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3 Projektskrivning

Projektstil: För att radiera texten, använd Alt + Enter

Competitive Neutrality in Mixed Markets

Projektet avses starta, datum
2014-07-01

Projektet beräknas vara slutförd, datum
2017-06-30

Sammanfattning av projektets syfte, betydelse och genomförande (högst 1400 tecken).

This research project studies mixed markets where public, private and third-sector organizations compete with one another. Our aim is to answer three questions:
- Under what conditions should the different ownership forms be allowed to compete with one another and under what conditions should public or private firms be blocked from entering a market?
- How should a mixed market be organized to achieve the social objectives? i.e., how can the advantages of the different ownership modes best be exploited?
- How can competition policy and regulation be used to improve the outcome in mixed markets?

Some concrete examples of issues that we have in mind include:
- How should the new rules in the Swedish competition act concerning public commercial activities be interpreted?
- How can the regulatory authority use the so-called reference prices to stimulate competition between private and public providers of dental care?
- Set-asides for third-sector organizations in public procurement according to the new EU directives?
- The practice of retaining some production in-house ("tailed integration").

For this purpose we will build an analytical framework combining elements from the theory of privatization and the theory of mixed markets.

Bifoga en utförligare projektbeskrivning (max 10 A4-sidor).
4 Kostnadsrevisning

Fyll i de ofärgade cellerna med för projektet gällande information, så uppdateras de färgade automatiskt. Ge akt på de felmeddelanden i rött som visas vid överträdelse av Konkurrensverkets riktlinjer för anslag till forskningsprojekt.

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4a Redovisning övriga kostnader

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5 Kostnadssammanfattnings (anges i kronor) för nu sökt anslag

Total projektikostnad

1 978 020

Därav söks från | Tidigare erhållna anslag från
---|---
Konkurrensväket | Annan anslagsgivare *
1 978 020 kr | Konkurrensväket | Annan anslagsgivare **

*Anslagsgivarens namn | Ansökan inlämnad, datum | Sökt belopp

**Anslagsgivarens namn | Ansökan beviljad, datum | Beviljat belopp

6 Övriga projekt som samtidigt kommer att ledas av huvudansvarig

Projekttitel För att redigera texten, använd Alt + Enter
Regleringsmyndigheter i Östeuropa: Organisering för effektivitet (finansierat av Östersjostiftelsen)

Namn och institution på personer som beviljas forskningsbidrag kommer att publiceras på Konkurrensväkets webbplats.
Mixed Markets and Competitive Neutrality

It is increasingly common that private firms and public entities compete with one another in the same market (OECD, 2011). Many markets that were previously the exclusive domain of the public sector are being deliberately opened up to private providers, in an attempt to reduce costs or deliver better products. Examples include day care, schools, health and dental care as well as care of the elderly. In other markets publicly owned enterprises are trying to explore synergies and other commercial opportunities, competing alongside existing private firm and third sector organizations. Examples include broadband services, gyms, road construction and restaurant services.

Such mixed markets are contentious in more than one way. Commercial firms fear that undue advantages are given to their public or third-sector competitors, for example by cross-subsidizing losses with taxes or revenues from monopoly markets; many citizens fear that private production will erode quality; many public employees fear that private employers will be less generous; advocates of market solutions point to the tendency of private firms to be more cost effective.

While much ongoing empirical research seeks to substantiate or refute these claims and counter-claims, surprisingly little research investigates how mixed markets work from a theoretical perspective. Even fewer studies try to develop a systematic understanding of how mixed markets should be regulated to achieve social objectives such as productive efficiency, high quality and low prices.

There is, however, a substantial previous theoretical literature on privatization. This literature aims to understand why and under what conditions the government should leave the market to private firms only and under what conditions public production should be preferred.¹ Our project aims at extending this existing base of knowledge about the relative advantages of public and private solutions to study markets where private and public firms compete alongside one another.

Broadly speaking our aim is to answer two questions:

- Why and under what conditions is a mixed market a better solution than a pure private or a pure public solution?

¹ See, e.g., Laffont and Tirole, 1993, chapter 17, and Martimort, 2006. A relevant line of research is also that on so-called quasi-markets (Le Grand, 1991; Le Grand and Bartlett, 1993) which, however, focus more on understanding the properties of markets driven by consumer choice, with fixed prices and where producers are entirely or mainly paid by the government or some other third-party financier.
- How should a mixed market be regulated to achieve the social objectives?
  I.e., how can the advantages of the different ownership modes best be exploited?

Part I: Pros and Cons of Mixed Markets
The most basic question that we will address in this project is why some markets are and perhaps should be mixed in the first place. More precisely, the issue is why and under what circumstances mixed markets may be preferred to purely private or purely public provision. That is: under what conditions should the different ownership forms be allowed to compete with one another and under what conditions should public or private firms be blocked from entering a market? We will mainly concentrate on welfare services that are at least partly financed through taxation.

Previous research on mixed oligopoly
The main question has been if the entry of a public firm in an otherwise private oligopoly market can reduce the welfare losses due to market power. The earliest papers argue that public firms may indeed fulfill such a role. The key assumption is that public firms seek to (or could be instructed to seek to) maximize welfare. For a brief survey see Crémer et al. (1989).

Later studies provide less favorable results for mixed markets. With decreasing returns to scale, public firms may reduce market efficiency by increasing total production costs (De Fraja and Delbono, 1989). With free (but costly) entry, the presence of a welfare (or output) maximizing but cost inefficient public firm is irrelevant to overall welfare (Bennett and La Manna, 2012).

The importance of the principle for compensation
The studies cited above all assume that firms are free to set prices. As recognized in I.a. Gaynor and Town (2011) it is important to take into account that different mixed markets are based on different principles for funding. For example, in Sweden, schools combine consumer choice with vouchers while in dental care markets the commercial firms are allowed free pricing at the same time as the public providers are restricted to cost-based pricing. The importance of these differences can be illustrated through an extremely simplified analysis.

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2 Some concrete examples of issues that we have in mind include (i) the proper interpretation of the new rules in the Swedish competition act, (ii) how the design of vouchers and public subsidies affect competition between private and public providers in markets such as schools, dental care and pharmacies, (iii) set-asides for third-sector organizations in public procurement according to the new EU directives and, finally, the common government practice of retaining some production in-house; a practice sometimes called tapered integration.

3 Alternatively public entities are assumed to maximize size as measured by employment or output (Niskanen, 1971, 1975). De Donder and Romer, 2009, extend the analysis to include firms with mixed public-private ownership and internal bargaining.

4 See also the literature on quasi markets.
Consider a public-services market with consumer choice and public financing through vouchers. A concrete example is schools in a municipality large enough to support exactly two schools, located in different parts of the town. Our very preliminary analysis is based on the stylized notions often used in previous literature: that private firms have low costs and public firm provide high quality. At this moment we simply assume that costs and qualities are exogenously given and known by all market participants.

Consider first the possibility that both schools are public, producing the same high quality at the same high cost. Then, families will choose the closest school since there is no difference in price or quality. The Government can adjust the budget (vouchers) to make both schools break even, without leaving any surplus to the producer. Consider next the possibility that both schools are private, producing the same low quality at the same low cost. Again, families will choose the closest school. And again, the government can adjust the vouchers to make both schools just break even.

One cannot say that a public system or a private system should generally be preferred over the alternative. It depends on whether the value of the quality difference is larger or smaller than the cost difference. This can be expected to vary from market to market, e.g. depending on how difficult it is to regulate the quality.

Consider now the possibility that one of the schools is public and that the other school is private, that is, a mixed market. Then, several problems arise:

1. In a mixed market students living close to the public school receive high quality education at high cost, while the students living close to the private school receive low-quality education at a low cost. Such an "average outcome" is always (weakly) worse than the best of the pure alternatives.

2. Since both public and private schools are free, families will tend to choose public schools that offer higher quality, even if they live closer to the private school, disregarding the higher production costs in public schools. That is, combining consumer choice with public financing distorts the competitive process, favoring the public alternative (high quality) over the private alternative (low production cost) in mixed markets.

3. Since families do not choose the closest schools, a mixed market implies higher transportation costs than a pure market, either public or private.

4. In a mixed market, the Government must adjust the vouchers to a level that supports the producers with the highest cost. If the Government cannot discriminate between private and public providers, private providers will earn a positive profit. Such a profit is not a pure transfer since public financing is associated with distortive taxation.

5. The mixed market is less equitable than either a purely private or a purely public market.
This highly simplified analysis suggests that mixed markets are inferior to at least one of the pure alternatives in a market with vouchers.\textsuperscript{5}

In some mixed markets with partial public funding, commercial firms are allowed to set prices freely while public providers are restricted to charge cost-based prices. The Swedish dental care market is organized this way. Another difference to the school market is that demand is elastic. Then, some of the above results have to be modified.

If the cost disadvantage of the public firms is small enough, pure public provision is the preferred alternative, since consumer prices will be low. Conversely, if the cost disadvantage is sufficiently large it is optimal to leave the market to private producers only. However, our preliminary analysis suggests that a mixed market is the optimal solution, for some intermediate public-sector cost disadvantages. The aggressive pricing policy of the public firm will force the private firm to reduce its prices – and for a given price it is better that part of the production is allocated to the low-cost private producer. The conclusion is in line with some of the previous research, cited above, although the mechanism is somewhat different.

\textbf{Importance of information incompleteness}

If the government (e.g. in the form of a municipal school board or a public procurement agency) would have access to full information, it could easily convince any firm (through contract or law) to produce the socially desired quality, to keep costs at a minimum and to set price equal to cost. There would be no benefits from competition. And ownership would not matter.

Therefore, to understand the merits of private and public ownership and the role of competition it is vital to understand what the most important limitations on information are. According to the literature on privatization, based on the theory of incomplete contracts, ownership matters since (i) public and private owners have different objectives and since (ii) it is the owner of a firm that has the right to decide on all matters that have not been specified in procurement contracts or by a regulatory agency.

More specifically, Hart, Shleifer and Vishny (1997), "HSV", show that private firms have overly strong incentives to reduce production costs at the expense of quality, if quality cannot be contracted or specified through regulation. Publicly owned firms have too weak incentives both to reduce costs and improve quality. A manager in the public sector faces weak incentives to innovate and to control costs, since s/he can only appropriate a small share of the benefits. Which ownership form that should be preferred varies from market to market, depending on e.g. how difficult it is to measure quality.\textsuperscript{6}

\textsuperscript{5} We have emphasized (generic) vertical differentiation in combination with (horizontal) geographical differentiation; adding non-geographic horizontal differentiation linked to the form of production will make mixed production more attractive.

\textsuperscript{6} Hoppe and Schmitz, (2010) refine HSV’s analysis by allowing more flexibility in how control rights are allocated between different parties. Their results are
This literature does not, however, consider competition between public and private firms. Our ambition is therefore to integrate the literature on mixed markets (studying competition between private and public firms, but using naïve models of why public and private firms differ) with the literature on privatization (studying why private and public firms differ, e.g. in terms of production costs and quality, but neglecting competition between the two modes of ownership).

Our preliminary conjecture is that mixed markets may be more efficient than purely private and purely public markets. The cost efficiency of the private firms can be used to discipline the public firms, while the latter’s dedication to quality can force the private firms to give more attention to quality.

More precisely, our conjecture is based on the following observations. Any organizations’ incentives for quality improvements and cost reductions are interdependent. High quality implies a high market share and this increases incentives to keep production costs low. Low cost increases the markup and therefore the incentives to sell more by offering a higher quality. Thus, public firms should have stronger incentives to invest in reductions of variable costs when competing with private firms, rather than with other public firms. The reason is that their quality advantage translates into an increased market share. Moreover, private firms should have stronger incentives to invest in quality when they compete with public firms than with other private firms. One reason is that the private markup is higher, improving the incentives to capture a larger market share.

But there are also reasons to suspect that pure private and pure public markets may sometimes be preferred. One reason, central to the competitive process, is that the customers may perceive private and public firms as more different, which in itself may reduce competition in other variables, such as price and quality.

The mixed market as an experiment
Another possible rationale for mixed markets is that they constitute a laboratory for experimentation and discovery of the relative merits of the two organizational forms, when cost and quality differences are unknown. All previous economic research on privatization assumes that the Government knows the size of the public production’s quality advantage and the size of the private production’s cost advantage and, therefore, is in a position to optimize. If these differences are not known, the competitive process can perhaps be used as a learning process to reveal, in the particular market, which alternative is to be preferred.

consistent with the observed variation in public and private production across industries. Wolinsky (1997) explore the role of consumer choice between competing public providers, but leaves out private alternatives from the analysis. Schmidt (1996) extends the analysis to weak budget constraints in public firms.
Political economy
As an alternative to the rational public-interest perspective above, a mixed market can also be seen as the outcome of a political process, one that can best be analyzed with, e.g., public-choice theory. Even if our knowledge about the relative merits of private and public providers is still very incomplete – or perhaps exactly because of this fact – many people and several political parties have taken a firm stance and many tend to prefer one of the two polar solutions. Some people favor public production, often based on the notions that public provision results in a more equitable outcome and in superior quality, while some favor private solutions, under the hypothesis that private solutions lead to greater efficiency.

It is perfectly possible that mixed markets therefore should be viewed as a political compromise: consumers of opposite conviction can make choices accordingly; politicians from both camps get something they want. (Gingrich, 2011.) In contrast, an attempt to stamp out one of the alternative production forms from the market can give rise to bitter political opposition. If an issue is salient to a group of voters, they may be able to obtain concessions even against the wishes of the majority, according to the interest-group theory developed by Peltzman (1976), Becker (1983) and others.

Intrinsic motivation and third-sector organizations
Third-sector organizations such as foundations and sports associations often have an objective (or mission) that is appealing to their employees. Those employees who share the objective of the firm become intrinsically motivated. Therefore, the moral-hazard problem, which is a key issue spoiling performance, is alleviated in firms with many motivated workers. Also publicly owned suppliers often rely on intrinsic motivation.7

Part II: Public Policy – Taxation, Regulation and Competition policy
Mixed markets can be expected to differ from other markets since private firms and public entities differ in many respects. The fundamental difference is a difference in owner objectives. Private corporations maximize profits while public entities are typically given more complex instructions that may involve quality, ensuring equal access and to act as “provider of last resource”. Private firms are often thought to be more efficient, e.g., due to capital market discipline and superior corporate governance. Public firms may have preferential tax treatments or may be able to acquire inputs, including capital, at below market prices.

These and other differences imply that the competition in mixed market is different from competition in purely private markets. As a result, standard analysis in e.g. competition policy cases may need to be modified.

Policy makers often phrase the over-riding issue in mixed markets as one of competitive neutrality. Intuitively competitive neutrality should mean that the two forms of ownership should compete on their relative merits. But what does this mean more specifically?

We advocate an efficiency-based notion of competitive neutrality. As we see it, neutrality should mean that markets are organized in such a way that we can exploit the relative advantages of different ownership forms in such a way that social welfare is as high as possible. Competitive neutrality does not necessarily imply that taxation or competition policy rules must be “nominally neutral.” There may be a need for special rules for private or public firms.

Application of standard competition law to public firms
The existing literature on mixed oligopoly studies competition between private firms and a public entity in an otherwise unregulated market. Little research has been undertaken to study how competition law can be brought to bear on mixed oligopolies in order to achieve welfare objectives.

General competition rules banning the abuse of a dominant positions and anticompetitive agreements apply to both private firms and public entities’ commercial activities. Since public firms differ in many respects from private firms it is, however, likely that the exact interpretation and application of these rules should be adapted when applied to public firms.

Public firms will often have other objective than profit maximization. As argued above, a simplified interpretation of those objectives could often be output maximization. Therefore, public firms can be expected to compete more aggressively than private firms. While this may be beneficial in many circumstances (see above), it also increases the risk that public firms engage in predatory behavior.

Sappington and Sidak (2003a, 2003b) are two of few papers providing formal analysis of how competition policy should be applied to mixed markets. They show that public firms may have incentives to set prices below marginal cost, may have stronger incentives to behave anti-competitively and may have no need to recoup losses incurred when, e.g., engaging in predatory pricing. They argue that, therefore, the threshold below which the firm is not allowed to price

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8 For example, the Australian Government states that publicly owned firms should not have a net competitive advantage solely by virtue of public sector ownership and that competitive neutrality should be an "over-riding principle; see "Competitive Neutrality Policy Statement" available at www.treasury.gov.au/documents/275/PDF/cnps.pdf. The British competition authority OFT also endorses competitive neutrality, as does OECD. The Swedish special competition rules for public-sector commercial activities, discussed below, aim at competitive neutrality (Swedish Competition Authority, 2013).
should be higher for a state-owned firm than for a private firm; how much lower will depend on the specifics of the case.

In this part of the project we aim to investigate if also other differences between public and private providers justify differences in the application of the standard competition rules to public entities – or in the design of the rules. Examples of differences that may be of importance are, first, synergies with reserved activities and, second, soft budgets and protection from bankruptcy.

Some of the public entities’ commercial activities are motivated by a wish to exploit synergies with publicly financed activities. Examples include municipal swimming baths opening gyms within their premises and the use of army helicopters for civilian transport services.

An eternal issue is how common costs should be allocated; in this case the issue is allocation between the reserved activities and the commercial activities where the public entities face competition. One view is that the secondary activities should only be required to cover the extra costs that they entail and that the unavoidable common costs thus should be covered from taxes or revenues from reserved activities. Such an arrangement clearly risks squeezing private firms out of the market.

Another view is that public entities should distribute common costs according to standard accounting norms, e.g., in proportion to their share of variable costs. However, such rules are quite arbitrary and may still disadvantage private firms. A third view, therefore, is that costs should be allocated so that the public firm derives no benefit from its reserved activity and a fourth view is that the public firm should not be allowed to engage in commercial activities in competition with private firms.

From a normative economic point of view, none of the above rules is very appealing. Instead, one may argue that the correct rule should be some form of Ramsey pricing. The markup over costs in the reserved and the competitive segments ought to be proportional to the inverse price elasticity of their respective demand; possibly taking deadweight losses from taxation into account.

Public firms may also act more aggressively since they cannot go bankrupt and may, therefore, enjoy lower interest rates. It has been claimed that this is an unfair advantage conferred on public firms, but we believe this argument is too simplistic. The lower cost of capital may reflect an inherent advantage of public organizations. If so, it would be a waste not to exploit this advantage. However, also this counter argument is too simplistic. The public firm may not face lower business risks; its risk advantage may be that losses will be paid by taxpayers. Since taxes results in distortions, the shadow cost of public funds should be accounted for when public firms’ capital costs are determined – and when a test for predation is formulated.

Special competition rules for public entities’ commercial activities
The Swedish Competition Act was recently augmented with new rules for public entities active in commercial markets; rules that focus on the competitive
advantages enjoyed by public entities. Unfortunately, there is virtually no economic research to guide the application of the new rules, in sharp contrast to the situation for standard competition rules. The first aim of this part of the project is to start filling this lacuna.

The new rules are reminiscent of the rules applying to dominant firms, limiting the ability of such firms to "abuse their dominance" (or, with the US terminology, to "monopolize" a market). But the new rules appear to be more far-reaching than the standard rules in several important respects:

- The regular competition rules only authorize the court to order a dominant firm to modify its behavior, while the new rules authorize the courts to order a public entity to exit a market.

- Public entities need not be dominant to be liable to the new rules.

- The wording of the new rules also seems to suggest a lower threshold for the magnitude of the adverse effect on competition. In our translation, the new rules take aim at practices with "some effect," while the standard rules require a "noticeable effect."

On the other hand, the new rules seem to suggest a more generous efficiency defense, similar to that in the old Swedish rules for mergers. Essentially it appears that the new rules provide for a total – rather than a consumer – welfare standard.9

We will address questions like: Will the new rules help increasing the efficiency of the markets? How should they be interpreted to best achieve this purpose? Alternatively, can the new rules be better understood as aiming towards other objectives than efficiency? Our point of departure will be the modeling framework developed in Part I of this research project, as well as the existing literature on mixed oligopoly.

Regulation of dental care

In this part of the project we will focus on a particular market, namely the market for dental care in Sweden. The purpose is to study how competition between public and private firms works and how the Swedish dental and pharmaceutical benefits agency (TLV) can use its regulatory powers to promote competition.

TLV uses a system of so-called reference prices to influence affect the market. The reference prices are based on estimates of the production costs for public provision and fulfill two roles: they determine the reimbursements that patients receive and they provide patients and firms with information about what a reasonable cost-based price would be. The goal is to contribute to affordable

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9 In addition, some aspects related to legal procedure and consequences differ: the transgression of the rules need not be on-going; injunctions with penalties are the only sanctions available.
prices, without direct regulation, by contributing to competition in the market. (Swedish Competition Authority, 2013.)

Examples of issues that we wish to address are: (i) To what extent are private and public firms competing with one another? (ii) Are the patients using the reference prices to estimate the price level in the market? (iii) Can reference prices provide a focal point for the caregivers’ pricing decisions? (iv) How are the public and private providers’ prices affected by the reference prices?

References