

Financing the Athenian state: public choice in the age of Demosthenes

Nicholas Kyriazis

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Abstract The present essay analyses Athenian finances during the fourth century BC, the ‘Age of Demosthenes’, from both the revenue and expenditure points of view. It examines how Athenians practiced the concept of ‘economic democracy’ on matters of public choice, and the sometimes ingenious solutions they adopted for financing public goods such as defense, education and ‘social security’. Ancient Athens, the ‘prototype’ political democracy, was advanced also in matters of public administration, finance and institutions, on which political democracy was based and without their smooth running could not have functioned.

Keywords Institutions · Ancient Athens · Economic development · Finance

JEL Classifications N00 · N01 · N013 · H41 · A13

1 Introduction

1.1 The Athenian democracy

Athenian democracy was established during 510–507 BC when Cleisthenes, leader of the democratic party, overthrew the tyrant Hippias and lasted, with very brief interruptions during 407 and 404–403 BC, until its defeat by the Macedonians in 322 BC. It seems that democracy was practised again during the 3rd–2nd centuries

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N. Kyriazis (✉)
University of Thessaly, Thessaly, Greece
e-mail: nkyr@ergoman.gr

BC, until the Roman conquest of Greece. We lack sufficient evidence on the detailed working of democracy during these two last centuries of Athenian independence.

In 490 BC the Athenians were victorious in the first Persian invasion at the plain of Marathon, which gave rise to the famous athletic ‘Marathon race’.

Athens then faced the threat of a second Persian invasion which, if not successfully repelled, would lead to its loss of independence and incorporation into the Persian Empire. Athens reacted by building a new fleet of 200 triremes, thus becoming a naval power.

During these two centuries there was a gradual shift towards more democratic institutions through the reforms of Ephialtes (462 BC) and Pericles, and this was followed by economic institutional reforms introduced by Euboulos and Lykourgos during the mid-fourth century.

During this period, we have indications of the emergence of an alliance of interests between wide groups of the Athenian population: The poorest classes, which gained full political rights but also substantial economic benefits, first as labourers to build the fleet and then as oarsmen, who were regularly paid out of the public treasury while some of them were remunerated as public servants. Also, a new class of ‘entrepreneurs’ emerged which was responsible for emerging sectors linked to the shipbuilding programme and then to the increased trade opportunities offered within but also beyond the Athenian empire: Shipbuilding itself, followed by the iron and bronze industry, the production of luxury goods, arms, jewellery, and pottery, as well as construction and private banking, etc. (Cohen 1997).

Modern authors such as Glete (1993) and Rodger (1997) underline that sustained naval power, which required a very high outflow of funds (much more than armies since ships were very ‘capital intensive goods’) required interest aggregation, that is, an alliance of interests. This alliance came into being in Athens because most (if not all) of the decision makers gained from it: The rich through economic expansion and sea borne trade which resulted from Athenian maritime supremacy (Lytkens 1994; Ober 1989), and the middle classes¹ through economic prosperity in general since they found new markets for their products (high valued agricultural goods such as the famous honey, wine and figs of Attica), and artisan products such as jewellery, pottery, metal, works of art (statuary, etc.). During the fourth century, as analysed in a following section, this led to a balance of interests, through policies introduced by Lykourgos and Euboulos.

Although growth and welfare are difficult to estimate for older societies, the anecdotic evidence we possess indicates both as well as the development of

¹ The “middle classes”, i.e. craftsmen, builders, stone masons, artisans and people living from agriculture, owning tracts of land that they cultivated themselves (as opposed to the few big aristocratic landowners) served as heavy infantry hoplites. They had to be able to bear the substantial cost of the armour and weapons of heavy infantry. They were about 10.000 strong, i.e. one-third of all male adult citizens. In ancient Athens there was only a small percentage of “labourers” (i.e., non self-employed persons), because the great majority of free persons were self-employed. Non self-employed labour was mainly provided by slaves, although many slaves (those “living apart”), (Cohen 2000) were also self-employed, paying only a part of their incomes to their owners.

economic institutions and property rights that go hand in hand with political ones as, for example, joint stock companies for trade and shipping and even a monetary union with one legal tender, the Athenian drachma, that replaced all other currencies within the empire.² Since the time period involved was long enough, citizens had time to estimate and consolidate their estimates of their gains that would arise from turning toward the sea. This, again reinforced first the transition to the new regime and then created a new path of dependence around it.

During the fourth century, Athens refined its institutions and its finances. Because many speeches by ancient orators (and most important of all, those of Demosthenes) have survived, we possess enough documentation to enable us to reconstruct the finances of Athens during the fourth century BC and, in particular, the period of about 370–360 to 322 BC.

In the next sections, I will elaborate on the concept of ‘economic democracy’ as practised in relation to public choice, followed by an analysis of Athenian finances.

2 The concept of economic democracy

Democracy is a constitution based on argumentation (Dem. 19.184) or, in a more modern definition, ‘rule by the people, for the people’. Ancient Athens is the prototype direct democracy, where all issues were debated and voted (for or against) in the Assembly, which was open to all male adult citizens, estimated at about 30.000 during the fourth century and which required a quorum of 6.000 (Hansen 1999). In an assembly democracy like ancient Athens, debate plays a far more important role than in modern parliamentary (indirect) ones. In modern democracies there is often a gulf between political debate, which takes place in the media, and decision-making, which is mainly carried out in offices and committee rooms. Also, many modern critics maintain that the supply of public goods does not correspond to citizens’ demands, either concerning the total supply (oversupply of some public goods) or their mix. Some authors, as for example, Buchanan (1986) go as far as arguing that there are ethical limits to taxation, which is the point at which an individual citizen would rather choose to ‘secede’, that is, to withdraw simultaneously from both the tax and the benefits sides of the fiscal account.³

Taking this one step further, the existence of the ‘black economy’ and tax evasion can be interpreted as a conscious effort by economic agents to avoid excessive tax burdens that they feel is directed towards financing public goods that

² For indications of economic growth see, for example, Cohen (1997). For institutional development, see Kyriazis and Zouboulakis (2004), Ober (1989), Ober and Manville (2003), Kagan (1991).

³ Aristotle in the ‘Politics’ (Arist.Pol. 1304 b 19–1305 a 7) points out that the majority decisions of the humble folk (who are the majority in a democracy and in the Assembly) may drive the well-to-do minority into rebellion. Yet, that never became a problem in Athens, showing that the Athenian state had managed to establish a system of, in modern terms, ‘checks and balances’ so that the advantages of democracy even for the well-to-do evidently outweighed the disadvantage of being sometimes in the minority, (Lys. 19.57, Dem. 21.62–3, Hansen 1999), a point elaborated in Kagan (1991), Ober (1989), Karayannis (2007).

are of low quality or even of no benefit to them (Karayiannis 2005; Halkos-Kyriazis 2006).⁴

In Athens debate took place in the Assembly and led directly to decisions therein concerning all state matters, be they external policy, law making, or finances, that is, the provision of public goods and how to finance them. Ancient Athens is, of course, well known as the ‘prototype’ political democracy. As I propose to show, it was also the prototype economic democracy, in the sense of the active and general participation of its citizens in decision-making concerning economic issues, such as the choice of public good of mainly, but not only, defense. I would like to emphasize that decisions made under the principle of ‘economic democracy’ are not necessarily better or more correct than those made under other forms of decision-making, although in many cases the solutions adopted do seem to be farsighted, to promote welfare and also to be more ‘equalitarian’, as we will analyze below. But what is indisputable is that decisions taken under ‘economic democracy’ increase the responsibility of the individual citizen. By having the right to vote on every issue, and very often actively using this right, the Athenian citizen did not delegate authority in decision-making, as citizens of modern democracies do by delegating decision-making to parties and governments. He took the responsibility of shaping economic policy and public choice upon himself, which meant that correct or wrong decisions were the outcome of his personal choice and vote. Using modern concepts, this decision-making procedure is the first example of internalising the costs and benefits of the results of decision-making for every active citizen-voter. The outcome could not be perceived as an externality, that is, as something given and where the citizen had no, or at best, minimal influence as, for example, in today’s decision-making process concerning defense, but depended on his own choice, expressed through his vote on every issue. In this aspect, I argue that ancient Athens was more advanced than today’s democracies, where decision-making is indirect.

There is an ongoing discussion on the effects of democracy (either indirect or direct) on the modelling of the voters (ranging from ‘purely altruistic’ to ‘purely self-interested’) (e.g. Cronin 1999; Lyttkens 1994). Athenian citizen-voters, as probably most voters and humans, showed characteristics of both. Certainly, citizens exhibiting ‘altruistic’ behaviour and working for the benefit of the public good exist and are even numerous, if we take into account references to this in the writings of the ancient authors. Many wealthy Athenians spent far more than necessary for various *liturgies*, because this earned them ‘fame’, good standing and recognition among their fellow citizens. This can, of course, be interpreted in terms of their desire to increase their total individual welfare, under the assumption that

⁴ According to Karayiannis (2005), in responding to a survey, 56% of Greek entrepreneurs maintained that they committed tax evasion as a purely defensive measure because they felt that they paid taxes that were too high compared to the benefits derived from the state’s various policies. Of course this is almost a “philosophical” question and depends much on the analyst’s “beliefs”. Resistance to taxation has been interpreted also as a “free-rider problem”. In fact, as Ober (2008), Karayiannis (2007) and Lyttkens (1994) have argued, direct democracy eliminates in great part the “free rider problem” and the transaction costs of monitoring, etc.

For a more extensive presentation of this, see Halkos-Kyriazis (2006) and the references given there.

non-material elements are included in the individual's utility function. Also, it must be underlined, that 'altruistic' behaviour was encouraged through education, 'morals' and customs, which were prevalent in ancient Athens (and other Greek city-states). Athenian youths were taught fundamental altruistic values, such as devotion to the state, democracy, justice, liberty, etc.⁵

Self-interest was also an obvious element, as expected and as seen in modern democracies. The fundamental difference with modern democracies is that there existed no organised permanent parties like today and no permanent coalitions. The relatively small number of citizens, (about 30.000, requiring a quorum of 6.000 for decisions at the Assembly which permitted the formation of ad hoc coalitions and logrolling, i.e. exchanging of votes between groups according to their interests (Buchanan and Tullock 2004). One group could win the support of another on a particular issue of great value in exchange for a promise to vote in favour of the other group when an issue of particular interest to them arose in future. As I will argue later on, this brought about a balance of interests among the various interests in ancient Athens, as shown in fourth century politics and expressed in the Athenian budget.

Athens was not characterised by extreme pressure group warfare (as was the case in other city-states, as for example in Argos or Syracuse, where civil warfare erupted). Indication for this is, first, that wealthy Athenians seemed on the whole content to live in Athens. They did not 'secede' and seek refuge in other city-states, which was always an option, due to the existence of many city-states and the small distances involved, the same cultural milieu (same language, religion, and values) and the competition that existed among city-states. During the whole of the fourth century, Athens was characterised by internal social stability. Secondly, Athens attracted many foreigners (known as 'meteques' and estimated at 20.000, or two-thirds of its citizens), many of them rich. The fact that so many foreigners chose to settle and work in Athens is proof of the social stability of Athens and the system of property rights and guarantees that was extended to foreigners. If Athens were a 'predatory state', characterised by extreme group competition, there would not have been the attraction for so many foreigners to leave their home states and settle permanently in Athens.

To paraphrase Arrow (1962), under economic democracy, Athenians 'learned by voting', that is they gained experience in financial matters and financial administration, learned from past mistakes and restructured their institutions as needed. One example is the *trierarchy*, according to which a wealthy Athenian was charged with the running expenses of a trireme warship for one year, at the same

⁵ Modern authors, starting with North (1981) with his emphasis on customs and norms, stress the importance of the "fundamental values" of societies for economic behaviour and thus, economic performance. That the specific "values" mentioned in the text were taught to Athenian youth, we have evidence from the writings of ancient historians (Herodotus, Thucydides, Xenophon, etc.), philosophers (Plato and Aristotle, mainly) and orators (Demosthenes, Isocrates, Lysias, etc.) (Karayannis 2007).

The value of non-material motivation in organisations and employer–employee relations have been underlined by economists such as Simon (1991) "Pride in work and organizational loyalty are widespread phenomena in organizations". Athenians who undertook *liturgies* also took pride in their achievement and showed intense loyalty to their city.

time acting as captain of the ship. In the beginning the *trierarchy* fell on individual wealthy Athenians, who realised, during the course of the fourth century, the limitations of this system, both from a ‘justice’ and practical point of view. So, on the basis of a proposal by Demosthenes, they introduced the ‘*symmoriae*’ system, under which a group of wealthy Athenians was collectively responsible for each *trierarchy*.

In the next section, I will present the topic of Athenian finances and discuss how they were used through the procedure of direct voting to shape economic policy.

3 The choice of public goods and their finance

During the fourth century Athens did not have an empire as it had during the fifth and so, it had to finance expenditures for war and peace out of its own resources. What is most amazing is that it managed to do so without apparent difficulty, although it was at war during the periods 357–355, 348–346, and 342–338.⁶ Even after the defeat of 338 BC, the administrator Lykourgos managed in a short time to restore Athenian finances and even to increase them from about 400 talents⁷ a year at the end of the 340’s, to 1,200 talents in the 330’s (Plut. Mor. 852F). This financial strength reflects the soundness of the Athenian economy of the time, the ‘first modern economy’ because of its structure, where for the first time in history the ‘services’ and ‘industrial’ (handicrafts) sectors contributed more to GDP than agriculture, and at the same time the sound institutional settings of the state’s finances, as elaborated under the workings of economic democracy (Halkos and Kyriazis 2006). The above contrasts very favourably with the financial failures of prosperous early modern states, like the Hapsburg Empire of Charles V and the Spanish empire of Phillip II and his successors, which went bankrupt six times during the period 1557 to 1647 (Kyriazis-Zouboulakis 2003).

As in all states until more or less the end of the 19th century and the advent of the welfare state, the major and most resource-consuming public good was the provision of defense. In this Athens was no exception, although, as I will show further on, Athens was the first state in history as far as we know, that introduced measures for the provision of other public goods, such as ‘education’, ‘culture’ and ‘support for the poor’, that are associated with modern welfare states.

As mentioned above, in 482 BC, Themistocles, the political leader of Athens at that time, foresaw the need for a strong fleet to face the second Persian invasion. Thus, he brought before the Assembly his proposal to build 200 triremes in two years, to be financed by revenue from the Lavrion silver mines in the south of Attica, which were owned by the state. These revenues would be distributed on an equal basis to all free Athenian citizens at ten drachmae each, at a time when a

⁶ For a general historical background see A.W. Pickard-Cambridge (1978).

⁷ 1 talent = 60 minae = 6,000 drachmae = 36,000 obols, when the average daily earnings of a free labourer or slave at the time were one and a half to two drachmae.

labourer's pay was one drachma per day. The Assembly voted in favour of the proposal, which became known as Themistocles' 'Naval Law, or Decree'.⁸

The introduction of the Naval Law and the transformation it brought about is the first known historical example of what we call 'economic democracy'. This system includes (1) a decision-making process concerning not just political choices involving the exercise of public functions or making war and peace but also economic choices, such as taxation and the provision of public goods; (2) a process of direct voting that can be characterised as a continuing process of 'permanent referendums'; (3) a market-like mechanism of decision-making, where the Athenian assembly of citizens—*Ecclesia*—simulated the attributes of modern markets. This decision-making system served as a mechanism of (a) information exchange, (b) first defining and then safe-guarding property rights through laws voted by the *Ecclesia*; (c) expression by the citizens of their preferences of public decisions; (d) determining social prices and, (e) determining the distribution of tax burdens.

Economic democracy, like political direct democracy, is linked with continuous voting, but it also involves economic issues, the most important being the determination of public goods and their financial support. In the case of Athens, the information exchange prior to the vote determined: (1) the kind of public good 'defense' needed in order to face external threats, such as the decision to build a fleet or not; (2) the amount of the public goods required as well as the time schedule, for example, the construction of 200 triremes in two years; (3) the definition of property rights and their safeguard, for example, who would build the ships and what their legal rights and obligations would be; (4) the 'social price' of the public good, for example, one talent per ship; (5) the distribution of tax burden, for example, each citizen offering his ten drachmas of the Lavrion silver receipts. During the fourth century, 'economic democracy' was further refined.

This decision was one of the most beneficial and far-reaching in its results, and represented a balance between 'altruistic' and 'self-interested' behaviour on behalf of the voters who voted for it.

It was beneficial and far-reaching because it allowed the fleet to win against the Persians at Salamis in 480 BC, thus rescuing the Athenian state and democracy and, as most historians agree, safeguarding 'Western' values. It represented a balance between altruism and self-interest because the voters sacrificed personal consumption in exchange for the public good of defense that they hoped would guarantee for them their way of life, values, religion, etc. It also embodied self-interest because Themistocles promised to the poorer citizens, who would become the oarsmen of the ships, full citizens' rights (they would be able to elect, but not be elected) and remuneration for rowing (Kyriazis-Zouboulakis 2004).

In opposition to economic democracy, Western political democracy has no procedure for the citizens' continuous decision-making concerning economic issues. In representative democracies, elected delegates are empowered to make these decisions on behalf of the citizens who can approve or disapprove them globally

⁸ For an analysis of the economic effects of the shipbuilding programme and the transformation of Athenian society it brought with it, see Kyriazis-Zouboulakis (2004).

only at the next elections. As North (1978) pointed out, “For better or for worse, the decisions of politicians and judges frequently do reflect their view of the ‘public goods’”. Furthermore, rulers in representative democracies avoid offending powerful constituents with close access to opponent political parties. Efficient structure of property rights can therefore be seriously affected in present political systems with influential groups and opinion-makers.

The new institutional setting that evolved after the introduction of the *trierarchy* also provided a solution to the problem of the accurate extent of the cost accrued to its citizens by the increased provision of the public good ‘defense’. The so-called problem of the ‘free rider’ arises with the provision of a public good, which all citizens consume, although individual consumption cannot be measured. Some citizens might consume more of this public good than others because they value and need that particular good more and pay proportionately less than they would have been willing to pay if an adequate pricing system could be found (Alchian and Demsetz 1973). Such was the case in the city-state of Athens with its transformation into the first maritime empire in history. As in the case of England in the late 16th century, such a strong fleet was costly to build and maintain but the public benefits due to its existence far outweighed both its private and public costs.

Even intuitively it seems that Athenian citizens perceived that the economic benefits were not equal to all of them. Economic development created by maritime trade benefited all inhabitants but to different degrees. Shepherds, farmers and landowners presumably benefited from higher prices due to greater demand and to some degree due to exports of high quality products like the renowned honey from Mount Hymmetus. But they profited much less than urban craftsmen, ‘manufacturers’, ship-owners and sailors, who were the direct beneficiaries of the growth of trade. If the costs were to be shared equally, a ‘free rider’ problem would exist for these categories. The introduction of the institution of *trierarchy* ingeniously solved this problem. Through the system of *liturgy*, the costs and benefits were to a high degree internalised. The wealthiest citizens (ship-owners and ‘manufacturers’) who benefited most from the provision of the public good ‘defense’ and the naval fleet, had to pay a proportionately higher charge for it.⁹ The *trierarchy* was precisely a specific charge levied upon the citizens who benefited most from the provision of the public good ‘defense’, with an obvious redistribution effect.

During the fourth century, the state had to finance its policies through its own means. Thus, no more ambitious building programmes of public monuments could be contemplated (the works on the Acropolis had already been finished by 407 BC). The state concentrated, again through what had become the well-tried procedure of

⁹ We have, of course, no statistics as to the extent and profits of trade, but Herodotus provides a very interesting example from the days before the Persian invasions. Koleos, a Samian ship owner and captain, undertook for the first time the difficult and dangerous voyage for trade with today’s Spain, then known as ‘Tartessos’, or the ‘gates of Hercules’. Koleos’ profit from this voyage was the unheard of sum of one talent, at a time when the cost of building a trireme warship was one talent. A merchant ship would presumably cost much less. During the fourth century, as will be analysed further on, we have clear evidence that the wealthiest Athenians were no longer the landowners, but the merchants, bankers and entrepreneurs, all of whom benefited from trade and the position of Athens as the main sea power and ‘industrial nation’ in the Mediterranean.

economic democracy, on the provision of those public goods deemed to have priority: Defense, ‘education and culture’ and ‘social security’.

In the second half of the fourth century, for which we have sufficient information in the extant ancient sources, the Athenian state had the following sources of revenues:

- (1) Rents from state-owned property, either directly or indirectly, through sanctuaries and temples of various gods and divinities. These were let at auction to the highest bidder, usually on ten-year leases. The auction was held in the Council under the direction of the so-called *poletai* (sellers), in the presence of the king-archon (επώνυμος ἄρχων, one of the state’s high magistrates). Rents were paid annually to the *apodektai* (cashiers) in the ‘bouleuterion’ building (Andoc. I.92–3, Arist., ‘Ath.Pol.’ 47.4). This method anticipated modern state procedures when dealing with similar matters. The Athenian state, by using the system of auctioning in the allocation of concessions (mines, etc.) was again using a very modern procedure. Auctions are mechanisms that help determine the correct price of a resource and an optimal allocation, since through this mechanism the resource goes to the highest bidder. Presumably, the highest bidder makes the best use of this resource and this results in the most efficient use of resources thus promoting growth and welfare. Auctions help to establish correct prices by simulating a market procedure in cases where markets do not exist. At the same time, auctions maximize state revenue for the given resource (Smarczcz and Tietzel 2001).
- (2) Minerals and whatever lay beneath the earth belonged to the state. For Athens, the most important minerals were the silver mines of Lavrion, which I mentioned earlier in their relation to Themistocles’ Naval Law. The mines were let out in separate concessions to the highest bidders for either three or even ten years at a time, in a procedure similar to the one under point 1, but with the presence of the treasurer of the Military Fund and then Board of the Theoretic Fund. These two magistrates could be vaguely compared in their functions with today’s Ministers of Defense and Culture respectively. The rents were payable each year to the *apodektai* in the ‘bouleuterion’ building (Arist. Ath. Pol. 47.2).
- (3) Custom duties, of which the most important was the *pentekoste* a two percent duty on the value of all imports and exports. Collection was farmed out for a year to the highest bidders. The procedure was similar to that of point 2. What is important to note from a modern standpoint is that the highest bidders were usually a consortium of private individuals, which is an indication of the advanced nature of the legal procedures and property rights in the Athenian State. Without this, the organization of consortiums would have been impossible (Andoc. 1.133–6, Dem. 35.29–30). As Lyttkens (1994) has pointed out, this system had two advantages. First, it guaranteed the height of the specific revenue for the state and second, it minimised transaction costs. Since the actual revenues were not known in advance, this investment entailed a high

degree of risk for the individual entrepreneur and this was the reason why consortiums were established as a device of risk sharing.

- (4) The *metoikion*, a personal tax for metequos (non-Athenian citizens living and working in Athens). It was farmed out on a yearly basis in the Council by the *poletai* (Harp.s.v.metoikion).
- (5) The *pornikon telos*, a license fee paid by all prostitutes to carry out their profession legally (Aesch. 1.199–20).
- (6) Court fees, fines and confiscations. In private suits, both parties paid fees called *prytaneia*, and in disputes of private citizens against the state a citizen deposited a *parakatabole* a percentage of the value in dispute, which was returned if the plaintiff won but fell to the state if he lost. Fines in public prosecutions went also to the state. They were frequent and could amount to several talents. Confiscated goods were sold at public auctions (Harp.s.v. *parakatabole*, Dem. 23.167, 24.50, 43.71, Arist. Ath. Pol. 52.1, Hansen 1999). Again, the modernity of these procedures is evident.
- (7) Finally, the *eisphora*, a property tax. Athenians had thought that free citizens should not be liable to pay a property (or income) tax, which for them was a sign of servitude. So, in the beginning, *eisphora* was an extraordinary measure, decided under the principle of ‘economic democracy’ by voting for it only in times of extreme necessity, such as war, as for example in the last years of the Peloponnesian War. During the fourth century, when the revenues from the empire did not exist any more, and the revenues from other sources were not sufficient to cover expenditures, the Athenians were convinced of the necessity of making the *eisphora* permanent, to be imposed on the wealthier citizens and metequos. The decision was again made through the usual voting procedure. The *eisphora* was a highly progressive form of taxation, falling on the rich. Again, the modern nature of this tax is evident. It is the first example known in history, whereby a democratic citizens’ body decides to impose a permanent property-income tax on some of its members, of a progressive nature and for redistribution purposes, since the proceeds were used to finance ‘programs’ benefiting in part the poorer citizens, as I will analyze below (Dem. 50.8).
- (8) Lastly the *liturgies*. Under these, wealthy citizens undertook some ‘payment cum personal service’ (Hansen 1999) for the benefit of the state. The most important and onerous one was the *trierarchy* under which first one and later on a group of wealthy citizens (under the system of *symmoriae*, introduced through a proposal of Demosthenes) undertook the running costs for a trireme warship for one year, at the same time offering the services of overseeing it and captaining the ship. The cost was high, averaging between 3.000–6.000 drachmas (Gabrielsen 1994) but could not fall on the same person for consecutive years. Other *liturgies* were the paying and overseeing of the production of theatrical plays and religious festivals. *Liturgies* were also of a highly progressive nature since they fell on the rich to the benefit of the poor. They were also an ingenious way of solving problems of public choice and their financing. Through this system, Athenians financed public goods such as

defense (the warships) and culture-religion (theatrical plays and religious festivals).¹⁰

I will turn now to the examination of the expenditure aspect of the Athenian state budget. Athens did not have a centralised budget but separate Funds, the most important ones being the Military Fund and the Theoretic Fund. The second was created by Euboulos in the middle of the fourth century and apart from its primary function, which was the financing of the *theorica* (i.e. payment of some kind of remuneration, usually one drachma per day, to poorer Athenian citizens as compensation for working time lost, to enable them to see the four-day long enactment of theatrical plays) it also undertook the financing of public buildings and roads, of defense and the administration of the navy (Arist. Ath. Pol. 43.1, Aesch. 3.25, Harp. S.v.theorikon). Concerning the navy, financing by this board must probably be understood to comprise construction of ships, ship's 'houses' (*νεοσοικικοι*) and administration expenses of the personnel, but not the running expenses of the fleet, which were covered by the *trierarchy*. What is important here is to underline that the Theoric Fund covered the expenditure of three kinds of public goods: First, culture and education, that is, attendance at theatrical plays; second, public infrastructure such as buildings and roads; and third, defense, which was shared with the Military Fund.

¹⁰ As mentioned in the text, during the fourth century, the wealthiest Athenians were no longer the landowners, but the 'entrepreneurs'. We know by name 30 bankers (Cohen 1997), some of them citizens, some meteqes. Prominent among them was Passion who started as a slave and ended his life as an Athenian citizen. He owned also a factory, which yielded a profit of one talent per year (Dem. 36.48, 59.2). Cephalus, a Syracusan resident in Athens owned a factory employing 100 men (Lys. 12.19). We know also some captains and shipowners like Diodotus and Diogeiton. Diodotus left a fortune of 13 and 2/3 talents (5 on cash deposits, 7 and 2/3 on nautical loans, none in land!). (Lys. 32.4, 6, 15, 25. Diphilos, a mining concessionaire, had a property amounting to an astonishing 160 talents, more than the state's annual income had been before the mid-fourth century. (Plut. Mor. 8430). The brothers Lysias and Polemarchus owned a shield factory employing 120 men. (Lys. 12.19). The father of the orator Demosthenes owned two factories, one of which produced knives and employed 32 slaves, while the other produced beds, employing 20 slaves. His total fortune was 15 talents (Dem. 27.9–11). As to the question concerning the voluntary or not acceptance of the burden of *liturgies*, the interpretation of modern scholars differs (for relatively opposite views see Lyttkens (1994) and Karayannis (2007), Ober (1989, 2008), Ober and Manville (2003) with Cohen (1997) taking a middle view). As I mention in the text, the fact that wealthy Athenians did not 'secede', even though they had the opportunity, while rich foreigners chose to settle permanently in Athens, seems to indicate that *liturgies*, while certainly expensive, were not deemed to be so prohibitive as to induce wealthy people to leave Athens. It seems that according to their rational calculations, wealthy people evaluated that the benefits provided by the Athenian state outweighed the burdens imposed on them. Although there have been some examples of legal procedures (mainly for fraud against the state) in Athens, the cases we know are not linked to political issues or persons, as opposed to what we know of democratic Rome. There, vicious legal prosecution of political enemies in the Senate was standard practice. Athens did not have a permanent aristocratic legal body as the Senate and further, was not characterised by civil strife, as was the case during the whole of Roman Republican history. During the age of Athenian democracy (starting with Solon in the 560's until 322 BC, i.e. 240 years, these were two attempted coup d' états (both failures) to overthrow democracy (Cylon's in the mid-sixth century and in 407 BC during the Peloponnesian War) and one short lived oligarchy (404–403 BC) imposed by the victorious Spartans. During the Roman Republican period from the fourth century to its abolition in 31 BC there were the two civil wars of the Gracchi, Marius—Sylla, the Caesars—Pompeius, Brutus—Marc Anthony's, Octavius—Marc Anthony's civil wars and their mass political murders.

Concerning the specific amounts of the various expenditures, ancient sources allow us to determine the following:

1. The remuneration of the Assembly (which required a quorum of 6000, at one drachma per session) would have cost about 45 talents a year (Arist. Ath. Pol. 62.2; Hansen 1999, p. 150).¹¹
2. The Council of 500 cost about 15 talents (Hansen 1999, p. 255).
3. The Courts cost between 22 and 37 talents (Hansen 1999, p. 189).
4. We do not have sufficient information to enable us to estimate the expenditure on *theorica*, which may have been high.
5. Payments for honorary decrees, which may have amounted to about ten talents.
6. Military expenditures: As with most states from ancient times to the beginning of the twentieth century, military expenditure was by far the most costly item, necessitating high expenditure, which usually took more than 50% (and often during wartime as much as 90%) of total state expenditure. Here also, we do not have sufficient data to permit us to make accurate estimates, but we can at least calculate some of the expenses: After the reform of 336/5 BC the training of the *ephebes* (youths of 18–20 years doing their obligatory military service, each year's class being between 500–1,000 strong) cost 25 talents a year (Arist. Ath. Pol. 42.3). The 1,000 strong cavalry force (the ownership of the horse belonging to the cavalryman and so presumably also the cost of acquiring it) cost 40 talents per year for the mounts' foddors, which was borne by the state.

To the above must be added the cost of fortifications (the Attica region being perhaps the most heavily fortified of all Greece), the upkeep of the navy (without the *trierarchy*) and the 'police force', a mercenary corps of so-called 'Scythian archers'.

What is important here is the fact that by the fourth century Athens had both a standing navy (the largest in Greece and the eastern Mediterranean) and a standing army (although it was a small one, mainly the cavalry force). This was a decision taken again under the principle of 'economic democracy' and enabled the state to solve the problem of providing the public good of 'national defense', at specific quantities (number of ships and of soldiers, both infantry and cavalry) and at a specific cost. It must also be further underlined, that in this respect as well, Athens was again ahead of the times: Other Greek states followed in establishing permanent military forces (such as Macedon, the Hellenistic Kingdoms and then Rome) but Western states did not establish such forces until the second half of the 15th century, when Charles VI of France established the 'Companies d' Ordonnances'.

But apart from the cost of 'administration' (points 1 to 3 above), the Athenian state was the first one in history to introduce a 'public education system' and some 'social policy' measures.

It may appear strange to say that Athens spent funds on the public good 'education'. It is of course true that ancient states did not have a system of public

¹¹ By the time of Aristotle, when he was writing 'Athenaion Politeia' the pay was one drachma per day for attendance at the Assembly and one and a half for the 'main' Assembly which lasted longer (*ekklesia Kyria*). Under the assumption that only the first 6,000 participants (quorum) were paid and the number of days per year that the Assembly was meeting, Hansen (1999) arrives at the sum of 45 talents. Using similar assumptions, he arrives at the amounts quoted for the Council and the Courts.

education (schools, universities, etc.), this being considered a private choice, the cost of which should be born by the beneficiary.

The famous private philosophic schools of the fourth century, like Plato's Academy, are well known. But Athenians seem to have felt that these schools, as well as the children's private teachers (known as *paidotrivai*) could be afforded only by relatively well to do families and not the poorer ones. They felt that poorer citizens should at least partake of some sort of education, financed through the state's (i.e. the Assembly's) decision to introduce the *theorica* that is, the production of theatrical plays. The cost of producing the plays was one of the *liturgies* falling on the wealthier citizens and thus had again a redistributive function. But Athens went a step further by being the first state in history to introduce at least one element of publicly financed 'education', the theatrical plays. As we have seen, theatrical performances had a highly important educational function in that they taught 'morals', history, mythology and religion. It was believed that all Athenian citizens should be able to benefit from attending the performances. Since they took place during daytime and lasted the whole day for a four-day period, the poorer citizens would have to lose four days' wages (or remuneration from work) in order to attend. Many would not be able to afford this loss. They had to be compensated and so, the *theorica* was introduced. This was a payment made to poorer citizens as compensation for wages and remuneration lost, thus allowing them to attend performances. Seen in this light, the *theorica* was the first educational programme in history financed by a state for the benefit of a substantial part of the population.

Lastly, in social policy measures, Athens was again the first state in history to introduce social policy programmes with a 'modern' character. It had a sort of 'social security' (or relief for the poor) for disabled persons with no means of support.¹² These persons could be registered with the Council and could receive a subsidy of one obol and later two obols per day. Further, if a citizen died in battle the state undertook the upbringing of any under-age sons. Moreover, at times of food shortages, the state often distributed corn, either free or subsidized (Lys. 24.26, Arist. Ath. Pol. 49.4. Aeschin. 3.154, 1.103–4). The re-distributive character of these social policy measures is clear and strong, since the beneficiaries, the poor citizens, paid no taxes at all while the wealthy were taxed to generate the necessary revenue to finance these measures.

Table 1 attempts to reconstruct the Athenian budget for the 340's, during peacetime. *Liturgies* are presented as 'extraordinary revenues and expenses', since they did not form part of normal revenue, and were used only for the specific purpose of each one, that is the *trierarchy*, etc. It is clear that, while the other *liturgies*, (plays, festivals, etc.) were more or less stable and given for every year, the *trierarchy* was not, for two reasons: (i) the number of *trierarchies* per year depended on the political situation. During war years, it was certain that more ships would be in service than during peacetime. (ii) the cost per ship would increase in war years, since presumably, ships would be more intensively used on campaigns, demanding more material etc.

¹² They had to own property of less than 300 drachmae.

Table 1 The budget of the Athenian state in the 340's (Peacetime)

Revenue	Expenditure
Total: 400 talents	
Ordinary revenue sources	A. Administration
1. Rents from state-owned property	A1. Assembly 45* talents
2. Revenue from minerals (i.e. silver-mines). 160 talents	A2. Council 15* talents
3. Custom duties	A3. Courts 22–37* talents
4. 'Metokion' personal income tax on meteqes). 15–20 talents	Total administration: 82–97 talents.
5. 'Pornikon telos' (licence fee of prostitutes). 1,5 talent	B. Honorary decrees, 10* talents
6. Court fees, fines, confiscations	C. 'Theorica', payment for attending the plays
7. 'Eisphora' (property – income tax. 60 talents	D. 'Social measures' (Relief for the poor, Upbringing of children whose fathers died at war)
	E. Military
	E1. Youths' military service, 25 talents
	E2. Cavalry (fodder), 40 talents
	E3. 'Police' ('Scythian' archers)
	E4. 'Infrastructure' (fortifications, roads, 'ships houses')
Extraordinary, linked to <i>liturgies</i>	
1. Plays and festivals	
2. Trierarchy: 3.000 drachmae per ship per year (average during peacetime) by ten ships, 30.000* drachmae or 5* talents	
	Wartime extraordinary expenditure
	1. Naval crews' enumeration
	Minimum 20 ships: 200* talents
	Maximum 100 ships: 1.000* talents
	2. Army mercenaries.
	3. Trierarchy: 20 ships, 5.000* drachmae per ship
	100.000* drachmae, about 17 talents
	100 ships, 5.000* drachmae per ship
	500.000* drachmae, about 83 talents

Notes: Numbers without asterisks are given by the ancient authors. Numbers with asterisks are modern estimates. Where no numbers are given, no estimates are possible

Sources: Ancient authors, Lyttkens (1994), Hansen (1999), Amemiya (2007), Karayannins (2007) own estimates

Also, a question remains concerning the *trierarchy*. *Trierarchy* meant that a certain number of ships would always be ready to go to sea and on campaigns in a kind of 'fleet-in-being'. But the ships were not manned unless they went on a mission and the cost of the crews were borne by the state. This interpretation is, I believe, the only one that helps us to reconcile the facts: The existence on the one hand of *trierarchies* in all years (also during peacetime) with Demosthenes' proposal to establish a permanent 'mobile intervention force' of ten triremes, 2.000 hoplites and 200 cavalry on the

other. Demosthenes' proposal would mean that the ten triremes would have to be not only ready through the *trierarchy*, but also permanently crewed (Dem. 4.28–29). Table 1 further attempts to reconstruct the budget during wartime, taking two extremes: a low mobilisation of 20 ships, and a maximum effort of a 100.¹³

The cost of the *trierarchy* is calculated as follows: Each ship had a crew of 200 (Morrison 1986), each man received a wage of one and a half drachma per day and the campaign season (spring to beginning of fall) has been calculated as being 210 days per year, thus giving a total of crew expenses per ship per year of 63.000 drachmae, or more or less ten talents.¹⁴

It is clear that a sustained naval war would exceed the ordinary financial capabilities of the Athenian budget. Extant evidence indicates that, although Athens did have a developed banking system (Cohen 1997), the state did not borrow money, although *trierarchs* and generals sometimes did borrow for their needs, to be repaid when they received the amounts due to them from the Treasury.

On the other hand, it seems that the Athenian budget was not necessarily balanced each year. Although we lack definite evidence, it seems that there was the possibility of a surplus during peacetime, which could be used during time of war. These surpluses would presumably be kept either as coins, or as silver ingots at the Treasury in the Acropolis.

Still, it is certain that during this period, a protracted naval war was beyond the financial means of the Athenian state under its normal financial situation. It would have to find recourse to other means of finance, for example an increase of the *eisphora*, which had occurred during the second period of the Peloponnesian War during 413–404 BC. Happily for Athens, during 376–322 BC, no other state in the region had the financial capability of sustaining a fleet capable of challenging Athens at sea. Thus, the Athenian fleet, in small numbers, had only to support land operations, as for example escorting expeditionary forces to Chalcedice.

4 A system of compromises

The workings of modern democracy have raised the question of its relation to economic performance. Authors have underlined the existence of rent-seeking pressure groups and their 'capture' of the state,¹⁵ the relation between democracy

¹³ The maximum is calculated by taking into account the estimate of the population of Athens at the time, which was about 30.000 adult male citizens, plus about 20.000 metèques (foreign free residents) who were also liable to military service (Hansen 1999). 100 ships would require 20.000 crewmen, or about 40% of the available total adult population, which is clearly sustainable only for short periods of maximum effort.

¹⁴ My calculation shows that Demosthenes' cost estimate for his permanent mobile force of 92 talents per year is rather low, unless of course he envisaged a kind of 'half-pay' for the crews of the ships when not actually in overseas service, which of course is not clear in his proposal. If not, accepting full payment for a year (365 days) instead of only for the campaign season, would mean that each ship cost almost 110.000 drachmae per year, i.e. 18 talents, and only ten ships would require 180 talents, double the sum estimated by the orator.

¹⁵ As, for example, an anonymous referee, and Tollison (1982).

and growth (ranging from democracy positive to negative) and the relation of democracy and the growth of government participation in the economy (increasing under democratic regimes at least to the end of the 20th century). (Feld and Saviar 1997; Barro 1996; Tavares and Warciarg 2000).

Ancient Athens helps us understand some of these points. First, it seems that the relation between democracy and increasing government participation in GDP existed also in ancient Athens. The dramatic increase in the Athenian budget under Euboulos and Lykourgos was in part due to increased prosperity and more efficient administration, but possibly indicates a higher share of the state in economic activity as well.

My interpretation of *liturgies* is a blend of altruism and self-interest on the part of wealthy Athenians. The aspect of ‘altruism’ was related to ‘fame’ and ‘virtue’, intangibles whose importance for the persons benefiting from them should not be neglected. This motivation of Athenians is not different from today’s motivation of modern charity donations.¹⁶ The aspect of ‘self-interest’ was their contribution to the compromise proposed by Euboulos and Lykourgos and accepted by the Assembly.

Euboulos and Lykourgos used the principle of economic democracy in order to propose and to have accepted, a new policy of check and balances between the various interest groups among Athenian citizens, and possibly also metequas, who did not vote, but I assume could exert some influence through Athenians with whom they collaborated.

Euboulos and Lykourgos proposed the following compromise: The poorer Athenians, the main benefactors in time of war, since they had permanent employment and remuneration as oarsmen in the fleet, would refrain from voting for war, in exchange of remuneration in peacetime. This took the form of increased payment for *theorica* (i.e. attending public ceremonies like the theatre, but also employment in various public bodies like the Assembly and the Courts, as stated above). Through the continuous voting procedure under the principles of ‘economic democracy’, the poorer citizen-voters were guaranteed stable employment and remuneration in peacetime. The richer citizens, entrepreneurs, bankers, etc. gained from this compromise by having the possibility of pursuing their interest (profit-making) without the uncertainty and danger of war. In exchange, they accepted some forms of contributions to the state (i.e. to the benefit of the poorer citizens) both from the state revenues per se, (as stated above), but also from their own revenues in the form of their acceptance of *liturgies* and also the imposition, for the first time, of an income–wealth tax (the *eisphora*).

This was the ingenious solution implemented by Euboulos and Lykourgos in order to achieve peace through a policy that balanced the interests of the various interest groups.

Today, it can be argued that Euboulos and Lykourgos implemented for the first time a ‘social contract’ which was not a fiction as postulated by philosophers of the

¹⁶ The tradition of voluntary *liturgies* revived during modern times in Greece, the best-known example being the donation of funds by Greece’s then richest entrepreneur, Averoff, to build a battle cruiser bearing his name. The ship “Averoff” was commissioned in 1911, served as Greece’s flagship during the two Balkan and the two World Wars, and is now preserved as a museum.

Enlightenment like J.J. Rousseau, Voltaire, J. Locke, D. Hume, etc. but a reality that came about through direct voting on economic issues.

5 Conclusions

I have analysed the workings of Athenian democracy with an emphasis on the decision-making procedures concerning public finances and the choice and provision of public goods. As already stated by Aristoteles and later taken up by many philosophers and political scientists, notably Mill (1861), perhaps one of the most important ideas to be found in relation to democracy, is the one which aims at the creation of a citizens' society in which they are active in politics and economics so that they can achieve the fulfilment of their personalities. They express their 'virtue' (the Greek word being *areti*) by taking part in decision-making and in solving public problems for the 'common good'. Sovereign citizens in a democracy must take part in this decision-making procedure, because this is the way they can be masters of their own fate and the fate of their societies and their states (Macpherson 1977; Paparrigopoulos 1984). Seen in this light, citizens' participation and involvement in decision-making is the cornerstone of democracy.

The citizens of ancient Athens seem to have been aware of this and thus participated actively in decision-making in the field of finance and economics, practising what I have called 'economic democracy', or democracy in economic decision-making. Aristoteles, when writing of the ideals of democratic participation, must have drawn on the experience of Athens, since he lived there for a time, as the head of the Academy after Plato's death.

Based on this principle, Athenians evolved an elaborate structure of decision-making but also types of revenue for the budget that have a very modern character, like progressive income-property taxation. They solved also successfully problems facing modern democracies concerning public choice and the provision of public goods like defense. Through the procedure of continuous voting (or 'referendums', as they may be called using modern terminology) they acquired knowledge, evolved an elaborate institutional setting, and expressed their preferences concerning both the choice and the amounts of the public goods to be provided, at the same time internalising the costs and benefits of their decision-making.

Today's representative democracies have strayed from the old Athenian (and that of other Greek city-states) ideal of participative democracy.¹⁷ Still, during the last decades of the 20th century and the beginning of the 21st, some states and societies seem to have begun to reintroduce elements of participative democracy at many levels, while some, like the Swiss Federation never stopped drawing on them.¹⁸

Tomorrow's technology through, for example an electronic 'voting-card and signature' for every citizen, may enable the increased re-introduction of 'economic democracy', while increased awareness by citizens of their rights, as well as of the

¹⁷ For a history of 'participative' democracy within liberal democracy, see Macpherson 1977.

¹⁸ An example of this is the referenda undertaken in some European Union states concerning the new European Constitution.

repercussion of decisions taken which affect their lives, may force politicians to move in this direction. Once introduced, this will be a self-reinforcing process, as it was in ancient Athens. When citizens become more aware of the stakes and have an incentive to acquire more information, they become more ‘qualified’ in decision-making.

Thus, it is worthwhile to study the model of ancient Athenian democracy, also in the case of decision-making concerning public choice, finance and economics in general.

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