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EXCERPTS FROM *OCEANS OF WINE, EMPIRES OF COMMERCE* – MERCHANTS INTO CAPITALISTS: MADEIRA WINE AND THE DEVELOPING ATLANTIC ECONOMY, 1640 - 1815

Over the course of the eighteenth century Madeira's wine exporters evolved from merchants into capitalists. At the beginning of the century, the distributors' principal tasks were buying low and selling high. Their organizations were simple and their capital requirements modest. By 1800, their task was organizing the trade, the heart of which was managing customer networks, as shown in the preceding chapter. They also organized supplier networks, and used their geographical position to engage in a reverse trade from America to Madeira and a forward trade to southern Europe. To achieve these things, the exporters created more complex organizations that required more capital. While the capital levels of Madeira firms never approached those of the British monopoly companies such as the Bank of England and the East India Company, nor even the great London or Lisbon mercantile houses, they were massive compared to the commitments required by the family-based trading companies that preceded them. The shift was both a consequence and a requirement for the development of large-scale, Atlantic-wide commerce. Alongside merchants in other trades, they established a model for organizing and managing businesses on a more global scale and in a more international way than had been the case in the middle decades of the seventeenth century.

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ORGANIZING THE TRADE

Successful distributors assiduously organized their customers; as Chapter Six shows, they built networks of buyers who, in turn, gave statuses and identities to the distributors, managed chains of products and conversations directed towards them, and insinuated themselves into their customers' personal lives and social projects. They moved from selling on the spot to captains (as was the norm in the seventeenth century) to filling the orders of correspondents and agents overseas, and then to sending partners to live and trade in consumer communities. In addition, as Chapter Four delineates, they "organized" the product, inventing a substantially new drink over the course of the century to balance the operational constraints of production and the physical and social demands of customers. Because letters to and from customers dominate the extant records, conversations with customers are the aspects of distributors' work that we know best. But we see the same organizing, improving mentality at work in the smaller number of references to other aspects of the business. Over the eighteenth century, the distributors organized networks of suppliers using conversational techniques similar to those they used with customers; they increased their oversight and management of the wine after it left their hands; they increased their control of shipping and imports into the island by taking interests in ships and cargoes. By the early nineteenth century, a Madeira wine trader managed suppliers, shippers, customers and products over multiple years and vast distances. In doing this, they became systematic, standardized and "professional" enterprisers.

SUPPLY NETWORKS

Supply networks were essential to the distributors' work. Obtaining manufacturing and packaging items, for example, required ongoing correspondence with merchants in North America, the Baltic countries, northern England and Scotland, the Channel Islands, western France, mainland Portugal and southern Spain. Wood for barrel staves, hoops and bungs; iron for barrel hoops; gesso for fining down the must; and brandy for fortifying the wine: to have wine available for export, a merchant in Madeira needed to procure all these inputs simultaneously. A shortage in anything quickly saw a scramble to find it, as was the case with coopers and cooperage materials in the late 1780s and early 1790s, when firms were forced to buy from island competitors or Londoners; such delay, as it often did, caused the firms to slow the dispatch and raise their prices for wine, although in some cases shortage unresolved reduced shipments and thereby caused the prices to rise. The absence of manufacturing and packaging goods could halt exports for months and reduce profits substantially.[1]

Wine distributors also imported goods into Madeira. They brought cloth and dry goods from England and Europe, and, unless the buying and packing were done by a relative or employee they could trust, flawed or spoiled goods could cost more than the products were worth. Even when the products came safely to hand, there was no guarantee they were suitable: English-speaking distributors experienced chronic difficulty intuiting which textures, colors and patterns the Portuguese on the island and in

[1] John Searle to Newton, Gordon & Johnston, December 9, 1789, Box 1788/89, Cossart, Gordon Papers, Guildhall Library; Newton & Gordon to Thomas Gordon, March 6, 1790, v. 13, f. 257, Newton & Gordon Letterbooks; Richard Lamar Bisset to Henry Hill, September 17, 1791, v. 10, f. 146, Hill Family Papers, HSP. See also Daniel Henry Smith to James Gordon, March 16, June 15, 1776, Leacock Papers.

the Brazils would find attractive.[2] The largest supply item imported into the island was food. Madeira harvested only a minor wheat crop in the best of years, and Porto Santo and the Azores, where harvests were larger, did not produce enough to satisfy Madeira's demand. The same was true of fish: local stocks were never sufficient. One rather imperious Englishman, forgetting the principle of comparative advantage, pointed out that "were the Natives to apply themselves with common industry" to fishing, "the demand would be much smaller" – but that this they "had little interest in doing." The Madeira wine merchants who imported American foodstuffs also served their customers by providing an outlet for their New England fish, Middle Atlantic grain and Carolina rice. Imports also provided the Madeira merchants with currency: American customers who took wine of greater value than the foodstuffs they exported paid the balance in cash or bills on London. "It was only by importing food" that the exporter could "at all command [the] cash" they needed for their "immense payments" to growers and the government. Even as late as 1806, "[t]he importation of food" was seen as the only reliable means they had of supplying themselves "with money to pay for … wines." Those who did "not import grain or flour" were "often disappointed for want of conveyances."[3]

Importing foodstuffs into Madeira required careful, constant management. A successful distributor paid close attention to his sources for fish in Scotland,

[2] Savvy firms understood this need, and by the end of the century were sending Portuguese representatives to London and New York – people "who understand the assortment of goods fit" for Madeira, and "have great advantage over us on this account." John Leacock, Jr. to William Leacock, January 23, 1801, Leacock & Leacock Letterbook 1799-1802, f. 223, Leacock Papers, Casa Branca. On the importance of knowledge in cloth in London, see John Styles, "Product Innovation in Early Modern London, *Past & Present*, n. 168 (2000), pp. 124-70.

[3] Newton, Gordon, Murdoch & Scott to Thomas Gordon, April 22, 1802, v. 23, f. 235, to Francis Newton, May 26, 1806, v. 28, f. 367, Newton & Gordon Letterbooks.

Newfoundland, New England and the Baltic, wheat in the New England, middle and Chesapeake regions of North America, and rice in South Carolina and Georgia. He exerted whatever control he could over quality, timing and price, as well as keeping open multiple re-export destinations in Southern Europe and Brazil. It was possible to engage in such supply on an *ad hoc* basis, with a large number of suppliers, but, as with their relationships with overseas distributors, Madeira distributors increasingly found it in their interests to ally themselves with one or a few suppliers. Provisioning the island and Southern Europe, and controlling the process of procurement attracted "handsome freight" to their houses and earned them "handsome profit."[4]

The supply networks for fish show procurement at work.[5] Dried and salted cod from New England had been a barter-good at least as long as Portuguese, British and American ships had plied the waters between New England and Southern Europe in the 1640s.[6] For much of the ensuing 120 years, the principal American import into Madeira was cod, usually salted, and wine firms like Newton & Gordon imported most of it.[7] Small catches of fish in the late 1750s and early 1760s, occasioned by both natural causes

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[4] John Howard March to Thomas March, November 1, 1816, March Letterbook, pp. 238, 242.

[5] On fish, see Alexander Gordon to James Gordon, October 8, 1760, Chalmers & Co. to James Gordon, September 15, 1762, March 2, 1763, September 14, 1763, James Gordon to Alexander Gordon, July 8, 1766, Letterfourie Papers; Newton & Gordon to Thomas & Thomas Gerry, December 12, 1762, Newton & Gordon Letterbooks, v. 3, f. 74, to Thomas Newton, October 18, 1763, v. 3, f. 223, to Robert Hooper & Co., November 4, 1763, v. 3, f. 234, to Johnston & Jolly, February 4, 1766, v. 4, f. 2, to John Rowe, April 14, 1768, v. 4, f. 205, to Francis Newton, December 6, 1769, v. 4, f. 420, to Newton & Gordon, February 24, 1785, v. 8, f. 31, to Donaldson & Stotts, August 20, 1785, v. 9, f. 66, to Jeffrey & Russell, December 19, 1791, v. 14, f. 53, to Charles Vaughan, January 6, 1793, v. 15, f. 13, Newton & Gordon Letterbooks.

[6] Edward Johnson, *Wonder Working Providence, 1628-1651* (New York, 1810), p. 247. According to Johnson, "Portugal hath had many a mouthful of bread and fish from us in the exchange of their Madeira liquor." See also Duncan, *Atlantic Islands*, p. 172.

[7] Newton & Gordon to Thomas Gerry, Sr. & Jr., December 2, 1762, to William Brown, December 2, 1762, to Thomas Newton, October 18, 1763, to Robert Hooper, November 4, 1763, Cossart & Gordon Papers, Box 1, Bundle 4, Box 3, Bundle 1764-1765, Guildhall Library. John Rowe of Boston, Jeremiah Lee of Salem, Robert Hooper and the Daltons of Marblehead jointly consigned about 2,000 quintals of codfish to Newton & Gordon in 1762 and 1763.

and the depredations of the French and Indian War, increased competition and led many firms to formalize their supply alliances with Americans and look for new sources. Newton & Gordon struck agreements for cod with Jeremiah Lee, Robert Hooper, and John Rowe of Massachusetts and for herring with Scot & Co. of Sweden. As the inclusion the latter suggests, interruptions of traditional channels caused firms to think about alternatives, principally herring from northern Europe. Prior to the Seven Years War, firms with American connections imported cod; those with ties to Britain did what the Gordons Brothers did and sold herring. The island's herring supply had been "entirely in the hands of the Glasgow merchants" and "hardly any" other fish vessels "came from any other port." But during the war, as American correspondents faltered or were prevented from supplying fish, Newton & Gordon and other firms looked to the Baltic. Newton & Gordon's competitors the Gordon Brothers began devising schemes to import fish from Sweden, Norway and Scotland, and in particular to sell Swedish herring "in their shops." They preferred Swedish herring because it was a "larger fish &, being cheaper," it yielded "more to the importer," especially "when retailed at the same price with British herring." In a lucrative adventure of 1760, the Gordons joined Scot, Pringle & Cheap to bring a shipload of red herring from Bergen to Madeira; the ship then carried what remained unsold, together with wine, to the Canaries and South Carolina, and consigned it to an agent in Charleston; on return, it carried rice to Lisbon. When the new schemes, too, were frustrated by war or the depletion of fish stocks, distributors settled for smaller, rounder and cheaper Southern European pilchards. As cod stocks ran short in the 1770s, even the most diehard cod proponent turned to pilchard for short-term supply. Between the Seven Years War and the American Revolution, Americans dominated cod imports into Madeira, and Britons controlled herring imports; after the end of the Revolution, American control of cod importation lapsed, annual exports to Madeira falling to a sixth of what they had been at the end of the Seven Years War and leaving the British "with no other rival" in the herring and salted cod fish trades.[8]

Thus, the Madeira firms diversified, adding other products to their core *raison d'être* of supplying wine to the world. The products were complementary to the distributors in that they "administer[ed] both … old and new activities with the same personnel, using the same channels of communication and authority and the same types of information." On the acquisition side, they completed with each other to sell the crops of their American buyers. Richard Hill's complaint, in his first year in the island, was not that he lacked buyers for the wine he proposed to send to America, but that he was miserable "for want of wheat, bread, or flour" to sell on the island. "I have not a single friend to consign to me," he wailed. They built supply networks that coordinated the "vertical or transactional interdependencies between firms," provided "a flexible organizational solution for joint specialization," offered "some protection for property rights of intangible assets," and reduced "the capital accumulation constraint on the division of labor and growth." Few of the relationships were full-fledged joint ventures, at least until the Seven Years War; their contracts specified simply "the terms of goods and service exchange and not the organization of the relationship between the firms."

[8] On herring and pilchards, see Alexander Gordon to James Gordon, October 8, 1760, Chambers, Torngren, Bellenden & Co. to James Gordon, September 15, 1762, March 2, September 14, 1763, Alexander Gordon to James Gordon, July 8, 1766, Letterfourie Papers; Orders from Gothenburg, 1764-1765, Box 3, Cossart & Gordon Papers, Guildhall Library. Charles Murray supplied the Marquis of Carmarthen with a detailed qualitative and quantitative report on the state of the island's fish trade in 1786. Memo, July 15, 1786, FO 63/7.

They managed the networks using many of the same personal, voluntary and non-hierarchical management approaches they used with customers.[9]

Over time, product diversification and geographical expansion "added new resources, new activities, and an increasing number of entrepreneurial and operational actions and decisions," and the existing wine-trading structure of middling and large firms was found wanting in dealing with these demands. They moved from a multitude of *ad hoc* supply relationships to fewer, more regular and longer-term relationships, along with larger inventories, more physical plant and more labor, and so greater capital to cope with their more complicated businesses; this in turn begat a search for additional products and other ways to keep the resources productive.[10]

QUALITY CONTROL

At the same time they were developing and managing supply networks, Madeira's distributors were increasing their oversight of the quality of the wine all along the distribution chain. From early on, as evidenced by the letters of seventeenth-century merchants, they personally tasted and tested the wines before placing them on board ships, discarding bad wines when necessity arose. They personally visited the vineyards, usually late in the year, taking with them a "Taster," a Madeiran employed both for his language skills and his palate's discrimination. Usually a Taster was an employee of only one house. When Francis Newton opened shop in 1748, he assured his silent partner George Spence that although personal "knowledge of wines" was ultimately necessary for real success, "most merchants trust to their Tasters, Portuguese, who are the best

[9] Zuscovitch, "Networks," p. 243; Grandori and Soda, "Inter-firm Networks," p. 13.

[10] Richard Hill to Richard Hill Jr., March 4, 1741, Hill Family Papers, Howland Collection, Folder 1, Haverford Library. On diversification, see Alfred D. Chandler, Jr., *Strategy and Structure: Chapters in the*

judges of it."[11] About this time distributors begin to instruct their agents overseas to test the wine when it arrived. In 1763 Robert Bisset instructed Henry Hill, who had just returned to Philadelphia to the firm's resident partner there: "If you should [travel] … near any of these gentlemen's [customers'] houses, I wish you could taste the wine and advise me how they prove, for I can assure you they were not entirely to my liking, having an *aspereza* [roughness or harshness], [and] smallness." After 1775, this kind of oversight became commonplace. Indeed, it bore to the heart of a firm's ability to compete. When John Leacock, Sr. instructed his son on how to handle the London business, he was expanding upon what Bisset had urged nearly three decades before: "particular attention" was to be paid to the quality of the wines that were shipped, so that the firm would be "able to succeed in giving general satisfaction." An agent was to "strain every nerve" and gain "a knowledge of the kind of wines which are imported into London," by the firm and competing houses. It would not be going too far, in fact, "to attend on the quays when the West India ships arrive, both to hear the character of the wines shipt" and, "if possible, to taste them yourself and give us the fullest information respecting their quality which may be the means of our improvement in what we ship." If the wine was found wanting, or the consumer "obstinate & tenacious" in insisting that it was so, most firms came to believe "we must take it back if they insist on it." It would

History of the American Industrial Enterprise (Cambridge, 1962), pp. 14-15, 42-9; Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, 1990), pp. 8-9, 39-45.

[11] Alberto Vieira, *O Público e o Privado na História da Madeira*, vol. 1: *Correspondencia particular do mercador Diogo Fernandes Branco (1649-1652)* (Funchal, 1996); Hancock, ed., *Letters of Freeman*, *passim*; Blandy, ed., *Bolton Letters*, *passim*; Francis Newton to George Spence, December 6, 1748, June 6, 1749, v. 1, ff. 16, 26, Newton & Gordon Letterbooks; Robert Bisset to Henry Hill, July 20, 1763, v. 6, f. 63, John Jay Smith Collection "A", to Henry Hill, August 30, 1763, Folder 3, Richard Lamar Bisset to Henry Hill, December 25, 1785, Folder 6, Sarah A.G. Smith Collection, Hill Family Papers, HSP. Occasionally, a taster might be a foreigner. Thomas Gordon's nephew William Caulfield served as Newton, Gordon & Johnston's taster in the 1780s. Newton, Gordon & Johnston to Thomas Gordon, July 22, 1786, v. 9, f. 254, Newton & Gordon Letterbooks.

not do to have wine with a bad reputation flowing about foreign markets with the firm's name attached.[12]

The increased attention to quality at the points of distribution and in the hands of customers came at the same time that Madeira distributors began changing the makeup of the beverage – fortifying it with brandy, rocking it in barrels, heating it, and remaking its packages. Their focus on product quality was as conversation-based as their outreach to customers and suppliers. They carried on conversations not only with their partners and agents, but also their neighbors. They were intensely interested in what their neighbors were doing. They picked up a lot informally, in the course of idle conversation at Factory meetings, social events at Bachelor's Hall, and extemporaneous visits to one another's counting houses. Given how small Funchal was and how much their correspondences overlapped, it was difficult to keep secrets for long; with respect to product innovation, few firms even tried. The Leacocks regularly monitored the progress of the larger Newton, Gordon, Murdoch & Scott firm, for instance, "to see how they proceed" before making major decisions. Similarly, they knew when the Murdochs were beginning to heat their estufa, and what Phelps was doing with his. Exchanges of information required limited grants of cooperation, contribution and commitment among firms. They fostered information exchange and built trust among firms.

For quality control to pay off, the Madeira distributors also had to educate customers in the art of connoisseurship. "Quality" was wasted if customers could not discern it. This became crucial as blended and heated wines came on the market in

[12] Robert Bisset to Henry Hill, July 31, 1763, v. 6, f. 64, John Jay Smith Collection "A," Hill Family Papers, HSP; James Gordon to Alexander Gordon, December 5, 1765, Letterbook 1765-75, ff. 5-6, Letterfourie Papers; John Leacock, Sr. to William Leacock, August 16, 1791, f. 2, Leacock & Sons

greater volume in the 1790s, and their arrival was an impetus behind the extensive conversations about the nature of the wine, its color, odor, taste and strength. During that decade, firms expressed heightened concern that a "palate … accustomed to drink genuine and unsophisticated wine" be able to detect bad vintages and wines wrongly "improved" by mixtures. Accordingly, they took steps to articulate in detail how to tell the good from the bad, defining "quality" together with their customers.[13]

GREATER ENGAGEMENT WITH SHIPPING

Through the end of the Seven Years War, Madeira distributors mostly acted as agents – filling orders and accepting consignments from customers, and allowing the owners and captains of vessels to control the property in transit and assume the risks. It was a principle of prudence that guided most firms "very rarely [to] adventure deeply for our own account, whether sending out wines or taking in provisions."[14] Surviving business letters and accounts suggest that the merchants began to depart from such caution and participate more fully in shipping and trading in the 1760s. They took shares in ships and cargoes; a common division was for each merchant or firm to take one third of a ship or cargo. This ensured them of provisions and orders and divided costs and risks. Furthermore, joint ventures encouraged a measure of cooperation among

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Letterbook, 1791-94, Leacock Papers; Francis Newton to Newton & Gordon, March 28, 1770, Box 5, Cossart Gordon Papers, Guildhall Library.

[13] Francis Newton to Newton, Gordon & Johnston, January 19, 1791, Box 1791/92, Cossart, Gordon Papers, Guildhall Library; Newton, Gordon, & Murdoch to John Campbell, April 14, 1798, v. 18, f. 316, Newton & Gordon Letterbooks. Cf. Lamar, Hill, Bisset & Co. or Searle & Co. to Samuel Galloway, August 20, 1764, Folder 7, Galloway Papers, Library of Congress; Alexander Oliphant to James Duff, January 14, 1767, Oliphant & Co. Letterbook, f. 18, GD 306/1/1, SRO.

[14] Newton & Gordon to John Rowe, September 13, 1762, to Thomas & Thomas Gerry, December 12, 1762, and to Thomas Newton, April 22, 1763, Newton & Gordon Letterbooks.

distributors, property-based incentives being necessary "where uncertainty and opportunism are particularly prevalent" as they were in the mid-century wine trade.[15]

As early as 1749, a couple of export houses resolved for the first time "to buy a small vessel to send to North America," seeing the "scheme" as "the only method in the world" "to push business from America," that is, to obtain imports into Madeira, which by that time comprised "half of this trade." By participating in the venture, Lamar, Hill, Bisset & Co. "made a great advantage of their grain" which "turned out to better advantage than if consigned" the normal way. During the Seven Years War, wine firms began to compete more vigorously for North American consumers; as part of the competition, they took more shares of American imports on their own accounts. They paid the freight with bills of exchange on the delivery of the cargoes, "authorizing the shippers to draw for their reimbursement" "upon London at the usual sight". In 1757, Hill's firm began regularly buying shares in cargoes imported from Philadelphia, and their competitors began to grumble that they often made "a great hand of their grain and turn[ed it] to better advantage than if [it was] consigned to them by Americans." After the close of the war, copying the Hill model, John Searle II and the Philadelphian Thomas Riche took shares in grain from Philadelphia, and Newton & Gordon ordered "a small quantity" of Massachusetts fish on their own account. Like the Searle-Riche partnership, many were with correspondents on the western shore of the Atlantic; the Gordon Brothers kept a 140-ton vessel sailing among Madeira, St. Kitts and Virginia by

[15] Grandori and Soda, "Inter-firm Networks," pp. 16-17. On joint ventures generally, see G. Balcet, *Le Joint Ventures Multinazionali: Alleanze tra impresse, competizione e pore di mercato economia mondiale* (Milan, 1990); C. Turati, *Economia e organizzazione delle joint venture* (Milan, 1990); J. Laage-Hellman, "Technological Development in Industrial Networks" (University of Uppsala, Ph.D. thesis, 1989); Farok J. Contractor and Peter Lorange, "Why Should Firms Cooperate?" in Contractor and Lorange, eds.,

owning it in thirds with a Leeward Islands trader and a Norfolk merchant.[16] Such ventures, islanders reasoned, brought them not only supplies of fish but also buyers of wine. Owning vessels and cargoes came to be seen as the best method for controlling trade. From the time of the Seven Years War, the "entire plan for American correspondences" was rewritten. Firms continued to accept consignments of fish, wheat and rice and "made return" in first-rate London wines and lower quality New York wines. But increasingly they also took shares in vessels, although only "according to circumstances." The expense of owning vessels and freighting space, and the probability of loss were still high.[17]

Assuming a principal's risk was a major business change for the distributors of Madeira's wine, further enmeshing their operations with those across the ocean. Even more than receiving each others' goods on consignment for resale, taking ownership of commodities required the extension of trust. It has always been useful, as Kenneth Arrow has noted, "for individuals to have some trust in each other's word." Absent trust, "it would become very costly to arrange for alternative sanctions and guarantees and many opportunities for mutually beneficial cooperation would have to be forgone." In the small world of the Madeira wine trade, the "parallel creation of trust between the firms" or enterprisers in question was effected by interpersonal affiliation, expressions of

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Cooperative Strategies and Alliances (Oxford, 1988) pp. 1-28, 57-68; P. Beamish, *Multinational Joint Ventures in Developing Countries* (London, 1988).

[16] Francis Newton to George Spence, April 1, 1749, Newton & Gordon Letterbooks, v. 1, f. 15; and Alexander Gordon to James Gordon, December 27, 1761, Letterfourie Papers. Compare the Searles' New York schemes as described in Thomas Newton to Francis Newton, December 26, 1758, February 19, 1759, Thomas Newton Letterbook, Madeira Wine Company Archives.

[17] Francis Newton to George Spence, March 7, 1757, v. 1, f. 248, Newton & Gordon Letterbooks; Thomas Riche to John Searle, August 9, 1764, Thomas Riche Letterbook, v. 1, HSP; Newton & Gordon to Thomas Gerry, Jr., May 23, 1766, Newton & Gordon Letterbooks, v. 4, f. 23; Newton & Gordon to Johnston & Jolly, February 18, 1767, to Hugh Moore, April 1, 1783, to Archibald Moncrief, November 25,

shared values and norms (articulated through trans-oceanic epistolary conversations), and individuals' reputations for performance over extended periods.[18]

Trust was important, but the Madeirans' motto was more "trust but verify" than simply "trust." They regulated and monitored the riskier principal ventures in ways that they did not apply to consignment trade. At the outset of a venture they required a personal financial commitment from their partners, to purchase and outfit the vessels and acquire goods. They demanded frequent updates from fellow adventurers on all aspects of a voyage. They demanded frequent and detailed accounting. Finally, they were more meticulous about insuring their own cargoes and ships than they were those of others who had consigned goods to them. This combination of trust, information and control made joint ventures common, and they persisted well beyond 1815.

PROFESSIONAL APPROACH

Another way the Madeira merchants organized the transatlantic trade in the eighteenth century was their increasingly coordinated, "professional" approach. The greater volumes of information and money were handled with greater care and standardized. By 1815, most firms of middling size or larger had customers on four continents, and so the need for coordination was great. This is evident among the foreign firms on Madeira most clearly. Account books were ordered as needed from London,

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1791, and to Samuel Donaldson & Co., September 25, 1794, v. 4, f. 67, v. 8, f. 18, v. 14, f. 21 and v. 16, f. 96, Newton, Gordon & Johnston to Hugh Moore, April 1, 1783, v. 8, f. 18, Newton & Gordon Letterbooks.

[18] T.K. Das and Bing-Sheng Teng, "Trust, Control, and Risk in Strategic Alliances: An Integrated Framework," *Organization Studies*, v. 22 (2001), pp. 1-2, 6-7; Kenneth J. Arrow, "The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Nonmarket Allocation," in *The Analysis and Evaluation of Public Expenditures: The PPB System*, v. 1 (1969), p. 62; Borch, "Strategic Networks," p. 7. More recent discussions of trust in a historical context include Luuc Kooijmans, "Faith and Trust: The Van der Meulen Family," in *Entrepreneurs and Entrepreneurship in Early Modern Times* (The Hague, 1995), pp. 25-34, and Peter Mathias, "Risk, Credit and Kinship in Early Modern Enterprise," in John McCusker and Kenneth Morgan, eds., *The Early Modern Atlantic Economy* (Cambridge, 2000), pp. .

often in batches. Before the middle of the eighteenth century the books were basic, and even later if a merchant was launching himself. A few years into his partnership with George Spence, Francis Newton asked him for "a Journal & Ledger, the same as last, & a Cash Book pretty broad, post paper & wax." But by the time Newton & Gordon added a partner in 1774, it ordered a full run of books from the London stationers Goadby & Berry. The requirements of a growing, successful firm now included:

> 1 ledger, containing 7 quires, of fine, super-royal paper, bound in vellum, covered with buckram and lettered (a quire commonly forming 16 pages);
> 1 alphabet to the ledger;
> 1 journal, similarly constructed;
> 2 books, each containing 3 ¼ quires, each of fine royal paper, bound in vellum, covered in buckram and lettered;
> 1 book, marked "Invoices, Bills, & C."
> 1 book, marked "Cash Book";
> 1 book, marked "Bill Invoice Book";
> 1 book, marked "Wine Entry";
> 1 book, marked "Borrador & C., for payments and disbursements to the men who carried wine from the countryside in goat skins;
> 1 book, marked "Island Accounts";
> 1 book, of demi-paper, marked "Copy of Letters";
> 1 book, marked "Merchandise Expenses";
> 6 books for memorandums, unruled, with marble covers;
> 6 alphabets; and
> 3 titles for books.

In addition, supplies were to accompany the books:

> 6 pasteboards;
> 2 reams of quarto letter paper;
> 2 reams of fine foolscap paper;
> ½ ream of blotting paper;
> 12 papers of ink powder;
> 1 bottle of red ink;
> 1 tin pen;
> 6 pencils;
> 1 ruling brass;
> 2 sand boxes;
> 4 ivory handle penknives;
> 2 pairs counting-house scissors;
> 2 ivory folders; and

12 pieces of red tape.

The labels of books were marked in English or Portuguese, depending on the activity being recorded. Some books were dedicated to the accounts of island suppliers, island customers, and house expenses, while others devoted to overseas people and ventures.[19]

As account books multiplied in counting houses, the practice of accounting with them became widespread. Before mid-century, British books were balanced infrequently – often upon the death of a partner or termination of a partnership, or at the whim of the resident, say once every seven years. No standard prevailed; certainly annual balancing was not part of the exporters' lexicon. But by the end of the century annual inventory-taking and account-balancing had become routine for any firm of any size or with overseas partners.[20] Annual accounts were now made up and to end every June 30. Portions of the accounts kept in these books were routinely copied and forwarded to partners overseas. Typical was one enclosure that John Leacock, Sr. sent his son William in London in 1796. It contained an inventory, a balance sheet, a list of bad debts, accounts for the several partners, a statement of profit and loss, "wine accounts," and the

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[19] This and the following paragraph draw upon Francis Newton to George Spence, October 27, 1753, v. 1, f. 77, Newton & Gordon Letterbooks; Daniel Henry Smith, Memoranda to London Partner on goods "For the Counting House" in Funchal, 1760s, Letterfourie Papers; Invoice, May 7, 1774, Box 8, Cossart, Gordon Papers, Guildhall Library; John Leacock, Sr. to William Leacock, August 12, 1796, Leacock & Sons Letterbook, f. 135; John Howard March to Thomas March, November 25, 1815, September 23, 1816, pp. 13, 224, March Letterbook. Separate "East India" books do not commence in the island firms' record-keeping until 1813. In addition to accountbooks, island merchants increasingly purchased accounting treatises as training and reference books in their counting houses after 1775, for "the merchant should be perfectly acquainted with all the departments of writing, arithmetic, and the keeping of books." Anon., *The Book of Trades, or Library of the Useful Arts, Part I* (New York, 1807), p. 129. Some of their purchases included: Daniel Dowling, *A Complete System of Italian Bookkeeping according to the Modern Method Practised by Merchants and Others,* 2nd ed. (Dublin 1770); William Perry, *The Man of Business, and Gentleman's Assistant* (Edinburgh, 1780); George Fisher, *The American Instructor* (Philadelphia, 1787); Thomas Dilworth, *The Young Book-keeper's Assistant* (Wilmington, DE, 1798); Charles Hutton, "Citizen of Philadelphia," *A Course of Book-Keeping, according to the Method of Single Entry, with a Description of the Books, and Directions for Using Them*, 2nd ed. (Philadelphia, 1815).

[20] How-to manuals were published by a variety of American and British accountants; the exporters read them and demanded their clerks read them, too.

London partner's account for counting-house and related expenses incurred overseas (such as the subscriptions at the coffee houses for the admission of the individual partners or clerks, the fees and gratuities at the India house or other public offices, and postage). The terms of the accounting were increasingly deemed one of the most important things to articulate in the articles of copartnership. In 1814, Newton & Gordon, once again restructuring itself, felt it necessary to detail the terms. Each year, on June 30, "an inventory of all goods, and effects on hand shall be taken, and a general balance of the books and accounts made, as soon after that period as the same can be accomplished." Copies were to be transmitted "to the managing partner in London to lie in his counting house for the information of himself and of the other partners." (Article 6) The articles set rules for listing inventory "to prevent trouble, and guard against possible differences in opinion, concerning the valuation of effects and property."

> All wines, brandies, casks, and materials for making casks shall be valued at first cost & charges, as nearly as the same can be ascertained.
>
> All Merchandise shall be valued at the current market prices at the date of the inventory, deducting therefrom 12 ½ percent as an allowance for expense of sale & management.
>
> All Furniture to be valued at the prices in the preceding inventory, or if purchased subsequently at the price of cost and charges, deducting therefrom; however an allowance at and after the rate of ½ percent from the date of the preceding inventory;
>
> All property in houses and buildings to be taken at the original cost, except some circumstances should have occurred to enhance or depreciated the value, in which case as much be left to the discretion of the persons on the spot.
>
> All debt known and ascertained to be lost beyond doubt should be expunged from the account to prevent the copartners being deceived as to the amount of their gains, from the business, or of their capital in the house.

But it was not just annual accounts that needed to be submitted in a neat and orderly fashion. Weekly and monthly letters updating overseas partners were kept with greater precision and sent with greater frequency. By 1815, many firms were doing what a new

American exporter was doing – telling his partner in the States to keep to a "plan of numbering" correspondence, "so that all your letters shall be regularly noticed." Numbers on letters may seem small matters to later generations, but "particularity in numbering and forwarding letters" sped the flow of information, increased the ease of decision-making and reduced transaction costs.

Record keeping, double-entry bookkeeping and regularized methods for managing correspondence were also more widespread by 1815 among the Portuguese. Due in part to initiatives like the Marques de Pombal's *Aula da Commercio* in 1769, many large Portuguese firms, at least on the mainland, adopted British-style record-keeping by 1800 at least as far as their conduct of trade was concerned. Turn-of-the-century records left by Tome José Pereira Araujo and Domingos Oliveira were every bit as full and regular as those of Newton, Gordon, Murdoch & Scot, although there still remained a fair amount of variation in Portuguese houses.[21] It is hard to be precise about the Portuguese Madeira wine houses because few firms' records survive before the end of the century. British merchants complained diachronically and xenophobically that even large Portuguese firms kept their records badly. When William Halloran joined with Manoel Da Campos in the 1730s, he found the accounts in a mess. "What little business" Da Campos had "was ill attended," his partner "trusting entirely to a Portuguese clerk & serv.ts whom he never was at the trouble to call to an accot, nor did he ever look into the

[21] Jorge Pedreira, unpublished ms, European University Institute conference, October 2001, and his draft book manuscript, January 2003; Tome José Pereira Araujo and Domingos Oliveira accounts, in American archives, and Cossart Gordon Papers, Guildhall Library. Porto wine export houses' records suggest much the same conclusion. The accounts of Ferreira, the largest Portuguese house in 1834, still kept records erratically and sloppily, often on scraps of paper. In contrast, Sobral & Pinto, which worked closely with an English house (Swann Knowsley), kept records in the standard northern European manner. Not all English Porto houses, of course, maintained pristine records either. Young firms, like Hunt Roope and Sandeman, only slowly started keeping pristine records, at the point that they assumed economic leadership in the community. I am indebted to Paul Duguid for some of this information.

house's affairs, having at that time a pretty good estate of his own to live upon." "All the books that appeared were a confused blotter or a sort of waste book in the Portuguese language & an Invoice book with some accots of Dr & Cr in English." Halloran and James Gordon introduced the full range of double-entry books, ledgers, journals, and complementary sets and forms, "in order to … proceed in a more regular manner than they had done."[22] While one might discount such diatribes, the evidence that survives suggests some truth to the accusations, certainly to the charge that the Portuguese wine exporters did not adhere to northern European standards of the day. The Portuguese firms were familiar with commercial forms – they commonly used bills of exchange, for instance, especially in international trade – but they frequently did not record them for comparison later on. Many Portuguese wine exporters kept no records, but then their annual exports of wine may have been so small (as described in Chapter Five and Six) that rigorous accounting hardly seemed warranted. Others kept some books, but these were simple compared to the English houses' books. Jesus Maria Joseph of Funchal, for instance, kept a book of Current Accounts in which he listed only the item sold, the unit rate, and its total value; there are no cross-references to other books, and no identifications of accountholders.[23]

In addition to accounting methods and record books, participants in the Madeira wine trade adopted common standards over the eighteenth century. The pipe was one example that cut across national lines. Island firms came to insist on 110-gallon-containers for all but the India market. This standard probably hardened because 110

[22] A State of the Case, c. 1758, Letterfourie Papers. Adam Smith apparently believed this, as well, contrasting how different were "the conduct and character of merchants" – and related to this their profits – in Cadiz and Lisbon, as opposed to Amsterdam. *Wealth of Nations*, IV.vii.3.

[23] Jesus Maria Joseph, Livro do Conta Corrente, 1706-32, Arquivo Regional Madeira.

gallons was also the volume of the British Caribbean sugar and rum container, and West-Indian sugar planters, important buyers of wine, could reuse the casks, effectively reducing the cost of the wine to them. Similarly situated Mid-Atlantic wheat and corn exporters reused wine pipes for grain cargoes.[24] But common standards also attached themselves to business methods. Partners and clerks were increasingly required to speak, read and write Portuguese. Alongside such requirements, one finds correspondents earning commissions and agents earning salaries becoming more commonplace, and their presence in most major consumer ports contributed to better communication with consumers. Most intriguingly, the larger, more successful firms' correspondence is strewn with partners' insistence that clerks adhere to the same prices for wine, terms of barter, and standards for quality.[25]

CAPITAL

By the turn of the nineteenth century, the Madeira exporters had invented the wine – with its accompanying production processes, elaborated their outreach to customers, extended credit to those they served, and organized the trade. Most customers were no longer individuals, but themselves distributors – wholesalers or retailers in the West Indies, the new United States or India, mainly; customer-supplier relations were developed and cemented by multiple layers of interest; infrastructures of partners and agents monitored the products and the reactions of drinkers around the world; and the

[24] Reusage was common. Pipes being used as rum containers are noted in the 1750s in: Port of New York Manifest Books, v. 36, nos. 13, 45, New York State Archives, Albany; Thomas and John Lawrence to Baynton, Wharton & Morgan, June 4, 1764, Baynton, Wharton & Morgan Papers, PSA.

[25] Chapter Four, above, nn. 91, 98, 116-17. Robert Bisset and Joseph Gillis to Marien Lamar, February 28, 1770, Folder 5, Hill Family Papers, HSP; John Marsden Pintard to Elias Boudinot, January 15, 1783, Boudinot Papers, Folder 40, ABS; Richard Lamar Bisset to Lamar & Bisset, December 9, 1791, v. 10, f. 210, Robert Bisset to Henry Hill, August 2, 1796, Folder 7, Hill Family Papers, HSP.

principal sources of profit moved away from the simple trading format – buying low and selling high – to a more complex, integrated and controlled management of suppliers, shipping, and customer relationships around the world.

Doing these things was expensive, and became more so over the course of the eighteenth century. They took capital; over time, larger amounts of it – capital for manufacturing machinery, new and traditional supplies, space and, above all, inventory. As the anonymous author of *The Book of Trades* noted in detailing the work of the merchant in 1807, "[t]o carry on the business," "a man should possess "a large stock of general knowledge, and a considerable capital." In building their trans-Atlantic wine businesses, the Madeira wine exporters became "capitalists." They increased the capital in their businesses, taking additional partners and expanding their firms if they deemed that necessary. The remainder of this chapter examines the accumulation of capital in the trade, and the growth in firms that that additional capital required.[26]

"CONSIDERABLE CAPITAL"

Partners' equity rose rapidly after 1750. Detailed records of capital requirements are rare for Madeira houses, as for firms in any trade of the age. But a dozen or so accounts have survived in business archives, and they allow us to chart the increase in the

[26] Anon., *The Book of Trades, or Library of the Useful Arts, Part I* (New York, 1807), p. 129. "The word "capital" and "capitalist" did not mean in the eighteenth century what they have come to mean in the twenty-first (especially as concerns the capitalist's ties to labor), and the treatment that follows adheres to early denotation. In the eighteenth century, they connoted the "stock of a company, corporation, or individual with which they enter into business and on which profits or dividends are calculated." *OED sub* "capital." Before the 1830s, it did not connote the "general body of labourers and operatives." For pre-1830s meanings of "capital" and "capitalist," see Richard Grassby, *The Idea of Capitalism before the Industrial Revolution* (New York, 1999); François Crouzet, *The First Industrialists: The problem of origins* (Cambridge, 1985), p. 10; Jean Baechler, *The Origins of Capitalism*, (New York, 1976), pp. 20-8. Cf. Randle Cotgrave, *A dictionarie of the French and English tongues* (London, 1611), *sub* "capital": "wealth, worth; a stocke, a man's principall, or chiefe, substance"; Edmund Burke, *Reflections on the Revolution in France* (London, 1790), p. 51; *Arthur Young, Travels in France* (London, 1792), p. 529; Jedidiah Morse, *The American universal geography*, v. 1 (Boston, 1796), p. 442.

demands upon partners for both start-up and operating capital. In 1756, Michael Nowlan and another Irishman, Gedley Clare Burges, entered into partnership; to initiate their trade, they and two sleeping partners on the mainland pooled 12.000$000 (£3,250). Nowlan & Burges lasted for six years, after which Nowlan decided to go it alone. In 1774 he joined forces with John Leacock; they deemed 17.000$000 (£4,604) sufficient to carry on work nearly identical in scale to Nowlan & Burges. In 1791, four years after Nowlan died, Leacock reset the stocks of the firm and took his sons John and William into the business. Leacock & Sons opened with capital of 26.250$000 (£7,100). This was not enough to meet the mounting demands of the trade, however, for, five years later, they increased the amount to 36.000$000 (£9,800). In less than forty years, the capital requirements for a mid-sized wine trading firm had tripled.[27]

The requirements for a larger operation are represented by Newton & Gordon. In founding the firm in 1758, Francis Newton contributed half the capital, Thomas Gordon a third, and Thomas Newton a sixth, but it is unclear what the total was. From allusions in correspondence, it appears to have been between £3,000 and £6,000. In the mid-1760s, on the death of Thomas Newton, the remaining two partners “augmented” firm capital “considerably,” probably raising it to £20,000. Two years later, when William Johnston joined them, the books show £17,469 (64.500$000) of capital, although the demands of increasing inventory caused them to raise their investment the following year to £23,833 (88.000$000). According to Gordon, “the average capital employed” at the time of balancing in 1778 and 1782 amounted to £29,792 (110,000$000) and of this just over half

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[27] Nowlan & Leacock Ledger 1774-84, and Leacock & Sons Ledger 1791-1800, Casa Branca, Funchal. No later figures survive. The total capital of Leacock & Spence for 1759-74 amounted to 4.000$000. Similarly, in 1761, the capital stock of a comparably sized competitor – Smith, Ayres & Co., a firm of four

"existed on the island." After the war – although not because of peace, but because a London partner wished to contribute less – the firm discussed reducing its capital to £15,000. In the end, they concluded that that would "be scarcely sufficient" for a firm desiring to regain lost ground, and revived the notion that at least £20,000 was needed, believing "every advantageous object may be pursued" at that level, and allowing any excess to be distributed to the partners. To solve the London partner's concerns, the firm replaced William Johnston with Thomas Murdoch IV in 1794. The firm's new partners took the opportunity of re-writing the articles, increasing the capitalization only slightly, to £21,000. But this badly projected growth, and the amount did not satisfy the demands of maintaining inventories and making increasingly large shipments of aged wine to America. Accordingly, four years later, they doubled the firm's capital to £40,000. By 1805, after old Gordon died and a new five-man partnership was formed, stock was set at £64,000; three years later, even that was insufficient, and so they reset it at £90,000, where it remained for the duration of the Napoleonic Wars. In the first fifty years of the Newton, Gordon firms' history, their stock rose nearly twenty-fold. On Madeira as elsewhere, an extensive Atlantic trade "required an extensive capital."[28]

INVENTORY

The most direct evidence for the growth in capital required to participate in the Madeira wine business comes from firm records that show the increases in inventory. Table 7.1 shows the values of three firms' total inventories between 1753 and 1815; these inventories were greater than for most firms. Although it varied slightly from firm to

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partners – was set at £3,000, each sixth contributing £500. Newton & Gordon to John Parminter, July 27, 1761, Newton & Gordon Letterbooks, v. 2, f. 322.

Table 7.1
Total Inventory of Three Wine-Trading Firms [29]

	Newton & Gordon		Lamar, Hill, Bisset		Leacock & Co.	
Date	Reis	Pounds	Reis	Pounds	Reis	Pounds
1753 [30]	8.081$790	2,189				
1759	5.503$676	1,491				
1760	14.696$238	3,980				
1761	7.632$999	2,067				
1762	3.887$821	1,053	29.238$093	7,919		
1763	7.627$509	2,066				
1764						
1765	10.133$289	2,744				
1766	13.477$596	3,650				
1767			47.873$255	12,966		
1768						
1769						
1770						
1771	23.403$978	6,339				
1772			22.754$921	6,163		
1773						
1774	20.152$350	5,458				
1775	24.524$400	6,642				
1776					17.176$000	4,652
1777			40.951$341	11,091	18.716$450	5,069
1778	37.573$515	10,176			8.001$917	2,167
1779						
1780						
1781						
1782	54.530$000	14,769	39.182$675	10,612		
1783	54.800$000	14,842				
1784						
1785						
1786						
1787			48.697$277	13,189		
1788						
1789						
1790	45.000$000	12,188				

[28] Newton & Gordon to Johnston & Jolly, v. 4, f. 90, to Francis Newton, November 27, 1773, v. 5, f. 279, to Thomas Gordon, April 26, 1785, v. 8, ff. 438-45, to Francis Newton, November 10, 1798, v. 19, f. 142, Newton & Gordon Letterbooks.

[29] The rate of exchange was 1$000 = 65 pence sterling. John J. McCusker, Jr., *Money and Exchange in Europe and America, 1600-1775: A Handbook* (Chapel Hill, NC, 1978), p. 113.

[30] 1753 inventory for Newton & Spence.

Table 7.1
Total Inventory of Three Wine-Trading Firms [29]

Date	Newton & Gordon Reis	Newton & Gordon Pounds	Lamar, Hill, Bisset Reis	Lamar, Hill, Bisset Pounds	Leacock & Co. Reis	Leacock & Co. Pounds
1791	72.248$730	19,567			12.388$699	3,355
1792			33.688$665	9,124		
1793						
1794						
1795						
1796					25.593$872	6,932
1797						
1798						
1799						
1800					67.855$208	18,377
1801					69.281$896	18,753
1802			39.672$150	10,745	54.137$168	14,662
1803					48.098$276	13,027
1804						
1805	335.080$939	90,751			100.564$624	27,236
1806						
1807	344.816$252	93,388			116.352$793	31,512
1808	284.524$467	77,059			100.045$637	27,096
1809	342.594$869	92,786				
1810	271.305$887	73,479			85.823$463	23,244
1811	267.924$451	72,834				
1812	261.370$709	70,788				
1813	311.308$179	84,313				
1814	257.293.210	69,683				
1815	300.934$412	81,503			98.908$659	26,246

firm, a total inventory accounting generally included wine (including brandy), “charges on wine” (gesso and brimstone for fining, preparation implements – funnels, cranes, pinchers and corkscrew – and wooden and glass containers), merchandise such as dry goods, fish, wheat and rice, “charges on merchandise” (wooden casks and cloth bags, “engines for cleaning wheat,” and weights, beams and scales), office utensils such as books, papers and writing supplies, house furniture, house expenses, and cash. In the case of the Newton, Gordon firms, it also included the amortized values of leased and owned property, but the listing of such was unusual. Inventory fluctuated quite a bit from year to year and even decade to decade, depending on weather, harvest, vintage, war and consumer demand, but the overall trend toward larger inventories is evident in all three companies.[31]

The Newton firms, especially, grew dramatically in the last half of the century. Newton came out to Madeira in 1748, and had a business with George Spence between 1748 and 1757. The only inventory we have of that partnership is its combined stocks in December 1753: 8.081$790 or £2,189. After Newton split from Spence and allied himself with Thomas Gordon, the records became more frequent. There exist seven inventories from the first eight years of their partnership; they were subject to wide swings, but the average of those seven itemizations was just shy of 9.000$000, or £2,435. The average for the inventories of 1790 and 1791 was 58.600$000, almost £15,900, an increase of more than five and one-half times; if the increase had been steady over the 30 years, it would have been nearly 7% per year. The greatest rise, however, occurred over the next decade, as all firms moved to adopt the more expensive and seemingly more profitable estufa heating process. In the 10 of the 11 inventories recorded between 1805 and 1815, their total inventory averaged 297.815$238, or £80,658, and constituted a remarkable fivefold increase.[32]

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[31] In addition to these three firms' inventories, see inventories in the Letterfourie Papers: David Henry Smith to James and Alexander Gordon, May 11, 1775, noting December 31, 1774 inventory.

[32] Figures for inventory and capital stock levels are presented in the Newton & Gordon Inventory and Ledger Books, 1760-1815, kept by the Madeira Wine Company in its Funchal museum. Comparable figures are available for the several Leacock firms. In 1800-07, Leacock & Leacock's wine inventory averaged 82.004$000 per year, more than eleven times what it had averaged in 1790-91 (7.291$760, or 28% of a total 26.042$000). Ledger, 1800-1810, Leacock Papers, Casa Branca, Funchal. On the difficulties of making up annual balances because the "accounts with the Country Men are so many" and the "accounts with the Hucksters never shut," see Francis Newton to George Spence, July 16, 1785, v. 1, f. 169, Newton & Gordon Letterbooks.

Similarly, although not as dramatically, John Leacock's two- and three-partner firms also grew from an average 14.631$000 (£3,969) in the early years of the American Revolutionary war to 25.593$872 (£6,932) in the middle years of the French Revolutionary conflicts (1796), and then more than doubled to an average 59.836$000 (£16,205) in the early years of the Napoleonic conflicts (1800-1803). Between 1805 and 1815, average inventory nearly doubled once more, to 100.000$000, or £27,000. The mid-sized American firm Lamar, Hill, Bisset & Co.'s inventories increased somewhat earlier, about the time of the outbreak of the American Revolution. Except for the extraordinary year 1767 (when the firm was rebuilding its stock after years of neglect), pre-war inventories hovered between 20.000$000 and 30.000$000. From 1782 to 1802, inventories bounced around between 33.000$000 and 50.000$000. The four post-war inventories averaged 55% higher than the two pre-war inventories, again excepting 1767.

The steady expansion of business is reflected in these inventories. So, too, is stagnation. After 1761, Lamar, Hill, Bisset's principals lived in Philadelphia and London, and were mainly concerned with providing a living for relatives overseas. Unlike Newton & Gordon or the Leacocks, the Lamar, Hill, Bisset firm did not retain earnings and plow them back into the operation in the last four decades of the century, but paid them out to the founding partners' heirs. The exception was the 1790s, as the survivors invested in estufa heating, which was required to continue in business at that point.

A large part of the growth in inventories comes from investments in wine stock. Before the 1750s, smaller commercial draws, technologically primitive production, and limited storage facilities created little encouragement for firms to retain their wines. The large share of wine in inventory became common only in the 1770s, when abundant vintages and the reduction in American demand because of the war left Madeira merchants with an excess of product. For Lamar, Hill, Bisset & Co., wine rose to 64% of inventories in 1772-1777, up from roughly 30% in the 1760s. Nowlan & Leacock's wine stocks fluctuated widely, but beginning with the Stamp Act Crisis, wine hovered between 57% and 82% of inventory; the only time it fell below half was 1790's 48%. The most detailed picture of the buildup of wine is found in the Newton & Gordon records: between 1769 and 1775, wine stocks averaged 12.210$196 (£3,307); by 1805-1815, they had risen tenfold to 142.335$104 (£38,549). Most Madeira firms responded to the "crises" of the 1770s – unprecedentedly large vintages and the traumatic loss of the American market – by making a virtue of necessity. They began keeping old wine, aging it themselves, where earlier they had left storing and aging to customers, and they used these changes to solidify the idea of Madeira as a luxury drink.

Inventories show other increases in the cost of doing business, especially increases related to the manufacture of wine. As Madeira's wine was "invented" after 1750, the expenses incurred in producing the product mounted. Wine traders required additives like brandy, stoves, engines, pumps, additional pipes of all shapes and sizes, tools (funnels, gallon pots, bung and tap borers, pincers and bung screws), supplies, and especially buildings and warehouses for heating, aging and storing the wine. In the accounting language of the day, these were the "charges on wine." Expenses grew significantly, especially after the onset of *estufa* heating in the 1790s. In Lamar, Hill, Bisset & Co.'s 1802 inventory, the copper boiler, the share of a pump they jointly owned with another firm, the coal for heating the boiler, and tile and pine gantries – all required by *estufa* heating – added an extra 586$006 to the already considerable 32,000$000 in wine. "Wine Expenses" – not just "Wine" – came to be a regular item in any inventory after the American Revolutionary war. Whereas before such charges constituted only 6% of all inventory, by the 1805-1815 period they had risen in value nearly 100–fold and made up 18% inventory. As one exporter mused in 1787, "a large stock of old wines requires much capital and is attended with much expense, but it is extremely desirable & … in the present situation of Madeira's trade absolutely necessary."[33]

PARTNERSHIP

Over the 150 years of the development of an Atlantic, even worldwide Madeira wine distribution system, the capital and management required to participate in the business dramatically increased. Firms had to manage supply sources and customer relations more intensely. The scope of trading activities was vastly wider, encompassing not only sales of wine to more and farther flung parts of the globe, but also the supply of equipment and other inputs into Madeira production, and reverse trade goods imported into Madeira and re-exported to southern Europe (the "merchandise" and "charges on merchandise"). Manufacturing processes had to be organized and overseen, quality control monitored, and accounts drawn. All these activities required more capital and more hands. Accordingly, firms grew in size over the period. Trading businesses managed by lone proprietors and single families gave way to larger firms, managed by partners who, more often than not, were unrelated.

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[33] Wine Inventory, 1802, Folder 4, Lamar, Hill, Bisset & Co. Papers, Edward Wanton Smith Collection; Newton & Gordon Inventory Books, MWC. In 1800-07, the Leacocks' wine inventory averaged 82.004$000 per year, more than eleven times what it had averaged in 1790-91 (7.291$760, or 28% of a total 26.042$000). Ledger, 1800-1810, Leacock Papers, Casa Branca. See also William Johnston to Thomas Gordon, March 25, 1787, v. 9, f. 380, Newton & Gordon Letterbooks.

In the second half of the seventeenth century and the beginning of the eighteenth century, firms usually consisted of two closely related merchants – two brothers, a father and son, or an uncle and nephew. Occasionally, two or three unrelated merchants pooled their talents and resources and shared risks, as did Obadiah Allen and Richard Pickford in the 1670s and 1680s, Richard Miles and Richard Richbell in the 1700s, and William Bolton, Sr., John Morgan, and Marmaduke Darrell in the 1700s and 1710s, but these were exceptions. Bonds between non-relatives were less close. Allen & Pickford joined with William Freeman of Nevis and London in the 1670s, but as correspondents, not partners. Similarly, Bolton, Darrell & Morgan joined with Robert Heysham of London and his brother William Heysham of Barbados – as agents. When the governor and enterpriser Duarte Sodré Pereira allied with Aaron Lamego of Jamaica in the early 1710s, he did so as correspondent.[34]

By the first quarter of the eighteenth century (1703-1728), the English-speaking merchant community of 43 men still had only four partnerships and firms – Bolton, Darrell & Morgan (which evolved into Bolton & Darrell upon Morgan's demise), Lynch & Lynch, Miles & Richbell (which evolved into Miles & Miles upon Richbell's death), plus James Gordon's brief alliance with Manoel Da Costa Campos and, when that broke up, William Halloran's partnership with Campos. All other British traders appear to have operated as sole proprietors, as did all the Portuguese except Da Costa Campos.[35]

[34] Clerks were also chosen along non-patrilineal lines. Thomas Gordon's father, for instance, found for the firm a Dumfries boy who "writes a good hand" and wanted work as a clerk; he was "the son of the man who carries the halberds for the magistrates" in Gordon's native Dumfries Town, but no relative of Gordon. Thomas Gordon to Newton & Gordon, April 29, 1766, Scrapbook, David Cossart Papers.

[35] Blandy, ed., *Bolton Letters*, v. 2, *passim*; *Entradas*, 1721-23 & 1727-28. David Jeffreys may also have had a partner when Jeffreys died in 1705.

As the eighteenth-century unfolded, Madeira residents joined with a greater number of partners, many of who were non-relatives and non-residents. The importance of family, kin, friendship and ethnicity notwithstanding, non-relatives and non-residents were increasingly brought in as sleeping partners by the 1750s, providing financing or metropolitan expertise; this is why Michael Nowlan combined with Gedley Clare Burges in Madeira, James Archbold and Domingos Francisco Guimaraes in Oporto, and Robert Jones in London. A common agreement was the one Robert Ayres made in 1761: he kept a third share, gave another third to working partner Edmund Smith of Madeira, and divided the remaining third between Samuel Smyth of London and James Sedgeley of Bristol, sleeping partners who provided capital and acted as agents in England. By 1768, at least 10 English-speaking firms, with roughly 50 senior and junior partners, were operating in Funchal.[36]

Between the Battles of Yorktown and Waterloo, sole proprietorships ceased to play an important role in the island's valuable export trade. Not one of the top ten exporters in 1807 worked alone,[37] while at least 18 British and American firms had establishments there. The nineteenth-century firms that dominated the Factory and the island's export trade commonly had four to five, sometimes six partners – at least one of whom resided in London and, for the American firms, another who lived in the United States. Blood ties still bound firms together, but with greater frequency, strangers with

[36] Gedley Clare Burges to Michael Nowlan, February 28, 1756, Burges Letterbook, ff. 2-3, Leacock Papers; and Newton & Gordon to John Parminter, July 27, 1767, Newton & Gordon Letterbooks, v. 2, f. 322; Newton & Gordon to John Parminter, July 27, 1761, v. 2, f. 322, Newton & Gordon Letterbooks.

[37] On the proliferation of houses and firms, see Newton & Gordon to Andrew Ramsay, April 20, 1760, to Thomas Newton, December 12, 1762, to William Thomson, April 22, 1763, to Johnston & Jolly, February 14, 1766, and to Kearny & Gilbert, July 28, 1766, Newton & Gordon Letterbooks, v. 2, 141,v. 3, ff. 81, 137, v. 4, ff. 5, 34.

needed resources and connections were brought into the business. Over the course of the prior century, average firm size had doubled.[38]

The Portuguese, in contrast, still avoided partnerships. Pantaleao Fernandes, Sr. and nine other native enterprisers formed partnerships: Fernandes & Ornelas; Nicolau Soares & Joao Telles; Teixeira & Vasconcelos; Francisco Theodor & Benito Perreira; and Pacheco & Roxa. Fernandes even formed short-term partnerships with Britons James Gordon, Richard Hill, and Robert and John Scot at various times. But these men constituted at most 5% of the Portuguese merchants in this period, and they were decidedly unusual. Why this was so is unclear, for there were no legal and institutional constraints on their doing so; indeed, Portuguese law was, if anything, more encouraging and accommodating of partnership than the English common law or the emerging commercial law of Anglo-America. Under Portuguese law, the liability of partners depended on the nature of the contract, which could and often did stipulate limited liability, something that was not yet a fixture of English law. It may reflect a Portuguese perception that the opportunities in the Madeira trade were not as great as the English-speaking British and Americans found them, and so not worth the effort of building firms. Few Portuguese were in partnerships even at the end of the Napoleonic period, when they were making a comeback in the island's export community.[39]

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[38] It should not be thought that only death forced firm restructuring. Madeira firms were always remarkably fluid and experienced a high level of change in their partners. The case of James Mowat certainly suggests this state of affairs. A native of the Orkney Islands, he had started as a clerk in James and Alexander Gordon's house and was working there as early as 1760; in the summer of 1762, he joined the new island firm of Fergusson & Murdoch, agreeing to act as their resident partner, while the two senior partners drummed up business in America and Britain; he died in the flood of January 1766. Alexander Gordon to James Gordon, October 22, 1760, September 21, 1762, January 15, 1766, Letterfourie Papers; Newton & Gordon to Johnston & Jolly, February 14, 1766, v. 4, f. 5, Newton & Gordon Letterbooks. It was not unusual for a merchant to have belonged to four or more distinct trading houses during his career.

Madeira wine exporters changed their business practices substantially over the course of the long eighteenth century, under pressure from consumers, suppliers and producers. The new business practices required more capital than simple trading did, and by the end of the century the successful Madeira distributors were capitalized at three or four times the levels of early in the century. *Did this make them capitalists?*

"Capitalist" here connoted an enterpriser who amassed his or her own and other people's capital in private property, used it to produce more capital (taking economic risks in the process) and, importantly, took initiative to organize suppliers, competitors and customers to create an economic environment that would produce more returns to the capital. This emphasis on the managerial and organizational aspects adheres to a Weberian conception of capitalists as carriers of rationality, in contrast to a Marxist conception that emphasizes the relationship of capital and capitalists to labor.

The argument presented here about the relation between change and capital does not directly address the issue of the origins of capitalism. In fact, it presupposes some forms of capitalism already existed and asks how merchant groups got recruited or co-opted into them. Put another way, the concern is with the contagion of capitalism – about which historians presume much but know little – rather than its origins. Nearly everyone seems to agree with Marx and other theorists that the sources of the transition from feudalism to capitalism lay in increases in rural productivity. However, this consensus unduly privileges the production side of the story. From the perspective of the present study, markets emerged out of marketplaces, capitalists emerged from traders,

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[39] I am indebted to Jorge M. Pedreira for some of the information on partnership law in Portugal.

manufacturers emerged from artisans and growers, and consumer culture emerged from agrarian culture – and they did so together, in continual reciprocal interaction.

The Madeira wine distributors accumulated savings from past labors – their own and others' – and invested them in the business. They took risks with the expectation of reaping profits. Too, they engaged in trade that was "round-about," in the sense that the end-of-century manufactured product required labor and other inputs to heating, agitating, and fortifying, plus those required simply to barrel and ship. But what really stands out is how they managed the business as their investments grew. They organized suppliers and employees; and they elaborated consumer networks in order to maintain and augment the capital they had already invested. This organizing, together with taking the risks and receiving the profits, marks them as capitalists and makes their work notable in the construction of a trans-imperial Atlantic economy.