The Production and Trade of Fish as Source of Economic Growth in the First Century CE Galilee: Galilean Economy Reexamined

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The Abstract

The article challenges the model of economic oppression in Galilee and argues that the development of Galilean fishing industry and trade gave an economic boost to the local economy. There has emerged a significant interest in ancient fishing technologies and fish production in recent classical scholarship. The article uses these discussions, together with recent archaeological findings in Galilee, especially in Magdala, to reconstruct a more accurate and nuanced portrait of the fishing economy in the region. It is argued that the expansion of the Galilean fishing economy opened up new economic possibilities not only for the elite but also for the members of local fishing collectives.

Key words: Jesus, Galilee, fishing, ancient economy, Magdala

The socioeconomic situation in Galilee has figured prominently in recent discussions about the origins of Christianity. Many scholars have described the Galilean economy as a part of the political state economy under the tight control of Herod Antipas and his imperial patrons and seen the ministry of Jesus and his earliest followers as a reaction to

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1 Stefano De Luca, Rick Bonnie and Antti Marjanen have read an earlier version of this article and offered many useful comments. Robert Whiting has revised the English of the article. I warmly thank them all.
growing economic oppression and exploitation.² I challenge this model in this article and argue that the expansion of Galilean fish production and trade gave an economic boost to the local economy and that also local collectives of fishermen were able to benefit from this development.

The article first presents the main results of the recent archaeological excavations in Magdala/Taricheae that have revealed how this site was a major and flourishing center of fish production already from the first century BCE onward. After this, the article discusses new interpretations of inscriptions referring to associations of fishermen; this evidence suggests that fishing and the production of fish were not dominated by the state. It is proposed that the expansion of Galilean fishing industry coincides with the increase of fish consumption in the region, which makes it plausible that the investments in the Galilean fishing economy were a response to the growing demand for fish products.

Magdala as a Fishing Center

The recent excavations especially on the Fransiscan property in Magdala have revealed the urban character and prosperity of the site and exposed facilities, most remarkably a

harbor, that suggest large scale fishing and trade in the region. The Magdala harbor was built in the Late Hellenistic period (1st century BCE) and extended in the early Roman period (mid-1st century CE).

The first layers of the harbor coincide with the planning and foundation of the city and include a *quadriporticus*, a large rectangular courtyard (32 × 32 m) that was surrounded by porticoes on all sides and that had a rectangular water basin, possibly a fountain, in the center. The southern and the eastern aisles of the *quadriporticus* gave directly onto the water. The eastern wall is about 2 meters wide and it has a mooring stone with a 14 cm diameter. The stone was used to attach boats to the north-south running quay where

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boats were loaded and unloaded. The wall with the mooring stone adjoins a large rectangular tower, the so-called Hasmonean port-tower (26 × 17 m), to the north of the quadriporticus. The southern and the northern side of the port-tower faced the water, and in its southeastern corner another mooring stone is preserved with a pierced hole that is 10 cm in diameter.

The harbor was extended in the first century CE. The extended structures included storage facilities needed in the harbor. The excavations in Magdala have exposed the first port structures in the region of the lake that can be securely dated to the first century BCE and that were indisputably in use in the first century CE. These structures


6 There are signs of various landing places and anchorages around the lake, sometimes with stone structures that could have been, for example, breakwaters. In earlier scholarship, these sites are quite often referred to without an appropriate discussion of available stratigraphic evidence for dating them. Cf. M. Nun, “Ports of Galilee: Modern Drought Reveals Harbors from Jesus’ Time,” BAR 25 (1999) 18–31, 64; Der See
also bear evidence for the scale of investments that were put into the development of the infrastructures that facilitated the Galilean fishing economy.

It is significant that the foundation of Magdala as an urban center can now be dated to the first century BCE which is the period when Galilee fell into the orbit of the Hasmoneans.\(^7\) The Magdala excavations clearly indicate that the urbanization in the region began already in this period, not just when Herod Antipas founded Tiberias in 19 CE.\(^8\) Jürgen Zangenberg has asked whether the construction of Magdala by the

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\(^7\) \textit{Genezareth und die Evangelien: Archäologische Forschungen eines jüdischen Fischers} (Giessen: Brunnen, 2001) 57–99. Nun discusses places such as Capernaum, Hippos, Kursi, Gadara, Tiberias and Magdala as if there were evidence to take the structures found in various surveys as dating to the first century CE. For a more adequate, critical discussion of these and other suggested landing places with references to relevant stratigraphic data, see now De Luca and Lena, “The Harbor,” 114–119.


The results of the Magdala excavations are not yet fully incorporated into Galilean studies where the introduction of Hellenistic culture in the region and the beginnings of urbanization are still generally associated with Herod Antipas’ regime. Cf. Meyers and Chancey, \textit{Alexander}, 121.
Hasmoneans suggests that they wanted to “safeguard their trade and influence on the Lake in competition to Hellenistic settlements like Philoteria, et-Tell, Hippos and Gadara?”

It should be asked also why Antipas chose to build Tiberias and make it the capital of the region instead of Magdala, which was already a flourishing center at the beginning of the first century CE. I suggest that the founding of Tiberias can be seen as part of Antipas’ attempts to get the already thriving trade, including the fishing business, under his control.

It is most probable that the Magdala harbor and the adjacent structures had an important economical function for the city and its surroundings. The source of the prosperity evident in Magdala was, at least partly, the fishing industry practiced in the region. The high number of coins, also of minimal value, suggests that intense monetary economic activity and frequent trade exchanges took place in Magdala.

Sixty percent of readable numismatic material (nearly 1500 specimens) found in the excavations at the Franciscan property stems from the Hasmonean or Herodian eras while the circulation of the coins at the site drops after 70 CE.

The Greek name of Magdala, Taricheae, indicates that the place was known as a place where fish was processed; for example Strabo mentions Taricheae by the lake and adds

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that “the lake supplies excellent fish for pickling.” The salting aimed at preserving the flesh of the fish to be consumed later in settings that were not near to where the fish was caught. The surviving recipes for salted fish products suggest that all fish parts could have been used in the salting process. Fish were placed in alternating layers of salt in either rectangular or circular vats (Greek ταριχεία, Latin cetariae) of varying size.

Until quite recently, there had been no archaeological evidence suggesting such an industry in Magdala. However, a preliminary suggestion has been made that some pools or vats found in the excavations conducted by the Israel Antiquities Authority could be related to fish processing. In a building complex along a street between the recently discovered synagogue and the harbor, a series of four plastered, rectangular pools or

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11 Strabo, *Geogr.* 16.2.45: ἡ λίμνη μὲν ταριχείας ἰχθύων ἄστείας παρέχει. The name of the city is derived from the verb ταριχεύω (to preserve meat or fish by salting, pickling, or smoking) and related words (ἡ ταριχεία, a preserving, salting; in pl. αἱ ταριχεῖα, factories for salting fish). For detailed discussions of the literary references to Taricheae and the identification of Taricheae with Magdala, see U. Leibner, *Settlement and History in Hellenistic, Roman and Byzantine Galilee: An Archaeological Survey of the Eastern Galilee* (TSAJ 127; Tübingen: Mohr Siebeck, 2009) 217–221; De Luca and Lena, “The Harbor,” 280–291.


vats, c. 0.5 × 0.5 × 0.7 m each, was found. The excavators cautiously suggest that the building with the vats could have been used “in conjunction with the fish industry, although at this stage, this hypothesis cannot be substantiated.”

Findings in Magdala should be placed in a larger comparative context that supports the conclusion that these structures are associated with small scale urban fish production. Large-scale fish-salting installations are found mostly in non-urban coastal settings where it is possible to catch large quantities of pelagic migratory fish species.

However, there is now increasing evidence of smaller urban workshops with only a few vats and with varying floor plans. A first century CE workshop in Seville, ancient

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14 Avshalom-Gorni and Najar, “Migdal,” (for the pools, see Fig. 6). The vats or pools are associated with the production of fish also by De Luca and Lena, “Magdala/Taricheae,” 309; R. Bauckham and S. De Luca, “Magdala As We Now Know It,” Early Christianity 6 (2015) 91–118 (112).


Hispalis, had apparently only four vats in the central working area with a few associated rooms also used for processing fish.\textsuperscript{17} There were 18 workshops around the forum of Roman Sabratha in Libya; the workshops had groups of two to four vats (49 in total) that were mostly located towards the back of a room opening directly onto the street.\textsuperscript{18} In Pompeii, five fish-salting vats have been identified just behind the thresholds of street-front rooms located inside a major entrance to the town, \textit{Porta Stabia}. Steven Ellis has suggested that the location of the vats in the front of the rooms allowed retailers to see or even smell the manufacturing process at the same time that the location made possible the necessary ventilation of the facilities.\textsuperscript{19} The vats in Pompeii bear witness to the use of small vats (the smallest one with a minimum volume of 0.82 m\textsuperscript{3}) in the urban setting, not unlike the vats found at Magdala.

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\textsuperscript{19} Ellis, “The Rise,” 61–67. The vats were in use from the second half of the second century BCE to the last years of the first century BCE.
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The inner-city fish-salting facilities “challenge the assumption that smelly industries were kept well outside city limits.”\(^{20}\) The presence of small-scale pollutant industries – not only salteries, but also tanneries and fulleries – that were interspersed within the city fabric testifies to “the complexity of mixed-use urban space.”\(^{21}\) It is most probable that urban fish salteries were examples of “small privately owned industries working independently of the state and in competition with each other.”\(^{22}\) While we also have some evidence of imperially owned fish-salting industries, there was not any kind of state monopoly on fish processing or the sale of processed fish, a conclusion consistent with the following discussion that the state did not control fishing on the sea.\(^{23}\)

The cured fish flesh was the main product (*salsamentum*) of the fish salting process, whereas fish sauces (*garum* and *liquamen*) or fish pastes (*alleclallex* and *muria*) were its by-products. Steven Ellis emphasizes that these three products were produced from the same process and it is therefore impossible to distinguish the production of salted fish from the production of fish sauces or to determine what end product was produced in an

\(^{20}\) Wilson, “Fishy Business,” 527. For example, a Byzantine edict (*Hexabiblos* 2.4.22) tries to restrict the manufacture of *garum* and cheese within a city.


individual vat.\textsuperscript{24} Even though garum and other fish sauces and pastes were regularly used in ancient diet, the production of salted fish was the more important activity in terms of food production.\textsuperscript{25} Certain kinds of salted fish or fish sauces such as famous garum sociorum were expensive and accessible mainly to the elite.\textsuperscript{26} However, cheap low-quality products were a regular part of the diet for the majority of the population; for example, garum is common in many recipes because it was used instead of salt to season food.\textsuperscript{27}

\textit{The Production of Fish in a Jewish Context}

Salted-fish products are regularly mentioned in the Mishnah, which speaks for their wide availability even though their use also created a concern about whether these products contain forbidden ingredients.\textsuperscript{28} However, despite the reservations expressed in some rabbinic discussions, salted-fish products were probably widely used by Jews. We

\textsuperscript{24} Ellis, “The Rise,” 68.

\textsuperscript{25} Marzano, \textit{Harvesting}, 89.

\textsuperscript{26} Cf. Pliny the Elder, \textit{Nat.} 31.43.

\textsuperscript{27} Marzano, \textit{Harvesting}, 90–95.

\textsuperscript{28} Salted-fish products are mentioned, for example, in \textit{m. Šabb.} 22:2, \textit{m. Yoma} 8:3, \textit{m. Ned.} 6:3–4 and \textit{m. Kelim} 10:5. There appear in \textit{m. Ter.} 10:8 various legal opinions that detail how many portions of unclean fish (דג טמא) there may be in the brine (ציר) produced from clean (דג טהור) and unclean fish. Even though the amounts of unclean fish that are mentioned are small, these discussions seem to allow that some amount of unclean fish was pickled together with clean fish.
cannot know how broadly rabbinic dietary practices were followed, but many specific rabbinic eating regulations separated those Jews who observed these regulations, not only from non-Jews but also from other, non-rabbinic Jews.\textsuperscript{29} In his detailed discussion of Jewish dietary practices in Hellenistic and Roman era Palestine, Justin Lev-Tov has remarked that, given the remains of forbidden species such as pig and catfish in predominantly Jewish settings, dietary customs within the Palestinian Jewish population were more complex than has often been acknowledged.\textsuperscript{30}

In addition, rabbinic rules articulated in \textit{m. Abod. Zar.} 2:3–7 (cf. \textit{t. Abod. Zar.} 4:11–13) do not indicate that it was impossible for Jews following these rules to use salted-fish products in their diet. David Freidenreich has shown that these rules are based on a concern that one cannot expect non-Jews to use only ingredients that are permissible to Jews when they prepare food.\textsuperscript{31} The basic presumption is that Jews may not consume


fish products prepared by non-Jews if it cannot be verified whether these products contain only kosher fish; or, to put it otherwise, the use of these products is allowed if it is certain that they do not contain forbidden fish species. The main source for salted fish would have been smaller species in the Sea of Galilee, especially the gregarious Kinneret sardine and cichlids that can produce large catches and abundant raw material for the fishing industry. Even if dietary regulations similar to those proclaimed in the Mishnah and in the Tosefta had been followed in first-century Galilee, there is nothing in them that would have prevented the development of fish industry in a predominantly Jewish milieu such as Magdala.

It is difficult to estimate the extent of the trade in Galilean fish products. Fish and shellfish remains from the Sea of Galilee/Jordan River have been found in Roman and Byzantine era Sepphoris even though the great majority (90%) of the rather small sample of fish remains that has been analyzed comes from the Mediterranean Sea.

32 Rosenblum, Food and Identity, 89 n. 192; Freidenreich, Foreigners, 53. Freidenreich (Foreigners, 63) says that the discussions on foreign food in the Mishnah and in the Tosefta “allow for considerable Jewish-Gentile interaction” and, therefore, are substantially different from some later rabbinic legal opinions that focus on the foreignness of Gentiles. While earlier rules in the Mishnah and the Tosefta focus on the ingredients of foodstuffs and their preparation processes, later discussions were motivated by attempts to clearly separate Jews from Gentiles. Thus also Rosenblum, Food and Identity, 188.

Sea-fish remains are predominant among the examined fish bones from Hellenistic and Roman era Hesban, located on the edge of the Masaba plateau in Jordan, but fish species typical of the Sea of Galilee/Jordan River water system are represented in the sample as well.\textsuperscript{34} The remains of the cichlid family and catfish from the lake are found in Byzantine era Caesarea.\textsuperscript{35} More important than this scattered evidence for individual sites is Justin Lev-Tov’s suggestion that fish-bone remains in general become more frequent in Roman era Palestine as compared to earlier periods. Lev-Tov attributes this to Roman influence and concludes that “Roman foodways” impacted local diet in a subtle way as “dishes featuring Mediterranean fish complemented the pre-existing cuisine.”\textsuperscript{36} Even though Romans and those following their tastes would have preferred food made of sea fish, it is probable that the large-scale dietary changes also created increasing markets for fish products manufactured locally from freshwater species. The attestation of a fishing industry at Magdala thus coincides with the increase of fish


\textsuperscript{36} Lev-Tov “‘Upon What Meat,’” 439; Thus also Kraemer, “Food,” 407.
consumption in the region, which makes it plausible that the investments in the Galilean fishing economy were a response to the growing demand for fish products.

Organization of Fishing and Fishing Rights

In order to find out how fishing was organized in Galilee, we need to rely on comparative material elsewhere in the Roman world, where different kinds of guilds or voluntary associations for various professions were widespread. Professional associations for fishermen are attested in various inscriptions, especially in the eastern part of the empire.\(^{37}\) The firm evidence for the professional associations of fishermen in Galilee derives from the Palestinian Talmud where “the fishermen of Tiberias” are mentioned.\(^{38}\) However, it is possible that Galilean fishermen had already earlier organized their cooperation in some form or another. This cooperation was not necessarily based on such a hierarchical structure with clearly defined assignments as was the case, for example, in a fishing collective responsible for large scale tuna fishing


\(^{38}\) “The fishermen (or, more literally “netfishers”) of Tiberias” (חרﾐי טיבריו) appear in y. *Pesah* 4.30d and y. *Moʿed Qat.* 2.81b (cf. b. *Moʿed Qat.* 13b). In a funerary inscription from Beth She’arim, a group of people from Jaffa is called the “House of Fishermen” (ביתי החormsg). See R. Hachlili, *Jewish Funerary Customs, Practices and Rites in the Second Temple Period* (JSJSup 94; Leiden: Brill, 2005) 209. It is not clear whether this expression is a family name derived from their occupation or whether it refers to an association of fishermen.
in Parium on the Sea of Marmara. Annalisa Marzano has remarked that not all collaboration was done in the context of professional associations but it was also based on a more loosely formed business partnership, which was reasonable because of the costs involved in fishing. In this respect, a dedicatory inscription to Poseidon and Aphrodite from Cyzicus, also on the Sea of Marmara, is noteworthy. This inscription mentions eleven individuals involved in the fishing business who are listed as μέτοχοι, “partners,” and headed by ἀρχώνης, most probably to be understood as a “chief contractor” in this connection. It is interesting that Luke uses the same term, μέτοχος, to describe those who fish together with Peter (Luke 5:5). In the same story, Luke uses another term meaning “a partner” or “a companion,” κοινωνός, as he defines James and John, the sons of Zebedee, as Peter’s partners (Luke 5:10). This word is related to the terminology used in the context of associations where κοινόν was one the terms used for these

39 For the text and discussions of the inscription (I. Parion 5), see E. Lytle, “Marine Fisheries and the Ancient Greek Economy” (PhD. diss., Duke University 2006) 68–74; Marzano, Harvesting, 74–76. The inscription has been dated to the middle of the second century CE.

40 Marzano, Harvesting, 42.

41 For the inscription, see Lytle, “Marine Fisheries,” 76–78; Marzano, Harvesting, 42–43. Marzano comments that the inscription possibly but not certainly dates to the first century BCE.

42 The original word in the inscription is μέτοχος but it is usually taken as an equivalent to μέτοχοι. See Lytle, “Marine Fisheries,” 77.
associations. Of course, both terms appearing only in Luke’s version of the call of the disciples were common and quite often used without any suggestion of membership in a special organization or association. It is possible that Luke has adopted the terminology known to his audience in a Diaspora context, perhaps around 100 CE, and projected it back to the earlier Galilean context. In any case, Mark’s and Matthew’s versions of the call stories indicate that fishing was a collaborative business. Simon and Andrew are fishing jointly with casting nets (Mark 1:16; Matt 4:18) and Matthew mentions that James and John were mending their nets together with their father Zebedee in a boat (Matt 4:18) while Mark remarks that Zebedee had hired servants (μισθωτός; Mark 1:19).

We do not know in detail how the work of the collective may have been organized or regulated in Galilee but any kind of agreement between those involved should have included plans for the selling or preserving of the surplus of catches not used by local households. Furthermore, some deal about how the shares of achievable profits were divided and what was paid to hired workers was needed. These things may not have been outlined in a written document but may have been based on a more informal agreement between members of a collective belonging to the same family or to a cluster of local families in Galilean villages or small towns. That professional associations or more loosely formed partnership networks, including those of fishermen, were based on kinship ties, was also a familiar feature elsewhere.\(^{43}\)

\(^{43}\) For example, in the above mentioned inscription from Parium (I. Parion 5), many participants of the fishing collective are connected by family ties or by manumission.
One of the most important questions connected with the organization of fishing has to do with how rights for fishing were regulated. The most important scholarly contributions to first-century fishing and fishermen in the Galilean context, Wilhelm Wuellner’s monograph *The Meaning of “Fishers of Men”* (1967) and K.C. Hanson’s influential and often cited article “The Galilean Fishing Economy and the Jesus Tradition” (1997), argue that fishing rights were tightly regulated by the Roman state, which in a Galilean context would have been represented by Herod Antipas and his government. According to this widespread view, local fishermen leased their fishing rights from tax farmers or collectors (τελώναι) working for the state. Furthermore, the leasing of these rights was a main function of the custom house (τελώνιον) in Capernaum mentioned in the gospels (Matt 9:9, Mark 2:14, Luke 5:27).44 However, recent discussions concerning the legal status of fishing and fishermen in the Roman world suggest that this view needs to be revised.

Both Wuellner’s and Hanson’s argumentation is based explicitly on Michael Rostovtzeff’s conclusions in his classic *The Social and Economic History of the Hellenistic World* (originally 1941). When discussing various documentary papyri from Ptolemaic Egypt, Rostovtzeff says that fishing and the transport and sale of fish were

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managed by the Egyptian administration that leased fishing rights to “special telonai who underwrote the fishing contract (ἰχθυκη ὀνῆ), which was carried out by expert fishermen liable to pay to the crown 25 per cent of their catch (τετάρτη ἀλέων or ἰχθυκῶν) besides minor taxes.” Elsewhere, Rostovtzeff says that the tax paid by fishermen could be even 30 or 40 per cent of the produce sold. By paying these taxes, fishermen “received loans for the purchase of the tackle.” The system eventually led to a situation where fishermen “may have worked for their own account as state ‘contractors.’”

Recent scholarship has shown that Rostovtzeff’s ideas cannot be generalized across the Hellenistic or later Roman world. Rostovtzeff is not alone in his opinions but the alleged active role of earlier Greek and Hellenistic city states or later Roman imperial government in fishing is promoted by many historians. However, the active role of the

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47 Marzano (*Harvesting*, 251) says that the situation regarding fishing rights in Egypt was different from other areas in the Roman world because of the continuation of the administrative practices from the earlier Ptolemaic regime.

48 Cf. P. Ørsted, “Salt, Fish and the Sea in the Roman Empire,” in *Meals in a Social Context: Aspects of the Communal Meal in the Hellenistic and Roman World* (ed. I. Nielsen and H. Sigismund Nielsen; Aarhus: Aarhus University Press, 1998) 13–35 (19). Ørsted says that is was a *communis opinio* among earlier scholars that fishing was the monopoly of the state.
state in sea fishing and fish production is based on a misleading reading of some of the evidence. Quite many literary and documentary sources do imply that fishing rights in inland lakes, ponds, coastal lagoons and sometimes even rivers were owned by the state or nearby temples and thus tightly regulated. However, recent scholarly reviews of the relevant ancient evidence emphasize that this evidence cannot be applied to open sea fishing. On the contrary, the concept that fish, like hunted birds or wild animals, was regarded as res nullius, the property of no one, was widespread from the classical Greek period to legal collections compiled at the instigation of Byzantine emperors. There is simply no evidence of decrees that would have attached open sea areas to territorial waters belonging to the command of different administrative districts or disputes between fishermen from poleis sharing neighboring coastal waters or officials policing sea waters in an attempt to regulate marine fisheries. Ephraim Lytle speaks of “the limits of regulatory reach,” an expression suggesting how unrealistic it is to think that


50 Already Plato (Leg. 7.824c) says that “the fisherman shall be allowed to hunt in all waters except havens and sacred rivers and pools and lakes, but only on condition that he makes no use of muddying juices.” The obscure reference to “muddying juices” is probably to fishing with poisons, a notorious method also known from other sources. For detailed discussions of other relevant sources, see Ørsted, “Salt,” 13–35; Lytle, “Fishermen,” 1–55; Marzano, Harvesting, 236–266.

marine fisheries could have been controlled by officials of Greek or Hellenistic city states or even by Roman authorities. Lytle’s focus is on classical Greek evidence but he discusses many later Hellenistic and Roman sources that show that his conclusions, supported by other recent scholarly discussions of the topic as well, are also tenable for the Roman period. According to him, “there is no evidence in the [Roman era] jurists to suggest that the legal status of the ocean and those reaping its bounty ever changed” even though the power of the state increased with the expansion of the empire.52

The general idea – that fishermen had the right to fish wherever they thought it was best – sometimes created a conflict of interests between owners of maritime villas or other coastal properties and local fishermen.53 It was not self-evident that rulers would have sided with the rich elite in these conflicts. Quite to the contrary, we have a decree from Antoninus Pius reaffirming that no one can be prohibited from going to the seashore to fish, provided he keeps clear of houses, buildings and monuments.54 This degree should probably be understood as an intercession in the conflict between the fishermen in Formiae and Caieta and local villa owners who tried to prevent these fishermen from practicing their profession near their estates. Antoninus Pius’ reply shows that it was quite conventional to think that access to the sea cannot be regulated but the sea and its resources belong to everyone. The view that fish are common property is attested also in

52 Lytle (“Marine Fisheries,” 6–7), with references to relevant legal texts.

53 Marzano, Harvesting, 252–266.

54 Dig. 1.8.2–4. For the text and its interpretation, see Marzano, Harvesting, 255.
a Jewish context; this principle underlies a rabbinic rule that says that caught fish – or wild animals – belong to the owner of the traps.\textsuperscript{55} 

In light of the above discussion, the crucial question is whether the jurisdictional situation on the Sea of Galilee should be compared to smaller inland lakes, pools, havens or lagoons that were seen as owned by the state or temples or to the open sea where fishing was not regulated. I suggest that the situation at this sizeable lake was comparable to open sea waters. We have much literary and documentary evidence of smaller inland lakes, rivers, etc. whose ownership was claimed by states, temples or private citizens, but we do not have any evidence that would imply that the Sea of Galilee was subject to such ownership claims at any time.\textsuperscript{56} For example, free access to a lake may have been restricted if the entire lake was located on private property, a situation obviously not applicable to the Sea of Galilee.\textsuperscript{57} There was no centralized authority or administration around the lake but the cities of Tiberias, Magdala/Taricheae, Bethsaida/Julias, Hippos and Gadara shared the dominion of the

\textsuperscript{55} In \textit{m. Git.} 5:8 it is stated that “the law of theft” applies “in the interests of peace” in part to what is caught in traps set for wild animals, birds or fishes. Rabbi Jose is ascribed a rule that “the law of theft” applies in every respect. The underlying assumption here is that fishes or wild animals belong to everyone, but caught fishes and animals are the property of the owner of the traps and, therefore, “the law of theft” applies to them.

\textsuperscript{56} For evidence connected to ownership of inland lakes, see Ørsted, “Salt,” 18; Lytle “Marine Fisheries,” 20 n. 40, 30 n. 45.

\textsuperscript{57} Cf. Lytle, “Marine Fisheries,” 8 n. 10.
lake in the first century CE. In a situation like this, it is probable that fishermen, Jews as well as non-Jews, from different administrative areas were able to practice their profession on the lake without the intrusion of patrolling officials. It is not likely that any kind of central authority would have issued fishing licenses and then tried to control where Galilean fishermen from various cities or towns around the lake laid their nets. The above conclusion does not mean that the state and its officials would not have had any interest towards local fishermen and their catches. Many Hellenistic and Roman sources speak of special taxes imposed on fish products (e.g., δεκάτην or δεκάται ἵχθύων). It has recently become more and more evident that these references should not be understood as payments paid for the right to fish on the sea but custom dues when the fish was brought to the harbor and entered the markets. These dues would be based on the wholesale value of the catch and they would be paid only on fish that was meant to be sold but not on fish that was used by the households of fishermen. This is


also how the function of the first century CE “custom house for the fish tax” (τὸ τελόνιον τῆς ἰχθυῖκῆς) in Ephesus is nowadays increasingly understood.\textsuperscript{61} This custom house was earlier taken as a place where fishing rights were sold and, because it was approximately contemporaneous, it has served as a model for interpreting the custom house in Capernaum along similar lines.\textsuperscript{62}

However, the inscription mentions that the Ephesian custom house was built jointly by “the fishermen and fishmongers” (οἱ Ἀλιεῖς καὶ ὑπαρχοπόλαι). It is said that they, “having received this location from the city by decree, constructed and dedicated at their own expense (ἐκ τὸν ἵδίον) this custom house for the fish tax” (τὸ τελόνιον τῆς ἰχθυῖκῆς). It may seem strange that a group of people would voluntarily contribute to the building of facilities that aim at the taxation of their own activity. While this would not make any sense if the custom house was meant for selling fishing leases, the activity of Ephesian fishermen and fishmongers is sensible if the building was meant for collecting the tax on the fish that was meant to be sold in the markets of the city. As Ephraim Lytle has concluded, the building project in Ephesus “best agrees with a scenario whereby fishermen wishing to have access to the city’s markets had to deliver their fish at the docks in the harbor and pay in the process a duty on the value of the

\textsuperscript{61} The custom house is mentioned in an inscription on a stele found perhaps \textit{in situ} at the southeast corner of the ancient harbor in Ephesus. The inscription can be dated to 54–59 CE because it is dedicated to the emperor Nero and his mother Agrippina and wife Octavia. For the text of the inscription and its interpretation, see Lytle, “A Customs House,” 213–224; Marzano, \textit{Harvesting}, 243–246.

\textsuperscript{62} Thus, e. g., Hanson, “The Galilean Fishing Economy,” 103.
The building of the custom house would have ensured that the tax was collected efficiently so that the catch reached the customers unspoiled.

The conditions resulting in the building of a custom house in such a major city as Ephesus were obviously quite different from a Galilean rural village. However, I suggest that the function of the custom house (τὸ τελώνιον) in Capernaum could be understood to be similar to the custom house in the harbor of Ephesus even though it is probable that local fishermen did not build the house on their own expense as their colleagues did in Ephesus. The Capernaum custom house is not explicitly said to be connected to fishing, but it would make sense to take it as a place where products – not exclusively fish, but also agricultural products – meant for local markets were taxed.

Fabian Udoh’s recent discussion on taxes in Galilee supports this conclusion. Udoh considers it probable that Herod Antipas also levied taxes on sales in such rural towns as Capernaum. This is attested by the presence of toll collectors (τελῶναι) that the gospels frequently mention in Galilean settings (Matt 5:46, 9:9–13, 11:19, 21:31; Mark 2:13–17; Luke 5:27–32, 7:34, 15:1). Udoh concludes, “by founding Tiberias on the shore of the Sea of Galilee, Antipas might have sought to increase his tax base and control the trade, including the fishing industry, flowing through the lake.”

The existence of the custom house in Capernaum points in the same direction and is witness

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63 Lytle, “A Customs House,” 220. Thus also Marzano, Harvesting, 245.

to the attempts of Herod Antipas and his government to regulate and tax commerce even in rural Galilean villages and towns. In this way, the state could interfere in the business of local fishermen even though it is unlikely that fishing rights as such were regulated. While Galilean fishermen could have sold some of the surplus of their catches in markets of small towns, there is now increasing evidence that fish markets and fish production were highly developed in the region.

*Fish Markets and Market Officials*

The markets in Magdala as well as in Tiberias seem to have been organized and regulated. This is supported by the discovered lead weights, some of them mentioning a special official, ἀγορανόμος (“a clerk of the market,” cf. Latin aedilis). The evidence from other parts of the ancient world shows that agoranomoi had an important role in the sale of fish and fish markets.

A square lead weight was found in a domestic house in Magdala and it contains Phoenician iconography in a cartouche including a portrait of the goddess Tanit. This weight was probably not made in Magdala but bears witness to business activities between Magdala and the coastal Phoenician cities, especially Tyre. It has been suggested that the weight shows that the Phoenician measurement standards were earlier followed in the region whereas the Roman metrological system gained ground gradually from the first century CE onwards. In any case, the use of such weights illustrates that

commerce was standardized to prevent deceit and foul play that would most probably lead to legal sanctions.

Two lead weights mentioning ἀγορανόμοι are connected to Agrippa II and, therefore, do not directly make known the administrative situation in Magdala and in Tiberias in the first half of the first century CE. However, these weights bear witness to the continuing influence of these market officials in the region because the existence of such officials is attested for earlier periods as well. Another lead weight found before 1965 mentions Gaius Julius who is said to be an ἀγορανόμος “in the 34th year of Herod the tetrarch.” The weight was found in an unspecified location on the western shoreline of the Sea of Galilee, but its reference to Herod Antipas has convinced most scholars that the agoranomos in question operated in Tiberias around 30/31 CE. Josephus mentions that Herod Antipas gave the office of agoranomos in Tiberias to the roman di Magdala / Tarichae. Gli scavi del Magdala Project 2007 e 2008: Relazione preliminare e prospettive di indagine,” SBFLA 59 (2009) 343-562 (371–372).


future king Agrippa I as an honor (A.J. 18.149: ἀγορανομία τῆς Τιβεριάδος). It is unclear whether Agrippa ever took up this office but this mention supports the conclusion that there were officials whose responsibility was to oversee the markets already in Antipas’ Tiberias.  

The term ἀγορανόμος appears in literary sources and in epigraphic material from the classical Greek period onwards for market officials operating not only in major cities but also in small towns. In the Roman era, the term is used as equivalent to the Latin term aedilis. There is both inscriptive and literary evidence for agoranomoi in several cities in Roman and later era Palestine. The tasks of the office holder included the supervision of business transactions in markets and in that capacity he “could impose

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68 Kushnir-Stein (“Two Inscribed Lead Weights,” 144) argues that the agoranomos Gaius Julius mentioned in the inscription of the weight is actually Agrippa I identified by Josephus as an agoranomos. However, this conclusion remains unsubstantiated; see Sigismund, “Small Change?” 333.


penalties on the spot for infringement of the market regulations, and might be called upon to act as arbitrator in disputes over prices.”

Agoranomoi are quite often mentioned in connection with the sale of fish. Fish prices were dependent on seasonal or sometimes even daily variations of catches and, therefore, the supply of fish was beyond the power of any official. In general, smaller fish species were cheaper than larger ones and, therefore, more affordable to ordinary people. There are some Hellenistic inscriptions listing fish species accompanied by their prices. These lists have earlier been taken to mean that the fish were sold in these markets with a price fixed by market officials, but Ephraim Lytle has suggested that “the prices for fish recorded at Akraiphia (and in the similar inscription from Delphi) are not fixed prices, but maximum prices, intended, at least on the surface, to protect consumers from abuse during periods of shortage or increased demand.”

An imperial letter from Pergamon, most probably to be dated to the time of Hadrian, refers to small fish (λεπτὰ ὀψάρια) sold by weight and with prices fixed by the agoranomoi. This

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71 Bekker-Nielsen, “The One That Got Away,” 126–127. Cf. Philo, Spec. 4.193: “Again those who handle weights and scales and measures, merchants, pedlars and retailers and all others who sell goods to sustain life, solid or liquid, are no doubt subject to market-controllers” (ἀγορανόμοι; translated by F. H. Colson in LCL).

72 Marzano, Harvesting, 281.

73 Lytle, “Fish Lists,” 253–303. Two Hellenistic fish lists dated to the late third century BCE have been found in the Boiotian town Akraiphia and in Delphi.

74 Lytle, “Fish Lists,” 290. Thus also Marzano, Harvesting, 283–284.

75 For the text and its interpretation, see Lytle, “Fish Lists,” 288–289.
document indicates that one could buy enough small fish to be shared with several people with one *denarius*. It has recently been suggested that the *agoranomoi* had fixed the price of small fish so that people with limited means could buy it.\(^{76}\) Similarly, some literary sources speak of *agoranomoi* who prevented abuses by fish retailers and opposed excessive asking prices for fish products.\(^{77}\) This evidence implies that the emergence of regulated markets brought stability and predictability that would be beneficial both for those who supplied fish for markets and for ordinary consumers of fish.

**Conclusion: Fishing and the Galilean Economy**

The above discussion has demonstrated that the development of professional fishing activity on the Sea of Galilee was intensified with the investments in Magdala from the first century BCE onwards when Galilee was brought into the Hasmoneans’ sphere of influence. It is likely that the prosperity evidenced at Magdala resulted from the expansion of fishing markets and trade in the region. This expansion very likely opened up new possibilities of at least a reasonable livelihood for ordinary fishermen working on the lake as well. Archaeological remains make clear a huge gap between the affluent conditions in Magdala and the much more modest standards of living in small rural villages such as Capernaum. However, Sharon Lea Mattila has reminded us that the evidence from early Roman Capernaum related to such luxury items as glassware and

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imported vessels, as well as the remains of the excavated houses, illustrate that at least some inhabitants of the village lived at a level significantly above subsistence level. In light of this kind of evidence, it has become all the more evident that there was socio-economic differentiation among Galilean villagers. It is likely that some rural fishermen families who had organized the practice of their trade collectively were able to benefit from the development of the Galilean fishing economy and gain a moderate livelihood from their profession.


My conclusions regarding the development of the Galilean fishing economy are in line with those studies that have shown how various sectors of the local economy developed and flourished in first century CE Galilee. For example, Kefar Hananya, Skikhin and Yodfat seem to have been thriving centers of local pottery production. In light of this evidence, it seems that the rural population in Galilee was in many ways involved in regional market exchange and benefited from it.\textsuperscript{80} As a matter of fact, this conclusion is not at all surprising in light of recent scholarly discussions on the ancient economy. These discussions have suggested that there was a modest per capita economic growth in most parts of the empire during the first century CE.\textsuperscript{81} Andrew Wilson has clarified how improvements in maritime technology – ship design and harbor construction – in


the late Hellenistic and early Roman periods played a part in this development by facilitating large-scale maritime trade.\textsuperscript{82} The evidence of the development of Galilean fishing markets and trade suggests that the region around this inland lake was not untouched by these larger trends.