Is Greece a Rent Seeking Society? A Research on the Relationship Between Entrepreneurship, Trust and Institutions

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Abstract The paper analyses the various interactions among the institutional and cultural environment and the quality of entrepreneurial activity in Greece. The institutional context and the way in which institutions perform in particular, shape the structure of entrepreneurial incentives. As explicitly demonstrated by Baumol (J Political Econ 98:893–921, 1990) institutions actually channel entrepreneurial talent toward different activities which may be productive, unproductive or destructive. At the same time, informal institutions, i.e. culture and values have proven to be of equal importance for entrepreneurship. Within this context, the paper builds a simple model of rewards' satisfaction accounting for first, the existence of income externalities, in order to test the hypothesis that individuals care about their relative position, i.e. economic status, and second, for the institutional quality, trust and values pertaining in the society, in order to analyze the possible existence of an underlying 'social consensus' that is supportive of rent-seeking behavior in Greece.

Keywords Entrepreneurship · Rent-seeking · Rewards satisfaction · Institutions · Trust · Greece

1 Introduction

The conventional rent-seeking theory assumes a distributive context within which individuals tend to spend their effort and resources towards creating and/or maintaining monopoly rents either through legal processes such as lobbying, queuing and contributions to political parties or through illegal processes such as bribes, illegal political contributions etc. (Khan 2000; Lambsdorff 2002). Following contributions such as that of Krueger (1974) and Posner (1975), a significant realization evolved suggesting that rent-seeking is

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closely related to processes of institutional change through which economic rights are altered. Since rents are beneficial for their recipients these individuals are expected to spend resources in order to create, maintain and transfer these rents (Khan 2000). Nonetheless, it is the political and institutional characteristics of a society that will determine how much effort is actually expended in rent-seeking, which individuals and groups win the various distributive contests and the types of rights and rents that are created (Khan 2000; Lambsdorff 2002).

The consumption of rents often produces externalities. In general, an externality occurs when an economic activity results into costs or benefits that are incurred by a third party who is not involved in the transaction (Buchanan and Stubblebine 1962). Externalities are thus understood as a market failure and can be either positive or negative. Monopoly rents are an obvious example of market failure that imposes monetary costs in the society. When an economy produces goods with the presence of externalities that are not regulated then the observed market prices do not reflect the full social costs or benefit of the associated transactions and thus the market fails to produce maximum welfare for the society (Arrow 1969). In the available literature, externalities are analyzed in a number of contexts (MacKenzie 2009). Relevant to our analysis is the case of individuals' preferences over their relative income status (i.e. not the absolute amount of money that they earn but their money compared to what other people earn) and their possible social consensus towards the generation, maintenance and transfer of rents to specific groups in the society. In particular, we are interested in the possible presence of positional externalities stemming from income distribution and suggesting that the level of an individuals' satisfaction is a function of not only socio-demographic variables (age, education, marital status, etc.) and absolute income but also of relative income as well. In such a case interpersonal comparisons of utility should be studied as income is also related to social status and the relative position of individuals in the society.

Different social, institutional and economic outcomes are produced in the case of altruists or envious individuals (Konrad 2004) or in general, in the case of agents that are not indifferent about the generation of rents, who wins these rents and how (Linster 1993). Rents are associated with entrepreneurial activity and in particular with the way in which a society's institutional environment, formal and informal, channels entrepreneurial talent towards a variety of activities that range from productive to unproductive and even destructive (Baumol 1990). Thus, increased attention is paid to the catalytic role of rent-seeking as *rent seeking is costly to growth*. It is highly associated to underdevelopment traps, stagnation, and higher probability of bankruptcy (Murphy et al. 1993). Further, it is important that rent seeking exhibits increasing returns, i.e. rent seeking activity makes rent seeking more attractive relative to productive activity and this would have feedback effects on the growth potential of the economy (Murphy et al. 1991).

As Baumol (1990), proposes while the total supply of entrepreneurs varies among societies, the productive contribution of the society's entrepreneurial activities varies much more because of their allocation between productive activities (innovation) and unproductive activities (rent seeking). This allocation is heavily influenced by the relative payoffs the society offers to such activities. This fundamental note came to clarify the preexisting misconception that an economy of private enterprise has an automatic bias towards innovation. Actually, such an economy "… has a bias only towards profit" (Hobsbawm 1969: 40). Thus, the entrepreneurs might allocate their efforts into roles that do not follow the constructive and innovative spirit that is conventionally attributed to them. Indeed, at times the entrepreneur may even lead a parasitical existence, i.e. rent seeking, damaging the productive structure of the economy (Baumol 1990).

In a given society, the variety of roles—productive entrepreneurship or rent seeking—are determined by the existing rules of the game, that is the existing reward structure in the economy—society (Baumol 1990). Following Acemoglu (1995) the closer a society is to a rent-seeking equilibrium, the higher the degree of social consensus towards rent-seeking, i.e. the higher the respect that the society pays to rent-seeking compared to a Pareto equilibrium. A Pareto equilibrium defines an allocation of resources in which it is impossible to make any individual better off without making at least one individual worse off (Arrow and Debreu 1954), and it is the outcome of an economic system of free, competitive markets. Competitive markets are associated with the management of risk, i.e. uncertainty and vulnerability that rent-seeking seeks to eliminate. Social consensus refers to the society's attitudes and value judgments, i.e. culture and institutions (Tabellini 2007) that might favor the one or the other type of equilibrium, that is a rent-seeking versus a Pareto equilibrium. Thus, trust relationships are fundamental for the development and stability of democratic societies and the orderly conduct of social and economic affairs (Hardin 2001). In the absence of trust pertaining to the behavior of individuals and social groups, a society must handle the cost of a complex and expensive system in order to monitor and protect its economic functioning against exploitation and opportunism (Hardin 2001). Yamagishi (2001) defines trust as a form of social intelligence characterizing individuals that are more discerning in their attitudes towards others. This is a particularly important characteristic as, at the aggregate level, it relates to the level of generalized trust developed in the society (Fukuyama 1995). Distrust breeds distrust and in high distrust societies individuals must make conscious efforts to develop the social intelligence required for detecting risks and taking risks when appropriate (Yamagishi 2001). In such cases, negative effects on productive entrepreneurship, linked to innovative behavior and the management of risk and uncertainty, are anticipated.

Within this context a research question is formulated referring to whether Greece is a rent-seeking society. It is acknowledged that the reward structures (i.e. rents) differ according to the existing values, culture and institutions (formal and informal). Further, the reward structure consists of pecuniary (income, relative income) and non pecuniary aspects (social status, prestige). It is thus assumed here that economic agents choose activities that yield the highest pecuniary and non pecuniary returns based on his/her personal judgments oven institutional quality and values. Research on relevant issues in Greece is very limited. In a recent study Bitros and Karayiannis (2010) use cross section questionnaire data to study the determinants of entrepreneurial morality in a small country such as Greece and find that, among other factors, entrepreneurial morality is significantly influenced by localized and generalized morality and the moral factors that contribute to success in business. Business ethics and the moral base of business people's decisions are an open debate in the field. The role of business people as business people has been studied by Michalos (1995, 2013) who suggests that it is both a moral and a rational decision for business people to support business ethics when performing their role as business people albeit the material payoffs of morally good actions are not necessarily positive, if present whatsoever. In real world situations he argues, it is difficult to produce pragmatic justifications of motives, intentions, actions and consequences (Michalos 2013). The present study aims at contributing to the understanding of the institutional environment pertaining entrepreneurial activity in Greece via shedding light at the interplay between values and the decisions/beliefs of the society, the working population and the business people, in particular.

The study builds a simple model of rewards' satisfaction accounting for first, the existence of income externalities, in order to test the hypothesis that individuals care about

their relative position, i.e. economic status, and not only about the absolute amount of money that they earn, and second, for the institutional quality, trust and values pertaining in the society, in order to analyze the possible existence of an underlying 'social consensus' that is supportive of rent-seeking behavior in Greece. The study's contribution is significant as it utilizes available knowledge in the field in order to build a theoretical and empirical framework for analyzing the interrelationship among the key concepts of entrepreneurship, rent-seeking, institutions and trust. To that extent the study provides a theoretical framework and testable empirical hypotheses that can be used in the case of other countries as well in order to generate comparative results and further advance our knowledge in the field.

We use data from the European Social Value Survey (2008) and we build an empirical model through which we distinguish between three groups of individuals namely the society, the working population and the entrepreneurs in order to test for the existence of income externalities and social consensus towards unproductive entrepreneurship. In particular, we formulate and test two hypotheses. H1 is set to test the case that individuals care about their relative income position (positional externalities) and not only about the absolute amount of money that they earn. H2 then comes to test the effect of perceptions over institutions and values upon the level of satisfaction from rewards. Taken together these two hypotheses can give us an idea about the possibility that individuals care about rents and are willing to place effort and resources towards gaining and maintaining rents. At the empirical level we test these two hypotheses for (a) the society as a whole, i.e. all participants in the ESV Survey (including working and not working population, public and private sector workers, entrepreneurs, pensioners, etc.), (b) the working population (including all workers, e.g. entrepreneurs, public servants, etc.) and (c) the entrepreneurs (including only private sector entrepreneurs excluding primary production activities). In the case where similar favorable attitudes towards rent-seeking are observed for all these groups of individuals then a social consensus towards rent-seeking might be assumed.

Results are supportive of the hypotheses built here. In short, Greece is found to be a society with widespread support over the value of unproductive entrepreneurship which accompanied with the presence of income externalities sketches the picture of a backward economy. Important developmental policy implications arise as a result of these findings. Indeed, the economic crisis faced by Greece from 2009 onwards has revealed the poor level of institutions in the country and exodus from this backward economic spiral cannot be expected in light of a lacking institutional reform. The latter must indeed take the nature of both formal and informal changes as it is not only governmental structures that need a radical reform but also, the values and norms shared among individuals must turn towards more societal responsibility.

The rest of the paper is organized as follows: following the introduction part of the paper, part two is devoted to first, a brief discussion on the interrelationship between the key concepts of entrepreneurship, growth, trust and institutions and second, to the development of a simple model of rewards' satisfaction that can be used to study social consensus towards rent-seeking as a shared phenomenon in the Greek society, i.e. as a phenomenon underlying the behavior of all groups of individuals namely the society, the working population and the entrepreneurs. Part three of the study is devoted to a discussion of the econometric model and the associated empirical hypotheses that are proposed and tested in the context of the present study. Part four concludes the paper with a presentation of the main findings and a discussion of the results in light of the relevant literature.

2 Theoretical Model

2.1 Entrepreneurship and Growth: The Role of Trust and Institutions

More than four decades ago Baumol (1968) addressed the issue of how entrepreneurship is dealt with in economic theory. With an insightful, clear and concise manner he stated the context of entrepreneurship research and pointed to the key theme of motivation behind entrepreneurship. As regards the context of entrepreneurship research, it suffices to remind that the entrepreneur determines the behavior of the firm which is a vital component of the free enterprise society underlying its overall process of economic growth (Baumol 1968). Thus, differences in the growth rates of countries are to be explained by differences in the availability of entrepreneurial talent. Numerous studies have since showed that entrepreneurship significantly impacts economic activity (see indicatively Henderson 2002) while differences in national economic growth rates are to be largely explained by differences in the entrepreneurial activity among countries (see indicatively Reynolds et al. 1999; Zacharakis et al. 2000). In setting the context of research, Baumol (1968) went on to stress the significance of motivation as the driver of entrepreneurship suggesting that the Schumpeterian innovator is to be supported by an appropriate reward structure pertaining to the society. In other words, entrepreneurship as an input to an economy' production process comes from within a society's socio-cultural and psychological arrangements.

Baumol's (1990) path-breaking contribution entitled "Entrepreneurship: productive, unproductive and destructive" and published in the Journal of Political Economy, has come to clarify the above-mentioned concepts and ideas by stating that an entrepreneur might indeed play a variety of roles that are away from being constructive and innovative, leading as far as to pursuing a parasitical existence that damages the economy. The quality of entrepreneurship, he argues, depends on the rules of the game that is, the structure of rewards prevailing in the economy. Using an extensive set of historical data he established his main argument suggesting that depending on the structure of payoffs in an economy (the rules of the game), the exercise of entrepreneurship can sometimes be unproductive or even destructive. In addition, the rules of the game that determine the relative payoffs to different entrepreneurial activities change from one time and place to another (Baumol 1990). This may be attributed to the variety of discrete components that comprise the national rule of law and the causal mechanisms linking the rule of law to economic growth (Haggard and Tiede 2011). Further, Infante and Smirnova (2009a) who developed a microeconomic model to study the presence of rent-seeking activities in both developed and developing economies, suggest that a possible explanation for their presence relates to the economies operating under decreasing returns due to increasing costs in the productive sector. Thus, it is the distribution of resources that matters and not a 'genetic predisposition' on free-riding as usually assumed in the case of developing countries, in particular (Infante and Smirnova 2009a).

Today, it is a commonly shared view that the entrepreneurs are not a priori 'good' for a society (Hobsbawm 1969). Unless productive entrepreneurship is experienced by the economy, costs in terms of welfare and growth occur. These costs are associated with rent-seeking activities or else unproductive entrepreneurship (Murphy et al. 1991, 1993; Acemoglu 1995). Murphy et al. (1993) suggest two main reasons why rent-seeking activities are so costly to growth. The first reason relates to that rent-seeking activities exhibit very natural increasing returns, that is rent-seeking makes its self more attractive compared to other distributive activities, and the economy is gradually led to an equilibrium of high rent-seeking and low production. The second reason relates to the possible existence of

public rent-seeking which is even more harmful compared to everyday production as it damages growth via economy—wide formal institutional channels as, for example, poor property rights.

Michalos (1995, 2013) provides important insights as regards the interplay of motives, intentions and actions of business people when performing their role as business people. He analyses how close the model of moral decision making is to the model of rational decision making (Michalos 1995) but he underlines that the business case for business ethics, i.e. the thesis that being morally good is materially good for business (BC thesis) is a morally deficient argument for business ethics (Michalos 2013). Successful decisions he argues, *need to appear morally virtuous and make a sustainable profit*. To that extent he explicitly argues that we better *assert* the business case for business ethics (ABC thesis) as it can generate personal and corporate material payoffs but it can also pose a serious threat to what people understand as moral virtue and the very institution of morality (Michalos 2013).

Following the above, a large body of literature focuses on the analysis of the various interactions among the institutional and cultural environment, the quality of entrepreneurial activity and growth (Putnam 1993; Acemoglu 1995; Zak and Knack 2001; Knack and Keefer 1997; Williamson and Mathers 2011; Henrekson and Sanandaji 2010; Tabellini 2007; Sobel 2008; Sobel et al. 2010). While the causal relationship between institutions and economic development is far from being fully understood (Chang 2010), the interaction between entrepreneurship and institutions is well-illustrated in the relevant literature (North 1990). In a study of 23 OECD countries Nystrom (2008) finds that, among other factors, the smaller size of government, better legal structure and security of property rights (variables used to approximate economic freedom) tend to increase entrepreneurship. In a recent review of the relevant literature (Bruton et al. 2010) classify the available evidence on the relationship between entrepreneurship and the institutional setting and clarify that institutions both constrain and enable entrepreneurs in their activities as they define the set of and limits to entrepreneurial opportunities, thus affecting the rate and size of new venture creation.

In addition, the institutional context and the way in which institutions perform in particular, shape the structure of entrepreneurial incentives. Entrepreneurship is an intentional, planned behavior much affected by social norms and the values shared by a society (see Krueger et al. 2000 for a review of different models of entrepreneurial intentions). Bruton et al. (2010) call this the issue of legitimacy, i.e. the right of a venture to exist and perform its economic activity in a certain way (Suchman 1995). Legitimacy suggests that the strategies, practices and goals pursuit by any new organization must pass the rules of cognitive and moral legitimacy set forth by the institutional environment in which they wish to operate (Stinchcombe 1965; Bruton et al. 2010).

The productivity of capitalist countries is much explained by the freedom of economic agents to pursuit the profits associated with new venture creation and thus create wealth for the economy. Indeed, the interaction of formal and informal institutions and increases in the levels of productivity of capitalist countries is well illustrated by theory and empirical research findings. Mathers and Williamson (2011) study an unbalanced panel of 74 countries for the years 1980–2004 and find that: (a) culture enhances the effectiveness of economic institutions, (b) economic freedom (i.e. 'good institutions') contributes to economic prosperity and (c) effectiveness is strongly affected by cultural values. These findings provide support to their argument that culture as encompassed in a set of pre-existing informal rules actually determines the success or failure of formal economic

institutions, acting as a filter of the productivity of economic freedom and capitalism (Mathers and Williamson 2011).

Institutions shape the actions of entrepreneurs and determine the level of productive versus unproductive or destructive activities that might occur while at the same time, entrepreneurs may also help shape the institutions prevailing in a society thus pointing to a two-way causal relationship between entrepreneurship and institutions that is time and place (history) dependent (Baumol 1990; Acemoglu 1995; Murphy et al. 1991, 1993; Putnam 1993; Zak and Knack 2001; Knack and Keefer 1997; Williamson and Mathers 2011; Henrekson and Sanandaji 2010; Tabellini 2007; Sobel 2008; Sobel et al. 2010). At the same time, informal institutions, i.e. culture and values have proven to be of equal importance for entrepreneurship. In many cases, the design of formal institutions fails to take into account the existing informal institutional environment and its important constructs such as trust, social capital, norms and beliefs, or else culture. Such failures carry tremendous consequences in terms of a country's economic performance and the prevailing types of entrepreneurship and growth, in specific. The interrelationship between formal and informal institutional environments and their effect on entrepreneurship and growth are subjects of increased research emphasis. Recent evidence show that well-functioning institutions are often observed in countries or regions where individual values are consistent with generalized morality and this implies a causal effect from values to formal institutional outcomes (Tabellini 2007).

As stressed in a number of studies (see indicatively Banfield 1958; Putnam 1993; Platteau 2000), trust is the most prominent characteristic of a society. Tabellini (2007: p 9) identifies trust as the '… first and most obvious positive cultural feature' of a society, while Fafchamps (2004: p 5) provides an informative definition of the term by suggesting that "trust can be understood as an optimistic expectation or belief regarding other agents' behavior". Trust is built through various sources of either repeated interpersonal contact or from a general knowledge of incentives underlying the behavior of certain groups of people (personalized trust versus generalized trust) (Platteau 1994). A thorough analysis of trust as an element pertaining virtually all economic transactions has been provided by Arrow (1972) who suggests that lack of mutual confidence leads to increased protection and monitoring costs of economic transactions. In contrast, higher levels of trust lead to (Knack and Keefer 1997): (a) increased innovation, as entrepreneurs do not devote time to unproductive monitoring activities, (b) lower society's dependence upon formal institutions to overcome the difficulties arising from poorly protected property rights, (c) increased credibility towards government officials and their policy initiatives and thus a stable and supportive environment to investment and economic activity and (d) to higher returns on the accumulation of physical and human capital.

As pointed by Fafchamps (2004) in the presence of trust economic agents operate more efficiently and at lower costs. In such a case the society benefits from the presence of generalized trust that yields more efficient outcomes than personalized trust. Generalized trust is established faster and more cheaply than personal trust and refers to the net of values and norms, i.e. the codes of good conduct and honest behavior that are shared by the individuals in the society. Generalized morality can be indicative of the level of trust characterizing a society (Fafchamps 2004) and the degree to which the above mentioned benefits can arise since individuals who practice generalized morality are more reluctant to free ride on others (Tabellini 2007). Further, trust and generalized morality are reflected upon institutional quality. Institutional quality relates to the type of institutional structures that the society has developed and endorses and determines the degree of economic freedom characterizing each society (Gwartney and Lawson 2005; Farr et al. 1998;

Gwartney et al. 1999; Cole 2003; Powell 2003). The highest the economic freedom the lower are the returns to unproductive entrepreneurship, i.e. rent seeking (Sobel 2008; Baumol 1990; Karabegovic and McMahon 2005). Economic growth follows naturally as a result of higher levels of productive entrepreneurship while in the case of poor institutional quality economic backwardness and stagnation are to be observed (Reynolds et al. 1999; Zacharakis et al. 2000; Henderson 2002; Aharonovitz and Nyaga 2010).

The present study builds upon these theoretical insights in order to develop a theoretical construct and testable empirical hypotheses over the interactions between formal and informal institutions and their effect upon the supply of entrepreneurship in Greece. In light of the need to overcome longstanding development impediments that have drove Greece to its current difficult situation, knowledge over the productive structure of the economy and the socio-economic values that lead to their reproduction is essential. As of 2009 Greece has officially entered an economic crisis period leading to a series of international political and economic negotiations and arrangements that resulted into the formation of a three-party bailing out scheme funded by the International Monetary Fund (IMF), the European Central Bank and the European Commission. Since then subsequent reform and stabilization programs have been introduced with average so far success in rectifying the pre-crisis fiscal and productivity imbalances. The latest IMF (2013) review of Greece report points to that while at certain areas progress has been made, the necessary structural reforms are progressing slowly. For example, the privatization program is behind schedule, progress in liberalizing regulated professions is lower than targeted and judicial reforms and anti-corruption plan are delayed (IMF 2013). These structural impediments hamper the productivity of the economy and the operation of markets as an economic development machine.

2.2 A Simple Model of Reward Satisfaction

We start by developing a simple model of individual preferences over the reward structure of the society. We do that by developing a societal utility function that relates the level of satisfaction that the individuals of the society enjoy to their preferences over the quality of institutions and personal attitudes towards societal values. Thus, in addition to the standard socio-economic and demographic variables used to analyze the level of individual satisfaction, i.e. utility as a function of income, age, education etc., we enter in our analysis variables such as satisfaction from democracy and government, trust in parliament, police, and the legal system, and personal attitudes towards values such as creativity, being rich, freedom, success, etc.

Following the theoretical discussion presented above, individual preferences over institutions and values might be used to categorize a population (m) of individuals intro three subsets, namely the subset of neutral persons (a), i.e. the group of people that do not have any preference over rent-seeking (they are indifferent towards this phenomenon), the subset of rent-seekers (r), i.e. the group of people that have a positive preference over rent-seeking (their utility increases as rent-seeking in the society—economy increases), and the subset of idealists or altruists (i), i.e. the group of people that have a negative preference over rent-seeking (their utility decreases as rent-seeking in the society—economy increases). These three groups comprise the whole society, that is $(a + r + i) = m$ holds, i.e. $(a + r + i) = 1$ the number of individuals in the economy. Further, the number of people are not necessarily equally distributed among the three groups. In the case of a society with high levels of generalized trust and a social consensus towards minimizing opportunism and rent-seeking behavior we would expect the subset of idealists (or else altruists) (i) to outnumber the other two sets of people. Alternatively, in the case of a

society that places much value on rent-seeking we would expect the subset of rent-seekers (r) to outnumber the other two sets of people.

Any standard utility function assumes that an individual's level of satisfaction depends upon socio-demographic and economic variables with income having a positive effect on the level of utility. Thus, all other things being equal, the individuals earn positive rewards p in accordance to their preferences for income so that, p_a is a preference free income for each person in the a group, p_r is the income that rent-seekers earn and p_i is the income that idealists earn. It holds that $p_r > p_a > p_i$ and $p_m > 0$.

We assume that any rational individual j maximizes a standard utility function that is increasing in income, i.e. of the form:

$$u_j = U(y) \tag{1}$$

where u is utility and y is income, and it holds that $U' > 0$ and $U'' < 0$ (Spence 1973). If Eq. 1 were to depict the utility of individuals that do not have any particular preference over rent-seeking, i.e. the neutral group of persons, then we would have a utility function of the form:

$$u_a = U(y) \tag{2}$$

If now we introduce income externalities and individuals' preferences over the reward structure of the society into Eq. 1 we get an additive utility function of the form:

$$u_j = U(y, y^*, \mathbf{q}, \mathbf{v}) \tag{3}$$

where a person's satisfaction from his/her rewards is related to income, both absolute and relative (Duesenberry 1949; Pollak 1976) and personal judgments over institutional quality and culture (values and attitudes). At this point a note should be made regarding the importance of identifying income externalities as a phenomenon compatible with social consensus towards rent-seeking and of course unproductive entrepreneurship and large welfare losses. Following Dusenberry's (1949) relative-income hypothesis a number of economic models have been built on the assumption that individual utility depends not only on the amount of goods and services consumed, that is on absolute consumption, but also on relative consumption. In relative consumption models there can be a distinction between positional goods, i.e. goods for which the link between context and evaluation is strong, e.g. square-foot house, and non-positional goods, i.e. goods for which the link between context and evaluation is weak, e.g. vacation time (see Frank 1985). Frank (1985, 1991) defines the dependence of utility on relative consumption as positional externalities and suggests that economic policy recommendations stemming from models that do take into consideration the issue of relative consumption are more informative and effective. This is due to the fact that relative consumption models identify the fundamental conflict between individual and social welfare and predict an equilibrium with too much expenditure on positional goods and too little expenditure on non-positional goods (Frank 2005). A society that endorses such an equilibrium is close to income inequalities and a 'waste' of resources caused from a shift of production from non-positional but welfare enhancing goods, towards positional goods such as larger houses and more expensive cars. To the extent that money is the most abstract good that can be put to all uses it is important to identify the uses that the Greek society values.

Turning now to our model, in Eq. 3 the terms u and y are defined as in Eq. 1, y^* stands for relative income (absolute income y over the average income $\bar{y}$ of the group that the individual compares his/her absolute income against, i.e. $y/\bar{y}$), $\mathbf{q}$ stands for a vector of personal judgments and perceptions over the quality of institutions (e.g. satisfaction from

democracy and government, trust in parliament, police, legal system, etc.) and **v** stands for a vector of individual preferences and personal attitudes towards societal values (e.g. creativity, being rich, freedom, success, etc.).

Again if Eq. 3 were to depict the utility of individuals that have a preference, either positive or negative, for rent-seeking we would get an additive utility function of the form:

$$u_{r,i} = U(y, y^*, \mathbf{q}, \mathbf{v}) \tag{4}$$

For rent-seekers an appropriate environment for pursuing their goal of maximum utility, so that $U_r'(\mathbf{v}) > 0$ also holds, is observed for the subset of preferences denoting low institutional quality and low trust. In contrast, such an environment will exercise a negative effect upon the utility of idealists and thus for that group of people $(U_i'(\mathbf{v}) > 0)$ holds only for the subset of preferences denoting high institutional quality and high levels of trust.

In its simplest form, at any given point in time, the welfare level of a society that is w, is subject to the level of satisfaction reached by individuals, i.e.

$$w = \sum_m u \tag{5}$$

and thus the growth potential of individuals can enter the welfare function through the function of preference utility maximization as:

$$w = \sum_m u(y, y^*, \mathbf{q}, \mathbf{v}) \tag{6}$$

All other things being equal, a large proportion of unproductive entrepreneurs defined here as rent-seekers, will lead to lower growth and thus diminishing social welfare whereas a higher proportion of idealists will lead to higher levels of trust and growth and thus higher social welfare. The effect of neutral persons is subject to exogenous micro and macro factors such as education, technological progress and so on. Independent preferences can also be used to proxy the average structure of preferences held by a society. In the case of a balanced distribution among the three types of individual preferences the preferences of neutral persons should give a mixed picture over the factors that are conducive to satisfaction. Alternatively, in the case where rent-seekers or idealists prevail, independent preferences should portray the preferences of the dominant group.

In terms of rewards the welfare function of a society is:

$$w = \sum_m por w = p_a + p_r + p_i \tag{7}$$

And thus the structure of the society can be said to be neutral towards growth if and only if $p_r = p_a + p_i$ that is, rewards to rent-seekers are equal to the sum of rewards that neutrals and idealists earn. In the case of $p_r < p_a + p_i$ a rewards structure that is favorable towards growth might be assumed. Finally, in the case where $p_r > p_a + p_i$ the rewards structure of the society is such that long-run growth cannot be sustained (see indicatively Murphy et al. 1993 for a discussion of the effects of increasing rent-seeking rates on the returns to production).

3 Econometric Model and Data

The structure of rewards, income satisfaction and the role of preferences towards institutions and trust are studied here in an attempt to identify the structure of the Greek society

and the potential presence of the three groups of individuals identified here. In particular in order to test for the presence of rent-seekers that is of unproductive entrepreneurs we distinguish between the general population, the working population and the entrepreneurs. Income satisfaction as measured for the general population is used to proxy generalized morality, i.e. the degree of income satisfaction for the group of neutral individuals, i.e. the group of individuals that have no particular preference over institutions and trust and thus their satisfaction levels ideally, may reflect the prevailing preferences in the society. Then this level of income satisfaction may be compared against the level of income satisfaction measured for the working population to see if any differences arise when it comes to the preferences of only the people that participate in the labor market is concerned. Finally, self-employed individuals are used to proxy entrepreneurship (Nystrom 2008) which can be identified as productive or unproductive depending on (a) the level of income satisfaction compared to the other two groups of people and (b) the effect that high institutional quality and high trust exert upon the income satisfaction levels of individuals in this group.

Thus, in order to analyze the main hypothesis of whether Greece is a rent-seeking society we distinguish between the society, the working population and the entrepreneurs and we test the following empirical hypotheses:

H1 In Greece there exist negative income externalities shared across the society, the working population and the entrepreneurs, and,

H2 Greece shares a social consensus towards rent seeking, i.e. similar judgments over institutional quality and shared values and attitudes across the society, the working population and the entrepreneurs.

Using the European Social Survey we have availability of subjective data regarding income satisfaction and thus we can perform interpersonal comparisons as well as comparisons among groups of people. In the present study, the use of subjective data is essential as positional externalities stemming from income distribution and social consensus towards rent-seeking are issues that call for interpersonal comparisons of utility. A number of empirical studies follow Van Praag's (1991) argument of the need to use interpersonal comparisons of utility to study specific issues in light of the limitations of the axiomatic theory of revealed preference (Senik 2005). Thus, subjective data are used by Thurow (1971) and Ravallion and Lokshin (2001) to study poverty and the perception of inequality, by Clark and Oswald (1994), Winkelmann and Winkelmann (1998) to study the non-monetary costs of unemployment, by Malone et al. (2010) to study the perceptions of financial well-being among American women in diverse families and by Mangiavacchi and Rapallini (2012) to study self-reported intra-household welfare distribution. In our study the use of subjective data is crucial as it allows us to identify positional externalities stemming from relative consumption and variations in the perceptions of institutional quality, generalized trust and culture as determinants of social consensus towards rent-seeking behavior in Greece.

The dependent variable is satisfaction from rewards and it is proxied by the variable of respondents' feelings about the level of total household income. To the extent that responses to this question are ordinal an ordered probit is estimated of the following form (see Greene 1997 for an analytical description and technical details):

$$u_j^{'} = \beta^{'} \mathbf{x}_j + \varepsilon_j, \quad \varepsilon_j \sim F(\varepsilon_j | \vartheta), E[\varepsilon_j | \mathbf{x}_j] = 0, \quad Var[\varepsilon_j | \mathbf{x}_j] = 1 \tag{8}$$

where u'_j is the unobserved latent variable of income satisfaction for person j, **x** is a vector of independent variables and ε an error term. The observation mechanism results from a complete censoring of the latent variable as follows (Greene 1997):

$$
\begin{aligned}
u_j &= 0 \quad \text{if } u_j \le \mu_0, \\
&= 1 \quad \text{if } \mu_0 < u_j < \mu_1, \\
&= 2 \quad \text{if } \mu_1 < u_j < \mu_2, \\
&\quad \ldots\ldots \\
&= J \quad \text{if } u_j > \mu_{J-1}
\end{aligned}
\tag{9}
$$

And the cumulative distribution function (CDF) that is used for the estimation of an ordered probit model is (Greene 1997):

$$
F(z) = \int_{-\infty}^{z} \frac{\exp(-t^2/2)}{\sqrt{2\pi}} dt = \Phi(z),
\tag{10}
$$

$$
f(z) = \phi(z)
$$

Three sets of independent variables are used reporting: (1) the values that people adhere to (e.g. creativity, being rich, freedom, success etc.), (2) the perceived quality of institutions (satisfaction from and trust in institutions) and (3) a set of control variables including socio-demographic and economic variables (e.g. age, education, marital status, income etc.). In particular the list of variables approximating the society's values include the individuals responses on questions regarding the importance of thinking new ideas and being creative, of being rich and have money and expensive things, of showing abilities and being admired, of being treated equally and have equal opportunities, of being important to follow rules, to make own decisions and be free and being successful. The second set of variables approximating institutional quality and trust includes variables regarding the political interest shown by individuals, their participation in elections, the perceived quality of government and democracy, the degree of how people can be trusted, and their degree of trust in institutions such as the national parliament, the European parliament, the legal system, the police, the politicians, and the political parties. Finally, the third set of independent variables includes control variables referring to age, education, gender, marital status and absolute and relative income. Table 1 presents a list of all the variables used in the analysis as available from the ESS Round 4 referring to 2008.

The empirically estimated relationships are Eq. 11 (the benchmark model) and Eq. 12 (the full model) shown below. Eq. 11 is called the benchmark model as: first, it is used to test the effect of socio-economic and demographic variables that typically exert an effect on rewards' satisfaction, and second, it is used to test the hypothesis of income externalities via of course the coefficients of absolute and relevant income approximating individuals' attitudes towards their earnings (absolute income) and their social position as a result of these earnings (relative income). Equation 12 is called the full model as in line with the theoretical context presented here it also includes three sets of variables approximating individuals perceptions over the quality of institutions, the level of trust pertaining to the society and the values that individuals adhere to.

$$
\begin{aligned}
u_j = \beta_0 &+ \beta_1 age + \beta_2 age^2 + \beta_3 education + \beta_4 education^2 + \beta_5 gender \\
&+ \beta_6 marriage + \beta_7 income + \beta_8 relativeincome + \varepsilon
\end{aligned}
\tag{11}
$$

Table 1 Definition of variables

Variable name	Proxy	Definition
Rewards' satisfaction (dependent variable)	HINCFEL	Feeling about household's income nowadays
Control variables		
Age	AGEA	Age of respondent, calculated by year of birth
Agesq	$AGEA^2$	Age of respondent, squared
Education	EDUYRS	Years of full-time education completed
Educationsq	$EDUYRS^2$	Years of full-time education completed, squared
Gender	GNDR	Gender of respondent
Marital status	MARITALA	Legal marital status of respondent
Income[a]	HINCTNTA	Households total net income, all sources
Relative income	RLTVINC	Income weighted by average income in the sample
Institutional quality and trust		
Political interest	POLINTR	How interested in politics
Participation	VOTE	Voted in last national election
Quality of national government	STFGOV	How satisfied with the national government
Quality of democracy	STFDEM	How satisfied with the way democracy works in the country
Generalized trust	PPLTRST	Most people can be trusted
Trust in national parliament	TRSTPRL	Trust in the country's parliament
Trust in legal system	TRSTLGL	Trust in the country's legal system
Trust in police	TRSTPLC	Trust in the police
Trust in politicians	TRSTPLT	Trust in politicians
Trust in political parties	TRSTPRT	Trust in political parties
Trust in European parliament	TRSTEP	Trust in the European parliament
Values		
New ideas and creativity	IPCRTIV	Important to think new ideas and being creative
Rich and money	IMPRICH	Important to be rich, have money and expensive things
Abilities and admire	IPSHABT	Important to show abilities and be admired

Table 1 continued

Variable name	Proxy	Definition
Equal opportunities	IPEQOPT	Important that people are treated equally and have equal opportunities
Follow rules	IPFRULE	Important to do what is told and follow rules
Make decisions and be free	IMPFREE	Important to make own decisions and be free
Be successful	IPSUCES	Important to be successful and that people recognize achievements

See Appendix A4, Variables lists, ESS4-2008 ed.4.0. All variables have been recoded to denote positive values, perceptions etc

[a] The variable of total household income is recorded into ten monthly income categories ranging from less than €500, to more than €3001

Table 2 Reward structure satisfaction

	Model 1. Society	Model 2. Working population	Model 3. Entrepreneurs
Control variables (socio-demographic and economic characteristics)			
Age	−5.9569***	−5.2575**	0.6948
	(1.9374)	(2.3398)	(5.8558)
Age square	10.52328***	8.8134**	−1.6647
	(3.5083)	(4.2580)	(10.9074)
Education	−1.7117***	−3.8276***	−3.2219***
	(0.5423)	(0.7767)	(1.0919)
Education square	1.2345**	3.4306***	2.9097***
	(0.5795)	(0.8389)	(1.0851)
Gender	−0.0258	0.0175	−0.1364
	(0.0705)	(0.0773)	(0.1610)
Marital status	0.1095	0.1605*	0.1408
	(0.0803)	(0.0878)	(0.1843)
Income	−0.4185***	−0.4143***	−0.5102***
	(0.0550)	(0.06214)	(0.1232)
Relative income	0.7828***	0.7425***	1.0406**
	(0.2097)	(0.2408)	(0.5063)
Constant	−1.0951	2.1005	6.9326
	(2.0136)	(2.5212)	(6.8278)
Summary statistics			
μ_1	1.5291***	1.5572***	1.6550***
	(0.0462)	(0.0515)	(0.1049)
μ_2	2.7412***	2.8170***	2.7396***
	(0.0577)	(0.0655)	(0.1346)
$Log - L$	−1103.679	−910.5613	−224.0034
χ^2 (df)	267.3280 (8)	238.8361 (8)	69.6708 (8)
N	996	836	210

Dependent variable is satisfaction from rewards. Society is represented by all people in the sample. Working population refers to employees and self-employed in all types of businesses. Entrepreneurs refer to self-employed population excluding self-employed to own family business and self-employed in the primary sector. Estimations are based on non-missing observations. The table reports the coefficients (i.e. the betas) from the empirical estimation of Eq. 11. The standard errors are reported in the parentheses, and asterisks ***, **, * report significance at the 10, 5 and 1 %, respectively

$$u_j = \beta_0 + \beta_1 age + \beta_2 age^2 + \beta_3 education + \beta_4 education^2 + \beta_5 gender + \beta_6 marriage$$
$$+ \beta_7 income + \beta_8 relativeincome + \beta_{9-12} quality + \beta_{13-19} trust + \beta_{20-26} values + \varepsilon$$

$$(12)$$

As mentioned earlier both these equations are estimated for the general population, the working population and the entrepreneurs in order to test not only the presence of income externalities but also the existence of a social consensus underlying such behaviors. The group of society is represented by all people in the sample. The working population group refers to employees and self-employed in all types of businesses. The group of entrepreneurs refers to self-employed population excluding self-employed to own family businesses and self-employed in the primary sector.

Table 3 Reward structure satisfaction: the effect of institutions and trust

	Model 3. Society	Model 4. Working population	Model 5. Entrepreneurs
Control variables (socio-demographic and economic characteristics)			
Age square	8.4531**	7.6167*	−6.3898
	(3.6594)	(4.3979)	(12.3021)
Education	−1.7103***	−3.7938***	−3.1613***
	(0.5539)	(0.7943)	(1.2258)
Education square	1.3392**	3.4962***	3.0167**
	(0.5915)	(0.8562)	(1.2172)
Gender	0.0108	0.0497	−0.1423
	(0.0738)	(0.0806)	(0.1772)
Marital status	0.1537*	0.1972**	0.2024
	(0.0833)	(0.0908)	(0.1955)
Income	−0.4183***	−0.4064***	−0.5390***
	(0.0569)	(0.0644)	(0.1377)
Relative income	0.7539***	0.6669***	1.0460*
	(0.2158)	(0.2486)	(0.5661)
Institutional quality and trust			
Political interest	−0.0803*	−1.1172**	−0.0109
	(0.0443)	(0.0482)	(0.1020)
Participation	0.2301**	0.3417***	0.3756
	(0.0109)	(0.1243)	(0.2701)
Quality of national government	−0.0459**	−0.0469**	−0.0702
	(0.0191)	(0.0211)	(0.0483)
Quality of democracy	−0.0142	−0.0087	0.0252
	(0.0192)	(0.0205)	(0.0453)
Generalized trust	−0.0062	0.0054	0.0213
	(0.0161)	(0.0177)	(0.0377)
Trust in national parliament	0.0447*	0.0531**	0.0590
	(0.0235)	(0.0257)	(0.0558)
Trust in legal system	0.0107	0.0132	−0.0142
	(0.0126)	(0.0132)	(0.0549)
Trust in police	−0.0626***	−0.0736***	−0.0693
	(0.0177)	(0.0193)	(0.0439)
Trust in politicians	0.0115	0.0224	0.1594
	(0.0363)	(0.0402)	(0.1096)
Trust in political parties	−0.1049***	−0.1005***	−0.2491**
	(0.0322)	(0.0362)	(0.1010)
Trust in European parliament	0.0415**	0.0268	0.0296
	(0.0179)	(0.0197)	(0.0481)
Values			
New ideas and creativity	−0.1651***	−0.2128***	−0.2907***
	(0.0394)	(0.0445)	(0.0988)
Rich and money	0.0048	0.0091	0.0040
	(0.0296)	(0.0328)	(0.0796)
Abilities and admire	0.0481	0.0553	0.1259
	(0.0376)	(0.0413)	(0.0880)
Equal opportunities	−0.0245	0.0081	−0.0773
	(0.0412)	(0.0472)	(0.1069)

Table 3 continued

	Model 3. Society	Model 4. Working population	Model 5. Entrepreneurs
Follow rules	−0.0086 (0.0279)	−0.0225 (0.0302)	−0.1013 (0.0679)
Make decisions and be free	0.0045 (0.0441)	0.0224 (0.0498)	0.2284** (0.1141)
Be successful	−0.0489 (−1.320)	−0.0341 (−0.820)	0.0427 (0.441)
Constant	1.0098 (2.0903)	3.6375 (2.6034)	9.5601 (7.7783)
Summary statistics			
μ_1	1.6061*** (0.0483)	1.6404*** (0.0542)	1.7794*** (0.1137)
μ_2	2.9006*** (0.0615)	2.9968*** (0.0705)	3.0131*** (0.1519)
$Log - L$	−1057.978	−869.2496	−209.2421
χ^2 (df)	358.7307 (26)	321.4595 (26)	99.1934 (26)
N	996	836	210

Dependent variable is satisfaction from rewards. Society, the working population and entrepreneurs are defined as previously. Estimations are based on non-missing observations. The table reports the coefficients (the betas) from the empirical estimation of Eq. 12. The standard errors are reported in the parentheses, and asterisks ***, **, * report significance at the 10, 5 and 1 %, respectively

4 Results and Conclusion

Via the empirical estimation of Eq. 11 (benchmark model) the existence of negative income externalities (i.e. interdependent preferences) is confirmed and shared across the society, the working population and the entrepreneurs (Table 2). In particular, H1 is confirmed via the negative coefficient of absolute income and the positive coefficient of relative income. This actually suggests that individuals are not satisfied with the absolute amount of money that they earn but their satisfaction is positively affected when they compare absolute earnings with what others earn in absolute terms, i.e. their relative status. This hypothesis is confirmed for the three groups of individuals i.e. for the society as a whole, the working population and the entrepreneurs and thus it can be argued that Greece is a society with commonly held income externalities underlying the existing reward structures. In other words, positional externalities as regards the level of rewards earned are a phenomenon shared along the society, the working population and the entrepreneurs. This suggests that when it comes to income individuals do not value the absolute amount of money but their position relative to the group they belong. The effect of the control variables that are typically used in the analysis are as anticipated that is reward satisfaction increases with age and education albeit in the case of entrepreneurs only education exerts a statistically significant effect. Gender does exert a statistically significant effect while the variable of marital status exerts a positive and statistically significant effect only for the working population group of individuals.

The empirical estimation of Eq. 12 (full model) (Table 3) tends to present a social consensus towards rent seeking. More specifically, H2 is confirmed as, in the presence of negative externalities, the society and the working population are 'satisfied with their

rewards' when voting and trusting in parliament and 'unsatisfied' when there exists political interest, trust in institutions such as the police and the political parties, quality government and a shared view that it is important to be innovative and have creative ideas. In particular, when society is concerned, satisfaction from rewards decreases as a result of increases in: the political interest shown by individuals, the level of satisfaction from government, the level of trust in the police, the level of trust in political parties and the value ascribed to being innovative and have new ideas and increases when participating in elections, i.e. for voters. In other words, satisfaction is higher the more far the society is from 'good' institutions. Importantly, when the working population is concerned the same picture is presented suggesting that 'good' institutions or else institutional quality is not valued by the part of population that is actually involved in distributive activities. Results become even more indicative when the group of entrepreneurs is concerned. Again H2 is confirmed as, in the presence of negative externalities, the group of entrepreneurs seems to value freedom while trust in institutions, such as political parties, and values, such as innovativeness and creativity, diminish their reward satisfaction. In other words, entrepreneurs have not been found to value the image of the Schumpeterian innovator, i.e. the image of the entrepreneur who wants to be creative and lead things in his/her field. Contrary, entrepreneurs in Greece have greater satisfaction from rewards when they make own decisions and are free. Companied with the shared view of dislike towards quality institutions it can be argued that entrepreneurship in Greece falls into the unproductive type of Baumol's (1990) classification.

In conclusion, the results support the hypothesis that Greece is a society away from Pareto equilibrium, i.e. there seems to be 'social consensus towards rent seeking'. It seems that satisfaction from the reward structures pertaining in the Greek society diminishes with trust in institutions and their perceived quality while the 'entrepreneurial values' of innovativeness and creativity also diminish satisfaction. This finding leads to important research and policy implications. Income externalities endorse income inequalities which is a means of social polarization. Positional externalities seriously affect the allocation of resources within an economy and the institutional and public policy environment in support of such allocations (Frank 2008). The very meaning of freedom in the economic actions of agents is at the center of the discussion as the context of economic freedom and institutional quality may lead to severe welfare losses in the presence of extensive and persistent positional externalities supported by policy programs designed on the basis of traditional economic models of utility maximization and social welfare (Frank 2005, 2008). This is of immense importance for Greece as it is called upon to implement radical institutional reforms which have found their way via the legislative root but which are lagging behind as it regards everyday practice that is, implementation. One argument for these delays, set forth by a number of different interest groups, relates to that these reforms do not convince the society and the varying groups of individuals over their ability and appropriateness towards meeting the productive challenges faced by the Greek economy.

Companied with low trust and weak civic norms, positional externalities suggest that the ability of Greece to perform stabilization and reforms programs is seriously hampered. Such an argument follows the findings of Berg and Sachs (1988) and Keefer and Knack (1995) who argue that difficulties and delays characterize stabilization and reform programs in polarized societies as the different societal groups are more willing to impose costs on the society (Knack and Keefer 1997). In the case where an economic crisis hits a society that is lacking in social cohesiveness then it is less likely for this society to build up social consensus over the necessary policy reforms (Knack and Keefer 1997). In such a case, policy makers are urged to direct resources to unproductive channels such as

consumption in order to find supporters who in turn do not invest any of the benefits they gain into the society due to lack of trust to government and state institutions. Following the results of the present study, these arguments can be held true for Greece as well and then it becomes obvious that a radical institutional reform is needed prior to any attempt to build a sustainable productive entrepreneurship basis. Such a reform ought to account for the country's historical pattern of rewards' structure and motivation and of course for the level of corruption characterizing public and private activity in the country. In particular, after establishing the rent-seeking behavior of individuals in Greece an interesting line of future research in the field would be to extend our study towards identifying the origins of these unproductive structures, i.e. history dependence, and the time pattern of reward structures, i.e. intergenerational talent allocation (Acemoglu 1995; Tabellini 2007). Also, we need to identify the mechanisms that could change social consensus towards reward structures that favor productive entrepreneurship (corruption and the efficiency of state, Infante and Smirnova 2009b). In addition, research is needed on business ethics in order to provide knowledge regarding the interplay between motives, intentions and actions underlying the role of business people in the presence of moral concerns and the need for societal responsibility (Bitros and Karayiannis 2010; Michalos 1995, 2013). Last but not least an important issue for research relates to the nature and role of state entrepreneurship in Greece.

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