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Article

Tracing the Optimal Level of Political and Social Change under Risks and Uncertainties: Some Lessons from Ancient Sparta and Athens

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Abstract: The present paper is inspired by the notions of “financial risk” and “financial uncertainties” and transfers their basic reasoning to social science analysis; that is, it develops a theoretical analysis in order to explain social and political change. We know that the degree of social and political change depends on the set of established institutions in a society. Societies can face two extremes: volatility, e.g., rapid changes that lead to instability, which increases the risk of a system or regime collapsing, or rigidity, which does not permit necessary adaptation and change and thus may again increase the risk of the regime collapsing. Thus, an optimal (or ideal) point of change is between the two extremes, permitting change that is neither too sudden and fast nor too slow and inflexible. To illustrate this, we analyze two cases from ancient Greece: Sparta, as a society and state with too many institutional checks and balances that led to rigidity and collapse, and Athens, which in the 5th century BCE had an institutional setting with very limited checks and balances, which again led to near collapse until the late 5th century BCE, when new institutions that were related to some efficient checks and balances were introduced that enabled the state to survive in a world of changing circumstances and balances of power.

Keywords: institutional volatility; institutional rigidity; political and social change; regime risks; Sparta; Athens

JEL Classification: D72; H50; N13; P26



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1. Introduction

The issue of the risks that are associated with the survivability (or not) of a regime when social and political change occurs has occupied a central place in the writings of philosophers, historians, political scientists and economists, since at least the time of the ancient Greek thinkers such as Plato, Aristotle and Thucydides. Such questions were revived by 17th–18th-century authors such as John Locke, David Hume, Adam Smith, Montesquieu, Voltaire and Jean Jacques Rousseau, and then by Karl Marx, his followers and his opponents, as well as institutional economists. Among the latter, North (1981, 1990, p. 2) argues that inadequate institutions are uprooted while effective ones survive and so there is a gradual evolution of more adequate forms of economic, political and social organization. This actually means that, when a sociopolitical regime fails to provide effective policy measures, for example, on economic policy issues, the risk of its final collapse increases significantly, as Toynebee (1951), Acemoglu and Robinson (2013), Economou and Kyriazis (2019) and others have observed (from different perspectives).

In general, an environment that promotes the evolution of the institutions of a society, that is, institutional change, through an innovative spirit is crucial for economic growth (North 1990; Grossman and Helpman 1991). Societies with economic institutions that encourage innovative ideas can achieve prosperity in the long run (Acemoglu and Robinson 2013). This is because according to Kuznets (1966), innovations that are related to structural

change are directly related to economic growth. This also reduces the risk of a regime collapsing due to internal or external factors. Regarding the internal factors, this, for example, is related to failures in establishing efficient institutions that are necessary for long-term economic growth such as property right protection, the rule of law in general and sound money (Rodrik 2000, 2007; Acemoglu and Robinson 2013; Economou and Kyriazis 2019). Regarding external factors, this is related to failures in properly handling an external threat such as a military invasion that actually tests the endurance and the ability of reaction or survivability of a system or regime, as Toynbee (1951) argued in his seminal work, *The Study of History*.

For example, the radical transformation of the Athenian economy of the Classical period (508–322 BCE) from an agrarian economy of primitive structures to an extroverted maritime economy where market forces (by the standards of the time) and international trade values were present was the result of the need to face an imminent external threat, the Persian invasion. This was achieved by the Athenians, under their democratic leader, Themistocles, by introducing a vast shipbuilding program of warships so as to repel the enemy. The shipbuilding program was related to many risks and financial uncertainties, but in the end, it was crowned with success, saving the Athenian city-state itself and transforming the structure of the Athenian economy from an agrarian into a maritime and commercially extroverted one (Kyriazis and Zouboulakis 2004; Halkos and Kyriazis 2010; Economou and Kyriazis 2019; Bitros et al. 2020; Economou et al. 2022).

In this paper, being inspired by the notions of “financial risk” and “financial uncertainties”, we transfer their basic reasoning to social science analysis, that is, give them a sociopolitical diastasis, so as to explain how and why the need for institutional change may lead to the survival and the evolution of a sociopolitical regime or, alternatively, to its collapse. To the best of our knowledge, this is an innovative approach. As will be analyzed in Section 2, there is a vast bibliography that connects financial risk to sociopolitical risk. For example, in their important contributions, Alesina et al. (1992) and Alesina and Perotti (1996) have analyzed the nexus between economic growth (due to, among other factors, efficient financial institutions) and a political regime that safeguards political stability. In this paper we expand the above findings by transferring the basic reasoning of the well-established notions of financial uncertainties, risk and volatility to social science analysis.

In particular, in our paper, we focus on the ancient Athenian and the Spartan sociopolitical systems during the Classical times (508–323 BCE), as case studies, and then draw some inferences for modern societies. We argue that there are both benefits and drawbacks for any society characterized by flexible political and economic institutions such as the ancient Athenian one. The benefits are related to the ability of the sociopolitical regime to evolve and progress through time. The drawbacks are that flexibility may slip to extreme volatility¹, leading to detrimental policy outcomes and the risk that finally the system and the regime may collapse as a whole. On the other hand, a rigid political system, like that of Sparta, may ostensibly look strong enough during a specific, even long, period of time, but the risk of collapse may prove high when the socioeconomic circumstances that demand significant institutional changes cannot be met by such a rigid regime.

Thus, the ideal scenario is an “optimal” level of change, that is, the efficient level of change which permits a society’s adaptation to new ideas and institutional proposals without a breakdown of the regime, which ensures its durability in the long run. In other words, we argue that the best option that significantly diminishes the risk of a regime collapsing is a system which is neither too volatile and flexible regarding sociopolitical change nor too rigid, tending to appear ossified.

Our paper is organized as follows: Section 2 explains the nexus between financial and political risks for a state. In principle, there is a strong correlation between the two. This section links the findings of the international bibliography regarding the nexus between financial and political risks to the discussion that follows in the next sections. Furthermore, Section 3 defines the concepts of “rigidity”, “volatility” and the “optimal level of change”

regarding the structure of a sociopolitical regime by relating them to the logic of “risk” and “uncertainties” as concepts that are transferred from the field of financial economics into sociopolitical analysis.

Based on the logic of Sections 2 and 3, Sections 4–7 analyze as case studies the political institutions of Sparta and Athens. They explain how these institutions functioned in practice and, furthermore, why Sparta failed to introduce institutional changes and finally collapsed, while Athens managed to effectively transform its 5th century BCE institutions so as to successfully handle the challenges of the 4th century. It is further argued that the Athenian political system came to an end, not because of internal pressure and collapse, but because of defeat by an “external” factor, the superior Macedonian navy in 322 BCE, in the Lamian War.

Our argument is that during the period 508/7 to 416 BCE, Athens provides an example of a sociopolitical change that illustrates the extreme of too high volatility, while during the period 415–322 BCE it illustrates the ideal level of change, defined as “optimal”. Sparta, on the other hand, illustrates the other extreme, that of rigidity during the period 508–372, followed by its inability to reform in the period 371–192, which led to its final collapse. Section 8 provides a synopsis of the previous sections. It also discusses the limitations and the opportunities for further research under the logic that was described throughout this paper.

2. The Nexus between Financial and Sociopolitical Risks: A Review

There is a vast bibliography that connects financial risk (FR) to political risk (PR).² For example, Kirikkaleli (2020), by using the wavelet coherence technique with quarterly data from 1984 to 2018, showed how PR affected the economic and financial risk in Venezuela. He found that PR had a strong power for explaining economic risk from 1995 to 2005, while between 1984 and 2010, economic risk and PR were positively correlated at different frequency levels. In general, he found that in the long run, changes in PR significantly led to changes in FR in Venezuela.

The strong nexus between PR and the financial sector is highlighted in the definition provided by Bekaert et al. (2014) where the relation of PR with the value of investments is highlighted. In general, academics argue that PR is influential on financial markets (Stiglitz 1993) as well as concerning firms (Faccio et al. 2006; Tran et al. 2021). Barro (1991) has found that in periods of political turbulence, entrepreneurs with a risk-averse mentality are likely to shift their investments to other countries that offer more relative safety and less risk. Thus, when PR increases in general, investors try to diversify their portfolios between different countries so as to minimize their FRs (Kinsella and Rubins 2005). In the same vein, Tabassam et al. (2016) have found that political uncertainties in a country change the nature of investment and the patterns of spending, which has negative effects on economic growth. Thus, in principle, political institutions that induce policy uncertainties are harmful to investments in the long run (North 1990; Weingast 1993; Georgiou et al. 2015).

PR also reduces the likelihood of entry in a particular market of a multinational company for making a foreign direct investment, as various authors have found so far (Henisz and Delios 2001; Delios and Henisz 2003; Uhlenbruck et al. 2006). PR is also related to central banks and the stock market. Major central banks such as the Federal Reserve and the European Central Bank support that PR factors are found to be influential on volatility embedded in financial intermediaries and have exerted major shocks on commercial banks. Furthermore, authors such as Charfeddine and Al Refai (2019) have found that stock markets are adversely affected by rising political tension in both domestic markets and in the international arena. In particular, Wang (2019), utilizing synthetic control methods (SCMs), estimated the causal impact of a political shock, the Taiwan Strait Crisis in 1995–1996, on Taiwan’s stock market. His major findings are consistent with existing literature which reveals the causality between political uncertainty and stock prices in emerging markets.

Another part of the bibliography relates FR to the quality of governance. Such risks derive from uncertainties such as the extent to which a country is governed by the rule of law, the effectiveness of a country’s court system, the issue of enforcement (or not) of contracts between firms and their local trading partners and violation of intellectual property rights (Uhlenbruck et al. 2006).

Another sub-category that connects FR to PR is related to the so-called *geopolitical risk* of a country in the international system. According to the important contribution of Caldara and Iacoviello (2022), geopolitical risk is associated with wars, terrorist acts and tensions between states that affect the normal and peaceful course of international relations. Relevant research on the topic includes the work of Kyriazis and Economou (2021) who explored whether the Turkish geopolitical uncertainty exhibits significant linkages with fluctuations in the Turkish lira values against other currencies during the Erdoğan administration period (March 2003 up to the present). Their econometric outcomes revealed that geopolitical risk uncertainty led to the devaluation of the Turkish lira against the US dollar, the Swiss franc and the Swedish krona but in a non-significant manner, whereas mixed results emerged concerning the impacts of macroeconomic or financial variables. In a similar study, Economou and Kyriazis (2021) have explored the nexus between Russia and Turkey regarding their geopolitical uncertainty during the Putin administration era in Russia. They implemented the innovative Caldara and Iacoviello indices and the vector autoregressive (VAR) methodology. The nexus between geopolitical risk in Turkey and Russia was found to be unstable. They found that uncertainty in Turkey constitutes both a negative and a positive determinant of geopolitical stability in Russia, depending on the time horizon of the impact. Russia could take advantage of Turkish positive effects in the medium run. This could be alarming for investors but could also prove beneficial as they should not invest in Russian assets when the country’s geopolitical risk is elevated due to Turkey’s geopolitical instability. Table 1 summarizes the above analysis.

Table 1. The nexus between financial and sociopolitical risks.

Financial Risk (FR) and Political Risk (PR)	Bibliographical References
PR negatively affects financial markets	(Stiglitz 1993)
A strong nexus between PR, economic risks and FR in general	(Alesina et al. 1992; Alesina and Perotti 1996; Georgiou et al. 2015; Kirikkaleli 2020)
A strong nexus between PR and economic governance	(North 1990; Weingast 1993; Uhlenbruck et al. 2006)
A strong nexus between PR and the financial sector in general	(Bekaert et al. 2014)
PR negatively affects firms’ profitability and survivability	(Faccio et al. 2006; Tran et al. 2021)
PR negatively affects investments	(Barro 1991; Kinsella and Rubins 2005; Tabassam et al. 2016)
PR negatively affects the stock market	(Charfeddine and Al Refai 2019; Wang 2019)
PR discourages multinational companies from entering a market	(Henisz and Delios 2001; Delios and Henisz 2003; Uhlenbruck et al. 2006)
Geopolitical risks, which are directly related to PR, affect the financial sector and markets	(Caldara and Iacoviello 2022; Economou and Kyriazis 2021; Kyriazis and Economou 2021)

As a general comment, the above findings certify that there is a strong and negative correlation between FR and PR on a global scale. As a final comment, the nexus between political instability and financial crisis applies also vice versa. This is verified by Geithner (2014), among other authors, who found that financial crises have led to changes in governments and smaller or greater political instability, as in the cases of Mexico, Thailand, Indonesia and South Korea.

3. Defining Further Political and Social Change in Democratic Regimes

The question of the appropriate level of political and social change for a society, not too sudden and fast, not too slow and inflexible, is a central issue of all polities, old and new, democratic and authoritarian.

It can be argued in general that the institutional set-up of democracies (either representative and, perhaps, with “direct” elements) is more adaptable to institutional change, which may be related to the adoption of new constitutional arrangements, because the alteration of parties in government introduces new strategies, some of which are adopted and may prove to be successful. This is a kind of continuous trial and error procedure. It cannot be excluded that new strategies may be introduced in other forms of government (political regimes) such as oligarchies or monarchies. However, what historical examples seem to show is that authoritarian regimes (oligarchies, centralized monarchies and empires, or 20th-century communist states) are less reluctant to introduce new strategies, because this may trigger a chain of events that cannot be controlled, thus increasing the risk for the collapse of such regimes. This built-in rigidity proved in most cases to be short-sighted, leading to the regimes’ eventual breakdown. Such cases, of course, in the modern era include both the Soviet and the Eastern European socialist regimes during and after the Cold War (Kornai 1990; Gorlizki and Khlevniuk 2020). On the other hand, dictatorships or kingships may appear to be stable, but in many cases have proved to be unable to adapt, increasing the risk to their long-term survivability and, finally, leading to their overthrow by revolutions (for example the French and the Russian revolutions) or internal collapse (as in the case of the communist states after 1989). Thus, the appropriate level of sociopolitical change of institutions is difficult to specify in actual terms: we therefore introduce it as a theoretical benchmark. We focus on the rate of change of the institutions of governance.

Political decision-makers of a state society face a set of choices in each period of time. According to the institutional setting of each state, the decision makers are different. They may be a king with his supporting elite; a more diffuse oligarchic body; an all-powerful citizen body in ancient direct democracies; or what Achen (2022) and Hodgson (2022), among others, define as “mixed” cases of regimes. We postulate that the decision makers try to maximize their individual welfare, which may be a mixture of economic values and “intangible” ones such as prestige, religion, a particular way of life and freedom.

Thus, according to who the decision makers are in each case, a different welfare function is maximized, but in all cases, the decision makers are postulated as being rational, trying to maximize their individual welfare as they perceive it. Thus, the function to be maximized at each period is:

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

where $S_1 \dots S_n$ are the various strategies on the decision makers choice set, linked to different welfare levels. During each period of time, new strategies may be introduced and old ones may drop out, as no longer practicable. External and internal circumstances modify the set of strategies available, a point that will be made clear in the following discussion of the case studies.

During each period of time, the decision makers adopt one of the available strategies, and this shapes the decision tree probabilities as illustrated in Figure 1 below. Figure 1 shows that if strategy S_2 is chosen at time period 1, to the exclusion of strategies S_2 and S_3 , then at time period 2 the strategies S_4, S_5, S_6 and S_7 are given as options, and if S_5 is chosen, then at time period 3 strategies S_8 to S_{10} are available, etc.

Thus, in theory, there may be two extremes: In the first case, it is possible that many new strategies can be introduced. New ones can be adopted with high frequency and older ones may be discarded. This could lead to a political system that is very adaptable, but also too fickle and variable, with a high degree of uncertainty and low predictability which increases the risk of its collapse.

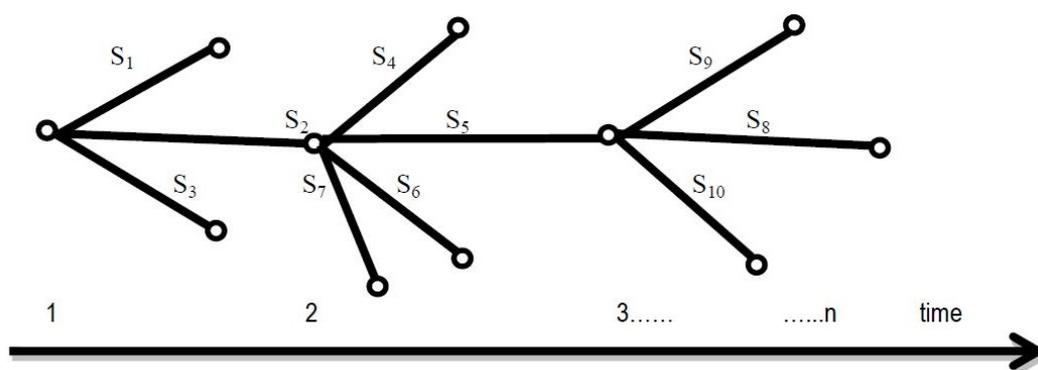


Figure 1. Decision tree probabilities and the adoption of new strategies.

In the second case, the system seems to be characterized by great stability and predictability, such as the strategies S_1 and S_3 with very few new strategies being introduced, and even fewer being adopted, no breaks, low adaptability to new ideas, being unable to successfully face new challenges, a system that tends to be “ossified”. Such a system resembles a deterministic model with perfect predictability in future steps. Such a regime may become too unstable if circumstances require significant institutional changes that the system is not prepared to perform. In such a scenario, the risk of collapse of the regime increases significantly.

The above discretion resembles the structure of the Athenian and Spartan regimes. During the 5th century BCE, Athenian democracy’s institutional arrangements and post-constitutional policies were decided directly by the Assembly of citizens, and the distinction between rules for policy making and policy measures was sometimes blurred. As will be argued later in Section 5, in the late 5th century (from 415 and later), some new institutional mechanisms were introduced that could be seen, to some degree, as “checks and balances” mechanisms to the Assembly’s decision. For example, Themistocles’ Naval Law of 483/2 BCE inaugurated a “turning to the sea” policy, which, as already mentioned in Section 1, in practical terms, had to do with the introduction of a vast ship-building program of 200 warships so as to face the imminent Persian threat. According to North’s (1990, 1991) spectacles, this “turning to the sea” strategy could be seen as the driving force for institutional change through creating opportunities for the players in the society to change the rules of the game. On the other hand, it may be argued that Sparta had a ‘constitution’, known as the *Great Rhetra*, which included rigid checks and balances (Cartledge 1987; Rahe 2016).

Thus, Figure 2 below actually describes three cases of sociopolitical regimes. Vertical axes exhibits the ‘regime change’ and horizontal axis the ‘time period’ that is, how much time is need in the long run for a regime to change. Regime 1 (red line) denotes great stability, almost rigidity over time. Such a sociopolitical regime, where few new strategies are introduced and even fewer are adopted, results in a system characterized by stability and predictability, policy continuity and low adaptability to new ideas. This system tends to be “ossified” and may not be able to succeed against new challenges which may cause its collapse. Such a system may give the impression that the risk of collapse in the long run is extremely low.

Regime 1 describes Sparta whose institutional structures proved to be rigid. Although this had benefits for a considerable period of time, 750–372 BCE where Sparta was the mightiest city-state in metropolitan Greece, as will be further explained in Section 3, the system of governance ultimately failed to adapt after 371 when the historical necessity for institutional sociopolitical changes arose. The Spartan regime faced a combination of shocks which eventually led to its collapse. Cases of rigidity are found in many other historical cases, such as the Kingdom of Croesus in Lydia in the 6th century BCE, Spain in the 16th century, France during the 16th–18th centuries where the *ancien regime* broke down with the French Revolution, the Indian Mughal Empire which broke down at the beginning

of the 18th century and the Soviet regime in 1989 (Economou and Kyriazis 2019; Gornitzki and Khlevniuk 2020; Ober 2022).

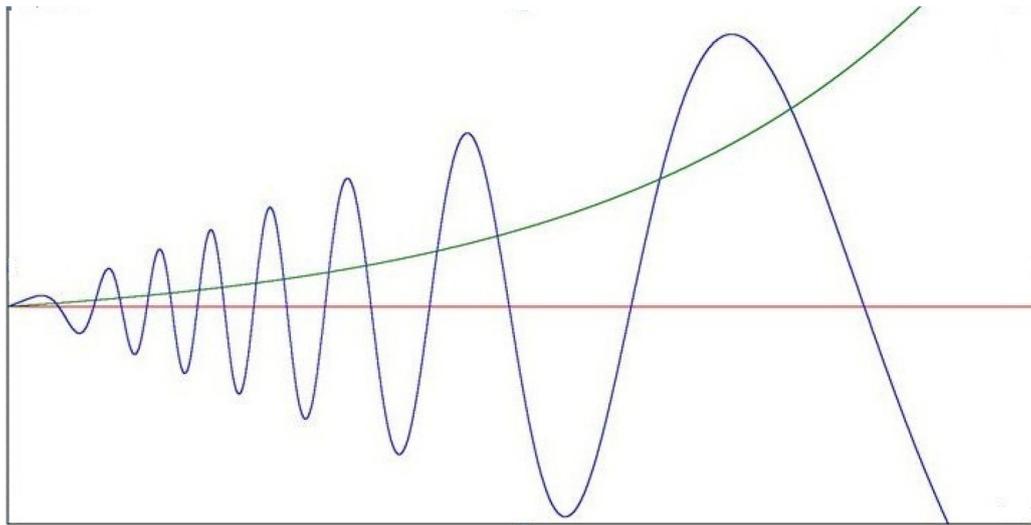


Figure 2. The three different cases of a regime change. Figure based on Economou et al. (2016).

Regime 2, as depicted by the ongoing series of (blue color) curves in Figure 2, denotes extreme volatility, where its intensity increases through time. The Regime 1 case is characterized by great certainty and predictability. By contrast, Regime 2 is characterized by great uncertainty and no predictability, where a large number of new strategies are introduced and adopted with high frequency, while older arrangements and institutions are discarded. This could lead to a political system that is adaptable but is subject to the risk of becoming too fickle, with a high degree of uncertainty and low predictability. This regime is characterized by extreme volatility resulting in great uncertainty, and the risk of collapse in the long run is extremely high. As it will be further argued in Sections 6 and 7, 5th century BCE Athens comes close to Regime 2, where many new ideas and proposals were offered and implemented which caused the regime to make wrong decisions (e.g., the Sicily campaign) leading to the verge of collapse (after the loss of the Peloponnesian War).

At this point, we have to clarify that we do not argue that a sociopolitical regime introducing a multitude of proposals always leads to instability and collapse. This further means that if a political regime is hit by a multitude of shocks (in our case, proposals as presented in Figure 1), it may make good sense to respond with a range of policy measures, each one addressing the source of a different shock. If these policy measures prove effective, the political–social regime avoids collapse. Thus, what is for sure is that the introduction of a large number of proposals by a regime may increase its volatility and the risk of collapse, but this does not (necessarily) mean that the regime will finally become unstable, or even collapse.

The third type, Regime 3 in Figure 2 (green exponential curve), is the intermediate case, the efficient one, which displays gradual (institutional) change through time; new ideas are introduced and accommodated, leading to an evolutionary regime change. Thus, the Regime 3 case represents the “optimal” or ideal rate of change that prevents collapse, which is a high probability in the previous two cases due both to internal and external shocks. Faced with external and internal shocks, the systems of the first and second cases are more likely to collapse than the system of the third case which is more adaptable. Figure 2 illustrates the three cases. We consider the Regime 3 type as the ideal case scenario. It satisfies the following criteria: (i) it makes the regime durable and prevents collapse; (ii) it is adaptable to external and internal shocks (accommodating them and thus again preventing collapse); and thus, as a result, (iii) it prevents failure. An “optimal” or ideal level of change is thus a benchmark that guarantees the longevity of a regime and safeguards it

against the risk of collapse when facing internal or external challenges. A system of checks and balances (see [Buchanan and Tullock 1962](#)), in modern terminology, would thus be considered as successful if it comes close to the ideal level of social and political change. As will be further explained in Sections 6 and 7, 4th century Athens resembles the third case, when Athens introduced a number of institutional reforms that restricted, to some degree, the unfettered power of the *demos* (the people) which then resulted in less volatile policy changes.

4. Sparta: The Structure of Political and Economic Institutions

This section explains the institutional rigidity of the Spartan sociopolitical regime by taking into account various aspects.

4.1. Political Institutions

Sparta may claim to have had the first ever constitution, the so-called *Great Rhetra*, introduced allegedly in approximately 750 BCE by the lawgiver Lycurgus. The institutional setting of Sparta incorporated a complex system of checks and balances: two kings provided by two royal families, the Agiadae and the Eurypodidae; the Council of the *Five Ephors* who were high-ranking officials, elected annually and sharing power with the Spartan kings; the *gerousia* of 30 (the Senate) which included the two kings; and the *Apella*, or popular Assembly of all male Spartan citizens, the so-called *homoioi*, meaning “equals”, that is, full citizens ([Cartledge 1987](#); [Gagarin 2013](#), pp. 231–32).

By the mid-10th century BCE, Sparta on the Eurotas River, in the southwest part of the Peloponnese, had been settled by the Dorian branch of Greeks, which enslaved the earlier population, turning them into *helots*. They then expanded to neighboring Messenia, which they conquered after war, also turning the Messenians into helots. The word helot is rendered by modern historians as slave, but some see it as a kind of serf ([Cartledge 2001](#)). The population of *helots* outnumbered the Spartans by an unknown multiple. The Spartans lived in fear of a revolt by the helots (which happened, for example, in the 460s BCE), and in the face of this threat, transformed themselves into “the first hoplite republic in Greece through a unique package of reforms” ([Cartledge 1987](#), p. 15). *Hoplites* were free citizen soldiers of ancient Greek city-states. To defend their city-states, they financed their military equipment (primarily spears, breastplates, greaves, helmets and shields) themselves and participated in the *phalanx* formations, which were the main military organization under which *hoplites* fought on the battlefields ([Kagan and Viggiano 2013](#)).

The essence of the social reforms that were adopted after the emergence of the phalanx type of warfare and organization was as follows: firstly, Spartan citizenship depended on the possession of an allotment (Greek: *klaros*) from the production of which a Spartan “equal” (citizen) was required to pay a fixed minimum contribution on a monthly basis to a common mess (common meal, Greek: *syssition*). Thus, citizenship depended on economic qualifications, something which was true of most of the city-states of the period, where full citizenship depended on *hoplite* status. What was different was that Spartans provided not only presumably their hoplite equipment, but also the fixed “common mess contribution”. Secondly, all Spartans served as *hoplites* in the army. Thirdly, all Spartans participated in the popular Assembly known as *Apella*, one of the main institutional bodies, and they had the right to vote on peace or war, by acclamation. Fourth, socially, in order to produce the desired uniformity, solidarity and unquestioning obedience and discipline, a comprehensive system of public education, the *agoge*, was rigidly enforced by the central authorities. Sparta was the only Greek city-state with such a kind of public education system.

The Spartan social classification included the additional class of *perioikoi* (those living around the main city-state, Sparta) who lived in about 80 settlements scattered all over Lacedaemon and Messene. The *perioikoi* were free and had local autonomy but had no public political rights whatsoever. They probably made some financial contribution, possibly in the form of taxes, in kind, to the Spartan state, and they participated in the army. By

the 4th century, they served as *hoplites*, brigaded in the same units as the Spartan *hoplites*, and probably had to provide their arms and armor by their own means (Cartledge 1987, pp. 15–16; 2001; Cartledge and Spawforth 2002).

The Spartan political system (constitution), was considered already by Aristotle (1944, pp. 20–35) and modern authors such Rahe (2016, chp. 2) as a mixed system, characterized by Rhodes (2007, pp. 58–60) as a peculiar kind of oligarchy. One of the many particularities of the Spartan constitution was that during the Classical period, it retained a system of two kings when monarchies no longer existed except on the fringes of the Greek world, as in Macedonia and Epirus. Sparta inaugurated an early type of constitutional monarchy since each king acted as a check on the other but more importantly they were both checked by the *ephors*. The kings were the military commanders during war. Once back in Sparta, the king could, in effect, be called to account by trial before his peers, in which case, the 30-member *gerousia* sat as a mixed ad hoc supreme court together with the five *ephors*. Through their exclusive power of jurisdiction, the *gerontes* (old men, being over 60 years of age) in these and other capital cases wielded a strong influence on the conduct of foreign and domestic policy. Even strong kings such as Cleomenes I and Pausanias (in 403 BCE) faced trials. The *gerousia* was the most senior political body, and its members served for life. The *gerontes* were elected by the Assembly of the Spartan citizens.

Probably only those from aristocratic families could be elected as *gerontes*. Apart from functioning as a Supreme Court, empowered to put even kings on trial, the *gerousia* had two other crucial functions. Together with the Council of the *ephors*, it had general supervision of Spartan laws, which were unwritten. This entailed two separate functions: (i) interpretation of the laws, and since they were unwritten, the *gerousia* had a wide latitude in sharing power as far as the legal system is concerned, which was somewhat akin to common law practice; (ii) according to the *Great Rhetra*, the *gerousia* was empowered to both introduce and refuse to introduce proposals at the Assembly, thus controlling its agenda and policy making in general. In modern terminology, the *gerousia* enjoyed the right of both prospective and retrospective veto (Cartledge 1987, pp. 121–25; Rahe 2016).

The five *ephors* were elected for a year and probably could not be re-elected. They were possibly elected, in the same manner as the *gerousia*, or they were somehow nominated or co-opted by the *gerousia*. The *ephors* had executive, judicial and religious duties. They controlled contacts between Spartans and foreigners, received foreign embassies, had the power to send away foreigners residing in Sparta (a procedure known as *xenelasia*), granted or withheld permission to Spartans to reside abroad and engaged in negotiations with other states, having more or less the functions of a modern foreign office.

In times of war, two *ephors* accompanied a king on campaigns, supervising him, and they were empowered to give orders to overseas commanders. They also determined the age-groups of the army to go on campaigns and were responsible for logistics, e.g., provisions and technical staff, and presumably, siege engines and their servants. At home, they supervised the *agoge* (the military training of boys until they reached manhood) and policy functions, including the supervision of the *helots'* to ensure that no revolts took place. The *crypteia* (hidden force), the Spartan "Secret Service", was also administered by them. Together with the *gerousia*, they had the power to bring kings to trial. Their judicial powers included preliminary hearings of capital cases in order to decide whether a case should come to court. They also judged all civil suits individually. In non-capital criminal cases, they might impose and exact fines ad hoc, and the proceeds were supposed to go to the public treasury, of which they were the comptrollers. They supervised the few taxes raised on Spartans and foreign tribute. One of the *ephors* presided at the Assembly's meetings. Thus, in today's terminology, the *ephors* combined elements, of the executive branch (foreign affairs, finance, defense) and the judiciary.

The Spartan Assembly had very limited powers: it made the final decisions concerning war and peace and legislation, but without the power of initiative, since the agendas and the proposals were introduced by the *gerousia* placed before it by the presiding *ephor*. No ordinary citizen had the right to speak (Cartledge 1987, pp. 128–29).

In addition to the above institutional setting, Spartan society was characterized by respect for the laws and the officials, military discipline, and the system of common messes to which all citizens were obliged to participate (and contribute) up to the age of 60. The system of *agoge* was deemed to create a uniformity of values and societal norms, which placed the state above the individual. Thus, it is probably no exaggeration to call the Spartan state and society both collectivist and militarist.

4.2. Economic Institutions

Sparta's peculiar institutional system extended to the economy, which was also unique among Greek city-states. Being professional soldiers, Spartans did not have civilian occupations as in other city-states, such as farmers, handicraft workers, employment in services (e.g., trade, banking, shipping like in Athens) or entrepreneurs (bankers, factory owners, ship-owners, etc.). Sparta was, to a higher degree than the average city-state, an agricultural state, but agriculture was carried out by *helots* and *perioikoi* (Cartledge and Spawforth 2002). We do not have sufficient extant comparative evidence to see if this absenteeism led to lower efficiency and productivity in Sparta, compared to other states, where farmers, being owners and laborers at the same time, had incentives to maximize output and efficiency.

The services sector was very small, mainly concerning trade, probably again in the hands of *perioikoi* and possibly some foreigners. There were no Spartan banking services and almost no commercial shipping activity. Foreign trade was also relatively small since the Spartan way of life frowned at luxuries or works of art and had autarky as its ideal. Manufacturing and handicrafts were again in the hands of *helots* and *perioikoi*, and possibly some foreigners, but catered mainly to basic needs, such as weapons, utensils and furniture, rather than luxuries and goods for export. An even greater peculiarity was the aversion to a monetized economy. Sparta originally had only unwieldy iron coins instead of silver or gold. However, this changed during the Hellenistic period, and the Spartan economy was monetized (Hodkinson 2009).

Once more, we do not have sufficient extant evidence, but the inference we can draw from ancient sources and modern interpretations seems to indicate that, similarly to the political institutions, the Spartan economy too was stationary. In contrast to Athens and other city-states, it recorded no growth and was ill-adapted to face serious challenges.

5. Evaluation of Sparta's Political and Social System

In this section, we argue that Sparta, with its systemic checks and balances, failed to undertake an efficient management of geopolitics and internal affairs; failed to follow the new trends in military organization, though a militarist society itself; and finally failed to make the necessary socioeconomic changes so as to avoid its final collapse.

5.1. Rigidity in Managing Geopolitics and Internal Political Affairs

The Spartan politico-economic system was probably in place already by the second half of the 7th century BCE and endured to the end of the 3rd century BCE, when it broke down. During this period, Sparta faced the challenges of the second Persian invasion 480/479, the third Messenian War (the uprising of *helots* in 464), the Peloponnesian War during 431–404 BCE and the so-called Corinthian (395–387 BCE) and Theban wars (378–375 BCE), among other challenges.

After the long-drawn Peloponnesian War (431–404 BCE), Sparta was at the apex of its power and took over the "Athenian empire".³ It established Spartan supervisors (*harmostes*) in many city-states. This opened Sparta to foreign influences. In general, *harmostes* mismanaged their tasks, so much so that less than a decade from the end of the Peloponnesian War, old allies such as Corinth and Thebes took arms against Sparta, together with a revitalized Athens. The wars continued with changing alliances up to 362 BCE, when the Spartan army suffered a crushing defeat at Mantinea (after two previous defeats at Tegeira and Leuctra in 371 BCE), where the Spartan king and commander Kleombrotos died (Cartledge 2001). After Leuctra, the Theban commander, Epaminondas, freed the

Messenian *helots* from Spartan rule. Sparta thus lost half its territory, which it never regained, and became a second-rate power. During the following years, Sparta chose a policy of isolation instead of participation in the coalition of southern Greeks against the Macedonians. Next, Sparta chose not to participate in the Macedonian-led Greek coalition against Persia, established by Philip II and Alexander the Great, but in 330 BCE chose to challenge alone the Macedonian regent in Greece (Alexander fighting against Persia in Asia).

During the second half of the 3rd century BCE, King Agis IV tried to introduce reforms (including cancelation of debts), but the *ephors* had him murdered. His successor, King Cleomenes III, introduced sweeping reforms that abolished the old system. He abolished the *ephors* and the *gerousia*, but he governed with almost absolute power, much like a Roman emperor, at the same time introducing social reforms by granting Spartan citizenship to many non-citizens such as the *perioikoi*, as well as land reform. However, he again confronted the Macedonians alone and suffered a crushing defeat by King Antigonos Doseon, again at Sellasia in 222. As a result, he was forced into exile. Continuing its isolationist policy, Sparta chose not to participate in the reborn Achaean League. It became a member of the Achaean League only by force in 191 BCE (Economou 2020). Finally, the system completely collapsed when Sparta was converted into a kind of dictatorship under Machanidas in 211 and under Nabis in 207 and subsequently fell under Roman rule.

We believe that this mismanagement of foreign policy and geopolitics which affected Sparta's geopolitical decline during the 4th and 3rd centuries BCE must be attributed to the rigidity of the Spartan political system which did not accommodate change after external and internal shocks. Spartan policymakers proved unable to handle Sparta's grand strategy after 403 BCE. The reason is that the Spartan political regime was characterized by a peculiar system of checks and balances, which discouraged the implementation of new ideas, protected the ruling elite and prevented reformers from challenging the status quo. Only small, occasional shifts of power could take place when an innovative king reigned (such as Cleomenes I).

5.2. Failure to Adapt to New Trends in Military Organization

At the same time, Sparta showed an inability to adopt military innovations. It did not introduce military reforms, for example equipping itself with a strong cavalry, which proved to be necessary during the Peloponnesian War. It neglected the new, lightly equipped skirmishers (*peltastai*), at whose hands it suffered a grave defeat at Lechaion during the Corinthian war, in 390 BCE, where the Athenian general Iphicrates, who introduced innovative military tactics, managed to crush a whole Spartan unit. Of course, Sparta developed its navy during the Peloponnesian War, but in the tactical field, in which the Spartans were supreme to the end of the 5th century, it failed to adapt during the 4th century, thus suffering some crucial defeats at the hands of the outnumbered Thebans and Boeotians, when General Epaminondas introduced his so-called "oblique" approach military tactic.

During the 4th century, Greek armies combined heavy and light infantrymen with cavalry, while the Spartan army remained mainly a heavy infantry one. However, even in this, we believe that it suffered critical defeats because the percentage of professional Spartan soldiers in its ranks diminished sharply, as the number of Spartan *homoioi* fell dramatically from about 8000 in the 480s BCE to about 3000 at the beginning of the 4th century. So, in order to maintain the numbers of the *phalanx*, *perioikoi* and *neodamodeis* increasingly served in the ranks of the *phalanx*, alongside Spartans (Cartledge 2001).⁴ However, *perioikoi* and *neodamodeis* were not professional soldiers, and thus we presume that they were no better than the average hoplite of other Greek city-states.

In the end, the Spartans through the decision taken by king Cleomenes III adopted the superior Macedonian type of *phalanx*, but this came too late to change the fate of Sparta. The Spartan army was crushed in Sellasia by the Macedonian and the Achaean League armies, and then Sparta, until its subjugation by Rome in 146 BCE, declined almost completely and played only a minor role in Greek affairs (Economou 2020).

5.3. Failure to Establish a Series of Necessary Socioeconomic Changes

In addition, the Spartan institutional setting failed to accommodate internal pressures. A common theme among contemporary writers was the diminishing number of the *homoioi* citizens, which did not happen, at least not to the same degree, in other city-states. This shortage of manpower (*oliganthropia*) intrigued not only ancient writers such as Herodotus and Aristotle but also modern writers (Crawford and Whitehead 1983, pp. 503–4; Hodkinson 2009). The Peloponnesian War forcefully brought Sparta into contact with the mainstream of Greek socioeconomic developments, thus creating tensions beneath the constitutional facade, which emphasized the equality of the Spartan citizens and their ideal of concord (same-mindedness, *homonoia*) among themselves.

In fact, there always had been rich and poor Spartans, but the Peloponnesian War increased this disparity: the wealthy upper class possessed land in addition to the *klaros* (allotment), the minimal land plot attributed to every Spartan citizen, which enabled it to contribute to the common mess and provide itself with *hoplite* equipment. Rich Spartans, in order to preserve their social status, apparently aimed to limit their male offspring to a single son and would seek to marry off their daughters to the sons of other wealthy families. Poor Spartans also tended to restrict their offspring, because if they had many sons, then their *klaros* would have to be divided among them, thereby becoming too small to permit any of them to retain the necessary minimal mess contribution. These social forces of the institutional setting brought about a gradual decrease in population. Another source of demographic decrease was manpower losses, which were severe also for Sparta, especially during the last period of the Peloponnesian War in the naval battles which they lost.

During the Peloponnesian War, Sparta had to acquire fleets in order to combat Athens in the Aegean. However, fleets were very costly, both to build and to maintain, and the rudimentary non-monetized (at that time) Spartan economy had to turn to contributions, in money (coins), to their allies and even more to the Persian Empire. So, in a decade, Sparta became de facto a monetized economy, a tendency which continued after the war with the Spartan governors and garrisons in many city-states, paid in coins. However, the distribution of this monetary inflow was uneven: admirals, ship captains, governors and officers serving abroad received the lion's share, increasing the gulf between rich and poor.

Thus, wealthy Spartans had now a surplus of liquid funds to invest. However, since the backward Spartan economy did not offer a diversity of investment opportunities, the only investment outlet they had within the Spartan state was the acquisition of additional land. Poor Spartans had fallen into debt by raising a "mortgage" on the security of the crops raised on their land, or on the land itself, in return for coined money which the rich Spartans had now in surplus. This led to land concentration and downward social mobility from Spartan status to *ypomeiones* (those who did not have sufficient land for the mess contributions and their hoplite equipment) which then explains the diminishing number of Spartan citizens during and after the Peloponnesian War (Cartledge 1987, pp. 169–70). This is why we stated above that the monetization of the Spartan economy "corrupted" the Spartan citizens, which could be seen as a "curse in disguise".

5.4. A Comprehensive Assessment of the Socioeconomic and Political System of Sparta

We conclude that the Spartan regime, with its checks and balances, diffusion of power, respect for authority and tradition, lack of incentives and alternatives for economic activity, the stifling of the initiative of outstanding individuals and the mismanagement of geopolitics and grand strategy, was the outcome of an endogenous systemic rigidity. As a result, the lack of adaptability both to internal change and external shocks increased the risk of the collapse of the regime and finally led to its breakdown at the end of the 3rd century BCE.

Under A. Toynbee (1951), logic it could be argued that Spartan history shows a rigid regime that fails to adapt when facing pressures from new, unexpected, external and internal conditions. Sparta won the Peloponnesian War but proved ill-adapted to lead the Greek world. An interesting counterfactual would have been for Sparta to have willingly

decided to participate as a member state of the Achaean League during the second half of the 2nd century BCE or later during the first half of the 1st century BCE. However, Sparta chose to continue its isolationist policy, and it finally joined the Achaean League only for a short period of time and only after it was forced to do so, during the 192–146 BCE period (Economou 2020).

In terms of our model, this would have meant the adoption of a new strategy after 404 BCE. Additional strategies to address internal social problems would have been to prohibit rich Spartans from buying land belonging to the poor, thus avoiding downward social mobility, and to grant full citizenship to *perioikoi* and *helots* before the Cleomenes III reforms in the 240s BCE, by which time it was too late. Thus, as our analysis indicates, having failed to introduce new strategies at crucial periods, Sparta declined, and its political system broke down by the end of the 3rd century, when Machanidas and Nabis established dictatorships. This is not to deny the earlier success of the Spartan institutions. During the period 650–372 BCE, Sparta was the most powerful city-state in ancient Greece. What can be argued is that when circumstances changed in certain important ways, the same institutional rigidity that had been Sparta's strength became, instead, a liability.

6. Athens: An Adaptable Society with Collective Decision-Making Procedures

6.1. The Political Structure

Since the political history of Classical Athens is relatively well-known (see, among others, Ober 2008, 2017; Cartledge 2018), we will not analyze it in detail. The Athenian democracy emerged in 510–507 BCE through the reforms of Cleisthenes and was strengthened gradually through the introduction of the Athenian Naval Law (*Decree of Themistocles*) which initiated Athens' "turn to the sea" shipbuilding program in order to repel the Persian invasion and opened the way to full political rights for all citizens. This "turn to the sea" strategy along with the reforms of Ephialtes and Pericles gradually reshaped Athens' socioeconomic and political institutions from an aristocratic dispensation during the 6th century BCE to a direct democracy and a free market type of economy during the 5th and 4th centuries (Economou and Kyriazis 2019; Bitros et al. 2020).

Ober (2008) explains the emergence of democracy in Athens as a shift of power between, on the one side, the aristocracy and, on the other side, the middle (*hoplites*) and poor (*thetes*) classes, leading to a bottom-up democratic and perhaps spontaneous revolution in 510–507 BCE. The aristocracy found the expansion of democratic rights to be in its interest. In contrast to Athens, Sparta had a militarily focused, aristocratic government that had little incentives to grant voting rights to the agricultural workers (Fleck and Hanssen 2006)

By the mid-5th century BCE, Athens was the most complete direct democracy the world had known. Major decisions about all aspects of external and domestic policy were made by the Assembly of the demos through regular voting. Judicial powers were vested in the popular courts to which jurors were appointed by lot, as was also the case with the Council of Five Hundred which set the agenda for the Assembly's meetings. The Athenian political system was based on equality of political rights. Citizens over 20 had the right to vote in the people's Assembly. Full political rights were obtained at the age of 30 when a citizen was allowed to present himself at the annual election of magistrates (Bitros et al. 2020).⁵ All citizens had the same opportunity to occupy state posts through selection by lot.

The only posts not filled by sortition (selection by lot) were those deemed to demand a proven ability and experience by the occupant, such as those of the 10 generals (leaders of the army, requiring military ability) and judges who judged special commercial cases known as *dikai emporikai* (Cohen 1992). Equality was encapsulated in the principles of *isonomia* (equality in front of the law), *isegoria* (equality of all to speak, e.g., to introduce proposals for policy, laws and decrees to be voted by the Assembly) and *isocratia* (equality of political rights, to be appointed to public posts including the courts) (Bitros et al. 2020; Cartledge 2022; Ober 2022).

Contrary to the Spartan system, the 5th century Athenian political setting until 415 BCE had almost no provisions for checks and balances, since the people (*demos*) were supreme in political, military, judiciary and public finance policy making. As it is further argued in Section 6, this entailed the risk of too high volatility in decision making.

6.2. The Economy

The Athenian economy was flourishing and growing during the 5th and 4th centuries BCE. It was highly diversified and export-oriented. It had established a regime of property rights protection and implementation of contracts, and for the first time in history, the contribution of the manufacturing (e.g., metallurgy; carpentry; shipyards and dockyards for warships, the *triremes*, and merchant ships; pottery; artifacts) and services sectors (in areas such as trade, shipping, insurance services for commerce, maritime loans and banking services, even primitive versions of joint-stock companies) was higher in GDP terms than the overall annual agricultural production, giving thus to Athens the characteristics of the “first modern economy”.⁶

During the 5th century, Athens benefited from the revenues of its empire. Remarkably, during the next century, after Athens lost its empire, it made an economic and financial recovery by introducing various economic policy measures promoting trade. Under these policy measures, Piraeus became the entrepôt of the Mediterranean world and Athens one of the main manufacturing centers, mainly for high-quality and value-added goods, such as jewelry, works of art, utensils, pottery, honey and figs (Cohen 1992; Halkos and Kyriazis 2010; Halkos et al. 2021). After the reforms of Eubulus and Lycurgus, who introduced extensive public work programs as opposed to a continuing war strategy, public revenues increased from a low of 130 *talents*⁷ in the 350s to 400 *talents* in the 340s and 1200 *talents* in the 330s; the latter figure is comparable to the imperial revenue of the 440s (Economou and Kyriazis 2016; Bitros et al. 2020).

7. Reducing Systemic Risks When Institutional and Political Change Occurs: Athens during the 4th Century

Contrary to the Spartan system of diffusion of power, the Athenian system was characterized by a concentration of power in the hands of the citizens, through the Assembly (mainly) and the courts (Ober 2008, 2017). Possibly, there was some kind of a relative blocking (or vetoing) power as far as the courts are concerned during the 5th century BCE (the extreme volatility period according to our analysis). However, what is for sure is that the veto power of the courts increased significantly during the 4th century BCE. This became a necessity due to some very serious and costly strategic mistakes that the Athenians made, becoming also victims of demagoguery, such as, first, the Sicilian campaign which led to the Athenian disaster at Syracuse in 415–413; second, the condemnation of the victorious generals after the Battle of Arginousae in 406; and third, the volatility in decision making concerning foreign policy which is related to a high propensity of the Athenians to shift their alliances very often. According to Schwartzberg (2004, pp. 316–17), this made them look quite unreliable, in comparison to the Spartans, and this led to the loss of many important allies since the Athenians were considered untrustworthy.

Recognizing the weaknesses of the democratic constitution of the previous period, with its too high volatility in decision making and abrupt policy swings, the Athenians introduced institutional changes which made decision making more stable.

The most important institutional reforms were the following three: The first, which took the form of a checks and balances mechanism, was the *graphe paranomon* procedure, introduced in 415 BCE, through which any citizen could sue (within a year) the proposer (known as *ho boulomenos*) of a decree with a charge that his proposal was unconstitutional, that is, it contradicted with the existing laws of the state, or that his proposal did not follow the correct procedures when it was submitted to the Athenian Assembly (Schwartzberg 2004, pp. 319–20). Under the same reasoning, any citizen could sue the proposer of a law through the *graphe nomon me epitedeion theinai* procedure, with a charge that the proposal

was unconstitutional, or that it did not follow the correct procedures when it was submitted to the Athenian Assembly (Canevaro 2018). Fines were very severe for those who proposed such laws or decrees. For a *graphe paranomon* that was rejected by the *nomothetai* (see below), the proposer could be fined with 1000 drachmae, while for a rejected *graphe nomon me epitedeion theinai*, the proposer could even face a death penalty.⁸

Linked to these two kinds of *graphai*, at the end of the 5th century, possibly in 404 BCE, two new special boards were introduced, the *nomothetai* (meaning those who are establishing new laws) and the *thesmomothetai*. The *nomothetai* board was drawn from the annual group of judges serving in the *Heliaia* courts. It could be a large gathering of judges. For example, Demosthenes (*Against Timocrates*, 24.27) mentions a case of 1001 judges.

The *nomothetai* could be summoned (i) if the Assembly called them for revisions to the existing laws, (ii) if an Athenian citizen proposed a change in the laws or (iii) if they were asked by the *thesmomothetai* (see below). Thus, the main duty of the *nomothetai* was to certify that a decree or law proposed by a citizen did not contradict any other existing laws (Harris 2013, pp. 244–45; Canevaro 2018). If the proposed laws did contradict any other existing laws, they were rejected. It was actually a two-tier board where the first board (elected by the Council of the Five Hundred) had also the right to propose new laws while the second (elected from the Athenian municipalities—demes) voted on whether to ratify each law and add it to the existing laws (Harris 2013). Thus, this body, in addition to the role of inspecting the “constitutionality” of the proposed laws against the current legislation, also had the power to propose new laws.

The *thesmomothetai* were an institution with similar or supplementary duties to those of *nomothetai*. According to the orator Aeschines (*Against Ctesiphon*, 3.38–3.40), the *thesmomothetai* were a board of six *archons*⁹, whose duties were to review the existing laws annually to determine whether there were inconsistencies, duplications or invalid laws in force and, if so, to inform the *nomothetai* to rectify them. Schwartzberg (2004, p. 320), among others, accepts this interpretation. These boards were connected with the restoration of democracy in 404 BCE.

The above description shows that the *nomothetai* actually had a veto right on law proposals to be decided by the Assembly. Even if a proposal was accepted and became state law, it could be annulled at a later time by procedures run (i) by the Assembly, (ii) the citizens (*graphe paranomon*, *graphe nomon me epitedeion theinai*) and (iii) the *nomothetai*. Harris (2013, p. 244) argues that in the 5th century, the constitution of the Athenians placed that legislative power in the hands of the Assembly, but in the 4th century, that legislative power was placed in the hands of the Assembly and the *nomothetai*. The introduction of these checks and balances institutions does not mean that the Athenian citizens (the *demos*) were deprived of their ability to make decisions. *Demos* remained the superior political institution concerning decision making. Harris (2013, p. 244 fn. 78) clarifies this by arguing that:

“Even though the *nomothetai* gave final approval to the laws in the fourth century, it was the Assembly that initiated all laws and submitted them to the *nomothetai*. Their authority derived from the citizens of Athens, which is why they were called the laws of the Athenians (not the laws of the *nomothetai*).”

What we are arguing is that democracy became more moderate, mature and less volatile in the 4th century in comparison to the previous century, which proved beneficial for the survival of the political regime, and Athens avoided the risk of internal collapse at the end.

Returning to the narrative of the main political/military events that took place in the 4th century, after the unsuccessful attempts of the Athenians to establish a viable Second Athenian League which culminated with the so-called Social War during 357–355, Athenian public revenues were falling to 130 *talents* per year, a very low sum in comparison, say, to the Periclean era. However, the innovative spirit of the Athenians then again led them to a new key strategic choice that proved beneficial in the long run. They introduced a pacifist grand strategy by avoiding new war engagements, and they replaced large war

expenses with large fiscal expansionary programs of a Keynesian nature, and this led them to impressive economic growth; in 322, after just 33 years, their public revenues rose to 1200 *talents* from 130 in 355 (Economou and Kyriazis 2016; Bitros et al. 2020).

The Athenian democracy was abolished in 322 BCE after Athens was defeated by the Macedonians at sea at the battle of Amorgos. This means that the system did not “fail” or collapse internally like Sparta’s, as was argued in Section 4, but that it failed to effectively repel a stronger enemy in military terms, the Kingdom of Macedon. The Athenians also made an unsuccessful effort to expel the Macedonian garrison in the 3rd century during the Chraemonidean War (267–261 BCE) and later managed to do so, paying off the garrison, as an inducement for them to leave Athens. Showing its strong roots, Athenian democracy more or less functioned (but with interruptions) until about the middle of the 2nd century and the Roman conquest (but we lack the information to trace institutional changes), even though Athens was no longer a major power in Greece.¹⁰

The above historical facts prove that although Athens failed in military terms, it still continued to be a successful example of socioeconomic organization during the Hellenistic period. Thus, in the end, it did not “collapse” as it happened with the Spartan case. Thus, Athenian society during the period 508–404 BCE comes close to the case of Regime 2 in our model, the high-volatility case, where the risk of collapse is extremely high, but after 403 and more profoundly during the period 355–322, it seems to be closer to the case of Regime 3, that is, a system with an optimal level of change that successfully accommodates external shocks and internal changes so that the risk of internal collapse diminishes significantly. By contrast, Sparta, although it managed to remain the greatest power in geopolitical terms in ancient Greece from 650 to 372 BCE, due to the reasons that were described in Sections 4 and 6, failed to adapt.

8. Concluding Remarks

The objective of this paper was to transfer the well-established notions of “financial risk” and “financial uncertainties” to social science analysis, that is, to give them a sociopolitical diastasis. The theoretical implications of the paper are that it defines what kind of institutions are needed so that an efficient level of social and political change takes place so that, on the one hand, the risk of a regime’s collapse is avoided and, on the other hand, social prosperity and progress continue in the long run. We have presented an analysis of sociopolitical rigidity versus volatility of a regime that permits a sociopolitical regime to avoid the risk of collapse and adapt both to external shocks and internal change, making it thus durable. The practical implications of the paper are that we have presented Sparta and Athens as two examples, the first for rigidity, the second for high volatility during almost the 5th century (until 415 BCE) and then, during the 4th century, as approaching the ideal or “optimal” level of change.

According to our argumentation, Athens during the 5th century was a very volatile regime, but it avoided collapse during the 4th century due to institutional changes which made the socioeconomic and political structure more moderate regarding decision making. By contrast, Sparta remained in a state of rigidity due to the structure of its institutions, and when some visionary leaders such as Cleomenes III tried to introduce changes, it was too late for Sparta to become successful; this resembles what happened with the Soviet regime when Michael Gorbachev tried to introduce a radical package of institutional reforms of socioeconomic and political nature, *perestroika* and *glasnost*, but he failed since, obviously, the regime could not be saved due to its chronic pathogens and structural weaknesses.

To the best of our knowledge, this is the first attempt to interpret sociopolitical change by simultaneously comparing Sparta and Athens from such an analysis perspective. The limitations regarding this particular case study, Sparta vs. Athens, are related to the absence of cliometric–statistical data for testing our model and hypotheses. We however believe (and hope) that this analysis could be further used by social scientists to interpret not only historical case studies, as happens with this paper, but also recent cases, such as the current Chinese regime or the European Union. For example, based on the logic of

the above analysis, an interesting issue for future research would be to try to define the optimal level of economic and sociopolitical reforms that the current Chinese regime needs to introduce so as to further expand its economic might in the future combined with a more democratically oriented package of political institutions. Equally interesting would be to explain how any institutional changes regarding sociopolitical matters may occur in China in the long run based on factors such as the authoritarian characteristics of the Chinese Communist regime.

Another interesting case study for future research is the European Union's further political integration (as a process of sociopolitical change), which is strongly related to the achievement (or not) of high financial performance throughout the union, since this will increase prosperity among the member states in the long run.

We hope that this article sets the appropriate stimuli for further research on related topics in the near future.

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Notes

¹ A notion that derives from financial economics.

² Due to space limitations, we cannot retrieve all of this bibliography here, but only a representative part of it.

³ The term refers to the so-called Delian League or Athenian Alliance of the 478–404 period. It was an association/military alliance of more than 300 Greek city-states, under the leadership of Athens, whose initial purpose was to continue fighting the Persian Empire. Gradually, Athens acquired a hegemonic role within it. For a financial aspect regarding the functioning of the Alliance, see [Figueira and Jensen \(2021\)](#).

⁴ *Neodamodeis* (new citizens) were given citizenship whenever the state deemed it necessary, mainly, we guess, when the city needed to replenish the ranks of the citizens after severe manpower losses, such as after the earthquake of about 461 BCE, the losses from the Peloponnesian War, and the crushing defeats of the Spartan army by the Thebans and Boeotians in 371 and 362 BCE.

⁵ Only Athenian male citizens enjoyed full political rights. Slaves, *metics* (citizens that came to Athens from other city-states for work) and women were excluded from political participation.

⁶ See, among others, [Cohen \(1992\)](#), [Ober \(2008\)](#), [Halkos and Kyriazis \(2010\)](#), [Lyttkens \(2013\)](#), [Bergh and Lyttkens \(2014\)](#), [Bitros et al. \(2020\)](#), [Economou et al. \(2021a, 2021b\)](#), [Halkos et al. \(2021, 2022\)](#) and the references cited therein.

⁷ One *talent* was equal to 6000 drachmae. As a measure of comparison, the daily wage of an unskilled worker during the 4th century BCE was 1.5 drachmae.

⁸ Due to space limitations, we cannot retrieve all this evidence here, but a detailed analysis of such legal and judicial procedures is provided by [Schwartzberg \(2004\)](#), [Harris \(2013\)](#), [Lyttkens et al. \(2018\)](#) and [Canevaro \(2018\)](#), among others.

⁹ They were members of the *nine archons*, an ex-aristocratic body.

¹⁰ A very interesting historical analysis regarding Athens during the Hellenistic and Roman periods until the time of Mark Antony is provided by [Habicht \(1999\)](#).

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