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Abstract: In the 1950s, economists claimed that the 'welfare loss from monopoly' was well below 1% of GNP. This led to the literature on rent seeking that argued for an additional loss equal to all or part of the economic profit. Here I identify a third loss in the form of suppression of innovation and entrepreneurship when this leads to a decrease in political support. This decrease results from an increase in political competition and loss of rent on old technology. The third loss may be the highest of all.

JEL Classifications: D42, O30, P59.

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Introduction

In this paper, I re-visit the 'welfare loss from monopoly,' a subject originally raised by A.C. Harberger, who tried to measure this loss in a paper published in 1954. As Harberger remarks [1954, p. 77], "this is not the kind of job one can do with great precision. The best we can hope for is to get a feeling for the general orders of magnitude that are involved." He then

proceeded to argue that the 'welfare loss' from monopoly in the United States was tiny as a share of GNP—see also Del Rosal [2011, pp.298-99].

A welfare loss results in the first instance because the consumer surplus destroyed by raising a product's price above its competitive level exceeds the resulting gain in producer surplus. Thus, it is purely an efficiency measure. The basic approach is to divide an economy into two sectors of roughly equal output value—sector I operating under perfect competition and sector II operating under imperfect competition. In sector I firms price at marginal cost, whereas in sector II, firms take advantage of their market power to raise price above marginal cost; this is the source of the welfare loss.

Figure 1 therefore applies to sector II, whose demand curve is D and initial supply curve is S_B , which also measures the sector's marginal cost. The intersection of demand and supply at B gives the competitive price and quantity, P_B and Q_B . However, market power enables equilibrium price to remain above this level, say at P_F with quantity Q_F , so that this sector operates at F. The resulting deadweight loss equals the area of triangle FBL; a 'tiny' deadweight loss means that this area is tiny relative to the sum of output values (or values added) in the two sectors. In Figure 1, this would be roughly twice $P_F Q_F$.

The discovery of a tiny welfare loss led to efforts to uncover further costs of market power, which led in turn to the theory of rent seeking [Tullock 1967, Krueger 1974, Posner 1975]. According to this theory, firms will compete for rent in the form of economic profit—or the rent to a firm's market position—and incur costs in order to obtain this rent. Such rent seeking wastes resources since it does not produce a socially useful product. This waste will equal all or part of the economic profit, and if rent-seeking competition is perfect, all of this

profit will be wasted [Krueger 1974, Posner 1975]. Suppose that there are no fixed factors of production. Then in Figure 1, the profit and waste are the area under the price line, P_F , and above the supply curve, S_B , between $Q = 0$ and $Q = Q_F$. The total welfare loss is area $P_F B L I K$, which is clearly larger than area $F B L$ alone.

However, one can argue as in Carson [2020] that rent-seeking competition is unlikely to be perfect. A government supplies monopoly rights because it wants something in return, namely political support. Carson assumes two basic sources of support—wealth or income creation and wealth or income redistribution. The less inclusive a political system is, the more its government will rely on redistribution for support and the less it will rely on wealth creation. In relying on redistribution, it exploits differences in ability and willingness to supply it with political support.

Thus, let ‘insiders’ be those with a relatively high willingness and ability to provide support to this government and ‘outsiders’ be those with a relatively low willingness or ability. Then government transfers income from ‘outsiders’ to ‘insiders’—eg., by giving insiders monopoly power and/or by subsidizing insiders and taxing outsiders—in return for political support from the insiders. This support can take many forms depending on the nature of the political system, including money, resources, campaign rallies, monitoring, delivery of votes, intimidation, and assassination or imprisonment of political rivals or opposition groups, among others. This rent seeking represents an alternative use of resources to wealth creation.

Note that the income transferred must be targeted to specific insiders who are good at supplying support. Protection that is not targeted in this way, such as that from copyright and patent laws, generally won’t be consistent with support maximization when inclusiveness is

low. The less inclusive a political system is, the more a government will rely on insiders for support, the greater will be the support derived from rent seeking, and the greater will be the protection from market competition [Carson 2020], as measured by gross rent. Thus, if we let V stand for the gross rent received by insiders, as in Carson, a support-maximizing government will seek to keep V high when inclusiveness is low and $GDP - V$ high when inclusiveness is high. For a political system that is maximally inclusive, $V = 0$ holds at the support maximum, and the distinction between insiders and outsiders vanishes. The more inclusive a political system is, the more efficient the associated economic system is. A government will also try to change the political system in a way that raises its support.

In general, V can be divided into expected rent-seeking cost, C , and expected rent-seeking profit, G , $V = G + C$, where G is also the net rent to the firm's market position. Specifically, C is all or part of area P_FFLIZ . If $G = 0$, the firm's stakeholders have no incentive to supply support to the government that is seeking it. To secure their political support, G must be positive and rent-seeking competition will therefore be imperfect. Likewise, C must be positive since the government has no reason to extend protection to firms whose stakeholders are not supplying it with support. The welfare loss from monopoly is then C plus area FBL , which will be larger than area FBL alone since $C > 0$.

Innovation

To bring innovation into the picture, suppose that supply curve S_A in Figure 1 results from a cluster of one or more innovations that shift marginal cost downward and outward from S_B . As a result, sectoral output supplied at any price increases from the amount read off supply

curve S_B to the amount read off S_A . Here we can think of Q as indexing the services provided by the group of products to which the innovations apply rather than product quantities. Then improvements in product quality expand the supply of these services at any given price. This allows us to consider innovations that raise product quality, as well as those that reduce product cost.

Since sector II is imperfectly competitive, suppose that the outcome following a cluster of innovations is at E with price P_E and quantity Q_E . If we ignore rent seeking, the net social gain from innovation is the area of triangle FBL plus the area of triangle BEI plus the area between the two supply curves and under P_E between zero and Q_E , or area KIETZ in Figure 1. Area FBL plus area BEI gives the increase in consumer surplus over and above the loss of producer surplus by firms using the old technology, while area KIETZ gives the producer surplus of firms using the new technology.

The total social gain from these innovations is therefore area KILFBETZ plus any decrease in C when the economy moves from F to E. This is also the social loss if the innovations are suppressed. A policy change favoring entrepreneurship and innovation is likely to attract investment away from rent seeking (or political competition) to economic competition. Therefore, we should expect C to fall as one of the benefits of this policy change. In addition, new technologies will often have applications that are not foreseen when they first appear or will lead to other new technologies with unforeseen applications. Thus, the social gain, including these externalities, from innovation could be higher than area KILFBETZ plus any benefits resulting from a policy change favoring entrepreneurship.

In deciding whether to promote innovation, however, a government will use a different measure of benefit than consumer surplus when inclusiveness is low, since it is seeking to maximize its political support, which comes mainly from insiders. Thus, it may discourage innovations with positive social gains, as defined above, and encourage innovations with negative social gains. Because the sources, nature, and timing of innovation are hard to foresee, the best way for a government to encourage innovation is to establish the right environment—including competition, well-developed financial markets, freedom from market and trade distortions, a strong educational system, and a good transportation and communications infrastructure plus some degree of patent and copyright protection. If effective, the latter allows positive economic profit to persist over time.

A key question is whether a government would want to establish an environment favorable to innovation and to entrepreneurship more generally as part of its political support maximization, and the answer again depends on the nature of the political system. Such an environment is compatible with maximizing wealth creation, which is the goal in Carson [2020] when inclusiveness is high. If inclusiveness is low, however, support comes mainly from insiders, and the key success indicator in maximizing support is V . A problem then is that innovation increases competitive pressures on prior rents, whose survival requires protection from competition. Thus, innovation may lower political support. Indeed, if consumers and innovators are outsiders and producers using old technology are insiders, it is clear that the cluster of innovations whose effects are depicted in Figure 1 are support decreasing. There is a loss of producer surplus on old technology equal to part of area $P_F\text{FLIP}_E$, because of innovation.

It is plausible, moreover, that consumers and innovators would be outsiders and that producers using old technology would be insiders. Insiders are generally a small percentage of the population and are chosen for their willingness and ability to supply political support in return for rent. They are not selected for their administrative, managerial, and entrepreneurial skills, except insofar as these make them better suppliers of political support. Even if the innovators are insiders, the cluster of innovations whose effects are shown in Figure 1 will be support decreasing if the support lost because of the loss of area P_{FLIP_E} in producers surplus exceeds the support gained from acquiring area KIETZ.

Given a policy of maintaining an environment favorable to innovation, the producer surplus from innovation depends mainly on entrepreneurial effort, skill, and luck. The entrepreneur may credit himself or herself rather than government for this surplus. Thus, the political support gained from area KIETZ may be small. A further problem is that the accumulation of wealth from innovation and entrepreneurship could finance a potential political opposition that would lower the current government's support. When support maximization leads to suppression of innovation and preservation of the outcome at F, the welfare loss from both political and economic monopoly equals area KILFBETZ plus C plus any benefits that would result from a greater openness of government to economic entrepreneurship and innovation plus any other loss owing to failure to realize the positive externalities described above.

Finally, we could add area EAT to the welfare loss—since E represents an imperfectly competitive outcome—causing it to become area KILFBEATZ. However, Schumpeter [1950] famously argued that innovation required imperfect competition. This would preclude adding

area EAT, since a solution at A would then be unattainable. The Schumpeterian hypothesis has been challenged [eg., Symeonidis 1996], and a plethora of studies of this question doesn't appear to yield a clear answer as to whether innovation requires perfect competition or not. However, either area KILFBEATZ or area KILFBETZ, is potentially many times as large as area FBL.

While it is hard for a government to foresee innovation, it can more easily manage a program of copying technology that is new to the domestic economy, but already in use elsewhere. (Such programs use both legal and extra-legal means of acquiring technology.) If a government can gain access to technologies that are new at home, but already in use or under development abroad, it will have opportunities to promote growth based on these technologies. The technologies in question are often protected, but copying them may still be less costly than inventing them and bringing products based on them to market for the first time. This is especially true if the economy in question has another advantage, such as a large domestic market or a low-cost factor of production, such as labor or human capital, that these technologies require. Developed economies also sometimes allow less developed countries relatively easy access to some of their technologies.

Programs aimed at copying technology often use supply restrictions, such as credit rationing, to ensure that firms in the program have low-cost access to key resources. These are a major barrier to the entry and expansion of small and medium-sized firms [Aghion, Harmgart, and Weisshaar, 2008, esp. pp. 50-54]. Thus, a strong program of technology copying may be harmful to innovation. At best, it allows a nation to keep up technologically, with some lag, and it too threatens rents on older technologies. Managing such a program so that it increases

political support will likely include efforts to turn entrepreneurship outward in export-led growth, in order to allow for protectionism at home, and to replace protectionism to some extent with subsidies. If we count political as well as economic monopolies, the welfare loss from monopoly can be large. When innovation is suppressed, moreover, the cost of protectionism in the form of technological backwardness and lower output falls on insiders (or their descendants) as well as on outsiders—for an example, see Freeland [2012, pp. 277-286].

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