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Athenian fiscal expansionary policy and peace versus war strategy

Emmanouil Marios L. Economou and Nicholas Kyriazis*

Abstract: In the present essay, we develop at first a model of choice by actors to show how a society can take decisions on specific issues according to how flexible or rigid it is in new ideas and trends. Then, by utilizing game theory we explain how the Athenian society abandoned war in favour of a peace grand strategy during the second half of the 4th century BCE. To achieve this, two visionary Athenian policymakers Eubulus and Lycurgus introduced fiscal expansionary policy programs which proved beneficial for the majority of the citizens. We found that through the expansionary public works programs, the Athenian citizens were taking decisions based on rational choice according to a wider economic prospective.

Keywords: model of choice, game theory, fiscal expansionary programs, Late 4th century BCE Athens.

JEL Classification: H30 • H53 • H56 • N43 • Z13 • Z18

1. Introduction

The issue of estimating social change is still pivotal in research fields such as the *New Institutional Economics* school initiated by North (1978, 1981, 1990) to more

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recently, the analysis of the emergence of specific *macrocultures* that are favourable to the creation of democratic forms of government (Kyriazis and Economou, 2012, 2013, 2015).¹

In the present paper we argue that during the second half of the fourth century BCE a series of fiscal expansionary programs being undertaken by two visionary Athenian policymakers, Eubulus and Lycurgus lead Athens out of a serious crisis: an economically harmful and unsuccessful war during 357-355 BCE, which was highly detrimental because of the loss of both human and capital resources, and because of the disorganization which had caused in the Athenian social structure.

Firstly, in order to show the variety of options that direct democracy was offering to the Athenian citizens, we present a choice set like those that were being discussed in each gathering of the Athenian assembly. Next, by examining the issue of the selection between peace or war strategy, we utilize game theory in order to show that the adoption of new proposals by the Athenian citizens was actually a compromise between different social groups and was based on rational choice. We found out under which terms the implementation of a peace grand strategy can be mutually beneficial to different social groups and under specific terms, against the adoption of a war strategy, which may be beneficial only to specific social groups and again, under specific terms.

We argue that Eubulus and Lycurgus democratically persuaded their co-citizens to abandon war strategies in favour of peace through a series of vast fiscal expansionary policies, which finally not only raised impressively the Athenian state revenues, but also became the way through which different social groups benefited by increasing their personal welfare and income.

¹ We have introduced the concept of *macroculture*, taken over and adapted from organization theory into Institutional Economics in order to analyse structural change. A macroculture encompasses the common values, norms and beliefs shared among the members of a society or a state. The adaptation of the term in economics and politics has also a dynamic time characteristic, that of long term periods. As we have shown by applying the concept to the case of Classical Athens, the elements of macroculture take shape over time periods of decades to centuries (Kyriazis and Economou, 2012, 2013a, 2015). According to the theory, through these values, norms and beliefs, a macroculture guides actions and creates typical behaviour among independent entities, so that it coordinates their activities so that complex tasks may be completed (Abrahamson and Fombrun, 1992, 1994; Jones, Hesterly, and Borgatti, 1997).

2. A model of choice

Since Kleisthenes reforms started after 508 BCE, Athens gradually developed the most advanced system of direct democracy in antiquity under which any citizen, called “ho voulomenos” (he, who wishes to make a proposal) could introduce in front of the Assembly of citizens, (requiring a quorum of 6000 present) proposals on any subject, such as external policy, (war or peace), public choice such as, the famous naval law of Themistocles (Kyriazis and Zouboulakis, 2004; Halkos and Kyriazis, 2010) or monetary currency policy, eg. Nicophon’s monetary law of 376 BCE., on the parallel circulation of all good coins and the state's guarantee for their acceptance (Engen, 2005; Ober, 2008).²

Under direct democracy citizens have a variety of different options to choose, for a variety of different issues. In ancient Athens, which was the first ever recorded fully functional direct democracy³, citizens aged 30 and above were having the right to participate in the city-state’s *Assembly* of citizens in order to exchange views, listen to different proposals by the orators, and decide on a series of vital issues for the existence of their state, such as war and peace, economic policy, the appointment of generals etc. Direct democracy secured the ultimate principle of the real time participation of the Athenian citizens to the shaping of the final outcome as far as key issues that had to do with the future of their city were concerned.

Thus, the principal-agent problem that our modern representative democracies face was practically non-existent in ancient Athens, since citizens had the right of participation and decision, with a legally binding effect to the Athenian state’s policymakers. It has been estimated that in normal cases, approximately forty times a

² A detailed analysis of this working of direct democracy, and the initiator (“ho voulomenos”) as enriching the existing choice set of strategies, is offered by Kyriazis and Karayannis (2011).

³ Since the 6th century BCE there was a gradual emergence of a democratic macroculture throughout the Hellenic world. Except Athens, many other city-states such as the islands of Chios, and Naxos, and furthermore, Megara, Pontoheracleia (in today’s north-west Asia Minor), Cyrene (in today’s Libya), Kroton, Akragas and Syracuse (in today’s South Sicily) had established functional democratic regimes (Robinson, 2003, p.2; Kyriazis, 2012, p.42). Since the late 5th century BCE, and in a more organized form during the 4th and the 3rd centuries, Greek federal states emerged. Some of them, were democratic federations such as, the Aetolian and the Achaean ones (see Mackil, 2013; Economou and Kyriazis, 2013; Economou, Kyriazis and Metaxas, 2014).

year, the Athenian citizens had the right to vote in favour or against a policy (a proposal) being introduced in the Assembly of citizens.⁴ Thus, these frequent citizen's gatherings in the assembly of citizens could be seen, as "the festivals of democracy" since citizens themselves were taking decisions, by keeping their own future in their own hands.

But participation in democratic procedures was not only limited to the participation in the Assembly. Citizens, at least some time in their life, also became magistrates of the state by being elected by lot to state posts, thus they were becoming part of the state's mechanism. The most famous posts were: be elected as member of the *Council of the 500*, the so, called *vouleutai*, and to become a member on the public courts as public judges (6000 members), the so called *Heliastai*. (Hansen, 1999; Kyriazis, 2009). There was certainly a bottom-up democracy under such procedures. Manville and Ober (2003, pp. 65-66) have argued that this active participation in daily state affairs was the main reason for the Athenian success: "*citizens as active members of the state were undertaking leading positions (in public life)....they were becoming better as personalities themselves and more efficient as members of the society as a whole*".

It appears that the Athenian society during the 508-322 BCE period of democracy (with its short interruptions), had managed to become "flexible" and receptive to change. Furthermore, the Athenian society was an open society, if we use a modern interpretation, based on Popper's (1966) argumentation. Under such a perspective our analysis now focuses to a model of choice through direct democracy. A set of choices instead of say, just one single policy to be accepted or not, can be more easily provided in receptive and open societies such as ancient Athens, in comparison with more centralist and rigid types of regimes such as Sparta.

Under direct democracy every citizen has the right to vote in favour or against any proposal brought by any citizen in front of the supreme body of governance of the city-state, the Assembly. We postulate that citizens are rational in the sense of maximizing their individual welfare. When each citizen votes on particular proposals,

⁴ There is a vast bibliography as far as the Athenian democracy is concerned. See among others, Hansen (1999), Ober (1997, 1999, 2008), Manville and Ober (2003), Rhodes (2004), Raauflaub, Ober and Wallace (2007), Kyriazis (2009, 2012), Halkos and Kyriazis (2010) and Lyttkens (1994, 2013).

he chooses the proposal that he expects will maximize his individual welfare. Thus, the following function is maximized:

$$\max (S_1, S_2, \dots, S_n) \quad (1)$$

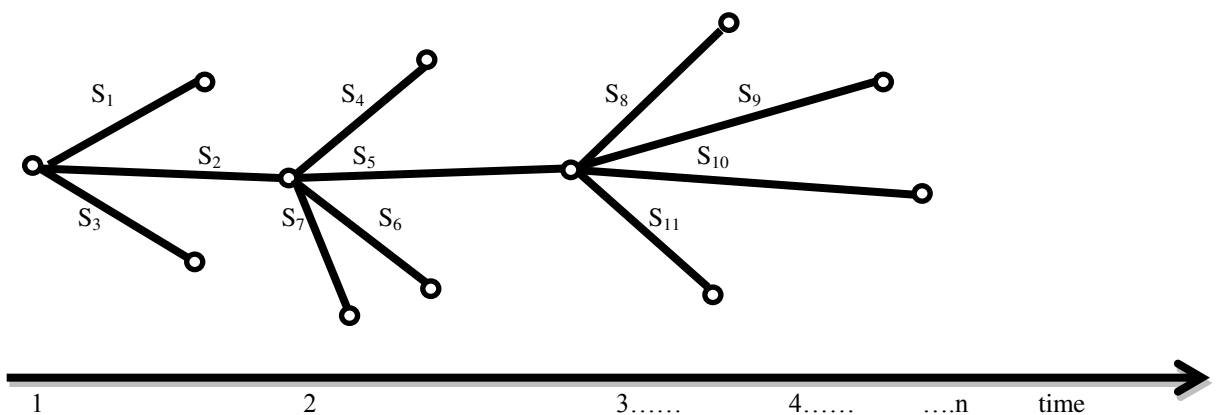
where S_1, S_2, \dots, S_n , are the various strategies in his choice “set”, that he expects to maximize his welfare. Since in a direct democracy every vote counts as one, the strategy that is finally selected, depends on the possibility that it has finally received the majority of votes, eg.

$$\sum_n S_1 > \sum_n S_2 > \dots > \sum_n S_n \quad (2)$$

where \sum_n is the total number of votes received for each strategy.

Diagram 1 shows that citizens at first have to choose one specific strategy out of the three available possibilities, S_1, S_2, S_3 . If strategy S_2 is chosen at time period 1, to the exclusion of strategies S_1 and S_3 , then at time period 2 the strategies S_4, S_5, S_6 and S_7 are provided as options. Again, at time period 2, if S_5 is chosen (to the exclusion of S_4, S_6, S_7), then at time period 3 strategies S_8, S_9, S_{10} and S_{11} become available, etc. Thus, the more strategies being introduced, the more flexible and receptive to change is a socio-political system.

Diagram 1: Decision probabilities and the adoption of new strategies



3. Choosing between war and peace: A game theoretical approach

In this section we argue that under specific terms, a flexible and receptive to change society such as the Athenian one can abandon a specific grand strategy, in our cases war, in favour of peace.

Table 1 presents a game theory matrix which estimates the payoffs of three Athenian citizens: Two poor *thetes*, who were low income citizens who serve as rowers in the navy, in the trireme warships, and a *trierarch*,⁵ a rich one, a commander of a trireme warship. There are two options in the game: war (w) and peace (p) strategy. Each of the three players chooses the one that maximizes his welfare in the game calculated for simplicity as material payoffs.

Let us assume (which will be explained in the next section) that for the two poor citizens, for whom we make the hypothesis that they have the same preferences, the war strategy maximizes their payoffs, while for the rich one, the peace strategy does so. Both the low income *thetes* maximize their payoff by receiving 4 each one, during the war period, since they are hired as rowers in the navy and thus, they receive a regular wage. In case of peace, there is a great possibility that the poor *thetes* will remain unemployed, since the navy does not need them anymore. We make the hypothesis that they sporadically find a job elsewhere, in peaceful activities in Athens, thus, in that case they both receive as a payoff, 2.

On the other hand, the wealthy man maximizes his payoff by receiving 12. Such a prospect can be achieved when there is a peace period, since we make the hypothesis that the wealthy man is a merchant and commerce can only flourish during normal periods, where no barriers because of the war can arise. However, in case of a war the situation radically alters for the rich: We assume that there is a great

⁵ The Athenian democracy had introduced the institution of *liturgies* according to which, wealthy Athenians were “obliged” to undertake the financing of some institutions such as, *theorika*, which were related to 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. The most important and onerous liturgy was the *trierarchy* under which a single wealthy citizen and later on a group of wealthy citizens (under the system of *symmoriae*) undertook the running costs for a single trireme, at the same time offering the services of overseeing it and captaining the ship (Hansen, 1999; Kyriazis, 2009, pp. 118-119). Triarchy was very costly. It was amounting at about 3000 to 6000 thousand drachmas (Gabrielsen, 1994; Kaiser, 2007). Lyttkens (1997) argues that wealthy citizens willingly decided to finance triarchy because it was a way of increasing their personal prestige in the Athenian political arena.

possibility that due to the war, the rich will not only fail to undertake effective commercial action, but also that he might suffer a loss thus, a negative payoff outcome, say -2, such as a partial or a total destruction of his commercial infrastructure and trierarchy costs etc.

Since every citizen has one vote, the war strategy which is selected by the two poor ones is finally chosen due to the majority rule. The outcome of the game is given by table 1 below. Since the payoff for each of the two poor players under the war strategy is 4, while under the peace strategy is 2, they choose the war strategy, even though this brings about a pure loss for the rich. The “value” of the game is 6 in the case of the war strategy (adding up the payoffs of the three players) which is lower than the “value” of the game under the peace strategy, which is 12. What we purport to show in this simple game is that inferior outcomes (strategies) such as war, may be chosen under democratic voting, if no compensatory payments, “logrolling” or balancing out of interests as Buchanan and Tullock (2004) would have argued, can be offered as an alternative option to the citizen-voters.

Table 1: Game matrix for a choice without compensatory payments

		Strategies	
		Peace	War
Players	1 (poor)	2	4
	2 (poor)	2	4
	3 (rich)	8	-2
“Value” of the outcome:		12	6

The situation for the two poor citizens in the first game, which provides the outcome without compensatory payments was:

$$\text{payoff (war)} > \text{payoff (peace)} \quad (3)$$

and for the rich:

$$\text{payoff (war)} < \text{payoff (peace)} \quad (4)$$

Let us now introduce the possibility of compensatory payments by the rich to the two poor players. In the second game which is described below, the rich citizen offers compensation to the two poor voters, if they vote for peace instead of war. In the new game matrix (table 2), the peace strategy can be adopted, if the following conditions are met:

For the poor:

$$\text{payoff (peace, with compensation)} \geq \text{payoff (war)} \quad (5)$$

and for the rich:

$$\text{payoff (peace, subtracting compensation)} > \text{payoff (war)} \quad (6)$$

In game matrix 2 compensatory accounts are given within the parenthesis in each row of the peace strategy: Each poor voter receives (+2) from the rich one, so that he is as well off from a payoff situation point under the peace strategy as he was under the war strategy (condition 5). The rich voter offers a total of 4 as compensation to the two poor voters to vote for peace, out of his total payoffs of $12 - 4 = 8$. As table 2 presents, the “value” of the game is now again 12.

Table 2: Game matrix for a choice with compensation payments

		Strategies	
		Peace	War
Players	1 (poor)	2 (+2) = 4	4
	2 (poor)	2 (+2) = 4	4
	3 (rich)	8+ (- 4) = 4	-2
“Value” of the outcome:		12	6

But the important point of the second game is that once compensatory payments are introduced, the possibility of achieving Pareto improving situation is given. In the outcome of the second game, the rich player has improved his situation (from -2 to 4) so that it is Pareto efficient, while the two poor ones are no worse. Of course, through bargaining, the two poor voters could convince the rich one to give

them a somewhat higher compensation, (say 2,5 to each). In this case, they would also be better off. Conditions (5) and (6) are thus a minimal condition.

It is also clear, that the second game is not a zero outcome game (where the gains of one, equal the losses of the other(s) players) but a positive sum game. Everyone gains, since the total “value” of the game is higher than in the previous game matrix 1. As we will show, Eubulus and Lycurgus fiscal policy programs can be analysed as programs with compensatory payments by the rich to the poor in order to bring about a change of strategy, from war to peace.

4. The implementation of fiscal expansionary policies in the 4th century BCE Athens

At the beginning of the 4th century BCE, Athens attempted to reconstruct the Athenian League which had been abolished after Athens’ defeat in the Peloponnesian War. This second Delian League was successful for some years, so long as some city-states felt threatened by Spartan power and thus needed Athens’ protection. However, since the sudden decline of Sparta after its army was defeated in two decisive battles by the Thebans (at Leuctra in 371 and at Mantinea in 362 BCE), many allies considered Athenian protection not necessary anymore and wanted to get rid of the burden of payments to the Athenian war treasury linked to this.

This reluctance of the allies of Athens to contribute to the war treasury led to the so called *Social War* (circa 357-355 BCE). Athens tried to prevent them from breaking away but finally, without success. However, due to the war, Athenian public revenues were falling to 140 talents per year (due in part to much lower custom duties from trade, since war inhibited trade) whereas expenditure soared. Despite the fact that state was in a situation of an economic recession, the majority of the poor Athenian citizens still voted for the continuation of the war, because many of them had found a stable and not very dangerous employment as rowers in the fleet, which during wartimes comprised between 50 to 100 ships, giving employment from 8.500 to 15.000 rowers.⁶

In other words, being employed as a rower in the triremes could mean that at least one fourth to half of the active population of Athens could find a job in the navy,

⁶ Each trireme employed 170 rowers and of a total complement of 200. See Morrison and Coates (1986).

as the total population of Athens is estimated to have been approximately 30.000 people in the 4th century BCE (Hansen, 1999). The fact that employment in the Athenian navy even during wartime was relatively safe may sound strange, but during the 4th century, it was so. After the victorious battle of Naxos in 376 BC., the Athenian navy had reestablished its supremacy for the next half century, till its final defeat in the battle of Amorgos in 322 BCE by the Macedonian fleet. During this period the Athenian navy fought a series of skirmishes but no major losses and human casualties occurred as against, in comparison to those of the Peloponnesian War.⁷

What is important to mention, is the fact that the intervention of Athens in a series of war campaigns during the 5th and 4th centuries BCE had gradually unveiled a situation of opposing interests between the low income class citizens, the *thetes* on the one side, and middle-class *hoplite*,⁸ Athenians who could not cultivate their farms when being absent in foreign expedition as well as rich Athenians, who were losing revenues from a reduction of trade, banking, exports and being burdened by liturgies such as *trierarchy* on the other side. To solve this harmful situation Eubulus, the leading orator and politician of the 350's proposed a compromise between the different interest groups.

Instead of continuing the war strategy, poor citizens (the *thetes*) could choose peace (to the benefit of the rich and the middle classes). In this case, they would receive *theorika* payments. *Theorika* was a compensation in favour of citizens in order to attend public festivals, sacrifices, and public entertainments of various kinds. They also functioned as a redistribution relief package in favour of the citizens when in need. Thus, in our case they functioned as a reimbursement for the loss of low income *thetes* wages.

In addition *thetes* now had the opportunity to work in an extensive public works program held by the state in order to beautify the city, as a part of Eubulus project of rebuilding Athens strength through internal means. Eubulus introduced a

⁷ For estimates of the cost of war see Pritchard (2011) and Arvanitides and Kyriazis (2012).

⁸ Hoplites were a middle income class citizen group, who were responsible to bear arms (by financing their military equipment by themselves) when needed, to defend their city-states. Hoplites were present throughout the Greek world, since at least the early 8th century BCE, to the end of the Greek independence by the Romans in 146 BCE. For the emergence of the hoplites and their organisation, see modern interpretations, among others Hanson (2009), Kyriazis (2012, 2014), Kagan and Viggiano (2013), Lyttkens (2013) and Pritchard (2013).

law making it difficult to use the surplus of the public finances for military operations, which ensured that it would be available only for the public works. Those works included among others, a newly made network of roads, water supply of the city, new waterfronts and shipyards. $\frac{3}{4}$ of the warships were redeployed in the newly build ports in Zea and Mounichia so that more space would become available in the central port of Piraeus for merchant ships. Eubulus also improved the legislation when it comes to the commercial law (Sakellariou, 1972, pp. 40-41).

Financing increased *theorika* payments became feasible through the implementation of the *pentekoste*, through which 2% of the sums on the value of exports and imports were collected as a custom duty by the state. Furthermore, due to an increase in trade, and finally, due to more intensive exploitation of the state's property such as the Laureion silver mines. Eubulus also proposed that the *eisphora*, a tax on property paid by the rich during wartime should become permanent including the peaceful era, as an additional source of revenue for the state's budget, out of which *eklesiastika* (payment for the poor so that they would attend the Assembly), *theorika*, and the public building program could be financed (Kyriazis, 2009).

It is obvious that all these institutional settlements played the compensatory role which has already been described by the second game matrix above. The compensatory measures under a peace situation made the poor at least as well off, as during the war period. The compromise between rich and poor was successful. Thetes were less in favour of war having in mind that extra war expenses would absorb the surplus of the *theorika*, intended otherwise for them as compensation. On the other hand, the rich would not anymore be overburdened with war expenses, and loss of income.

Also, through the compensatory system of *theorika* the danger of a possible social unrest that may have been caused by the dissatisfied lower income classes and may have turned into a revolt against the rich and their wealth, gradually faded away. The fact that the *theorika* payments safeguarded the cohesion of the Athenian society and the survival of the political regime, made the Athenian orator and politician Demades, an important figure of that period to characterize all these compensatory system from the rich to the poor citizens, as "the glue of democracy" (Plut. Mor. 1016B; Sakellariou, 1972, pp. 40-41).

The expansionary fiscal policy program that introduced by Eubulus lasted up to 340 BCE. It is believed that Eubulus died at the same year. During the 355-340

BCE period state revenues increased from 130 talents to 400 talents, almost four times higher than the year 355. The grand strategy of the Athenian state which was based on reaping the rewards of peace, through the impressive increase in international trade and social reconciliation was abandoned only when the geopolitical expansionism of Macedonia under king Philip become extremely difficult to be ignored while in the meantime, the belligerent passionate speeches of Demosthenes were adding fuel to the fire in favour of the war.⁹

After the battle of Chaeronea which took place in 338 BCE, were the coalition armies from Athens, Thebes and their allies was defeated by the Macedonians, Lycurgus, another Athenian statesman and orator implemented another similar fiscal expansionary project. Lycurgus plan brought the brightest and longest period of peace in the history of the Athenian democracy, which lasted to 322 BCE (Lycurgus died in 323 BCE, the same year as Alexander the Great). By the mid of 330's BCE public revenues had been increased to 1200 talents per year (Amemiya, 2007; Ober, 2008; Kyriazis and Economou, 2013b).

Lycurgus political program was highly successful for a variety of reasons: Firstly, Lycurgus program guaranteed stable employment and revenues for the majority of the poorer Athenians in a series of public work programs. Being inspired by his mentor Eubulus, Lycurgus launched a vast public works program, second only to that of Pericles, which may be interpreted, in modern terms, as an expansionary fiscal policy program of Keynesian inspiration. The public works program included the new sewage system for Piraeus, monuments such as the theatre of Dionysius beneath the Acropolis, and the extension of the Pnyx, the place where the assembly of citizens was taking place (Hansen, 1999; Kyriazis, 2009).

Other monuments were also built including a prominent water clock, the Lyceum, the Telesterion at Eleusis¹⁰, as well as the construction of local theaters in

⁹ That the Macedonian threat was real was realized by almost every Athenian, when king Philip seized in a surprise move, a fleet of 240 Athenian merchant ships carrying grain. Athenian population was dependent on the imports of cereals, since the Greco-Persian war era (490-470 BCE) and even earlier, since it was not self-sufficient in grain products. See Green (1998).

¹⁰ Lyceum like the Academy and the Kynosarges were extensive athletic facilities, where every citizen, without socioeconomic discriminations could receive training and exercise themselves in all kinds of sports. This institution was financed by the state and gradually expanded during the fifth century providing they were not slaves. See Fisher (1998) and Kyriazis and Economou (2013a) who provide

some demes. The agora, the “centre” of the city where most financial transactions were taking place was provided with new temples and law court facilities. In addition, new ship sheds for warships and an arsenal for naval stores were constructed at Piraeus. City walls were modernized and enhanced. Finally, a new Panathenaic stadium indented for sport activities was constructed (Ober, 2008, pp. 68-69).

Lycurgus followed his predecessor Eubulus doctrine to focus on “international” trade as a means of increasing public revenues. Thus, Lycurgus passed a *commercial law*, which allowed metics and perhaps even slaves to litigate over contracts on equal terms with citizens. Through *enkteseis* he also offered special grants to non-citizens to own real estate whereas some foreigners that were accustomed to overseas trade were granted full citizenship by special decrees of the assembly (Engen, 2010). The efficient exploitation of trade transactions was also guaranteed by the use of the navy so as to suppress piracy. For this purpose, a naval station was also established on the Adriatic sea (Ober, pp. 68-69).

In addition, another way of increasing public revenues seems to have come from an increase of the sacred revenues. Revenues from temples are estimated to have been more than 2% of the annual state income (Papazarkadas, 2011). Finally, in 354/3 BCE Lycurgus introduced more aggressive measures to safeguard the soundness of the highly-esteemed Athenian coins, the so called “Athenian owls”. He drastically took measures to face coin forgery. In the meantime, he introduced a massive new issue of money in the market (Ober, 2008, pp. 68-69). This may seem that except from of an extensive expansionary fiscal policy, Lycurgus also introduced for some period a parallel controlled monetary expansionary policy too.

The result of all these policies was that the economy in its totality prospered, trade, exports and GDP grew. The Athenian 4th century economy showed modern characteristics in the sense of being probably the first economy ever in which the second and third sectors of the production (manufacture and services) contributed more to the total Gross Domestic Product and employment than the primary one (agriculture). Thus, the period 355-322 BCE must be regarded as a second Golden Age for Athens.¹¹

additional references. The Telesterion of Eleusis was a sanctuary, one of the primary centers of the *Eleusinian Mysteries* devoted to the goddesses Demeter and Persephone (Wilson, 2005).

¹¹ A detailed estimation of sectorial GDP and employment contributions is offered by Halkos and Kyriazis (2010).

The total of 1200 talents revenue for the period of Lycurgus is impressive since it came from Athenian own sources, without contributions by allies. During the 355-322 period, Athens did no more have an empire. However, the revenues being achieved were higher than the 1000 talents of Athens during the 440's BCE in absolute terms, and roughly comparable in relative terms, taking into account a possible inflation.¹²

However, we further argue that the achievements of the Athenian economy during 355-322 BCE were not only the result of the fiscal expansionary programs. They must be also attributed to the stable economic and political environment during this period, due to the peaceful grand strategy which was introduced by Eubulus and Lycurgus and due to the positive feedbacks to the economy because since at least the second half of the 5th century BCE, in Athens (and many other Greek city-states) an efficient economic environment of institutions, such as property rights protection and banking services had gradually been established etc.

Efficient banking services and granting of maritime and other types of loans were considered during the 4th century as usual economic transactions, being performed in an efficient way (Amemiya, 2007; Cohen, 1973, 1997; Scheffold, 2010). There was civic and property rights protection, political rights protection, the right to speak freely and have your ideas and values being exposed openly without any kind of penalty, a kind of "political liberalism" if we interpret the Athenian society's picture of the era through F. Hayek's (1973) spectacles, as well as, a series of institutions which were beneficial to the city, such as *enkteseis*, through which, a citizen from another city-state, whose (mostly) commercial activities had favoured the Athenian city-state, could receive a grant, to become an Athenian citizen (Burke, 2010, p. 397; Engen, 2010, pp. 192-197).

Furthermore, based on the ancient sources, (Arist. Ethics E. 1942β, 14-17; Dem. Lacr. 39; Hyper, For Eux. 35) we learn that "*nothing has more validity than its conditions, and nobody has the right to appeal to any law or decree, or anything else*

¹² While for example a stonemason received a wage of one drachma per day for the working on the Acropolis building program, which was equal to the daily wage of a rower during the 5th century, he would receive one and a half drachma during the second half of the 4th century. For prices, wages etc. Loomis (1988) offers a detailed analysis as Burke (1985) and Humphreys (1985) for Lycurgus's project.

against this written agreement”. Kyriazis (2007, p. 74) has argued that the Athenian courts were responsible for solving legal disputes concerning property rights and safeguarding among others, legal contracts of associations: We think that the binding of contracts is a pivotal element for achieving an efficient level of market economy transactions. Finally, these transactions were becoming easier since after 376 BCE, as it has been already mentioned earlier, Nicophon’s Law was introduced, according to which strict measures were taken to securitise that the coins which were used in financial transactions were “pure” and trustworthy, so that transactions took place fair and fast for both sides (Engen, 2005; Ober, 2008).

Table 3: Institutional and political change in ancient Athens

Political Decision	Year(s) of introduction	Initiator	New Institutions and policies	Political change
Naval Law	(482/481)	Themistocles (“politician”)	<i>Trierarchy</i> Public Private Partnerships (PPP)	Full political rights to all citizens
<i>theorika</i>	(460-450 approximately)	Pericles (“politician”)	Payment for public service and for theatre plays	
<i>graphe paranomon</i>	(415-403)	?	Less radical democracy	Constitutional legal procedure
Nicophon’s monetaty law	(376)	Nicophon (“businessman”)	Monetary law: Parallel circulation of all good coins	
1.) Expansionary fiscal policy 2.) Trade increase policy	(354)	Eubulus (“politician”)	Increased <i>theorika</i> payments Extensive public works program Nicophon’s law is improved	Peace grand strategy
1.) Expansionary fiscal policy 2.) Trade increase policy 3.) Nicophon’s law is improved	(338)	Lycurgus (“politician”)	<i>Eisphora</i> also in peacetime Extensive public works program Trade increase policy (commesial law, Enkteseis)	Peace grand strategy

Finally, in the Athenian economy and society women too had the right to run business activities such as fashion houses, even banking services etc. (Halkos and Kyriazis, 2010; Kyriazis, 2012, pp. 74-76). Finally, slaves were in an undeniably better social status compared, say, with slaves in Sparta or in Rome in later historical times. Slaves in Athens could not be tortured, killed. They could not be punished without judicial sentence. Slaves had some “minimal” rights to exercise, such as to participate with their families in some aspects of social life, such as religious events, for example, during the preliminary phases of the famous “Eleusinian Mysteries”, or to participate in symposia such as the so-called *Hoes* during the Anthestiria festival. Slaves could also acquire property and through it, even to buy their freedom, thus to become citizens with full political rights, like the case of the famous banker Pasion (Isocr. Pan 18.1; Cohen, 2000, pp. 132-145; Kyriazis, 2012, pp. 72-73).

Table 3 illustrates a few important institutional changes. It presents a series of key decisions that were decided by the Athenian citizens, for example the Naval Decree of 482-481 BC, its initiator Themistocles, and the positive feedbacks that that these decisions had on introducing new institutions and political change.

5. Concluding remarks

In this essay, we have analysed, at first, a model of choice set in order to argue that the Athenian democracy was a political society of “flexible” citizens, with the meaning of being receptive and adaptable to new ideas, values and principles. Such a condition was the result of an emerging democratic macroculture, as Kyriazis and Economou (2013a) have argued.

Next, we analysed through two simple games, how and under what terms peace strategy is beneficial for (at least) the majority of citizens in a society, whereas, then we interpreted the implementation of such a peace strategy in the Athenian democracy during 355-322 BCE as the final outcome of such an “exchange”: the majority of the Athenian people, decided to abandon war in favour of a peace grand strategy, through the establishment of two high scale extensive public works, that could be characterized as of Keynesian inspiration in a modern sense.

The programs of Eubulus and Lycurgus balanced out the various contradictory interests through the introduction of compensatory payments by the rich to the poor to convince them to change preferences, thus bringing about a Pareto better outcome for the society as a whole and in the sense that the real preferences of the majority of the

voters were revealed and then adopted through the voting process by the Athenian Assembly.

We think that Eubulus and Lycurgus fiscal expansionary policies amplified citizens' trust in the Athenian political regime and democratic institutions. By participating in a political system that was taking into account their individual preferences, the Athenian citizens had the will and the motives to defend it from any possible future collapse. Our idea that a political system survives when citizens as individuals wish as a total to defend it can also be found within the key findings of Weingast (1997) who examined the political foundations of democracy in seventeenth-century England, after the Glorious Revolution of 1688.

The public works implemented by Eubulus and Lycurgus disclose also another diastasis when comparing ancient to modern democracies: in a direct democracy the problem of revealing the actual preferences of citizens on particular issues and in real time can be efficiently managed under certain circumstances whereas in a representative democracy fails to do so, because under it, citizens-voters have to decide upon a "bundle" of all-encompassing proposals made by each political party, without having the possibility to decide upon separate issues.

Finally, we conclude with some ideas as to the future of today's Europe. We argue that the ancient Athenian paradigm of the 355-322 BCE period might offer some argumentation in favour of those policymakers and scholars such as Galbraith (2008), who argue that public investment in infrastructure and social welfare policies must increase within the European Union (EU), and should, at least partially, replace excessive austerity measures throughout Europe, because so far, austerity measures have finally lead to the decline of the EU GDP in the long run.

Austerity measures, even having been necessary in some respects for restructuring a deregulated economy, such as the Greek economy after the debt crisis of 2010, cannot be acceptable forever. We fear that a "EU solidarity in austerity" will finally lead to the de-legitimisation of the EU's goals and policies in the eyes of its constituents throughout Europe. Thus, in such cases governments should actively participate in the recovery of economies in decline, by perhaps, introducing policies of social welfare in favour of low income citizens, or alternatively introducing public investments, under the aegis of the EU budget.

We do hope that with this essay, we contribute to the ongoing research globally, as far as issues which connect democracy and economy are concerned, with

a paradigm from ancient Greece, where the first ever functional recorded democracies ever recorded: Democracy in order to flourish and have its positive outcomes for a society to emerge as an “invisible hand”, requires political stability and strong economic institutions.

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