Technology, Markets and the Subversion of Property Rights: Foundations of New Business Models

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Abstract: The paper seeks to explore how shifts in property rights have been used to develop innovative models of organization that internalize the socio-economic costs of the immediate post-Communist era, in Romania. Using Bromley’s (1991) definition of property as a triadic relationship, the case of apartment block infrastructure is used to show how a common property regime has provided a more optimal outcome than either an open or private property regime. How far collaboration and common ownership can be extended, through technology, into wider patterns of production and consumption is therefore a logical next question. There is considerable debate about the extent to which knowledge is becoming a greater source of value than products, as technology and globalization combine to drive the marginal cost of (re)production and delivery close to zero (Evans & Wurster 1997, Botsman & Rogers 2010, Mason 2013). Some companies are seeking to manage networks and use on-line rating systems to both establish trust and build communities of interest. Wikipedia has demonstrated how such networks can enable the emergence of commons spaces that can outperform privately controlled spaces. In Romania there is found to be much interest in collaborative consumption and emergent signs of collaborative approaches to production, but, as yet no significant technology driven common ownership models.

Keywords: Collaboration; Commons; Property; Technology; Romania

JEL classification: D23; D62; L29; O31; P14; P26

Introduction

The use of technology to disintermediate, internalize externalities and reformulate markets is driving a significant shift of power relations between producers and consumers. Increasingly markets are being shaped by forces of collaboration, expressed through digital networks. These forces are often blurring the boundaries between production and consumption, not least since the source of financial value in markets is increasingly
knowledge more than products. There seems to be a shift in both the production and consumption of benefit streams, which is at heart, a debate about property rights. This paper will seek to explore, through some cases, how state, common and private property regimes have shifted in Romania. There will then be an examination of the extent to which technology is shifting the contemporary balance of property rights in markets. Finally there will be a discussion of the extent to which the Communist heritage of Romania continues to influence models of business.

1. Property & Externalities

The failure of capitalist and Communist economic systems to internalize the full costs of industrialism’s production and consumption through historic notions of stewardship has been widely documented (Corkendale 1988, Gillespie & Thomas 1989, Jacobs 1991, Peterson 1993, Diamond 2006). The challenge with problems of externalities is how to align the externalities interests of the producers and the consumers. Central to resolving problems of externalities is therefore about improving economic and social efficiency through innovative models of organisation and that, almost by definition is related to regimes of resource governance, that are usually referred to as property rights. If one was therefore able to limit only specific activities which have harmful external consequences, then one could at once prevent externalities from affecting those beyond the property boundaries, without undermining the property right itself. This is, Bromley (1991) argues, because, contrary to popular belief, property:

…is a benefit (or income) stream, and a property right is a claim to a benefit stream that the state will agree to protect through the assignment of duty to others who may covet, or somehow interfere with, the benefit stream…. Property is not [italic in original] an object but rather is a social relation that defines the property holder with respect to something of value (the benefit stream) against all others. Property is a triadic relation involving benefit streams, rights holders and duty bearers.

Thus “it is not [italics in original] the resource itself which is owned: it is a bundle, or a portion of rights to use a resource that is owned” (Alchian & Demsetz 1973). Rights to exploit land for agriculture, hunting, minerals and fishing, etc. were therefore often historically controlled by different parties.

Bromley’s (1991) argument means that not only may property be unpackaged by the owner, in order to divide and sell various benefit streams, but also that claims may be made on behalf of society over some of the benefit streams(Taylor 1997). Historically claims made by the state, on behalf of wider social, or environmental interests have been made through legislation to directly restrict an activity, or taxation to increase its cost. However, the emerging legitimacy of free markets as the solution to socio-economic problems, associated with neo-liberalism and the reforms of Thatcher and Reagan, gave rise to the idea that the state may be able to represent society's interests effectively by creating a value in reducing external costs and thus converting a negative externality into a potential benefit stream (Gillespie & Thomas 1989). This process resulted in a new global market place for the trading of emission reductions with the Kyoto Protocol (Grubb 1999) and associated European emission trading scheme (Taylor 2004), for example.
Whilst business always seeks entrepreneurial means to charge for accessing and/or consuming benefit streams, advanced forms of capitalism have sought to commoditize benefit streams, as a means to add value (Porter & Millar 1985). As the former Communist countries of Eastern Europe were recast as emerging markets during the 1990’s, the collision of Communist systems with unchecked market forces gave rise to new definitions of Bromley’s (1991) triadic relationships. Infamously described by Fukuyama (1989) as “the end of history”, where market forces and private property rights were the outright winners and the interventionist state and ideas of society, rooted in Rousseau and Hegel (Ryan 1984) lost. However, the triumph of private property is only part of the story. The failure of state owned property revealed that such regimes were not the same as common property; they were simply open access regimes (Boiler 2014), and something that is owned by everybody is, de facto, owned by nobody and treated as a free good.

2. The Infrastructure of Residential Living

Residential water metering in the early part of the naughtiness, described by Taylor (2004), is a case in point:

*drinking water is provided centrally, consumed individually, but paid for communally - and thus treated as a free good. It therefore provided no incentive to restrain usage, and placed residents of apartment blocks in a prisoner dilemma, where everyone realizes it is in the collective interest to reduce consumption, but a fear that neighbors will simply free ride - and not reduce their usage, but still enjoy lower bills arising from the conservation efforts of others - maintains the status quo.*

Following significant increases in prices for all utilities, during 2002 many residents of blocks took measures into their own hands and started installing water meters in a bid to escape the prisoners’ dilemma and gain personal control over consumption costs of the resource. Unfortunately the seemingly reasonable demand by newly metered residents that they ought only to pay for the volume of water that they consumed was without legal basis and has created a raft of additional problems.

Back in 2002, block administrators were under no obligation to take account of the fact that a meter indicated that a family’s bills ought to be lower than if calculated on the traditional communal division of costs. Yet even as the number of metered apartments grew geometrically the absence of meters provided by the water company at the entrance to each staircase (a defined communal unit within a block) meant that the water company could not assign unattributed consumption (losses) to a particular group of residents. The water companies have no interest in who consumes how much; rather they simply want the total amount leaving their plant to be paid for. Thus without stair meters they blocked the use of meters as well.

In Bucharest and some major cities the water companies have begun a program of installing meters at the stairs of blocks. This has enabled block administrators to start using the meters as the basis of cost calculation. However, attempts to shift losses onto those without meters created huge disparities in bills and conflict between neighbors. The problem was compounded by the facts that there was no legal basis to discriminate against those without meters, and that the poorest members of society were those who
could not afford meters and yet it was precisely those people that were being asked to shoulder all of the losses.

In the autumn of 2003 the government further embedded the emerging chaos, by allowing block administrators to use meters as the basis of calculation, without providing a clear indication of what should be done with the losses. Rather than address the root of the problem, the government had allowed those with some measure of wealth to offload some of their financial burden upon the poor. Now that meters are being fitted to stairs you might well ask where are the losses? Surely a system of metering would encourage residents to fix leaky pipes and reduce such wastage?

Many residents have discovered that if you leave the tap running at a very low level continuously the meter does not register the flow, thus enabling you to escape payment. However such usage is captured at the water company’s stairs meter, thus creating “losses”. In some blocks administrators divide such losses between all residents, thereby encouraging neighbors to monitor each others behavior. However the more common practice is to simply shift the costs to non-metered residents, who have no measurable means of defense. Such problems are compounded by a practice of meter readings being taken by residents themselves, inevitably leading to the creation of fictional losses that are being stored up as future debts and conflicts.

The case illustrates the economic and environmental inefficiency of state controlled open access property regimes, but also demonstrates the limitations of private regimes in improving equitable outcomes. The difficulties of residential housing in fact demonstrate that the challenge in Romania is often not so much how to replace state property with private property, but how to make common property regimes work, key problems being trust and the tension between free riding and unequal abilities to pay.

Lin Ostrom (1990), who won a Nobel prize for her work on common property rights defines common property as having defined boundaries, rules of governance, principles of what may be taken out (if it is a production commons), or put in (if it is a consumption commons) and how, and a system of sanctions to punish rule breakers.

Despite early problems, described above, the management of apartment block infrastructure has gradually, but inexorably, and almost universally, shifted from an open access regime to a common property regime

![Figure1: The management of apartment block infrastructure](image)

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Let us take the example of the physical condition of apartment buildings in Romania, as another example. The entrances and stairwells were, for many years, in poor condition, with plaster crumbling, paint peeling, and smelling like a toilet. However, once residents placed access controls (intercom activated locks) on the exterior doors a dramatic improvement took place. Suddenly the interior public spaces were repaired, painted and a different quality of living was created. Yet, in fact all that had really changed was a shift from an open access to a common property regime. The resource boundaries could be controlled and mechanisms to contribute to its maintenance could be developed. Nowadays almost all apartment blocks have such entrance locks in place and it is easy to forget how awful apartment buildings used to be.

The example of apartment blocks is an instructive one, for not only did it improve efficiency and overall outcome, by internalizing the costs and benefits of maintaining the resource to a defined group of commoners, it invested commoners with a stake in their surroundings. The motivational impact of this cannot be over-estimated.

3. Collaborative Production & Consumption

The idea of having a stake in the work environment has been taken forward on the largest scale in Romanian business by especially the booming local IT sector. At this stage the idea of gamification and the playful work environment paired with an agile working method is an answer to the problems of engaging employees in a market where knowledge is more valuable than products (Evans & Wurster 1997) and severe talent shortages exist (Deloitte 2017). Although not altering the ownership structures of companies the shift in the source of value from products to people has led to a dramatic shift towards a less hierarchical, more democratic and egalitarian approach to the organization and delivery of work. The numerous and fast growing IT outsourcing companies flourishing in cities like Cluj, Iasi and Bucharest are, often unconsciously, enabling adhocracy as organizational cultures (Mintzberg 1989). These cultures are dynamic, project based, serving global clients and whilst they leverage, at least initially, the cost advantages of the Romanian labor market, they are driven by the key human links far more than any amount of process. In organizations like Evozon, Arobs, Yonder and others the boundary between work and private life is blurring as organizational and personal growth are combining into a mission that is producing phenomenal growth.

Across the world technology is enabling the smallest businesses to access global markets and doing away with the need to choose between richness and reach (Evans & Wurster 1997) as the most obscure niches become viable opportunities when geographic limitations are removed. The likes of eBay and Amazon market place are disintermediating traditional business models and simultaneously opening up new ones. A fault-line is emerging between industrial commodification of private rights and organizational hierarchies and the networked disintermediation of a global circus of connected and collaborative communities.

Some companies have gone so far as to allow customers to identify and manage their own benefit streams, preferring to simply manage, or aggregate, a web, or network, of interconnected consumers who both consume and rate their experiences for other consumers. Amazon has revolutionized the customer experience by getting consumers to
do the work previously done by the company and its market research agents themselves. To do this Amazon and its imitators (Air BnB, Booking.com, etc.) have realized that the real value in some markets does not come from physical control of property rights. It flows from gate-keeping access to them in ways that make it so easy to use that they have become ubiquitous. Enabling the review process to become more democratic, more of a common property, has proven both engaging and allowed the company to open and explore whole new market places. Not waiting for governments to create a market, such as with emissions reductions, “Amazon’s business model [is] the classic strategy for capturing externalities” (Mason 2016). Of course, because the company controls the technology platform any common rights are really no more than leasehold and without defined term. Nonetheless frustration at the damage Amazon is doing to traditional bookshops has combined with a realization that an on-line community can thrive in a niche as a counterpoint has given rise to hive.co.uk. Very similar to Amazon, this on-line bookshop, however, asks every customer to which independent local bookshop they would like to donate part of their purchase price. In other words, according to Amazon style, customer feedback rates first enabled on-line networks to overcome problems of trust, but, as they spread, are increasingly creating space for values based communities to flourish by challenging the utilitarian principles of profit maximization.

Easily dismissed by Marxists as false consciousness, the combination of technological change and globalization is, however, enabling both the breakdown of the barrier between the company and customer and owner and employee. At a global level, Wikipedia has demonstrated how the commons can compete with the private and win. It has done so by replacing extrinsic interest with intrinsic interest and then combining that with global scale and ongoing peer review processes. The self correcting global brain pool that has created the world’s encyclopedia has destroyed the capacity of any single company or organization to capture more knowledge internally in order to compete. Given that “Information goods exist in potentially unlimited quantities and, when that is the case, their true marginal production cost is zero” (Mason 2016), the scope to extend the Wiki model is clearly tremendous. Effectively the wiki model socializes knowledge under the auspices of collaborative control.

4. Technology & Collaboration in Romania

Managers of IT companies that I have spoken to, in Romania, are clear that the dynamism and complexity of global economic change is such that the only way to organize is some form of collaboration, which leverages collective knowledge by enabling networks. Unfortunately money alone has turned out to be insufficient as a motivator globally (Pink 2009) or in Romania (Deloitte 2017) and whilst there has been a wave of interest in intrinsic motivation (Gladwell 2005, Pink 2009, Duigg 2013) to drive business engagement, most of it has not connected the intrinsic yearning to the need to collaborate within a community. As value is becoming less tangible in economics and insecurity is rising (James 2007) the appeal of the commons is a return to the certainties found in belonging to community as a source of identity (Taylor 2013). Our rights are, once again becoming contingent upon our duties, which are codified in the norms of behavior of our tribes and communities. In short, we are seeing the re-emergence of virtue ethics, pushing the hegemonic ethic of utilitarian economics as a legitimate end in itself back
Cooperation, as a legitimate form of organization is re-establishing itself wherever technology disrupts traditional markets. This is not to say that Fordist notions of capitalism and competition are about to wither and die any time soon, but they are being challenged, pushed back and changing.

At the local level, in the case of Romania, however, there are signs that the rediscovery of the commons is changing the nature of business and social organization. The rise of the commons as the foundation of community life in most apartment blocks is gradually creeping outdoors. First, the small areas of green space around apartment blocks are slowly, but steadily, being transformed from waste grounds to cared for spaces, where littering is frowned upon and plants are actively nurtured. Second the exterior of buildings continues to be transformed, as insulation and other improvements are undertaken to improve both the economics and the aesthetics of apartment living. We are even seeing the start of such regimes as the foundation for community energy schemes

The chaos of overcrowded city streets is being addressed, quite incidentally, through technologically innovative communal approaches to transportation. Ride sharing sites such as Bla Bla Cars have proved popular, initially with students, but quickly gaining wider acceptance. Whilst for aspirational and executive type’s car sharing company Cluj Pony has seen remarkable growth, enabling customers to rent cars by the hour, on an occasional basis, or with a pre-paid account. The cars themselves are the essence of contemporary urban tech chic – Mini’s and Smart cars. Meanwhile the tech taxi firm Uber is growing fast in major cities across Romania and proving popular for the way that it’s online rating system motivates drivers to behave well. Equally well the rating system for ride sharing sites has been critical in persuading female customers to use such services (Botsman & Rogers 2010). Why do such rating systems prove so effective? In contrast to traditional taxi drivers, Uber drivers “know their behavior today will affect their ability to transact in the future” (Botsman & Rogers 2013).

On-line rating systems are overcoming problems of trust and improving service without the need for managers, or the motivation of individual ownership. As such rating systems are an ideal mechanism for enabling common and collaborative regimes to flourish (Phelps 2013).

Technology is not just challenging the way companies do business in Romania, it is challenging markets and paradigms of thinking that underlie the need to own physical assets, in favor of collective and shared solutions. Technology, even in Romania, is “fuelling a world where usage trumps possessions... where access is better than ownership” (Botsman & Rogers 2013). Whilst on-line rating systems are enabling relationships of trust to emerge in what is a very low trust society (Hampden-Turner & Trompenaars 1997). This is a remarkable transformation in a country where Communism left a legacy of mistrust towards anything that smacked of collectivism.

Whilst it is not true to say that there is significant evidence of the emergence of a large scale cooperative, or employee owned economy in Romania right now. It is fair to say that Romania, like many countries, is experiencing a surge of interest in common and collaborative usage of technology to deploy new models of business. Whilst the
experience common property regimes that dominate residential apartment block infrastructure are creating a wider space for collaboration beyond the tech economy.

Businesses like Uber, Cluj Pony, Bla Bla Cars and others are shifting the customer experience from the corporate control of point A to the collaborative experience of point B.

Networks of customers and values communities are both identifying and constructing notions of value themselves and between themselves.

Beard Brothers is one of the early examples of a self-organizing groups that seeks to use technology to create a commons that can collaborate to solve practical problems for those in need in society. It is an NGO, but is really no more or less than an activist version of eBay or free cycle; matching resource capabilities to resource needs and, like Wikipedia, simply removing the profit element. Their success speaks volumes about the desire of the tech community to contribute to a Romanian society which is more collaborative than the extreme individualism described by Hampden-Turner & Trompenaars (1997).

Romanians have become used to a measure of partnership in controlling resources. The convenience and simplicity of technology and associated rating systems is likely to transform latent potential into emergent reality. The huge protests last winter against the government’s abuse of the common space that is the law prove this. The booming IT sector, short of trained people, is likely to generate a new wave of not just collaborative customer experience, but of commonly owned businesses and services.

One Romanian IT company has already structured its finances in such a way that anything project teams deliver above a companywide ROI percentage target remains with the team to spend in any way that can be agreed by the team members. If this is not an exercise in learning how to be a commoner what is? Several IT executives, interviewed for this paper, have indicated that they believe customer owned membership type schemes will emerge that, unlike the Wiki model, will involve financial transactions amongst a limited group of stakeholders, who themselves are the common owners of the resource. Such a structure is likely to emerge, if only to leverage the desire to work for oneself, in a booming
economy, within a larger team and overcome the need for financial resources with the power of the collective.

Conclusion

The solution the failure of State (open access) property regimes has been found in common property, as a more effective means of internalizing the externalities arising from living in apartment blocks, than private property. Thus despite a widespread rejection of all things collective after the 1989 revolution, defining common property regimes as different to open access regimes has created new models of organization and delivered superior outcomes to what went before, or the alternative of atomized private regimes. Thus collaborative common consumption regimes can be said to work in Romania.

Despite considerable growth of the IT sector and enthusiastic use of technology solutions to practical problems no large scale model of a production based commons exists on or off-line. There is, as yet, no John Lewis, no Wikipedia or Mondragon. However, The online rating system has proven a remarkably effective way of both constructing trust and of changing behavior. Collaborative behavior is just beginning to move beyond consumption and adopt a more entrepreneurial nature. Nonetheless, given the success of establishing commons regimes in a country so predisposed against anything collective, the potential for the emerging shoots of a productive digitally driven commons is found upon fertile ground.

References