Noah Gould

Dr. Herbener

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Locational Aspects of Rent-Seeking: A Theoretical Examination

1. Introduction

When Amazon chose the location for their second headquarters, it ended up with two locations: New York and Washington D.C. These two cities share a common attribute; they are both regulatory centers, one international and one national. A firm choosing where to locate its headquarters based on access to regulatory institutions is an important part of the question, "How do firms decide where to locate their headquarters?"

Agglomeration theory describes how firms enjoy several benefits from locating in cities, such as lower transaction costs, access to a broad labor pool, ability to share knowledge with other firms, and access to trading routes. One crucially overlooked factor in agglomeration theory is regulation. Regulation effects the relative appeal of certain cities based on the possible earnings to firms from rent-seeking. This phenomenon underscores how certain cities such as capital cities, which act as regulatory hubs, become more appealing to firms in a rent-seeking society.

Firms can move closer to key cities that act as regulatory centers in order to more effectively engage in rent-seeking and to avoid rent extraction. As the regulatory burden increases, the prize for engaging in rent-seeking increases. Being closer to the capital city increases the firm's efficiency of rent-seeking over its rivals. The location of their headquarters can increase its efficiency by both reducing its costs of rent-seeking, such as costs of managing its lobbying arm, and increase its revenue in rent-seeking through processes such as using local positions as leverage against rent extraction. When regulation increases, the prize for engaging in rent-seeking increases; this causes firms to engage in more rent-seeking and to move, on average, closer to regulatory hubs in order to access lower cost, higher output rent-seeking opportunities.

Through this argument, we aim to give a concrete connection between the literature on agglomeration and rent-seeking. Gordon Tullock first suggested the connection between rent-seeking and location in his paper *Rent Seeking as a Negative-Sum Game* (1980). He saw a positive relationship between the size of a city and the amount of regulatory power that city has. He predicted that, as more and more firms become focused on rent-seeking, there will be “steady growth of the Virginia and Maryland Suburbs” (ibid, 35). Additionally, Benson and Faminow focus on how the relative growth rates of cities are related to the amount of rent-seeking that takes place in a society (1988). This paper will add to the literature on agglomeration, specifically the literature on corporate headquarter (CHQ) location by discussing the importance of rent-seeking in how entrepreneurs make decisions on the location of their headquarters.

Also, through better understanding how location plays into rent-seeking phenomena, we will be able to better understand the mechanism of rent-seeking. Rent-seeking shifts the economy away from satisfying the needs of consumers to manipulating government to give a certain firm competitive privilege over another. Shifting away from the optimal location of a firm creates a further social waste. The aim of this paper is not to demonstrate empirically that this phenomenon is occurring in the current economy. Instead our aim is to show that, given a rise in regulation, the marginal firm has incentive to move closer to a regulatory hub to reap the gain of rent-seeking. Our aim is to develop a theoretical understanding how the mechanisms of rent-seeking ensure that these changes will take place.

Section 2 lays out background on the theory of the entrepreneur and Section 3 gives background on the theory of agglomeration. Section 4 outlines the phenomenon of rent-seeking. The locational aspects of rent-seeking are outlined in Section 5 and the link between regulation and rent-seeking in Section 6. Finally, conclusion and predictions based on the argument are offered in Section 7.

2. A Theory of Entrepreneurial Decision-Making

An entrepreneur organizes a firm in a way which maximizes profit. An entrepreneur is a "servant to the consumer" because, if he fails to satisfy their desires, he will earn a loss. (Mises 1998, 241). As part of a decentralized feedback system, entrepreneurs earn a profit when they succeed in moving resources from less valued to higher valued ends and reap losses in the converse instance. This creates a dynamic process of social competition. As with all human action, an entrepreneur also necessarily acts in uncertainty. The entrepreneur is specifically interested in forecasting the future array of prices that will arise, for it is these prices that will determine whether he earns a profit or loss. The entrepreneur can never be absolutely certain that he will turn a profit, so he must act based on his best assessment of the situation.

The judgement-based approach to entrepreneurship, put forth by Frank Knight, emphasizes actions taken by the entrepreneur rather than opportunities discovered by him (1964). Knight argues that entrepreneurial skill is defined by the ability to make correct judgements on the future based on limited present knowledge. In the judgement-based approach to entrepreneurship, judgement is "acts of creating and evaluating opportunities, and deciding on which resources need to be assembled, how they need to be combined, etc. to realize the opportunity" (Foss and Klein 2012, 78). Thus, the entrepreneur attempts to accurately predict a future that is not completely knowable and benefits from a correct prediction. His action is that which ultimately creates value.

Entrepreneur must have a distinct process of making decisions; this is the unique skill of the entrepreneur. They must constantly assess their business to determine whether they will earn a profit. In addition, they must constantly make decisions on their labor inputs, shift factors of production and adjust production processes. The entrepreneur may use any of the factors available to make these decisions based on how he can earn a profit.

The features of the economy the entrepreneur responds to can come from two main directions. First, he can respond to consumer desires, which he must attempt to accurately forecast. The desires are displayed through the feedback mechanism of profit. Second, he can respond to the promptings of the state in government bureaucracies. Third and finally, he can respond to some form of mixed features, from both consumers and government. These three orientations reveal very different means by which the entrepreneur can profit. The case of government bureaucracy will be further explored in Section 4 in our discussion about rent-seeking.

The distinct difference between the sphere of consumer behavior in the market and bureaucratic behavior is the presence of profit and loss mechanisms. Mises defines Bureaucratic management as "management of affairs which cannot be checked by economic calculation" (1983, 48). When there is no mechanism of profit and loss, the government agents must rely on some other mechanism. The "common man" understanding of the different between public and private production is that public production occurs for the "public good." But without profit and loss, we cannot determine what this public good is. Thus, bureaucrats must use their own judgement to determine whether or not they should take an action.

Thus the entrepreneur acts to earn profit and avoid losses. He must forecast into the future and correctly predict the array of prices. The entrepreneur is willing to adjust his business decisions on all margins in order to increase his profit. Because of this, the entrepreneur can act in both the private and public sphere.

3. A Theory of Agglomeration

A second relevant area of theory is that of agglomeration. Agglomeration is a subset of spatial economics which seeks to determine why cities form. Cantillon is generally acknowledged as the father of special economics. His *Essay on the Nature of Commerce in General* explores why markets are established in specific locations and anticipates the modern literature on agglomeration. While exploring many factors, he focuses on how cities reduce transaction costs and promote knowledge sharing. The concentration of buyers and seller reduces transaction costs for both buyers and sellers because it allows them to find the individuals relevant for trade. In a market context, buyers and the seller meet in one location, say in a town square, where they can trade more easily,

> A Market Town being placed in the centre of the Villages whose people come to market, it is more natural and easy that the Villagers should bring their products thither for sale on market-days and buy the articles they need, than that the Merchants and Factors should transport them to the Villages in exchange for their products. (Cantillon 1959, 6)

Search costs are reduced because buyers can find all the relevant sellers in one area. Another example of an agglomeration effect in order to reduce transaction costs is when all the businesses of a specific industry are located in one section of a city. Buyers can easily compare prices of the different businesses and more easily find the specific good for which they are looking. This analysis begins to explain why cities are formed.

The question most relevant to our research question which falls within agglomeration literature is how firms decide where to locate their CHQ. A firm's headquarters are the center of decision-making for the entrepreneur and are not necessarily the center of production. The CHQ engages in many functions, including "strategy implementation, control, the management of vertical and horizontal information flows, running transfer pricing systems, the maintenance of reward systems, and other tasks dedicated to maintaining coordination and cooperation across the hierarchy" (Foss 2019, 2). All these functions oversee the quantity and means of production. The location of the firm's headquarters is decided in a way to make production more efficient and to maximize profit.

The entrepreneur may organize the firm's CHQ in a variety of ways. First, the CHQ could be located in one place with all information being gathered, relevant employees of the firm consulted, and production decisions made from that one location. Second, the CHQ could be split between two or more locations and the decisions be likewise split between the different centers. Third, the entrepreneur could create a "Shadow" CHQ, which acts is the official or legal headquarters on paper, but is not the true center of decision making for the firm. The firm would create a shadow CHQ if there is some benefit to being perceived by the government or others as being in one location but the benefit of moving the true CHQ does not outweigh the cost. A common example of this is multi-national-corporations moving to a country with low corporate taxes. They create a "shadow" headquarters and continue to conduct their true operations from their original location. One phenomenon that makes shadow CHQs less likely is that firms must often prove it is a true headquarters through number of employees or other factors. The state will try to enforce the true headquarters as he legal headquarters in order to collect a greater amount of taxes. This would not remove the shadow headquarters phenomenon, but it would deincentivize it. The shadow headquarters can be combined with either the one-CHQ model or the multi-CHQ organization. The firm could either create one shadow headquarter and have one true headquarter or the firm could have several headquarter in addition to a shadow headquarter. If the firm has several headquarters, it can choose which one to designate as the official headquarters as it sees the most benefit.

Economists have explored a vast array of factors which are relevant to the decision of CHQ location. These factors generally relate to limiting costs of production or increasing output. For instance, location near a port city may reduce the transportation costs of the firm. Also, a particular location could improve access to high-quality factors of production. Since many production processes rely on specialized knowledge, firms may locate closer together in order to share knowledge more effectively. The interdependence of firms is generally acknowledged to be very important because firms are highly integrated. For instance, firms very often purchase inputs of production from other firms and must cooperate maximize profit (Selting 1994). Consider a manufacturing plant with hyper-specific machines needed to produce a good. The firm that provides parts for those machines must have a high degree of coordination with the other firm. Additionally, specific knowledge required for production may be shared or trade between firms in order to produce. These processes of production which require coordination are aided by the concentration of the firm's CHQs to the CHQ of other related firms.

Through the core of agglomeration theory, we see that the entrepreneur is willing to adjust a myriad of factors in order to earn a future profit. Just to determine where to place his headquarters, he must consider the labor market, transportation costs, and many other factors. The process of entrepreneurship is dynamic and ever changing. In response to shifting factors around him, the entrepreneur must decide where to locate the firm's headquarters. He will make this decision based on marginal factors.

4. A Theory of Rent-Seeking

Rent-seeking is missing from the debate surrounding agglomeration, but can provide significant insight into the theory behind how firms choose their CHQ. Rent-seeking is defined by Gordon Tullock as is "the use of resources for the purpose of obtaining rents for people where the rents themselves come from some activity that has some negative social value" (2002). Tullock originally introduced the theory surrounding rent-seeking in his seminal paper *The Welfare Costs of Tariffs, Monopolies and Theft.* In this paper, he argues that the social cost of tariffs had been previously underestimated. Anne Krueger later independently introduced the concept and coined the term "rent-seeking." Tullock expanded our understanding the cost of tariffs to not only include the triangle of pure Dead Weight Loss, but also the total expenditure of resources in rent-seeking behavior. These expenditures occur on things such as the equipment and personnel required to lobby and the investment in new office space in the relevant city. Rents from rent seeking are derived from "preventing others from competing with you or by forcibly taking the wealth of others" (Ikeda 2003, 25). While trade in the free market requires two parties who mutually benefit from the trade, rent seeking involves forcibly moving wealth from one party to another.

The expenditure incurred through rent seeking are wasteful because they are employed in accomplishing some task that has a socially wasteful outcome. Thus any resource allocated towards rent-seeking could have been allocated towards some socially beneficial end that would satisfy a need of a consumer. Classic examples of rent-seeking are firms seeking to be granted a monopoly privilege or establish a tariff in their favor. A tariff incurs a cost on both taxpayers and consumers. The whole country is worse off for the imposition of a tariff because a tariff raises the prices of goods and misallocates production decisions. A tariff moves individuals away from producing where they have comparative advantage into some area where the government decised they should produced. When a firm engages in rent-seeking to procure a tariff, not only has the firm helped institute a wasteful policy, but it expended additional assets in pursuit of this endeavor.

A further example, which will be focused on in this paper, is regulation. Regulations can benefit a firm by restricting who can and cannot produce, thus conferring monopoly privilege. A regulation can also put limits on what type of a good is produced. Bans on incandescent lightbulbs benefit the firms with advantages in producing other types of lightbulbs and harm the firms who invested in resources to produce this type of bulb. Firms have incentive to get laws passed which benefit themselves and harm their competitors. These special rules and regulations help the firm while harming the general welfare.

To further clarify Tullock's definition of rent-seeking, consider how both actions undertaken by a firm that incur losses and rent-seeking by a firm both have negative social costs because they move resources from more valued to less valued ends. There is a difference, however, between the two. While in rent-seeking the negative value is borne by some party other than the entrepreneur, the cost of rent seeking is borne by some party other than the firm A better definition of rent-seeking is expending resources in some action that has a negative social value in which the cost is borne by some party other than the firm. In activity in the free market, activity producing losses can be eventually stopped because the entrepreneur is forced to continue to bear the brunt of his own mistakes. Rent seeking, in contrast, has no such hindrance because the government benefits by force one party over another.

Additionally, actions such as tax avoidance should not be considered rent-seeking because they move the firm back towards satisfying the wishes of the consumer. The tax drives a wedge between the consumer and the producer. Any tax avoidance, while it would provide the firm a competitive edge, would be removing the wedge out from between the producer and consumer. Thus tax avoidance does not have the same social cost as rent-seeking and cannot be considered wasteful.

Rent extraction is the other side of rent-seeking. Rent-seeking refer to the prize gained by a firm through obtaining some government favor. On the other hand, rent extraction occurs when a bureaucrat threatens to implement a rule that would harm a firm unless the firm agrees to compensate the bureaucrat. The theory on rent extraction views government not as a “monolith” but as a group of “independent actors making their own demands to which private actors respond” (McChesney 1987, 102). When the engage in rent extraction, bureaucrats gain by “first threatening and then by forbearing to collect from extracting private rents already in existence” (ibid). Bureaucrats use the threat of regulation to extract resources from firms. If the regulation were to be implemented, the firm would lose income. The firm has incentive to provide compensation in order to avoid the unfavorable rule or restriction.

The firm can provide compensation to the bureaucrat in several ways. The firm could directly pay the lawmaker, though such a payment could be illegal. The firm could also donate to a lawmaker’s campaign, ensuring him re-election. The payment need not be monetary, it can also be in the form of a employment offers, dinners, and other favors. These favors can be used to leverage a politician’s forbearance in applying regulations. Though the discussion around regulation often focuses solely on rent seeking, rent extraction just as important because it creates waste in the same manner. McChesney notes that “with constant marginal utility of wealth, a private citizen will be just as willing to pay legislators to have rents of $1 million created as he will to avoid imposition of $1 million of losses" (1987, 104). Rent extraction must be included in our understanding of rent seeking. These payments made to bureaucrats are also wasteful because the firm will not be able to produce at optimal level it which it would have without the rent extraction.

The same understanding of the entrepreneur applies both the unhampered market and the rent-seeking society. In both cases, the entrepreneur undergoes risk by acting in uncertainty and must consider all relevant factors in order to reap a profit. The difference between the two societies is that one is governed by profit and loss and the other creates social waste. Entrepreneurs must decide how to allocate their production decisions. "The rules of the game that specify the relative payoffs to different entrepreneurial activities play a key role in determining whether entrepreneurship will be allocated in productive or unproductive directions" (Baumol 1990, 918).

5. Location of CHQ Can Make Rent-Seeking More Efficient

Just as in production in the market that is oriented towards the consumer, the action of rent-seeking can be made more efficient for the firm. Efficiency has two sides, output and cost. To engage in rent-seeking more efficiently, the firm can either increase output or lower cost. The location of a firm's headquarters can have an impact on both parts of the efficiency equation. When a firm's headquarters are moved closer to a regulatory center, the output of rent-seeking is raised by the secrecy of in-person communication, the visibility of the firm, and the greater ease of leveraging a firm's assets against rent extraction. Additionally, when a firm moves closer to the regulatory hub, it can reduce its costs. The costs involved in rent-seeking are communication costs, travel costs, and information costs. Each of these factors will be explored in detail.

Face-to-Face Communication

Face to face interaction is important, perhaps even necessary, to engage in rent-seeking. To broker deals with lawmakers, lobbyists must ensure that their negotiations are documented precisely. Such in person communication includes different types of meetings both informal and formal. Informal meetings, especially after normal working hours, enhance the ability of all parties to maintain secrecy. Secrecy in negotiations is both necessary for the politician and for the entrepreneur. The politician cannot risk his constituency be alerted to deals he is making with businessmen and entrepreneurs would not want competitors to become alerted to their strategy. For the politician, having a deal that is not easily documented prevents the details from being introduced when they could be damaging politically. The politician may not want his constituency to learn of the negotiations if he thinks they will view them unfavorably. For the entrepreneur, secrecy is valuable because he does not want his competition to be alerted to the rent-seeking opportunity. If rival firms were able to make a counter-offer to the lobbyist, the firm could lose out on this rent-seeking opportunity. When a firm moves its headquarters closer to the regulatory center, it makes it possible for the firm's lobbyists to communicate face to face and thus makes the firm's rent-seeking more efficient. Face to face interaction only become possible when the firm is located close to lawmakers. Furthermore, informal meetings, which are most important to preserve secrecy, are only possible when the lobbyist is in person with the lawmaker.

Leveraging against Rent Extraction

While a firm can gain through engaging in rent-seeking, it can also gain by avoiding rent extraction. To avoid rent extraction, firms must develop a mechanism of compensating bureaucrats. One example, posited by Fred McChesney, is when politicians introduce a bill in order to threaten a firm (1987, 108). The lawmaker introduces a bill and then directly threatens to pass the bill into law unless the firm gives compensation.

One way to leverage against the lawmaker's threats is for a firm to donate to the politician's campaign for reelection. These payments, however, may be less useful to the politicians because there are rules governing how one can use campaign contributions. Direct payments, however, pose significant problems to both the politician and the entrepreneur if they are discovered. Thus a firm is better able to avoid rent extraction if it has an alternative non-monetary mechanism of compensation. One such mechanism is to use positions of employment as leverage in exchange for a lawmaker not imposing an unfavorable regulation. This leverage can also be thought of as using the positions as "counter-threats" against government action. Suppose a government official threatens a firm with a regulation. The firm could promise a job in their company to that lawmaker if he is either willing to retire or is unlikely to be re-elected for another term. The lawmaker could refrain from imposing the regulation that he had threatened, then retire knowing he has a steady income. A firm could also promise the position to a relative or friend of the lawmaker to compensate the lawmaker indirectly. This provides a reliable non-monetary mechanism of leveraging against rent extraction.

Positions of employment that are in close geographical proximity to the lawmaker are easier to exchange because they do not require the person interested in the job to move away from the regulatory center to take the job. These jobs are extremely valuable for the firm to be able to use as leverage in negotiations. When a firm moves closer to a regulatory center, they produce more local jobs that can be used as leverage against rent-seeking. In the CHQ, these would be primarily white-collar jobs. Firms which are further away from the regulatory hub cannot as easily make counter-threats because of their distance from the government agency's CHQs.

An additional threat a firm can leverage against rent extracting behavior is the promise of local growth in the economy and in new job creation. This indirectly benefits the lawmaker by pleasing his constituency. The firm can promise to invest in jobs in the local economy, or conversely threaten to remove their investment if the demands are not met. The promise of economic development is often presented openly, to both the lawmaker and publicly. Since, the promise of local jobs can only be made if the firm is located near the lawmaker, only firms with CHQs near the regulatory hub can promise large numbers of jobs. Furthermore, this phenomenon encourages firms to move their whole CHQ towards the regulatory hub, not just a satellite or shadow headquarter.

Visibility Increases Output of Rent-Seeking

Additionally, being closer to the regulatory center make the firm more visible. [1] This aids in both its rent-seeking and rent extraction operations. When firms are more visible, they may be approached by bureaucrats as the most relevant experts to be considered in a new regulation. In fact, many lobbying organizations explicitly position themselves as centers of information for lawmakers. Think tanks are the most prominent example of agencies which influence government policy through disseminating free information. Visibility may also play into how a firm is able to initiate negotiations with lawmakers. Firms with larger reputations will have an easier time negotiating favorable regulations because lawmakers could trust their commitments

[1] A potential downside to the firm moving close to a regulatory hub would occur if consumers have a significant negative perception of rent-seeking activities. Moving closer to the regulatory hub would make the rent-seeking activity more visible to consumers who could possibly punish the firm through decreasing their purchases from the firm. Moving to the regulatory hub would be profitable for the firm if the expected value of the rent exceeds the expected value of the consumer sales foregone.

in negotiation and rely on a long term relationship. These firms could use their visibility and reputation as further leverage against a government agent. A better reputation could communicate to the specific government agent how the firm could go to another bureaucrat to receive compensation and cease the rent extraction, giving the firm further leverage in negotiations.

Communication Costs

The second facet of a firm increasing its efficiency in rent-seeking is lowering costs. Moving closer to a regulatory hub lowers a firm's communication costs. The most important change in communication costs is between the lobbying arm of the firm and the rest of the firm. The firm must integrate and synchronize its business operations in order to be successful. To do this, the firm must coordinate its rent-seeking operations with its production decisions in the market. As the ratio of the firms rent-seeking activities to all other activities increases, the more important this phenomenon become because there will be a larger number of lobbyists who need to communicate with the central headquarters. A firm with its CHQ combined with its lobbying operations in the regulatory hub would minimize its communication costs.

Travel Costs

Likewise, travel costs for employees between the headquarters of the company and its lobbying operations will be decreased by moving closer to the regulatory hub. The closer the regulatory hub is to the CHQ, the lower the transportation costs would be for employees who must move often between the two hubs. This phenomenon also grows stronger as a firm engages in more rent-seeking activity related to its market activity.

Information Costs

The information costs of the firm are also lower when the firm locates its headquarters closer to the regulatory hub. "The workings of the government are increasingly so complex that an intimate knowledge of the process is needed for successful rent seeking" (Benson 1988,169). The types of information that are useful to a firm include policies of regulatory agencies and changes to those policies, upcoming bills and debates on regulation, and other rent-seeking actions by other firms. When the firm locates its headquarters near where the regulations are being made, it can more easily find out which relevant regulations are being considered by lawmakers. The regulations will be in discussion in legislative bodies and debated between lawmakers. The entrepreneur must gather the information on upcoming regulations that are being developed and capitalize on them. With this necessary information, it can better carry out its rent-seeking operations. When the firm's employees are closer to the hub, they are in closer proximity to those who have the necessary information to make rent-seeking decisions. Even if they would have been able to gather this information at all when they are at a distance to the regulatory hub, it would be at a much higher cost.

5. Regulation Increases Rent-Seeking

All these benefits underline how moving closer to the relevant regulatory hub can confer benefits to a firm through its ability to conduct rent-seeking. The value of rent-seeking, however, is further determined by the regulatory burden of an economy. Increased regulation implies that the government controls more facets of the market. This provides more possibilities for entrepreneurs to turn the rules to their benefit because there are more relevant rules that can be used for their gain. Increased regulation increased the expected value of the total rent-seeking available for the firm.

For a given increase in regulation, not all firms in the market will see a rise in potential rent-seeking activity. Only the firms who are related in some way, however tangential, to the regulation will see an increase in rent-seeking opportunity. [2] For instance, regulations on catching fish would impact sellers of fish, those who use fish as an input, such as restaurants, and unions involved in the transportation of fish, among other. For the relevant firm, the prize of rent-seeking increases when regulation concerning their respective market increases.

When the prize available to those engaged in rent-seeking increases, further incentive is available for entrepreneurs to enter the "market" for rent-seeking. Thus the average firm will increase its rent-seeking activities as a result of he added incentive.

The larger a firm's rent-seeking activities compared to its market oriented activities, the more the phenomenon related to efficiency of rent-seeking will come into play. Raising the output of rent-seeking will become more desirable and lowering the costs will become more desirable when the firm engages in more rent seeking. When a rise in regulation occurs, the marginal firm will move its headquarters towards the regulatory hub in order to increase its rent-seeking activities in a low-cost, high-output manner.

Earnings from rent-seeking arise and are dissipated in a similar manner to profits in the general market. When a new opportunity arises for rent-seeking, the first entrepreneurs who devote resources to capturing it will gain the most. As more entrepreneurs enter the market, the available earnings will be dissipated. This occurs because the assets necessary for rent-seeking, such as office space and employees, will approach the gains of rent-seeking and the potential for earnings will disappear. The firm that first acquired the assets will reap the benefits of the rent-seeking because the value of the rent-seeking is reflected in those assets. The firm which initially

[2] See section 6 for further discussion of which firms are more likely to move their CHQ.

purchased the assets retains the rents. The firm can gain by correctly predicting in the future which rent-seeking activities will continue to be profitable. But this process will not end rent-seeking because new opportunities will arise for rent-seeking. This parallels the churning process discussed by Hayek in *The Meaning of Competition (2010).* An opportunity arises, which is subsequently exhausted by competition. New opportunities are continually arising, however, and continue the churn of competition.

Some firms may not be incentivized to move their entire headquarters. With a given increase in regulation, a firm may only move one part of its CHQ. Another option is for a firm to set up a shadow headquarters in order to access some of the benefits of being located closer to the regulatory hub. Not all the benefits, however, can be accessed only by a shadow CHQ. In order to reduce communication, transportation, and information gathering costs, a firm must move its entire CHQ to the regulatory hub. Additionally, the leverage against rent extraction can only be used if the firm has real resources invested in the regulatory hub and not only a false cover. Thus some firms will be incentivized to move their entire CHQ to the regulatory center. In both the case of moving CHQ and the case of creating of a shadow CHQ, there is a negative social value because these are moves that would not have taken place under the optimal, non-rent seeking instance.

This analysis can apply to local, national, and international regulatory centers and not significantly shift the argument. An example of international movement would be how we see Brussels greatly expand the number of headquarters (Dinan and Wesselius 2010). An example of local movement is a firm moving from a smaller city to a state capital after a budget increase.

6. Conclusion and Predictions

Conclusion

This theory introduces new insights into both the literature on agglomeration and on rent-seeking. When regulations are increased, the marginal firm will move its headquarters from the market determined optimal location to a suboptimal location, creating an additional social cost of rent-seeking. We also provide insight into a marginal feature overlooked in the literature about how entrepreneurs decide which cities to locate the CHQ. Entrepreneurs will take into account regulation in order to engage in rent-seeking when determining where to locate their CHQ, moving their headquarters closer to regulatory hubs when regulation increases.

Additionally, the current literature on rent-seeking often focuses overly on the cost of rent seeking instead of the mechanism of rent-seeking. Some argue over whether the social cost of rent-seeking is the Tullock Rectangle, the famous triangle of Dead Weight Loss, or something in between. Instead, we give insight into the mechanism of rent-seeking. A dynamic view of the entrepreneur allows them to undertake action on a myriad of factors. They take into account the factors evident in the literature on agglomeration, labor, transportation costs, etc., and also the factors involved in production. On top of all these factors, the entrepreneur must consider the gains available from the state. In choosing to engage in rent-seeking, he also chooses to forgo other production.

Predictions of Patterns Based on Rent-Seeking and Location

Through incentivizing rent-seeking, regulation effects the make up of business and thus, jobs on a national and local level. The availability of jobs across the country is then affected by this change. Economists such as Raj Chetty currently focus much of their work on the locational aspects of poverty. An example of his work is the finding that “intergenerational mobility varies substantially across areas within the United States" (Chetty et. Al. 2014, 1). Location is a large determining factor in poverty and economic mobility in the U.S. The locational aspects of rent-seeking are certainly relevant to this discussion because they explain a part of why firms are concentrated so heavily in some areas. The choices made by entrepreneurs in a rent seeking society shift away from the optimal distribution of corporations. Under increasing regulation, inequality of opportunity in the job market will continue to grow due to the fact that firms will increasingly cluster around regulatory centers which can grant rents. These centers will grow at the expense of regions which are not able to grant rents. In response to this, cities could compete in granting rents to entrepreneurs in order to attract economic investment.

A firm divides its activity on a "continuum" running from exclusively market activity and no rent-seeking activity to no market activity and exclusively rent-seeking activity, Between these two extremes lie most firms "that are active in both areas of wealth generation" (Benson, 1988, 161). Firms will locate their CHQ where they believe to be the lowest cost, highest output location. Thus the firms most affected by the phenomenon of rent-seeking efficiency being increased by proximity to the regulatory hub will be firms with more rent-seeking activity relative to their market activity. The firms most relevant to moving their CHQ based on rent-seeking activity will be those whose business is currently most heavily regulated by the state.

This theory also predicts that the prices for assets used as factors of production in rent-seeking will rise when regulation rises. Common assets used in rent-seeking are office buildings in a regulatory hub and land in and surrounding a city. We would expect the prices of these assets to rise in a rent-seeking society. Additionally, the concentration of firms near the capital city, the largest regulatory hub, will differ based on the regulatory burden of the country. In countries with higher levels of regulation, due to rent-seeking, we predict that more firms will locate their headquarters near regulatory hubs than in countries with lower levels of regulation.

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