

# Moonlighting Politicians\*

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## Abstract

In most modern democracies elected officials can work in the private sector while appointed in parliament. We show that when the political and market sectors are not mutually exclusive, a trade-off arises between the quality of elected officials and the time they devote to political life. If high-ability citizens can keep earning money outside of parliament, they will be more likely to run for election; for the same reason, they will also be more likely to shirk once elected. These predictions are confronted with a dataset about members of the Italian Parliament from 1996 to 2006. The empirical evidence shows that bad but dedicated politicians come along with good but not fully committed politicians. There is in fact a non-negligible fraction of citizens with remarkably high pre-election income who are appointed in parliament. These citizens are those who gain relatively more from being elected in terms of outside income. At the same time, they are less committed to the parliamentary activity in terms of voting attendance.

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# 1 Introduction

In almost every parliamentary democracy elected officials are paid a fixed salary, whether they work hard or not. What is not always recognized is that in many countries, like Italy, France, Germany, and the UK, members of parliament can keep working in the private sector after election.<sup>1</sup> Outside employment can be either the continuation of a previous activity or something completely new. It is easy to think of an entrepreneur who keeps on running a company while holding a seat in parliament, or a lawyer who still attends to his clients. It is harder to think of a civil servant or any other employee doing this, because they would need to regularly show up to work or because some incompatibilities might apply. Nevertheless, even in countries with a strict system of regulations, like the US, politicians can earn money outside of parliament by offering consulting, writing books or giving speeches and lectures, no matter what their previous job may have been.<sup>2</sup>

Politicians' outside employment has been long debated in many countries. In the US, for instance, the law regulating outside employment was tightened in 1977 after a tough confrontation inside Congress. As summarized at that time by Senator Bob Packwood (R) in his speech to the Senate, there were mainly two rationales for a strict limitation of outside income:<sup>3</sup>

“One, it is we ought to be full time Senators and we should not do anything that takes time away from this job. That is the time argument. Two, it is a conflict. If we go out and speak, it is indeed a conflict and that ought to be barred.”

Other politicians opposed the tightening by arguing that citizens with remarkable market activity would choose not to run for elective office rather than give up their private business. Referring to his choice to run for Congress while maintaining an external source of income as a lawyer, Senator Edmund Muskie (D) declared:<sup>4</sup>

“I feel very strongly about this, and I say once more that maybe I did make a mistake 22 years ago. But I do know this, that the only thing that has made it possible for me to stay in public life 22 years was my choice - and I think it was an honorable choice - of this source of income for all of that time.”

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<sup>1</sup>See Djankov et al. (2009) for a cross-country review of financial and conflict disclosure rules applying to national representatives.

<sup>2</sup>In the US outside income cannot exceed 15% of the salary of an Executive Public Officer, which in 2006 was \$165,200. See Appendix A in the working-paper version of this article (Gagliarducci et al., 2008a) for a review of outside income regulations across countries.

<sup>3</sup>Congressional Record, Senate, March 21 1977, p. 8333, Official Conduct Amendments of 1977.

<sup>4</sup>Congressional Record, Senate, March 18 1977, p. 8158, Amendment n.93.

The issue is still harshly debated, not only in the US. For example, public disclosure of politicians' tax returns in Italy and the UK has recently spawned numerous articles on the popular press, with voters and opinion makers being mostly concerned that elected officials who engage in relevant private activities may be diverted from being full-time representatives.<sup>5</sup>

In this paper, we argue that when the political and market sectors are not mutually exclusive, a trade-off arises between the quality of elected officials and the time they devote to the public office. If high-ability citizens do not have to give up their private business when appointed, they will be more likely to run for election. For the same reason, however, they will also be more likely to shirk once elected. We frame this intuition in a stylized model with two sectors: political and private. We assume that individuals are characterized by a unique skill, ability, which is financially rewarded in the private but not in the political sector. Given this setting, the traditional literature on political selection would predict adverse selection of *bad politicians* (Besley, 2004; Caselli and Morelli, 2004). The main novelty of our framework is that politicians can work in either sector or in both. This departure comes with two main implications. First, the traditional assumption that the opportunity cost of running for office is higher for high-ability individuals may no longer be satisfied.<sup>6</sup> In particular, if the marginal returns to ability are larger after election, for example because of the networks and the visibility that politicians gain while in office, high-skilled citizens may have a comparative advantage in entering politics. Second, after election, politicians with higher outside income opportunities may prefer to spend less time in parliament and more attending their private activities.

The intuitions of the model are confronted with a dataset about the members of the Italian Parliament, which, with more than 900 representatives, is one of the largest assemblies in the world. The dataset contains individual information on attendance in floor voting sessions, and extensive details on pre-election and outside income from 1996 to 2006. The main results show that, despite the sizable drop in market income following election, most politicians still earn a considerable amount of money by working in the private sector (an average of 62,700 euros, 34% of the total income while in office). In particular, we find that marginal returns to ability are amplified after election, the ratio

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<sup>5</sup>“On. Bongiorno scelga: o fa il deputato o l'avvocato”, *Corriere della Sera Magazine*, August 10, 2006; “Paid-up Members”, *The Guardian*, March 28, 2005.

<sup>6</sup>The same holds in Mattozzi and Merlo (2008), because of the opportunity of post-congressional earnings. See the discussion in Section 2.

between the marginal outside income and the marginal pre-election income being greater than one. This is evidence of a comparative advantage for high-ability citizens in terms of outside income, which might explain why they decide to enter politics. Accordingly, we find that citizens who become politicians belonged to the upper tail of the income distribution before entering politics, the gap with respect to the rest of the Italian population varying from +4% to +33% across the quantiles of the joint distribution.

At the same time, we find that politicians with higher outside income are less committed to parliamentary activity in terms of voting attendance. One standard deviation of outside income (217,500 euros) is associated with +3.9 percentage points of absenteeism rate in floor voting sessions (with respect to a 33% average). The effect is even larger when outside income is instrumented with pre-election income (+5.2 percentage points), which can be taken as a pre-determined measure of individual ability and a predictor of outside income opportunities while in office.

The rest of the paper is organized as follows. In Section 2, we review the related literature. In Section 3, we present the theoretical framework. In Section 4, we describe the data. In Section 5, we present the estimation results concerning the link between the time dedicated to parliamentary activities and outside income. In Section 6, we present empirical evidence on the selection into parliament. We conclude with Section 7.

## 2 Related Literature

Despite the public discussion mentioned above, politicians' outside employment has not received much attention in the political economy literature. Models that predict adverse selection in politics (Besley, 2004; Caselli and Morelli, 2004) are based on the assumption that the private and political sectors are mutually exclusive, and therefore low-quality individuals have a lower opportunity cost of running for office.<sup>7</sup> In this paper we highlight that, as far as politicians can hold outside activities, under certain circumstances we may observe positive instead of negative sorting into politics. In this respect, we complement Mattozzi and Merlo (2008) when they emphasize the role of the public office in signaling individual ability to the market. In their model, there are high-ability citizens willing to serve for a period (*political careers*), after which they leave parliament and capitalize on

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<sup>7</sup>Messner and Polborn (2004) obtain a similar result, although in their case the rationale for adverse selection is that high-quality citizens free-ride on low-quality ones, as for the former the attractiveness of public office is low.

their political experience. Positive sorting may arise, therefore, because of increasing post-congressional returns.<sup>8</sup> By introducing outside opportunities, we study another channel that may induce high-skilled individuals to enter politics. We also allow for the possibility that they might decide to stay in office longer, because they do not need to leave politics in order to grasp the benefits of their political experience.

Some authors have considered honesty, in addition to ability, as a desirable attribute of politicians (Caselli and Morelli, 2004). Others, instead, have focused on commitment. Besley (2004), for example, shows that paying politicians better will improve their performance, because the salary of a politician plays an efficiency-wage role. Conversely, Poutvaara and Takalo (2007) show situations where increasing politicians' remuneration lowers candidate quality. In our framework, we also focus on commitment in political life, but we abstract from honesty as we cannot observe any empirical counterpart.

There is also an established literature in political science addressing the issue of legislators' personal finances. Among the others, Fiorina (1994) shows that the professionalization of the legislative office in the US (i.e., the fact that it became a full-time job) made it relatively harder for the Republican Party to recruit high-quality candidates, because it traditionally recruited businessmen and lawyers. Not surprisingly, Rosenson (2007) find that senators who earned more honoraria were less likely to vote for a tightening of outside income limits legislation. Another strand of literature has focused on legislator voting.<sup>9</sup> Lott (1990), for example, finds that the possibility of being employed in the government after retiring from Congress reduces shirking in voting participation, otherwise increasing in the proximity of new elections.

To the best of our knowledge, however, there are neither theoretical nor empirical studies assessing the implications of outside income on both politicians' effort and selection, and the way these two dimensions combine together.

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<sup>8</sup>An empirical counterpart of this analysis was presented in Diermeier et al. (2005), who find that congressional experience in the US significantly increases post-congressional wages, both in the private and the public sector. Keane and Merlo (2007) further extend the analysis by assessing the impact of some specific policies on the quality of politicians. Interestingly, they find that restricting private sector employment after leaving Congress, like precluding employment in firms that rely heavily on government contracts, induces politicians who least value legislative accomplishments to leave the Congress.

<sup>9</sup>See Bender and Lott (1996) for a review.

### 3 Theoretical Framework

The following model provides a framework for evaluating the consequences of outside income opportunities on politicians' *ex-ante* self-selection decision and their *ex-post* behavior, and it is meant to set the stage for the empirical analysis.

#### 3.1 Assumptions

Assume to observe a population of individuals with ability  $a$ , uniformly distributed in the interval  $[0, \bar{a}]$ . Ability is valued by the market as  $M(a)$ , that is, every individual with ability  $\tilde{a}$  can get a market income equal to  $M(\tilde{a})$  if he decides to work full-time in the private sector. This sector is meritocratic and attaches a positive value to skills:  $M'(a) > 0$ . The alternative option is to become a politician. The rewards from a career in parliament are both financial and psychological. On the financial side, we assume that the remuneration is equal to  $W$  (the salary of the members of parliament) and independent of ability or performance. On the psychological side, positive payoffs (ego rents) accrue both from *being* a politician and from *doing* politics. Being a politician gratifies people because of the celebrity and power consciousness that come with it. At the same time, doing politics gratifies people because of the policy goals they can achieve. In other words, we assume that ego rents from becoming a politician ( $R$ ) are made up of both payoffs attached to the position itself ( $R_1$ ) and payoffs attached to the time spent in parliament ( $R_2$ ).

The main departure of our model from the rest of the literature is that members of parliament can also earn money in the private sector while in office. Potential outside income is a function  $P(a)$  strictly increasing in ability:  $P'(a) > 0$ . Keeping the time for outside activities the same,  $P'(a)$  could be lower, higher, or the same as  $M'(a)$ , depending on whether being elected has a positive or a negative reward in the private sector. An intuitive motivation for  $P'(a)$  being greater than  $M'(a)$  comes from Mattozzi and Merlo (2008): politicians are typically under the spotlight, hence, by entering politics high-ability citizens have relatively better chances to reveal their specific skills. Alternatively, they might be able to exploit their political position and establish a network of acquaintances, the network being stronger the higher the ability of the politician. On the other hand, it might be the case that the market has a negative stigma towards part-time politicians, in which case  $P'(a)$  will be lower than  $M'(a)$ . Accordingly, we do not restrict the relationship between  $M'(a)$  and  $P'(a)$  in any particular direction.

Since time is a scarce resource, if politicians devote part of their time to making outside income, their time for political activities, as well as the rewards from doing politics  $R_2$ , will be lower. Formally, if we define  $e \in [0, 1]$  as the time spent working in the parliament, the net payoff of becoming a politician is

$$\pi(a) = R_1 + eR_2 + W + (1 - e)P(a) - M(a), \quad (1)$$

which is equal to the sum of all financial and psychological rewards while in office, minus the opportunity cost of becoming a politician  $M(a)$ .

Decisions take place in two stages. In the first stage, each individual, according to his own ability, chooses whether to enter politics or not. To focus on this self-selection decision, we abstract from the role of political parties and voters in determining the quality of elected politicians. In doing so, like Besley (2004), we make the simplifying assumption that the set of elected politicians is a random draw from all those willing to serve. In other words, voters do not observe neither candidates' ability nor their future dedication. The resulting model is therefore static. It is important to note, however, that the predictions of our self-selection framework would extend to more structured models, as long as parties or voters were supply-constrained by the pool of candidates. We discuss later in this section the implications of removing information asymmetries on the side of voters.

Finally, in the second stage, each individual who has chosen to become a politician decides how much time to dedicate to parliamentary activities.

## 3.2 Predictions

As a benchmark, it is useful to derive a solution for the simple case where, like in the traditional literature on political selection, the possibility of earning outside income is ruled out (i.e.,  $P(a) = 0 \forall a$ ). In this situation, as long as there are positive ego rents from doing politics ( $R_2 > 0$ ),  $e$  is always equal to 1, and the payoff of becoming a politician is equal to its opportunity cost if  $R_1 + R_2 + W = M(a)$ . Clearly, only individuals with ability lower than  $a_1 = M^{-1}(R_1 + R_2 + W)$  decide to become politicians. Excluding the two trivial equilibria in which all citizens become politicians ( $a_1 > \bar{a}$ ) or nobody becomes a politician ( $a_1 \leq 0$ ), the adverse selection of low-ability politicians is the main prediction. This is the result of traditional models: high-ability individuals prefer to stay away from politics because of the high opportunity cost of becoming a politician.

Things change if outside income is allowed. Outside income affects both the *ex-ante* decision to enter politics and the *ex-post* decision to exert effort in political life. Let's start with the second-stage decision about  $e$ , which is relevant only for those who decide to become politicians. In this case, as long as the payoff is linear in  $e$ , there can only be corner solutions: members of parliament for whom  $R_1 + R_2 + W \geq R_1 + W + P(a)$ , i.e., with ability lower than  $a^* = P^{-1}(R_2)$ , are completely dedicated to the legislative activity ( $e = 1$ ), while the others are not ( $e = 0$ ).

Going back to the first-stage decision of entering politics, it is useful to look separately at citizens with  $a \in [0, a^*)$  and citizens with  $a \in [a^*, \bar{a}]$ .<sup>10</sup> The former weigh the benefit ( $R_1 + R_2 + W$ ) against the opportunity cost  $M(a)$ . For them, the net payoff of becoming a politician is

$$\pi_1(a) = R_1 + R_2 + W - M(a). \quad (2)$$

Their decision is the same as under the traditional assumption of no outside income. These citizens become politicians only if  $a \in [0, a_1)$ , where again  $a_1 = M^{-1}(R_1 + R_2 + W)$ . In the interval  $a \in [0, a^*)$ ,  $\pi_1(a)$  has either no zeros or a unique zero at  $a_1$ , after which it changes from positive to negative. Hence, in this subsample of citizens, we may observe the following outcomes: i) everybody becomes a politician, if  $\pi_1(a) \geq 0 \forall a$ ; ii) nobody becomes a politician, if  $\pi_1(a) < 0 \forall a$ ; iii) negative hierarchical sorting, if  $a_1 \in (0, a^*)$ .

Now focus on the first-stage decision of entering politics made by citizens with  $a \in [a^*, \bar{a}]$ . For them, the time constraint is at stake. They weigh the benefits of becoming a politician ( $R_1 + P(a) + W$ ), which now include outside income, against the opportunity cost  $M(a)$ . Their net payoff of entering politics is

$$\pi_2(a) = R_1 + P(a) + W - M(a), \quad (3)$$

which is increasing (decreasing) with ability as long as  $P'(a) > M'(a) \forall a$  ( $P'(a) < M'(a) \forall a$ ), i.e., as long as the marginal returns to ability are enhanced (diminished) after election.

From the above discussion about individuals with  $a \in [0, a^*)$ , we know that  $\pi_1(a^*)$  can be either positive or negative and, since  $P(a^*) = R_2$ , we have that:  $\pi_2(a^*) = \pi_1(a^*)$ . In the interval  $a \in [a^*, \bar{a}]$ ,  $\pi_2(a)$  has either no zeros or a unique zero at  $a_2$ , which is defined as:  $R_1 + W + P(a_2) = M(a_2)$ . Therefore, in this subsample of citizens, we may observe the following outcomes: i) everybody becomes a politician, if  $\pi_2(a) \geq 0 \forall a$ ; ii) nobody

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<sup>10</sup>To rule out the uninteresting situation where the time constraint is not binding, we only consider the case with  $a^* \in (0, \bar{a})$ .



becomes a politician, if  $\pi_2(a) < 0 \forall a$ ; iii) negative hierarchical sorting, if  $a_2 \in (a^*, \bar{a})$  and  $P'(a) < M'(a)$ ; iv) positive hierarchical sorting, if  $a_2 \in (a^*, \bar{a})$  and  $P'(a) > M'(a)$ .

By combining the results for the two subsamples of high-dedication and low-dedication individuals, we can derive the self-selection equilibria of the model, summarized in Figures 1 through 4. Excluding the trivial equilibria in which nobody becomes a politician, or everybody does, we are left with four possible outcomes.<sup>11</sup> In Figure 1 (case A) and Figure 2 (case B), we observe adverse selection like in the traditional literature: low-ability but eventually high-dedication citizens find it profitable to enter politics, while the upper tail of the ability distribution always stays away from political life. On the contrary, in both Figure 3 (case C) and Figure 4 (case D), citizens in the upper tail of the distribution find it profitable to enter politics because of the convenience to cultivate private interests while appointed ( $P'(a) > M'(a)$ ), but they will not spend time in parliament ( $e = 0$ ).

We can thus summarize the model's predictions in the following proposition:

**Proposition 1** (i) *A necessary condition to observe high-ability ( $a \in [\bar{a} - \epsilon, \bar{a}]$ ) individuals entering politics is that marginal returns to ability increase after election:  $P'(a) > M'(a)$ .*  
(ii) *Upon election, the time spent in parliamentary activities is decreasing with ability:  $e = 1$  if  $a \in [0, a^*)$  and  $e = 0$  if  $a \in [a^*, \bar{a}]$ .*

### 3.3 Extension

In this section, we address one aspect of the model that, for the sake of simplicity, we neglected in the previous analysis, and discuss how this extension might change the main predictions contained in Proposition 1.

Assume that the one-period payoffs are the same as in the previous framework, but now incumbents can be reelected for one more term. As in Ferejohn (1986), voters have a referendum on the incumbents, but cannot observe the quality of challengers, who are still elected with a random draw. Incumbents are reelected only if a minimum public good  $\underline{G} > 0$  is provided, with  $G(a, e)$  increasing both in  $a$  and  $e$ .<sup>12</sup> In other words, ability and dedication are substitutes, and voters only care about a minimum level of service being provided, no matter how. In particular, politicians below  $\underline{a}$ , with  $G(\underline{a}, 1) = \underline{G}$ , will never

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<sup>11</sup>In all of the figures,  $\pi_1(a)$  and  $\pi_2(a)$  are drawn as straight lines for simplicity, although they do not necessarily need to be linear. The only assumption we make is that they are continuous and monotonic.

<sup>12</sup>To leave notation simple, we assume a perfect correspondence between ability in the market and ability in politics (e.g., problem-solving skills increase productivity in both sectors). Others, like Caselli and Morelli (2004), assume instead a positive (but not necessarily perfect) correlation.

be reelected, while politicians above  $\tilde{a}$ , with  $G(\tilde{a}, 0) = \underline{G}$ , will always be reelected. All of the others, with  $a \in (\underline{a}, \tilde{a})$ , will be reelected only if they devote a minimum time to the public office  $\underline{e}(a)$ , which is decreasing in  $a$ .

To preserve the simplicity of the framework, we also assume that there are no post-congressional returns and all incumbents care about being appointed for a second term, such that if citizens benefit from being one term in politics, for the same reason they will always seek reelection.<sup>13</sup> This assumption leaves the analysis substantially static: the problem rests on the comparison of one period in office against one period out of politics.

It is easy to show that, even in the case of informed voters caring about  $G(a, e)$ , Proposition 1 still holds. As before, let's start with the second-stage decision about  $e$ . Individuals in the interval  $a \in [0, a^*)$  will always choose  $e = 1$ , because for them the ego rents from doing politics are greater than outside income. On the contrary, individuals in the interval  $a \in (\tilde{a}, \bar{a}]$  will always choose  $e = 0$  because for them outside income is greater than ego rents and they do not need effort to be reelected. All of the others, in the interval  $a \in [a^*, \tilde{a}]$ , will devote the minimum amount of time to parliamentary activity which is required to be reelected, based on their ability level,  $\underline{e}(a)$ . Therefore, the second component of Proposition 1 remains unchanged: the time devoted to political life decreases with ability, although now we observe a continuum instead of two corner solutions for  $e$ .

Moving to political selection, the possible outcomes become more scattered, but again the main insight of our basic framework still holds. Now, individuals in the interval  $[0, \underline{a}]$  will enter politics without being reelected. In the interval  $(\underline{a}, a^*)$  we will observe negative hierarchical sorting, while in the interval  $a \in (\tilde{a}, \bar{a}]$  we may observe positive sorting only if  $P'(a) > M'(a)$ . Finally, in the interval  $[a^*, \tilde{a}]$ , individuals will decide whether to enter or not according to the net payoff:  $\pi = R_1 + W + \underline{e}(a)R_2 + [1 - \underline{e}(a)]P(a) - M(a)$ . Many outcomes are plausible in this range, but intuitively, in order to observe positive sorting, the return from cultivating private activities while appointed has to be not only higher than when not appointed (as in the case of uninformed voters), but higher enough to compensate for the minimum duties required to be reelected. At the end of the day, also the first component of Proposition 1 remains unchanged: high-ability individuals enter politics only if marginal returns to ability increase after election.

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<sup>13</sup>The case of politicians who find it profitable to enter politics because of  $P(a)$ , but not to work the minimum time needed to be reelected (defined by  $\underline{e}(P - R_2)$ ), would complicate the notation without altering the main predictions of Proposition 1.

## 4 The Data

In what follows, we confront our theoretical intuitions with a dataset about the members of the Italian Parliament (*Camera dei Deputati* and *Senato*) for the period 1996-2006 (legislatures XIII and XIV). Although the original dataset also included legislatures X (1987-1992), XI (1992-1994) and XII (1994-1996), we could not use XI and XII because they only lasted for two years and the outside income could not be recovered; we then dropped legislature X to avoid time discontinuities.

The Italian Parliament is particularly suited for this type of empirical analysis. First, it is one of the largest assemblies in the world, with more than 900 representatives (630 deputies and 315 senators), against 535 in the US, 575 in France, and 659 in the UK. Second, although it has long been recognized as an assembly mostly composed of professional politicians, many outsiders entered the political arena after the majoritarian reform of the electoral system in 1994, which enhanced the representation of citizens with a past experience in the private market.

The dataset contains yearly total income information, as reported in the individual tax returns. We also have information over the legislative term on absences in floor voting sessions, not attended without any legitimate reason.<sup>14</sup> Finally, we have detailed information on the following political and demographic characteristics: political experience (this includes being a member of the executive committee of a party at the local, regional and national level; past and current appointments as minister or state secretary; past appointments at the local government level, such as municipality, province, or region; past appointments in parliament); current appointments in parliament (whether or not a politician is in a second committee, and whether or not he is president or vice president of the parliament or of a single committee); political party affiliation; the electoral system under which the politician was elected (majoritarian or proportional); the district of election; coalition type (whether they support the government or not); and self-declared demographics (age, gender, place of birth, place of residence, level of education, field of education, previous job, marital status, and number of children).

The sources we used to collect this information included: the Annals of the Italian

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<sup>14</sup>Attendance does not refer to any committee's activity, which we could not recover. Cases of non-attendance because of parliament missions and cabinet meetings are not counted as absences. Electronic votes account for about 90% of total floor votes (almost the totality if the vote was on a final bill approval), the rest being held with hand counting. Some measurement error may arise from the forbidden practice of multiple voting.

Parliament (*La Navicella*) for the demographic information;<sup>15</sup> the Archive of Tax Returns for the members of Italian Parliament (*Servizio Prerogative e Immunità*) for the income information (except the parliament salary); and the Press Office of the Italian Parliament (*Ufficio Stampa*) for statistics on individual attendance and the parliament salary.

A brief remark is needed on the distinction between earned and unearned income. In the theoretical framework, we implicitly assumed that outside income was earned income, not unearned. In the data we observe instead the total income, which is the sum of property rents, labor income from entrepreneurial and self-employment activities, and earnings for dependent employees.<sup>16</sup> Property rents, however, do not represent a significant share of individual income, which makes the observed total income a good measure of the earned income.<sup>17</sup> Moreover, it is important to note that even if total income were not a perfect proxy for earned income, it could still be a good measure of politicians' private activities, as far as unearned income also requires some time of management.

## 4.1 The Italian Institutional Framework

In 1994, there was a substantial change in the Italian electoral system. While politicians in previous legislatures were elected with a proportional system, those in legislatures XII (1994-1996), XIII (1996-2001), and XIV (2001-2006) were instead elected with a mixed system (25% proportional and 75% majoritarian). Legislatures XI and XII lasted less than the expected duration (two years instead of five) and early elections were called. The number of seats (945) has remained unchanged throughout all terms: 630 in the House of Representatives and 315 in the Senate.

Another important element concerns the change in the party system composition. Before 1994, most of the parties leaned around a center-wing coalition that held power with no interruption since 1948. After 1994, new political actors joined the party system following the corruption scandal that involved many formerly established political leaders (this

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<sup>15</sup>*I Deputati e i Senatori del Parlamento Repubblicano*, edited by Editoriale Italiana. To account for possible mistakes, we cross-checked the same information on the Italian Parliament's website, which gathers information on all the members of the previous legislatures, and we corrected accordingly.

<sup>16</sup>Dividends and capital gains are not reported in the tax return since they are taxed as they are realized. The only exception is represented by the revenues from significant financial shares (5% if the company is listed in the stock market, 25% if not), which are reported only for their 51%.

<sup>17</sup>The tax returns' archive of the Italian Parliament contains information about the number of properties, but not their value. We checked on a random sample of politicians and we found that properties are not considerable in number. Of course, this could be because they were listed under the names of relatives, but this would not bias the tax declaration.

judicial investigation was called *Mani Pulite*). At the same time, some parties changed their names and composition to adjust to the bipolar framework induced by the majoritarian system (the so-called *Seconda Repubblica*). Since the data we use only refer to legislatures XIII and XIV, they are homogeneous with respect to both the electoral rule and the party system.

The regulation concerning outside income has remained essentially unchanged since its introduction in 1957 (*Decreto del Presidente della Repubblica* N.361). Outside employment in Italy is monitored by the Committee on Elections (*Giunta per le Elezioni*), which is the institutional body in charge for the decision concerning incompatibilities with other non-elective public offices. Magistrates, academics, and any other public servant cannot simultaneously hold a position in parliament, in which case they can request leave on absence. In the case of an executive manager of a state-owned or state-assisted company, or other elective offices (mayors or governors), leave on absence is not allowed. Besides these incompatibilities, no limits are set to the amount of outside income.

## 4.2 Descriptive Statistics

Table 1 summarizes the characteristics of the politicians in the dataset. The initial sample, after excluding ministers, life senators, and those with missing information on income and absenteeism, is made up of 1,614 members of parliament (out of the initial 1,889), with repeated observations for those who held two consecutive appointments (448 individuals). The majority are male (90%) and the mean age at the beginning of the legislative term is 51 years. Before being appointed, many politicians were lawyers (15%), academics (8%), entrepreneurs (9%), self-employed (9%), and managers (8%), that is, they held typically private jobs.<sup>18</sup> Politicians also exhibit a level of university education (72%) considerably higher than the rest of the Italian population (10% in 2002 for the 25-64 population).<sup>19</sup> At the same time, 16% of politicians in the sample were completely new to politics when elected to parliament; that is, they had never had any previous appointment in parliament, government, local government, and political parties. On the contrary, 55% had had at least one previous appointment in parliament, 57% an appointment in a local government, 39% an executive appointment in a political party, and 9% had been appointed as government

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<sup>18</sup>For 71 politicians who declared to have retired before election, we re-imputed the previous job with the job they held before retirement.

<sup>19</sup>Source: *Education at a Glance*, OECD, 2004.

minister or deputy minister. For the institutional reasons explained in the previous section, repeated appointments in parliament are not frequent (at least for the back-benchers): the average number of terms is 1 (2 including the observed term) and the number of years served is 3.16.

Measuring the dedication of a member of parliament is not an easy task, as the commitment to the public office is a multi-dimensional object. Being aware of this shortcoming, we proxy the time devoted to parliamentary activity with the absences in electronic floor voting sessions that lacked a legitimate reason. Other measures could have been used, like the bill sponsorship, the legislative achievements, the attendance in committee sessions, or the number of appointments in the parliament (as president or vice president of a branch of the parliament or a committee) and in the government (like minister or deputy minister). Although we actually have some of these measures, there are various reasons why we believe absences to be a more suitable measure of commitment. As for bills' sponsorship, while it may actually reveal politicians' interests, it is not always clear whether it was the administrative staff, rather than the politician himself, who drafted them.<sup>20</sup> As for the appointments, they are usually assigned after a tight bargaining process within parties and coalitions. This is not true for absences, except in the case of a tight vote in which parties would probably exert some discipline.

Table 2 reports summary statistics for absences over the legislative term, standardized by the total number of voting sessions.<sup>21</sup> The average rate of absenteeism is 33%. Excluding army officers, blue collars and students, for whom we have few observations, absences seem to be considerable for lawyers (37%), journalists (36%), academics (36%), magistrates (36%), entrepreneurs (35%), physicians (35%), top civil servants (34%), managers (34%), and self-employed (33%). With the exception of top civil servants and magistrates, lack of attendance is highest for the professions without formal or substantial incompatibilities, i.e., for those who could keep running their pre-election business. On the other side, teachers (28%), political party officials (28%), and clerks (26%), seem particularly committed to parliamentary activity. Not surprisingly, absenteeism is lowest for politicians belonging to the government coalition (19%, see Table 3) than for politicians in the

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<sup>20</sup>Gagliarducci et al. (2008b) exploit the Italian two-tier elections to evaluate the impact of different electoral systems on politicians' in-office behavior, which is measured by the share of bills targeted to the district of election.

<sup>21</sup>Actual number of votes ranges from 0 to 34,577, over a total number of votes varying from 6,418 to 34,966 depending on the legislature and the branch of the parliament.

opposition coalition (49%).

The dataset contains the gross salary from serving in parliament and the gross total income of all the members of parliament, from the first to the third full calendar year of the legislative term.<sup>22</sup> For freshmen, we also observe the gross total income one year before election. We then retrieved outside income by taking the difference between the gross total income and the gross parliament salary (which is constant, up to some inflation adjustment) in a specific year. Since absences are measured per term, we take the average of the outside income over the first and the third full calendar year in office.

Table 4 summarizes the income variables.<sup>23</sup> The average total income of a representative is 186,100 euros; 123,900 euros come as parliament salary, while 62,700 euros as outside income (33.7% of total income).<sup>24</sup> The standard deviation of outside income is 217,500 euros, and the maximum value is 5,419,800 euros. In the second part of the table, we focus on the sample of freshmen, for whom we also have information on the income before election. On average, citizens who then become politicians earned 105,700 euros per year, with a standard deviation of 142,500 euros and a maximum of 2,663,600 euros. Table 5 also shows that politicians with higher outside income were lawyers (an average of 119,600 euros), followed by entrepreneurs (113,000 euros) and academics (101,000 euros).

## 5 Empirical Findings on Outside Opportunities and Time in Office

In this section, we present empirical evidence about the relationship between the ability to generate market income and the time devoted to parliamentary activities. Following

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<sup>22</sup>Elections are usually held in the Spring. In July, all members of parliament must submit their tax return, which refers to the previous calendar year. For this reason, we could not recover the gross total income for the fourth full year in office (except for those serving two consecutive mandates). We also have the net total income, but, as far as this includes tax deductions, we prefer to use the gross total income.

<sup>23</sup>We are aware that, because of tax evasion, the declared income might underestimate the true income. We believe this is a minor problem here, since politicians' tax returns are subject to public disclosure. If not, any evidence we might find could be biased upward if tax evasion (and then underreporting) were higher for politicians with high outside income. Selection mechanisms, instead, would remain unchanged as far as the degree of tax evasion is constant before and after election, which is plausible under the assumption that potential candidates anticipate the imminent public disclosure.

<sup>24</sup>In addition to the salary, a politician receives from the parliament 206.58 euros (at 2004 prices) for each voting day. This is meant to be a reimbursement for accommodation expenses in Rome, and it does not appear in the tax return (as any other office-related benefit). Considering that the average number of voting days per month is 12 (three per week), the variable component of the remuneration of a member of the Italian parliament amounts to a maximum of 29,747 euros per year (23.7% of the main salary).

the discussion in Section 3, we expect this relationship to be negative, as high-ability politicians have more outside opportunities which might divert their attention away from the public office.

To begin with, we first analyze how absenteeism in voting sessions relates to the pre-election income. Being pre-determined, the latter is a suitable proxy for the market ability in the absence of any time constraint. Without loss of generality, this relationship can be written in the following reduced form:

$$e_{it} = \delta M_{i(t-1)} + \beta X_{it} + \epsilon_{it}. \quad (4)$$

where  $e_{it}$  is the absenteeism rate,  $M_{i(t-1)}$  is the pre-election income,  $X_{it}$  is a set of individual covariates, and  $\epsilon_{it}$  is an error term capturing any other unobservable determinant of the absenteeism rate. In column I of Table 6, we present the OLS estimate of this correlation over a sample of 763 freshmen for whom we observe the pre-election income, where individuals with missing values for any control variable, life senators, and ministers were excluded.<sup>25</sup> After controlling for a large set of characteristics (previous job, gender, age, education, political experience, political party, macro-region of election, term in office, type of electoral system, and being in the government coalition), we find that absences in floor voting sessions significantly increase along the pre-election income distribution, the estimated coefficient  $\hat{\delta}_{OLS}$  being 0.0196 and statistically different from zero at 5% confidence level. In particular, one standard deviation of pre-election income (142,500 euros) is associated with +2.8 percentage points in absenteeism (+9.3% with respect to a 30% mean over the sample of freshmen). This is compelling evidence that, once elected, citizens who were successful in the market are less committed to the public office.<sup>26</sup>

The fact that citizens with high pre-election income have higher absenteeism rates, however, is not direct evidence of a time constraint between private and public activities, because the dynamics of market returns might change greatly after election. To focus on this, we rewrite equation (4) in the following form:

$$e_{it} = \gamma \tilde{P}_{it} + \beta X_{it} + \epsilon_{it}, \quad (5)$$

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<sup>25</sup>We excluded 15 outliers with more than two million euros of outside income, and 27 with less than fifteen thousand euros of pre-election income.

<sup>26</sup>We also find that the absenteeism rate is significantly higher for men (+4.6 percentage points), and lower for older politicians (-3.6 percentage points every ten years), for those who belong to the government coalition (-23.5 percentage points), for the members of the House of Representatives (-9.5 percentage points), for those elected in the XIV legislative term (-13.2 percentage points), and for those belonging to a left-wing party (-9.6 percentage points). Other characteristics are less statistically significant, if not irrelevant.



where now the realized outside income  $\tilde{P}_{it}$  (i.e.,  $(1 - e)P(a)$  in the theoretical model) replaces the pre-election income  $M_{i(t-1)}$ . In column II of Table 6 we present the OLS estimate of this correlation over a sample of 1,611 politicians, including those in the second (or more) term. The estimated coefficient  $\hat{\gamma}_{OLS}$  is 0.0133, and statistically different from zero at 1% confidence level. In particular, one standard deviation of outside income (217,500 euros) is associated with +2.9 percentage points in the absenteeism rate (+9.1% with respect to a 33% mean over the whole sample of politicians), revealing that a time constraint between parliamentary and outside activities is actually at stake. The same estimate on the sample of freshmen is 0.0180 (see column III), which is very similar to the estimate in column I. We interpret the difference between the estimate in column I and III as evidence that the time constraint is binding especially for freshmen, who have less experience in combining private and public practices.<sup>27</sup>

Since  $\tilde{P}_{it}$  is jointly determined with  $e_{it}$ , in the last two columns of Table 6 we instrument it with the pre-election income  $M_{i(t-1)}$ , which we assume to affect  $e_{it}$  only through  $\tilde{P}_{it}$ . By doing so, we recover the effect of outside income opportunities  $P_{it}$ , rather than the mechanical correlation between the realized outside income  $\tilde{P}_{it}$  and the time devoted to parliamentary activities.<sup>28</sup> As expected, the first-stage estimate in column V shows that the pre-election income is a good predictor of outside income opportunities while in office: one euro of pre-election income corresponds to 0.83 euros of outside income, the F-statistic (76.133) also suggesting that the instrument is relevant. Moving to the second-stage estimate in column IV, we find that the effect of having higher outside income opportunities on the absenteeism rate is still positive and statistically different from zero at 1% confidence level, the estimated coefficient  $\hat{\gamma}_{2SLS}$  being now 0.0237 (+5.2% for one standard deviation).<sup>29</sup>

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<sup>27</sup>Although, as we discussed before, bills do not exactly reflect individual dedication, we ran a robustness check by replacing absences in voting sessions with the number of sponsored bills. We found that one standard deviation of pre-election income is associated with -0.44 bills (-6.6% with respect to a 6.6 mean), while one standard deviation of outside income is associated with -0.83 bills (-10.0% with respect to a 7.9 mean).

<sup>28</sup>We follow Merlo et al. (2008), who run a similar 2SLS estimate over the members of the Italian House of Representatives for the period 1982-2006. They also provide a wide analysis of the career profiles of Italian legislators in the post-war period.

<sup>29</sup>We performed a series of robustness checks on all the estimations presented in this section. First, since the absenteeism rate is bounded between 0 and 1, we implemented the GLM estimator proposed by Papke and Wooldridge (1996), and results were quantitatively the same. We then included a quadratic term for both the pre-election and the outside income to capture any eventual non-linearity (politicians with higher ability may find a way to perform the same amount of private activities without interfering with public office), but this never turned out to be statistically significant. Finally, we repeated the

The size of these numbers is particularly important from an economic point of view. In fact, 13.4% of politicians have a source of outside income greater than 100 thousand euros, 5.3% greater than 200 thousand euros, and almost 2% more than 500 thousand euros (see Table 5). Even if not for everybody, it seems that a problem of time constraint between private and public activities arises for a relevant number of politicians.

## 6 Empirical Findings on Political Selection

As the regulation of outside income in Italy never changed during the period of time covered by the dataset, we cannot directly test the implications of our model in terms of political selection. Nevertheless, something interesting about the characteristics and the incentives of those who are elected can still be gathered from the data.

We start by comparing the pre-election income distribution for the politicians in our sample with the income distribution of the Italian population. To this purpose we merge our dataset with the Bank of Italy's Survey on Household Income and Wealth (SHIW) for the year 1995 and 2000 (the years in which we observe the pre-election income of the freshmen politicians elected in 1996 and 2001, respectively), which is a representative sample of the Italian population.<sup>30</sup> Since almost every politician in the sample was employed before appointment (except 2 students and 71 retired), to make the comparison coherent we extract individuals who declared to be employed in the SHIW. Because of differences in the coding, we could only match managers, entrepreneurs, self-employed, lawyers, clerks, teachers, and blue collars. We further restrict the joint sample to individuals in working age (25-60).<sup>31</sup> Following Brandolini (1999), we account for under-reporting in the SHIW by increasing the income of the Italian population by 30% (half increment for employees). We do not make the same correction for the income of politicians, as we observe their true tax returns.

As we can see in Figure 5, politicians' income distribution is located to the right of the population distribution. For some members of parliament the pre-election income

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same exercise using the yearly absenteeism (rather than the term average), which is available for the House of Representatives only, and found almost the same results: one standard deviation of pre-election income is associated with +5.0 percentage points in the absenteeism rate, while one standard deviation of outside income is associated with a +3.8 percentage points (+6.0 when instrumented with the pre-election income). All of these results are available from the authors upon request.

<sup>30</sup>The SHIW only provides net (instead of gross) total income. We recovered the same measure for politicians by subtracting the net tax reported in the tax returns from the gross pre-election income.

<sup>31</sup>The minimum age for being candidate to the House of Representatives is 25 years, 40 to the Senate.

is extremely high, with only a small fraction being below the median of the national distribution. We test the significance of these distributional differences in Table 7, which reports the estimates of a quantile regression over the joint distribution:

$$\ln(M_i) = \alpha_\tau Pol_i + \beta X_i + v_i, \quad (6)$$

where  $\ln(M_i)$  is the logarithm of the net total income (the net pre-election income for freshmen politicians),  $X_i$  is a set of all the control variables we could match between the two datasets (age, gender, one year dummy, five job dummies, and four education dummies), and  $Pol_i$  is a dummy variable equal to one if the individual is a politician and zero otherwise.<sup>32</sup> The coefficient  $\alpha_\tau$  is always positive and significant at any quantile (see column I), with the premium for future politicians being smaller at lower quantiles (from +33% in the 90th quantile to +4% in the 10th quantile). To focus the comparison on the high-skilled tail of the distribution, in column II we restrict the joint sample to males between 40 and 60, with at least a B.A. degree, and we exclude blue collars, teachers, and clerks. As expected, the gap is lower, but still positive and statistically significant at the highest quantiles. As far as pre-election income can be interpreted as a proxy for ability, this evidence is at odds with the prediction of negative hierarchical sorting into parliament emphasized by the traditional literature on political selection.

Our theoretical framework could offer a possible explanation to this puzzle. We know in fact that high-ability citizens would enter politics only if the payoff from being in office were higher than the payoff from staying out of politics. In what follows, we decompose the financial gain from election into its two main components: parliament salary and outside income. To this purpose we remove from the initial sample of freshmen former army officers, students, political party officials, trade unionists, clerks, blue collars, and teachers. By doing so, we are left with a sample of 507 politicians whose pre-election income is more likely to reflect individual talent. Table 8 summarizes the total income while in office, the parliament salary, and the outside income by quintiles of the pre-election income. The average total income while in office exceeds the pre-election income in every quintile, i.e., all members of parliament (except 49) had a pecuniary gain from being elected (from an average of +335% in the first quintile to +19% in the highest

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<sup>32</sup>Following Manski and Lerman (1977), we control for choice-based sampling by using the *Pesofl* weights (the inverse of the sampling probability) available in the SHIW dataset, and a weight equal to one for all the politicians (the whole universe of members of parliament).

quintile).<sup>33</sup> However, the size and composition of this financial variation are significantly different at different levels of pre-election income. As shown in Figure 6, citizens with a low income before election gain mostly because of the parliament salary (an average of +295% for citizens in the lowest quintile), which more than offsets the drop in the market income (outside income being 40% of pre-election income). On the contrary, citizens with a high pre-election income gain because they can keep on running their private business (in the highest quintile the outside income is 77% of the pre-election income). In fact, if they should count on the sole parliament salary, they would suffer a 58% income loss.

It is also important to note that, in every quintile, the average outside income is lower than pre-election income (except for 63 politicians), because of the minimum duties that everybody has to carry out when appointed. However, the ratio between the outside income and the pre-election income increases as we move up in the pre-election income distribution. This echoes the fact that high-ability citizens might have a relative advantage in terms of outside income, i.e., the marginal return to ability for market income is greater when appointed than when not appointed, which is a necessary condition for observing high-ability individuals entering politics in our framework ( $P'(a) > M'(a)$ ). If we rewrite this condition as  $\frac{\partial P(a)/\partial a}{\partial M(a)/\partial a} > 1$ , i.e.,  $\mu = \frac{\partial P(a)}{\partial M(a)} > 1$ , we can obtain an estimate of  $\mu$  by regressing outside income on pre-election income, and test whether it is greater than one ( $H_0 : \hat{\mu} \leq 1$ ). Since we do not observe the outside income opportunities  $P(a)$ , but the realized outside income  $\tilde{P}(a)$  only, we include absences in voting sessions as an additional control to recover an estimate of  $\frac{\partial P(a)}{\partial M(a)}$  for the same level of dedication  $e$ . We thus estimate the following equation through OLS:

$$\tilde{P}_{it} = \mu M_{i(t-1)} + \lambda e_{it} + \beta X_{it} + v_{it}. \quad (7)$$

As discussed in the previous section, the absenteeism rate is an equilibrium outcome that is in itself determined together with outside income. This might introduce an additional source of bias in the estimation. To address this issue, we instrument absenteeism with the time distance (in hours) between Rome, where the Parliament is located, and the province of residence, where politicians' outside activity and personal interests are likely to be concentrated. Time distance is computed as the time to get to Rome with the fastest mean of transportation between car, airplane and train (see Table 9).<sup>34</sup> It also accounts

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<sup>33</sup>Figures are invariant to the use of median instead of average values.

<sup>34</sup>We retrieved the time distance by car using the information available at [www.viamichelin.com](http://www.viamichelin.com). For

for the commuting and boarding time from the province of residence to the nearest *Alitalia* flight or *Trenitalia/Eurostar* railway station, and daily frequencies (normalized to one for the car).<sup>35</sup> This variable is likely to affect the absenteeism rate because it raises the traveling time between Rome and the province of residence, and it is exogenous with respect to outside income for two main reasons. First, because the equal distribution of representatives over the national territory ensures that not only the citizens who live close to Rome run for office.<sup>36</sup> Second, because politicians are exempted from travel expenses (except when they travel by car) and therefore the individual wealth does not influence traveling decisions. At the same time, the distance from Rome does not affect outside income directly, but through absences only, as far as the central geographical position of Rome guarantees that the distance does not reflect different regional economic conditions. As an example, Milan (one of the provinces with the highest per-capita income) and Bari (one of the provinces with the lowest per-capita income) share the same distance from Rome, which is about 3:10 hours.

The final sample over which we estimate equation (7) is made of 385 individuals for whom we have non-missing values for any variable (including the province of residence). The estimate in column I (Table 10) shows that  $\hat{\mu}_{OLS}$  is equal to 1.10, and statistically different from one at 10% confidence level. Results remain unchanged when we correct for the endogeneity of the absenteeism rate. First-stage estimates in column III show that being resident in a province far from Rome has a negative and statistically significant impact on absenteeism (-2.54 percentage points for each hour), as the burden of missing one voting session to go back to the province of residence is higher for politicians who live far from Rome. More importantly, the second-stage estimate of  $\hat{\mu}_{2SLS}$  is also equal to 1.10, and statistically greater than one at 10% confidence level. This confirms the raw evidence presented in Table 8 about marginal returns to ability being increasing after appointment.<sup>37</sup>

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the airplane and the train we referred instead to the information available on the *Alitalia* and *Trenitalia* web-sites, respectively.

<sup>35</sup>We also tried with other specifications, like changing the commuting time, or using the average instead of the fastest mean of transportation, but distances do not vary substantially.

<sup>36</sup>85% of the politicians live in the same region of election.

<sup>37</sup>The comparison between the pre-election and the post-election market income might be spurious in the presence of favorable economic conditions specific to some professional categories in the reference period. We checked this possibility over the SHIW dataset, and found that entrepreneurs and self-employed actually experienced an income increase at national level between 2003 and 2004, but this does not overlap with the intervals used in the estimation (1995-1997 and 2000-2002). Before 2003, and for all

To sum up, all of these findings suggest that high-ability politicians have the opportunity after election to reveal their skills to the market or, alternatively, they are better at exploiting the public office for establishing acquaintances and boost their outside work. For the same reason, they do not need to leave the office to capitalize on their political experience. As a matter of fact, we find that 75% of the freshmen in the fifth quintile of the pre-election income distribution seek reelection (82% in the first, 84% in the second, 82% in the third, and 79% in the forth), and 61% will be granted reelection (71% in the first, 65% in the second, 62% in the third, and 56% in the forth).

## 7 Conclusion

We investigated the possibility that elected officials could keep working in the private sector while appointed in parliament. We showed, both theoretically and empirically, that after removing the mutual exclusiveness between the elective office and outside work, a conflict of time commitment arises, which was not identified in the previous literature. On the other hand, as long as high-ability citizens do not have to give up their private business, they are more likely to run for election and adverse selection into politics is no longer the only possible outcome.

Of course, our exercise was focused on the consequences of outside income in terms of time devoted to parliament, while neglecting the additional problem of the conflict of interest, i.e., the fact that members of parliament with relevant outside activities might respond more to their private interests than to their electoral constituencies (Stigler, 1967). Still, it raises a challenge for further research aimed at investigating other channels through which outside interests can drive the behavior of elected politicians.

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the other professional categories we could match, the income profile was flat.

## References

- Bender, B., Lott, J.R. Jr., 1996. Legislator Voting and Shirking: A critical Review of the Literature. *Public Choice* 87, 67-100.
- Besley, T.J., 2004. Paying Politicians: Theory and Evidence. *Journal of the European Economic Association* 2, 193-215.
- Brandolini, A., 1999. The Distribution of Personal Income in Post-War Italy: Source Description, Data Quality, and the Time Pattern of Income Inequality. *Giornale degli Economisti e Annali di Economia* 58, 183-239.
- Caselli, F., Morelli, M., 2004. Bad Politicians. *Journal of Public Economics* 88, 759-782.
- Diermeier, D., Keane, M., Merlo, A., 2005. A Political Economy Model of Congressional Careers. *American Economic Review* 95, 347-373.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2009. Disclosure by Politicians. NBER Working Paper No. 14703.
- Ferejohn, J., 1986. Incumbent Performance and Electoral Control. *Public Choice* 6, 5-25.
- Fiorina, M.P., 1994. Divided Government in the American States: A Byproduct of Legislative Professionalism?. *American Political Science Review* 88, 304-316.
- Gagliarducci, S., Nannicini, T., Naticchioni, P., 2008a. Outside Income and Moral Hazard: The Elusive Quest for Good Politicians. IZA Discussion Paper No. 3295.
- Gagliarducci, S., Nannicini, T., Naticchioni, P., 2008b. Electoral Rules and Politicians Behavior: A Micro Test. IZA Discussion Paper No. 3348.
- Keane, M., Merlo, A., 2007. Money, Political Ambition, and the Career Decisions of Politicians. PIER Working Paper No. 07-016.
- Lott, J.R., 1990. Attendance Rates, Political Shirking, and the Effect of Post-Elective Office Employment. *Economic Inquiry* 28, 133-150.
- Manski, C.F., Lerman, S.R., 1977. The Estimation of Probabilities from Choice Based Samples. *Econometrica* 45, 1977-1988.
- Mattozzi, A., Merlo, A., 2008. Political Careers or Career Politicians. *Journal of Public Economics* 92, 597-608.
- Merlo, A., Galasso, V., Landi, M., Mattozzi, A., 2008. The Labor Market of Italian Politicians. Fondazione Rodolfo DeBenedetti, mimeo.

- Messner, M., Polborn, M., 2004. Paying Politicians. *Journal of Public Economics* 88, 2423-2445.
- Papke, L.E., Wooldridge, J., 1996. Econometric Methods for Fractional Response Variables with an Application to 401(k) Plan Participation Rates. *Journal of Applied Econometrics* 11, 619-632.
- Poutvaara, P., Takalo, T., 2007. Candidate Quality. *International Tax and Public Finance* 14, 7-27.
- Rosenson, B.A., 2007. Explaining Legislators Positions on Outside Income Limits: Voting on Honoraria Ceilings in the U.S. Senate, 1981-1983. *Public Choice* 133, 111-128.
- Stigler, G.J., 1967. The Economics of Conflict of Interest. *The Journal of Political Economy* 75, 100-101.



# Tables and Figures

Table 1: Sample Characteristics

	Obs.	Mean	St. Dev.	Min	Median	Max
Male	1,614	0.90	0.3	0	1	1
Age	1,614	50.94	9.24	27	50	88
Lower Secondary	1,614	0.02	0.13	0	0	1
Upper Secondary	1,614	0.26	0.44	0	0	1
B.A.	1,614	0.63	0.48	0	1	1
M.A. or Ph.D.	1,614	0.09	0.29	0	0	1
Lawyer	1,614	0.15	0.36	0	0	1
Top Civil Servant	1,614	0.07	0.25	0	0	1
Manager	1,614	0.08	0.28	0	0	1
Political Party Official	1,614	0.07	0.26	0	0	1
Journalist	1,614	0.07	0.26	0	0	1
Entrepreneur	1,614	0.09	0.29	0	0	1
Self Employed	1,614	0.09	0.29	0	0	1
Teacher	1,614	0.09	0.29	0	0	1
Clerk	1,614	0.02	0.16	0	0	1
Magistrate	1,614	0.05	0.21	0	0	1
Physician	1,614	0.02	0.14	0	0	1
Blue Collar	1,614	0.00	0.07	0	0	1
Professor	1,614	0.08	0.27	0	0	1
Trade Unionist	1,614	0.09	0.29	0	0	1
Army Officer	1,614	0.00	0.07	0	0	1
Student	1,614	0.01	0.04	0	0	1
House of Representatives	1,614	0.66	0.47	0	1	1
Government Coalition	1,614	0.52	0.5	0	1	1
Parliament Appointments	1,614	0.15	0.36	0	0	1
Majoritarian Election	1,614	0.76	0.43	0	1	1
North-West District	1,614	0.26	0.44	0	0	1
North-East District	1,614	0.18	0.39	0	0	1
Center District	1,614	0.18	0.39	0	0	1
South District	1,614	0.25	0.43	0	0	1
Islands District	1,614	0.12	0.33	0	0	1
Parliament Experience (n. terms)	1,614	1.00	1.32	0	1	9
Parliament Experience (years)	1,614	3.16	4.61	0	2	36
<i>Ever appointed in:</i>						
Parliament	1,614	0.55	0.5	0	1	1
Government	1,614	0.09	0.29	0	0	1
Local Government	1,614	0.57	0.5	0	1	1
Political Party	1,614	0.39	0.49	0	0	1
Any	1,614	0.84	0.37	0	1	1

Notes. Self reported previous job and highest educational level completed. *Any* means they held at least one political appointment. Life senators and ministers excluded.

Table 2: Absenteeism by Previous Job

	Obs.	Mean	St. Dev.	Min.	Median	Max.
Student	2	0.42	0.27	0.23	0.42	0.61
Army Officer	9	0.40	0.31	0.02	0.41	0.83
Lawyer	247	0.37	0.27	0.01	0.3	0.99
Journalist	118	0.36	0.25	0.00	0.30	0.96
Magistrate	40	0.36	0.27	0.03	0.28	0.87
Professor	152	0.36	0.29	0.00	0.28	0.91
Entrepreneur	150	0.35	0.28	0.00	0.30	0.97
Physician	125	0.35	0.27	0.00	0.29	0.95
Top Civil Servant	111	0.34	0.3	0.01	0.24	0.97
Manager	133	0.34	0.28	0.00	0.27	0.96
Self Employed	149	0.33	0.27	0.00	0.28	0.96
Trade Unionist	31	0.29	0.29	0.01	0.18	0.86
Political Party Official	118	0.28	0.26	0.00	0.18	0.98
Teacher	148	0.28	0.27	0.01	0.17	0.99
Clerk	73	0.26	0.24	0.00	0.19	0.86
Blue Collar	8	0.22	0.25	0.02	0.15	0.79
Total	1,614	0.33	0.27	0.00	0.25	0.99

Notes. Percentage of electronic floor voting sessions not attended without any legitimate reason. Self reported previous job. Life senators and ministers excluded.

Table 3: Absenteeism by Party Affiliation

	Obs.	Mean	St. Dev.	Min.	Median	Max.
<i>Government coalition</i>						
Left	60	0.30	0.19	0.07	0.25	0.99
Center-left	303	0.14	0.13	0.00	0.09	0.78
Center	55	0.18	0.18	0.01	0.10	0.94
Center-right	207	0.12	0.17	0.00	0.07	0.97
Right	113	0.19	0.16	0.01	0.17	0.75
Separatist	109	0.44	0.27	0.01	0.47	0.98
Total	847	0.19	0.20	0.00	0.12	0.99
<i>Opposing coalition</i>						
Left	34	0.47	0.24	0.12	0.40	0.96
Center-left	200	0.40	0.28	0.02	0.28	0.97
Center	148	0.42	0.26	0.03	0.36	0.96
Center-right	209	0.55	0.21	0.08	0.55	0.96
Right	123	0.63	0.17	0.21	0.63	0.95
Separatist	8	0.57	0.18	0.36	0.52	0.90
Other	45	0.42	0.29	0.02	0.35	0.99
Total	767	0.49	0.26	0.02	0.49	0.99

Notes. Percentage of electronic floor voting sessions not attended without any legitimate reason. Life senators and ministers excluded.

Table 4: Income Measures

	Obs.	Mean	St. Dev.	Min.	Median	Max.
<i>All:</i>						
Total Income	1,614	186.1	217.7	82.0	142.5	5,542.4
Parliament Salary	1,614	123.9	1.4	122.6	122.6	125.3
Outside Income	1,614	62.7	217.5	0.0	18.7	5,419.8
<i>Freshmen:</i>						
Pre-Election Income	791	105.7	142.5	0.0	71.6	2,663.6
Total Income	791	181.0	156.4	82.0	140.5	3,150.9
Parliament Salary	791	124.0	1.4	122.6	125.3	125.3
Outside Income	791	57.5	156.1	0.0	16.7	3,025.5

Notes. All income measures are gross, in thousand of euros (2004 prices), and averaged between the first and the third full calendar year of the term (except the pre-election income, which refers to the year before election). *Freshmen* are politicians who were not appointed in the previous term. Life senators and ministers excluded.

Table 5: Outside Income by Previous Job

	Obs.	Mean	Median	St. Dev.	% > 100	% > 200	% > 500
Lawyer	247	119.6	55.4	191.0	31.58	15.38	4.45
Entrepreneur	152	113.0	27.6	468.6	17.11	7.89	4.61
Professor	150	101.0	25.6	394.2	19.33	10.00	1.33
Army Officer	9	83.6	96.5	36.2	33.33	0.00	0.00
Magistrate	40	62.3	28.9	76.7	27.50	5.00	0.00
Manager	133	57.5	12.6	184.5	8.27	2.26	2.26
Self Employed	149	50.0	18.3	96.0	13.42	4.70	0.67
Physician	125	43.5	27.7	55.9	8.00	1.60	0.00
Top Civil Servant	111	43.0	8.1	115.0	9.91	2.70	0.90
Journalist	118	42.6	17.7	71.2	11.02	4.24	0.00
Union Rep.	31	17.9	9.7	19.8	0.00	0.00	0.00
Teacher	148	17.9	9.5	22.1	0.68	0.00	0.00
Clerk	73	14.8	3.3	27.0	4.11	0.00	0.00
Political Party Off.	118	12.0	2.3	21.9	0.85	0.00	0.00
Blue Collar	8	2.6	0.3	4.5	0.00	0.00	0.00
Student	2	0.1	0.1	0.1	0.00	0.00	0.00
Total	1,614	62.7	18.7	217.5	13.44	5.39	1.55

Notes. Gross outside income in thousand of euros (2004 prices), averaged between the first and the third full calendar year of the term. Life senators and ministers excluded.

Table 6: The Determinants of Absenteeism

	I	II	III	IV	V
	OLS			2SLS	
<i>Dependent variable:</i>	Absenteeism			<i>second-stage</i> Absenteeism	<i>first-stage</i> Outside Income
Pre-Election Income	0.0196** (0.0089)				0.8264*** (0.0947)
Outside Income		0.0133*** (0.0042)	0.0180** (0.0071)	0.0237*** (0.0096)	
Male	0.0455** (0.0225)	0.0380** (0.0161)	0.0461** (0.0224)	0.0455** (0.0219)	0.0032 (0.0803)
Age	-0.0036*** (0.0009)	-0.0020*** (0.0007)	-0.0035*** (0.0009)	-0.0037*** (0.0009)	0.0038 (0.0034)
B.A. Degree	-0.0116 (0.0209)	-0.0024 (0.0140)	-0.0106 (0.0209)	-0.0115 (0.0204)	-0.0061 (0.0578)
House of Representatives	-0.0949*** (0.0196)	-0.1151*** (0.0124)	-0.0949*** (0.0196)	-0.0951*** (0.0191)	0.0080 (0.0626)
Government Coalition	-0.2351*** (0.0162)	-0.2698*** (0.0110)	-0.2348*** (0.0162)	-0.2354*** (0.0159)	0.0138 (0.0662)
Majoritarian Election	-0.0172 (0.0184)	-0.0605*** (0.0132)	-0.0160 (0.0185)	-0.0152 (0.0180)	-0.0817 (0.0787)
Legislature XIV	-0.1320*** (0.0162)	-0.1137*** (0.0107)	-0.1271*** (0.0162)	-0.1276*** (0.0158)	-0.1856*** (0.0658)
Political Party Experience	0.0230 (0.0179)	0.0110 (0.0115)	0.0199 (0.0177)	0.0203 (0.0173)	0.1131 (0.0905)
Parliament Experience	0.0146 (0.0233)	0.0310*** (0.0113)	0.0141 (0.0235)	0.0146 (0.0230)	0.0018 (0.0595)
Government Experience	0.0874 (0.0531)	0.1298*** (0.0240)	0.0973* (0.0528)	0.0938* (0.0518)	-0.2698 (0.1773)
Local Government Experience	-0.0360** (0.0166)	-0.0242** (0.0112)	-0.0336** (0.0167)	-0.0319* (0.0164)	-0.1727*** (0.0512)
Parliament Appointment	-0.0047 (0.0352)	-0.0261* (0.0154)	-0.0054 (0.0356)	-0.0063 (0.0347)	0.0679 (0.0943)
Party Appointment	0.0230 (0.0185)	0.0336*** (0.0118)	0.0247 (0.0186)	0.0257 (0.0182)	-0.1135** (0.0484)
Second Committee	-0.0219 (0.0255)	-0.0227 (0.0201)	-0.0209 (0.0257)	-0.0202 (0.0251)	-0.0748 (0.0655)
Left-wing Coalition	-0.0960*** (0.0171)	-0.0818*** (0.0118)	-0.0964*** (0.0171)	-0.0958*** (0.0167)	-0.0077 (0.0443)
Previous Job		yes(14)			yes(14)
Macro-District of Election		yes(5)			yes(5)
Observations	763	1,611	763	763	763
R-squared	0.413	0.438	0.413	0.412	0.650
F-test excluded instrument					76.133

Notes. Dependent variable: percentage of electronic floor voting sessions not attended without a legitimate reason. In column IV, outside income is instrumented with the pre-election income. Freshmen politicians only, except in column II. Life senators and ministers excluded. Politicians with more than two million euros of outside income excluded in column II. Politicians with more than two million euros of pre-election and outside income, and less than fifteen thousand euros of pre-election income, excluded in columns I and III to V. Clustered at individual level (in column II) and robust standard errors in parentheses. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*. Constant included. All the control variables are dummies 0/1, except Age which is in years. All income measures are gross, in hundred thousand of euros (2004 prices), and averaged between the first and the third full calendar year of the term (except pre-election income which refers to the year before election).

Table 7: Income Distribution of Italian population vs. Politicians - Quantile Regression

$\tau$	I	II
0.1	0.0361*** (0.0115)	0.0201 (0.0423)
0.2	0.0882*** (0.015)	0.0106 (0.045)
0.3	0.0953*** (0.0207)	0.0413 (0.054)
0.4	0.1156*** (0.0167)	0.0695 (0.0632)
0.5	0.1264*** (0.0208)	0.1247** (0.0546)
0.6	0.1569*** (0.0225)	0.1537** (0.0741)
0.7	0.2362*** (0.0282)	0.1903*** (0.0639)
0.8	0.2896*** (0.0302)	0.2511*** (0.081)
0.9	0.3276*** (0.0452)	0.2999*** (0.1099)
Italian Population	9,973	610
Politicians	446	265

Notes. Dependent variable: logarithm of the net labor income (2004 prices), normalized to 0.1 when 0. Only managers, lawyers, self-employed, entrepreneurs, blue collars, teachers and clerks. Freshmen politicians only. Individuals with more than two million and less than fifteen thousand euros of income excluded. Age between 25-60 in column I. Age between 40-60, males with at least BA degree, blue collars, teachers and clerks excluded in column II. Analytical standard errors in parentheses. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*. Income for the Italian population raised by 15% (clerks, blue collars, teachers, and managers) and 30% (self-employed, lawyers, and entrepreneurs). Weights equal to the inverse of the sampling probability for the SHIW Italian population sample, one for politicians. Also control for gender, type of job, age, year, and education. Constant included.

Table 8: The Pecuniary Gain from Election

		Obs.	Mean	Median	St. Dev.	Min.	Max.
I	<i>Quintile:</i>						
	<i>Income:</i>						
	Pre-Election	102	31.23	7.99	15.47	31.95	44.96
	Total	102	135.80	16.70	120.21	130.00	240.05
	Parliament	102	123.63	1.34	122.58	122.58	125.33
	Outside	102	12.41	16.75	0.00	7.12	117.47
	Pre-Election > Total	0					
Pre-Election < Outside	12						
II	Pre-Election	101	56.33	6.58	45.41	58.00	66.32
	Total	101	147.74	32.49	119.85	136.90	321.1
	Parliament	101	123.86	1.38	122.58	122.58	125.33
	Outside	101	24.17	32.37	0.00	14.32	195.77
	Pre-Election > Total	0					
	Pre-Election < Outside	15					
	III	Pre-Election	102	77.19	6.93	66.38	76.27
Total		102	149.14	30.90	82.04	137.15	269.13
Parliament		102	124.12	1.37	122.58	125.33	125.33
Outside		102	26.41	30.52	0.00	13.56	146.55
Pre-Election > Total		0					
Pre-Election < Outside		8					
IV		Pre-Election	101	117.00	16.40	92.77	116.16
	Total	101	170.57	50.70	115.27	149.97	385.45
	Parliament	101	124.22	1.36	122.58	125.33	125.33
	Outside	101	46.75	50.61	0.00	25.68	262.87
	Pre-Election > Total	8					
	Pre-Election < Outside	10					
	V	Pre-Election	101	292.16	294.72	149.62	211.42
Total		101	347.63	372.29	124.12	256.35	3,150.86
Parliament		101	124.24	1.35	122.58	125.33	125.33
Outside		101	223.42	372.22	0.44	131.02	3,025.53
Pre-Election > Total		41					
Pre-Election < Outside		18					

Notes. Freshmen politicians only. All income measures are gross, in thousand of euros (2004 prices), and averaged between the first and the third full calendar year of the term (except pre-election income which refers to the last fiscal year before election). Teachers, clerks, army officials, political party officials, students, trade unionists, and blue collars excluded. Politicians with more than two million euros of pre-election and outside income, and less than fifteen thousand euros of pre-election income, excluded. Life senators and ministers excluded.

Table 9: Time Distance from Rome by Residence

(#)	Prov. of Residence	Distance	(#)	Prov. of Residence	Distance
1	Torino	3.15	44	Perugia	2.07
2	Novara	3.41	45	Viterbo	1.27
3	Cuneo	4.31	46	Rieti	1.24
4	Alessandria	4.23	47	Roma	0.06
5	Imperia	4.26	48	Latina	1.13
6	Savona	3.37	49	Frosinone	1.13
7	Genova	3.06	50	Caserta	1.48
8	Varese	3.42	51	Benevento	2.28
9	Como	3.42	52	Napoli	1.47
10	Sondrio	5.20	53	Salerno	2.40
11	Milano	3.10	54	L'aquila	1.27
12	Bergamo	3.22	55	Teramo	1.55
13	Brescia	3.52	56	Pescara	2.20
14	Pavia	3.36	57	Chieti	2.18
15	Cremona	4.22	58	Campobasso	2.58
16	Mantova	3.38	59	Foggia	3.36
17	Bolzano	3.42	60	Bari	3.06
18	Trento	4.09	61	Taranto	4.15
19	Verona	3.16	62	Brindisi	3.22
20	Vicenza	3.46	63	Lecce	3.43
21	Belluno	4.17	64	Potenza	3.50
22	Treviso	3.31	65	Matera	4.13
23	Venezia	3.05	66	Cosenza	5.48
24	Padova	3.27	67	Catanzaro	3.16
25	Rovigo	3.38	68	Reggio Di Calabria	3.22
26	Udine	4.19	69	Trapani	4.19
27	Trieste	3.16	70	Palermo	3.05
28	Piacenza	3.45	71	Messina	4.29
29	Parma	3.27	72	Agrigento	4.40
30	Reggio nell'Emilia	3.35	73	Caltanissetta	4.32
31	Modena	3.16	74	Catania	3.16
32	Bologna	2.45	75	Ragusa	4.42
33	Ferrara	3.22	76	Siracusa	4.17
34	Pesaro E Urbino	3.46	77	Sassari	3.35
35	Ancona	3.08	78	Cagliari	3.11
36	Macerata	3.02	79	Pordenone	3.41
37	Ascoli Piceno	2.57	80	Oristano	4.27
38	Massa - Carrara	3.40	81	Biella	4.28
39	Lucca	3.22	82	Lecco	3.53
40	Firenze	1.35	83	Lodi	3.37
41	Pisa	2.50	84	Vibo Valentia	4.42
42	Arezzo	1.19	85	Verbano-Cusio-Ossola	4.23
43	Grosseto	1.52			

Notes. Time distance computed as the time to get to Rome with the fastest mean of transportation between car (computed at [www.viamichelin.com](http://www.viamichelin.com)), airplane and train. It also accounts for the commuting time to the nearest *Alitalia* flight (plus 1.5 hours of airports' formalities) or *Trenitalia/Eurostar* station, and daily frequencies (normalized to one for the car).

Table 10: The Relationship between Outside and Pre-election Income

<i>Dependent variable:</i>	I	II	III
	OLS	2SLS	
	Outside Income	<i>second-stage</i> Outside Income	<i>first-stage</i> Absenteeism
Pre-Election Income	1.1038(*) (0.0787)	1.0917(*) (0.0710)	-0.2681 (0.8007)
Absenteeism	0.0025 (0.0027)	-0.0399 (0.0244)	
Male	-0.3326*** (0.1018)	-0.0792 (0.2164)	5.0930 (4.3386)
Age	0.0069 (0.0056)	-0.0111 (0.0093)	-0.3370*** (0.1256)
B.A. Degree	0.005 (0.1258)	-0.1734 (0.1941)	-3.9652 (3.3807)
House of Representatives	0.1333 (0.1233)	-0.4128 (0.2882)	-12.4710*** (2.5811)
Government Coalition	-0.0334 (0.1039)	-1.0999* (0.6456)	-25.4947*** (2.4819)
Majoritarian Election	-0.0979 (0.1513)	-0.2151 (0.2091)	-3.3767 (2.7273)
Legislature XIV	-0.2013** (0.0923)	-0.7722** (0.3472)	-13.4981*** (2.4026)
Political Party Experience	0.1841 (0.1357)	0.2791 (0.2002)	2.4820 (2.7578)
Local Government Experience	-0.1062 (0.0999)	-0.2991* (0.1746)	-4.2390* (2.4724)
Parliament Appointment	0.0056 (0.1818)	-0.2581 (0.3484)	-7.4439 (6.6178)
Party Appointment	-0.048 (0.1041)	0.1701 (0.1870)	5.5999* (2.8542)
Second Committee	-0.2498* (0.1480)	-0.1253 (0.1563)	1.6954 (3.2668)
Left-Wing Coalition	0.0223 (0.0847)	-0.1495 (0.1613)	-4.9831* (2.5504)
Time-Distance from Rome			-2.5378** (1.2613)
Previous Job	yes(14)	yes(14)	yes(14)
Macro-District of Election	yes(5)	yes(5)	yes(5)
Observations	385	385	385
R-squared	0.823	0.623	0.435
F-test excluded instrument			4.53

Notes. Dependent variable: Outside income averaged between the first and the third full calendar year of the term. Absenteeism (in percentage points) is the percentage of electronic floor voting sessions not attended without a legitimate reason. In column II, absenteeism is instrumented with the distance (in hours) from Rome. Freshmen politicians only. Lawyers, entrepreneurs, self-employed, magistrates, journalists, top civil servants, academics, physicians, and managers only. Life senators and ministers excluded. Politicians with more than two million euros of pre-election and outside income, and less than fifteen thousand euros of pre-election income, excluded. Robust standard errors in parentheses. Significance at the 10% level is represented by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*. When (\*),  $H_0$ : coefficient  $\leq 1$ . All the control variables are dummies 0/1, except Age which is in years. Constant included. All income measures are gross, in thousand of euros (2004 prices).



Figure 1: Negative Hierarchical Sorting (case A)

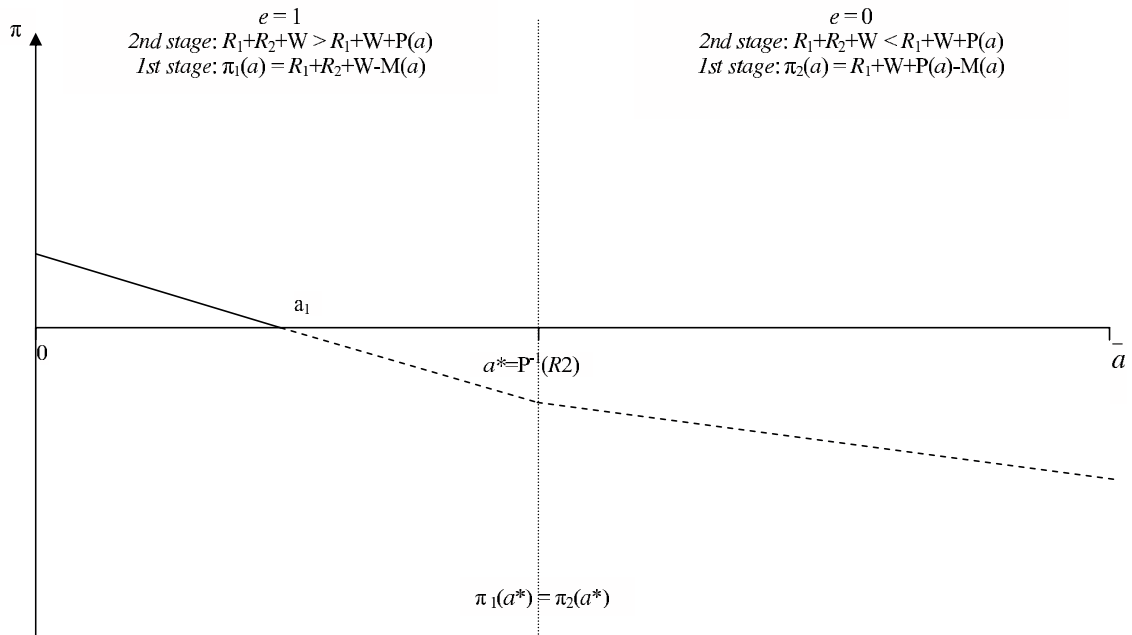


Figure 2: Negative Hierarchical Sorting (case B)

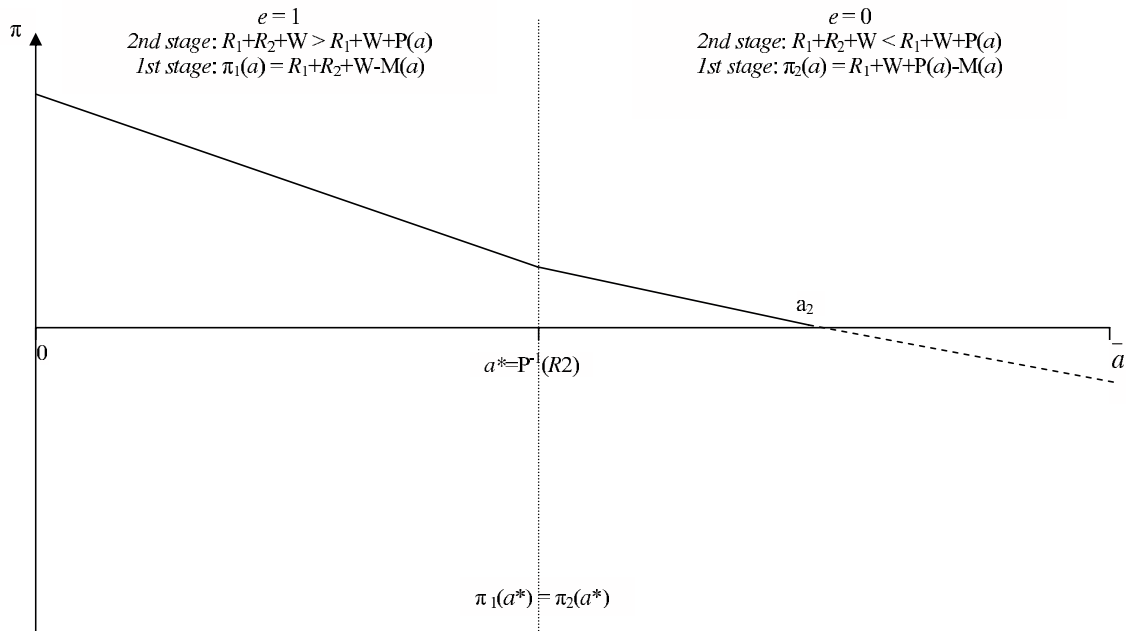


Figure 3: Two-tail Sorting (case C)

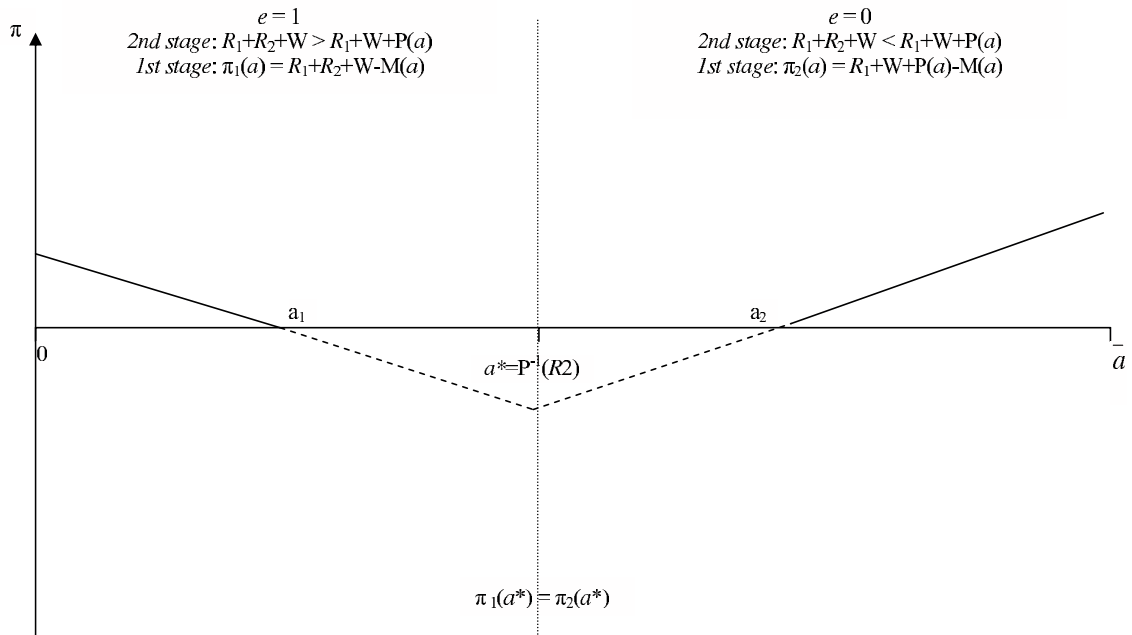


Figure 4: Positive Hierarchical Sorting (case D)

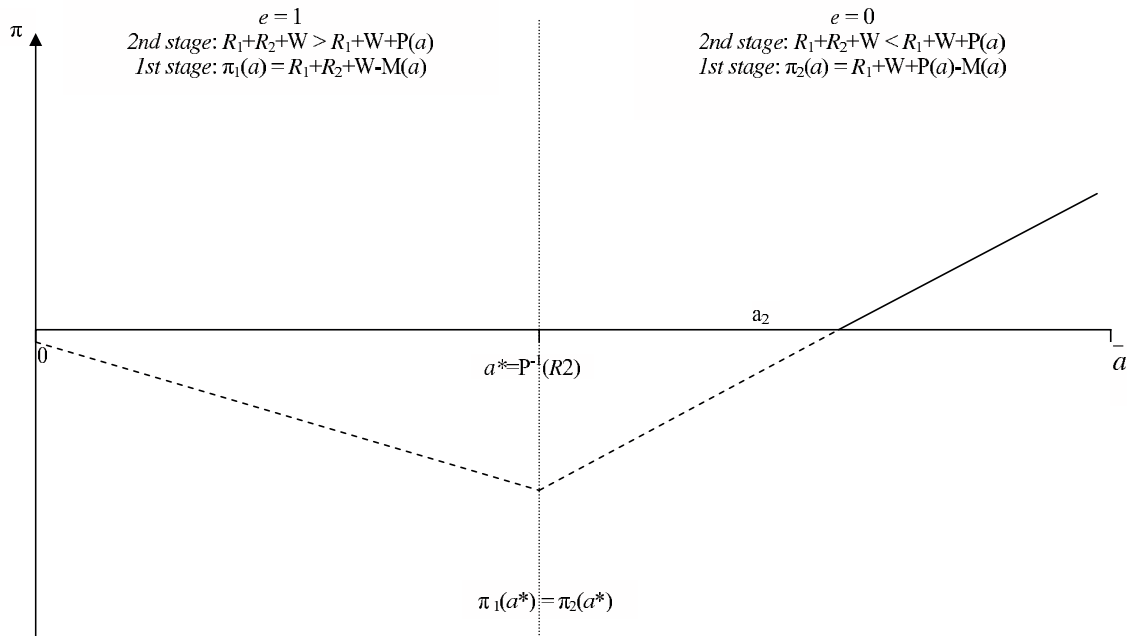
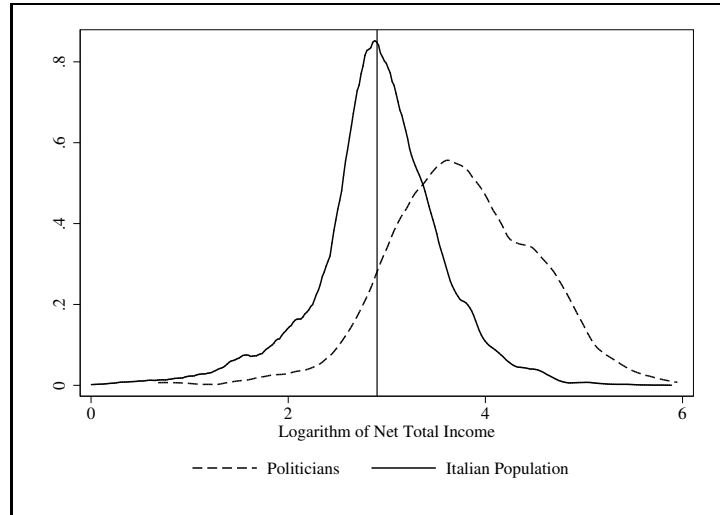
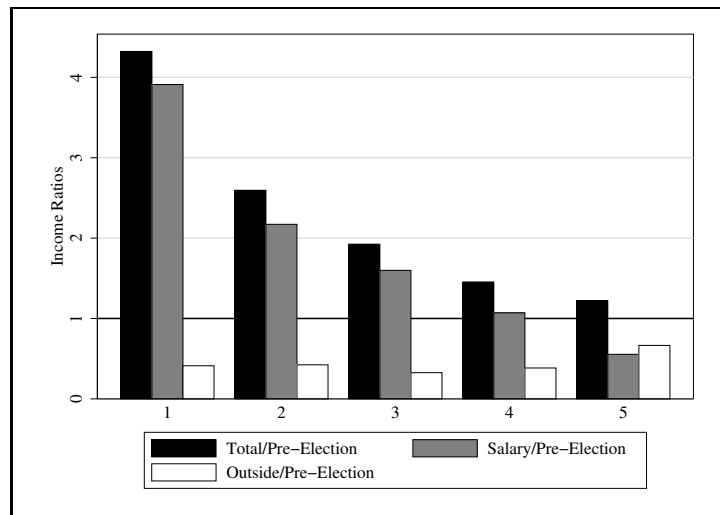


Figure 5: Pre-election Income Comparison with the Italian Population



Labor income in thousand euros (2004 prices). No. of obs.: 490 politicians (freshmen only), 14,420 citizens. Only lawyers, managers, entrepreneurs, clerks, teachers, blue collars and self-employed; age between 25 and 60. Income for the Italian population raised by 15% (clerks, teachers, blue collars and managers) and 30% (self-employed, lawyers, and entrepreneurs). Politicians with more than two million euros and less than thirty thousand euros of income excluded. Weights equal to the inverse of the sampling probability for the SHIW Italian population sample, one for politicians. The vertical line is the median of the national distribution.

Figure 6: The Gain from Election by Pre-election Income Quintiles



Ratios of the mean values within quintile. Freshmen politicians only. 101 observations per quintile (see Table 8). Teachers, clerks, army officials, political party officials, students, trade unionists, and blue collars excluded. Politicians with less than fifteen thousand euros of excluded.