QLU QUALITY LEADERSHIP UNIVERSITY ISSN-L 2644-4038

Understanding Market Failure: Do We Need More or Less Regulation? Is water a solid, a liquid or a gas?

Recibido: 20 de agosto de 2015
Aceptado: 17 de septiembre de 2015

Eric Molino[1]

I usually start my semester with this apparently evident question. Half of my students are confused thinking they enrolled in the wrong class, and the other half is suspicious as to why I am asking such a simple question. Eventually someone will just look at me and say: "it is a liquid (obviously)". Nevertheless, if I wait long enough, someone will give me the answer I'm looking for: "well, it depends." Exactly, water can be a liquid, but only at 1 atmosphere of pressure and between 0 and 100 degrees Celsius.

Changing either its pressure or its temperature would make water become either ice or steam. This very simple question, although seemingly unrelated to economic theory, has profound implications in policy making. You see, it is key for economic analysis to understand that nothing is an absolute in practice, and that everything depends on the premises we use to frame our questions. In this article we will briefly review how understanding which factors cause market failure will help us determine the appropriate policy response and why more regulation or less regulation are not panaceas. First, we need to define what we mean by market failure.

In microeconomic theory, market failure occurs under any deviation from a perfectly competitive market. This unpretentious premise is not trivial. Perfectly competitive markets have some desirable characteristics for consumers: 1) firms are price takers and they are unable to affect price as demand is perfectly elastic; 2) firms can enter and exit the market easily without high transaction costs enabling constant innovation and inefficient firms to drop out; and 3) lastly, there is no deadweight loss to society and welfare is Pareto Efficient.

[1] Professor of Microeconomics Quality Leadership University. Correo electrónico: emolinoferrer@gmail.com

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In order to have such outcome, the market should possess the following characteristics: rational agents, enough buyers, enough sellers and none with the capacity to influence price, low entry and exit barriers, low transaction costs, product homogeneity, and no information asymmetry. It is imperative to understand that if any of these premises do not hold, market failure exists. If, for instance, products are not homogeneous or they are difficult to compare, each firm can behave as a monopolist, become price seekers and set price at their profit maximizing output and not the Pareto Efficient quantity, there would be market failure.

Consequently, one might ponder: should something be done about this? Would government intervention achieve market efficiency? Jeffrey Sachs, who has done extensive research on economic development and poverty, suggests that economists should be more like doctors. Consider for a moment, how a doctor evaluates a patient. A responsible doctor would ask a patient questions such as: what are his/her symptoms? Has he/she changed his/her diet recently? Does he/she have any allergies or history of illness in his/her family? What the doctor is trying to do with these questions is to determine what is the most appropriate treatment for the patient. Prescribing acetaminophen would certainly help alleviate a headache, yet it is dangerous for people with liver disease.

Thus, not asking all the necessary questions can be potentially fatal to the patient. Hence, even though a policy maker could have the best of intentions, prescribing the incorrect policy or an unnecessary intervention could potentially exacerbate the market failure or create new ones. That is, it would be unfitting and irresponsible to determine if more regulation (or deregulation) is the right move without considering the temperature and pressure of water. [2]

Deadweight loss refers to the welfare that is lost either by the consumer or the producer because prices do not allocate products and services efficiently.[3] Pareto Efficiency refers to the principle of achieving a market price and quantity that maximizes producer and consumer surplus. 19 So, what questions should we ask in order to make an appropriate economic assessment? First, identify the market failure (e.g. few firms or disproportionate

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ISSN-L 2644-4038

market shares, high transaction cost or information asymmetry). Second, understand what is causing this market failure (e.g. a changing macroeconomic environment, patents or ineffective/inefficient policy). Next, is this failure just an intertemporal shock? (i.e., is it sustainable in the long run or is it only perceived in the short run?). It is then that we can establish if the correct course of action is more regulation, less regulation or even doing nothing at all. Let's go back to our previous example. If the only market failure is product heterogeneity, we know by Hotelling's law that other companies would try to replicate that product.

In that case, no intervention would be necessary as new firms would enter the market seeking higher profits, and competition would bring prices down towards marginal cost. However, it would be a very different circumstance if heterogeneity of products would be combined with other market failures such as barriers to entry and high transaction costs. Under this scenario, new firms would not be able to enter and compete against the incumbent firms. Furthermore, theoretically, some incumbent may not be able to develop similar products if an extensive due diligence or an accreditation/registration process is not suitably amortized in their cost structure.

This is what economists would call a first mover's advantage. Therefore, it seems as some market failures, as it is the case for barriers to entry and transaction costs, could be mitigated or even eliminated by deregulation. Reducing barriers to entry such as reducing inefficient taxes/laws or reducing transaction costs by eliminating unproductive bureaucratic could promote competition. Although it is now tempting to conclude deregulation and laissez-faire economics will always be the correct response, the doctor could be prescribing acetaminophen to a patient with liver problems. What happens in a market with few firms? Having a few big firms playing could lead to cartels and collusions or having one dominant firm would lead to monopolistic prices.

Again, ask the patients all the questions. Once we have identified the market failure as having one or few firms controlling the market, ask: what is causing this scenario? Is this condition the result of a macroeconomic external shock and only the efficient firms survived or one of the firms started acquiring and merging horizontally? The latter might need some further analysis. If one firm is allowed to buy smaller firms without restriction, it would eventually have the means to become a dominant firm or a monopolist deterring a new firm when entering the market.

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Evidently, this is why most countries have antitrust laws and regulate anticompetitive behavior providing a great example of when regulation is needed. In conclusion, before implementing a new policy, a policy maker should remember: is water a solid, a liquid or a gas?