control the market.⁴¹ They began to integrate backwards, increasingly sending their agents into the interior of Brazil and other Latin American growing countries to purchase directly from producers.⁴² Looking forwards, the big mills improved roasting, grinding and packaging technology so that processes formerly done by the grocer or the housewife were done by the roaster. By 1935, 90 percent of all coffee sold in the U.S. was sold roasted in packages rather than green beans sold in bulk as before.⁴³

As a result, value was increasingly added by the roasting companies. That is: a larger share of the labor involved in making a cup of coffee was purchased rather than done by the end user. This meant that an ever greater share of the monetary value was added in consuming countries in North America and Europe and by an ever smaller number of companies. Since roaster profits came from using coffee as a raw material, rather than an object of speculation as it had been previously for many merchants, roasters favored stable, predictable prices.⁴⁴ Although the European coffee trade was slower to turn to large mass roasters and retail sales of packaged coffee, brands such as the Pelican Rouge captured large markets in the early twentieth century. Later conglomerates such as Nestle and Jacobs took hold of the market.

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The gradual rise to dominance of industrial capital did not mean that the consumer market was very price sensitive and susceptible to new coffee product lines and advertising. The expansion of large roasting companies with their superior technology,

⁴¹ In 1912 the Woolson Spice Company built the world's largest roasting factory in Toledo, Ohio with 500 employees and a capacity of one million pounds of coffee a week, *Spice Mill*, Jan. 1912: 28.

⁴² Goetzinger, *History of the House of Arbuckle*, p.3; Zimmerman, *Wille*, p.123; Greenhill, "Brazilian Warrant."

⁴³ Wm. Ukers, *All About Coffee* (NY: Tea and Coffee Trade Journal, 1935), p. 388.

⁴⁴ Edward Green wrote to R. Johnston from Santos, 12 Oct. 1903 in the Johnston Archive, University of London, London: "There is no denying the fact that all of us in Santos formerly looked upon our stock of coffee as a speculative thing to lay with or a peg on which to hang larger speculations in Exchange."

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greater efficiency, more reliable and cheaper product as well as much greater advertising budgets and marketing sophistication did not expand coffee consumption as one might have expected. On the contrary, just as consolidation was beginning to occur, per capita consumption in the U.S. was stagnating. It would take forty years for U.S. consumers to again reach the thirteen pound per capita level of 1902.⁴⁵ The two decades-long jump in U.S. consumption was in good part brought on by U.S. troops' introduction to instant coffee during World War Two and the Korean War.

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The most complete study we have found on the influences of coffee prices, done by the U.S. Federal Trade Commission in 1954, concluded that the great price rise during the wars "cannot be explained in terms of the competitive laws of supply and demand."⁴⁶ The FTC also complained that futures speculation drove up prices out of line with supply and demand.

Speculation was encouraged by the concentration of the trade in a few hands. Ten exporting houses in Brazil sent out between two-thirds and 90 percent of the crops until the 1920s and continued to control over half after that. Since Brazil was exporting between 40 and 80 percent of the world's coffee and these exporting houses operated in other producing areas as well, a few houses dominated world exports. In the United States, the top ten importers (some of whom were also exporters) imported over half the total. And increasingly, a small number of roasters dominated that trade. By the 1950s the five largest roasters in the United States roasted over one-third of all coffee and held 78 percent of all stocks.

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⁴⁵ Michael Jimenez, "From Plantation to Cup" in *Coffee, Society, and Power in Latin America* In Roseberry, L. Gudmundson, and M. Samper, eds. (Baltimore: Johns Hopkins University Press, 1995), pp. 42-43.

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⁴⁶ FTE, *Investigation of Coffee Prices*, p. xv.

This small number of traders and roasters gave them not only oligopsonic power over prices, but over grades. Despite an apparently precise system in which all grades and sorts in New York and Europe were based on discounts or premiums on Rio number 7 and later Santos number 4 coffee, in fact as the *Tea and Coffee Trade Journal* reported in July of 1917 (p.30): "The commercial classification of coffee is a matter of great complication. The factors which determine the market value of coffee are almost infinite in number." Standards varied widely and were quite artisanal⁴⁷. The companies with the largest market power could assert their standards.

The Valorization of Coffee

Government intervention, which characterized the world coffee market more than any other commodity for most of the twentieth century, worked to further dampen the market's price mechanisms and brought some control back to the growing countries. Beginning in 1906 some of Brazil's states held stocks off the world market to "valorize" them. This led to a federal price support program, the Inter-American Coffee Agreement and finally in 1962 the International Coffee Agreement. Since the main objective of these cartels was to stabilize prices rather than corner the market, roasters in the consuming countries joined. They were willing to accept somewhat higher prices in return for guaranteed production because so much of value was added in the consuming countries. The coffee bean itself had become a low-cost raw material.

⁴⁷ *The Tea and Coffee Trade Journal* reported in January of 1917:32 that the complications passed on to roasted coffee: "We do not believe that any two concerns use the same terms in describing their grinds and I do not believe that I have any two salesmen on the road who write up orders alike." The FTE, *Investigation*, p. xxii chided the industry's "rule of thumb practices."

After strenuously opposing valorization at the outset, the governments of the consuming countries signed on. Their reasons were less economic than political, however⁴⁸. Coffee was a pawn in the Cold War. It was no coincidence that the United States signed on to the agreement two years after the Cuban Revolution. The Kennedy administration feared that revolution might break out in coffee-growing countries. Socialist guerrilla movements in Colombia, El Salvador, Guatemala and most of all Nicaragua since the 1960s demonstrated the social tensions in several coffee-dependent economies. To allay nationalist and socialist movement, coffee-producing countries were given annual quotas at prices somewhat higher than the unhindered global market would have dictated.

Political reasoning also effectively destroyed the I.C.O. in 1989, the year the Berlin Wall came down. The Reagan administration no longer feared Soviet aid to socialist groups and was ideologically committed to neo-liberal free trade so it withdrew from the I.C.O.

With the decline of the market power of states in coffee growing countries, the large roasters came to dominate the world market. They had consolidated their position gradually. Marketing played as important a role in this growth as did automation. Arbuckel's became by far the largest coffee roaster in the United States because it sold beans in one pound paper sacks and awarded gift premiums in exchange for returned labels. The rise of chain stores such as the Great Atlantic and Pacific Tea company,

⁴⁸ For an insightful analysis of the politics behind the rise and demise of the I.C.O. see Robert Bates, *Open Economy Politics, The Political Economy of the World Coffee Trade* (Princeton NJ: Princeton University Press, 1997).

which made coffee their most profitable good, allowed wholesaling concentration though each chain still roasted its own green coffee blends.

This changed in the 1950s when the super market was created. Selling a vastly larger number of goods, the supermarket depended upon small margins but large volume. For the first time, coffee companies competed on price rather than the quality of their blend. This was because the super market corresponded with two other phenomena at the same time. Giant food conglomerates such as General Foods, Coca Cola, Ralston Purina that bought up smaller successful coffee companies had less interest in coffee as a family artisanal tradition than earlier coffee roasters such as Chase and Sanborn, or Maxwell House.

Moreover, the mechanization of coffee processing had permitted dumbing down of roasting techniques since constant heat allowed temperature and time measurements to replace the eye of the expert roaster in determining a proper roast. Second, the advent of the automobile led to suburban living, interest in fast foods, home drinking rather than cafe drinking, so that convenience became the watchword rather than quality. This facilitated the spread of a few very large, lower quality, canned, ground roasted coffee companies. Thirdly, new coffee products that were developed after World War II became popular such as instant, decaffeinated, and bottled coffee. Consolidation proceeded to the extent that today four companies control 80 percent of the U.S. coffee market. Worldwide, four or five companies control half the world's instant and roast coffee markets.

Thus although coffee was the world's second most important internationally traded commodity in many years, and it was produced in over 100 countries while being consumed in virtually every country, it was surprisingly monopolized and monopsonized.

Conclusions

Brazilian and Costa Rican producers changed the nature of the world coffee market. Far from being passive victims of an anonymous world market, they were price makers and intimately involved in the creation of market institutions. Brazil had a decisive influence on coffee prices and on the expansion of consumption in the world, while Costa Rica carved itself a niche where its higher quality grain obtained better prices, and contributed to development of that niche.

Over time, the nature of the international market shifted notably. Latin American producers played a key part in transforming coffee from an elite leisure beverage that served as a sign of distinction to a mass convenience drink. Control went from farmers to local merchants, to importers, to roasters, to multi-national corporations and, for most of the twentieth century, States. Although the market's dynamism came largely from private initiatives, state intervention was necessary to institutionalize and standardize practices once the market's size outstripped merchants' ability to operate it. Both the ability of growers to meet growing demand without raising prices (initially by super-exploiting natural resources and labor rather than technological improvements, later by developing new cultivars, and modernizing processing and transporting), technical refinements by processors and marketers in consuming countries, and consumers' tastes and culture explain the rapid and huge expansion of the international coffee market.

Although African and Asian coffee growers have substantially increased their production in the last three decades, Latin America continues to be the world's leading producer and the United States the leading consumer. Still, this appearance of continuity masks a massive transformation in the actors, technology, profitability, nature of demand (what it is people are buying in a cup of coffee) and social relations in the global coffee commodity chain. A long and numerous line of people may be chained together but their stake, control, and profit vary substantially still today as the chain has undergone major changes over time.