
Markets and Decisions. The inclusion of economics is a unique feature of the WZB among social science institutes. Its Research Area on Markets and Choice centers on economic decision making and its societal consequences, combining psychological and economic perspectives. Applications include the analysis of political processes and market design, particularly for matching problems. Research is also conducted into the economics of change driven by beliefs, power, competition or cooperation.

Goods without a Price Tag Smart Market Design Can Make the Distribution of Important Goods More Fair and Efficient

Dorothea Kübler

If anybody still had faith in a market that regulates itself and helps create a balance of interests, the current financial crisis surely killed that faith once and for all. Market regulation has become a catchword even in libertarian circles. The regulation of markets is often done via financial mechanisms, such as those proposed with regard to a financial transaction tax: taxes are imposed on financial transactions to make speculation and short-term trading unprofitable.

However – there are also a number of sectors in society in which, even though there is a market, people do not use money as a means of exchange when transferring ownership from one person to another. Internship positions are one example; seats at schools or universities are another. They are often in short supply and high demand but not legally available for money. Governments and society face a difficult task here: how should the rules for allocating these goods be designed?

Some of them, such as health care and education, should be available to everybody, regardless of their financial situation. Ownership of these goods is an essential prerequisite for participating in social and political life. If seats at schools or universities are in short supply, admissions offices often use meritocratic criteria and allocate the seats on the basis of achievement. Again, there are good reasons not to attach a price tag to these goods. Efficiency may be a motive for using meritocratic criteria, for instance if admission to university is granted to the best high school graduates, supposing that they are the ones who will benefit most from getting a university education. But it is also possible to apply social criteria in order to enable social mobility, integration, and participation by providing access to education. Some goods, such as human organs or spouses, cannot be legally bought and sold at all. These prohibitions have a protective function, because trading humans or human body parts for money would be demeaning for the individuals involved, or because the only reason why such offers can come up in the first place is poverty and despair.

Summary: For a number of goods such as school or university admission and organs for transplants, prices are not used to determine their distribution. Norms and moral values in a society determine what should and what should not be for sale. But when prices do not play their usual role in equating supply and demand, market failure is widespread. Smart market design is important to allow for a just and efficient allocation of these goods.

What complicates the matter further is that the allocation always requires a precise match: a student may choose a specific secondary school, but that school must actually offer the student a seat in the class. Likewise, the donor organ has to be compatible with the patient who is to receive it. Only then will the matching be successful. The rules and mechanisms of such matching processes are closely entwined with priorities and values that need to be negotiated by society and political actors. The economy can help balance and harmonize the values and interests of all actors involved, and it can help make matching processes more efficient.

Markets without money may be a good alternative for certain goods, but to disregard the guiding function of prices creates a number of difficulties. These difficulties are various expressions of market failure. First of all, the fact that a short supply does not translate into higher prices means that the market is frequently unable to satisfy the demand. For example, there is a shortage of physicians who want to work in rural areas. Due to official regulations, however, the payment that doctors receive is the same for those working in the city and those in the country; there is no compensation for the lower appeal of rural areas through higher earnings.

Second, if popular goods such as university seats in large cities are not more expensive than other, less popular ones, there is an imbalance in applications that can only be resolved in a time-intensive process of rejections, waitlists, and the like. Such procedures often take up too much time. A good current example is university admissions in Germany, where many fields of study have space available long after the semester has started even though there are still applicants waiting to be admitted. A third form of market failure occurs if the fear to go away empty-handed repeatedly causes market participants to try to close transactions at ever earlier points – sometimes before they have decisive information regarding whether their transaction partner is suitable or not. Fourth, choosing not to use money as a means of exchange may lead to a situation that rewards strategic manipulation. When choosing schools, for example, it may be smart not to put one's true favorite school on the wish list if seats are allotted based on the schools' priorities and students' preferences.

But these difficulties can be addressed by using a smart market design. That is to say, the rules of the market must be actively designed if we want to achieve specific goals. The 2012 Nobel Prize in Economics was awarded to Lloyd S. Shapley and Alvin E. Roth "for the theory of stable allocations and the practice of market design." In their work, the two laureates explored markets without prices, such as the marriage market or the college admissions market, studying their design using real-world cases. The celebrated Gale-Shapley mechanism is widespread and used in many countries for school and university admissions, for example. Around the globe, the mechanism is being reinvented time and again by practitioners who are unaware of its use in other locations, let alone the scientific literature. In other words, the Gale-Shapley mechanism seems to be an obvious solution for allocation problems in markets without prices. It creates stable allocations, and if applied correctly, applicants cannot manipulate it.

In practice, however, we sometimes see allocation mechanisms that lead to less favorable allocations. In Berlin, for example, students choose secondary schools based on a variation of what is known as the Boston mechanism, even though it was discontinued in Boston many years ago because it could be manipulated. To be successful, therefore, Berlin parents' best bet is to act strategically and not necessarily submit an honest list of their preferred schools. In order to be able to manipulate the lists in a smart way, however, you have to be well informed – meaning that active parents have a better chance of getting their child admitted at their preferred school than others. The German university admissions system is another area that suffers from poor market design. In degree programs with a decentralized admissions system, free seats are available every semester even though there are still applicants waiting to be admitted. In subjects such as medicine, where admission is handled by a central clearinghouse (formerly ZVS, now hochschulstart.de), a combination of the Boston and Gale-Shapley mechanisms is used, which also leads to inefficient allocations.



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Specifically, the existing mechanism disadvantages the best *Abitur* graduates, and particularly those best graduates who do not submit strategic wish lists – even though the mechanism is explicitly aimed at giving the best graduates an advantage when it comes to choosing a university.

Whereas more or less effective markets without prices are already in place for German schools and universities, there are other cases for which a debate about introducing such markets would be desirable. Even if there is a clear ban on human organ trafficking, exchange opportunities might lead to more and better transplantations. Even if people are prepared to donate a kidney to a person close to them, this may still be impossible due to incompatibilities (of blood groups, for example). But if a second pair, consisting of a donor and a patient, could be found for an exchange that would enable medical compatibility, two transplantations (instead of none) would become possible. In 2004, a kidney exchange clearinghouse was established in New England. Similar institutions are emerging in other parts of the United States as well, and a national clearinghouse is under preparation. Why don't we have any clearinghouses for living organ donors in Europe? One possible reason is our abhorrence of exchanging human body parts. Such feelings and moral institutions are important restrictions for such transactions. The slippery slope argument that exchange opportunities are the first step towards organ trafficking may play a role here as well. However, if we oppose the exchange of human organs we also have to ask ourselves how many lives could be prolonged if such exchange opportunities did exist.

Complaints about the uncontrolled growth of markets and their intrusion into all areas of life are very popular. Even though such statements are too sweeping and often neglect the advantages of markets, we do have to be very careful and keep asking ourselves: which transactions may legitimately involve money as a means of exchange and which may not, and where might the use of in-kind exchanges, as with kidney donations or college admissions based on achievement or social criteria, be acceptable instead. Then again, there surely is a fair number of goods that are not for sale and must be kept out of the interplay of supply and demand.

The question of which goods should be distributed in markets without prices cannot be answered without context. It critically depends on the mechanism that is to be used for allocation. That mechanism has to be adapted to the social norms and criteria that have to be satisfied, and it has to take account of the alternative actions – especially back-up options – that market participants may choose. If a market without prices results in a situation such as the one in Berlin, where the best-informed parents have the best chances of getting their child into their preferred school, not very much has been gained.

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