

Overseeing a Voyage: Leadership and Logistical Expertise in P. Cair. Zen. 4.59753

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Abstract: Numerous documents have mentioned waterborne activities and ship movements on the Nile to provide detailed transaction records and operational details. P. Cair. Zen. 4. 59753, a 3rd-century B.C. Greek papyrus from the Zenon Archive in Ptolemaic Egypt is one example. It provides a detailed account of the expenses of a boat that traded between Memphis, Aphroditopolis, Herakleopolis, Bousiris, and Ptolemais. Despite its being fragmented and lacking the sender's name and title, its contextual evidence suggests that the sender may be the ship's captain. This article analyzes the recorded tasks to clarify the managerial and logistical responsibilities involved in operating a river voyage, situating the document within a wider collection of comparable records from the archive. The document reflects a structured system of financial accountability marked by precise terminology and balanced accounts. It also reveals detailed knowledge of geography, supply chains, and monetary transactions while indicating a shared financial model where captains assumed some risk and shared in profits. In addition to related archival evidence, this papyrus gives valuable insight into professional ethos and coordinated practices essential to the success of a river-based economy.

Keywords: Ptolemaic Egypt, freight and expenses, ship captain, facing crises, crew wages.

الإشراف على رحلة: القيادة والخبرة اللوجستية في ضوء بردية P. Cair. Zen. 4. 59753

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المخلص: وثقت العديد من الوثائق الأنشطة المائية وحركات السفن على نهر النيل، وقدمت سجلات مفصلة للمعاملات والتفاصيل التشغيلية. من بين هذه الوثائق البردية اليونانية P. Cair. Zen. 4. 59753، التي تعود إلى القرن الثالث قبل الميلاد من أرشيف زينون في مصر البطلمية، والتي تحتوي على سجل تفصيلي لجميع نفقات سفينة قامت بالتجارة بين ممفيس، وأفروديتوبوليس، وهرقليوبوليس، وبوسيريس، بطليمية وعلى الرغم من أن البردية مجزأة وتقتصر إلى اسم الراسل ولقبه، فإن السياق يرجح بقوة كونه قبطان السفينة. ويظهر تحلل هذه المقالة المهام المسجلة لتوضيح المسؤوليات الإدارية واللوجستية المرتبطة بتشغيل رحلة نهريّة، مُصنّفة الوثيقة ضمن مجموعة أوسع من السجلات المُماثلة من الأرشيف. تعكس الوثيقة نظامًا منظمًا للمساءلة المالية يتميز بمصطلحات دقيقة وحسابات متوازنة. كما تكشف عن معرفة واضحة بالجغرافيا وسلاسل التوريد والمعاملات النقدية، مع الإشارة إلى نموذج مالي يتحمل فيه الربانبة بعض المخاطر ويتقاسموا الأرباح. إلى جانب الأدلة ذات الصلة من الأرشيف، تُقدم هذه البردية رؤية حول الأخلاقيات المهنية والممارسات المنسقة الضرورية لنجاح الاقتصاد النهري.

الكلمات الدالة: مصر البطلمية، الشحن والنفقات، قائد السفينة، مواجهة الأزمات، أجور الطاقم.

The Nile was truly the lifeline of Egypt, carrying goods, officials, and travelers up and down the river. It wasn't just a river; it was the mainstream that linked together Egypt's geography, economy, and culture. To understand how significant the Nile was to Egypt throughout its history, and specifically to this study, regarding the Ptolemaic era, one must consider its function across the country. Economically, it was vital for watering the land and supporting trade, while militarily, it was a crucial means of moving troops and maintaining control. In many ways, the Nile was the backbone of everything in Egypt.¹

Reflecting the Nile's centrality in Egyptian life, numerous documents record water-based activities and ship movements. While different types of records provide valuable information, papyri are considered a unique window into daily life in Egypt. The text under the study here: P. Cair. Zen. 4. 59753 is a significant text, though it is an expense account provides a detailed record of ship's expenses incurred during a river voyage between several local cities, it reveals much about shipping, maintenance, logistics, and uncovers insights into Ptolemaic Egypt beyond just financial records, making this papyrus a voyage through time.

P. Cair. Zen. 4. 59753 is a 3rd-century B.C. Greek papyrus from the Zenon Archive in Ptolemaic Egypt.² The papyrus is fragmentary, and the sender's name and title were not preserved. However, the recorded activities reflect a figure who exercised marked management and navigational skills, successfully corresponding to travel between several cities, managing the ship's operations, and demonstrating familiarity with its logistical and maintenance needs, as will be shown in the analysis that follows.

The text consists of 75 lines arranged in five columns. This study will discuss the ideas and information as they appear in the text, analyzing the content column by column, comparing these findings with related documents from the Zenon Archive, and considering their linguistic and structural features.

Column I (ll. 1-20): records financial advances and payments made in ports like Memphis, emphasizing shipping charges and travel costs, particularly focusing on freight (ναῦλον) paid for cargo during voyages between key locations such as Memphis,³ Aphroditopolis,⁴ Heracleopolis,⁵ and Busiris⁶. It illustrates how those costs (in drachmas and obols) are split between the two parties, and calculated totals for the ship's share versus that of the partners involved.

The captain of P. Cair. Zen. 4. 59753 lists freight payments for transporting grain from Heracleopolis and Busiris, totaling 39 and 31 drachmas respectively, with

¹ Meadows, Andrew, "The Ptolemaic League of Islanders" in *the Ptolemies, the Sea and the Nile: Studies in Waterborne Power*, (Cambridge University Press, 2013): 19

² Zenon Archive, TM Arch ID 256: <https://www.trismegistos.org/arch/>

³ TM Geo 1344 <https://www.trismegistos.org/place/1344>, see in general, Thompson, Dorothy J., *Memphis under the Ptolemies*, (Princeton, NJ: Princeton University Press, 1988).

⁴ TM Geo 236 <https://www.trismegistos.org/place/236>

⁵ TM Geo 801 <https://www.trismegistos.org/place/801>

⁶ TM Geo 471 <https://www.trismegistos.org/place/471>

expenses for the ship deducted (13 drachmas), and the remaining balance, 26 drachmas, divided equally between the two parties, 13 drachmas each.¹

This text goes beyond simply listing expenses, for it serves as a valuable model for similar river voyages. Interestingly, it also helps confirm the presence of a harbor in or near Herakleopolis.

The differences in costs during the voyage reflect the varying distances traveled between these key stops and give a clearer picture of the logistics involved in navigating the Nile.²

Having a clear agreement on wage payments and profit distribution was essential to the operation of Nile River voyages. This principle is explicitly demonstrated in P. Cair. Zen. 4. 59753, where income and expenses are divided equally between the ship's owner and the captain, each receiving a 50% share.³

This type of account is common within the archive and allows for the assessment of patterns in freight costs associated with riverine trade operations.⁴ A comparable text for the distribution of expenses and profits is also evident in P. Mich. Zen. 60,⁵ where the captain reports that the crew objected to sailing under a one-third share system (ἐπὶ τρίτῳ μέρει, l. 5) preferring instead a more balanced agreement, sailing on a half-share basis (ἐφ' ἡμισέαι, l. 6).⁶

P. Cair. Zen. 4.59753 records the 50% profit-sharing model and gives a comparable example in early medieval Egypt, demonstrated by the Coptic ostrakon OMH 82 from Medinet Habu. In this system, after the captain received an initial freight payment, all the following income from the passengers, along with operating expenses, was equally divided between the captain and the hirer.⁷ This arrangement enabled shared responsibility and profit.

Columns II and III: Column II (ll. 21–41) recorded goods, supplies, and minor expenses for the voyage, listing essentials as sacks, nails, and rudder wood, each priced

¹ The freight for transporting grain to Heracleopolis is listed as “ἀρ(ταβῶν) ἄν(α) (δραχμας) δ (δωβόλον)” (200 artabas at 4 drachmas and 2 obols per artaba, l. 8), totaling “(δραχμαὶ) λθ” (39 drachmas, l. 9). For the shipment to Busiris, the rate is “ἀρ(ταβῶν) ἄν(α) (δραχμας) γ (δωβόλον)” (240 artabas at 3 drachmas and 2 obols, ll. 14–15), totaling “(δραχμαὶ) λα” (31 drachmas, l. 16). From each of these totals, “(δραχμαὶ) ιγ” (13 drachmas, ll. 10, 17) are deducted as expenses for the ship (τὸ ἀνήλωμα εἰς τὸ πλοῖον).

² Stephen Michael, Vinson, *The Nile boatman at work: 1200 BCE-400 CE.*, (The Johns Hopkins University, 1996), 125

³ Lionel, Casson, *The Philosophy of Shipbuilding: Conceptual Approaches to The Study of Wooden Ships*, edit, (Texas: A&M University Press, 2004), 100

⁴ Vaneerdeghe, Nick, "Running a Boat in Ptolemaic Egypt." *Zeitschrift für Papyrologie und Epigraphik* 218 (2021): 173; Erja, Salmenkivi, Ptolemy the Second Philadelphus and His World, edit. vol. 300. Brill, 2008, 187-188. DOI: <https://doi.org/10.1163/ej.9789004170896.i-488.2>

⁵ P. Mich. Zen. 60 (?? 248/247 BC)

⁶ Thompson, Dorothy J., *Trade in the Ancient Economy*, edit. (Berkeley: University of California Press, 1983), 68.

⁷ Vinson, Steve, "P. Grenf. II 23: a new edition." *Zeitschrift für Papyrologie und Epigraphik* 21 (1998): 200-201, n. 19

in drachmas or obols. It also accounted for crew payments and daily travel expenses incurred during the voyage to Aphroditopolis. Moreover, column III (ll. 42–47) continued this list with items such as an axe and additional wood, ending with the calculation of the ship’s total consumption cost in drachmas and the distribution of individual shares. Because Column III directly extends the inventory and financial data from Column II, it is most effective to present them together.

The expenditure reflects a wide range of ship-related needs, including payments to assistants, equipment maintenance, and material provisions relevant to the functioning of the vessel.¹ Security-related fees appear in the form of a “φυλακή” (guarding fee, l. 29) of 2 obols. The text indicates that the author of P. Cair. Zen. 4.59753 was also liable for managing various payments, including essential fees related to security responsibilities.²

The practice of recording expenses and documenting maintenance costs for each item is also evident in other documents from the Zenon archive. A matching example attested in P. Cair. Zen. 4. 59706, which records daily expenses incurred during a river voyage, listing nomes between Memphis and Hermopolis and detailing costs over three days. However, the fragmentary nature of the document prevents a clear understanding of the specific expenditures or their intended purposes.

Additional records from the Zenon Archive shed light on the meticulous tracking of ship maintenance and operational costs. For example, P. Cair. Zen. 4.59754 itemizes expenses, such as repairs, equipment purchases, labor wages, freight container fees, and taxes, including the wax tax, revealing the broad scope of financial responsibilities in operating a transport vessel.³

Similarly, the text of P. Lond. 7.1940⁴ provides a detailed record of financial transactions related to ship operations, illustrating payments for shipping costs, provisions, labor, and materials. For example, column 1 opens with a statement from Demetrios, described as a servant overseeing, expenses such as freight payments and

¹ P. Cair. Zen. 4. 59753: “τοῖς ὑποστελεῦσιν” (to the assistants, l. 25), amounting to 1 drachma and 2 obols; “ἀλλαγία χαλκῶν” (replacement of bronze, l. 26), costing ¼ obol; and the purchase of “σάκος” (a sack, l. 27), priced at 1 drachma and 3 obols. Essential maintenance materials, such as “ξύλον εἰς πηδάλιον” (wood for the rudder, l. 32) are also listed and priced. at 2 obols, and “σίδηρος” (an iron piece, l. 30).

² P. Cair. Zen. 4. 59753: “φυλακή (διώβολον)” (guarding fee, 2 obols, l. 29); “ἐρευνητικὸν (ὀβολοὶ) β” (inspection fee, 2 obols, l. 35); and “ἐρευνητικὸν κατὰ πλοῦν (ὀβολοὶ) β” (inspection fee during the voyage, 2 obols, l. 40), all of which underscore the captain’s attention to the vessel’s condition and readiness. The expenses even extend to the cost of composing the letter, noted as “χειρογραφίαν ἐπιστολῆς” (letter draft, ½ obol, l. 38); John Bauschatz, *Policing the chora: law enforcement in Ptolemaic Egypt* (Duke University Press, 2005), 154

³ P. Cair. Zen. 4. 59754 offers a detailed account of general expenditures related to a boat, including repairs and the purchase of equipment, such as “ἥλοι” (nails, l. 2) and payments to “πρίσταις” (the sawyers, l. 3). It also records wages for various laborers, including “[τ]έκτονι” (to the carpenter, l. 5), “ναύταις” (to the sailors, l. 11), and “κυβερνή(την)” (to the captain, l. 13). Additional costs include provisions for freight containers, “κεράμια” (ceramic wares, l. 6), and taxes such as “κηροῦ τέλος” (wax tax, l. 14). This account illustrates the range of financial considerations involved in maintaining and operating a transport vessel.

⁴ P. Lond. 7.1940 (257 B.C.)

purchases of bronze. It itemizes provisions like wheat and barely freight charges, labor wages to sailors and the captain, as well as costs for tools used as containers in additional expenditure covers taxes such as the wax tax.¹

These models collectively show that captains, agents, and assistants all participated in river transport by carefully overseeing expenses and managing ship operations. Their records, using the practices of the period, show their deep familiarity with technical and financial activities.

Column IV (lines 48–64): the text details the payments to cities like “Ἀφροδίτη πόλι” (to Aphroditopolis, l. 50), receiving 7 drachmas and 5¾ obols, and “ἐν Ἡρακλέους πόλι” (in Heracleopolis, l. 51), receiving 9 drachmas. These disbursements reflect the organized and specific nature of payments made at each location, likely covering transport fees or provisions. The text also documents financial transactions, specifying amounts allocated to individuals, including a significant advance of 20 drachmas made to a person named Spinther. This indicates the commander’s flexibility and notion in allocating expenses aboard the ship according to necessity.²

Further documents illustrate the captain's flexibility in proposing options and the alternatives available for accounting methods. For example, a similar approach in P.Cair. Zen. 4. 59649,³ a memorandum concerning a boat belonging to Zenon, presents various proposals for managing its upkeep and crew payments. It specifies wages for five sailors, suggests alternatives involving monthly wheat rations deducted from wages, and outlines rent agreements where the writer pays Zenon an annual fee while Zenon handles taxes and usage costs. Finally, another plan proposes the writer manages taxes and wages, with Zenon supplying wheat and making the boat available as needed.⁴

Likewise, in P. Lond. 7.1935,⁵ the letter from Amyntas to Zenon underlines the multifaceted role of captain Agathon, who was entrusted not only with navigation but also with managing funds and coordinating supplies. Following Zenon’s instructions, Amyntas reports that 50 drachmas were given to Agathon, along with provisions such as

¹ P. Lond. 7.1940, records a report from Demetrios, the servant “λόγος παρὰ Δημητρίου ὑπηρετοῦ l. 1”; as well freight payments (“διὰ Πέλοπος... εἰς τὰ ναῦλα,” ll. 2–4), bronze purchases (“χαλκοῦ,” ll. 6–7), costs (“κεράμια,” l. 6), and taxes like (“κηροῦ τέλος,” l. 14).

² P.Cair.Zen. 4. 59753: “Σπίνθηρι (δραχμας) κ” (to Spinther: 20 drachmas ll. 57–58). The name Spinther appears in the Zenon Archive in reference to more than one individual or role. One Spinther is identified as the οἰκονόμος (household manager) of Zenon, while others are mentioned without a clear designation; see, George Fredric Franko, “Sitometria in the Zenon Archive: Identifying Zenon's Personal Documents.” *The Bulletin of the American Society of Papyrologists* 25, no. 1/4 (1988): 61

³ P.Cair.Zen. 4. 59649 (?? 256 – 248 B.C.)

⁴ Zen. 4.59649, 4–5: “καὶ ὁψώνιον ναύταις |οῦσιν γ' ἐκάστωι (δραχμαὶ) ζ (τριώβολον)” (wages to the five sailors, each 7 drachmas and three obols); and in ll. 10–12: “καὶ πυ(ρῶν) α, κυβερνήτηι (δραχμας) η καὶ πυ(ρῶν) α εἰς τὸν (ἐνιαυτὸν) τιβ καὶ πυ(ρῶν) ἄρ(τάβαι) οβ” (1 artaba of wheat, 8 drachmas to the captain, 1 artaba of wheat for the year, and 72 artabas of wheat); in 15–19: “ἐγὼ σοι δώσω φόρον (δραχμας) φ, τὸ δὲ τέ[λ]ος σὺ τάξεις, ἐὰν δὲ τίς σοι χρῆμα τοῦ πλοίου γίνηται, ἐκ τοῦ ὑποκειμένου φόρου σοι καὶ ὁψωνίου λειτουργήσῃ” (I will give you a freight payment of 500 drachmas, and you will arrange the final payment, but if you need anything for the ship, it will be provided from the assigned freight payment and the food allowance).

⁵ P. Lond. 7.1935 (257 BC)

wine and honey, which were arranged through an intermediary named Aristes, ¹. It confirmed the need for communication and coordination, while proposing alternative plans to avoid financial losses and ensure the continuous operation of the vessel.

Facing crises and challenges is a fundamental task for successful ship management, as demonstrated by a document from the Zenon Archive. For example, the memorandum P. Col. 3. 44, ² written by the boat captain Phamounis to Zenon reveals a situation where Sosos, the designated successor to take over the boat, had not yet arrived. This forced Phamounis to sell some materials to ensure that the workers received their due payments. He also requests Zenon to send a replacement to assume control of the boat and asks for financial assistance to help manage the situation. This case highlights how unexpected crises can be faced until support can be arranged, all the while keeping the superiors informed of such difficulties. ³

Managing emergencies is common, but what distinguishes successful leadership is the wisdom in facing these difficulties. For instance, P. Cairo Zen. 1 59031 ⁴ shows Poseidonius' writing to Apollonios to report that Sosistratos's group removed essential iron equipment from their ship at Memphis. Although Poseidonius is not the ship's captain, he highlights a critical technical issue: vital iron components needed for handling unexpected emergencies had been taken. This episode illustrates how shipowners vigilantly oversee the ship's operational necessities, likely receiving such information directly from the crew or captain. ⁵ This report underscores the importance placed on technical readiness and how the removal of even a single piece of equipment could endanger the ship's safety and operations.

Column V (ll. 65-75): at the end, the text highlights an important tactic used to address the problem of sailors abandoning the ship. It records payments made to retain the remaining crew after others had left, including a 2-drachma bonus to prevent the ship's abandonment and wages for the mast-men, concluding with a 2-drachma balance.

Notably, the tone of the author of P. Cair. Zen. 4.59753 using first-person verbs highlights a strong sense of responsibility and direct involvement in managing the ship's affairs. This tone is supported by his active efforts to prevent the ship's

¹ P. Lond. 7.1935, 1-6 "Ἀμύντας Ζήνωνι χαίρειν. δεδώκαμεν Ἀγάθῳ τῷ κυβερνήτῃ καθάπερ ἡμῖν ἔγραψας ἀργυρίου (δραχμὰς) ν, τὸν δ' οἶνον καὶ τὸ μέλι διὰ τὸ Ἀριστέα ..."

(Amyntas to Zenon greetings. We have given to Agathon the captain, just as you wrote to us, 50 drachmas, and the wine and honey through Aristes...)

² P. Col. 3. 44 (253 B.C.); Vinson, The Nile boatman at work, 59

³ P. Col. 3. 44 "ἀφ' οὗ οὐκ ἐλήλυθεν. καὶ ἤδη πέπρακα, ἵνα ἔχωσιν οἱ ἐργάται τὰ δέοντα" (Since he has not arrived, and I have already sold [things] so that the workers may have what is due, ll. 6-8). Phamounis further requests: "ἀποστεῖλαί τινα ὃς παραλήγεται τὸ πλοῖον" (to send someone who will take over the boat, ll. 11-12), and appeals for financial aid: "εἰ δὲ δύνῃ βοηθῆσαι ἡμῖν χαλκοῖς" (If you can assist me with some money, ll. 16-17).

⁴ P. Cairo Zen. 1 59031 (258 B.C.)

⁵ P. Cairo Zen. 1 59031 "οἱ π[ε]ρὶ Σωσίστρατον ἐξείλοντο τὸν σίδηρον ὃν [ἀ]ναγκαῖον ἦν ὑπάρχειν ἐν τῷ πλοίῳ πρὸς τὰς προσπιπτούσας χρείας" (the men with Sosistratos seized the iron which was necessary to have on the ship for (dealing with) unexpected emergencies, ll. 5-8)

abandonment, reflecting his concern for maintaining the vessel's operational continuity.¹

Whereas, the author also demonstrates technical proficiency, evident in his use of precise financial and maritime terminology throughout the text. He records freight rates and expenditures with standard abbreviations such as “ἄρ(τάβων)” (artabas), “(δραχμαί)” (drachmas), and “(ὀβολοὶ)” (obols), alongside references to nautical terms like “ναῦλον” (freight) and “πλοῖον” (ship). His familiarity with these details, coupled with the final calculation “λ(οιπὸν) (δραχμαὶ) β” (2 drachmas left over l. 75), underscores his attention to fiscal responsibility—he not only monitors disbursements but also ensures a balance remains.

A comparison based on another text, such as P. Col. 3. 44 includes the verb “ἐξήγαγον” (I take them back again, l. 15), which supports a recurring pattern of captains referring to themselves through first-person action verbs. Such consistency across papyri strengthens the case that the speaker in P. Cair. Zen. 4. 59753 is indeed the ship's captain. While his identity is not specified, similarities in tone and duty suggest he might be an individual like Pais, known from P. Mich. Zen. 60, or like Demetrios, who appears as a ὑπηρέτης in P. Lond. 7. 1940, coordinating shipping and financial matters. Or simply, he may represent another figure occupying a similar leadership role. In all scenarios, the text consistently portrays a captain deeply embedded in the logistical and financial framework of Zenon's riverine transport system.

Conclusion: The analysis of P. Cair. Zen. 4.59753 from the Zenon Archive emphasizes the Nile's role as the backbone of Ptolemaic Egypt's economic and administrative systems. Being more than just a record of expenses, this papyrus reveals the logistical and managerial skills necessary for river transport in the third century BC. The commander appears not just as a pilot but as an operational leader responsible for overseeing expenditures, maintaining equipment, managing crew wages, and ensuring soft commercial operations.

This document reflects a structured financial accountability system, highlighted by precise terminology and balanced accounts. It demonstrates the commander's knowledge of geography, supply logistics, and monetary trades. It also suggests a shared financial model in which captains took some risk and shared in profits, a concept supported by similar records such as P. Mich. Zen. 60, P. Lond. 7.1940, and P. Cair. Zen. 4.59649. These texts serve not only as a practical record but also as evidence of a professional ethos grounded in accountability, expertise, and well-planned coordination, qualities essential for success in a river-based economy.

¹ P. Cair. Zen. 4. 59753: Verbs such as “ἔλαβον” (I received, ll. 2, 60), “ἔθηκα εἰς ἀνήλωμα τοῦ πλοίου” (I placed [this] toward the ship's expenses, l. 62), and the phrase “σοὶ καὶ παρ' ἐμοῦ” (you also [receive] from me, l. 61) illustrate this involvement. The author's commitment is further demonstrated in the line “ἔδωκα τῷ μετ' ἐμοῦ νῦν (δραχμας) β, ἵνα μὴ καταλιφθῇ τὸ πλοῖον” (I gave 2 drachmas to the crew with me, so that the ship would not be abandoned, ll. 65–70).

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