

The Economics of Migrant Transport between Europe and the United States, 1900-1914

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1. Why did most Europeans not migrate to America?

The migration of Europeans across the early twentieth-century North Atlantic was the greatest transoceanic relocation of all time.² It was a human drama, a major international demographic shift, and represented a massive historical experiment in ethnic transformation during a period of unprecedented globalization. This migration was also a far-reaching multinational travel business containing both risks and rewards for its three fundamental participants: the movers, the moved, and the sovereign authorities on either side of the borders being traversed. Prior studies have not adequately explained this business nor appreciated the relative importance of risk considerations to it.³

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² Keeling, "Business," chapter 1, part C, Appendix I-C.

³ The analysis here is based on the eleven million European-born migrants who made nineteen million ocean crossings on the eighteen thousand voyages of several hundred vessels of two dozen steamship lines plying between Europe and the principal ports of the United States during the years 1900 to 1914. This traffic generated seven hundred million dollars in revenue for those companies during that decade and a half (Approximate figures based on Keeling, "Business," Prologue, Appendix II-A).

Modern globalization is frequently attributed, in large measure, to the "shrinking" effects of technological innovation, especially the "falling costs of transportation and communication." In the late twentieth century, for example, television, satellites and the Internet are often thought to have helped make the world increasingly resemble a "global village." The introduction of steam power to transatlantic shipping in the second half of the nineteenth century, which lowered shipping costs and freight rates, thereby enabling North America exporters to "invade" Europe with cheap grain, is another important example. Although the "one stark difference" between the "first transnational economy" of the late 1800s and early 1900s and the "astonishingly parallel" globalizing world today was the free flow of migrants across the twentieth century Atlantic, it is not the case that "cheap steamship fares greatly increased the flow of emigrants," as is commonly supposed.⁴ Migration from Europe to the United States during 1900-14 took place at double the annual average inflow of the 1890s, yet the costs of moving, including the boat fare, changed little over this time, even in wage-adjusted terms.⁵

This paper outlines the underlying motivations and constraints upon those migrants, the shipping lines that brought them to (and from) America, and the politics behind the open borders that made such commerce in long-distance human relocation possible. Comprehensive examination of shipping and migration sources indicates that the strategies of both migrants and their transporters were governed less by the impact of one upon the other, and more by the risks that they faced in common, particularly the challenge of the business cycle and the distant yet potentially drastic threat of significant restrictions on the entry of foreigners into the United States.

Every cultural corner and economic niche in Europe transferred people to America during the "Great Migration" that ended in 1914, but far greater numbers were left behind. Most single, healthy and unskilled lower-to-middle income males living in emigration-prone regions did *not* move to the New World, despite incentives and the ability to act upon them.⁶

Intercontinental wage differences explain the attraction, but not the rejection of emigration. Despite useful insights, other historiographical findings are similarly incomplete. Family connections and "America Fever" underlay path-dependent concentrations of sending and receiving localities. The conversion of America's economy from commodity frontier to industrial juggernaut spurred the growing circularity of late 19th century migration. A "U-shaped life cycle" theory tracks the regionally specific rise of migration, with snowballing "chain migration" followed by labor and remittance flows

⁴ Massey, O'Rourke, Gaddis, p. 3.

⁵ U.S. Historical Statistics, Keeling, "Business," Appendix II-D-5. See also Keeling, "Transportation Revolution," pp. 42-43.

⁶ 39 million males aged 15-44 lived in the emigration-prone lands of south and east Europe in 1900. 5.2 million, or some 13%, of this age, gender, and regional category migrated to the U.S. during the subsequent 15 years (based on Mitchell, Europe [4th ed.]; Dillingham Report, vol. 3, p. 91; U.S. Bureau of Immigration annual reports, 1911-14, table VII; Willcox, pp. 642, 719).

leading to an eventual decline as income levels gradually converged towards those in the U.S.⁷ These well-tested findings do not, however, reveal much about the self-selection process by which millions emigrated abroad while tens of millions did not. Wage differences, migration chains, and U-shaped curves do not tell us why more Europeans did not follow the "curves" and use the "chains" to arbitrage away those differences. The "pushes" and "pulls" of transatlantic migration have been specified and quantified, but not the "intervening barriers." Possessing at least a rudimentary knowledge of how to pursue economic opportunities in America, and having the ability to do so, most Europeans must have lacked the "desire" to leave home.⁸ Hundreds of case studies provide thousands of individual examples of mobility sometimes (though more often not) overcoming inertia, but do not establish a comprehensive explanation for the aggregate outcome.

Economic historian Dudley Baines felt that the "more important" unanswered question was "not what factors caused people to emigrate but what caused so few people to emigrate," noting that "the reason for this differential behavior is not known."⁹ Although a comprehensive explanation lies outside the scope of this inquiry, the strategies of those who physically relocated across the early twentieth century North Atlantic indicate that risk factors played a paramount role. Although historians have tended to focus more on migration's costs and benefits, accompanying risks and their importance in shaping long-distance migratory travel have hardly gone unnoticed.

"What greater gamble is there than immigration?" asks Stephen Birmingham in the introduction to his 1984 account of Eastern European Jewish emigration.¹⁰ Other historians have voiced similar sentiments. In their view, America was "remote," a "distant magnet" whose attraction was strongly felt only when the "trio of concerns of journey, job hunt, and employment" was held at bay. Some who succumbed to the overseas lure remained there, without conspicuous success, because they were "ashamed to return home empty-handed," while others went back to Europe sick, injured or embittered.¹¹ Whether the riskiness of the long distance gamble is seen as shaping the extent of "reliance" on family ties in making the move, or as a "premium" incorporated into the overall economic hurdle to relocation, there is widespread agreement that to migrate across the Atlantic a century ago was, generally speaking, to trade a familiar though unsatisfactory present for a more promising yet more uncertain future.¹²

As a business, shipping is also well known for its "uncertainties," its "hazards" and its "extensive fluctuations": a "great gamble" in a commerce "as shifting and unstable as the sea," not recommended to those of "timid dispositions." Not surprisingly, as the high-risk core segment of a high-risk industry, the shipping of migrants to America in the 19th

⁷ See, for example, Gould, p. 102; Hatton and Williamson, pp. 12-13, 36-38, 46-51, 249-52; Åkerman, pp. 25-38.

⁸ See Thistlethwaite, pp. 37-38.

⁹ Baines, pp. 28, 36.

¹⁰ Birmingham, p. xii.

¹¹ Taylor, p. 91, Wyman, pp. 83-88, 193, Puskás, p. 227.

¹² Tilly, p. 184, Godley, p. 71.

and early 20th centuries has been seen as one involving "heroic death or glory" decisions amounting to an "immense leap in the dark." Cunard's entry into the "steerage trade" in 1860, for example, has been characterized by its leading historian as having "all the marks of a reckless gamble." Looking back sixty years, another shipping historian regarded his industry, "especially the service to America," as a "business exposed to the very greatest fluctuations" and beset with "continual dangers."¹³

Government regulators also felt compelled to confront the risks posed by migration. In its 1901 annual report, the American Bureau of Immigration wrote of the

...necessity, as a means of self-preservation, of undertaking seriously and earnestly to adopt means, not necessarily to shut off immigration, or even materially to diminish it, but at least to deal with it so that it may not continue to threaten our social and civil order.¹⁴

The analysis in this paper reaches two general conclusions concerning the risks of the migration business before World War I.¹⁵ The first is that the selection of those who migrated, and thereby the scale and character of the migration, was shaped more by so-far understudied risks than by the more extensively examined rewards. Although risk and reward calculations were more complicated for migrant transporters, and less transparently obvious for migration regulators, those groups – like the migrants themselves – also focused more on containing risks than on maximizing gains. The second general conclusion is that risk management strategies adopted by these three groups were mostly congruent rather than conflicting. That, in turn, had consequences for the nature and pattern of the overall migration.

2. Barriers, perceived and real

The still prevailing historiographical assumption that cost barriers prevented a (gradually declining) majority of would-be migrants from relocating across the turn-of-the-twentieth-century Atlantic is not credible for several reasons. By 1900, these migration costs amounted to less than six months of savings from an average American immigrant job, yet European migration to America, though it rose rapidly in the first decade of the twentieth century, never exceeded the heights relative to population of the early 1850s (i.e. during and after the potato famine), when the average time needed to earn back migration costs was twice as long and many migrants were relatively less well-to-do, some even fleeing starvation.¹⁶

¹³ Walsh, p. 20, Kirkaldy, pp. 205-06, Strouse, p. 476, Ottmüller, p. 143, Saliers, p. 914, Hyde, p. 67, Isherwood, "Kaiser Wilhelm," "Lusitania," De Boer, introduction.

¹⁴ U.S. Bureau of Immigration annual report, 1901, p. 36.

¹⁵ See also Keeling, "Business," chapters 5, 6, and 7.

¹⁶ See Wyman, pp. 23-25. The ready availability of within-family financing available to defray migration costs is also demonstrated by the high volume of remittances sent home to Europe by immigrants working in America. For example, a conservative estimate of net remittances in 1902 from America to the largest immigrant source country, Austria-Hungary (payments from America minus cash carried to America by

During the 19th century, intensive and extensive development of kinship and community migration networks spread usable information about U.S. employment opportunities widely across Europe. From the late 1880s up to World War I, regulatory impediments also did not deter migration, nor were they ever intended to prevent more than a small fraction of would-be migrants from relocating across the Atlantic.¹⁷ By 1900, most Europeans could legally and readily access relatively attractive job opportunities in America. Something other than cost hurdles and legal barriers kept them from doing so.

The historiography that exaggerates the importance of travel costs to late nineteenth and early twentieth century transatlantic migration also presents a similarly lopsided picture of the factors motivating the firms that transported the migrants. One prevalent generalization holds that ongoing improvements in transportation lowered travel expenses, enabling corporate migrant carriers to increase passenger revenues.¹⁸ A somewhat opposite contention asserts that shipping companies preyed upon hapless migrants, fleecing the huddled masses on their arduous treks to promised lands.¹⁹ In the first view, price competition between transport lines helped reduce travel cost barriers to migration. In the second perspective, shipping firms' gouging and exploitation added to those barriers. Neither view is persuasive since, as already outlined above, travel costs were not a significant barrier anyway by the late 1800s. Instances of migrants blocked by overcrowded ships or stranded in European harbors due to insufficient space on ships during migration peaks were also infrequent by 1900, since companies (for reasons outlined below) generally ran more capacity on routes to America than was needed to handle demands for migratory travel.

For potential transatlantic migrants, the risk of becoming jobless due to a general economic slump in an America that had not begun to measure "unemployment," let alone construct consistent public "safety nets" to deal with it, threatened the paramount objective of emigrating from Europe in the first place, and was thus a key criterion of migrant self-selection. In general, Europeans who actually migrated to the United States were more willing and able to countenance such risks, and to arrange for dependent family members to follow them, than were those who stayed in Europe.²⁰

immigrants), amounted to \$15 million. (Caro, p. 50). This just about sufficed to cover the total estimated migration costs (\$81) of the 185 thousand immigrants from Austria-Hungary, even without allowance for the large number whose passage was paid by accompanying relatives or taken care of by means of a prepaid ticket. U. S. Consular Reports (1904, pp. 3-5) confirm that remittances in large sums were indeed used "for the purchase of transportation tickets" or otherwise "used to emigrate with."

¹⁷ See section 5 below.

¹⁸ Greenleaf, pp. 128, 134, Chernow, p. 105.

¹⁹ Brownstone, pp. 13, 118, Taylor, pp. 85-86, Brandenburg, p. 365, Whelpley, pp. 3-19.

²⁰ Migrants' perceptions of migration risks were, of course, generally formed in comparison with the risks associated with staying home in Europe. Relative to risks stemming from business cycles in America, cyclic risks in Europe were lower, affected the mostly rurally-based emigration-prone less than other groups in Europe,

Because nearly all costs in late 19th and early 20th century transatlantic passenger shipping did not vary with revenue— to which migrant passengers contributed the lions' share – the riskiness of the migration endeavor translated almost directly into financial riskiness for shipping companies' stakeholders.²¹ Thus, while the biggest potential problem facing migrants was not being able to find work in America, or of losing jobs they had found, the most severe threat to shipping company viability was the risk of a sharp fall in migrant passengers resulting from just such a job market slump.

Like migrants and migrant carriers on the turn of the twentieth century North Atlantic, government policy makers were also mainly oriented towards cautionary concerns, although this has not been well covered in historical accounts. Looking backwards from quotas imposed in the 1920s, there is a tendency to overstate the practical effects of nativism on pre-World War I migration policies, to conflate vague anti-immigrant feelings with concrete anti-immigration platforms, and to confuse regulation with restriction. In reality, managing the prosaic practical risks of large crowds was a greater priority than were legislative and administrative changes that, for example, increased debarments at U.S. entry ports from one percent in 1900 to two and a half percent in 1914. It was the risk of stringent border controls, not the mild ones actually installed, which was the greater concern to would-be migrants and their transporters before 1914.²²

3. Rewards, risks and strategies for migrants

The potential rewards for migrants going to America from Europe were well known throughout Europe. In southern Italy, for example – a major source of early twentieth century emigrants – a "refrain" commonly heard was "'one year in America can net 1,000 Lire.'"²³ This "knowledge of economics" was relayed by the steady stream of

and were more easily ameliorated through family connections (see Morawska, pp. 185-86, Cinel, "Seasonal," pp. 58-59). These considerations applied across Europe. "When an unskilled worker...first comes to America [from Sweden] he is forced to accept whatever labor and wages are offered...This means that in hope of further advancement he must be content with comparatively unfavorable conditions, and even risk total failure. Thus the more skilled a worker has become in Sweden, the greater his risk in emigrating" (Lindberg, pp. 215). In Italy, "emigration progressively lost its temporary character...[as]...Italians [increasingly] realized that a job in an American city provided more financial security than a piece of land in the native Italian village (Cinel, "Seasonal," p. 56).

²¹ see discussion in section 4 below, Keeling, "Cartels," pp. 196-99, Marx, p. 21, Hutchins, pp. 522-23, and Bastin, p.104.

²² Keeling, "Transportation Revolution," pp. 54-55. Debarment figures are based on tables in U.S. Bureau of Immigration annual reports.

²³ Cinel, *Return*, p. 160, noted that 1,000 Lire in 1900 equaled about \$200, or more than enough to finance all roundtrip costs from and back to the home village in Italy. In an earlier analysis, the same author observed that, in south Italy, by the 1890s, it had

returnees back to Europe, whose less frequent but hardly unnoticed incidence of failure also conveyed warnings to prospective followers that America entailed downside risks as well as positive gains.

The oft-dreaded oceanic crossing was still a spartan and rugged undertaking in 1900 (by twenty-first century standards at any rate), although on-board conditions had improved considerably since the days of sailing ships little more than a generation before. Already by the 1880s, most Europeans had better chances of surviving a transatlantic crossing than of outliving the mortal hazards of everyday life in their home villages.²⁴ A more long-lived concern was that of being cheated or mistreated in transit. Such perennial exploitation was, however, more egregiously and frequently perpetrated by hucksters and hustlers within ports than by shipping lines or vessel crews. Rarely was it severe enough to deter otherwise committed emigrants from undertaking the journey

A more serious consideration was that American immigration authorities might reject a migrant upon arrival, thus forcing his or her return to Europe. Mainly affected were those who were too young, old or sickly to support themselves in America, and who also lacked family members able and willing to support them – i.e. a small minority of those actively contemplating relocation. The oft-spotlighted gauntlet at Ellis Island was more of an annoyance than a danger for the typical able-bodied migrant, provided he managed not to catch an excludable disease *en route* and was careful, when answering inspectors, to suggest neither that he had been induced to come by the promise of a job (in violation of contract labor laws) nor that he was without good prospects for landing one. The standard approach was to deny any contracted job arrangement but give the name of a relative already in America, to whom the migrant was headed. In a great majority of cases both representations were, conveniently, true. Most arrivees to America knew the drill well.²⁵

For most potential migrants – young, healthy, alert and eager to work – the chances of making it intact to America were actually very high.²⁶ The greatest concern, one that actually did deter many from even making the attempt, was the fear of failure *in* America: the potential inability to find sustained work there that would generate savings for developing a "new life" in the United States or returning "home" to Europe as a success.²⁷

become "almost a refrain" that "one could make more money in one day in the United States than in one week in Italy" (Cinel, "Seasonal," p. 47).

²⁴ Moltmann, p. 312.

²⁵ See U.S. Bureau of Immigration, "Report of Conditions," p. 26, Weiss, pp. 161-62, 210-11, Graham, pp. 46-47, Thomas, p. 48, and Pitkin, pp. 76-77.

²⁶ See below, section 5.

²⁷ Dillingham Report, vol. 1, p. 24. The risk of being swindled or injured on the job in America, a peril compounded by language barriers, could be significant in some instances. Non-English speaking workers at one large Chicago steel-making plant, for example, were injured at twice the rate of English speakers during 1906-1910. Nevertheless, "the one essential was not wages, working conditions, or living

In order to cope with the risks of migration, particularly that of being stranded in America during a recession with little prospect for work, kinship "chains" spread migration endeavors over many people, and often over multiple crossings per migrant as well. The same family networks that helped finance the crossing also smoothed adaptation to a new language, new laws, and new customs. An analysis of U.S. government passenger statistics shows that during the first decade and half of the twentieth century, nearly half of migrants between Europe and America crossed the Atlantic more than once. A further third traveled only at the behest or with the assistance of another migrant, generally a parent, spouse or other relative.²⁸

For the majority of migrants after 1900 who left Europe for America intending to later go back to Europe,²⁹ the possibility of America some day closing its borders was not a matter of immediate concern. It was, however, of some interest to relatives who had become naturalized citizens and American voters, to politicians who depended upon the support of such voters, and to transport companies whose multi-million-dollar passenger revenues were highly dependent upon the continuation of relatively unfettered human movement across the Atlantic.

4. Rewards, risks and strategies for shipping lines

Migration between Europe and the United States in early twentieth century was the biggest and riskiest activity³⁰ of a large and high-risk North Atlantic shipping industry.³¹ Migrant traffic constituted ninety percent of the North Atlantic transport companies' passengers and generated half of their total revenues.³² Migration was also at times regarded as a necessary but not entirely savory underpinning to the more desired business and tourist traffic, which contributed less to revenue and still less to earnings, but was subject to much smaller cyclical fluctuation, and conferred greater prestige.³³

standards, but employment itself. 'When there is none,' wrote one Polish laborer, America 'is worth nothing.' " (Brody, pp. 100-01,105).

²⁸ Figures from Keeling, "Business," Appendix II-A.

²⁹ Wyman, p. 193.

³⁰ Robin Bastin's study of migrant traffic out of Liverpool, Europe's leading port for emigration in the 19th century, concluded that "the carrying of large numbers of emigrants was a particularly hazardous business...complicated by violent fluctuations in the flow" (Bastin, pp. 2-3).

³¹ Meade (p. 111) wrote in 1904: "The shipping business is, of all industries, the most irregular. It is liable not merely to the usual alterations of prosperity and depression, but to sudden fluctuations of rates and traffic which are entirely without parallel in any other branch of trade." See also Salz, p. 848.

³² Revenue breakdown: 50% migrants, 20% other passengers, 25% freight, 5% mail. The volatility of shipping companies' migrant revenues was considerably greater than that of non-migrant revenues (Keeling "Business," Appendix III-A).

³³ Drechsel, p. 297.

Shipping companies faced a host of risks and concerns, from docking rights, port strikes, storms at sea and wars (which could also be extremely lucrative), to wide seasonal swings in revenues. In addition to the technical challenges of propelling what were in effect the largest human-built structures up to that time and of managing large crowds of tightly packed people for days on end, shipping companies were also simultaneously restricted by and dependent upon a variety of government laws and actions affecting both the migrant transport business and the "open door" immigration policies that were its essential prerequisites. The most critical challenges besetting shipping companies were, however, more economic than political in nature.

Shipping companies were particularly vulnerable to the ups and downs of migrant flows because nearly all their costs were fixed and did not vary with revenues (from migrants or any other source). One reason for the high fixed costs was the large investment needed in vessels, which grew larger as scale economies, prestige benefits and customer preferences encouraged, and port channels permitted, ever bigger ships.³⁴ These ships were mobile assets, readily redeployable throughout an intensely competitive international transport market, but not "divisible": once built, they burdened the companies' balance sheets for twenty years or more, unless they became technically obsolete, in which case larger and more expensive replacements had to be procured sooner than originally planned.³⁵

Shipping histories make recurring reference to the sizeable risk associated with investments in new vessels on the turn-of-the-20th-century Atlantic.³⁶ These ships were not only expensive to obtain and to maintain, relative to the cash flows they generated, but the revenue flows from them were also cyclically uneven, while purchases of these massive oceanic behemoths was not spaced and gradual, but tended to occur in lumps. Quantitative confirmation of the financial scale of these undertakings comes from the following average annual figures for the 1900-14 period (See Table 1, below).

While internal cash flow was thus sufficient,³⁷ on average, to cover the expenditures required to maintain the fleets of ocean liners, and not atypical for a capital

³⁴ Keeling, "Business," chapter 1, part B.

³⁵ Re: vessel longevity, see footnote to Table 1 below.

³⁶ Isherwood, for example, speaks of NDL's "heroic death or glory" decision in the 1890s (*Kaiser Wilhelm*, p. 376) to embark on a "do or die" programme of construction" (*Bremen*, p. 89), the "challenge" of Cunard's "huge construction programme" after 1903 (*Caronia*, p. 411), the "gamble" of White Star in 1901 (*Celtic*, p. 309) and its "tremendous decision" in 1907 to build the "enormous" trio of the *Olympic*, *Titanic*, and *Britannic* (*Olympic*, p. 101). See also Ottmüller, pp. 141-43, 209, Hyde, p. 157.

³⁷ In order to pay dividends (which averaged 4% of ship assets), companies also supplemented available internal profits with outside shareholder capital and borrowings. A dividend rate of 4%, (amounting, as calculated here, to about one-fourth of annual gross profits) is consistent with contemporary observations, e.g. "it has been found necessary not once, but hundreds of times, for as much as three-fourths of the profits to be retained in the business, leaving only one-fourth available for dividends and other purposes" (Fletcher, p. 90).

TABLE 1: FINANCING SHIP INVESTMENT, 1900-1914³⁸

Ship Replacement (depreciation)	= 10%	of total ship assets		
Ship Repairs and maintenance	= 3%	" " " "		
Growth of ship assets	= 5%	" " " "		
TOTAL NEEDED for ships (from above)	= 18%	" " " "		
Profits available				
(before depreciation, repairs and dividends)	= 18%	" " " "		

intensive business, both cash flow and investment outflow were subject to atypically wide variation. The lumpiness of investments resulted not only from large ship size, but was also a consequence of striving to maintain uniformity of service on key routes, which, in turn, often meant ordering upgrades to anew technological generation of steamers two or three vessels *at a time*.³⁹ Furthermore, in making an investment decision,

³⁸ Sources: Annual reports of HAPAG, NDL, Cunard, CGT, Anchor and Holland America. The depreciation figure is roughly consistent with an average vessel service life of about 20 years and an average vessel age of about 10 years suggested by many shipping sources such as Grotewald, pp. 197-98. Replacing five percent (1/20th) of a 50% depreciated fleet, each year, yields the annual depreciation rate of 10% (5% / 50%) used here. Companies in this period often depreciated ship assets at a faster pace than 5% per year, in order to build up balance sheet reserves in boom years which could be tapped into in subsequent bust years (smoothing out earnings fluctuations - see, for example, de Boer pp. 64-65 and Moss, and Hume, pp. 124-27), but this effect was offset by the general rise, over time, in the size and cost *per* new ship. (The total value of a fleet where the average value per ship grew over time contained an over-weighting of younger ships whose depreciation to asset value, in their early years, was relatively low.) The actual overall depreciation rate of about 10% thus still matches the theoretical rate implied by a 20 year write-off period. By comparison, freighters in the 1990s had similar longevity but lower maintenance costs (Stopford, pp. 128,160)

³⁹ See Bastin, p. 112 and below regarding vessel deployment. Investment "lumpiness" can be gauged by the following examples: (1) 330 ships were launched as new vessels during 1890-1913, and 214 of them (two thirds) by the ten largest firms. For these firms that meant an average of less than one new vessel per year. Yet a majority (116) of these 214 ships were launched in the same year as another ship launched by the *same* firm. The actual cost of most of the 214 vessels in example (1) is not known, but, assuming for illustrative purposes that they all cost the same, the standard deviation of the year-by-year investment outflows is double that for capital intensive Phillips Petroleum during 1991-2001 (Phillips annual report, 2001, pp. 94-95, Keeling, "Business," p. 53). (2) HAPAG had the most launched ships, 47, or an average of nearly two per year, yet had no launches during 8 of the 24 years, 1890-1914. The likelihood of randomly having so many non-launch years works out to less than 1%.

there was no way for a shipping manager to know whether a recession might occur two or three years later, just as the ship was delivered by the builder.

Not only were fixed capital costs large, albeit spread out lumpily over many years, but the operating costs of an oceanic crossing were also nearly all fixed, once the voyage had been committed to. For the shipping lines and voyages considered in this analysis, about 20% of costs related to acquiring and maintaining vessel fleets,⁴⁰ 10% were for administration on land, and 70% were associated with operating the ships. The largest operating costs were the coal fuel, and the crew wages and provisions required for the oceanic crossing; these voyage expenses were only slightly affected by how full the ships were with passengers.⁴¹

Coal, the biggest single cost item, varied from voyage to voyage but not with the number of passengers.⁴² Crew costs also varied from voyage to voyage, depending mainly on the ship, and only to a much lesser extent on the number of passengers carried.⁴³ About half the voyage wage bill paid for customer service (mainly stewards to clean rooms and serve food). Customer service crew numbers varied with passenger levels, though less than proportionately, and the number of stewards per first class passenger was several times higher than in steerage.⁴⁴ The only operating expense that was heavily influenced by passenger volume was provisions (food, mostly) although even here the correlation was not one hundred percent (because, for example, the caloric intake of coal stokers and sailors did not vary with passenger levels).⁴⁵ Over time, technical crew sizes and coal costs declined due to scale economies in ship size⁴⁶ and improvements to energy efficiency, but these savings were more than offset by higher

⁴⁰ See above re: investment in vessels and Keeling, "Business," Appendix III-B-1, "Operating Costs in North Atlantic Passenger Shipping"

⁴¹ Coal, crew wages, and provisions averaged about 70% of operating expenses (or "voyage expenses"), based on annual reports and contemporary accounts. The remaining costs, for docking and loading in port, depended on the size of the ship (e.g. "tonnage duties"), its length of stay in port, and the quantity of freight handled, not on the number of migrant passengers. Early twentieth century North Atlantic passenger shipping is an extreme example of the general characteristic of high fixed costs in shipping. See Stopford, pp. 353-58.

⁴² Coal costs varied by vessel (faster, larger, and older less energy efficient ships burned more per passenger berth), by route (longer routes needed more), by season (winter conditions meant longer voyages and more fuel), and with variations in the market price of coal. See Keeling, "Transportation Revolution," pp. 44-46, 66-67.

⁴³ Faster and bigger ships needed larger engines and deck crews. The number of stewards mainly varied with the capacity of the first class compartments. Detailed annual cost breakdowns for Cunard and CGT show total voyage costs correlated 97% with coal costs (company annual reports).

⁴⁴ Warren, p. xlii.

⁴⁵ Cunard voyage account data reveal revenues to be fairly strongly correlated (60%) with provisions costs, weakly correlated with wages (15%) and uncorrelated with coal costs (-1%).

⁴⁶ See Keeling, "Business," III-B-2: "Economies of Scale in Vessel Size."

ship speeds (requiring more coal), higher numbers of customer service crew members per passenger, especially in first class, and a general rise in wages after 1907.⁴⁷

Having costs that were mostly unaltered by revenue shifts forced shipping executives to carefully manage the revenue-generating capacity that was the source of those costs. High fixed costs, which meant low marginal costs for incremental passengers, also increased the temptation to cut fares in order to attract such passengers. This is a well-known risk in high-fixed cost businesses generally, but was a graver concern in transatlantic passenger shipping a century ago because of the demand, market, and regulatory structures facing that industry at the time.⁴⁸

A change of a few percent in gross production can tip an economy from prosperity into recession or vice versa. Changes in the rate of early twentieth century migration could be as much as one hundred times greater. The ebb and flow of migrant volumes had a particularly large financial impact on shipping companies because of their high fixed costs. A mostly empty ship weighed nearly as much and needed nearly as much coal as a full ship, as well as most of its normal crew. A completely empty ship could be left at the dock, its voyage cancelled, but this would not cancel depreciation, upkeep, and interest costs.⁴⁹ Even that partial solution was often unavailable, because companies faced enormous prestige and reputation losses among luxury class passengers, and to some degree even among migrants, if they failed to maintain normal schedules.⁵⁰

With costs that were mostly unaffected by (and unalterable in response to) recessions, large cyclical decreases in revenues meant large cyclical decreases in bottom line profits for ship owners. On the economic fringes, in temporary jobs and highly cyclical industries such as construction, those working as expatriate migrants were engaged in risky pursuits. Because transatlantic steam shipping had such very high fixed costs and was so dependent upon migrant traffic, the riskiness of the migration endeavor translated almost directly into financial riskiness for shipping companies' stakeholders. Available figures of the major shipping lines show a close correlation between corporate operating profits and levels of immigrant arrivals in America.⁵¹ Shipping lines'

⁴⁷ These trends are derived from crew list figures and vessel statistics. Rising fares after 1907 offset cost increases. Passenger capacity utilization changed little after 1907 and profits rose slightly up to 1913 (Keeling, "Business," Appendices I-C-3 and III-C).

⁴⁸ Scherer, pp. 520-21.

⁴⁹ Keeling, "Transportation Revolution," p. 53

⁵⁰ Drechsel, p. 297, Ottmüller, p. 143.

⁵¹ Annual U.S. calendar year immigration figures (U.S. Bureau of Immigration annual reports) have a correlation of 66% with shipping companies' reported operating profits. Official immigration tallies understate the cyclicity of migration by leaving out "non-immigrant" foreigners and naturalized U.S. citizens who constituted a large slice of the repeat migrant inflows in certain years (e.g. 1909). The volume of immigrants, moreover, does not take into account the effect of price-wars which which could exacerbate cyclical downturns by lowering average revenue *per migrant* during years (e.g. 1904, 1908) when the physical volume of migrants was already reduced. A more precise measure, "revenue from migrant passengers," was more

reputations also suffered on the cyclical upside if they failed to have space available to readily accommodate passenger flows in "boom" years.⁵²

A regular schedule that could be counted upon was something postal authorities (whose subsidies were the basis for the first steamship lines) and, later, business and tourist travelers quickly came to insist upon. Migrants were less demanding of punctuality, but were also keen to minimize waiting times in ports and desirous of regular and frequent bi-directional oceanic transport that would allow them to return to Europe for short visits, to escape American economic recessions or for final repatriation.⁵³ From steamship managers' perspectives, however, maintaining a fixed periodicity of arrivals and departures regardless of passenger traffic conflicted with two other objectives: always having a ship ready whenever there was customer demand for it, and minimizing costs by minimizing the number of vessels in the fleet. This unavoidable trade-off was generally resolved to the relative disregard of the latter goal, at least from 1900 to 1914. Throughout the period, companies maintained ship capacity beyond that needed to sustain regular route schedules.

Surplus, smaller than average "reserve vessels" were used not only as substitutes for vessels lost, damaged or hired away for wartime service, but also to accommodate cyclical and seasonal surges in migratory travel demand.⁵⁴ These large flotillas of lightly used, mostly older vessels, which provided extra capacity for emergencies and surges (foreseen or unforeseen) in passenger volumes, were often less costly than the alternative of chartering vessels from other companies; more importantly, they offered better insurance against the risk that such fluctuations posed to the integrity of schedules and to painstakingly earned reputations for steady and reliable on-schedule transport service. Scheduling imperatives were in fact governed more by the requirements of tourist and business travelers than by the less time-sensitive travel patterns of labor migrants, though shipping lines were well aware that most migrants, like most non-migrants, were in one way or another repeat customers.⁵⁵

highly correlated (85%) with operating profits (Keeling, "Business," Appendices I-C and II-A).

⁵² During peak periods of migration, shipping companies had to scramble to accommodate the resulting crowds. If a ship did not have enough room, companies faced an unpalatable set of choices. They could transfer excess passengers to another vessel or another line which usually meant forcing migrants to wait in port for some days, they could charter extra vessels, they could turn would-be clients away at ticket counters, or they could overstuff ships. All these methods were used, at one time or another, by nearly every line on the North Atlantic, and at considerable expense to their bank balances and reputations. Keeping such instances to a minimum was a clear priority. (These various practices are documented in the HAPAG and NDL annual reports, Passagegeld records, and in various newspaper accounts. See also Schachner, p. 70.

⁵³ Schachner, p. 70.

⁵⁴ See, for example, NDL, 1902, p. 3 and Isherwood, *La Touraine*, p. 16, *Majestic*, p. 92.

⁵⁵ As migration observer Edward Steiner put it in 1906, migrants were "all going somewhere to someone, not quite strangers they; someone has crossed the sea before

Maintaining a surplus capacity sufficient to meet peak cyclical demands and maintaining regular schedules throughout both seasonal and cyclical slumps⁵⁶ made the companies more financially vulnerable to such fluctuations, for several reasons. In continuing full "output" (e.g. full operating schedules) even during recessions, transatlantic shipping adhered to the practice followed by other large turn-of-the-20th-century businesses with high fixed costs and economies of scale and scope.⁵⁷

Like their heavy industry contemporaries, shipping firms had to cope with high capital costs, long investment lead times and severe seasonal fluctuations in revenues. However, the risk of price wars breaking out was greater in passenger shipping than in heavy industry, because overall travel demand did not respond much to fare reductions, which tended to come during recessions when traffic was low already.⁵⁸

The risk of cutthroat rate-slashing was further exacerbated by passenger shipping's oligopolistic market structure, in which a small number of large firms, regionally protected from direct competition or foreign merger to a greater or lesser degree in their home European ports, vied in the same international market and converged (mostly) on the same U.S. port (New York). From there, a relatively savvy eastbound repeat migrant could readily shop around for alternative routes back to Europe.⁵⁹ Under these

them. They are drawn by thousands of magnets and they will draw others after them (Steiner, p. 44).

⁵⁶ The Voyage Accounts of Cunard, one of the more profitable lines, indicate the extent of financial sacrifices companies were prepared to undergo in order to maintain schedules during "slack" months of the year. Of 687 Cunard voyages, between Liverpool and the U.S., during 1900-1913, over one quarter did not cover variable (!) costs (i.e. voyage expenses exceeded voyage revenues). Nearly two thirds (64%) of these unprofitable voyages occurred during just one third of the calendar year: the months of December through March. Loss-defying schedules were maintained cyclically as well. In the recession year of 1908, 38% of voyages had a loss against variable costs (voyage costs) versus 18% in the boom year of 1907. Calculations from Cunard Voyage Accounts.

⁵⁷ In contemporaneous American "heavy" industries, such as steel, tin-plate, and paper, it was common practice for plants to "run full," i.e. maintain production at full capacity during recessions, selling at a discount but minimizing costs per unit of output. This is described in detail and with numerous examples by Naomi R. Lamoreaux. With some differences, analogous strategies were followed by North Atlantic passenger shipping lines.

⁵⁸ In the nautical analogue to the land-based full-production strategy described by Lamoreaux, "running full" meant ships "running" mostly empty, and this was done not in order to cut price and "make it up on volume" as in heavy industry, but in order to preserve reputations with the travelling public -wealthy tourists and frugal migrants alike- through to the next economic upturn.

⁵⁹ For example, a hypothetical but quite typical migrant who traveled to America some years earlier on a prepaid ticket from Bremen on the NDL line, could opt to return via Rotterdam (Holland America Line) or Hamburg (HAPAG line) instead.

circumstances, the readiness of companies to form cross-border market sharing cartels ("conferences") is understandable, as is the unusual success of such international cooperation unsupported by direct governmental props. But even when they worked well, which was certainly not always, the conferences could only soften the blow of recessions by discouraging price drops on top of volume declines. These international arrangements could neither predict nor thwart recessions, of course, nor did they to any substantial extent limit market entry of new competitors or alleviate the chronic problem of overcapacity.⁶⁰

One common technique for limiting overcapacity was to interchange space on the ships, not – as common belief would have it – between migrants west and export cargo east, but between migrants west and tourists east and west.⁶¹ During the 1890s and continuing thereafter, interchangeability developed by expanding the offering of second class cabins, which, being in between (both in terms of on-board location and ticket price) the tourist-and-business-traveler-oriented first class and the migrant-oriented steerage, could appeal to both groups. During the peak migration month of May, for example, "upscale" westbound migrants could be housed in the same ship quarters used by budget-minded American tourists setting out eastwards for their summer European vacations.⁶² The second class cabins in this example would thus be booked in both directions, while steerage and first class capacity, which would otherwise have been used only in one direction that month, was correspondingly reduced by the growing percentage of ship-space capacity devoted to second class.⁶³

TABLE 2 : The Rise of the Second Class, 1890-1900 (calendar years)⁶⁴

2nd class as a % of 2nd and 3rd classes westbound to United States

	Migrants (estimated)	Passengers	Capacity Entered
1890	8%	10%	8%
1900	10%	13%	11%

A final part of shipping companies' strategy for dealing with the intertwined risks of recession, overcapacity and fare wars involved setting aside sufficient financial

⁶⁰ Murken, pp.57-58, 355, Thiess, p. 73.

⁶¹ See Keeling, "Business," chapter 1, part A.

⁶² See, for example, *Wall Street Journal*, May 11, 1903, p. 2.

⁶³ Keeling, "Cartels," pp. 202-03, Keeling, "Transportation Revolution," pp. 50, 56-57.

⁶⁴ Sources: Keeling, "Transportation Revolution," pp. 47,57; Keeling, "Business," Voyage database, Migrant Measurement database: passengers for 1890 estimated based on available data (in these sources) for "cabin" passengers (first and second class together).

reserves during boom years to sustain operations during loss-making periods.⁶⁵ This was particularly in evidence during the 1908 recession.⁶⁶

The greatest potential threat to the livelihoods of migrant transporters was that America might end its open border policies. Companies took some precautions, such as maintaining their freight carriage businesses as a fall back, but their surplus capacity problems would of course have significantly worsened had the freedom to migrate been significantly curtailed.⁶⁷ Most of the firms did indeed survive the end of open borders in the 1920s, although many shareholder stakes did not. Companies had various, mostly surreptitious ways of lobbying in America to protect their interests, e.g. against immigration restriction, but these overwhelmingly European-based firms had limited influence in Washington D.C. Their ex-customers, the families of naturalized citizens and second-generation immigrants were a more potent force wanting America kept open to European migrants and to the migratory travel business.

5. Public policy objectives and constraints

By 1900, legal barriers to leaving European countries had nearly all been dismantled or were being winked at.⁶⁸ Those with military service duties who wanted to evade them by emigrating mostly succeeded, as did those making detours around corrupt border officials.⁶⁹ The most significant governmental involvement was that of the United States Bureau of Immigration, acting under limited, though gradually extended, authority given it by the U.S. Congress. Pressured by the Bureau's fines for each debarred and returned passenger,⁷⁰ steamship companies began conducting cursory inspections at European embarkation ports, though they were even less intrusive than the still rather limited inspections conducted during the early 1900s at American arrival stations.⁷¹ Those migrants prevented from boarding might well be thankful, however, because a would-be-passenger so obviously excludable as to be detected during a hasty embarkation port check would most likely have been rejected anyway in America, thus resulting in two needless ocean crossings.

American public policy before 1914 reflected several principal concerns regarding European immigration. First and foremost was a desire to stop and send back to Europe any diseased, infirm or otherwise unemployable or undesirable entrants, such as those with criminal records. Given the non-applicability of all these grounds to the overwhelming bulk of arrivees, not to mention the limitations on time and staffing, the corresponding measures reduced the inflow by only one or two percent. An appeals

⁶⁵ See footnote 38 above re: asset depreciation policies.

⁶⁶ Keeling, "Business," chapter 6.

⁶⁷ HAPAG, Annual report for 1896 cited in Cecil, p. 25.

⁶⁸ Cowen, p. 234-37, Prpic, pp. 108-09, Stampfer, p. 220 and Just, p. 29.

⁶⁹ Dillingham Report, vol. 1, p. 185, Salz, pp. 880-81, Just, p. 107, Pitkin, p. 25, and Wertheimer, pp. 14-15.

⁷⁰ Starting in 1903 (see Keeling, "Business," chapter 5).

⁷¹ By today's standards. America required no visas or passports, for example (Moltmann, p. 320).

process could not prevent many heartbreaks, but there was general agreement among lawmakers that America was better off without the 1-2% that were sent back.⁷² Having thus protected America from unwanted immigrants, a decidedly secondary goal was to protect desirable immigrants from unwarranted mistreatment by Americans, i.e. at entry ports. Less important still was the emphasis, after the early 1880s, upon humanitarian regulation of conditions experienced by immigrants during their oceanic traverses.⁷³

Restrictionists in America perceived a much broader set of risks, including concerns that unchecked immigration would bring about deteriorating working conditions for unskilled labor in America or threaten America's cultural, social and ethnic cohesiveness. Generally speaking, however, the dominant policy of regulation and very limited rejection of the least desirable 1-2% posed only a minor risk, if often a chafing inconvenience, to both migrants and shipping lines.⁷⁴

More substantial quantitative restrictions on migrant flows – which would have struck at the heart of the migration business – were rightly considered not too likely before 1914, and conveniently so, as there were no easy hedges against them for either migrants or shipping lines. A few migrants had other options such as relatives in Canada or South America, for example, and most shipping lines to America had other businesses outside the North Atlantic, or the wherewithal to run ships with tourists and freight cargoes only. Nonetheless, migration to America was the mainstay of the transatlantic passenger lines, and the United States was the destination of most European emigrants. This mass relocation and the transportation system that enabled it both depended on an open door to the United States. With the door open, the business of transatlantic migration thrived; when the door closed after World War I, the business shut down.

6. Outcomes

The challenges of managing the risks of transatlantic migrant travel varied over time and place and with the perceptions and preferences of the migrants and transporters grappling with those challenges. Some risks were reduced by being traded off against other risks. Shipping companies built "ahead of demand" and maintained schedules even during cyclical contractions in demand, thereby increasing their risks of overcapacity, in order to reduce the risk to their reputations that would result from not having reliable space for passengers on a regular and consistent basis. Before reaching their decisions, potential migrants weighed the risks of going abroad against the risks of staying at home. Cooperative pricing and pooling arrangements or ownership amalgamations among shipping firms could help reduce the risks of over-capacity and cutthroat rate wars, but did so in ways that increased political vulnerabilities in the inherently international, and often protectionist business of transatlantic transportation. The common perception that migrants and transporters sought "zero sum" advantages by foisting risks on each other is

⁷² Figures from U.S. Bureau of Immigration data. See also Brandenburg.

⁷³ Policy makers rarely went further than shipping lines' own voluntary improvements to on-board conditions (Moltmann, pp. 318-20, Taylor, pp.157,164).

⁷⁴ Described in greater detail in Keeling, "Business," chapter 5.

not entirely wrong, but exaggerates historical reality, at least for the early twentieth century Atlantic.

Steamship lines were well aware that migration traffic was their core activity and that, one way or another, most migrant passages generated repeat business. Opportunistic price cutting or exploitative gouging was rarely a successful strategy even in the short term, and never in the long term. Instead, financial prudence – i.e. low dividend payouts – enabled companies to maintain sufficient surplus capacity to meet peak needs and yet maintain normal schedules of voyages at regular intervals during slack periods. Migrant customers (whose vulnerability to the business cycle shaped the often volatile year-to-year financial performance of North Atlantic shipping enterprises) particularly relied upon the maintenance of regular transoceanic departures in order to leave America quickly during recessions and to return swiftly during subsequent recoveries. Eastbound migratory outflows back to Europe during economic slumps in America also helped soften the cyclical blow to shipping companies.⁷⁵ Relatively stable prices were to the advantage of migrant passengers, as was the shipping lines' emphasis on quality improvements, which (given passengers' relative insensitivity to fare levels and the price floors effectively imposed by the shipping cartels) were the most effective way for the companies to pass along cost-savings from technological improvements. Shipping lines and public regulators also cooperated on a range of measures to manage the risks of large crowds of migrants gathering, embarking, travelling, disembarking and dispersing.⁷⁶

Similarly compatible practices were followed by the U.S. Immigration Bureau and other public sector entities during the period. In return for the important "foreign-born" vote, U.S. politicians headed off attempts at significant restriction by instead enacting very modest additions to categories of "excluded" new arrivals, such as those deemed unemployable or cursed with a "loathsome or contagious" disease – rare cases amongst overwhelming young and fit would-be migrants. In return for the preservation of open border policies that made migration such a substantial business, and for ongoing improvements to port infrastructure, shipping lines not only agreed to give up a small fraction of their potential passengers, but also actively assisted in the pre-screening used to identify and debar those legally ineligible for entry to the U.S.⁷⁷

The economic decision-making behind transatlantic migration in the early 20th century has been incompletely explained by prior studies of "pulls" and "pushes" or by information flows within kinship or corporate "networks." The congruent risk-management strategies of migrants, their transporters and their regulators account more effectively for the broad complexity of modern migration patterns, and help more fully reveal underlying migratory motivations and processes for 1900-14 – and for other periods as well.

⁷⁵ Discussed in Keeling, "Business," chapter 6.

⁷⁶ Dyos and Aldcroft, p. 355.

⁷⁷ Tichenor, pp. 124-25, 138, Pitkin, pp. ix, 53, 57, 95-97.

Transatlantic migration between Europe and the United States in the early 1900s was a powerful and long-lived business, but it was also unusually subject to cyclical, seasonal, technical, economic and institutional risks. The migrants, shipping line executives and governments involved in that business were well aware of its vulnerabilities, and that awareness was central to their strategies and to the calculated gambles they took. No travel industry today is either as important to nor as shaped by migration as was the case for the early twentieth century North Atlantic, but the underlying processes at work then still merit attention now. The north-south wage gap today greatly exceeds the transatlantic differential of a century ago, in a globalizing world increasingly shaped by concerns over risks and uncertainties. How the hazards and opportunities of mass long-distance migration were dealt with a century ago remains relevant today.

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