Norman Schofield · Gonzalo Caballero · Daniel Kselman *Editors*

Advances in Political Economy

Institutions, Modelling and Empirical Analysis

This book presents latest research in the field of Political Economy, dealing with the integration of economics and politics and the way institutions affect social decisions. The focus is on innovative topics such as an institutional analysis based on case studies; the influence of activists on political decisions; new techniques for analyzing elections, involving game theory and empirical methods.

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binding constraint on the dealings of the junta (see Barros 2002). Most significantly, transition took place because the regime, after some hesitation, obeyed the letter of the constitution. In Egypt, on the other hand, the transition of power was brought about by street protests. Common to both countries is the influence exercised by parties and organizations associated with the old regime during the transition period. In Egypt this was mainly the military which served as a power broker during the revolution whilst in Chile these were the parties of the right which bargained in the shadow of power which was projected by the military.

In this paper, we see a preexisting constitution as a natural focal point in the transition process which can serve both as a reference but also as a reversion point for constitutional reform. The reform process in which a society attempts to newly arrange its social compact creates many uncertainties. The negotiating parties may end up in a game of attrition where each tries to secure concessions from the other parties involved in the process. The attempt of constitutional reform may end in open conflict if the participation constraint of one of the players is not satisfied. For those reasons, the elected successor parties which are interested in changing the constitution may yet agree on the preexisting constitution as a default outcome in order to insure against the risks otherwise involved in negotiating a new constitution.

If the autocrat expects a succeeding constitutional assembly to use a preexisting constitution in that way, it creates an avenue through which the autocrat, in writing a constitution, can influence the power play after his demise. In this paper we assume that the interest group of the property owning class can exert sufficient influence on the autocrat to make him write a constitution on their behalf.

We show, first of all, that constitutions exist which are stable in the transition process. Whether or not the autocrat strictly prefers to hand down a constitution depends on who he expects to bargain over constitutional reform. If the autocrat expects that the future constitutional assembly is dominated by parties which favor redistribution, he does not want to bind himself by the constitution. If not a single party dominates the constitutional assembly and the middle class opposes redistribution or it is expected to forge a coalition with the right dominate, stable constitutions exist which are in the interest of the autocrat. Here, our model provides a theoretical underpinning for the frequently stated idea that a middle-class which is interested in maintaining property rights is a prerequisite for constitutional stability.[6]

Moreover, we show that if the autocrat can hand down a constitution immediately before his demise, he may choose to write a stationary constitution, i.e. a constitution which he predicts to be accepted by a succeeding constitutional assembly without further amendment. Only if the autocrat expects that he will have to abide by the constitution himself for some time, he will compromise on the stationarity property. We also argue that, theoretically, a succeeding assembly will elect the prior constitution as default bargaining outcome, irrespective of what it says. Hereby, cases are possible where a preexisting constitution is accepted in the reform process even when it has hardly constrained the autocrat and is significantly amended in the reform process.

[6] See e.g. Ordeshook (1997), Easterly (2001).

1.1 Related Literature

Looking at the selection of rules in general and the constitution in particular in terms of manipulating strategic situations to achieve desirable outcomes was advanced by Riker (1986) with his analysis of the events leading to the adoption of the American constitution.[7] Our paper models constitutional choice in terms of the strategic selection of a status quo point in a spatial model. This places our model in a strand of literature which derives equilibria of the political game which are predicated on previous choices such as the move of an agenda setter or the selection of institutions. Tsebelis (2002), for example, shows how institutions determine the set of veto players within a spatial policy framework and thus shape policy outcomes.[8] Whilst constitutional norms typically provide general rules for policy selection rather than making policy choices more directly, the selection of institutions together with the legitimization of a status quo policy has implications for policy outcomes. In the case of Chile and Egypt, one can argue that choices over political institutions were often clearly aimed at preventing or promoting particular policy outcomes.[9]

In our framework, a constitution provides a focal point which enables agents to coordinate on Pareto-better outcomes compared to outcomes achieved in the absence of a constitution. A different way of understanding constitutions as coordination devices—understood as "red-lines" the crossing of which agents accept as triggers for coordinated action—has been introduced by Weingast (1997). Other approaches focus on the role of constitutions as commitment devices by which a government can credibly pledge to uphold property rights (North and Weingast 1989) or an autocrat to give legally enshrined guarantees to his followers (Myerson 2008). Moreover, Grossman (2002) gives conditions under which it is possible to design constitutions with self-enforcing properties—i.e. where agents abide by constitutional processes—when facing the alternative of descending into conflict. Pech (2009) and Naqvi et al. (2012) focus on self-enforcing properties of constitutions which contain the rule of law as a mechanism. Another strand of literature looks at constitutions in terms of the properties and desirability of the voting rules it provides.[10] Finally, in an accompanying paper, Michalak and Pech (2012) provide a full equilibrium analysis which extends and applies the present framework to the

[7] See also Riker (1996). Schofield (2002) elaborates on this logic and applies it to the evolution of the American constitution.

[8] In a more general setting one may ask how the historical and/or constitutional choice of rules determines the selection of rules which at later stages emerge from the political game. See Barbera and Jackson (2004) and Lagunoff (2007).

[9] In the case of Chile, parties of the left were not admitted under the Pinochet constitution but they were admitted under the reform constitution, provided they were not antisystem. The decision of the Supreme Council of the Armed Forces to dissolve a parliament dominated by the Muslim brotherhood was a move which interfered with the institutional set-up of post-revolutionary Egypt but was mainly aimed at preventing parliament from selecting policies which were against the interests of the military rulers.

[10] See, for example, Gersbach (2004) and Barbera and Jackson (2006).

Chilean transition process. That paper, in more detail, focuses on the significance of middle class wealth for constitutional stability.

1.2 Outline of the Paper

Section 2 sets up the model. Section 2.1 presents negotiations in the absence of a prior constitution or after its rejection. Section 2.2 details bargaining on constitutional reform in the presence of a prior constitution. Section 2.3 derives optimal constitutions for the autocrat. Section 3 analyses the static constitutional choice problem of the autocrat. Section 4 extends our results to a dynamic setting. Section 5 discusses applications to different experiences of political transition and derives conclusions from our framework.

2 The Model

A constitution is a pair (t, x), representing a country's basic choices[11] on redistribution—associated with a tax rate t—and social policy x which may be measured along a scale representing liberalism versus authoritarianism, secularism versus a greater role for religion in public life or the relative importance of the social solidarity principle versus the free market principle.[12] The policy space $\Im$ is $T \times X = [0, 1] \times \Re$.

There are three socio-economic groups, the clientele of the autocrat, R, the middle class, M, and the working class, L. We do not explicitly model the military as a player. In the Chilean case the junta emerged from within the military. Therefore, one can identify the military in the aftermath of transition as a lingering aspect of the junta and closely associate it with the autocrat's clientele. In Egypt, autocratic government and military were organizationally separate but the military leadership shared interests with the possessing class and can, for the purposes of our model, be associated with the clientele of the autocrat. In both cases we can see some harmony of interest between the military and what we modelled as the autocrat's clientele. The military is a particularly powerful player when the option of freely negotiating the constitution degenerates into conflict. In this case, we expect the cost of free negotiations to be especially high to everyone, but the more powerful the military, the more limited will the possibility of achieving redistribution in the case of conflict be.

Furthermore, we assume that the autocrat perfectly internalizes the preferences of his clientele. For this assumption to be reasonable, either the clientele must be able to offer a perfect incentive contract to the autocrat, by which it offers support

[11] We do not discuss in this model rules governing post constitutional choices such as electoral rules. Stability properties of electoral rules are discussed, for example, in Barbera and Jackson (2004).

[12] Kitschelt (1996) finds that the majority of policy choices can be subsumed under a distributional/communitarian dimension.

in exchange for favorable constitutional rules or, alternatively, the autocrat "sells" those advantages to his clientele in exchange for support.

For simplicity, we assume that all groups have the same size when calculating the effects of different redistributive policies. Gross incomes of representatives of each group are $w_R > w_M > w_L$. The utility function of a citizen belonging to class i is $u_i = \alpha_i v_i(x) + w_i^n$ where w_i^n is citizen i's net income after taxes and transfers and where $v_i = -|x - x_i|^2$ captures the loss associated with realizations on the social policy scale where x_i, $i = L, M, R$ represents the bliss point of group i. We assume that $x_M < x_L$, $x_R \neq x_M$ and x_L yet $\alpha_R = 0$. In order to uniquely assign bargaining outcomes when R and M agree on t, we assume that R's income motive is overwhelming yet for two allocations where the income realization is the same, R strictly prefers the allocation where x is closer to x_R.[13]

The net income distribution is obtained from taxing income available for redistribution at a tax rate $t \in [0, 1]$. Proceeds from the tax finance a lump sum transfer which is evenly distributed among members of the three groups.[14] Thereby we impose equality in transfers and rule out the possibility of one socio-economic class enriching itself at the expense of some other class. This assumption is less problematic when we construct outcomes for the case of free negotiations over the constitution: The reversion wealth level which we associate with this scenario may be thought of as the level of wealth which agents expect to be able to defend or appropriate in a situation of conflict. Yet for the case where the assembly bargains over constitutional reform, we must specify the set of admissible choices. In restricting the bargaining space to choices of t and x, we effectively assume that accepting the prior constitution as a template for negotiations implies acceptance of the property rights which were defined under that constitution. Once the property order is accepted in principal, redistribution of property can only be achieved through general rules, i.e. general taxes.[15]

Inserting our assumption on feasible tax policies into the utility function for group i and denoting average income for redistribution $\overline{w}$, we obtain

$$u_i(t, x) = \alpha v_i(x) + (1 - t)w_i + t\overline{w}.$$

In all societies we know of, average income exceeds the income of the median citizen. This observation leaves the political theorist struggling for an explanation

[13] We effectively assume that R has lexicographic preferences where the utility function—with some abuse of notation—captures the net income part only.

[14] Assigning the choice of a tax policy to the constitutional stage appears to be counterfactual at first sight, because tax policies are normally determined by simple tax laws. However, it turns out that for some bargaining scenarios such as freely bargaining the constitution, the choice reduces to selecting either a tax rate of 1 or a tax rate of zero. The proper way of thinking of such an extreme choice is the election of the economic order of a country. Such a choice is clearly on a constitutional level.

[15] Such acceptance does not in general rule out that individual cases of "unfair" enrichment under the old regime are tried in court but it provides assurances to the vast majority of beneficiaries of the old system that expropriative measures by the new regime will not affect their property alone but would have to simultaneously affect the property of the middle class as well.

of the fact that in democratic societies we should have majorities in favor of expropriation when we hardly observe expropriating tax policies in practice. In order to allow for the possibility of a political equilibrium with non expropriating taxation for empirically relevant income distributions we make the assumption that only a share $(1-\gamma)$ of w_R is actually available for redistribution. If w_R consists mainly of productive capital, agency problems involved in its nationalization are likely to reduce its value. In practice, γ is likely to depend on the kind of industry in which the capital is deployed. If the capital is mostly invested in the natural resources sector, γ is likely to be low. We assume $(1-\gamma)w_R > w_M$ and define average income available for distribution as $\overline{w} = \frac{(1-\gamma)w_R + w_M + w_L}{3}$. As $\overline{w} > w_L$, the left always favors redistribution.

2.1 *Freely Negotiating a New Constitution*

We assume that in the absence of a default constitution, the outcome of the constitutional reform process can only be predicted with some uncertainty. That is, independently of how precisely the constitutional process unfolds, from an ex ante point of view the expectations over the final outcome take the form of a lottery $\ell = \{(x,t,\pi(x,t))\}$ with probability weights $\pi(x,t) < 1$ for all (x,t). The continuation pay off of each player $i = R, M, L$ when entering the constitutional reform process in the absence of a default constitution is $Eu_i(\ell)$. Throughout the paper we maintain that at any point a player who is dissatisfied with the outcome of the constitutional reform process can reject this outcome and revert to freely negotiating a constitution, ensuring for himself a default outcome of $u_i^0 = Eu_i(\ell)$. Such an assumption is compatible with scenarios where the draft reform constitution requires, formally or factually, widespread support in a referendum or where the free negotiation process takes the form of open conflict and such conflict can be precipitated by any party. We define (x^0, t^0) as the expected value of x and t for this lottery. From concavity of v and linearity of u in t it follows that $Eu_i(\ell) < u_i(x^0, t^0)$ for all i, a result which we use in the proof of Lemma 2 where we show that the set of outcomes which are generally acceptable over freely negotiating the constitution is non empty and contain, in particular, the policy point where the expected values of x and t are offered. More formally, we define the set I of outcomes which are preferred by all players to the lottery of freely negotiating x and t, ℓ:

Definition 1 I is the set out feasible outcomes which are weakly preferred by all players to freely negotiating the constitution with associated lottery ℓ, i.e. $I = \{x, t \mid (x,t) \succsim_i \ell \text{ and } (x,t) \in \Im\}$, $i = L, M, R$.

Note that I has a closed graph. In what follows, we focus on the case where $1 > t^0 > 0$. The case where $t^0 = 0$ is trivial: R can enforce its preferred outcome in terms of income realization and the incentives for writing a constitution would be minimal. The case $t^0 = 1$ corresponds to a situation where L can enforce its

preferred outcome in the transition and R can do nothing about it. Again, incentives for writing a constitution would be minimal. In the intermediate range, the following lemma holds:

Lemma 2 *For* $1 > t^0 > 0$, *the set* I *is non empty and convex.*

Proof By concavity of v, at least the point x^0, t^0 must be in I. Because v is strictly concave, I is not vanishingly small, i.e. there is $\varepsilon > 0$ such that L strictly prefers to get $(x^0, t^0 - \varepsilon)$ with certainty over a lottery with expected outcome x^0, t^0. As M and R also prefer this point, it must be in I. By convexity of preferences and $\Im$, I is also convex. □

Ignoring the trivial case $t^0 = 0$, the result of Lemma 2 only hinges on the assertion that expectations over the outcome from freely negotiating the constitution take the form of a lottery ℓ which is common knowledge to all players. One possible way of consistently modelling a bargaining game which provides such a lottery is to assume that each party is given a chance to implement its preferred outcome with a probability P^j.[16] In the case where this opportunity arises, rationality dictates that the party imposes its preferred policy point. Thus, if L wins, the policy realization (t, x) is $(1, x^L)$, if M wins, the policy realization is $(1, x^M)$ for $w_M \leq \overline{w}$ and $(0, x^M)$ for $w_M > \overline{w}$ and if R wins, the policy realization is $(0, x^R)$. Thus, for party i, expected utility from freely negotiating the constitution is

$$V_i^0 = P^R v^i\left(x^R\right) + P^M v^i\left(x^M\right) + P^L v^i\left(x^L\right) + \left(1 - P^L\right) w^i + P^L \overline{w} \quad \text{if } w_M > \overline{w}, \tag{1}$$

$$V_i^0 = P^R v^i\left(x^R\right) + P^M v^i\left(x^M\right) + P^L v^i\left(x^L\right) + P^R w^i + \left(1 - P^R\right) \overline{w} \quad \text{if } w_M \leq \overline{w}, \quad \text{for } i = L, M, R. \tag{2}$$

We can modify pay offs by admitting a conflict cost K_i which is incurred if free negotiations take the form of open conflict. Without changing any of the results of this paper we may extend the model to cover the case where players form a priori-coalitions before entering conflict. For example, L and M may form a coalition against R and expect to realize a point on their contract curve if they win. Note that our model does not attempt to explain conflict but instead uses a conflict scenario to rationalize a settlement in the shadow of conflict.

2.2 Negotiating a Constitution in the Presence of c

Suppose a constitution c specifying a tax/policy combination (t, x) has been handed down by the autocrat. Moreover, suppose that a pre-determined set of players negotiates over constitutional reform or de-novo design of the constitution. This set of

[16] For other specifications, see Michalak and Pech (2012).

bargainers is determined exogenously to the model. In what follows we focus on the case where two parties bargain. Sections 3.1 and 3.2 discuss in greater detail special applications of the two party bargaining game. Section 3.3 gives an overview of the remaining cases. The different cases where one party is in a position to impose the constitution or all three parties bargain over constitutional reform are straightforward extensions of the two-party bargaining model.[17]

Once the pre-determined bargainers accept c rather than reverting to freely negotiating the constitution, c serves as the default outcome which prevails if the bargainers are unable to find an agreement on the reform constitutional draft. Recall, however, that any group in society still has the option to revert at any time to the non cooperative outcome.

We think of the bargaining procedure as taking the simplest form of a two player random proposer game where the proposer makes a take-it-or-leave-it offer to the other player. Let $\Gamma_{ij}(c)$ be a correspondence which assigns to each choice of c as possible outcomes for the bargaining game between i and j, the equilibrium proposals submitted by i as a proposer, $P_{i\to j}$, and submitted by j as a proposer, $P_{j\to i}$. Naturally, $i, j \in \{R, M, L\}$ and $i \neq j$. Note that $P_{i\to j}$ and $P_{j\to i}$ might be set valued although they turn out to be singular in our application. All our results hold under the assumption that the ex ante probability of making a proposal is strictly positive for each player in a coalition which is a mild assumption as it only requires to exclude the case where agents are predicted to have no bargaining power at all when they enter the coalition which bargains over constitutional reform.

If $c \in I$, $u_j(c)$ is the default utility which player j realizes when a proposal is rejected. Hence, each player i, when making a reform proposal to j, chooses for $P_{i\to j}$ a pair $(x, t) \in I$ which maximizes $u_i(x, t)$ subject to $u_j(x, t) \geq u_j(c)$. If $c \notin I$, rejecting a proposal results in implementing an outcome c which will ultimately be vetoed by at least one player. Hence, a rejection of a proposal when the default constitution is $c \notin I$ results in every agent realizing his or her continuation pay off from descending into conflict, V^0. By this device, players who stand to benefit from bargaining in the constitutional reform process have incentives to accept even constitutions outside of I. Yet, as the following lemma shows, in the static model with two players bargaining, the autocrat will choose a constitution in I whenever he has a strict preference over constitutions in I.

Lemma 3 *If there are two bargainers and the autocrat uniquely prefers a constitution $c^* \in I$, this constitution is strictly preferred over any constitution not in I.*

Proof By construction of $\Gamma(c)$, any $c \in I$ is strictly preferred to the default outcome at least by the players involved in constitutional bargaining. If $c \notin I$, a proposal can-

[17] We do not explicitly model elections but rather assume that the representatives of each group can secure support of their clientele. Relative strength of representation and voting rule in the assembly determine the set of effective coalitions in the assembly. Moreover, given the set of effective coalitions—which is non empty because the grand coalition always is effective—there is a clear prediction which coalition forms, independently of the default constitution. See Michalak and Pech (2012) for endogenous coalition formation.

not be rejected against c without precipitating conflict. With $c \notin I$, $\Gamma_{ij}(c)$ assigns i's and j's ideal points in I. For i and j a lottery on $\Gamma_{ij}(c)$ with non zero weights must strictly dominate the alternative of realizing the default outcome from conflict with certainty and rationality commands that they accept c. Note that by construction of $\Gamma_{ij}(c)$, $c \notin I$ does not constrain the proposer other than by requiring him or her to choose a proposal in I. Yet it constrains the responder in rejecting a proposal. If there uniquely exists a constitution $c^* \in I$ which is preferred by the autocrat when the choice of c is restricted to be in I, the autocrat must wish to constrain at least one proposer to select not the proposer's ideal point in I because he cannot agree with the outcome proposed by both proposers.[18] Hence, a constitution which does not constrain proposals, i.e. any constitution not in I, is strictly dominated by the constitution $c^* \in I$ which does. □

This lemma extends to the case where only one party dominates the reform process. The dominant party strictly prefers the constitution over its default outcome and the other parties at least weakly prefer a constitution over their default outcome. It also extends to the case of unanimity where all c in I are at least weakly preferred by all parties over the default outcome. In the remainder of the paper we consider I as the choice set of the autocrat and obtain unique optimal choices in the cases of Propositions 5 and 6. Using the lemma, we can conclude that these constitutions are also strictly preferred over constitutions which are not in I.[19] Proposition 7 considers a case where L dominates the constitutional assembly and no optimal constitutional choice exists in I. In this case, the autocrat may choose a constitution $c \notin I$. Yet for this case we find that the autocrat always ends up with his default outcome, hence the autocrat is not only indifferent with respect to which constitution to write but he is also indifferent between writing and not writing a constitution.

2.3 Optimal Constitutions

The way the bargaining game is set up, given c the two bargainers have incentives to realize a point on their contract curve or, if this violates $(x,t) \in I$ to realize a point on the boundary of I. The following proposition characterizes (strictly) optimal constitutions of the static game as stationary constitutions, i.e. constitutions which are not amended in the bargaining process:

Proposition 4 *When the autocrat can directly propose a constitution without incurring a cost, for any constitution c which is not stationary, i.e. for which* $\Gamma(c) \neq c$, *there exists a stationary constitution which is at least as good for the autocrat as c.*

[18] Recall that $x_R \neq x_M$, so even if M and R bargain and agree on t, they still disagree over x.

[19] In the case of Proposition 6 where L bargains with an M party in favor of redistribution the autocrat has a unique preference of $c \in I$ but the preference is only in terms of policy realization and, hence, of a second order magnitude.

Proof Define the Pareto-set $B_{ij}(c)$ for the bargainers i and j given the default constitution c. First suppose that $B_{ij}(c) \subset I$. In that case, proposals coincide with points on the contract curve, i.e. $P_{i\to j}$ maximizes u_i given $u_j(c)$ and $P_{j\to i}$ maximizes u_j given $u_i(c)$. If one proposal P includes a lower value of t than the other, the autocrat is better off by selecting this proposal P instead of c. Setting $c = P$ guarantees that each proposer has to propose c when this is the default outcome. If the proposals $P_{i\to j}$ and $P_{j\to i}$ include the same value of t, the autocrat is as well off if he selects either $P_{i\to j}$ or $P_{j\to i}$ instead of c.

Next suppose that $B_{ij}(c) \cap I \subsetneq B_{ij}(c)$. In that case, the constraint that the proposal has to be in I may be binding. Yet a proposal P maximizes the proposer's utility given that it is in $B_{ij}(c) \cap I$. Note that $B_{ij}(c) \cap I$ is convex. When L or M is proposal maker, preferences of the proposal maker are strictly convex and the optimal proposal is uniquely defined. If this point is selected as default, the constitution is stationary. If R makes a proposal the binding segment of the boundary of I is strictly convex unless it coincides with the $t = 0$-line.[20] In either case, R has a unique proposal which, if selected as default results in a stationary constitution[21] and we are left with three possibilities: a) In point P constraint $B_{ij}(c)$ is binding and I is not. This coincides with the case where $B_{ij}(c) \subset I$. b) Constraint I is binding and $B_{ij}(c)$ is not. In that case, with P the proposer realizes the highest utility in I. If the autocrat selects $c = P$, either proposer must propose point c when it is the default outcome. c) Both constraints are binding. This case coincides with case b). □

This proposition allows us to focus on stationary constitutions when looking for optimal constitutions for the autocrat when discussing the static constitutional choice problem. In the dynamic constitutional choice problem, the autocrat incurs a cost when committing to a constitution and, as shown in the proof of Proposition 9, Proposition 4 does not apply.

3 Static Constitutional Choice

In this section we derive the optimal constitutional choice for the autocrat if he believes that his demise is imminent. As we know from Lemma 3, any default constitution c will be accepted by the bargainers. Yet only if the constitution is in the set I, will it actually impact on the successor's decision other than by requiring them to propose amendments only in I. Hence we are going to focus on the autocrat's constitutional choice as the problem of picking a constitution from within the set I.

[20] To see that R's proposal is unique when the $t = 0$ line is binding, recall that by our assumption that R's preferences are lexicographic, R's preferred point on the $t = 0$-line is uniquely determined. Hence, the optimal constitutional choice coincides with this point.

[21] To see that the point $c = (0, x^R)$ is stationary when selected as default in the case where $t = 0$ is the constraint on R's proposal, observe that R as a responder will reject any proposal which does not coincide with c.

Finally, from Proposition 4 we know that we can focus on stationary constitutions, i.e. constitutions which the predecessors accept with no amendment.

3.1 *M and L Negotiate on Constitutional Reform*

Suppose it is known that after transition M and L negotiate over constitutional reform and suppose in particular that this is known to the autocrat when he writes the status quo constitution. From the perspective of the autocrat's clientele, the case where R is excluded as negotiator represents a worst case scenario. So it is not implausible that, when writing the constitution, the autocrat focuses on that scenario in order to provide insurance against its consequences.

During the Egyptian revolution it was widely expected that it was ultimately up to the street protesters and the Muslim brotherhood to negotiate the future constitutional compact. If we identify the Muslim brotherhood with its welfare goals as the L party and the street protesters with their middle class ambitions as the M party,[22] we can explore the possible impact which the choices of an initial agenda setter—be it Mubarak or the military—would have had on the outcomes which the other two groups could have obtained.

3.1.1 Case $w_M > \overline{w}$

Initially we suppose that the lower boundary of the set I intersects the vertical part of the contract curve between L and M. That the contract curve is a vertical line for $0 < t < 1$ is demonstrated in the appendix. In that case, the autocrat wants to choose c^* such that c^* coincides with the intersection of the lower boundary of I and the contract curve in Fig. 1. To see the latter point, suppose that the autocrat picks a constitution at a point such as z which also is on the boundary of I and corresponds to a lower tax t. As the boundary of I coincides with l^0, M must realize a lower indifference curve m_z. If L proposes, she will propose a higher tax at the point where the contract curve intersects with m_z. This comes with a higher tax rate. If M proposes, she will propose the point where l^0 intersects with the contract curve. Here the tax rate is the same as with c^*. Hence, as long as L proposes with positive probability, it is better to select c^* in the point where l^0 intersects with the contract curve.

We can exclude the case where the lower boundary of I intersects with the upper horizontal part of the contract curve (i.e. where $t = 1$) because this would imply $t^0 = 1$. So consider the case where the lower boundary of I intersects with the lower horizontal part of the contract curve (i.e. where $t = 0$). In that case, the autocrat may select any point on the horizontal part of the contract curve and he will choose to

[22] See Sect. 5 for a more detailed discussion of these claims.

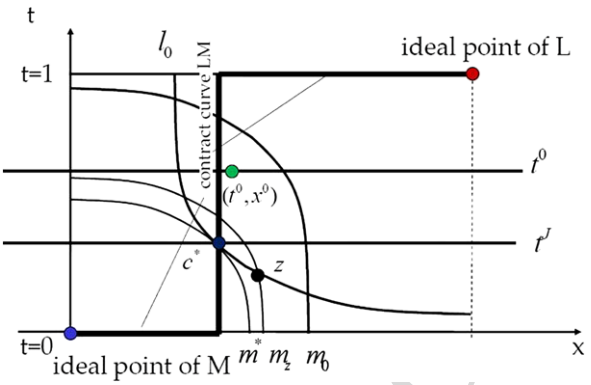

Fig. 1 Optimum constitution when L is expected to negotiate with M over reform and $w_M > \overline{w}$

select $x \in [x^M, x^L]$ as close as possible to x^R. The two negotiators will necessarily propose the default outcome c to each other. Naturally, also in the case where the optimal constitution involves $t^* = 0$, writing the constitution offers positive monetary value to the autocrat because $t^0 > 0$.

Proposition 5 *In the static model with L and M as bargainers and* $w_M > \overline{w}$*, the autocrat strictly prefers handing down a constitution. The monetary value of handing down a constitution is strictly positive.*

Proof See discussion above. □

3.1.2 Case $w_M \leq \overline{w}$

Next suppose that M has less than average effective wealth and, therefore, agrees with L on the ideal tax rate of $t = 1$. In that case which is illustrated in Fig. 2, negotiations between L and M will result in the maximum level of redistribution which does not violate R's participation constraint, i.e. the tax rate is $t = t^0$, independently of the status quo constitution. To R, who lexicographically prefers wealth, the monetary value of writing a constitution is zero yet he would still like to write a constitution in order to satisfy his policy preference with ideal point x^R. If writing a constitution is costly in terms of wealth, the autocrat prefers not to write a constitution.

Proposition 6 *In the static model with L and M as bargainers and* $w_M \leq \overline{w}$*, a constitution affects only policy but does not affect post transition wealth. Hence the monetary value of writing a constitution to the autocrat is zero.*

Proof See discussion above. □