Waterways to the World: The Panama versus the Suez Canal

At the time of its completion in 1914, U.S. officials envisioned the Panama Canal competing with the Suez Canal for a share of the maritime shipping market. Focusing predominantly on tolls and projects to improve each canal, this paper demonstrates that this fight for market share continued throughout the twentieth century and is ongoing today.

Introduction

On March 23, 2021, the *Ever Given*, one of the largest cargo ships in the world, ran aground in the Suez Canal and blocked the waterway to traffic. What happened remains unclear, though the suspect was a powerful wind gust. For the next week, hundreds of ships were forced to wait to travel through the canal as an excavator and eight tugboats worked furiously to free the 1300-foot-long vessel. Helped by a rising tide, they were able to extricate the *Ever Given* and take it to the Great Bitter Lakes, a large body of water that lays about halfway down the canal's 120-mile length.[1]

When the *Ever Given* ran aground, it was unclear how long the Suez Canal would remain unusable, with the chief executive officer of one construction firm saying that it could be weeks.[2] With that in mind, shipping companies, particularly those engaged in trade between Europe and the Far East, began to consider alternatives, one of which was traveling through the Pacific Ocean via the Panama Canal. That waterway had recently undergone an expansion to permit it to handle ships far larger than those that existed when it had opened to traffic in 1914. While some vessels, including the *Ever Given*, were too big to traverse the Panama Canal, the fact that shippers looked to it as a substitute for the Suez Canal was an indicator of the competition between them for maritime commerce that had been ongoing for generations and continues to the present day.

[1]Nabih Bulos, "Egypt's Leader Hopes Refloating of Stuck Suez Canal Ship Does the Same for His Reputation," *Los Angeles Times*, 2 April 2021, https://www.latimes.com/world-nation/story/2021-04-02/egypt-president-sisi-suez-canal-ship, accessed 3 April 2021.

[2] Herbert F. Hebron, "Refloating the Suez Canal Can Take Weeks: 'Very Heavy Whale on the Beach,'" en24News, 25 March 2021, https://www.en24news.com/now/2021/03/refloating-the-suez-canal-can-take-weeks-very-heavy-whale-on-the-beach-now.html, accessed 7 May 2021.

Dreams and Reality

What became the Suez and Panama canals had existed as ideas for centuries. The ancient Egyptians had constructed a waterway linking the Nile delta to the Red Sea—the so-called "canal of the pharaohs"—but it had fallen into disrepair.[3] In 1858, French diplomat Ferdinand de Lesseps founded the Suez Canal Company (SCC) which, with the financial support of thousands of French citizens who bought shares in the new firm, oversaw construction of the Suez Canal and its opening to traffic in 1869. The waterway did not permit two-way traffic along its entire length. Rather, a ship traveling in one direction would have to wait in the Great Bitter Lakes or at one of several "lay bys" until a vessel heading in the opposite direction passed.[4] The delays imposed by the waterway were worth it for shippers, though, as the canal shortened the travel distance between London and Bombay, India, by more than 4800 nautical miles; between New York City and Bombay by almost 4000 miles; between Marseilles, France, and Bombay by almost 6000 miles; and London and Melbourne, Australia, by more than 400 miles. In its first full year of service, 486 vessels used the waterway; a decade later, that number had grown to 1477.[5]

Buoyed by his success, de Lesseps turned his eyes to building a similar channel through the Isthmus of Panama, one that would link the Atlantic and Pacific oceans. The idea of constructing such a canal had appeared as early as 1534, when King Charles V of Spain proposed a survey to find a route for one.[6] Having failed to fully take into account the fact that Panama offered very different topographical, climatic, and health conditions from what existed in Egypt, de Lesseps' endeavor ended in failure. Following negotiations with French officials and a U.S.-sponsored revolution that saw Panama win its independence from Colombia, the United States in 1903 signed a treaty with Panama that gave Washington a 10-mile-wide strip of land—the Canal Zone—"in perpetuity." It then took up where the French left off and opened the canal a decade later.

In truth, U.S. officials envisioned constructing a canal in the Isthmus of Panama that would compete with the Suez waterway. About a year before the Suez Canal opened, Secretary of State Henry Seward signed a treaty with

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[3]For more on the "canal of the pharaohs," see Carol A. Redmount, "The Wadi Tumilat and the 'Canal of the Pharaohs,'" *Journal of Near Eastern Studies* 54 (April 1995): 127-35.

[4]*Report of Connecticut Rivers and Harbors Commission* (Hartford: State of Connecticut, 1911), 62.

[5] "The Suez Canal," *London Times*, 15 November 1929, p. 15; "Financial History of the Canal," undated, *British Documents on Foreign Affairs*, Part I, Series B, vol. 9, pp. 211, 213.

[6]E. Chaves-Carbello, *The Tropical World of Samuel Taylor Darling: Parasites, Pathology and Philanthropy* (Portland, Oreg.: Sussex, 2007), 35.

Colombia permitting the United States to cut a channel through Panama. In his mind, to have only the Suez Canal would force American enterprises on the East Coast no choice but to use it should they want to trade with Asia. He had no intention, he told a group of New York financiers, to see Americans "become tributaries to ancient and effete Egypt." Hence, he wanted to see a waterway built in Panama, one that would offer an alternative to Suez, and one that, in his mind, would prove "transcendently profitable and transcendently useful." Unfortunately for Seward, Colombia rejected the treaty, leaving his dream of an isthmian canal nothing more than that.[7]

The Competition Begins

That is, until 1903, when the United States began completing the canal. As construction progressed, officials on both sides of the Atlantic questioned whether the new waterway might capture some of the traffic that traveled by way of Egypt. Prince d'Arenberg, the president of the Suez Canal Company, doubted it. He told his shareholders in 1907 that few U.S. vessels used the Suez waterway. Moreover, the opening of the Panama route would permit an increase in maritime traffic from which the Suez Canal would benefit.[8] Similarly, American naval theorist Alfred Thayer Mahan commented in 1912 that a canal through Panama would act as "the gateway to the Eastern Pacific, as Suez is to the Western."[9]

In truth, however, the SCC had reason for concern. Unlike the sea-level Suez Canal, the fifty-mile-long, forty-foot deep Panama Canal required three pairs of locks to raise and lower ships through the mountains that bisected the nation. Each individual lock was 1000 feet long, 110 feet wide, and 40 feet deep, and required a vessel to wait for the lock to fill or empty before it could continue on its way. Yet the delays created were worth it. Thanks to the new waterway, the distance traveled between the U.S. East and West coasts fell by 54 percent, between the U.S. West Coast and Europe by 43 percent, and between Europe and the west coast of South America by 39 percent.[10] Indeed, despite the locks, a ship going through the Panama Canal needed only about

[7]Walter Stahr, *Seward; Lincoln's Indispensable Man* (New York: Simon and Schuster, 2013), 523-24.

[8]"The Suez Canal Company," *London Times*, 5 June 1907, p. 7

[9]A. T. Mahan, *Armaments and Arbitration: On the Place of Force in the International Relations of States* (New York: Harper, 1912), 177.

[10]John F. Stevens, "Is a Second Canal Necessary?" *Foreign Affairs* 8 (April 1930): 417; Aroop Mukharji, "Sea Change: McKinley, Roosevelt, and the Expansion of U.S. Foreign Policy, 1897-1909" (Cambridge, Mass.: Harvard University, 2020), 246. Unpublished dissertation.

ten hours to get from one ocean to another, or about six hours less than a vessel transiting Suez.[11]

Then there was the matter of tolls. The Suez Canal set its dues in 1873 using a system based on the carrying capacity of a ship, including not just the hold of the vessel but any covered or enclosed space erected on the deck.[12] In 1912, U.S. President William Taft signed into law the Panama Canal Act, which set the maximum toll at US$1.25 for laden vessels and a minimum of US$.75 for those in ballast. However, a complicated set of considerations as to whether to base tolls on U.S. Measurement Rules or a proposed set of rules for the Panama Canal led Taft's successor, Woodrow Wilson, to set the fee for loaded ships at US$1.20. And if this was not complex enough, because the U.S. rules exempted space that might be charged a fee under Panama Canal rules meant a vessel actually paid on average about 30 percent less US$1.20 a ton.[13] Given such a low rate, the *American Economic Review* anticipated shippers out of the United Kingdom and the U.S. East Coast to choose Panama over Suez when it came to commerce with East Asia, and the West Coast of both North and South America.[14] In response, the Suez Canal in 1912 reduced its rate for fully-laden vessels 50 centimes to 6.25 francs (or about US$1.20); this was followed by another rate cut in 1914.[15]

Finally, there was the size of the ships themselves. In 1912, the British Minister to Panama, Claude Mallet, warned his nation's minister for Foreign Affairs, Sir Edward Grey, that because of its depth, the Suez Canal could

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[11]*Official Handbook of the Panama Canal, 1915* (Washington, DC: GPO, 1915), 18; "Suez Canal Company," *London Times*, 19 June 1915, p. 13.

[12]Elsayed Hussien Galal, "Triple-E Vessels: Tonnage Measurement and Suez Canal Dues Assessment," *Journal of Renewable Energy and Sustainable Development* (June 2015): 187.

[13]Norman J. Padelford, *The Panama Canal in Peace and War* (New York: Macmillan, 1942), 108-14; "2,200 Merchants Applaud Goethals," *New York Times*, 21 December 1916, p. 8; "Suez Canal Dues Lowered," *London Times*, 7 September 1938, p. 17. Padelford explained that there are two types of tonnage. "Gross registered tonnage" is the entire weight of a ship. It differs from "net registered tonnage," which is the space available for cargo as well as passengers; both the Suez and Panama Canals assumed a ship could carry 100 cubic feet of cargo per ton. But the United States had its own rules of measurement, which allowed a shipowner to deduct from the net tonnage space used for fuel or for housing the crew. He used as an example the ship *Empress of Britain*, which under Suez rules would have paid a fee of US$30,741, plus additional dues for each passenger. However, under U.S. rules, that owner of the ship made some alterations to increase the amount of space not subject to tolls, thereby reducing the fee to use the Panama Canal to just under US$19,000.

[14]Lincoln Hutchinson, "Voyage Costs Via Panama and Other Routes," *American Economic Review* 4 (September 1914), 582-83.

[15]"Foresee Canal Rate War," *New York Times*, 23 August 1912, p. 1; "Suez Canal Tolls Cut," *New York Times*, 9 June 1914, p. 3.

handle ships with a draft of no greater than 29 feet. However, "the Panama Canal is designed to allow the passage of the largest vessel that is in service." It was for this reason that the SCC began a program of improvements to widen the Suez Canal and increase its depth so that, starting in 1915, ships with a draft of 30 feet could use it.[16]

From World War to Six-Day War

The world was in the midst of its first global conflict of the twentieth century at the time the Suez Canal completed its deepening. The war took a toll on maritime traffic, with the number of ships using the Panama Canal falling to about 2000 a year through the war's end in 1918, or about 500 ships fewer than went by way of Egypt. The number of vessels on both waterways increased afterward, to the point that by 1925 they had nearly equal market share, with about 5000 ships using each.[17] Not only did it appear the Panama Canal had cut into at least some of the traffic that otherwise would have gone through Egypt, but its lower tolls threatened to continue that trend, especially following the onset of the Great Depression in 1929. The Liverpool Steam Ship Owners' Association complained in 1931 that companies using the Suez Canal paid 15 to 25 percent more per vessel than those choosing Panama. The net result was to "divert a considerable amount of tonnage to the Panama Canal." This was especially the case for trade between Europe, and Australia and New Zealand, and between the U.S. East Coast and the Far East.[18] Although the Suez Canal Company denied the charge that its tariffs had encouraged shippers to shift their traffic to Panama,[19] it took the step early the following year to cut its dues to six francs (or US$1.16) per ton for laden vessels and three francs (US$.58) for those in ballast. Yet given how the Panama Canal figured fees, it still offered advantages: during fiscal year 1931, an unloaded vessel paid about US$.14 per ton more than the new Suez rate, but a shipper stood to save US$.25 per ton for fully-loaded ships.[20]

[16]Mallet to Grey, 8 May 1912, *British Documents on Foreign Affairs*, Part I, Series D, Latin America, 1845-1914, vol. 8, 387; "France Watches Panama," *New York Times*, 15 March 1914, p. XX6; "Suez Canal Deepening," *London Times*, 17 June 1914, p. 24.

[17]Ray Spangenburg and Diane K. Moser, *The Story of America's Canals* (New York: Facts on File, 1992), 61-62; "The Suez Canal Company," *London Times*, 24 June 1919, p. 23.

[18]"World's Dea Trade Hit in 1930 Decline," *New York Times*, 23 February 1931, p. 36; "City Notes," 11 February 1931, *London Times*, p. 19; C. H. Calhoun, "Panama Ship Toll Still Below Suez," *New York Times*, 31 January 1932, p. E8.

[19]"Suez Canal Dues," *London Times*, 27 March 1931, p. 13.

[20]Calhoun, "Panama Ship Toll Still Below Suez."

Over the next two decades, the two canals cut their tolls further. In 1937, at the behest of President Franklin Roosevelt,[21] the U.S. Congress revised the rules on the Panama Canal's fees for the first time since 1912, reducing the rates to US$.90 per ton for laden ships and US$.72 a ton for those in ballast. The Suez Canal followed suit.[22] By 1955, the average toll paid by a ship traveling by way of Suez was US$.80 a ton, or about $US.04 less than if that same vessel went by way of Panama. By that same year as well, the Suez Canal had recaptured its preeminent state among the two waterways. Only about 5-6 percent of the world's shipping went through Panama, and it handled approximately one-third of the tonnage carried by Suez.[23] However, given the difference in methods of weighing ships, a 6500-ton vessel that went through the Suez Canal paid US$6200 in tolls, or US$550 more than if that same ship chose Panama.[24]

Then came 1956. Relations between Egypt and Israel had been tense ever since the latter became a nation in 1948; that same year Egypt joined three other Arab countries and launched a military assault on Israel that ended with a cease-fire the following year, and afterward Egypt refused to permit ships heading to or from Israel to use the Suez Canal. In July 1956, Egyptian President Gamal Abdel Nasser took the further step of nationalizing the Suez waterway. In October of that year, Israeli, French, and British military forces launched attacks on Egypt, agreeing to end their assault only after coming under U.S. pressure.

The Suez Crisis raised concern that Panamanians, who had grown increasingly frustrated with North American control of the canal and the surrounding Canal Zone, might try to do what Nasser had.[25] Observers pointed out the unlikelihood of such an eventuality, as the Suez Canal had been a privately-owned British operation on Egyptian soil, while the Panama Canal was overseen by the U.S. government and located in land over which Washington claimed control.[26] Furthermore, Panama's military capabilities

[21]"A Message to Congress on the Panama Canal Tolls. February 26, 1937," *Public Papers of the Presidents of the United States* (New York: Macmillan, 1941), 99-101.

[22]"Shipping News and Notes," *New York Times*, 17 June 1951, p. 49; Hanson W. Baldwin, "Storm over the Panama Canal," *New York Times Magazine*, 8 May 1960, p. 91.

[23]Martin B. Travis and James T. Watkins, "Control of the Panama Canal: An Obsolete Shibboleth?" *Foreign Affairs* 37 (April 1959): 411.

[24]"Ships' Toll Rate at Suez Higher Than Panama," *New York Times*, 5 August 1956, p. 2.

[25]President to Secretary of Defense, 25 July 1956, *Foreign Relations of the United States, 1955-1957*, VII: 281.

[26]"Why Panama Canal Isn't Going the Way of Suez," *US News and World Report*, 17 August 1956, p. 54.

were far inferior to those the United States could bring to bear.[27] What the Suez Crisis did do, however, was move Egypt to close the Suez Canal from October 1956 until March 1957. Seeking alternate routes, some shipowners sent their vessels around Africa's Cape of Good Hope, but others selected the Panama Canal. Consequently, the Panama waterway collected an additional $3 million in dues during the fiscal year that ended in mid-1957.[28]

Over the next decade, the Suez Canal Authority, established by Egypt to replace the Suez Canal Company, continued work to enhance the waterway's attractiveness. In 1957, the canal could handle vessels with a 35-foot draft;[29] that had increased by two feet as of 1960.[30] In 1964, the SCA raised tolls that had been unchanged since 1954 by one percent and imposed another one percent rate hike in 1966.[31] Despite the higher prices, the number of ships using the canal increased from 18,000 during 1958 to more than 21,000 in 1966.[32] The Panama Canal also witnessed growing use: Whereas just over 10,500 ships traveled by way of Panama in fiscal year 1958, that number grew to 14,000 as fiscal year 1967 came to an end.[33]

It was that same year, 1967, when war again struck the Middle East. In June, Israel fought Egypt, Jordan, and Syria in what became known as the Six-Day War. During that short conflict, Israel seized territory from all three, including Egypt's Sinai Peninsula, which lay on the Suez Canal's east bank. Desirous to win international support for Egypt, and still unwilling to allow Israel use of the waterway, Nasser placed mines and scuttled ships in the canal. For the next eight years, the waterway remained closed to international traffic. Once again, shipping companies sought out alternative routes, including Panama.[34]

[27]"Panama Hopes for Greater Share in Canal Rewards," *London Times*, 17 April 1957, p. 9.

[28]"Suez Shift Boon to Panama Canal," *New York Times*, 4 January 1958, p. 30.

[29]"Restoring Channel of Suez Canal," *London Times*, 17 September 1957, p. 5.

[30]"Suez Raises Ship-Size Limit," *New York Times*, 19 September 1960, p. 61.

[31]"Suez Canal Tolls May Go Up One P.C.," *London Times*, 12 June 1964, p. 12; "Suez Canal Tolls Up on June 30," *London Times*, 15 June 1964, p. 8; "Suez Canal Dues to Be Increased," *London Times*, 29 June 1966, p. 1. At the time of the 1964 increase in tolls, the fee was US$.78 for loaded ships and US$.35.5 for those in ballast. See "Suez Canal Rates are Raised: Cairo Cities Increase in Costs," *New York Times*, 15 June 1964, p. 58.

[32] Dana Adams Schmidt, "World Bank Lends Cairo $56,000,000 for Suez Widening," *New York Times*, 23 December 1959, p. 1; Judith Miles, "Suez Canal Eases Back to Normal," *New York Times*, 18 August 1984, p. 3.

[33]"Panama Canal Has Record Year," *London Times*, 3 July 1958, p. 9; "Traffic in Canal at Record in '64," *New York Times*, 5 July 1964, p. S17.

[34]"Using Alternatives to the Canal," *London Times*, 22 July 1967, p. 17.

The Competition Resumes

By the time the Suez Canal reopened in 1975, two transformations were underway that would have an impact on both it and the Panama Canal. One was negotiations on a treaty by which the United States would turn the Panama Canal over to Panama. Growing frustration in Panama over U.S. control of the Canal Zone, which had precipitated unrest there in 1959 and again in 1964, made it clear to North American officials that if they did not revise the 1903 treaty with Panama, the canal could become a target of sabotage or attack. Those negotiations ultimately led in 1977 to the signing of the Panama Canal Treaties, under which the United States agreed to turn the canal over to Panama at the end of 1999.

The other transformation taking place was the increasing size of ships. Take oil tankers. Until 1956, the Suez Canal relied most heavily on petroleum-laden vessels for traffic; the companies that owned those ships had to restrict their size given the limitations of what that waterway could handle. But the closing of the canal from 1956 to 1957, and again from 1967 to 1975, forced those companies to have to round the Cape of Good Hope. They came to realize that despite the longer distance, they could actually save money by building larger ships that could individually carry as much oil that previously required several vessels.[35] Corporations transporting dry cargo came to the same realization. Many of these vessels were too large for either canal. Because of the size of the locks and the waterway's depth, a ship using the Panama Canal—referred to as a "Panamax" vessel—could not exceed 965 feet in length and 106 feet in width, and could not have a draft greater than 39.5 feet. Its capacity was restricted to 4500 twenty-foot equivalent units (TEUs), or the number of standard twenty-foot long, 8-foot wide, and 8-foot-high containers it could carry.[36] So-called "post-Panamax" and "super-post-Panamax" vessels, which were too large to fit into the canal, began to appear

[35]Charles A. Mink, "Suez Lessons Learnt," *London Times*, 11 September 1969, p. XVI; Hugh Thomas, "The No-So-Vital Suez Canal," *New York Times Magazine*, 17 March 1974, p. 62; "Why the Suez Canal is Likely to Drift Into Failure," *London Times*, 2 January 1975, p. 12.

[36]Stephen J. Ramos, "Planning for Competitive Port Expansion on the U.S. Eastern Seaboard: The Case of the Savannah Harbor Expansion Project," *Journal of Transport Geography* 36 (2014): 35.

in the 1980s.[37] By the year 2000, about 18 percent of the world's cargo shipping was of the post-Panamax variety, up 10 percent since the 1980s.[38]

What further unsettled the Panama Canal Commission was the competition for market share, not just from the Suez Canal, but from railroads. During peak season, it was not uncommon for a vessel scheduled to cross the Panama Canal to have to wait as long as 10 days before entering it, and at a cost of US$40,000-50,000 for each day that ship idled.[39] The most popular trade route for shippers who sent their Panamax vessels through the canal was between the U.S. East Coast and Asia. In light of the wait times and added costs incurred, shipping companies found it faster and cheaper to unload their products arriving from Asia at ports on the U.S. West Coast and ship them eastward by railroad, or vice-versa. Indeed, by the early 2000s, over 60 percent of goods that might have gone by way of Panama went instead via this overland route.[40]

In light of the ever-larger size of ships and the possibility of the Panama Canal losing market share, the Panamanian government began to look at the possibility of adding a third, larger set of locks to its canal. Such an idea was not new. A project designed to do just that began during World War II but was brought to a halt. In 1986, the United States, Japan, and Panama formed a tripartite committee that in 1993 considered construction of a sea-level waterway but, concluding it would be too expensive and harmful to the environment, recommended instead a third set of locks.[41]

By the early 2000s, the pressure to proceed with the locks had become overwhelming. Following a series of studies,[42] the Panama Canal Authority in

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[37]Robert Harrison and Miguel Figliozzi, "Impacts of Containership Size, Service Routes, and Demand on Texas Gulf Ports," Center for Transportation Research, University of Texas at Austin, rev. December 2001, 8, file:///C:/Users/vskau/Downloads/dot_14826_DS1.pdf. Accessed 20 May 2020.

[38]Ken A. Ericksen, *The Panama Canal in Transition: Implications for U.S. Agriculture* (Washington: U.S. Department of Agriculture, January 2000), 11, https://books.google.com/books?id=fOCajLgpSDwC&pg=PA11&lpg=PA11&dq=by+2000+percent+of+ships+were+post-panamax&source=bl&ots=ZRWs04Fgmr&sig=ACfU3U2Dl-Eeab3mTfhxuR5oTTcFsV4fIw&hl=en&sa=X&ved=2ahUKEwip-b7qjMPpAhVIXM0KHccYApcQ6AEwC3oECBEQAQ#v=onepage&q=by%202000%20percent%20of%20ships%20were%20post-panamax&f=false, accessed 20 May 2020.

[39]Leigh B. Boske and Robert Harrison, *Panama Canal Utilization* (Austin: Lyndon B. Johnson School of Public Affairs, University of Texas, May 2017), 2; "Full Steam Ahead: Southeast Ports Prepare for Panama Canal Expansion," *EconSouth* 12 (Third Quarter 2010), 24.

[40]"Full Steam Ahead," 33.

[41]Robert W. Aguirre, *The Panama Canal* (Leiden, Netherlands: Martinus Nijhoff, 2010), 38-39.

[42]Silvia de Marucci, "The Expansion of the Panama Canal and Its Impact on Global CO_2 Emissions from Ships," *Maritime Policy and Management* 39 (2012): 603.

2006 presented to the Panamanian leadership a US$5.25 billion expansion plan. The centerpiece was new locks at each end of the canal capable of handling post-Panamax vessels that were up to 1200 feet long, 160 feet wide, drafted 50 feet of water, and carried up to 12,600 TEUs. Put another way, the new chambers could accommodate ships up to 150,000 dead weight tons (dwt)—the amount of weight, including cargo, fuel, and people a vessel can carry without running too low in the water—or about 98,000 more dwt than permitted by the locks on the older canal.[43] On June 26, 2016, the new locks opened for business.[44]

As the Panama Canal expansion neared completion, the Egyptian government began to take another look at the Suez Canal. This was not coincidental. In the decade ending in 2014, 822 million tons of shipping used the waterway, a 37-percent increase over 2004. Wait times to enter the canal ranged from 8 to 11 hours. Concerned that the improved Panama Canal might siphon some shipping away from Suez, President Abdel Fattah el-Sisi in 2014 ordered an expansion of the Suez Canal so that, for the first time, vessels could travel its entire length in opposite directions. As a result, his government declared, a vessel traveling between Northeast Asia and the U.S. East Coast would save two days' travel by going via Egypt instead of Panama.[45] Built by the Egyptian military and completed a year before Panama's new locks opened, the improved Suez Canal reduced the waiting time for ships to use the waterway to three hours and cut travel time from 11 to eight hours. No longer having to wait six to eight hours in the Great Bitter Lakes for opposing traffic to pass—during which the waiting ship generally did not turn off its engines—meant even more savings. Even better, a deepening of the waterway accompanied its widening, thus permitting ships with drafts greater than 45 feet to use it. Accordingly, whereas the Panama Canal could accommodate ships of nearly 13,000 TEU, the Suez waterway to handle those of 18,000 TEU.[46]

The Panama Canal Authority (PCA)—Panama's successor to the Panama Canal Commission— believed it could still retain much of its shipping. The expanded canal, the PCA stated, only took eight to ten hours to cross (not counting a waiting time of 24 to 365 hours to enter the waterway) and could now handle nearly 80 percent of all commercial ships on the high seas.

[43]Carmen G. Gonzalez, "Environmental Impact Assessment in Post-Colonial Societies: Reflections of the Proposed Expansion of the Panama Canal," *Tennessee Journal of Law and Policy* 4 (2008): 319.

[44]Juan Zamorano and Kathia Martinez, "Panama Canal Opes $5B Locks, Bullish Despite Shipping Woes," Associated Press, June 27, 2016. Accessed via NewsBank

[45]"Egypt's Generals Want a New Canal," *Bloomsburg Business Week*, 25 August 2014, 21-22.

[46]Boske and Harrison, *Panama Canal Utilization*, 10, 12, 27; Turloch Mooney, "Egypt's Next Big Thing," *Journal of Commerce*, 24 August 2015, p. 42.

Additionally, the PCA implemented a new toll schedule that charged US$50-60 for the total TEU allowance and US$30-40 for each container on the ship. This clearly was aimed at encouraging larger ships to use the waterway; as an example, a vessel of 11,000 TEU would pay US$12 less per TEU than a similar 4600-TEU ship. The PCA hoped that these revised toll fees would allow the Panama waterway to regain any of the shipping it had lost to Suez. As a further incentive, the PCA implemented the Panama Canal Loyalty Program, which discounted the tolls charged on companies that regularly sent large ships through the waterway.[47] The Suez Canal, however, was not prepared to allow what Panama did to go unchallenged. Shortly after it opened its new channel it cut tariffs by nearly two-thirds on larger container ships to retain its traffic.[48]

Conclusion

Today, the Suez Canal handles about ten percent of the world's shipping,[49] versus six percent for Panama.[50] They each face competition to attract customers, whether it be from those with ever-larger vessels that neither waterway can handle and that companies see as cheaper to run, from railroads, or from the increasingly ice-free Northwest Passage near the Arctic Circle. Yet they continue to compete against one another, seeking means to convince shippers, particularly those heading to the Far East and the Pacific coasts of the Americas, that they offer the quickest and cheapest method of getting products to market.

[47]Boske and Harrison, *Panama Canal Utilization*, 1, 5-6, 9.

[48]Juan Zamorano and Kathia Martinez, "Panama Canal Opens $5B Locks, Bullish Despite Shipping Woes," Associated Press, June 27, 2016.

[49]Rick Gladstone and Megan Specia, "What to Know About the Suez Canal and the Cargo Ship That Was Stuck There," *New York Times*, 25 March 2021. Accessed via Nexis Uni.

[50]Ben Thrower, "Commentary: Expansion of the Panama Canal Benefits Global Trade," 15 July 2019, https://www.freightwaves.com/news/commentary-expansion-of-the-panama-canal-benefits-global-trade, accessed 11 May 2021.