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Care, Commons and Entrepreneurship

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Abstract

Health care costs has increased significantly during the last decades, and despite rapid development in medical practices, little has been achieved compared to other sectors when it comes to cost cutting innovations. The entrepreneurship that flourish in retail, technology and logistics seems to be virtually absent from the care sector. In this paper we explore the state of research on health economics, collaborative ("open source") development and on entrepreneurship and it applications to the care sector. We show that both the concept of evasive entrepreneurship and the Ostromian "commons" are useful tools when looking for solutions to mitigate escalating cost in this sector.

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Health Care Challenges

The health care sector is one of the economy's largest and most valuable for human welfare (Murphy & Topel 2006; Hall & Jones 2007; Chernew & Newhouse 2012). Health care in both the United States and Europe is at the same time been plagued by endemic problems of unequal access, inefficient production and high cost increases (Van Doorslaer 2000; Marmot 2008). Much of the debate has focused on the problems in the United States, but similar problems in varying degrees exist in European countries as well (Van Doorslaer 2006; d'Uva et al. 2009; Diderichsen 2012).

Health expenditure has outgrown the overall economy in developed countries over past decades, driven by factors such as aging, higher incomes and the adoption of new technologies (Chernew & Newhouse 2012).

Health spending relative to the rest of the economy was fairly stable historically, but began to grow rapidly around the 1950s both in the United States and Western Europe (Getzen 2015). Between 1960 and 2010, health spending as a share of GDP grew from around 5 to 17 percent in the United States, and from 3 to 10 percent of GDP in Western Europe (Rebba 2014). Interestingly, the rate of growth of health care expenditure is similar in the US and Western Europe, though starting and therefore remaining at a lower level in Europe (Getzen 2015). The increase in expenditure slowed sharply in recent years, though this is likely to be mainly a temporary effect of the economic crisis.

The high cost increase in health care also affects equality by making health unaffordable for low income individuals. Even in Europe, health care tends to have a significant component of private out-of-pocket spending. Lower income groups are, therefore, more likely to perceive a lack of access to health services even in countries which have universal health care (Cylus & Papanicolas 2015). High expenditures have put great pressure on public finances and created an impetus for reform aimed at increasing productivity in health care in order to maintain the long-term viability of the welfare state (Pammolli et al. 2012; Quaglio et al. 2013).

The costs of health care delivery vary significantly by provider and region beyond what can be explained by quality and input costs, which suggests that many providers produce at

suboptimal levels of productivity. ((Cutler, 2002); Fisher et al. 2009; Philipson et al. 2010; Skinner 2011). The causes for high cost and low effectiveness in health care have been intensely debated in recent years, but no definitive answers have been reached. While this issue is not fully understood, it is often argued that the unique characteristics of health care causes unique organization, which reduces incentives for process innovation and creates a bias towards high cost increase (e.g. Weisbrod 1991; Dranove & Satterthwaite 2000; Windrum & Koch 2008; Chernew & Newhouse 2012).

Weisbrod (1991) writes: "To understand the markets in which health care is provided and financed, it is useful to consider ways in which health care differs from most other commodities. First, it sometimes involves the preservation of life, or, at least, major effects on the quality of life. Second, it is a technically complex commodity that abounds with informational asymmetries, adverse to consumers."

Health care fundamentally differs from most other services due to the strong moral arguments that it should be provided for those in need, regardless of ability to pay. Health care services are moreover often complex, difficult to evaluate for the patient, rarely used, but very expensive and literally vital when needed. Therefore, health care is generally financed by others than the patient. Health provision, consequently, involves three parties: the patient, the financer in the form of the state or insurance company, and the provider. The three parties tend to have conflicting interests in terms of cost reduction.

One important explanation appears to be that the ethics of health care tends to incentivize technological change focused on increasing health quality and saving the patient, regardless of cost rather than lowering costs (Weisbrod 1991). Technological improvement can either focus on improving quality for given cost or decrease cost for given quality. In health care, there is a strong bias for the former, not for technological but for institutional reasons. Firms that invest in innovations know that a new treatment or drug that improves chance of survival is almost never denied by providers, regardless of cost. Focusing on drugs or treatments that lower costs may not be as profitable. Technology often decreases costs, but has instead had a tendency to make health costs increase (Cutler 1995, Cutler 1998, Berndt et al. 2000). Higher cost of healthcare should not be confused with higher costs of health, which has indeed declined – for example measured by life expectancy.

Asymmetric information and moral hazard problems create other ineffectiveness in provision of health services (e.g Dranove & Satterthwaite 2000; Zweifel & Manning 2000). Patient and providers prefer higher spending, while the financer prefer lowering costs. Principal—agent problems and the information disadvantage may also make patients prefer providers who are not opportunistic and do not have strong incentives to maximize profit. Agency problems and the informational disadvantage of patients creates a risk for profit-driven hospitals to act against the interest of the patient, which makes patients more trusting of non-profit private hospitals. This is likely one reason why for-profit hospitals are few compared to non-profit private hospitals in the United States. One way to deal with agency costs by financers such as the state is to control production in public hospitals. The organization structure of health care in either public or non-profit form, however, causes other problems such as bureaucracy, rationing and weak incentives to innovate.

Cutler (2010) discusses why innovation has not reduced inefficiency and waste in health care as in other sectors. Examples include slowness to adapt efficiency savings, and the fact that doctors waste time on routine administrative tasks that could be provided by less trained personnel or through IT (Gans 2004). Cutler (2010) argues that improved production processes of the type that has been seen in such sectors as retail, logistics and manufacturing are far slower to spread in health care due to the lack of organizational innovation: "Medical care is complex, and it is natural that there will be inefficiencies in complex settings. Indeed, in any industry where human action is important, there are bound to be mistakes. The failure of medical care is not so much that mistakes are made, but rather that the system has not evolved mechanisms to minimize those mistakes. For many years, Toyota was famous for its attention to error reduction; Wal-Mart is equally known for its supply-chain management."

Technological innovation tends to be expensive and characterized by high transaction costs, which makes creating incentives to fund R&D critical for technological development (Bakker 2013; Henrekson & Sanandaji 2016). Nevertheless, technology is not the most difficult innovation to incentivize without profit motives, since it can e.g. be directly funded by the state or universities. Another solution is using prizes to promote innovation where incentives are otherwise weak. One advantage is that prizes avoid the tradeoff inherent in granted monopolistic patents (Kremer & Williams 2010).

Improving processes that often spread by diffusion presents a greater challenge. Private firms with strong property rights and managerial structures, like Toyota and Wall-Mart, have obvious incentives to introduce process innovations. Once a procedural innovation is created in one part of the organization, it is actively copied by the rest of the firm. The best procedures are likely to spread in the industry, as the most effective firms take market shares while less effective competitors are forced to emulate or risk disappearing.

The organizational structure of health care, however, creates barriers for private market entrepreneurship that are not readily removed. This raises the question of other methods to introduce innovations. The profit motive is obviously not the only mechanism to introduce innovation. Windrum & Koch (2008) analyze innovation in the public sector, in particular health care. "Public sector entrepreneurs" tend to have weaker incentives to innovate, less risk-taking in public organization, and lower tolerance and higher sanctions for innovation failure. Innovation, however, takes place also in these organizations using other methods and incentives. Case studies in health care point to the key role played by the entrepreneurs, or "innovation champions", who drive forward the implementation and diffusion of innovation. Their success is in part dependent on willingness to experiment in the organization (Cunningham 2005).

Another organizational form that has shown strong ability to innovate without monetary incentives is the non-profit sector. Particularly impressive gains have been seen in self-organized open source systems, such as Wikipedia and Linux. Here incentives are different, including reputation, reciprocal altruism and a subculture of sharing. The work in new institutional economics, in the next section, has shown that these self-organized systems are more common and successful than predicted by simple theory.

Elinor Ostrom on Self-Organization

Self-organization and basic economic models predict that conflict of interest causes voluntary collective action to fail, even when such cooperation is in everyone's mutual benefit. Macur Olson famously concluded: "unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests" (Olson 1965).

This happens when rational, self-interested individuals have stronger incentive to free ride than contribute to collective benefits. The collective action problem can be theoretically shown in n-player prisoner dilemma games, where cooperation fails despite mutual gains (Hardin 1971; (Lichbach, 1996).

The "zero contribution thesis" in public good production is, however, not the full story. While cooperation is challenging, we also empirically observe many examples of successful voluntary organization are common. The work of Elinor Ostrom and her team in particular showed that self-organized communities can solve collective action problems using cooperative norms. They examined real-life common pool resources such as fisheries and grazing land. They found that communities over time organically developed collaborative institutions to overcome collective actions problem (Ostrom 1990; Ostrom & Gardner 1994; Dietz et al. 2000). This was a revolutionary insight for which Elinor Ostrom awarded the Nobel prize in economics as the first female laureate. Rules for managing common pool resources could be monitored and sanctioned by the community. The studies found that in setting with repeated interaction and communication, social norms can replace externally imposed set of rules, sometimes even outperforming them (Ostrom, 2014).

Ostrom focused on commons, which is any resource to which members of some group share acces. Individuals can extract resources from the common pool for private use, but at the risk of degrading the common through excess use, the "tragedy of the commons" (Hardin, 1968). One way to solve this collective action problem is privatizing the resource into parcels of private property, while another is assigning management to a central authority. Ostrom showed that groups could also cooperate and act as their own stewards, in practice transforming the resource into common property.

Successful cooperation is far from guaranteed and often fails. The potential for successful self-organization are however wider than the simple theory of self-interested theory would predict. Individuals often follow norms of reciprocity and are willing to restrict their own use common resource as long as most others reciprocate.

In addition to trust and reciprocity, successful commons governance requires an active community and evolving rules that are well-understood (Dietz, Ostrom & Stern 2003).

Longer-term survival of these institutions also requires so-called design principles. These include boundary rules, restrictions on use of resources, monitoring, graduated sanctions on offence, conflict resolution, and the ability of participants to elect leaders and modify rules. Cooperation works because participants monitor each other and are able to sanction or exclude cheaters. Over time, social norms often evolve where the preference to follow the rules is internalized. This allows for high levels of cooperation, without the need for close monitoring or costly sanctioning.

Organization cooperation requires individuals to keep their promises to each other. Simple theoretical models often predict that credible commitment in negotiations is impossible without the coercive power of external authority such as the state.

Ostrom et al. (1992) argued that other mechanisms could also effectively enable credible commitments: "Empirical evidence suggests, however, that individuals facing social dilemmas in many cases develop credible ex ante commitments without relying on external authorities". This was possible through repeated interaction, communication and the ability to sanction those who acted opportunistically and broke their promises. The threat of sanctions could in this setting create sufficient incentive to cooperate, and often outperform other arrangements. The authors concluded that self-governance is possible and that "when individuals are given an opportunity to restructure their own situation, they frequently – but not always – use this opportunity to make credible commitments and achieve higher joint outcomes without an external enforcer."

Self-organized collective action applies not only to fishing communities but many types of modern organization. Ostrom specifically discussed knowledge as a common pool resource whose production could be self-organized (Hess & Ostrom, 2005). One challenge is that defining the community in terms of users and contributors is more difficult in digital information than e.g. fisheries. Schweik (2005) further discusses the institutions governing open source software.

Users are more likely to lack common understanding and to experience conflict of interests in large and complex resources. This makes the costs of sustaining large and complex resources higher than governing smaller, more homogeneous resources (Ostrom et al. 1999). The high degree of complexity and often large scale may be a problem for creating health care

commons. The digital information commons have worked well despite high complexity and a large and dispersed community – perhaps in part due to the compensating effects of low costs of communication. Hess & Ostrom (2007) write "One of the surprising developments of global digital commons, such as the Open Source movement, is the high degree of cooperation and coordination that has been achieved by apparently disparate individuals, many of whom never have face-to-face contact"

Health care as such is not a common. Resources are generally privately or publically owned, and users can easily be restricted. Moreover, unlike a classic common such as grazing land, users of health care in the form of patients rarely participate in production. Defining health care as a common would stretch the definition too broadly so as to make it useless. There are, however, specific elements of health care provision that can be viewed as common pool resources. One important example is the provision of complex health care requiring the collaboration of different actors (Gochfeld et al. 2001; Berwick 2009; McGinnis 2013).

Due in part to technical complexity, modern health care is a fragmented field where many different professionals and organizations often cooperate in devising new treatments and providing care (McGinnis, 2013). Specialized knowledge is often spread in different actors that must work together in innovation and the provision of complex care. It is common for complex health programs to require the coordinated efforts of participants with diverse skills rather than being fully under one actor. Stakeholders can include different physicians, technicians, hospital administrators, regulators, research organizations, professional associations, private pharmaceutical and medical device manufacturers, community service organizations and patients.

McGinnis (2013) writes "Although most do not realize it, participants in these programs are learning how to manage common property, that is, resources which are made jointly available to a specific group of individuals, each of whom has only limited rights to the use of that resource, since many consumption and allocation decisions must be made by the group as a whole."

Because several participants collaborate and have a joint stake in the outcome, complex health care programs have elements of common property and can, therefore, be seen as

micro-commons. Like other commons, improved stewardship of collaborative health programs benefit all involved actors but require rules and non-hierarchical cooperation.

Health care systems in total are, however, not commons but rather public or privately owned, with clear boundaries of control and property rights (McGinnis 2013). One example can be a health care program where hospitals, research universities, public agencies and private medical companies work together in provision and innovation of a particular treatment. The individual actors are not commons but either public or private organizations. The joint elements of the program, though, are in part a common pool resource.

However, there are even more pure examples of health care commons. In unusual circumstances, health care providers and other parts of the community have self-organized to provide health care outside of public or private property in surprisingly large scale.

One example is Metropolitan Community Clinic in Greece. Health care provision in Greece faces major difficulty following the financial crisis, which brought the public to the brink of bankruptcy and, in addition, led to many Greeks losing their jobs. In Greece, the national health service is tied to employment. High unemployment led to many unemployed Greeks losing their insurance, virtually lacking access to public health care and no money to pay for private clinics. One response to institutional failure was Metropolitan Community Clinic, a self-organized initiative evading existing institutions to provide health care to those lacking health care. Cottica (2015) write:

"This is a very strange animal as health care providers go. It has no legal existence. Its literature proudly proclaims: "MCCH is a volunteer organization without Legal or Taxable status and it is not a 'Non-Profit-Making-Organisation'." Maria: "We are technically illegal". It does not accept donations in money. It does accept donations in kind: medicines, equipment, blood sample analyses. It operates from a building that belongs to the Municipality of Helliniko-Argyropoulis. Though none of its employees works in the building, the Municipality still pays the electricity and phone bills that the MCCH generates."

A striking feature of this health care common is the size of the Metropolitan Community Clinic, with tens of clinics. Traditional economic theory would have concluded that this arrangement is impossible, and the example serves as an illustration of Ostrom's Law: "A

resource arrangement that works in practice can work in theory" (Fennell 2011). Similar health care commons arrangements exist in underdeveloped regions with strong community ties, such as among the indigenous population in Malaysia (Wong et al. 2014).

Another purer example of health care commons is the growing number of open source IT programs for health care as well as patient symptom aggregators. One example of the latter is Patientslikeme, a large site where patients share symptoms, treatments and experience with medication (Bove et al., 2015) (Frost & Massagli 2008; Hixson et al. 2015). This data has also been shared with the medical community to enable research on larger samples. The site was founded by individual entrepreneurs, but has grown vastly in size as an open source community.

Open Source development is a common feature of rapidly developing industries (Dahlander & Gann, 2010; Von Krogh & Von Hippel, 2006). In the late 19th and early 20th century open source development was common in the then cutting edge heavier than air aircraft community. New innovations was readily shared - under the assumption that it was better for each individual inventor or developer to be able to use the advanced made by others. Most inventions was patented, but patents was not enforced by the patent holders (Meyer, 2014)). The same phenomenon is not present in the software industry where proprietary software companies are challenged by open source software (e.g Linux. Apache, Mozilla, MySQL) that are developed collaboratively (Raymond, 1999). The research on open source have primarily focused on how these project come about and how to improve the efficiently of such development projects (Capiluppi & Michlmayr, 2007; Feller & Fitzgerald, 2002; Hippel & Krogh, 2003; Von Krogh, Spaeth, & Lakhani, 2003). A subset of this literature explores the motivations behind participation in open source development, results that there can be applied to wider fields than software (Hars & Ou, 2001; Hippel & Krogh, 2003; Kogut & Metiu, 2001; Lerner & Tirole, 2002; Von Hippel, 2001).

Open Source health care is a less studied sub category even though care share some of the characteristics of the areas where open source development have proven successful (Fitzgerald & Kenny, 2003).

Self-organized cooperation in large complex systems is difficult to achieve at once. Ostrom discussed how cooperation could start in smaller groups and develop: "If a small core group of users identify each other, they can begin a process of cooperation without having to devise

a full-blown organization with all of the rules that they might eventually need to sustain cooperation over time. The presence of a leader or entrepreneur, who articulates different ways of organizing to improve joint outcomes, is frequently an important initial stimulus" (Ostrom 2000). While gains from cooperation present an opportunity, implementing these difficult systems often require the initiate of individuals – discussed in the next section.

Evasive Entrepreneurship

Institutional entrepreneurship refers to how entrepreneurs are influenced by and influence institutions (Henrekson & Sanandaji 2011, 2012). Entrepreneurship typically refers to business activity. More fundamentally, however, it includes all innovative activities aimed at change, not only firms. Other categories include "social entrepreneurs" who create non-profit organizations (Boettke & Coyne 2009), "political entrepreneurs" who recombine resources in the policy arena to bring about reform (Dahl 1961), and "community entrepreneurs" who organize to provide local public goods (Schneider et al. 1995).

According to Schumpeter (1934), the defining characteristic of entrepreneurship is not earning profits but disrupting the current equilibrium inherited from the past. Business entrepreneurs who change the market equilibrium with new technologies, products or organizations are one important group, but the term can be applied to other actions which bring about dynamic change. The Swiss businessman Henry Dunant is not famous for his private investments but for founding of the Red Cross, for which he received the first Nobel Peace Prize in 1901. Another example of non-profit entrepreneurs includes Jimmy Wales and Larry Sanger, who in 2001 created Wikipedia. Like for-profit entrepreneurship, The Red Cross and Wikipedia were innovative initiatives that required novel ideas, alertness to opportunities, risk taking and organizational effort.

Entrepreneurs act within the rules of society often referred to as institutions. Formal written institutions include laws, property rights and regulations, whereas informal unwritten institutions include as traditions, cultural practices and norms (Acemoglu et al. 2005). The concept of institutions is not perfectly defined, but the most common definition in institutional theory is that defined by North (1990) "Institutions are the rules of the game in a

society or, more formally, are the humanly devised constraints that shape human interaction". This is close to the definition in Ostrom (1990): "Formal and informal rules that are understood and used by a community."

Institutions such as property rights, rules, market structure, the political system and social norms largely regulate society and influence the extent to which entrepreneurial talent is directed toward productive or unproductive activity (Baumol 1990). Entrepreneurs can in turn work to abide, evade or alter institutions (Henrekson & Sanandaji 2011).

The common response is abiding institutions and working whiting the current framework. Altering institutions can take the form of social activism, aimed directly at influencing policy makers to reform laws and regulations, such as the environment movement and other forms of social activism. A third way in which entrepreneurs interact with institutions is through evasive entrepreneurship aimed at circumventing formal institutions.

When current regulations are obsolete, one solution is evasion rather than attempts to reform or abide by potentially stifling rules (Coyne & Leeson 2004; Henrekson & Sanandaji 2012; Elert et al. 2016, Elert & Henrekson 2016). Evasive entrepreneurship refers to circumventing institutional obstacles as part of novel activity. This is it's done by using new technologies, finding room in existing regulations or working in the gray zone. If successful, it can make the institution being sidestepped irrelevant, or even provoke reform by highlighting its inefficiency. One example includes rides-for-hire application companies such as Uber and Lyft which enable their users to circumvent regulations in the local taxi market. Another example aimed at circumventing intellectual property right and monopoly power includes file-sharing platforms such as The Pirate Bay.

Elert & Henrekson (2016) discuss evasive entrepreneurship in depth: "A well-established idea in the entrepreneurship literature is that entrepreneurs generally abide by institutions, which are therefore seen as the main determinants of entrepreneurship and economic growth. We challenge this idea by providing the first formal definition of evasive entrepreneurship, and argue that it is an important yet underappreciated source of innovation and change in the economy, especially because evasive entrepreneurs through their actions in the market may spur institutional change with potentially important welfare effects...This type of

entrepreneurship is a means to test and provoke the existing institutional frameworks, and it also indirectly results in adaptations within those frameworks".

This paper focuses on for-profit evasive entrepreneurship, but conceptually nothing precludes non-profit evasive entrepreneurship. While social activism takes place in the policy arena using political means, and deals with unwanted institutions by creating opinion and influencing politicians to directly reforming the institution in question, evasive entrepreneurship by contrast accepts the institution but devices methods to de facto work around it in the real economy.

An early definition of evasive entrepreneurship is efforts in "evading the legal system or in avoiding the unproductive activities of other agents". Adam Smith had this figured out already in 1776. He wrote that individuals could circumvent institutional constraints unfavorable to commerce, and added that the effort of individuals to better their condition is "not only capable of carrying on the society to wealth and prosperity, but of surmounting a hundred impertinent obstructions with which the folly of human laws too often encumbers its operation"

Whether or not evasion is socially beneficial depends on the specific circumstances. An entrepreneur who devises clever ways to evade taxes by using tax-havens may cause harmful economic effects. Elert & Henrekson (2016) write: "If evasive entrepreneurship circumvents institutions that are welfare enhancing, it is likely to decrease welfare, but if there are other motives behind these institutions or if they have become obsolete (act as impediments) due to technical and/or organizational change, evasive entrepreneurship is likely to raise welfare".

It is more likely that evasive entrepreneurship acts as a vehicle of regulatory change by provoking it when the institutions being evaded is obsolete or inefficient. In these cases, evasive entrepreneurship has the additional benefit of pointing to inconsistencies in regulation. This makes evasive entrepreneurship a potential tool for reform in areas where institutions are obsolete or ineffective, but where political reform is slow in response.

Policy-makers may indeed welcome evasive entrepreneurship in many situations. The interest of politicians and society do not always perfectly coincide – for example in settings characterized by rent seeking, corruption, lobbying or group conflict. This can lead to

institutions designed to further private interests of politicians or special interest despite being ineffective for society at large. Not all institutional inefficiency is however intentional. In other cases, inefficiency reflects complexity and the fact that optimal policies constantly shift due to technological and social change. In this situation, evasive entrepreneurship plays a Hayekian role by utilizing local information that is known in communities affected by policies, but which policy makers in centralized decision making do not have full access to.

Another major problem in devising institutions is uncertainty, not the least when dealing with new technologies. When there are large uncertainties, evasive entrepreneurs can serve as an educational source for policy-makers by experimenting and testing boundaries, demonstrating on a smaller scale what works and what does not. This is particularly true when there are active communities which self-organize to actively bring knowledge to the surface. In recent years, policy-makers have become more aware about the benefits of using self-organized communities as a source of small-scale experimentation, and innovation as a complement for large-scale bureaucracy. Many initiatives fail, but the cost of failure is small, unlike state activity, and easily outweighed by the gains from even a few successful experiments.

The ability to bend the rules with some flexibility may be desirable but difficult for the public sector for legal reasons, or as part of the common tradeoff between norms versus discretion. Lipsky & Smith (1989) find that employees of nonprofit agencies are committed and more likely to bend rules for individual clients perceived as being overlooked or whose needs are not met by routine public program. "It is not uncommon for employees in these agencies to work on their days-off to help a client or to try to circumvent a government regulation to obtain special programmatic or financial help". This flexibility is not possible for public programs which are obliged to treat all clients equally.

In other situations, evasive entrepreneurship is a response to policies against the interests of the public, for example in dictatorships or when there is high corruption. Governments that seek to preserve the political status quo can attempt to erect barriers for NGOs (Bloodgood et al. 2013). NGOs can attempt to alter these institutions, for example by forming transnational advocacy networks appeal to citizens of other more pluralistic countries (Keck & Sikkink 1998). Indian Gram Vaani circumvents legislative prohibitions on radio broadcasting by using mobile phone social network to connect millions of the rural poor (Robinson et al.

2015). A common example of evasive entrepreneurship for non-profits in dictatorships through permissible umbrellas. In Zimbabwe, the newspaper The Source survives in the repressive media climate by focusing on business journalism (Robinson et al. 2015). In Iran, many reformist organizations shift to environmentalism, an activity more accepted by the regime which allows some civil society to survive.

Evasive entrepreneurship is particularly important in situations when existing institutions do not function well, such as the Metropolitan Community Clinic in Greece mentioned above. Joshi & Moore (2004) discuss evasive entrepreneurship in public service provision using "unorthodox organisational arrangements" to adapt to prevailing local circumstances. These often informal arrangements are common in countries where state authority is weak. Standard classification of how services can be provided to the poor includes markets, state-agencies, self-service through collective action, non-profits such as philanthropic foundations, and religious organizations and indirect state provision in collaboration with non-profits or private firms. Unorthodox organizational arrangements are defined as those that fit into none of the standard categories, and best described as mixed or hybrid. They write: "Despite their unusual structuring, these arrangements often function effectively in circumstances where more conventional forms of service delivery have failed" (Joshi & Moore 2004).

The concept is related to the notion of co-production in Ostrom (1994) that interaction with the public can increase service quality of public agencies by eliciting information and cooperative behavior: "Co-production implies that citizens can play an active role in producing public goods and services of consequence to them".

One example is The Ghana Public Road Transportation Union, a private association of both owners and employees in the transport business that also collects taxes on behalf of the government. Another example of co-production is the involvement of farmer organizations in public irrigation agencies in East Asia. Joshi & Moore (2004) further define "institutionalised coproduction" as the provision of public services through long-term relationships between state agencies and organized groups of citizens. The authors believe that these arrangements have two distinct motivating forces.

One is declines in governance capacity at local or national level. When government no longer provides certain services, organized groups of citizens that are stakeholders move in to shore

up service provision. This is for example common in civil war, natural catastrophes and periods of economic crisis.

The second is logistical drivers, where co-production is motivated by complexity or costs: "some services cannot effectively be delivered to the ultimate recipients by state agencies for reasons that are more 'natural': because the environment is too complex or variable, and the costs of interacting with very large numbers of poor households is too great, especially in rural areas"

Co-production arrangements are often second-best rather than the optimal solution in a perfect setting. The arrangements, for instance, often lack accountability. This type of adaption is, however, common in many developing countries, and may constitute the best available alternatives in many environments with dysfunctional formal institution and weak public authority.

References:

- Acemoglu, Daron, Simon Johnson & James A. Robinson (2005). "Institutions as a fundamental cause of long-run growth." *Handbook of Economic Growth*, 1, 385–472.
- Acemoglu, Daron & and James Robinson (2008). "The role of institutions in growth and development." World Bank, Washington DC.
- Bakker, Gerben (2013). "Money for Nothing: How Firms Have Financed R&D-Projects since the Industrial Revolution." *Research Policy*, 42(10), 1793–1814.
- Baumol, William J. (1990). "Entrepreneurship: Productive, Unproductive, and Destructive." *Journal of Political Economy*, 98(5 part 1), 893–921.
- Berndt, Ernst R. et al. (2000). "Medical care prices and output." *Handbook of Health Economics*, 1, 119–180.
- Bloodgood, Elizabeth A., Joannie Tremblay-Boire & Aseem Prakash. "National styles of NGO regulation." *Nonprofit and Voluntary Sector Quarterly* (2013): 0899764013481111.
- Bloomberg Businessweek (2008). "Health 2.0: Patients as Partners", 2008-12-04.
- Boettke, Peter J. & Christopher. J. Coyne (2009). "Context Matters: Institutions and Entrepreneurship." *Foundations and Trends in Entrepreneurship*, 5(3), 135–209.
- Bove, R., Healy, B., Secor, E., Vaughan, T., Katic, B., Chitnis, T., . . . De Jager, P. (2015). Patients report worse MS symptoms after menopause: Findings from an online cohort. *Multiple sclerosis and related disorders*, 4(1), 18-24.
- Capiluppi, A., & Michlmayr, M. (2007). From the cathedral to the bazaar: An empirical study of the lifecycle of volunteer community projects. Paper presented at the IFIP International Conference on Open Source Systems.
- Casalino, Lawrence P. et al. (2009). "What Does It Cost Physician Practices to Interact with Health Insurance Plans?" *Health Affairs* (web exclusive), May 14, w533–w543.
- Chernew, Michael E. & Joseph P. Newhouse (2012). "Health care spending growth." *Handbook of Health Economics*, 2, 1–43.
- Cottica, A. (2015). Care by communities: Greece's shadow zero-cash health care system. Edgeryders.
- Coyne, Christopher J. & Peter T. Leeson (2004). "Plight of Underdeveloped Countries." *Cato Journal*, 24(3), 235–249.
- Cunningham, Paul (2005). *Innovation in the Public Health sector: A case study analysis*. Publin Report No. D19.
- Cutler, D. M. (2002). Equality, efficiency, and market fundamentals: the dynamics of international medical-care reform. *Journal of Economic Literature*, 40(3), 881-906.
- Cylus, Jonathan & Irene Papanicolas (2015). "An analysis of perceived access to health care in Europe: How universal is universal coverage?." *Health Policy*, 119(9), 1133–1144.
- Dahl, Robert (1961). Who Governs?: Democracy and Power in an American City. New Haven: Yale University Press.

- Dahlander, L., & Gann, D. M. (2010). How open is innovation? *Research Policy*, 39(6), 699-709.
- Diderichsen, Finn et al. (2012). "Health Inequality determinants and policies." *Scandinavian Journal of Public Health* 40(8 suppl.), 12–105.
- Dietz, Thomas, Elinor Ostrom & Paul C. Stern (2003). "The struggle to govern the commons." *Science*, 302(5652), 1907–1912.
- Dranove, David & Mark A. Satterthwaite (2000). "The industrial organization of health care markets." *Handbook of Health Economics*, 1, 1093–1139.
- Elert, Niklas, Magnus Henrekson & Joakim Lundblad (2016). "Two Sides to the Evasion: The Pirate Bay and the Interdependencies of Evasive Entrepreneurship." IFN working paper no. 1103.
- Elert, Niklas & Magnus Henrekson (2016). "Evasive entrepreneurship." *Small Business Economics*, 47(1), 95–113.
- Feller, J., & Fitzgerald, B. (2002). *Understanding open source software development*: Addison-Wesley London.
- Fennell, Lee Anne (2011). "Ostrom's law: property rights in the commons." *International Journal of the Commons*, 5(1), 9–27.
- Fisher, Elliott S., Julie P. Bynum & Jonathan S. Skinner (2009). "Slowing the growth of health care costs lessons from regional variation." *New England Journal of Medicine*, 360(9), 849–852.
- Fitzgerald, B., & Kenny, T. (2003). Open source software the trenches: Lessons from a large-scale OSS implementation. *ICIS 2003 Proceedings*, 27.
- Frohlich, Norman, Joe A. Oppenheimer & Oran Young (1971). *Political Leadership and Collective Goods*. Princeton: Princeton University Press.
- Frost, Jeana H. & Michael P. Massagli (2008). "Social Uses of Personal Health Information Within PatientsLikeMe, an Online Patient Community: What Can Happen When Patients Have Access to One Another's Data." *Journal of Medical Internet Research*, 10(3), e15.
- Gans, David. "The cost of healthcare complexity." Medical Group Management Association, Center for Research (2004).
- Getzen, Tom (2015). "Measuring and Forecasting Global Health Expenditures." In *Global Health Economics and Policy* (Handbook edited by Richard M. Scheffler). Singapore: World Scientific.
- Gochfeld, Michael, Joanna Burger & Bernard D. Goldstein (2001). "Medical Care as a Commons." In *Protecting the Commons: A Framework for Resource Management in the Americas*, Joanna Burger et al., eds. Washington: Island Press.
- Hall, Robert E. & Charles I. Jones (2007). "The Value of Life and the Rise in Health Spending." *The Quarterly Journal of Economics*, 39–72.
- Hardin, G. (1968). The Tragedy of the Commons. Science, 162(3859), 1243-1248.

- Hars, A., & Ou, S. (2001). Working for free? Motivations of participating in open source projects. Paper presented at the System Sciences, 2001. Proceedings of the 34th Annual Hawaii International Conference on System Sciences.
- Henrekson, Magnus & Tino Sanandaji (2011). "The interaction of entrepreneurship and institutions." *Journal of Institutional Economics*, 7(1), 47–75.
- Henrekson, Magnus & Tino Sanandaji (2016). "Tax policy and the rise, fall and resurgence of Schumpeterian Entrepreneurship." Working paper.
- Hess, C., & Ostrom, E. (2005). A Framework for Analyzing the Knowledge Commons: a chapter from Understanding Knowledge as a Commons: from Theory to Practice. *Libraries' and Librarians' Publications*, Paper 21.
- Hixson, John D. et al. (2015). "Patients optimizing epilepsy management via an online community: The POEM Study." *Neurology*, 85(2), 129–136.
- Joshi, Anuradha & Mick Moore (2004). "Institutionalised Co-production: Unorthodox Public Service Delivery in Challenging Environments." *Journal of Development Studies*, 40(4), 31–49.
- Keck, Margaret E., Kathryn Sikkink & Kathryn Sikkink (1998). *Activists beyond borders: Advocacy networks in international politics*. Vol. 6. Ithaca: Cornell University Press.
- Kogut, B., & Metiu, A. (2001). Open-source software development and distributed innovation. *Oxford Review of Economic Policy*, 17(2), 248-264.
- Kremer, Michael & Heidi Williams. "Incentivizing innovation: Adding to the tool kit." In *Innovation Policy and the Economy, Volume 10*, 1–17. Chicago: University of Chicago Press.
- Lerner, J., & Tirole, J. (2002). Some simple economics of open source. *The journal of industrial economics*, 50(2), 197-234.
- Lichbach, M. I. (1996). The cooperator's dilemma: University of Michigan Press.
- Lipsky, Michael & and Steven Rathgeb Smith (1989). "Nonprofit organizations, government, and the welfare state." *Political Science Quarterly*, 104(4), 625–648.
- Marmot, Michael et al. (2008). "Closing the gap in a generation: health equity through action on the social determinants of health." *The Lancet*, 372(9650), 1661–1669.
- McGinnis, M. D. (2013). Caring for the Health Commons: What it is and Who's Responsible for it. *Available at SSRN 2221413*.
- Meyer, P. (2014). *Aeronautical technology flows up to World War I*. Paper presented at the Asia Pacific Economic and Business History Conference 2014, Hamilton, NZ.
- Murphy, Kevin M. & Robert H. Topel (2006). "The Value of Health and Longevity." *Journal of Political Economy*, 114(5).
- North, Douglass C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

- Ostrom, Elinor, James Walker & Roy Gardner (1992). "Covenants with and without a Sword: Self-governance Is Possible." *American Political Science Review*, 86(2), 404–417.
- Ostrom, Elinor, Roy Gardner & James Walker (1994). *Rules, games, and common-pool resources*. Ann Arbor: University of Michigan Press.
- Ostrom, Elinor (1996). "Crossing the Great Divide; Co-production, Synergy, and Development." *World Development*, 24(6), 1073–1088.
- Ostrom, Elinor et al. (1999). "Revisiting the Commons: Local Lessons, Global Challenges." *Science*, 284(5412), 278–282.
- Ostrom, E. (2014). Collective action and the evolution of social norms. *Journal of Natural Resources Policy Research*, 6(4), 235-252.
- Pammolli, Fabio, Massimo Riccaboni & Laura Magazzini (2012). "The sustainability of European health care systems: beyond income and aging." *The European Journal of Health Economics*, 13(5), 623–634.
- Philipson, Tomas J. et al. (2010). "Geographic Variation in Health Care: The Role of Private Markets." *Brookings Papers on Economic Activity*, 1, 325–361.
- Quaglio, GianLuca et al. (2013). "Austerity and health in Europe." *Health Policy*, 113(1), 13–19.
- Raymond, E. (1999). The cathedral and the bazaar. *Knowledge, Technology & Policy*, 12(3), 23-49.
- Rebba, Vincenzo (2014). *The long-term sustainability of European health care systems*. "Marco Fanno" working paper no. 191. University of Padova.
- Robinson, J.J., Kristen Grennan & Anya Schiffrin (2015). *Publishing for peanuts: Innovation and journalism start-up*. Open Society Foundation.
- Schneider, Mark, Paul Teske & Michael Mintrom (1995). *Public Entrepreneurs: Agents for change in American Government*. Princeton: Princeton University Press.
- Schumpeter, Joseph Alois (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. New Brunswick: Transaction publishers.
- Schweik, Charles M. (2005). "An institutional analysis approach to studying libre software commons." *Upgrade: The European Journal for the Informatics Professional*, 6(3), 17–27.
- Skinner, Jonathan (2011). "Causes and consequences of regional variations in health care." *Handbook of Health Economics*, 2, 45–93.
- d'Uva, Teresa Bago, Andrew M. Jones & Eddy Van Doorslaer (2009). "Measurement of horizontal inequity in health care utilisation using European panel data." *Journal of Health Economics*, 28(2), 280–289.
- Van Doorslaer, Eddy et al. (2000). "Equity in the delivery of health care in Europe and the US." *Journal of Health Economics*, 19(5), 553–583.

- Van Doorslaer, Eddy et al. (2006). "Inequalities in access to medical care by income in developed countries." *Canadian Medical Association Journal*, 174(2), 177–183.
- Von Hippel, E. (2001). Innovation by user communities: Learning from open-source software. *MIT Sloan management review*, 42(4), 82.
- Von Hippel, E., & Krogh, G. v. (2003). Open source software and the "private-collective" innovation model: Issues for organization science. *Organization Science*, 14(2), 209-223.
- Von Krogh, G., Spaeth, S., & Lakhani, K. R. (2003). Community, joining, and specialization in open source software innovation: a case study. *Research Policy*, 32(7), 1217-1241.
- Von Krogh, G., & Von Hippel, E. (2006). The promise of research on open source software. *Management science*, 52(7), 975-983.
- Weisbrod, Burton A. (1991). "The health care quadrilemma: an essay on technological change, insurance, quality of care, and cost containment." *Journal of Economic Literature*, 29(2), 523–552.
- Windrum, Paul & Per M. Koch, eds. (2008). *Innovation in public sector services:* entrepreneurship, creativity and management. Cheltenham: Edward Elgar Publishing.
- Wong, Young Soon, Pascale Allotey & Daniel D. Reidpath (2014). "Health Care as Commons: An Indigenous Approach to Universal Health Coverage." *International Indigenous Policy Journal*, 5(3), 1–24.
- Zweifel, Peter & Willard G. Manning (2000). "Moral hazard and consumer incentives in health care." *Handbook of Health Economics*, 1, 409–459.











