



Discussion

Comment on: “Markets versus Governments” by Acemoglu, Golosov and Tsyvinski

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One of the oldest and most fundamental debates in economics pertains to the role of markets and government in the allocation of resources. There are two dimensions to this debate. The first is inherently *normative* and revolves around the question: What role should markets and governments play in the allocation of resources? The second dimension is motivated by the varied combinations of markets and governments observed in different economies. This leads to a series of *positive* questions: What factors can account for these different combinations of markets and governments? What is the role of political institutions and social preferences or culture in shaping the particular combinations that we observe? What are the properties of the allocations being implemented by these different arrangements? What are the resulting welfare implications?

This paper seeks to contribute to the normative debate and explores the conditions that make markets more desirable than governments. Since markets and governments are viewed as alternative allocation mechanisms, the outcome of this comparison depends crucially on the economic environment. Here, the presence of idiosyncratic risk in labor productivity implies that the ability to enable risk-sharing plays a key role in the ranking of markets and governments. This ability in turn depends on the particular way in which markets and the government are modelled.

There are many possible strategies to evaluate the comparative performance of different allocation mechanisms. One is to endow the economic environment with a primitive friction, such as private information or limited commitment, and ask how close the market and the government can get to the best allocation that can be achieved given that friction. This paper instead presumes that markets and the government are characterized by a different set of frictions. In the market setting, anonymity or lack of enforcement imply that the equilibrium allocation cannot in general sustain full risk-sharing. On the other hand, the government's ability to provide insurance is limited by two different frictions. First, individual abilities are private information. Second, the ruler is not benevolent and can appropriate rents. This approach implies that the comparison of markets and government boils down to a “race” between frictions. The resulting analysis teaches us about the properties of optimal allocations under different sets of frictions, but it is silent about the intrinsic comparative advantages of markets and governments. Since the issue of what government and markets *can* best accomplish is not addressed, the question of what role they *should* play in resource allocation remains open.

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I will proceed by describing the salient features of the environment and providing intuition for the main results. I will then offer some comments on the analysis and discuss the open questions.

1. Model and main results

The paper is part of the authors' broad agenda on the role of political economy distortions in the allocation of resources.¹ The economic environment draws from the literature on endogenously incomplete markets and dynamic optimal taxation with private information. Private agents are subject to idiosyncratic ability shocks that give rise to fluctuations in the disutility from labor. They are infinitely lived, have time separable preferences, are typically averse to risk and discount future utility at a constant rate.

Three allocation mechanisms are considered. Each mechanism can be represented as a set of constraints on the attainable allocations and for each mechanism the best resource feasible allocation subject to these constraints is derived. The first mechanism is *autarchy*. There are no markets and no trades between agents. Since there is no capital or storage, agents' consumption is given by their labor supply in each period. The authors refer to this arrangement as anonymous markets.

The second mechanism imposes a *self-enforcement* constraint on the allocation, following [Kehoe and Levine \(1993\)](#). The outside option for a deviating agent is a perpetual reversion to autarchy. The details of the trades and markets corresponding to this mechanism are not specified, but there is more than one market structure that will implement the resulting allocation.

The resource allocation mechanism that is referred to as *government* is more complex. It comprises a ruler who is responsible for the allocation of resources. Following the public choice school, the ruler is modelled as a malevolent Leviathan. The ruler's preferences are defined over a sequence of transfers extorted from private agents. She is risk averse, with coefficient of relative risk aversion σ_g , and discounts at the constant rate δ . The mechanism consists of a sequence of transfers to the ruler, as well as sequences of consumption and labor supply for each private agent. The ruler cannot observe individual abilities and in each period she can default and seize a fraction of output, η . This leads to two sets of constraints on the optimal mechanism. The sustainability constraint ensures that the ruler will not default, while a sequence of incentive compatibility constraints ensure that private agents do not lie about their type. Hence, the government mechanism is characterized by three frictions: the self-interested nature of the ruler, her sustainability constraint and private information on idiosyncratic abilities.

How can we interpret these arrangements? The implementation of the optimal allocation for each mechanism can in fact be decentralized for each of these mechanisms.² The authors' take is that the constraints associated with both market settings are particularly severe, so that risk-sharing is very limited. The purpose of the government mechanism on the other hand is to provide partial insurance subject to the private information. The price paid by society for this service is the sequence of transfers to the ruler. This interpretation seems rather arbitrary. There is no reason to conjecture *ex ante* that the constraints on risk-sharing from anonymity or self-enforcement should be more or less severe than those imposed by private information and sustainability. Indeed, the paper's findings defeat this logic. Yet, this presumption shapes the analysis and I will follow this interpretation.

1.1. Results on governments

The program associated with the government mechanism can be split in two stages. The first stage, which the authors refer to as quasi-Mirrlees problem, corresponds to the choice of individual allocations subject to the individual incentive compatibility constraints, given aggregate consumption and labor. The second stage maximizes aggregate welfare by choice of the aggregate consumption, labor and capital subject to resource

¹See [Acemoglu et al. \(2006, 2007\)](#).

²The decentralization under autarchy is trivial, since it involves no markets or trades. The self-enforcing markets allocation can be decentralized with endogenous debt constraints, as in [Kehoe and Levine \(1993\)](#), or with linear taxes as in [Kehoe and Perri \(2004\)](#). The government mechanism can be interpreted as a private information economy with *ex ante* heterogeneous agents, the ruler and private agents. The optimal allocation can be implemented with a system of nonlinear taxes, as in [Albanesi and Sleet \(2006\)](#) and [Kocherlakota \(2005\)](#), and linear taxes on aggregates to finance the ruler's consumption.

feasibility and the ruler's sustainability constraint. A key assumption in the analysis is that individual histories of consumption, labor supply and productivity shocks are private information. The restriction to private histories amounts to double sided lack of commitment in the first stage. If individual histories are private, the ruler is prevented from intertemporally smoothing the distortions that result from the binding incentive compatibility constraints. This fundamentally alters the nature of the optimal individual allocations. The *intertemporal* wedge that typically arises under private information will not be present but *intra*temporal distortions, that is limited consumption insurance and the wedge between the marginal rate of substitution between consumption and labor and productivity, will be greater in magnitude. In other words, the restriction to private histories effectively translates into an additional friction imposed on the government. I will discuss the role of this assumption for the comparison between the government and markets in more detail in Section 2.

How do we evaluate the performance of the government? It turns out that there is a simple metric that can be used, based on the “no distortions at the top” principle. According to this principle, which holds very generally in private information economies, there should be no wedge between the marginal rate of substitution between consumption and labor and productivity for the most productive agent. This result stems from the pattern of binding incentive compatibility constraints under the single crossing condition. The consumption/labor allocation is distorted for the low productivity types to make it unattractive to the higher types. Since no other agent can mimic the highest productivity type, it is not optimal to have such a distortion at the top. Then, a deviation from this principle can be attributed to the self-interested nature of the ruler and the associated sustainability constraint.

The economy always starts off with an aggregate distortion in all non-trivial cases. Output is lower as a result, which limits the rents extracted by the ruler. The aggregate distortion persists only if the ruler is sufficiently impatient. Instead, if the ruler is weakly more patient than private agents, the sustainability constraint eventually stops binding and the aggregate distortion disappears. The key to this result lies in the fact that the ruler's sustainability constraint can be relaxed by promising higher transfers in the future. This is general property of sustainable mechanisms, as shown by Ray (2002), and translates in this context in a prescription for back-loading transfers and front-loading distortions. Albanesi and Armenter (2007) show that in this class of models the sustainability constraint will eventually become non-binding if the ability to transfer resources and distortions intertemporally is sufficiently unrestricted. Imposing a stationarity restriction on the mechanism obviously constrains this ability. Not surprisingly, the aggregate distortion never disappears in a stationary sustainable mechanism.

1.2. Comparison of markets and governments

The results on the government are well known from the authors' previous work and from the literature on sustainable mechanisms. The main focus of the paper is the comparison between the government mechanism and the two forms of so called market mechanisms. The first set of findings pertains to the outcome of this comparison as a function of the government's characteristics. A second set of results concerns the role of idiosyncratic risk and private agents' risk aversion.

The three key parameters that determine the degree of inefficiency associated with the government mechanism are the ruler's discount factor, δ , the coefficient of relative risk aversion, σ_g , and the parameter η , which represents the fraction of resources the ruler can appropriate in case of default. A high value of δ reduces the severity of the sustainability constraint, as previously discussed. The other two parameters play a similar role. If the ruler is very risk averse, that is σ_g is high, or if η is very low, the punishment associated with default is more costly. Hence, high values of σ_g and low values of η reduce the severity of the sustainability constraint. Then, the government wins the race with markets for sufficiently high values of δ and σ_g , and sufficiently low values of η .

These intuitive results lead naturally to the following question: Why should society take δ , σ_g and η as given? Let's first consider the ruler's preferences. Obviously, if private agents could ex ante choose, they would appoint a ruler with high δ and σ_g , following Rogoff's (1985) conservative central banker logic. Here, private agents formally appoint and can dismiss the ruler if she defaults. They never will in equilibrium, however, simply because the potential rulers are all the same! This raises the question of whether the particular version

of the Barro–Forejohn electoral accountability model adopted here is a plausible representation of political economy constraints. As emphasized by Wittman (1989), effective political competition among heterogeneous potential rulers can generally bring large efficiency gains. Enriching the model along this dimension would certainly add realism and relevance to the analysis.

Similar considerations hold for the parameter η . The authors favor a broad interpretation of this variable to capture all forms of institutional constraints that enable the ruler to run away with some resources. While intuitively appealing, this stand is problematic given that by setting $\eta = 0$ society could minimize the sustainability constraint. What prevents private agents from adopting institutions that insure $\eta = 0$? Addressing this issue would be an important step in giving substance to the normative analysis. What does exactly does η capture? Leaky bucket bureaucracies? Vested interests and institutional entitlements? Culture or social norms? A tighter interpretation of η could also address some positive questions and make the link with the empirical comparative political economy literature. See Persson and Tabellini (2000, 2004) and Tabellini (2007).

The results on the role of risk and risk aversion in the comparison between markets and governments hinge on the fact that the degree of insurance is endogenous under self-enforcing markets and under certain conditions the market allocation can implement the first best. When risk and risk aversion are high, the punishment associated with default is particularly severe leading to more risk-sharing in equilibrium. For sufficiently high values of risk or risk aversion, the first best can be attained. Similarly, if the utility of zero consumption is $-\infty$ and the lowest value of the ability distribution is exactly zero, default is infinitely costly. Once again, this enables the market allocation to implement the first best. Risk-neutrality is another case in which markets implement the first best, as the lack of insurance is inconsequential. Since the government mechanism can never implement the first best for $\eta > 0$, self-enforcing markets are clearly preferred in these cases. This leads in general to a non-monotone relation. For low and high risk and risk aversion, self-enforcing markets do better than the government, while at intermediate values of risk and risk aversion welfare is higher under the government mechanism. The analysis is conducted for a special case in which all information is public in the government mechanism. Hence, the government mechanism features full insurance and the purely aggregate distortions exclusively stem from the ruler's sustainability constraint. Obviously, welfare under the government mechanism will be lower when the private information friction is also present, thus making the case for markets even stronger.

A similar non-monotone comparison arises for autarchy but it is driven by a very different logic. Here, the amount of exposure to risk in the market allocation is exclusively determined by the distribution of abilities and there is no insurance. A rise in risk or risk aversion reduce welfare directly. The outcome of the comparison hinges on how much insurance is provided by the government mechanism and how the transfers to the ruler vary with risk and risk aversion. The results crucially depend on the structure of preferences. If there are no income effects on labor supply, a rise in risk or risk aversion does not influence output. Hence, as risk or risk aversion rise, utility under autarchy declines and government are eventually preferred. If preferences allow for income effects, higher risk or risk aversion increase output, which in turn increases the size of the transfer extorted by the ruler. This property leads to a non-monotone relationship in the comparison between autarchy and the government. As risk or risk aversion rise, the welfare gain from the government mechanism initially rises, but eventually the costs associated with the ever large transfer extracted by the ruler prevail, and the welfare gain declines eventually becoming negative.

The welfare comparison between markets and the government depends on the ruler's preferences and on the value of η . If the ruler is perfectly patient and cannot extract any resources in case of default, that is $\delta = 1$ and $\eta = 0$, the government mechanism would win the race with markets with public information as long as private agents are risk averse. With private information, the comparison between markets and the government will depend once again on risk and risk aversion. How do markets fare in the race with the best type of governments? The authors neglect this case and this question remains unanswered.

2. Discussion

What have we learned from the analysis? There are two simple lessons. First, the type of government and the economic environment are critical in the comparison between markets and governments. Second, the

performance of the government, as modelled here, depends crucially on whether it is possible to shift distortions intertemporally in order to relax political economy constraints.

The analysis suffers from two main weaknesses. The first is the arbitrariness of the notion of government and markets. In fact, the authors are comparing the properties of optimal allocations constrained by two alternative sets of frictions, self-enforcement/anonymity versus ex ante heterogeneity and private information. Both the market mechanism and the government mechanism can be decentralized. The labeling of one mechanism as “market” and of the other as “government” seems arbitrary absent a theory of why self-enforcement constraints are more relevant with markets, while private information and sustainability constraints are more relevant with a government.

The second weakness is that neither the government nor markets are given their best chance. Let’s consider the government first. Two crucial assumptions for the analysis are private individual histories and the absence of aggregate risk. The private histories assumptions dramatically simplifies the analysis, allowing for some analytical results. However, if individual histories were public, the ruler could optimally smooth idiosyncratic distortions over time and thus attain a higher level of welfare, even with private information on idiosyncratic characteristics. Similarly, since the ruler and private agents have different attitudes toward risk aversion, it would be possible to share aggregate risk and improve welfare when the ruler is less risk averse than private agents. Without aggregate risk, agents prefer a more risk averse ruler because that reduces the value of default, other things equal. With aggregate risk, this result as well the outcome of the comparison of markets and the government may well be overturned. Finally, the market allocation mechanism does not contemplate the possibility of private insurance contracts. Yet, in a competitive setting, with private information as the only distortion, the zero profit restriction implies that the second best allocation could be implemented, with no rents extorted by a third party.

The dichotomy between markets and government also seems excessively forced, given that this analysis as well as previous work in this area point to possibly large gains from *combining* markets and governments. Let’s take the case of autarchy. We have learned from the incomplete markets literature that, if idiosyncratic productivity shocks are not too persistent, a lot of the gains from complete insurance can be attained by self-insurance, that is agents smoothing consumption by borrowing and saving through a risk free asset. Suppose the government is simply an entity that supplies such an asset. Given the minimal scope of government activity under this arrangement, the potential for political economy distortions would be minimized. Now let’s take the case of self-enforcing markets. It is standard practice to endow the government with enforcement powers. For example, the government has the ability to enforce tax payments.³ Why cannot the government simply enforce contracts on behalf of private agents?

Recent work has studied the complementarity between markets and governments in resolving frictions leading to incomplete insurance. This approach could be fruitfully applied to the main question in this paper. For example, [Bisin and Gottardi \(2006\)](#) suggest that the government can play an essential role in the creation and design of markets. [Kocherlakota \(1998\)](#) and [Green and Zhou \(2005\)](#) point to the government’s natural advantage in record-keeping. Finally, many papers, including implicitly this one, envision a role for the government in contract enforcement. Of course, the interaction between governments and markets does not always lead to desirable outcomes. [Krueger and Perri \(2005\)](#) and [Golosov and Tsyvinski \(2007\)](#) study environments in which the government can crowd out the market’s ability to provide insurance. [Bisin and Rampini \(2006\)](#) provide a series of examples in which markets can effectively restrain an uncommitted government. If anything, these negative results reinforce the interest for a general theory of the interaction between markets and the government.

The analysis seems to leave the most pressing normative questions unresolved. What is the essential role of the government? What is the essential role of markets? To begin to answer these questions, one must identify dimensions of intrinsic comparative advantage for the government. Two uncontroversial ones are governments’ enforcement powers and the naturally exclusive nature of the relationship with their citizens—typically, we are only subject to one government. A third dimension may be the government’s better ability to monitor and keep records, perhaps due to increasing returns to scale in these activities.

³Enforcement powers would be needed for a decentralized implementation of both the market and the government allocation mechanisms.

The normative challenge for future work resides in providing a theoretical foundation for the government's intrinsic comparative advantages.

Can this analysis help to rationalize the different combinations of markets and government that are observed around the world? I believe the results on the role of government characteristics in the comparison with markets could be fruitfully brought to bear on this positive question in the spirit of the comparative political economy literature.

These open questions point to an exciting agenda for work to come.

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