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CONTRACTUAL DEMOCRACY

Hans Gersbach

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Hans Gersbach, CER-ETH – Center of Economic Research at ETH Zurich and CEPR

ABSTRACT

Contractual Democracy*

Although they would yield social benefits, some political projects may not be implemented in democracies. Prominent examples are the reform of European labour markets, the reduction of government debt or the reduction of greenhouse gases. We suggest introducing political contracts to make liberal democracy more efficient without altering its fundamental values. Furthermore, such contracts can foster the public's trust in politics. We discuss four archetypes of political contracts and ways of implementing them. We outline the certification and control procedures for political contracts and address the major concerns arising with regard to contractual democracy.

Hans Gersbach
CER-ETH Center of Economic
Research at ETH Zurich
Zürichbergstrasse 18
8092 Zürich
SWITZERLAND
Email: hgersbach@ethz.ch

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1 Introduction

The objective of liberal democracy is to promote the well-being of the electorate while preserving its own fundamental values.[1] Yet, although they are socially desirable, many political projects fail to materialize in democracy. The reasons for such political failures are documented in well-known literature sources.[2] We would like to present a set of ideas designed to improve the functioning of liberal democracy without interfering with its foundations or with the values on which it rests. Our proposals for improving democratic elections center around political contracts. Political contracts supplement democratic elections and help to select, motivate and control politicians.

Political contracts differ from contracts in the private sector[3] in various important respects. First, political contracts are not agreements between two parties, but one-sided written declarations of intention by politicians. Second, political contracts are subject to the rules of liberal democracy: only contracts that do not interfere with the fundamental values of liberal democracy can become political contracts. In particular, periodic, free, and anonymous elections with equal voting rights to select the office holders for the executive and legislative branches should not be endangered by political contracts. Similarly, equal rights in competing for public office and the separation of powers with an independent judicial system and respect for basic rights are cornerstones of liberal democracy that must be honored by the issuers of political contracts. As a consequence, political contracts are subordinate to elections in a hierarchy where the latter must not be altered by the former. We call this hierarchical model "Contractual Democracy".

The first purpose of this article is to review and to structure the current state of

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[1] In general, this well-being is expressed by a social welfare function incorporating equity objectives. In some, but not all cases, promoting the well-being of the median voter or applying the Kaldor-Hicks criterion is a useful practical guideline for policy-making.

[2] See Buchanan and Tullock (1965), Olson (1965, 1982), Niskanen (1971), Tollison (1982), Mueller (1989), Bernholz and Breyer (1993/94), Dixit (1996), Drazen (2000), Persson and Tabellini (2000), Saint-Paul (2000) and Gersbach (2005).

[3] The corresponding contract theory in the private area is dealt with, e.g., by Bolton and Dewatripont (2005), and Schweizer (1999).

affairs on contractual democracy. Moreover, we advocate a specific certification and renegotiation procedure, and we propose several avenues for further research. Finally, we address the major concerns connected with our proposal.

The paper is organized as follows: In the next section we introduce four archetypes of political contracts and discuss some areas where they could be applied. In the third section, we outline how political contracts can be introduced and how liberal democracy can actually be transformed into contractual democracy. In the fourth section we outline the certification procedure for political contracts and discuss renegotiation clauses. In section 5 we discuss the potential of political contracts. In section 6 we address general concerns arising in connection with contractual democracy. Section 7 concludes.

2   Four Archetypes of Political Contracts

In this section we describe four archetypes of political contracts that can be used to improve the functioning of democracy. We use the term "political actors" for parties or single candidates competing for office and thus likely to offer political contracts.

2.1   Reelection Threshold Contracts

The Contract

The first type of political contract is the reelection threshold contract. A threshold contract stipulates a performance level that a politician must reach at the end of a term in order to obtain the right to stand for reelection. The performance level or threshold must be either a number (or a set of numbers), or it must describe a non-manipulable and decidable event.

The extent to which election promises in the form of thresholds have been honored is assessed before the next elections. If a politician has failed to meet the threshold, he loses his right to run for reelection. If he has been successful, the politician can run for

office in the customary way, and free and anonymous democratic elections take place.

Examples

There are various well-known situations where threshold contracts might have been applied in our day and age. After US President George Bush senior had announced "read my lips: no new taxes", threshold contracts would not have allowed him to stand for reelection after having gone back on this campaign promise.[4] Another, more recent example comes from Germany. In their election campaign in the 90s, both candidates for the office of Chancellor, Kohl and Schröder, pledged to reduce unemployment to a given percentage of the working population. Both promises would have qualified for a threshold contract as outlined above and both politicians failed to keep their promise. If the promise had been secured by a threshold contract, they would have left office much sooner or might have succeeded in reducing unemployment.

Sophisticated Threshold Contracts

Simple threshold contracts can be adjusted in three directions. First, threshold contracts of political actors can be conditional on the coalition formed to govern the country after the election. Such conditional contracts prevent political actors from making promises that will become untenable if they are forced into a coalition after elections. A famous example where such conditional threshold contracts might have been helpful was observed in 2005 in Germany, where the large parties CDU/CSU and SPD made promises regarding the value-added tax rate that were incompatible with one another.[5] When both parties were forced into a coalition, the parties reneged on their promises.[6]

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[4]For an analysis of such contracts, see Gersbach and Liessem (2005), and Gersbach (2005).

[5]For an analysis of such tax contracts, see Gersbach and Schneider (2007).

[6]The grand coalition formed by CDU/CSU and SPD increased value-added tax by three percentage points, which exceeded the declared intentions of both parties during the election campaign. The CDU/CSU had announced a two-percentage-point increase, and the SPD had pledged not to increase the tax rate at all.

Second, thresholds can be based on the price on an information market when policy outcomes are not verifiable.[7] The information market is used to predict the next-but-one reelection chances of an incumbent, which are a proxy for the long-term well-being of a society.

Third, threshold contracts may be based on the actual election outcome and are called vote-share thresholds.[8] Such a contract stipulates a vote threshold above $\frac{1}{2}$ the incumbent has to reach in order to get reelected. Hence it is harder for an incumbent to get reelected than for a politician who competes for office for the first time. More generally, vote threshold contracts can be made dependent on the actual term of the office holder where the vote threshold is increasing with the number of terms. Such vote thresholds require a careful implementation. If the incumbent does not reach the threshold, the challenger may be elected. However, as the vote share of the challenger may be below $\frac{1}{2}$, a separate run-off ballot between two candidates appears to be preferable in such cases. One candidate could be the challenger from the first election and the other candidate could be new. The possible run-off between two challengers can occur simultaneously with the election between the incumbent and his challenger, as one can combine both ballots. The second vote in the run-off would only be relevant if the incumbent does not reach the vote threshold.

2.2 Other Short-Term (Monetary or Non-Monetary) Contracts

The Contract

Short-term monetary contracts stipulate how the salaries of politicians will vary with the performance they achieve within a term. Various performance criteria are conceivable: the size of the budget deficit, whether or not specific important public projects have been undertaken, or whether specific laws have been eliminated or introduced. Short-term contracts can also involve immaterial benefits (or punishments). For instance, bad performance could imply general elections earlier than the end of a normal

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[7]For an analysis of such contracts, see Gersbach and Müller (2006).
[8]See Gersbach (2007).

term, while excellent performance could imply a prolonged term in office before the next election is called.

Examples

Short-term monetary contracts have been used in some provinces in Canada. In the province of Manitoba, for instance, the salary of each member of the Executive Council was made dependent on the fiscal discipline in a particular period and on whether the budget balance is repeatedly violated. And in Germany, the leader of the Liberal Party of Baden-Württemberg, one of the Federal States, suggested that the members of the cabinet should conclude a contract on the aims of the government that would involve a loss of 10 to 30 percent of their salary if those aims were not met.[9] This proposal has not been implemented yet.

In Yukon, Canada, an interesting non-monetary contract has been devised in the Taxpayer Protection Act, R.S.Y. 2002. If an accumulated deficit has been created or an existing deficit increased, the Legislative Assembly is to be dissolved, as it has not fulfilled its budget-control duty. Moreover, a specific procedure for eliminating an accumulated deficit is outlined.

Coalition-Membership Contracts by Parties

A special short-term contract is a coalition-member contract that specifies the set of possible partners a party is willing (or unwilling) to accept when entering into a coalition to form a government. If a party violates its coalition-membership contract, i.e., if it enters into a coalition with a partner that was excluded from the list of possible parties in the contract prior to the election, it would be punished accordingly, a possible penalty being the reduction of public party funding. Coalition-membership contracts could have been applied in Germany, for instance, at the general election in 2005. The SPD stated before the election that it would not form a coalition involving the party

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[9]See Homburger (2005).

"Die Linke". This promise was kept. However, at the state elections of 2008 in Hesse, the SPD made the same promise, but subsequently proved willing to renege on it.[10]

2.3   Long-Term (Monetary or Non-Monetary) Contracts

The Contract

Long-term contracts make the utility of politicians after the current term dependent on the outcomes they can influence by their actions today. The reward can either be granted in the next period of office or after retirement from office. Monetary rewards such as variations in the salaries and the pensions can be used for this purpose.

Immaterial rewards are equally conceivable. For example, a politician honoring election promises could have his next period in office extended by one year if he is reelected. Politicians retiring from office after performing well in long-term projects might be granted a seat in a governmental advisory board of elder statesmen, or might obtain the status of "Father of the State".

Examples

Long-term political contracts could be used in various areas such as unemployment or budget balance. If unemployment or the national debt have been reduced within a number of years, or if a politician has succeeded in keeping a balanced budget over a long time-span, he might be granted a reward. A particular form of long-term contract conditions future rewards upon specific events, such as the implementation of large projects, specific regulatory actions, or a successful reelection.[11] Similar or even greater long-time horizons are imaginable in the area of climate change. For instance, a politician may obtain the status of a "Father of the State" if he significantly reduces the emissions of greenhouse gases over a decade.

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[10]Due to internal party opposition the envisaged coalition could not be formed. "Was die Wähler an der Politik so richtig nervt", http://www.welt.de/politik/article1781706.

[11]In this case, politicians' salaries vary with the number of terms in office (see Gersbach and Liessem (2005)).

2.4 Contracts for Future Majorities

A fourth type of political contract motivates the politicians to undertake projects for voters who are in the minority today, but will be in the majority tomorrow. A basic idea for such contracts are rejection/support rewards (RSRs).

The Contract

RSRs work as follows: If an incumbent is rejected in his bid for reelection, but receives the majority of votes from the younger generation, say, individuals below the age of 45, he is entitled to a special reward, i.e. a pecuniary or non-pecuniary utility transfer. The practical application of RSRs requires that ballots be differentiated according to the age of citizens. Given a particular threshold for age (say 45), ballots must contain an indicator variable that assigns a voter to one of the two age classes.

Examples

RSRs could be applied as a general rule in democracies.[12] RSRs are particularly relevant for political projects where the initiation of policy measures and their consequences are decades apart, e.g. mitigation of climate change or investment in basic research. Hence, it would also be conceivable to couple RSRs directly with the question whether an incumbent undertakes any very-long-term projects at all. Then, RSRs would only apply if the incumbent offered a long-term political contract including specific projects of this nature.

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[12]For an analysis, see Gersbach and Kleinschmidt (2004).

3   Introducing and Proposing Political Contracts

There are two fundamental questions regarding the introduction of political contracts.

- Will the legislature allow such contracts in principle?

- Will such contracts be offered at all?

3.1   Allowance of Contracts

The answer to the first question could be affirmative if such contracts actually improve the well-being of the current generation. However, as politicians themselves may not benefit from such contracts[13], a governing parliament majority may decide to neither offer nor accept laws allowing political contracts. However, the competition among parties to form governments can foster the introduction of laws that allow political contracts. This has been indicated, for instance, in Gersbach (2004).[14]

Introducing political contracts is particularly difficult for rejection/support rewards, as such rules are designed to benefit young generations that have no majority at present.

Two changes are necessary. First, at the operational level, RSRs must be coupled with a change in the voting procedure, as ballot papers must bear an indicator of the age class to which each voter belongs. Second, RSRs must be introduced at the constitutional level, coupled with a qualified majority requirement for their abolishment. Otherwise, the old generation would eliminate RSRs even if they had been introduced before. In Gersbach and Kleinschmidt (2004), two way of implementing RSRs, *delayed introduction* and *funding by the young generation* are identified:

First, delayed introduction means the proposal to introduce RSRs would become effective only after a delay – after the old generation has died. Second, the young generation could set up an organisation that collects funds to pay RSRs. Once an office holder is

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[13]See e.g. Gersbach and Liessem (2005).

[14]The case is more complicated when there are separate elections for the legislative and executive branches, as in the presidential system in the US or the semi-presidential system in France.

deselected, he would be awarded an RSR if he has received a majority of votes from the young generation.

3.2   Introducing Specific Contracts

On the question of whether contracts will be offered at all, one has to distinguish two cases:

Case I: Competition of Political Actors for Contracts

The easiest way is to allow candidates for public office to compete by offering political contracts. Here, it will be entirely up to politicians to decide which type of political contracts - if any - they intend to propose. As politicians have only limited power and may depend on the approval of other bodies to undertake policy projects, they will be careful in designing their political contracts and may wish to obtain the agreement of their party to create collective responsibility for fulfilling the contract. In several papers (Gersbach (2004), Gersbach (2005), Müller (2007), and Liessem (2007)), it has been shown that once political contracts are allowed, competition between politicians ensures their actual introduction.

Case II: Design by Legislature

It is also possible for the parliament itself to impose political contracts on the members of the executive branch (e.g. Gersbach (2003)). This is particularly important for members of the executive branch not elected by the public, but appointed by government bodies. Short-term contracts for ministers, for instance, have to be designed by the parliament. Moreover, it might be useful if the parliament—and not the politicians themselves—designed monetary incentive contracts of any kind to prevent voters from being unsure about self-service behavior" on the part of politicians.

4 Certification Procedure and Renegotiation

4.1 Certification Procedure

As in economic models of contracts between private agents (see Watson (2007)), the contracting environment in the political sphere has to be dealt with carefully. We propose the following procedure to certify political contracts in the case of reelection threshold contracts, other short-term contracts, and long-term contracts.

An official body, which we call the "certification authority", reviews the following conditions:

- Does the proposal for a political contract tie feasible policy projects to their outcomes?

- Are the terms of the contract and its time frame described in such a way that a clear-cut answer is possible as to whether the contract has been fulfilled or not when the contract is up for review. In other words, is the contract verifiable?

- Does the proposed contract respect the values of liberal democracy?

If, and only if, the answers to all these questions are affirmative will the certification authority approve the proposals. A necessary condition is the availability of hard and non-manipulable information at the time the contract is up for review. A certified proposal is published and functions as a political contract. Later, the certification authority can also serve as an external enforcer. The review and enforcement of political contracts will therefore require a special court, which could be a separate entity of the constitutional court.

4.2 Renegotiation

With the exception of rejection/support rewards, political contracts should be coupled with a clause that allows the cancellation of the contract in the event of extraordinary

circumstances such as a war. The cancellation of certified political contracts might be possible as long as it is approved by a super-majority of members of the parliament. One could even allow for other forms of renegotiation.[15] In particular, one could allow a contract holder to offer an alternative political contract for the remaining duration of the original contract. If the new contract is certified and seconded by a super-majority of members of the parliament, it will replace the old one.

5 Discussion

In this section we discuss the types of political failure that can be alleviated by the different political contracts.

5.1 General Considerations

With the exception of RSRs, discussed in subsection 5.5, all political contracts have some common features. The main advantage of political contracts is the increased incentive to honor election promises. Politicians seeking office make promises in an attempt to alter the voters' beliefs about the policies a politician will undertake if elected and about the abilities of this politician. To some extent, repeated elections can punish candidates who renege on their campaign promises.[16]

However, politicians may lack the incentive to honor promises and to devote a socially desirable amount of effort to certain tasks. There are numerous reasons why this might happen, including a weak relationship between past performance and reelection chances, political uncertainty in general,[17] finite time horizon of the politician, rational ignorance of voters,[18] a long time-span between policy measures and outcomes, lags

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[15]The possibility for parties to renegotiate in the midst of a contractual relationship is central to contract theory (see Hart and Moore (1988), and Maskin and Moore (1999) for general characterization results).

[16]See the classical papers by Barro (1973), Ferejohn (1986), Austen-Smith and Banks (1989), and more recent models by Banks and Duggan (2002) and Aragones, Palfrey, and Postlewaite (2007).

[17]A nice example how political uncertainty might impede economic growth by reducing public investment in the formation of human capital is given by Hashimzade and Davis (2006).

[18]Voters may even have systematically biased beliefs about economic forces (Caplan (2002)) that

in the observability of outcomes,[19] or lobbying by special interest groups. The kind of commitment achieved by political contracts would encourage, if not enforce, serious efforts to convert election promises into the materialization of projects. Such positive incentive effects have been shown in Gersbach (2005) and Gersbach and Liessem (2005). The positive incentive effects survive when preferences of the candidates are unknown to the public (Liessem (2007)).

Moreover, political contracts would facilitate and improve communication between politicians and the public. They would enhance the politicians' authenticity, as those unwilling to commit to certified promises would lose some of their credibility. The separation into more or less credible promises would not only improve exchanges between citizens and politicians, it would also strengthen the citizens' trust in politics, an objective that is desirable in its own right.

Political contracts might also have disadvantages. Politicians might focus too exclusively on the realization of their certified promises to the detriment of other areas. This and other concerns will be taken up in subsection 7.3.

5.2   Threshold Contracts

The considerations outlined above apply for all contracts, but they are particularly noticeable in the most stringent kind of short-term contract, the threshold contract.

In addition, threshold contracts may curb the influence of well-organized special interest groups, as office holders are better protected against lobbying activities. Moreover, threshold contracts in the form of tax rate limits decrease the perks of politicians (see Gersbach and Schneider (2007)).

Vote threshold contracts create further and other types of incentive effects. When the reelection hurdle for a politician increases with the number of terms in office, this not only motivates the office holder to work hard to increase the welfare of the citizens, it

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may induce an office holder to disregard his promise.

[19]Of course, these causes are neither mutually exclusive nor fully independent sources of political failure.

also curbs the so-called incumbency advantage whose existence has been documented in the political-economic literature. Hence entry will become easier. Moreover, as reelection becomes harder and harder, an incumbent may renounce reelection campaigns earlier than under normal elections. Hence vote-share thresholds will shorten the tenure of politicians and may avoid that well-known politicians remain in office.[20]

Threshold contracts may also be useful in providing incentives for competent individuals to run for election.[21] Competent candidates can offer tighter thresholds and thus increase their election chances over other candidates. Yet, as less competent candidates have an incentive to pool with competent candidates in order to get elected at least once, voters face a serious inference problem if competence cannot be observed. Still, in comparison to elections alone, the possibility of using threshold contracts should help voters in their selection efforts. This selection argument is, however, as yet less formally developed than the incentive argument.

However, political competition with threshold contracts may also encourage over-promising. In order to get elected at least once, candidates may offer threshold contracts that promise many good things to society but will never be fulfilled. This problem is examined in Gersbach and Müller (2006), where it is shown that voters can use simple election schemes to punish overpromising behavior.

One downside risk of threshold contracts is posed by near-end-of-term negative incentive effects. If a politician has no chance of meeting his threshold near the end of his term, he might behave like a "lame duck", reducing his efforts because his reelection chances are nil.

5.3 Other Short-Term Contracts

In principle, similar considerations can be applied to short-term contracts. There are, however, important differences between short-term monetary contracts and threshold

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[20]A formal analysis of vote-share thresholds is given in Gersbach (2005).

[21]Moreover, to achieve socially desirable outcomes, the preferences of selected politicians should be sufficiently congruent to those of the electorate.

contracts. Short-term monetary contracts are less vulnerable to overpromising, as bad performance is punished immediately by a salary reduction. For non-elected ministers, such contracts can also be easier to use. However, the drawback of short-term monetary contracts is the type of reward/punishment they entail. As elected politicians tend to care more about power, policies they can implement and career opportunities after holding office, it is easier to select, control and motivate office holders by threshold contracts than by monetary rewards. Threshold contracts directly affect the most important elements in the utility of a politician.

5.4 Long-Term Contracts

In modern national economies, the time-span between the initiation of policy measures and their outcome is often very long, frequently exceeding one election period. Tax reforms, budget balance, reforms of the labor market, reduction of CO_2 emissions, and basic research funding to promote the development of new technologies are well-known examples. To be reelected, politicians have to offer visible proof of their accomplishments before the next elections. Accordingly, they lack incentive to undertake policies that will only produce benefits after their period of office is over. As the reelection mechanism does not foster the implementation of long-term projects, long-term political contracts can be used to promote them.

Gersbach (2003) introduces long-term contracts and shows how the public can make the value of a second term in office dependent on the realization of the outcomes of long-term policy projects. As a consequence, the incentive for a politician operating under such political contracts to undertake socially desirable policies increases with long-term consequences in the first term.

Gersbach (2004) shows that competition for office among politicians with long-term political contracts that become effective upon reelection alleviates inefficient decision-making in politics. The contract still helps to increase public welfare if the public is unsure about the politicians' time preferences. The incentive for the electorate to reject

the incumbent in order to economize on his future remunerations can be neutralized by parachute clauses. Such clauses guarantee a future bonus to a politician, even if he is no longer in office. The positive incentive effects remain operative for various alternative formulations of the utilities of politicians, as shown by Müller (2007).

5.5 Rejection/Support Rewards

Democracy may have particular difficulty in pursuing policies that mainly benefit future generations. If the beneficiaries of such long-term policies only form a minority today, politicians may not undertake them, since this would reduce their chances of getting reelected. The problem of socially desirable policy projects that require investment expenditure first and only pay off later has been extensively discussed in connection with government debt, social security, and global warming.

For instance, when a society experiences a slow-down or even a decline in population growth, adjustment and/or change of the pay-as-you-go system becomes inevitable to alleviate the burden on the young generation and to sustain incentives for growth. Such changes, however, may leave a majority of voters—retirees and individuals close to retirement age—worse off, as their expected net benefits would decline. Hence, pension reforms may not be practicable politically, although from a welfare perspective taking for future generations into account, they are, in fact, desirable.[22]

A similar inter-generational investment problem, coupled this time with more uncertainty about returns, is global warming. Most predictions suggest that the temperature associated with thermal equilibrium on earth will increase because of rapidly rising stocks of greenhouse gases (IPCC (2007)). Such temperature changes may have a sizable impact on the well-being of future generations[23], while a substantial part of

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[22]Starting with Browning (1975), a strand of literature (see Myles (1995) for a survey) has shown that voting equilibria regarding social security benefits and contribution rates leads to a social security budget that is excessive from a welfare point of view. The political economy of social security has been substantially further developed by Tabellini (2000), Casamatta, Cremer, and Pestieau (2000), and Wagener (2002). Börsch-Supan (2000) provides an in-depth study for the German case.

[23]See e.g. Boehringer and Vogt (2003), Goulder and Pizer (2006), McKibbin and Wilcoxen (2002), Nordhaus (2006), Nordhaus, and Boyer (1999), Schelling (2002), Stern (2006), and Tol (2006).

the costs for reducing emissions is borne by the older generations.

Thus, RSRs should induce politicians to act on behalf of the young generation, even if this is against the interests of the majority of the current electorate. Yet if RSRs can induce socially desirable long-term policies, they may invite excessive investment at the expense of the current generation if politicians try to obtain them. Gersbach and Kleinschmidt (2004) show that optimally designed RSRs balance the benefits and costs of this instrument so that it is universally welfare-improving.

5.6 Summary

Political contracts tend to have positive incentive and selection effects, and may reduce socially undesirable spending. Of course, our imagination may be insufficient to cover all the aspects of how democratic decision-making will change when political contracts are introduced, and the research on contractual democracy is still in its infancy. However, we may justifiably expect such contracts to improve and alleviate communication between the public and politicians, and to foster the trust in politicians and democratic institutions, a consequence that is beneficial in its own right.

6 An Illustration for Threshold Contracts

In this section we use an example how threshold contracts work.

6.1 The Model

We consider a simple effort problem. The voters and the politician are assumed to be risk-neutral. There are two periods. In the first period, the incumbent has to exert effort e on a task T. The effort e on task T creates benefits b for the public in the first period.[24] These are given by

$$b = e. \tag{1}$$

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[24]Additional benefits may also materialize in the second period, but this has no bearing on our main results.

The reelection chances of politicians are influenced by past performance, but the link may be weak.[25] We assume that reelection chances can be summarized by a continuous probability function $p(b)$, i.e. $p(b)$ is the probability that the politician will be reelected if the benefit b is realized. In our example, $p(b)$ is given by

$$p(b) = \begin{cases} 0 & \text{for } b \leq \underline{b}, \\ \gamma + \phi b & \text{for } \underline{b} \leq b \leq \bar{b}, \\ 1 & \text{for } b \geq \bar{b}, \end{cases}$$

with $-1 \leq \gamma \leq 0, \phi > 0$ and $\underline{b} = -\frac{\gamma}{\phi}$. Furthermore, $p(\bar{b}) = 1$ requires that $\bar{b} = (1-\gamma)/\phi$. The utility of the politician is given by

$$W^1 + p(b)W^2 - C(e). \tag{2}$$

W^1 denotes the utility of office in period 1, W^2 the discounted utility of office in period 2 and $C(e)$ the cost of exerting the effort. The utility from holding office may include monetary benefits, such as a fixed wage, and non-monetary benefits, such as prestige or the wielding of power. As utility W^1 from office in the first period is sunk after the politician has been elected, it will be neglected in the subsequent analysis. The remaining utility takes the form

$$U^A(b, e) = p(b)W^2 - C(e) = p(e)W^2 - C(e) := U^A(e). \tag{3}$$

Given the politician's utility, the participation constraint (PC) corresponding to the fact that the politician wants to stand for reelection amounts to

$$p(b)W^2 - C(e) \geq 0. \tag{4}$$

The politician chooses an effort level that maximizes his utility. Thus the incentive constraint (IC) is given as

$$e = \arg \max_e \{p(b)W^2 - C(e)\}. \tag{5}$$

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[25]For a microfoundation of weak links, see Gersbach and Liessem (2007), Alesina and Rosenthal (1995), and Fearon (1999).

The cost $C(e)$ of the agent is assumed to be given as follows:

$$C(e) = ce^2. \tag{6}$$

Factor c can be interpreted in two ways. Either it measures the agent's disinclination to provide effort e, or it could be interpreted as the competence of the politician, with small c meaning high competence, i.e., achieving a certain benefit level does not require much effort (cost) from the politician.

At the end of the first period, the benefits for the public are realized and the reelection decision takes place.

6.2 First-Best Outcome

We first characterize the first-best outcome, assuming that the public enforces the socially optimal effort level directly by a contract heavily penalizing downward deviations from the effort level written into the contract. Hence the public's problem is to maximize its utility subject to the politician's participation constraint. The participation constraint must be honored by the public because otherwise the politician would not seek reelection and would not enter into the contract.

Hence, the voters' problem is given by

$$\max\{U^P = e\}, \tag{7}$$

$$s.t. \quad W^2 - C(e) \geq 0,$$
$$e \geq 0.$$

A simple calculation leads to $e^{FB} = \sqrt{\frac{W^2}{c}}$.

This is the maximum effort level the public can implement; higher effort levels would not satisfy the participation constraint. The politician would not seek reelection and would forgo the contract. In the following, we assume that $\bar{b} \leq e^{FB}$, which will allow threshold contracts to achieve the first-best allocation.

6.3 The Reelection Mechanism

In this section we explore the solution under the reelection mechanism. The politician chooses his effort according to the incentive constraint (IC) as

$$e = \arg\max_e \{p(b)W^2 - ce^2\}.$$

As the politician can always choose $e = 0$ to satisfy the (PC), we can neglect the participation constraint. We obtain

Proposition 1

Under the reelection scheme $p(b)$, the politician chooses his effort according to

$$e^* = \begin{cases} 0 & for \quad \dfrac{W^2}{c} < \dfrac{-4\gamma}{\phi^2}, \\[2mm] \phi\dfrac{W^2}{2c} & for \quad \dfrac{-4\gamma}{\phi^2} \leq \dfrac{W^2}{c} \leq \dfrac{2(1-\gamma)}{\phi^2}, \\[2mm] \bar{b} & for \quad \dfrac{W^2}{c} > \dfrac{2(1-\gamma)}{\phi^2}. \end{cases}$$

Proof of Proposition 1

First we observe $U^A(e) < U^A(\bar{b})$ for all $e > \bar{b}$ as an effort level $e = \bar{b}$ guarantees reelection. Therefore we can restrict the problem to

$$\max_e \{U^A(e)\}; \quad e \in [0, \bar{b}].$$

Either there is a corner solution, i.e., $e = 0$ or $e = \bar{b}$, or an interior solution. In the interior case, the politician chooses his effort level according to the first-order condition

$$e^{int} = \phi\frac{W^2}{2c}.$$

As

$$\frac{\partial^2 U^A}{\partial e^2} = \frac{\partial^2((\gamma + \phi b)W^2 - ce^2)}{\partial e^2} = -2c < 0,$$

the second-order condition is fulfilled. We now check the cases in which the politician chooses the interior solution and those in which he chooses one of the corner solutions.

The politician chooses $e = 0$ if $U^A(e^{int}) < U^A(0)$. The condition yields

$$p(e^{int})W^2 - c(e^{int})^2 < 0,$$

which can be written as $(\gamma + \phi\frac{\phi W^2}{2c})W^2 - c(\frac{\phi W^2}{2c})^2 < 0$, which is equivalent to $\frac{W^2}{c} < \frac{-4\gamma}{\phi^2}$.

The politician chooses the upper corner solution when $e^{int} > \bar{b}$. With $\bar{b} = (1-\gamma)/\phi$, $e^{int} > \bar{b}$ is equivalent to $\frac{W^2}{c} > \frac{2(1-\gamma)}{\phi^2}$. Thus, for $\frac{2(1-\gamma)}{\phi^2} \geq \frac{W^2}{c} \geq \frac{-4\gamma}{\phi^2}$, the politician will choose the interior solution. The interval is not empty if $\frac{2(1-\gamma)}{\phi^2} \geq \frac{-4\gamma}{\phi^2}$ which is equivalent to $-1 \leq \gamma$. This is satisfied because of our assumption $-1 \leq \gamma \leq 0$.

The politician will choose $e = 0$ for $-4\gamma/\phi^2 > W^2/c$ and $e = \bar{b}$ for $2(1-\gamma)/\phi^2 < W^2/c$.

■

In a variety of circumstances, the reelection mechanism creates inefficiencies compared to the first-best outcome. The first-best outcome would be implemented if $\bar{b} = e^{FB}$ and $2(1-\gamma)/\phi^2 < W^2/c$. If $\bar{b} < e^{FB}$ then first-best cannot be reached either because the politician can secure his reelection with an effort smaller than e^{FB}. Alternatively, he may choose $e = 0$.

6.4 Campaigning with Threshold Contracts

Next we allow politicians to offer a threshold contract themselves during a campaign. Such a contract contains a threshold value $\hat{b}$ with the following interpretation: If the benefit realized at the end of the first period is smaller than $\hat{b}$, the politician cannot stand for reelection. If the benefit is equal to or higher than $\hat{b}$, the politician can stand for reelection. Then the democratic election process with free and anonymous voting takes place.

We assume that there is a campaign stage before the first period in which two political candidates, denoted by i, j, offer threshold contracts with values $\hat{b}_i$, $\hat{b}_j$ to the public, which become effective upon election. The costs of exerting effort (or of the compe-

tencies) of politicians i, j are equal and given by c, which is known to the voters. The structure of the game is summarized as follows:

Stage 1

> Two politicians i and j offer threshold contracts with values $\hat{b}_i$, $\hat{b}_j$.

Stage 2

> The voters observe the threshold offers and elect one of the candidates.

Stage 3

> The elected politician exerts his effort on task T.

Stage 4

> The benefit from the politician's activity is realized. The public observes the benefit signal b. If $b < \hat{b}_i$, $\hat{b}_j$ respectively, the politician leaves office and does not stand for reelection. If $b \geq \hat{b}_i$, $\hat{b}_j$ respectively, the politician stands for reelection.

We first look at the consequences that ensue when a politician, say i, has offered threshold $\hat{b}_i$ and is elected. The politician's reelection probability changes to

$$p(e, \hat{b}_i) = \begin{cases} 0 & \text{for } b \leq \max[\underline{b}, \hat{b}_i], \\ \gamma + \phi b & \text{for } \max[\underline{b}, \hat{b}_i] \leq b \leq \bar{b}, \\ 1 & \text{for } b \geq \max[\bar{b}, \hat{b}_i]. \end{cases}$$

The politician chooses his efforts according to the modified incentive constraint, which now amounts to

$$e = \arg\max\{p(e, \hat{b}_i)W^2 - ce^2\}.$$

Proposition 2

Three types of solutions can occur

(i) $e = 0$ *(lower corner solution)*,

(ii) $e = \max\{\bar{b}, \hat{b}_i\}$ *(upper corner solution)*,

(iii) $e^{int}(\hat{b}_i) = \max\{\phi \dfrac{W^2}{2c}, \hat{b}_i\}$ *(interior solution)*.

Proof of Proposition 2

First we rewrite the maximization problem of the politician as

$$\max_{e}\{U^A(e,\hat{b}_i)\}; \quad e \in [0; \max[\bar{b},\hat{b}_i]]$$

As we know, three cases can occur. The lower corner solution remains the same with $e = 0$, but the upper corner solution changes into $e = \hat{b}_i$ for $\hat{b}_i > \bar{b}$, or remains the same for $\hat{b}_i \leq \bar{b}$.

If $e^{int} \geq \hat{b}_i$, the interior solution remains the same because it is the utility maximizer. If $\hat{b}_i > e^{int}$ the politician will choose $e = \hat{b}_i$ under the interior solution, because otherwise he will not be reelected. He will not exert an effort $e > \hat{b}_i$ because $\frac{\partial U^A}{\partial e} < 0$ for $e > \hat{b}_i$.

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The proposition indicates that the threshold incentive contract increases the upper corner solution and the interior solutions if an adequate threshold signal is stipulated. In the upper corner solution, the effort level increases if a threshold signal $\hat{b} > \bar{b}$ is chosen. In this case the effort level leading to certain reelection is $e = \hat{b}$. For the interior solutions the effort level increases if a threshold signal $\hat{b}$ with $\hat{b} > \phi W^2/2c$ is chosen.

We use $e_i^*(\hat{b}_i)$ and $e_j^*(\hat{b}_j)$ to denote the global optimum of the politician's maximization problem. It follows that $e_i^*(e^{FB}) = e_j^*(e^{FB}) = e^{FB}$ when we impose the tie-breaking rule that the politician works in the interest of the public if he is indifferent between two options (here, e^{FB} and $e = 0$). Any downward deviation would result in zero reelection chances. Moreover, the PC is fulfilled at $\hat{b}_i = \hat{b}_j = e^{FB}$ since we have assumed $\bar{b} \leq e^{FB}$.

We now look for the sub-game perfect equilibria of the campaigning game. We assume that each politician is elected with a probability of $1/2$, if $e_i^*(\hat{b}_i) = e_j^*(\hat{b}_j)$.

Proposition 3

There exists a unique equilibrium in which both politicians offer the threshold values $\hat{b}_i^* = \hat{b}_j^* = e^{FB}$.

Proof of Proposition 3

Threshold value offers $\hat{b}_i^* = \hat{b}_j^* = e^{FB}$ are an equilibrium because a downward deviation by a politician would yield zero election probability for him.

Using standard Bertrand reasoning, it is straightforward to see that any other strategy combination cannot be an equilibrium.

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Hence competition for elections with threshold contracts produces the first-best outcome, as both candidates offer the first-best threshold.

7 General Concerns

In this section we address some general concerns regarding contractual democracy.

7.1 External or Unpredictable Events

A possible argument against political contracts is that external and/or unpredictable events might prevent politicians from achieving the goals they have committed themselves to.

When the outcomes of policy measures are influenced by random events, the link between efforts of politicians and reelection chances becomes weaker. Such random events, however, do not destroy positive incentive effects as long as politicians have some influence on the likelihood of their reelection (Gersbach and Liessem (2005)).

There are external events whose occurrence makes the fulfillment of the political contract itself socially undesirable. For instance, in the event of a threat to national

security, it can be in the interest of the electorate to postpone balancing the budget. As discussed in section 4, a pre-specified renegotiation procedure can resolve such cases.

7.2 The Certification Problem

Only a subset of political tasks will qualify for certification and thus allow for political contracts.[26] Political tasks whose outcomes can be measured by macroeconomic, social or environmental indicators could qualify for certification. Examples are GDP, unemployment, fiscal discipline, tax rates, crime indexes, or CO_2 emissons. In all these cases, however, it is crucial to elaborate a settled definition of the indicators and to designate a neutral third party to collect and verify the figures. Other examples are decidable events (building a bridge, abolishing a law, going to war, etc.) where a simple yes/no answer is possible. In other areas, such as the reform of health care or the judicial system, the certification problem is much more severe, as no single indicator is available.[27]

The heterogeneity of certification possibilities across political tasks gives rise to multi-task concerns, which we will address in the next subsection. Overall, there are already sufficient examples where political contracts could be applied. Moreover, we expect the number of certifiable contracts to increase considerably when contractual democracy is introduced.

7.3 The Multi-Task Problem

Politicians in the executive and legislative branch are typically concerned with many different issues. As discussed in the last subsection, some issues can, in principle, be quantified with sufficient precision, while this is not the case for other issues. Performance, in a significant part of the activities of politicians, cannot be measured with a sufficient degree of precision. The theory of multi-task incentive problems (Hölmstrom and Milgrom (1991)) has shown that severe measurement constraints on some tasks

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[26]Even if an event becomes commonly known, it may not be verifiable by the external enforcer.

[27]In some areas, however, a quality index similar to an inflation index can be targeted.

can make it unwise or impossible to use high-powered incentive schemes. Such considerations question our proposal, as effort allocations of politicians might be even more distorted in a contractual democracy, where political contracts center around some specific tasks, than in normal democracy. As discussed in section 5, politicians might focus too exclusively on the realization of their certified promises while neglecting other areas, especially under threshold contracts. For instance, if politicians are only judged by their employment performance, they may simply inflate the public sector to meet the required standard and neglect other important issues.

A variety of considerations lessen this concern. First, certified election promises would only be a threshold to candidacy which, once passed, leads to normal election. So the potential disadvantage would not be greater than it already is in a normal democracy. Second, the theory of multi-task problems (Gersbach (1998)) has also shown that global control, which corresponds to elections in the political sphere, can only provide optimal incentives in particular circumstances and is usually dominated by task-specific control.

Third, the multi-task and measurement problem can even be alleviated by the hierarchical scheme defining contractual democracy. This has been shown in the context of long-term contracts by Gersbach and Liessen (2003). The contract works as follows: A politician can only stand for reelection if he is willing to base his future income or the right for future reelection on his performance in connection with one issue, say unemployment. If he accepts the incentive component, he can stand for reelection, and voters can judge his performance on the remaining issues. If he has accepted the incentive contract, but has only worked to reduce unemployment, voters may not reelect him because he has a bad record on other important issues. Therefore the hierarchical scheme might cause the politician to choose the socially desirable policy for one dimension without neglecting other issues.

7.4 The Democracy Problem

One might argue that a contractual democracy is no longer a liberal democracy. By construction, this concern should not apply, as political contracts will not be certified if they alter the essence of a liberal democracy. Still, one might argue that the politician's self-imposed constraints on reelections might violate the universal right to candidacy at any time. However, as term-limits are also accepted in many democracies, self-imposed, conditional term limits introduced by threshold contracts could be adopted as well. Shortening the term by calling general elections in the case of poor performance does not violate any fundamental principle of liberal democracy. A more delicate case might be political contracts that allow a lengthening of the term by some pre-specified time-span in the case of good performance, as discussed in subsection 2.2, as this could undermine the legitimacy of politics. It is important to stress that political contracts are intended to strengthen the accountability of politicians towards the public and to foster the public's trust in politics, which appears to be of growing significance (see Gersbach (2005)).[28]

7.5 Other Concerns

There are various further concerns that have to be addressed. We provide four examples: First, one might argue that political contracts inhibit the formation of coalition governments, as the contracts of candidates and parties may be incompatible. As discussed in subsection 2.1, political contracts conditional on the formation of coalitions avoid such inconsistencies. Second, allowing for all types of political contracts might generate conflicting incentives for politicians. For instance, when short-term and long-

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[28]Politicians might commit to campaign promises by signing private contracts. For instance, a politician could sign a contract with a charity, promising it a particular amount of money if he reneges on a promise specified in the contract. The politician might also deposit up-front a specific amount of money in a fund (bonding). This amount would only be returned to to him if he kept his promise. In this case, he might even receive an extra bonus taken from private contributions. While such arrangements are conceivable in principle, they are not allowed in a contractual democracy, as they would allow interest groups to buy themselves directly into political processes. Moreover, it is likely that accountability to private persons or companies would undermine both accountability to the public and the public's trust in political processes and politicians.

term political contracts are used simultaneously on the same issue, the politicians' actions might not simultaneously foster the fulfillment of both types of contract. The inconsistency problem can be largely avoided if contract design is primarily left to political actors such as candidates and parties, and the legislatures only act subsidiarily, and in particular for non-elected public officials. Third, a democracy does not operate in isolation and is usually embedded in a market economy. How a societal system with a contractual democracy impacts on the market economy is an open issue. There are no obvious reasons to think that the impact will be negative. Fourth, one might be concerned about an increased incentive for opposition parties to filibuster policy projects in order to keep an incumbent from honoring his contract, if the rules allow for such activities. As endless blockades are risky and may make opposition parties more accountable, the level of wasteful filibustering might actually sink in contractual democracy.

8   Conclusion

Modern liberal democracy can afford to use political contracts. However, such an implementation will require changes in constitutional and legislative norms. It will be necessary to establish the simplest and most promising way of using political contracts while keeping the administrative repercussions as slight as possible.

Contractual democracy would radically alter the course of political action. Our suggestions indicate that the potential of liberal democracy has not been exhausted yet and that improvements via contractual democracy are not utopian, but a worthwhile goal.

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