Markets in political influence: rent-seeking, networks and groups

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Abstract

Mainstream economic theories of rent-seeking and interest groups typically ignore the parallel, yet highly relevant, streams of research on social networks and groups. Incorporating these broader social and psychological theories into economic models of rent-seeking appear to be a promising avenue for developing an integrated theory of the market for political influence that predicts many of the observed stylised facts, and can better inform policy makers. Such a theory has the potential to predict the often conflicting findings of empirical studies - such as significant underinvestment in rent-seeking, loyalty of political donors and recipients, and the variation in the prevalence of the 'revolving door' across industries.

This review highlights the shortcomings of basic rent-seeking theory and analyses how network and group concepts can improve the alignment between theory and evidence. Directions in research and policy analysis based on an integrated model are discussed.

1 Is political influence for sale?

Economists generally answer with a resounding 'yes'. Since Tullock (1967) and Krueger's (1974) pioneering articles, the idea that there is a market for political influence that generates a cost to society has been well established in the economic literature.

But economists are just a small subset of the social scientists seeking to understand the nature of political influence. The two other major areas of research are in sociology and psychology.

In sociology, the idea of social networks provides an important framework for analysing relationships between politicians, industry groups, lobbyists, and other personal and professional contacts. While social psychologists understand that *in-group favouritism* generates social behaviour that contradicts basic economic assumptions of individual rationality. Sociologists and psychologists would not so easily profess that political influence is for sale, let alone operating in a competitive market with specific prices reflecting the marginal benefits and marginal costs at which political decisions can be bought.

This review identifies the limitations of the economic approach, seeking to understand how alternative approaches may be synthesised into a rigorous framework to better understand the costs and benefits arising from the operation of this market. An exhaustive review of the literature is unnecessary, and this paper is not intended to fulfil this purpose. Sufficient coverage of relevant concepts demonstrate the benefits of core principles from each field to an integrated approach. Recent research blending these approaches is briefly examined.

Additionally Appendix A provides a dictionary of terms used in to describe activities that take place in the market for political influence.

2 A perfect market vision

In political science, *pluralism* captures the idea of multiple group interests competing to influence political decisions. This ancient past-time has been extensively studied in political science, but it was not until 1965 that these principle were proposed in economic terms by Mancur Olson (1965), and then in an economic journal by Tullock (1967), and again independently by Krueger (1974). It took a decade before economists generally focussed their minds on this problem, and the 1980s saw a boom in theorising about political markets in economics terms, becoming an independent field of study under the banner of 'Public Choice Theory'.

As Mitchell and Munger (1991) note, by the time of their writing economists had been extensively theorising about *pluralism* under 'such arcane terminology as "rent-seeking", "life among the triangles and trapezoids","DUP, or directly unproductive profit-seeking", and "optimal tariffs with revenue-seeking".' Since rent-seeking models adopt primitives consistent with pluralism, these areas are considered together.

What are these primitives? They consist of self-interested and perfectly informed individuals, known established interest groups, and government acting as an allocator of rents, while "[p]oliticians and bureaucrats are assumed to carry out the political allocations resulting from the competition among pressure groups." (Becker, 1983). The competitive market stems from the observation that "[i]n all societies virtually an unlimited number of pressure groups could form to lobby for political aid to their members." (Becker, 1983).

Tollison (1998) describes the fundamental theory as follows:

> Government activities are viewed as a process in which wealth or utility is redistributed among individuals and groups. Some individuals and groups are effective at organizing and engaging in collective action such that they are able, for example, to organize for less than a $1 in order to procure $1 of wealth transfers. These individuals and groups are net demanders of transfers. Other individuals and groups are in the inverse position – it costs them more than a $1 to avoid giving up a $1. Rational behavior dictates that this second group of individuals will be net "suppliers" of transfers. The institutional framework of representative democracy and its agents represent the means of facilitating wealth transfers, that is, of pairing demanders and "suppliers" efficiently. There exists an equilibrium level of transfers in this theory, with deviations being mitigated through elections.

Under the banner of rent-seeking, economists have considered the market for political influence to operate much like a lottery or tournament (to take just one recent example, Alcalde and Dahm (2010)). Full rent dissipation, or the expenditure equal to the value of Tullock's rectangle in Figure 1 is generally the predicted equilibrium outcome. While many variations of rent-seeking games exist with lower predicted rent-seeking expenditure (such as Menezes and Quiggin (2010)), it would be difficult to find any that account for the observed empirical evidence of such minimal expenditure on lobbying or political donations.

Economic theory does provide a framework for determining welfare costs arising in the market for political influence. In the market model, favourable policy in the form of monopoly power enables a reduction of output and an increase in price compared to the competitive market outcome. In Figure 1 we see the downward sloping demand curve, with the competitive market price and quantity, C and Q, and the monopoly price and quantity, MP and QM. If a government decision involves the possibility of creating such a monopoly through regulatory restrictions, the winners from this regulation would rationally invest in rent-seeking activities up to a cost represented by a portion of the whole rectangle between the MP and C lines, or Tullock's rectangle. If the market for rents in competitive, a value equal to the whole rectangle will be wasted on rent-seeking activities.

Total welfare costs come in two forms: Tullock's rectangle, or losses arising from resources diverted

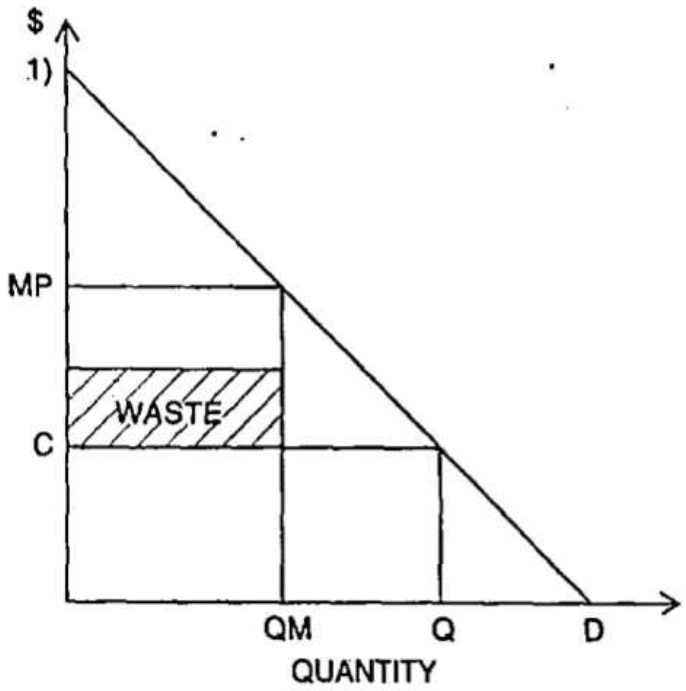

Figure 1: *Tullock's rectangle and Harberger's triangle Tullock (1997)*

from productive activities to rent-seeking activities, *rent-seeking costs*, and the efficiency loss arising from constricting the production frontier and growth prospects through sub-optimal allocation and regulation that results from rent-seeking, or *growth costs* [1]. Theories of rent-seeking have little to say about *growth costs*, which were first explored in detail by Murphy et al. (1993). Indeed, rent-seeking theories do not predict any particular relationship between the size of rent-allocations (the shift from Q to QM in Figure 1), the scale of *rent-seeking costs*, and size of *growth costs*, even if intuitively they may be related in some circumstances but not others. For example, it is possible that easily persuaded politicians would provide large rents for low *rent-seeking costs*, which may have relatively low *growth costs*.

3 Puzzling deviations from the market

Theoretical developments in rent-seeking have failed miserably in any predictive capacity. The empirical evidence against these basic models is extensive.

3.1 A free lunch?

Tullock (1997) laments that the actual rent-seeking costs appear much lower when one actually tries to measure them. He states "We now have various statistic on lobbying activities, etc. They are not complete, but they show actual expenditures which are trivial compared to the size of the gain." In a recent survey of the empirical literature, Del Rosal (2011) finds estimates of *rent-seeking costs* are often zero, and methodological problems plague the much higher estimates.

[1] The static representation of this efficiency loss is the 'Harberger' triangle in Figure 1 formed by the lines MP, QM and D. However the possibly larger long run costs in terms of reduced growth are not captured in the static model.

Theoretical developments treating rent-seeking as a deterministic contest show that the increasing asymmetry of information among contestants for rents reduces competition and *rent-seeking costs* (Kirkegaard). Yet this assumption requires further explanation. What mechanism sustains this information imbalance? Why doesn't a market for information emerge given the enormous returns available?

Others argue that uncertainty and risk-aversion explain low rent-seeking costs (Treich, 2010). If outcomes are uncertain, risk-averse agents will fail to invest an optimal amount in rent-seeking activities. This explanation relies on a finite number of risk-taking agents, and relies on information failures. If risk-averse agents know others are underinvesting, this increases their certainty of a pay-off. A better explanation is needed.

3.2 Where is the bribery and extortion?

Bribery is rare in countries with effective monitoring and policing. Indeed, if one subscribes to rent-seeking theory, bribery appears the cheapest mode of influence, and the lowest cost to society, as it diverts no resources to rent-seeking activities. Yet rent-seeking theory tells us little about the method of political influence. Are politicians persuaded through sheer volume of contact with lobbyists, their arguments and industry specific information? Some research suggests that lobbying through information provision works only under conditions where preferences of politicians and interest already mostly align, and indeed it is not the information itself that is persuasive, but the signal it creates (Potters and Winden, 1992).

Additionally, politicians in developed countries don't appear to extort companies that benefit from new policies. If companies were not bribing politicians for the rents they receive from new policies, the rational response is for politicians extort payments from them to not introducing costly regulation. Cynical economists may believe this happens behind closed doors. Alternatively, donations and revolving doors between politics and the private sector could be a form of soft bribery of politicians who are cheap because they can't coordinate there own interests against the pressure groups.

3.3 Entrenched loyalty

Political donors are loyal to politicians who are likely to pass regulation in their favour. Swing politicians receive few donations and are not targeted by lobbysits (Bertrand et al., 2011; Koger and Victor, 2009; Harrigan, 2008). This is the opposite of what rent-seeking theory predicts. Why preach to the choir?

3.4 Equality of access to the market

Not every interest group lobbies on every policy proposal, yet every group is usually affected by large scale reallocation of rents. The theoretical reason is that the marginal costs for coordinating and monitoring free-riders is higher for dispersed groups (Becker, 1983). This is a common economic coordination problem, but it simply leads to the question of why some groups' coordination costs are higher? How can the labor movement have coordinated so well historically against smaller and more well-connected business interests?

In its basic form, rent-seeking theories say nothing about equality of rent distributions resulting from rent-seeking markets. Only recently has Shughart II et al. (2003) expanded the competitive market picture of rent-seeking by showing demonstrating a long-term inverse relationship be the Gini coefficient and interest group dominance in US states. If successful rent-seeking leads to greater inequality, one needs to consider that increasing inequality further improves that bargaining

position of selected interest groups, bringing into question the assumptions of competitive markets for interest groups. Maybe winning rent-seekers increase their chances at winning future decisions.

3.5 Super-optimal markets

Though rent-seeking theory assumes a market for political favour operating optimally, the economic profession has been focussed on the welfare costs of this market. Which is surprising and confusing at the same time. The baseline welfare calculation would involve perfect and complete markets, even for political influence. In this case, any costs below the full Tullock rectangle would be super-optimal. Moreover, the resulting output costs would be zero, because society would politically trade favours towards the frontier.

For example, if information asymmetry is a market failure that means rent dissipation is low, the economic solution would be to address the market failure by improving information. In the market for political influence, this would increase *rent-seeking costs* and result in welfare loss for society as whole. Exactly which baseline the welfare costs and benefits of the market for political influence can be compared is unresolved.

4 Social networks

Networks are an important but neglected avenue for the study of markets by economists, and are a critical element in the covert market for political influence. The weight of evidence on lobbying, donations and favouritism of social connections shows social ties to be important determinants of political influence (Grossmann and Dominguez, 2009; Koger and Victor, 2009; Bertrand et al., 2011). The significance of the *embeddedness* of economic relations within social structures boils down to four core principles that govern how social networks affect economic outcomes (Granovetter, 2005).

1. Norms and network density
2. The strength of weak ties
3. The importance of structural holes
4. The interpenetration of *economic* and *non-economic* man.

The relationship between network density and the transmission and enforcement of social norms can complement iInterest group models by expanding on the assumptions about the costs of coordinated collective action. Denser social networks provide the means of monitoring and promoting cooperation and establishing trust. As Granovetter (2005) explains, "overcoming free-rider problems is more likely in groups whose social network is dense and cohesive, since actors in such networks typically internalize norms that discourage free riding and emphasize trust."

The principle of weak ties proposes that individuals, whose close friends[2] in a network do not share many of the same friends, benefit from indirect (two links removed) weak ties to a larger proportion of the population. Individuals with extensive weak ties receive information flows from a wider variety of sources through their friendship network. This principle is embedded in the notion of structural holes, a more general term to describe the centrality of individuals in a social network as a proportion of the number of shortest paths connecting all nodes going through them.

Individuals or firms bridging structure holes benefit from loyalties, norms, trust and information flows from multiple dense parts of the complete social network. For an entrepreneur, such broad

[2]The terms friends is used as a generic word to describe acquaintances, whether they be family, personal or collegial relationships

connections are valuable. Many sociologists even define entrepreneurial activity as the act of bridging structural holes.

If lobbyists and interest groups can pursue a social position providing access to politicians from multiple parties they may gain an advantage. Is there evidence of entrepreneurs in the market for political influence seeking to target both sides of politics to overcome their information asymmetry? Maybe. But the evidence throws up other important considerations.

For example, Koger and Victor (2009) analyse patterns of lobbying and donation behaviour in the US, finding that -

> ...lobbyists tend to concentrate their attention on political allies, avoid their ideological adversaries, and infrequently lobby fence-sitters, suggesting that they are not buying votes or persuading legislators on a case-by-case basis.
>
> More importantly, lobbyists appear to systematically switch issues as the politicians they were previously connected to switch committee assignments, hence following people they know rather than sticking to issues. We also find evidence that lobbyists that have issue expertise earn a premium, but we uncover that such a premium for lobbyists that have connections to many politicians and Members of Congress is considerably larger.

That lobbyists with many personal connections command greater prices appears to support the idea that a pay-offs exist for entrepreneurial lobbyists who manage to establish multiple political connections. Yet these connections appear to be legislators with existing common beliefs.

More recently Bertrand et al. (2011) investigate the claim that if lobbyists are information providers, than lobbyists with more information and experience should attain a wage premium, Moreover, they should be able to argue both sides of an issue. Yet lobbyist are loyal to their ministerial contacts, and usually change their issues when their contacts change committees. Both Koger and Victor (2009) and Bertrand et al. (2011) conclude that relationships are the source of influence, rather than expertise. Also i Vidal et al. (2011) shows that lobbyists whose US Senate connections leave office suffer a 24% decline in revenue, suggesting that the value of one beneficial social connections

Harrigan's (2008) analysis of the network structure of Australian political donors and lobbyists provides a more subtle story about relationship strategies. His analysis reveals two unique strategies of political donors - hedging, where the donor donates to both major parties roughly equally, or partisan, where donations are made loyally to one party, regardless of the party currently in power. Harrigan (2008) finds that larger companies are more likely to adopt a hedging strategy for their donations, as are members of known influential interest groups, such as the Business Council of Australia. An earlier survey of Australian pressure groups by Abbott (1996) found that most industry pressure groups have political contacts from more than one party.

Combining this evidence suggests that while lobbyists exploit previously established personal relationships, broader industry interest groups typically adopt a hedging strategy in their donations and lobbying activities. If the principle of weak ties is valid, then membership of industry groups with political connection bridging party lines is a more valuable strategy, and indeed is a strategy with potentially the highest information pay-off. With this framework in mind, lobbying and political donations appear to be a tools for individual business owners to express their ideological allegiance, or perhaps establish local relationships that will benefit their business exclusively. This may be especially be the case for firms whose business relies on regular discretionary government decisions, like developers who rely on planning approvals, and contractors who rely on government spending decisions. Harrigan's (2008) finding that directors of companies with a hedging donation strategy often personally donate to a single political party offers further support to this observation.

Loyalty of the *non-economic* man is the last key principle of social networks relevant to the market for political influence. Granovetter (2005) makes an important connection between social loyalty and the costs or benefits to society as a whole of non-economic activities including rent-seeking. He writes -

> The notion that people often deploy resources from outside the economy to enjoy cost advantages in producing goods and services raises important questions, usually sidestepped in social theory, about how the economy interacts with other social institutions. Such deployment resembles arbitrage in using resources acquired cheaply in one setting for profit in another. As with classic arbitrage, it need not create economic profits for any particular actor, since if all are able to make the same use of non-economic resources, none has any cost advantage over any other. Yet overall efficiency may be improved by reducing everyone's costs and freeing some resources for other uses.

Consider the instances of political connections of firm directors. Strong evidence shows that firms with current or former politicians on their board of directors receive many benefits, such as higher chances of government bailouts or improved chances of winning government contracts (Faccio, 2006).

That social structure can improve efficiency is important, and as mentioned earlier, the baseline from which costs of rent-seeking are measured is not clearly defined in economic theory. It is generally shown that loyalties and trust embedded in non-economic relationships reduces the costs of free-riding and enhances the probabilities of collective actions Marwell et al. (1988); Choi et al. (2011). But cronyism is the dark-side of social networks and their loyalties, and is likely to generate *growth costs* when decisions favour the trust and loyalty of close ties rather than the efficiency from better choices further distant in the network. There are well known costs from being limited for choice by one's social network, such as higher prices paid when buyers and sellers deal exclusively (Vignes and Etienne, 2011). Perhaps a policy goal of providing a better-connected national social networks that could break down class divisions and reduce crony social behaviour.

If social ties improve trust and generate political influence, it may be the case that donations are used as signals of trust by less well-connected firms, rather than by the firms who are have a high degree of trust from multiple social ties. Alternatively, if markets for political influence resemble credit markets, donations and regular lobbying could be a relationship 'fee' or some other signal that the credit is sound and that social convention will be followed. Perhaps the revolving door of politicians into business is evidence of future credit pay-offs and be considered a rent-seeking cost? Anthropologists have developed a picture of early markets that are run on social credit, and the trust that religious institutions and social conventions provided (Graeber, 2011). In the covert market for political influence, perhaps these ancient notions of markets provide a more practical understanding.

5 In-group bias

Humans exhibit strong in-group bias (Hewstone et al., 2002). People favour others who exhibit common traits to themselves, even without promise of future reciprocation of favouritism. Economic theories generally ignore this type of behaviour since it is open to gaming by others. Yet the sheer power of this psychological trait means it deserves the attention of economists, especially in the covert market for political influence.

Connections through common groups are known to be valuable, meaning that the costs of acquiring group loyalties are less than the benefits. For example, Fisman (2001) shows that political group affiliations and social connections of company directors in Indonesia add to company share values. Engelberg et al. (2012) finds that when banks and firms are connected through common group

loyalties, such as management attending the same college or previously at the same firm, credit interest costs for firms are lower after controlling for company credit ratings. Widespread group loyalty means that *rent-seeking costs* will be much lower that predicted by economic theory.

Groups can be considered as a complementary dimension of social networks. While group members do not necessarily have established personal links, they have loyalty ties, which are important in a market driven by trust. If one group member can signal to another their group alliances, they are likely to gain an 'unearned' advantage.

Replacing group connections with 'loyalty ties' as in Figure 2 can further build analysis of social networks. Individual 6, who had multiple groups memberships now gains from multiple loyalties and an advantageous position in this new loyalty network. This provides a conceptual link between the weak-ties and structural holes principles of networks, and the psychological underpinnings of those positional advantages. Individual 6 has the most structural ties, and a high measure of betweenness centrality as a result of multiple group loyalties.

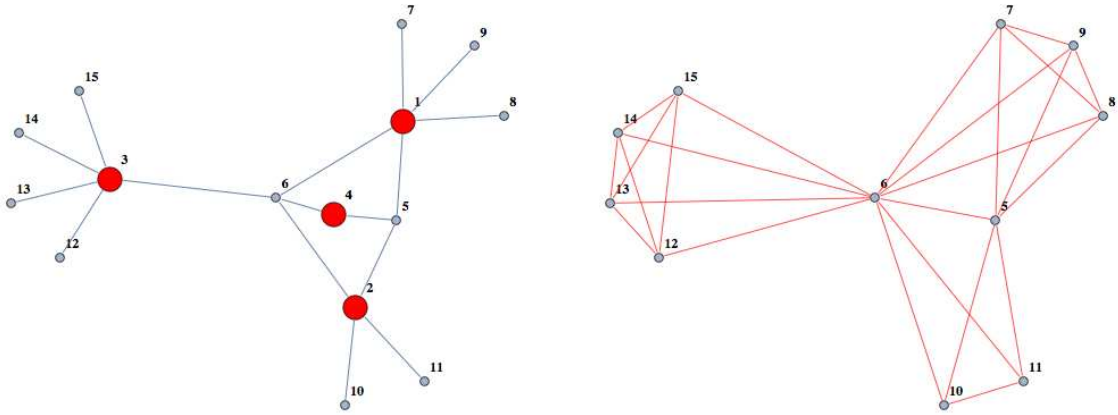

Figure 2: *Groups (red nodes 1-4), their members (individuals nodes 5-15), and the loyalty network*

If group loyalty is valuable, gaining access to elite groups can be considered a type of *rent-seeking cost*, and potentially welfare reducing. Exclusive schools, sporting and social clubs, even the costs of courting members of wealthy families could be included in definitions of rent-seeking activities. However, one needs to truly consider the counter-factual costs of socialising in a baseline society where there are no group loyalties before counting them all as costs.

A developing literature on endogenous group formation also provides some clues as to the way loyalties are formed, and is a crucial ingredient in understanding the dynamics of political influence. Recent experiments by Efferson et al. (2008) and Fu et al. (2012) show that groups form endogenously in repeated games, and that in-group bias can be generated by such simple group signals as shape markers in computerised games. Further, trust-game experiments have shown that members of groups formed through team-building activities contribute more to public good games when playing with members of their own group, than with mixed groups (Smith, 2011).

Experiments that take a further step from endogenous group formation and in-group bias, to include welfare costs and benefits would be useful tools for understanding the market for political influence, and the effects of policies targeted at reducing the social costs of the market.

6 Better models of political influence

6.1 Time and trust

Like the mafia, covert 'markets' in political influence operate on social credit and long term trust. One theory posits that political lobbying and donations are used to signal trust, rather than as a means of persuasion, since they are usually offered loyally to politicians and political parties who are likely to support the interests of the donor anyway Bertrand et al. (2011). Political attendance at industry group functions could be a trust signal in the reverse direction.

Why send signals at all if trust is generated through social ties and group loyalties? One answer could be that politically well-connected companies do not lobby or donate, since their trust is well established socially. Analysis of political donations and lobbyists will only capture less socially connected firms looking to signal their group loyalties. 'Hedging' strategies could be appropriate for large companies with long-term investments likely to be influenced by policies from both sides of politics.

One might consider the revolving door from politics to business as a future payment for services, while donations are a signal from companies benefiting from policy that their credit for these future payments can be trusted. There is also not reason to explicitly expect that any payments are particularly large in comparison to the rents at stake, since group loyalties ensure that the politicians and the firms who benefits loyally play the same game.

A general model, where the likelihood of exerting political influence is proportional to trust, T, which itself decreases with social distance, and increases with frequency of common groups, can be written as follows:

$$T = \frac{GF_{i,j} + d_i + l_i}{SD_{i,j}} \tag{1}$$

where GF is a weighted measure of the frequency of common groups, and SD is a measure of social distance from political decision makers, j. SD might be a measure of network position, such as the number of paths less than a certain length between i and j. In the model, if a threshold of trust is all that is necessary to exert influence, donations and lobbying will decline as social closeness and common group loyalties increase. Further, if a firm is more socially distant, its lobbying and donations must be greater to send reliable trust signals.

One might also suspect that industries relying on regular firm-level discretionary decisions by government, such as decision on government contractors, planning approvals for property developers and miners, would seek to establish individual relationships rather than play the trust game exclusively at an industry level. While other industries, such as with pharmacists and taxi owners, would only need to pursue an industry-wide trust strategy.

This model of the market for political influence is surprisingly efficient from the traditional view of rent seeking even if reallocation decisions themselves are costly for society.

6.2 Forget Tullock's rectangle

Securing rents appears to be a relatively low cost enterprise, meaning that *growth costs* are the main welfare implication of the market for political influence. Not only are the costs of Tullock's rectangle likely to be small, but it is not at all clear what those costs really are. If we include the costs of seeking strategic group membership, we need to assume that in the baseline that no group memberships would be sought, or at least in a far less costly manner. Social relationships exist regardless of whether one attempts to choose advantageous social ties. Should the costs of private schooling be included if one of the returns to private schooling is improved social connections?

An alternative view is that social cohesion enables super-optimal output through reduced *rent-seeking costs* and policy that facilitates broad economic growth. Thinking in this way shows that social structure provides economic benefits, and that some social structures, that are more uniformly well connected, are better than others at ensuring policy decisions are made for the benefit of the group as a whole. Estimating welfare loss from cronyism then relies on the counterfactual of a fully connected social network.

6.3 Equality and power

Despite economic theorising with assumptions of homogenous agents of equal wealth and perfectly contestable markets for new social links, inequality appears to be a dominant outcome of successful rent-seeking. That access to political power is not contestable through a formal market, but via an informal social structure, means that advantageous positions in the social network can more cheaply coordinate not only to influence policy, but defend their positions on the network.

For example, analysis by Bihagen et al. (2012) shows that not only have class divisions increased over recent decades in Sweden, but education as a tool for reducing equality is becoming less beneficial over time. The entrenchment of elite groups appears to happen as a product of evolving social structures, and it reduces pay-offs to education for those in less beneficial parts of the social network.

The general rule, winners improve their chances of winning future rent allocation decisions as group reciprocation and trust reinforces itself, such as through the revolving door. A simple model of this process might be as follows

$$GF_{t+1} = GF_t + \alpha W_t - \beta L_t \quad , \quad 1 > \alpha > \beta \tag{2}$$

where W is a win and L is a loss from a rent allocation decision.

In addition to the processes at play in the social structures, a meta-game of controlling opinions of the out-group in favour of the in-group through media and propaganda is surely a consideration.

7 Applying an integrated theory

With these general foundations in mind, policies to reduce the welfare costs of the market for political influence can be assessed from a more informed position.

Consider Ayers and Bulow's (1998) argument that mandating donor anonymity would disrupt the market for political influence, since donations are identifying signals of trust in a game of reciprocity. If we believe that signalling trust throughout donations is only required for less connected firms, then we will simply see that market for political influence constrict to a smaller, but better socially connected group, while *rent-seeking costs* may rise in the form of social ladder-climbing.

It is also not clear whether caps on lobbying decrease *rent-seeking costs* (Che and Gale, 1998; Kaplan and Wettstein, 2006; Pastine and Pastine, 2010). If professional lobbying is merely an attempt to signal allegiance and trust, capping or outlawing it would result in a narrow field of influence by those who have trust through fully social means. Like mandated donor anonymity, such a move could force those who use professional lobbyists to divert resources to establishing social connection through alternative and possibly more costly means, such as joining exclusive social and sporting clubs.

Another policy that can be considered under a more comprehensive theory is the directive requiring regular rotation of staff in sensitive areas introduced by the German government in 1998. One

would suspect that because relationships can't be maintained for long term cooperation, that in-group bias and social loyalties would have less influence on decisions by these rotated staff. However, some offsetting expenditure on making even more covert social ties with potential job candidates from other areas of government might occur.

In an interesting use of laboratory experiments, Abbink (2004) tested this policy under the framework of a repeated trust/bribery game. In this game the first mover (the firm) decides whether or not transfer money to the second mover (the government official), who then accepts or rejects the bribe, with a 0.3% chance of being 'caught' when accepting and having all monies taken. A small transfer fee is taken for each offer regardless of it being accepted or rejected. If the bribe is accepted, the official is forced to a decision between two alternatives X and Y, where X is more beneficial to the second mover (the official) and Y is more beneficial to the first mover, but Y comes at a cost to others playing similar games in parallel during the sessions, but is concealed from the other players. Significant reductions in bribes and improvement in total welfare were observed. These results are consistent with the notion that the trust from long-term relationships are key factors creating political influence.

The *output costs* of the market for political influence can also be estimated empirically by merging data on social networks with data on firm production. Doing so also establishes a verifiable baseline. The best analysis of this type is Cingano's (2009) work based on connections of Italian local politicians sitting on private company boards. He explicitly acknowledges that social connections can generate welfare benefits, such as through productivity gains for the industry as a whole by better navigating red-tape. Or they can reduce welfare through what he describes as the *grabbing hand* manipulation of government contracting decisions. The results show that the *grabbing hand* dominates through a 5% increase in revenue from government contracts, yet the lack of productivity change indicates that the provision of public goods decreased by around 20%. It is difficult to tell whether the model implicitly generates the *grabbing hand* effect, since it relies on controlling for productivity changes per firm over a short time (12 year) period, which are likely to simply be a noisy, approximately mean zero, set of figures. [3]. Implicitly this analysis assumes zero *rent-seeking costs*, and ignores long-run *growth costs* from reduced provision of public goods. However, this type of empirical work, where economic production models enable estimating of welfare costs in terms of decreased output against a known baseline, is promising.

8 Conclusions

Including insights from network analysis and group loyalties appears to provide important clues about how the current puzzles in the rent-seeking literature can be explained. The pure economic approach to understanding the market for political influence fails to explain too many empirical observations, and simply raises more questions than it answers. For example, if asymmetric information is a reason for low *rent-seeking costs* what is stops the formation of a market in information?

Integrating fundamental observations of behaviour from sociology and psychology improves the theoretical understanding the market, and points to avenues of empirical research. Ultimately, the market for political influence operates covertly within social structures, and by understanding the way the social structures work will help inform better policy.

[3] Also, consider the scenario where a firms wins a large government contract, and subsequently undertakes a period of capital investment to increase productive capacity. That will show up as a decline in productivity in the short-term, yet in reality it would probably result in a long term improvement in labour productivity for that firm.

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Appendix A - Definitions

It is worth providing a dictionary of commonly used terms in the different areas of analysis of political influence to ensure that they are used consistently.

Rent Seeking

Rent seeking is traditionally understood in economics, and now common language, is an activity undertaken by potentially beneficiaries of government policy (those who receive rents from a policy decision) in order to ensure policy decisions are made in a way favourable to them. The resources devoted to these activities are usually know as the costs from rent seeking. In this review the term *rent-seeking costs* has this exact meaning.

Political connections

Political connections is a term adopted to the data used by various researchers. Faccio's (2006) pioneering use of the term had a particular meaning.

> A company is identified as being connected with a politician if at least one of its large shareholders(anyone controlling at least 10 percent of voting shares) or one of its top officers (CEO, president, vice-president, chairman,or secretary) is a member of parliament, a minister, or is closely related to a top politician or party.

Other research has adopted the term to mean connections obtained by employing former politicians or their staff in lobbying activities (i Vidal et al., 2011), or in studios of Chinese corporate governance, a combination of identification with political parties and their influential institutions, former government officials or former experience in State institutions (Chen et al., 2011; You and Du, 2012).

No generally accepted definition of political connections appears in the literature. However, all uses of the term rely on the idea on the persistence of established personal relationships and group loyalties, which are entirely consistent with the theories that position in social networks, and membership of elite in-groups, are important determinants of political influence. This terms will used to identify either of these types of social connection, but typically with an explanation of whether the connection is in the form of group association, or person link in the social network.

Lobbying

Lobbying is probably the simplest idea to express. It is an act of persuasion, whether it simply comprises provision of industry-specific information to the legislature, or whether it be more directly a plea for industry or firm favouritism supported by propaganda and myth.

Cronyism

Begley et al. (2010) cites an anonymous blogger for definition of cronyism that captures both the sinister and celebrated sides of the term.

> Cronyism is the soft form of criminal conspiracy, but it's also not that far removed from the groovier, more celebrated forms of social networking. The much-vaunted networks of Silicon Valley are a crucial form of capital, but they are also crony networks with the attendant downsides of insider deals and quid pro quos for the connected. mtraven (2005)

Khatri et al. (2006: 62) defined cronyism as "a reciprocal exchange transaction where party A shows favor to party B based on shared membership in a social network at the expense of party Cs equal or superior claim to the valued resource." For cronyism to exist, four conditions must be satisfied: (1) no immediate return of favor, (2) something of value exchanged, (3) shared network membership, and (4) at a third partys expense.

Cronyism is usually a legal activity unless specific laws prohibit relationships between decision makers and beneficiaries.

Revolving Door

'Revolving door' describes the movement of individuals between roles as legislators and regulators, and firms affected by these laws and regulation. Senior Defence personnel are widely observed to move between the role of deciding defence contracts, and tendering for them.

> All but one of the Joint Chiefs of Staff at the turn of the millennium ended up serving on the board of a military contractor after completing their government service (Etzion and Davis, 2008)

In-group bias

The well established psychological preference towards individuals (or institutions) that can be observed to be identifiable similar. A variety of theories are put forward to explain this phenomena, mostly focussed on expectations of common beliefs and trust between members of a common group.

Social capital

In sociology, and occasionally economics, social capital relates to ones position in a social network. Individuals with high degrees of centrality can access a larger portion of the network through fewer connections, and are thus exposed to more diverse information, and more importantly, are typically receive new information sooner than others (Burt, 2000).