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Gender and the Agency Problem

Is it good for a firm to have a female CEO? Are countries with more female politicians less corrupt? An increasing attention to female representation in key roles in society has called for research exploring the outcomes and implications of such representation. A useful approach to investigate the impact of gender in such contexts is the so-called principal-agent framework which studies situations in which one party acts on behalf of another party. The idea is that the gender of participating parties is likely to affect motives, behavior and outcomes, predicted by the principal-agent framework. This brief reviews the use of the principal-agent framework for analyzing the effect of gender in two important areas of research: corporate finance and corruption. It outlines postulated theoretical channels for gender to matter, summarizes empirical findings and points to some of the policy challenges.

Increasingly, arguments in favor of more women in key positions are being put forth in society. Many European countries have by now introduced gender quotas for corporate board participation, with Norway being the first one to mandate a quota of 40% female board membership in late 2003. The United States joined the trend in 2018, with California being the first state to require women on corporate boards. The 2019 share of female CEOs in Fortune 500 companies is 5 %; while this number sounds very low, it is twice as high as a decade ago. Women's presence in politics and bureaucracy is also increasing in many countries worldwide.

This tendency is clearly positive news in the fight for more gender equality, and it is likely to improve the position of women in the society. However, its implications for other economic and societal outcomes are not immediately clear. For example, is a more gender-balanced board or a female CEO good news for company performance? How would female politicians affect policy and societal outcomes?

One useful approach for answering such questions is based on the so-called principal-agent framework (developed to study what is known as "agency problems"). This framework, widely used in economics, political science and other related disciplines in the last half century, addresses the problem of incentivizing one person (referred to as an "agent") to act on behalf of another person or entity (referred to as a "principal"). Many situations in real life are well described by this basic framework and it has been used in a wide range of different contexts, from relationships within a firm, or between a lawyer and her client, to insurance, real estate, policy choices by elected officials or appointed bureaucrats, and even situations involving corruption.

The relevant question is then whether, and if so, how, the gender of the agents can affect motives, behavior and outcomes, predicted by the principal-agent framework. This brief will focus on two main areas of studies within gender economics that use agency theory to motivate their findings: the role of gender in corporate governance, and in corruption. The brief will outline the theoretical channels through which the gender of the actors may act in these contexts, summarize the empirical findings of this literature, and shortly comment on policy implications. While the focus on two areas only may seem to be relatively narrow, it will allow identifying a number of common gender effects across the contexts, which may suggest implications for the other potential applications of the approach.

The basic principal-agent framework

Effectively any situation in which one party acts on behalf of another party for monetary or non-monetary compensation can be analyzed within an agency framework. A typical feature of such situations is that the parties have different objectives: for example, the board of the firm (the principal in this case) would be interested in maximizing the firm value, while the CEO (the agent) would probably be more concerned about her personal compensation. This difference is not necessarily problematic per se as long as the principal can get the agent to act as the principal wants. However, if parties do not have the same information – which is typically the case in the reality – the misalignment of their objectives becomes an issue.

Two main problems may arise in such situations. The first one is referred to as the problem of hidden action (moral hazard) – that the agent is likely to act in line with her own objectives, rather than in the principal's ones. This is likely to occur as long as her effort cannot be perfectly monitored by the principal. For example, shareholders typically cannot directly attribute the evolution of the firm's value to the actions of the CEO, which may result in the CEO making decisions that are, for instance, too risky from the firm's value maximization perspective. The second one is the problem of hidden information – when the agent is better informed about the issues at stake than the principal, which again may result in the agent not acting in the best interest of the principal. For example, shareholders may have a poorer knowledge of the market than CEO, which may result in the CEO making decisions maximizing her own compensation rather than the firm's value.

To lessen the extent of these problems, one needs to think of the spectrum of tools/decisions under the agent's control, as well as of the design of her compensation schemes so as to align her private objectives with those of the principal. For example, to motivate a CEO to behave in the interests of shareholders, his/her compensation package typically includes company stock options. In some cases, the way to provide better incentives for the agent is to delegate more decisions, allow her more discretion and link her compensation closely to the outcome of her actions. One possible example of such a mechanism is franchising: on average franchisees retain about 94% of franchise profits, which would make them very motivated to achieve good franchise performance. However, the cost of high incentivization is the potential misuse of decision power, especially if the set of the decisions for an agent to have control over is not chosen wisely and if sufficient alignment (or intrinsic motivation) is not achieved. Another obstacle when implementing the principal's preferred outcome is the trade-off between agent's incentivization and risk aversion. The agent is typically seen as more risk-averse than the principal (for example, firms' shareholders would typically diversify their risks by investing in a number of companies, while the CEO's main source of income would be associated with the company she manages). As a result, the agent may avoid undertaking the principal's value-maximizing actions because of the risks associated with them.

The bottom line of this discussion is that the task of incentivizing the agent may be difficult, and the principal's best-preferred outcome may not be achievable.

Gender and the agency problem

There are many twists and modifications of the basic framework described above aimed at better modelling the specific problem at hand. One particular feature of the principal-agent relationship that has received increasing attention in the literature is the gender of the participating parties. The main strands of this literature have studied the relevance of gender for corporate governance and corruption.

Gender and corporate governance

The corporate governance part of the literature focuses on the impact of the gender composition of the board of directors or of the gender of the CEO on firms' (or banks') performance, risk-taking, capital allocation decisions, firm reputation etc. One standard approach to this set of questions is to consider the principal-agent relationship between the agent – the CEO – and the principal(s) – the board of directors (and sometimes other firm stakeholders) - and ask how, and why, the gender of either party may affect the relationship between them and the outcomes of this relationship.

There are several channels suggested by the literature. First, women and men may have different personal characteristics – such as risk aversion, level of confidence or ethical values (though there is not necessarily agreement on the direction of the difference: while most studies argue that, on average, men are typically more overconfident than women (e.g., Barber and Odean, 2001; Lundeberg et al., 1994), there is no consensus about risk attitudes – e.g., Jianakoplos and Bernasek (1998) or Croson and Gneezy (2009) show that women are more risk-averse than men, while Adams and Funk (2012) document the opposite). These differences in personal traits may affect the decision-making of a board/CEO in an incomplete-information environment and ultimately the firm's performance.

Second, women and men may face different employment opportunities in case they lose their job, which, again, is likely to affect their decision-making and risk-taking (e.g., Faccio, Marchica and Mura, 2016).

Third, more gender-diverse boards may better reflect the preferences of (gender-mixed) firm stakeholders; in terms of the agency theory this would imply more aligned interests between the principal and the agent. It may matter because mixed-gender groups (and, by implication, boards) may exhibit different decision-making processes than same-gender groups, which, again, may introduce frictions into the agency relationship (e.g., Amini et al., 2017 or Van Knippenberg and Schippers, 2007).

Finally, the gender composition of the board may matter because female board members may improve monitoring over the actions of the CEO, since they are more independent not being part of the same "old boys'" social networks as the male members of the board and the (male) CEOs (Adams and Ferreira, 2009).

Empirically, this literature is largely inconclusive: while the majority of studies does find that the gender of the firm's decision-maker(s) matters, the sign of the effect differs between studies, datasets and specifications. For example, based on a US sample of firms, Bernile, Bhagwat and Yonker (2018) find that more gender-diverse boards lead to lower firm risk, and better performance. In turn, Adams and Ferreira (2009) document negative effects of more diverse boards on performance. Sila et al. (2016) find no relation between board gender diversity and risk. Similarly ambiguous are the findings on the effect of CEO's gender on firms' performance, as measured by risk exposure, capital allocation, propensity to acquire, business strategies etc.

One possible reason for this variability of findings is the endogeneity of the presence of female CEOs/board members and firms' outcomes, which is difficult to account for empirically (Hermalin and Weisbach, 1998; Adams et al., 2010). For example, female CEOs may self-select into firms with lower risks due to their own risk-aversion. Alternatively, corporate culture may affect the relationship between the gender of the CEO/board members and firm performance, etc. (see Adams, 2016 for an overview of this problem). There has been a number of attempts to address the causality/endogeneity issues in this context. For example, Bernile, Bhagwat and Yonker (2018) and Alam et al. (2018) exploit variation in the gender composition of boards created by the diversity of potential directors residing a non-stop flight away from the firm headquarters. Their motivation is that the personal travel costs of directors decrease with the availability of non-stop flights. Faccio et al. (2016) attempt to resolve the endogeneity issue by proxying the likelihood of hiring a female CEO by a measure of how many other firms that share board members with the firm in question have female CEOs. The idea there is that working with female CEOs in other firms may make board members more familiar with working with female executives, and more willing to hire a female CEO in the firm in question. A subset of the literature exploits reforms introducing gender quotas in corporate boards. These studies argue that the reforms are introducing an exogenous variation in the proportion of mandated changes in board gender composition – firms with more women in the board prior to the reform would need less adjustments to comply with the reform (see, e.g., Bertrand et al., 2018 for a state-of-the-art example of such an approach). Still, the endogeneity concern remains very valid for this literature. A recent literature overview by Kirsch (2018) or somewhat more dated, but still be relevant one by Terjesen et al. (2009) can be a good starting point for more detailed information on this field.

Gender and corruption

Similarly, there is a sizeable literature of gender aspects of corruption. This literature addresses a variety of topics, including the impact of corruption on women and gender inequality, gender-associated forms of corruption, and most importantly for us in the current context, gender attitudes and behavior towards corruption. One of the predominant theoretical mechanisms in this literature, again, uses agency theory. The main difference to the version of agency theory applied in the corporate governance case above is, perhaps, that in the case of corruption there is not always a clear pattern of subordination between the principal and the agent. More specifically, the principal for a (potentially corrupt) agent official may be either a higher-level official, or the direct recipient of her services or the electorate in general (of the agent official is elected). However, just as in the corporate governance literature, the gender vs. corruption literature asks the question how the outcome of an interaction between the principal and the agent would be altered by the gender of either party. It argues that women may behave differently from men in a corrupt environment through a number of channels, most of which resemble the ones in the corporate governance literature outlined above.

For example, gender differences in behavior and attitudes to corruption may be due to of personal traits, such as risk aversion or gender-specific conformity with social norms (e.g., Esarey and Chirillo, 2013 suggest that women are more likely to conform to the local social norms, so they are less likely to engage in corruption in an institutional environment where corruption is condemned, than in the societies when it is more accepted).

These differences may be due to differences in outside options of the corrupt official in case corruption gets detected (such as alternative employment opportunities). They may also be due to women not being part of business/political network(s), or having less experience in how things are done in decision-making positions. This could make them better monitors when they are in a principal role, or less able (or willing) to engage in corruption when in the role of agent. Thereby, it may result in a negative link between women in government and corruption, but only a short-term one (e.g., Pande and Ford, 2011). However, Afridi et al. (2017) argues for an opposite view, that a newly appointed female bureaucrat's lack of experience may increase corruption due to inability to handle matters efficiently. Their empirical results indeed support it: in India newly appointed female council heads are less efficient than male ones due to lack of experience; this efficiency gap also includes higher corruption levels in female-led villages. With time, as the female council heads gain experience, the difference disappears.

As can be expected, empirically this field is again not entirely conclusive. The early empirical research suggested a negative link between gender and corruption, or, more specifically, found that a higher presence of women in government is associated with lower levels of corruption (e.g., Dollar, Fisman, and Gatti, 2001 or Swamy et al., 2001). However, there has since been a wide discussion about the causal mechanisms of this relationship. One of the arguments has been that this correlation is due to institutional mechanisms: greater representation of women in power is observed in a more developed institutional environment, which is also providing more effective checks on corruption (e.g., Sung, 2003). Still, the discussion is ongoing, as other scholars argue that the relationship is still in place even after controlling for the institutional factors, though not in all power positions (e.g., Jha and Sarangi (2018) show that female presence in parliament decreases corruption while other measures of female participation in economic activities have no effect). There is certain evidence of female bureaucrats being less aggressive in extracting bribes (Dabalen and Wane, 2008) or female business owners paying less bribes (Breen et al., 2017), but the determinants and the causal relationship of these findings are again, unclear.

There has been a number of attempts to resolve the causality issue of the gender-corruption link. Similarly to the corporate governance literature, researchers have used an instrumental variable approach (e.g., Jha and Sarangi (2018) use number of genders in a country's language to instrument for female labor force participation, as it has been shown that gender discrimination is higher in countries where the dominant language has two genders as opposed to countries where it has no gender or three or more genders. The same authors use the year of universal suffrage to instrument the female participation in parliament). Unlike in corporate governance literature, a large part of this literature uses experimental approach, relying both on lab experiments to study gender attitudes to corruption (e.g., Rivas, 2013), and natural experiments (Afridi et al., 2017 study the reform in India that randomly allocated a third of council headship positions to women) and quasi-experiments (Brollo and Troiano (2016) look into close elections in Brazil and use a regression discontinuity design to show that female mayors are less likely to be corrupt). A useful overview of the literature is offered in Rheinbay and Chêne (2016).

Summing up and policy implications

There is an active public and academic debate about the greater involvement of women in key positions in society, its implications and outcomes, and potential policies to achieve it. A natural way of analyzing the implications of having more women in strategic positions utilizes the principal-agent modelling approach, with the presumption that the gender of the parties is likely to affect the model's predictions and outcomes. A substantial attention in this literature has been devoted to the impact of gender in corporate governance and corruption. Importantly, these two strands of literature outline several common channels through which gender is likely to have an impact, such as risk aversion, outside opportunities in case of losing employment, etc. This similarity suggests that the same channels are likely to play a role in other gender-relevant agency contexts.

Another similarity between these two areas of research is the ambiguity of the results in terms of both theoretical predictions and empirical findings. One possible source of this ambiguity is, likely, suboptimality of the empirical methods used, which might not allow to adequately establish the causal relationship between the characteristics and outcomes of the agency relation and gender of its participants. Differences of the contexts of the empirical studies are another probable contributor to the variation in predictions and results.

However, this ambiguity obviously does not mean that policies to empower women should not be undertaken at all. First, even if the results of a particular narrowly-targeted policy are so far found to be ambiguous, it may still be highly useful in changing social norms, with all the benefits attached to it. For example, there is no sufficient evidence that establishing gender quotes in corporate boards would improve firms' performance. For example, Ahern and Dittmar (2012) find that introduction of quota in Norway had a negative effect on Tobin's Q. However, a quota reform in Norway resulted in the appointment of better qualified female board members and raised the career expectations of younger women post-reform (Bertrand et al., 2018). Second, this ambiguity stresses that there is no universal "silver bullet" policy applicable to all countries and contexts: the design of policies that address gender inequalities, as any other policy, needs to carefully account for the local institutional and cultural context. Further, recent contributions to this literature has become much more informative for the policy makers. An active development of this field and its methods suggests that we are about to learn much about the role of gender and other compounding factors in the above contexts. In other words, modern informed gender policy is just around the corner.

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