

1 **Economic**
2 **viewpoints**

THE CASE FOR A COMMUNITY TRANSACTION ENGINE: GETTING COASE FOR THE TWENTY-FIRST CENTURY

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8 *New types of marketplace are now becoming viable. They can slash transaction*
9 *costs, bring new resources into the economy and expand economic opportunity.*
10 *These markets can be grown by the private sector. But, to deliver their full potential,*
11 *they need a change in the mindset of government.*

13 **Keywords:** Coase, transaction costs, private sector, marketplaces.

15 Ronald Coase famously identified that
16 transaction costs create firms. When the
17 ancillary costs of making a purchase reach a
18 certain percentage of the price paid for
19 regularly used goods or services it becomes
20 cheaper for an organisation to grow and
21 provide those facilities internally. Transaction
22 costs can also create the justification for
23 governmental activity. For example, local
24 authorities have traditionally provided
25 homecare through block contracts with
26 suppliers rather than dispersing the funds to
27 individuals so each can make their own
28 personal arrangements.

29 This short article argues that external
30 transaction costs could now be lowered
31 dramatically using marketplace technologies
32 that are just becoming viable. Doing so would
33 bring countless micro-sellers into hundreds of
34 market sectors where they would compete on
35 a level playing field with firms and
36 government. Key to achieving this is a new
37 kind of marketplace coupled with the public
38 policy that allows it to flourish.

40 **Uneconomic cycles**

41 As an example of this model for reducing
42 transaction costs we will focus on the market
43 for short-term bicycle hire in London. A
44 barely existent market, based on *ad hoc*
45 offerings from cycle shops around the British
46 capital, was supplanted in July 2010 by a
47 government institution¹. The London Cycle
48 Hire scheme could cost taxpayers over £100
49 million, eased by £25 million in sponsorship
50 from Barclays Bank. After 2.5 years of

51 planning², 6,000 bikes are being built and
52 distributed between 400 docking stations in
53 the city's central zone³. Users pay an access
54 fee, then hourly rates. The bikes are uniform;
55 built for endurance rather than cycling
56 pleasure and geared for the least able riders.

57 Let's assume large-scale, short-term, cycle
58 hire should be a priority in a congested city.
59 And let's concede that the lack of convenient,
60 consistent, widespread bike hire availability
61 constitutes a market failure. But, before
62 deciding a government-funded, centrally
63 planned, scheme is the best solution, we
64 should explore the role of transaction costs in
65 this potential market. The resources required
66 for the putative market, bikes that are not in
67 use at any given time, already exist all over
68 London. It is transaction costs that keep them
69 out of play. To illustrate this: imagine you are
70 a Londoner with a bicycle you don't need this
71 afternoon; you would like to rent it out for a
72 few pounds. The transaction costs you face
73 include:

- 74 • *Search and information costs:* How do you
75 find a forum in which your cycle can be
76 displayed to buyers? Listing on websites
77 such as Craigslist, Gumtree or Kijiji is an
78 obvious starting point; but the big sites
79 are not noted for bike hire listings. There
80 are of course specialist sites such as
81 byke.mobi; some are specific to London,
82 others aim to cover the world. Finding an
83 active exchange with a pool of genuine
84 buyers in your current part of the city
85 could take hours: a Google search for
86 'London UK "bike hire"' returns 24,900
87 relevant websites. Diversity of

1 marketplaces on the internet is welcome
2 in abstract; but the dissipation of buyers
3 and sellers among so many forums adds
4 immeasurably to search and information
5 costs for anyone actually attempting to
6 trade.

- 7 • *Bargaining costs*: Even if a suitable marketplace were found
8 and a buyer identified, you would have to negotiate
9 charges, deposit and the transfer of payment.
- 10 • *Policing and enforcement costs*: How do you know the hirer
11 will care for and return your machine? How does he know
12 you will provide the cycle as stated? The website you
13 alight on may have some sort of feedback mechanism. But
14 there are so many other bike hire websites and creating a
15 new account at any of them is so easy, it's of little
16 consequence for a user to incur negative comments. The
17 individual can simply change their on-screen identity or
18 move on to the next marketplace.

19 Every day, there are hundreds of thousands of bicycles in
20 London which aren't being used. Many will have owners who
21 would consider trading their asset but can't because
22 transaction costs are prohibitive. So, instead of a vibrant,
23 evolving, market in which individuals all over the city supply
24 all sorts of cycles on their own terms, Londoners keen to pedal
25 must settle for the cumbersome government-run machines
26 currently limited to the central zone until planners decide to
27 expand the service.

28 29 **A perfect market**

30 Hypothetically, what would a perfect marketplace in which
31 anyone could rent their bike for short periods look like? It
32 would need to be well known, instantly identifiable, somehow
33 standing apart from hundreds of other bike hire marketplaces
34 on the internet as a no-thought-required first port of call for
35 someone with a bit of bike downtime. Once inside the
36 marketplace, users would find transaction costs on these small
37 bookings had been pared to a minimum. There would be a
38 deep pool of buyers and sellers to constantly drive choice and
39 competition. Anyone looking to rent a cycle would need to be
40 able to make an assured booking in less than a minute. For
41 sellers, market entry should be equally effortless. The identity
42 of counterparties would always be clear with reassuringly
43 serious sanctions applied to dishonest users. Transfer of funds
44 would be electronic, seamless and verified.

45 If this hypothetical market is to be financially viable it
46 would have to be internet based. How might it display options
47 to someone in the suburbs who has entered a place and times
48 they want to rent a bike this afternoon? Imagine an
49 expandable map centred on the viewer's location. Flags have
50 been superimposed on the display. Each represents a bike for
51 hire for the times the user requires. The machines might be
52 owned by bike shops or individuals. Each is priced for this
53 specific transaction. Depending on the seller's preferences, the
54 pricing might factor in: the length of hire, period of notice and
55 – crucially – this buyer's track record of successfully completed
56 bike hires in this marketplace.

57 Once the buyer has selected the machine for which she is
58 willing to pay, she clicks on that flag. The bike owner – who

59 has specifically said they are contactable with the bike
60 available this afternoon – is sent a text message with details of
61 the transaction. Meanwhile, the system deducts the
62 appropriate sum from the buyer's account. It will be held in
63 escrow until 24 hours after the hire ends. If neither side marks
64 the transaction as having caused a problem, the money will
65 then be released to the owner's account minus the fractional
66 charge deducted to fund the marketplace. With these clicks,
67 the hirer is given details of where to pick up her bike from its
68 owner.

69 70 **Chain transactions**

71 A truly useful marketplace would extend beyond cycle hire to
72 offer multiple supporting forums. For example, it could
73 include a market for cycle deliveries. Anyone could offer their
74 services to ferry bikes around their neighbourhood on
75 whatever terms they wished. That would mean the buyer could
76 have the bike she wishes to hire delivered to her at the time
77 required. In a typical transaction, the system may have
78 identified cycles that were available, and had contactable
79 owners, in the area surrounding the buyer. It would then have
80 priced each offering by applying the seller's personal rules to
81 this buyer and this transaction. After that it could use data on
82 the buyer's pick-up point and each bike's location to find the
83 cheapest available local deliverer who had attained a track
84 record of honesty acceptable to both buyer and seller. The
85 process is reversed for return of the bike. The deliverer's
86 charges for the relevant mileage could be built into the overall
87 cost displayed to the buyer.

88 Other supporting marketplaces would help to increase
89 market usage. The example described so far pre-supposes
90 multiple bike owners available at home waiting for a booking.
91 In reality many people would want to realise the value of their
92 asset while out doing other things. So, there could be an
93 interlocking market for 'holders'; householders, or owners of
94 commercial premises, who choose to sign in neighbours' cycles
95 then sign them out to hirers through the marketplace. Again,
96 their charges could be seamlessly built into the cost of hire.
97 The system disperses fees appropriately after each transaction.

98 99 **A rational market**

100 Unlike listings websites, the marketplace being discussed here
101 can capture the full parameters of each transaction. Rather
102 than transposing classified adverts to a website and leaving
103 users to conclude purchases in e-mails or phone calls, this
104 marketplace manages transactions through to completion.
105 That gives it a deep pool of data which could be made to work
106 for users.

107 For example, someone looking to increase their economic
108 activity and pondering whether to rent out their bike might
109 call up a screen allowing them to input a query such as: '*Show*
110 *data from the cycle hire market within 5 miles of my home postcode*
111 *over the last 6 weeks.*' They would instantly see graphs of
112 hour-by-hour patterns of demand, supply and pricing. Other
113 graphs might display breakdowns on periods-of-notice for
114 bookings, length of bookings and geographic clusters of
115 demand or supply.

1 This output would allow individual sellers to constantly
2 re-align with buyers' demands. They could price intelligently
3 and may even want to structure their own use of a bike around
4 times when it would command less value in the hire market.
5 They may choose to explore their likely income in supporting
6 markets; branching into cycle delivery, for example, or holding
7 bikes on behalf of other people. Particularly, entrepreneurial
8 users may choose to purchase perhaps 20 bikes specifically for
9 release into the market. These machines could be constantly in
10 use, moving from holder to holder as buyers choose their
11 drop-off points within a geographic zone defined by the
12 owner. If entry costs were minimal, the market should
13 constantly find equilibrium between supply and demand.

14 This imaginary marketplace would compare favourably
15 with the government bike scheme for which so much of the
16 transaction cost has been borne by taxpayers. The marketplace
17 would allow anybody to build a track record of reliability as a
18 buyer or seller or both. The value of that record is a key factor
19 in lowering transaction costs. A user who has worked their
20 way up to a high ranking can charge more and may choose to
21 be selective in the buyers they will service, mandating their
22 bike(s) are only to be displayed to equally reliable buyers for
23 example. In a thick, very low overhead market both buyers
24 and sellers have much to lose by imperilling a good record.
25 Alternative marketplaces or starting again with a new identity
26 are likely to offer far less opportunity.

27 eBay, the global website for trading collectables, is often
28 cited as an example of how a dominant e-market can drive
29 good behaviour thereby cutting transaction costs. Because
30 eBay is the one-stop-shop for so many goods, a track record of
31 trustworthy behaviour has value. Less often cited is the one-off
32 nature of eBay's dominance. The site emerged in 1994 and
33 caught other players unawares as its trajectory conclusively
34 demonstrated that e-markets could unlock new resources and
35 were capable of enormous profitability once a winner-takes-all
36 scenario had emerged. Since 1994 there have been countless
37 attempts to launch 'the eBay of . . .'. These websites have
38 focused on particular sectors or geographies. Many have
39 attracted substantial investment. None have achieved the
40 enduring breakthrough of their pathfinder outside of a few
41 tight niches. Established firms and entrepreneurs have woken
42 up to the extraordinary potential of online marketplaces. After
43 eBay's off-the-graph returns became clear, no one player is
44 likely to ever catch the others sleeping again. Marketplaces for
45 services, rather than sale of goods, have particular problems
46 that can further deter investment. They are more
47 technologically demanding, significantly harder to launch
48 because of the localised nature of trades and operate in much
49 more regulated sectors. Tellingly, eBay has not initiated a
50 services marketplace beyond displaying a few categories within
51 their main system.

52 Our hypothetical bike hire marketplace is going to have to
53 crack this problem and find some distinctive way of standing
54 apart from the herd without incurring unrealistic marketing or
55 development costs. If it can do this, it would of course be
56 instantly scaleable. The government bike scheme has probably
57 killed short-term private sector bike hire in London for the
58 foreseeable future. The same deadening effect is likely to be
59 felt elsewhere. Which firm would invest in the infrastructure
60 for urban bike hire given the trumpeted success of the

government scheme in London and the likelihood of other
councils creating their own market-killing schemes?⁴ So,
hopeful cyclists in, say, Manchester, Liverpool or other parts of
the UK, will probably have to wait for their local authorities to
find the funds to replicate London's clunky, costly and
uniform bicycles. By contrast, a properly constructed
marketplace could expand nationally as soon as enterprising
Mancunians or Liverpoolians woke up to the demand that was
being demonstrated anywhere else in the UK. The marketplace
system simply reads the postcodes of buyers and sellers and
matches accordingly. It will launch anywhere that locals want
to start trading.

A community transaction engine

Cycle hire is one example of a market where private resources,
and therefore economic opportunity, are currently stifled by
transaction costs. There are hundreds of others. Broadly they
cover what can be termed 'community transactions': localised
hire of people or their possessions for relatively short periods
of time. Other sectors include: babysitting, very small-scale
cash loans, odd hours of work for local employers, home
hairdressing, overnight stays in private homes, housecleaning,
hire of toys or sporting equipment, tuition, localised services
for tourists and so on.

Multiple websites are attempting to make these sectors
more efficient.⁵ They have widely varying business models,
standards of probity, categories of services offered,
geographical focus, likely longevity and degrees of market
liquidity. The sheer number of these marketplaces is a huge
transaction cost: consider, for example, the time taken to find
the best babysitting market for your particular needs among
the 62,000 sites claiming relevance for Londoners seeking
short-term childcare. No one of these sites can deliver the
commanding liquidity, authority and universal awareness that
allows it to lower total transaction costs to the floor of which
e-markets technology is capable. Anything one of these
markets can do to increase its usefulness can instantly be
emulated by the others. Out-advertising other marketplaces as
a route to lasting dominance? Budgets for promotion of a
particular marketplace must be recouped in user charges. This
allows rival markets to undercut the high-profile player while
benefiting from the awareness raised. Technology, users and
investment in consumer e-markets are so fluid there is
minimal opportunity to break out of the pack.

There are features that could durably lower transaction
costs in these low level e-markets. But they involve publicly
owned facilities and are currently either not yet in existence or
not engaged with the technology. For example: relevant public
spending, currently dissipated across multiple channels, could
be routed towards individual workers through a system of
markets for childcare, cleaning and multiple other services
delivered by local people. That enduring liquidity could be a
catalyst that attracts snowballing sellers and buyers to a
particular system of interlocking markets. Publicly owned
mechanisms for verifying individuals, resolving disputes,
interacting with official bodies and promoting opportunities
to the public could likewise underpin a particular market
system. This is the thinking behind the concept of 'National
E-Markets' (NEMs).

1 The NEMs concept, developed at the Demos think tank in
2 the 1990s, is explained most recently in a paper published in
3 2010 by the Joseph Rowntree Foundation, *Could Online*
4 *Marketplaces Tackle Poverty?*⁶ (the paper was written by the
5 present author). It envisages a system of interlocking
6 e-markets specifically for low-value transactions that is
7 conceived as a public utility. Although funded, designed and
8 run by private sector operators, these markets would draw on
9 a package of publicly owned facilities that lower transaction
10 costs in these highly complex and currently inefficient
11 markets.

12 **Transaction costs and public policy**

13 NEMs require that policy-makers understand the importance
14 of lowering transaction costs and see the facilities they
15 command as having new relevance in the digital age. A means
16 to release the facilities to the private sector must be found.
17 This is analogous to previous technology developments that
18 made other aspects of the public realm suddenly valuable. The
19 invention of aircraft created an imperative for regulated
20 airspace so the skies could be safely opened to multiple
21 airlines. Broadcasting made parts of the electromagnetic
22 spectrum commercially desirable, but required some
23 enforceable, perpetual, means of allocating the spectrum
24 among competing stations. More recently, the advent of
25 mobile phones called for policy-makers to legally apportion
26 newly valuable airwaves so each operator had a secure
27 foundation for their services.

28 Policy-makers could simply sell access to the publicly
29 owned mechanisms that would slash transaction costs. More
30 intelligently, they could transparently focus on ensuring the
31 cheapest overheads and highest levels of safety in the intended
32 marketplaces. While multiple bodies would be free to launch
33 part of NEMs, they may have to adhere to light-touch
34 regulations to ensure competition, low usage costs, universal
35 service and protection for the taxpayer. A system of
36 interlocking NEMs should cost the taxpayer nothing but could
37 cut transaction costs for millions of citizens who wish to trade
38

39 their assets on a small scale. These new markets would be
40 available equally to any citizen or legal organisation in the
41 country as one more choice among thousands of evolving
42 online marketplaces.

43 Must government do anything? Yes, officialdom is the
44 gatekeeper to a range of facilities and an accompanying legal
45 framework that could add a new level of usefulness to the
46 emerging technology of advanced e-markets. No private sector
47 player can unlock these features. Could a range of firms get
48 together and emulate the facilities? Possibly, but it would be at
49 extortionate cost and any results would lack the official status
50 and existing data of well-established mechanisms.

51 We are in a new era of marketplaces. Governments' first
52 response to issues like economic exclusion, public service
53 inefficiencies, transformation of social care, tackling
54 worklessness and national competitiveness should now be to
55 ask 'do we have the most efficient marketplaces possible within
56 our economy?' Only when the answer is yes should
57 government intervention in any area be considered. It is
58 probably better that politicians release publicly held facilities
59 to allow creation of one more type of modern marketplace
60 than they shape entire sectors to overcome transaction costs.

- 61 1. See <http://www.tfl.gov.uk/roadusers/cycling/14808.aspx>.
- 62 2. The scheme was announced in February 2008: [http://](http://www.independent.co.uk/news/uk/home-news/livingstone-plan-for-streetcorner-cycle-hire-stands-781025.html)
63 [www.independent.co.uk/news/uk/home-news/](http://www.independent.co.uk/news/uk/home-news/livingstone-plan-for-streetcorner-cycle-hire-stands-781025.html)
64 [livingstone-plan-for-streetcorner-cycle-hire-stands-781025.html](http://www.independent.co.uk/news/uk/home-news/livingstone-plan-for-streetcorner-cycle-hire-stands-781025.html).
- 65 3. See [http://www.guardian.co.uk/money/2010/jul/24/](http://www.guardian.co.uk/money/2010/jul/24/london-bike-rental-revolution)
66 [london-bike-rental-revolution](http://www.guardian.co.uk/money/2010/jul/24/london-bike-rental-revolution).
- 67 4. See [http://www.24dash.com/news/local_government/](http://www.24dash.com/news/local_government/2010-08-25-Boris-Johnson-hails-success-of-London-Cycle-Hire-scheme)
68 [2010-08-25-Boris-Johnson-hails-success-of-London-Cycle-Hire-scheme](http://www.24dash.com/news/local_government/2010-08-25-Boris-Johnson-hails-success-of-London-Cycle-Hire-scheme).
- 69 5. These services are most established in the USA. They include
70 www.snapgoods.com, www.sharesomesugar.com, www.neighborgoods.com
71 and www.airbnb.com.
- 72 6. The paper can be downloaded from [http://www.jrf.org.uk/publications/](http://www.jrf.org.uk/publications/online-marketplaces-poverty)
73 [online-marketplaces-poverty](http://www.jrf.org.uk/publications/online-marketplaces-poverty).

74 **Wingham Rowan** is the former producer and presenter of the UK's
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| SNP Best-set Typesetter Ltd. | |
|-------------------------------------|-------------------------------|
| Journal Code: ECAF | Proofreader: Elsie |
| Article No: 2066 | Delivery date: 4 January 2011 |
| Page Extent: 4 | |