Law Markets: A model for Predicting Laws, Governments, and Institutions

by Graham Lawlor

Law Markets is a positive economic model, which treats laws as tradable goods, citizens as consumers of laws, and governments as producers of laws. This model borrows heavily from the fields of Public Choice, which models political actors as economic agents, and from New Institutional Economics, which analyzes social contracts in the presence of transaction costs. The financial fields of Efficient Markets Theory and Behavioral Finance provide tools to measure transaction costs and empirical studies to demonstrate long-term trends.

The traditional definition of laws in Public Choice Economics is a non-rival, non-excludable, 'public good'. The fundamental insight of the Law Markets model is treating restrictions on choice over laws, including rivalry and excludability, as (continuous) transaction costs rather than (binary) public goods features. This distinction enables quantification and comparison of transaction costs across a diverse range of methods of choosing laws (migration, voting, etc.) in a diverse range of institutional and historical contexts. The trend emerging from analysis of the law market parallels that of financial markets—that transaction costs decline persistently over time. The conjecture that this trend will continue drives generalized predictions about the future of individuals' choices over laws, institutions, and governments.

The paper is organized in three sections. The first section describes the model of laws as tradable goods (with transaction costs) and the conjecture that these costs are falling. The second section is a short survey of the methods of trading laws, their assorted transaction costs, and descriptions of where transaction costs decline. The third section describes some of the predictions and implications from the model and the conjecture.

The Law Markets Model

Shopping for Laws

Individuals in society have a variety of choices over the laws they face. Depending on the society, these methods of choice may include voting in an election, running for office, campaigning, petitioning, migrating to a new city or country, or founding a new city or country, among others. These actions can be

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thought of as types of exchange in a 'market' for laws. Analysis of these choices within a 'shopping for laws' metaphor exposes some important similarities and differences between the market for laws and markets for everyday goods.

When an individual votes in an election, he typically has a choice between two rival candidates for an office. Each candidate advocates some set of positions and pledges that if elected he will act to turn these positions into law. But the voter may like some positions held by one candidate and some held by another. Yet it is impossible for him to cast his vote in such a way that he selects a mix of the two candidates' positions. This situation is akin to entering a grocery store where two baskets of goods have been picked out already, leaving the shopper to select one of the two baskets rather than picking individual items off of the shelf.

Another way an individual can exercise choice over his laws is through migration. Here his choice of laws is restricted by the finite set of existing countries and cities of the world to migrate to. In a shopping context, this is like a shopping mall where you can visit any store you like but you have to purchase every item they have rather than buying only a few items from each of several stores.

In both voting and migration we can see the impact of restrictions related to the bundled nature of choices over laws. Clearly, having a 'bundled' choice is preferable to having no choice at all, but having discrete, un-bundled choices is preferable still. The bundled nature of these choices can be thought of as 'transaction costs' in the market for laws. The Law Markets model is essentially a process of analyzing these and other choices over laws and their associated transaction costs. The predictions of Law Markets follow from observing trends in transaction costs and anticipating these trends will continue.

Overview of Law Trades

The Law Markets model begins with the assumption that people have choices about their laws and all laws are the result of choice. The law market is the set of mechanisms through which people choose laws. A law is a contract that includes an exchange of rights (and possibly money and other resources) between/among parties to the law. A right is something an individual can do, that he is promising not to do, persistently, within the contract of a law.

To illustrate these definitions, consider the law against theft in the context of a 'Robinson Crusoe' world. Alone on a desert island, Crusoe has complete freedom to steal even though nobody has granted him permission to do so—he simply faces no restrictions on his behavior. Once a second person arrives, before they have made any agreements otherwise, both residents still have full freedom and may endure, for some time, constantly stealing and on guard against theft. At some point, the two may determine it is in their mutual interest to limit their freedoms and may enter a contract exchanging the right to steal. The contract (law) defines the rights in the process of promising not to do the thing defined. The 'right' is defined in the contract by giving away (to the counterparty) something that the parties previously had the freedom to do. Rights are defined by contracts (laws)—they do not exist outside of contracts. As with all trades, the fact that the counterparties voluntarily enter this trade implies that they each value what they get (safety from theft) more than what they gave up (the ability to steal).

Categories of Law Trades

The act of exchanging rights in the law market is known as a law trade. There are many methods of exchanging rights through law trades. Some broad categories are outlined below. The defining quality of a law trade is that at least one person's rights must change as a result of the process. For example, a migrant exchanges rights with citizens of his new country, as defined in their laws. All forms of law trade result in an exchange of rights and all exchanges of rights are law trades.

Categories of Law Trades	**Examples**
1) **Ad-hoc contract** for rights exchange (no institution required)	1) Pollution rights, air rights (buildings), landing rights (airports)
2) **Membership change** a) Of a person i)Indefinite ii)Temporary b)Of an asset	2.a.i) Immigration and naturalization 2.a.ii) Tourism, study, temporary-worker 2.b) Investment
3) Law change through **established institutional process** a) Single-step (referendum; direct democracy) b) Multi-step (representative; indirect democracy)	3.a) Voting, running for office, campaigning, donating, etc. 3.b) Voting, petitioning, campaigning, etc
4) Foundation of a **new institution**	4) Founding new city/state/country, autonomous region, secession, etc.

Overview of Transaction Costs in the Law Market

Law Markets uses a highly generalized definition of the term 'transaction costs.'[1] A transaction cost is "a *process* resulting in a cost (of *resources*) to one or both parties that is not benefit to either." The term 'cost' here is used in the economic sense ('opportunity cost').[2] In this definition, costs are more than just financial (money) costs, they include time, labor/effort, and the 'next best use' for any resource offered in an exchange.

For example, the transportation of goods to market is a process that is a cost of resources (time, labor/effort, money – opportunities). These costs are incurred by the buyer and/or seller but do not benefit either party directly—both would be just as happy with the exchange if the other did not incur any transport costs. The goods traded away are costs to the seller, but they are not transaction costs because they are the benefit to the buyer. The payment for the goods is a cost to the buyer but is not a transaction cost because it is the benefit to the seller. In the Crusoe example, both parties give up the 'right' to steal from the other. The rights are not transaction costs because they are the benefits to the counterparty. However, any resources they spend negotiating, agreeing, or enforcing this law are transaction costs as they are costs that are not benefits to either party.

Even in a so-called zero-transaction-cost world, transaction cost processes may never disappear, but the amount of resources they consume may be vanishingly small. For example, it may continue to be necessary to speak with a counterparty to get his consent for a trade, even if the cost of the phone call approaches zero over time.

Transaction costs are categorized according to the time at which they occur during the exchange process. Search costs occur before the parties have found each other and agreed on the deal. Clearing costs occur between the time the deal is agreed and when it is executed. Maintenance costs occur after the execution. The categorization of transaction costs is substantially similar to definitions used in Transaction Cost Economics literature.[3]

Transaction Cost Processes	**Examples**
1) **Search** - Finding the deal (pre-consent, pre-delivery)	Research, marketing, negotiation and bargaining (including price), coordination
2) **Clearing** (negotiation)- Executing the deal (post-consent, pre-delivery, one-time)	Transportation, processing, commission (paid to 3rd party agents), taxation, policing/enforcement (one-time activities)
3) **Maintenance** (enforcement)- Persistent transaction activities (post-consent, post-clearing, ongoing)	Exclusion (of free-riders), policing/enforcement (ongoing activities), legal opportunity cost (bundling of provisions in a bill, issues in a candidate, laws in an institution, positions in a party, etc.), lifestyle opportunity cost (bundling of laws with a geographical location - proximity to friends, family, home, job, language, culture, etc.)

Several of the resources consumed by transaction cost processes in the law market are the same as those of concern in other markets—money, labor, and time. These costs are straightforward because they are easily quantifiable and directionally uniform (everyone wants more time, money, and leisure). Other important resources of concern in the law market are legal opportunity cost (laws given up), and lifestyle opportunity cost (lifestyle aspects given up). These are harder to quantify and may not be directionally uniform (i.e. one emigrant may gain utility by escaping a particular law, whereas another emigrant may lose utility escaping the same law).

Another important difference between transaction costs for laws and transaction costs for traditional goods involves the persistent nature of the exchange of rights. Laws are a promise not to do something for a particular (often indefinite) length of time. Laws, therefore, usually contain provisions to monitor and enforce these promises. These provisions often imply significant, ongoing maintenance costs to the counterparties of the law trade (police, courts, jails, etc.).

Quantification of Transaction Costs

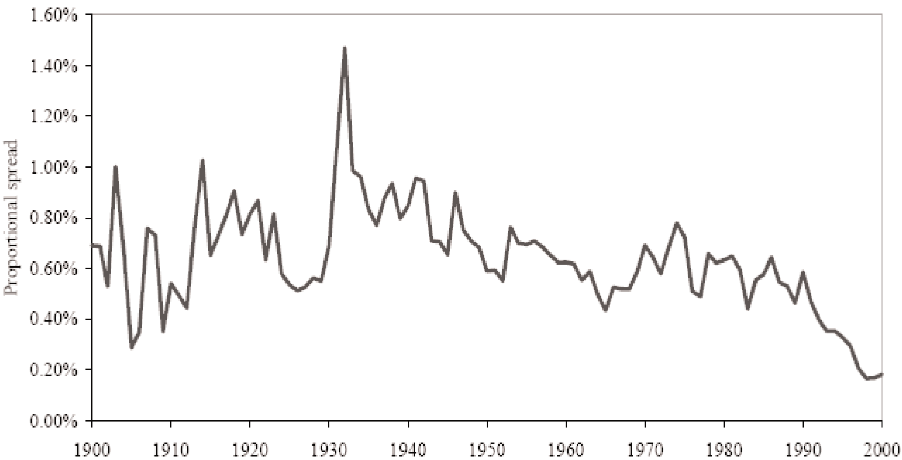
The predictions of Law Markets theory follow from the conjecture that transaction costs in the market for laws are experiencing a persistent, secular decline. In order to show this trend, we must quantify the total resource cost for law market transactions and observe trends over time. There are broadly two ways of approaching this problem: 1) by enumerating the processes that incur transaction costs and tracking them and 2) by seeking a single statistic that comprehensively encapsulates all transaction costs and tracking it. Because only the comprehensive approach can provide unambiguous trends, we will cover the second approach first. Since the law market is a one-sided market, the comprehensive approach cannot be applied directly, so we describe the enumerative approach as well.

Quantifying Transaction Costs in Two-Sided Markets

Many securities markets (stocks, bonds, currencies…) have a property that distinguishes them from goods and service markets—they are 'two-sided'. Certain agents in two-sided markets, called 'market makers', profit from constantly buying and selling the same security throughout the day. They maintain a small difference between the (lower) price they buy and the (higher) price at which they sell. This difference is called the 'spread' and the market maker adjusts the position and magnitude of this spread throughout the day, depending on supply and demand for the security. A large spread implies high profits for the market maker, though competition among market makers keeps these spreads low. Typically, the market maker has no particular view on the 'correct' price of the security, and therefore avoids maintaining a large position (long or short) at any time.

The two-sided property of these markets creates the conditions necessary to comprehensively observe transaction costs in a market. All market maker's revenues are generated by the spread, and therefore all his costs (exchange membership dues, marketing, running his computers, taxes, overhead, etc.) are funded by the spread. By looking at the spread we have an accurate and comprehensive measure of transaction costs. No matter what his costs are or whether we can enumerate or estimate them individually, they must always be included in the spread as long as he stays in business. Also, we have a very long historical record of spreads for certain securities markets, providing good data for long term trend analysis. The graphs below show a 100-year survey of stock prices and brokerage commissions for the stocks in the Dow Jones Industrial Average from 1900-2000[4] showing generally falling transaction costs.

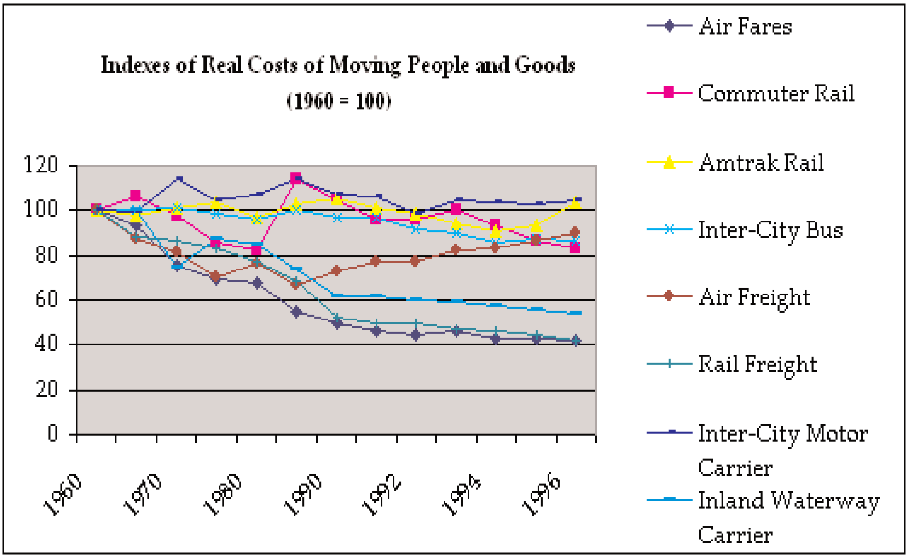
FIGURE 1: BID-ASK SPREADS ON DOW JONES STOCKS[5]



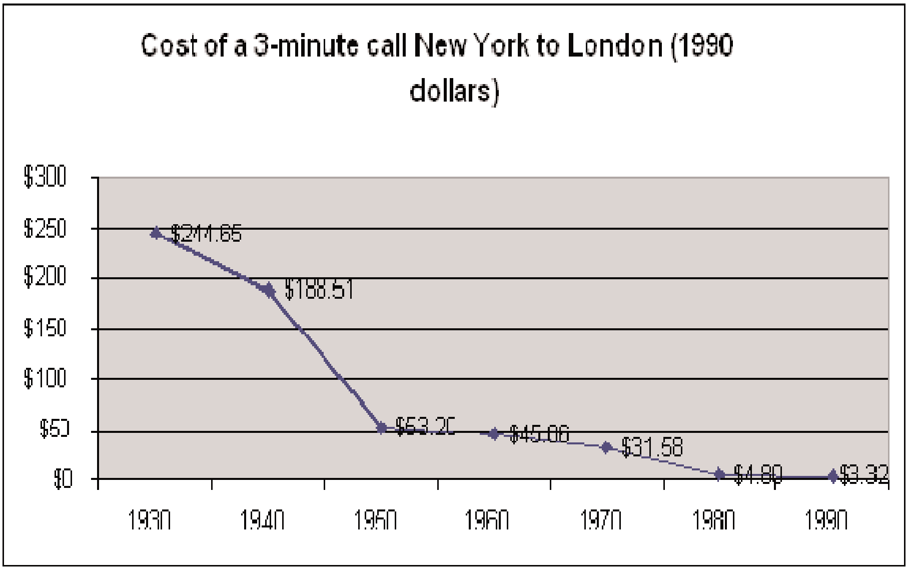
QUANTIFYING TRANSACTION COSTS IN ONE-SIDED MARKETS

Outside of securities markets, there is usually no equivalent of a 'market maker' who buys and sells the same goods in the same market. For example, retail customers cannot generally sell a meal to a restaurant, or sell a computer to *Best Buy*. Since there is no single agent who both buys and sells, there is no notion of 'spread'. To observe transaction costs in one-sided markets, we attempt to enumerate the various processes that incur transaction costs and attempt to detect trends in the resource costs of those processes. Fortunately, many transaction cost processes are common across a wide variety of markets (including law markets)—transportation, information, communication, etc. The advantage in this enumerative approach is that it can be applied to any market, not just two-sided markets. The disadvantage is that no matter how carefully we enumerate the various processes and estimate their resource cost, we can never be sure we have been comprehensive. Although this approach is necessarily anecdotal, some compelling trends emerge that comfort us in the conjecture that transaction costs are broadly declining over time.

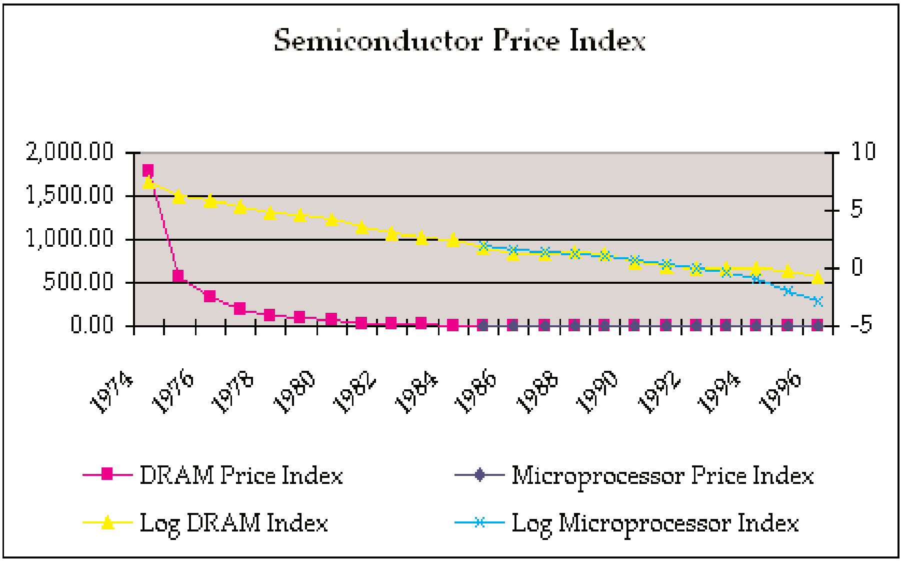
TRANSPORTATION[6]



COMMUNICATION[7]



INFORMATION[8]



The Efficient Markets Conjecture

Trends observed in both approaches lead us to a highly generalized conjecture, which, when applied to the market for laws, drives the predictions of Law Markets theory. This general conjecture, the Efficient Markets Conjecture states that: *for any given good, per-unit transaction costs will fall over time, asymptotically approaching zero.*

As the name suggests, this statement is a conjecture, and I do not attempt a proof.. Transaction cost research, like that cited above, though by no means comprehensive, provides some evidence. Literature in Endogenous Growth Theory[9] provides additional theoretical and empirical basis for the conjecture in a highly generalized, economy-wide case. In the limited survey below, I will provide more (anecdotal) evidence for falling transaction costs specific to the law market. To the extent these anecdotes are enough to convince the reader of the trend, they lead to some compelling implications.

There are several important clarifications to make about this conjecture. First, it is important to make the distinction between falling transaction costs and falling costs. In the graphs above showing trends in the stock market, for example, we can easily observe that the cost of trading a share of stock is falling over time However, in no way does this imply that the price of the shares themselves are falling (in fact they have risen significantly). In law markets the value of the law itself (say the value of Delaware's corporate governance law to a particular company) may rise, even while the cost of choosing the law (the cost of incorporating there) falls.

Secondly, it is important to note that we are looking for a decline in per-unit transaction costs, not a decline in transaction costs across the entire economy, or even across an entire market. All the predictions and implications below rely only on per-unit analysis. Indeed, the total amount spent on transaction costs (spread plus commission) in the stock market has risen significantly, while per-unit costs have fallen dramatically. Any fixed transaction cost spread over an increasing volume of transactions will result in falling per-unit transaction costs through economies of scale.

Survey of Transaction Costs in the Law Market

In order to drive predictions from the Efficient Markets Conjecture, we must observe declining transaction cost12s—not just in a prototypical market, but also in the particular mechanisms of the law market. As noted, many of the transaction costs in markets for goods and services apply to the law market as well. The falling cost of transportation makes immigration—as well as trade in oranges and iPods—much easier. The falling cost of information and communication makes coordination in the democratic process—as well as trade in furniture and real estate—much easier. ome of the most significant transaction costs in the law market—'legal' and 'lifestyle opportunity costs'— are where we can see some of the most dramatic declines and greatest evidence of the effects.

The survey in this section provides a more thorough view of how and where transaction costs are falling in each of the defined categories of law trades. North (1990, 1994) gives several treatments of causes and (persistently declining) trends in legal transaction costs over very long time horizons. Causes of declining transaction costs, North says, include 'social learning', 'institutional and economic change', and 'technological and institutional change.'[10] The phenomena described in this survey are examples of these causes. For brevity's sake, we include examples from only categories two (Membership Change), three (Established Institutional Process) and four (Foundation of a New Institution).

Category Two: Membership Change

A membership change is a law trade in which the desired law already exists within some institution (city, state, country, etc.) and the joining member becomes party to the law, thereby exchanging rights with existing members. Both temporary (tourists, international students, guest workers, and refugees) and permanent membership changes (immigrants) are everyday occurrences and a primary way people choose their laws. Hirschman (1970) and Ashby (2007) provide theoretical and empirical justification for migration towards better laws.[11]

Legal drivers for migration are both direct and indirect. If the destination country has better economic opportunities for a migrant than the origin country, and if these opportunities are the result of better laws or better government, then migration is driven by indirect legal causes. Some direct legal drivers for (temporary or permanent) international migration include:

Abortion (banned in Chile, Nicaragua, El Salvador, most of Africa and the middle-East)

Religious restrictions on marriage (Saudi Arabia, Iran, Israel)

Same-sex marriage (banned everywhere except The Netherlands, Belgium, Canada, South Africa, Spain, Massachusetts, and California)

Religious, political, ideological, persecution, intolerance

The notion of changing the membership of one's assets is an important subclass of this category of law trade. If I physically reside in one country but some of my assets (investments, capitol goods, etc.) reside in another country, then these assets are at least partially subject to laws in that country. We can see many examples of international investment flows following (positive or negative) changes in laws. One of the best illustrations of this recently is the dramatic uptick in investment seen in countries set to join the European Union. In addition, people routinely move virtual assets, such as censored blogs, online casinos, and websites towards permissive jurisdictions. Other common instances of legally-driven asset migration include tax havens, international stock listings, or simply investment in multinational corporations that have exposure to a particular foreign country, its laws and its economy. Finally, many of these drivers (temporary and permanent, direct and indirect, moving assets or moving the person) exist within national borders as well as across them. There is a large volume of people crossing city, country or state lines to gamble, drink, work, or setup a company on any given day.

The following is a brief description of some declining trends in transaction costs in the *membership change* (migration) category of law trade, organized by category of transaction cost (Search, Clearing, and Maintenance).

Search costs, as noted above, are costs associated with the parties to the trade finding each other, prior to agreeing to the exchange.

Declining trends in Search costs:

The Internet. Declining search costs associated with the development of the internet include costs of finding information about: how to migrate, visit, study, or work in another country; what the laws, economy, opportunities in other countries; identifying and communicating with agents to assist in immigration (immigration attorneys, travel agencies, schools, scholarship administrators, employers, etc.).

Financial Services Deregulation/Innovation (asset migration). Declining search costs in this area include ever-increasing options for foreign investing (American Depository Receipts (ADR's), mutual funds that invest in overseas firms, domestic brokerages with direct access to foreign stock exchanges, domestically-based companies with international operations, etc.)

Clearing costs, as noted above, are costs associated with executing the transaction, after the parties have found each other and agreed on the exchange.

Declining trends in Clearing costs:

Transportation. Broad, secular declines can be seen in the cost of most modes of transportation, due to technology, competition, deregulation, and economies of scale. In general, travel is easier and cheaper than it has been at any time in history.

Maintenance costs, as noted above, are costs associated with enforcing the terms of the trade, after the exchange has been executed

Declining trends in Maintenance costs:

The Internet. People are increasingly able to perform their jobs remotely, via the Internet. The ability to separate or de-bundle legal environments (countries) addresses two of the biggest transaction costs associated with migration: legal and lifestyle opportunity costs. This trend is increasingly broad, affecting a diverse array of professions and income levels worldwide.

Communication. It is continually cheaper and easier to remain in contact with people (friends, family, colleagues) through a proliferating range of media. This also has a major impact on the 'lifestyle opportunity cost' associated with travel and migration.

Globalization. Costs associated with learning a new language, culture, and customs in order to enjoy a different set of laws are continually falling. A few global languages are increasingly ubiquitous and people everywhere are more culturally aware.

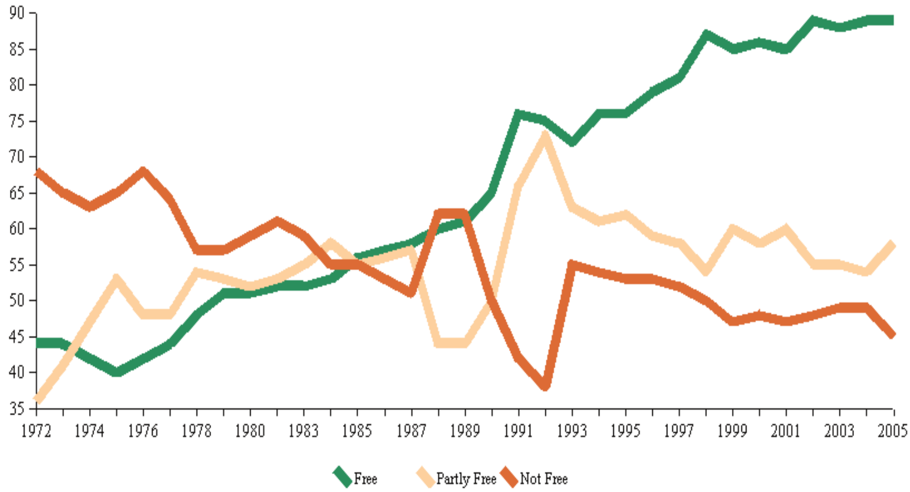
Category Three: Established Institutional Process

Institutions generally have processes, established in their charters or constitutions, that allow for changes to the laws of the institution. The details of these processes vary widely from government to government and by the type of institution (city/state/federal, democracy/kingdom/dictatorship, single-party/multi-party, parliamentary/presidential).

Some major declining trends in transaction costs are:

The Trend towards democracy. The broad trend away from autocracy and towards democracy in the world's governments is well established (see graph, Freedom House 2006). This phenomenon represents a major reduction in transaction costs in itself, as democracy is fundamentally a method through which people exercise choice over their laws. Choice over laws exists outside of democracy (e.g. petitioning, joining the ruling party, etc.) but success is much less likely and costs of failure higher.

FIGURE 4: FREEDOM IN HE WORLD 1972-2005 COUNTRY RANKINGS [12]



Privatization. In many countries, the government owns major industrial operations. These operations often consume large resources in the form of tax subsidies, privileged access and eminent domain rights. Citizens do have some choice over how these resources are used, but this choice is executed through the institutional process (voting, etc.). Institutional processes may or may not be democratic and nearly always have higher transaction costs than an equivalent private process. When governments privatize industrial holdings they are taking steps to break up the 'basket of laws' described earlier. Before a privatization, decisions over the industrial investment and decisions over laws are bundled. After privatization, these decisions can be made discreetly and independently. The table[13] demonstrates the global privatization trend:

CHANGE IN STATE OWNED ENTERPRISE'S ACTIVITY AS A PERCENTAGE OF GDP— DECREASE IN PERCENTAGE POINTS OF GDP—

The following is a brief description of some declining trends in transaction costs in the established institutional process category of law trade (democracy, dictatorship, or other system of government), organized by category of transaction cost (Search, Clearing, and Maintenance).

Declining trends in Search costs:

Coordination. Coordination is the ability for citizens to understand which laws, policies, and leaders others support. Since coordination takes place before the trade is executed (before the vote) it is considered a Search cost. Developments in various technologies make coordination much easier and have increasing political impact in countries at every level of democratization.

Countries (by Income Group)	1980	1999	Change
Low income countries	15	2.5	-12.5
Middle income countires	11.0	4.0	-7.0
Upper middle income countries	10.5	4.0	-6.5
High income countries	6.0	4.0	-2.0

The Internet. In democracies, the internet dramatically reduces certain costs related to coordination of opinions within the electorate— for example, candidate websites, pundit blogs, research distribution from think-tanks, newspaper websites, video sharing websites (YouTube, etc.), social networks, email, instant messaging, chat rooms, etc. In nondemocracies, the Internet enables dissident blogs, 'people-power' revolutions, and exposes corruption.

Other Technology. Proliferation and personalization of recording devices (cameras, video cameras, microphones, etc.) media distribution channels (cable, satellite, Internet, podcasts, mobile and wireless networks, etc.) and viewing devices (computer, mobile phone, etc.). Mobile phones and text messaging enable and reduce the cost of coordinating campaigns and volunteers.

Declining trends in Maintenance costs:

Enforcement. Enforcement technologies are undergoing considerable steady innovation. Continual improvements are observed in forensic techniques such as fingerprinting, DNA testing, etc.; monitoring technologies such as GPS, ankle bracelets, LoJack, etc. These trends reduce the costs of operating the enforcement mechanisms and the likelihood of (costly) enforcement errors.

Category Four: Foundation of a New Institution

Since 2000, three new countries (East Timor, Montenegro, and Kosovo) have emerged; in the last ten years at least thirty-four countries have written new constitutions.[14] The foundation of new cities, states, autonomous regions, and private institutions make this a significant method of law trade. The following is a brief description of some declining trends in transaction costs in the foundation of a new institution category of law trade, organized by category of transaction cost (Clearing, and Maintenance).

Declining trends in Clearing costs:

Global Perceptions. The principle that people have the right of self-determination is reflected in article one of both the International Covenant on Civil and Political Rights[15] (ICCPR) and the International Covenant on Economic, Social and Cultural Rights[16] (ICESCR). To the (increasing) extent that such principles are acknowledged and honored, it is becoming easier for groups to create new sovereign nations and autonomous regions.

The Internet. As discussed above, the Internet is perpetually evolving as a tool for communication and coordination in the law market. Since foundation of a new nation is not a daily occurrence, each example demonstrates new uses for the Internet. The three successful independence movements so far this century had access to coordination-enhancing capabilities of the Internet such as email, blogs, social networks, and Internet video/audio/photo dissemination. For example, Internet-distributed recordings of militia violence, arson, and looting accelerated the international response in East Timor, culminating in an armed UN security mission and various international assistance and finance programs for the new nation. Both Montenegro and Kosovo's independences from Serbia were closely monitored by regional and international missions and were generally free of violence (particularly so in contrast to secession movements throughout history). Internet distribution of news and reports from other contemporary revolutionary/secessionary crises (Myanmar, Darfur/Sudan, Tibet, Chechnya, Kenya, Pakistan, Zimbabwe) provide increasing avenues for dissemination of news and corresponding coordination of local and international reaction.

Other Technology. Proliferation of digital media recording devices (cameras, video cameras, audio devices, mobile phones, etc.), particularly in conjunction with the Internet as a distribution mechanism have incredible coordination power, both inside the country and internationally.

Declining trends in Maintenance costs:

Experience and International Assistance. New nations are increasingly seen as worthy and welfare-enhancing enterprises by the international community. To a great extent we can see established nations assisting new nations with peacekeeping, with the writing of their constitutions, and with financing critical services and infrastructure. At previous points in history, small, vulnerable new countries were quickly overrun by big neighbors—an outcome that is increasingly rare. To this extent, founders of new nations are able to reduce the transaction costs associated with these maintenance processes and more easily establish their new institution.

Substitution among Methods and Market-Wide Trends

The foregoing survey attempted to show some of the reasons to believe that transaction costs associated with an individual's choices over laws are declining. Treating these methods of law choice, together, as elements of a market, rather than a set of individual phenomena, has some interesting properties.

The methods of law choice are substitutes for one another. If my personal security is threatened I can enter an ad-hoc contract with my neighbors (a neighborhood watch association), or I can migrate to a safer town, or use my vote to put more police on the streets (institutional process), or I can found a new town. Any law can, in principle, be enacted by any of the methods outlined above. As with all substitutes, phenomena in one market affect the others. Some examples include:

Mass exodus from East Germany (migration) drove democratic reforms and reunification (institutional process, new institution)

A stable democracy and its prosperity (new institution) drove immigration to America

Threat of secession (new institution) drove autonomy and institutional reforms in Quebec, Scotland, and Basque Spain (institutional process)

Legislation supporting stem cell research (institutional process) in Singapore drove research investment and migration of scientists (asset and personal migration) It is through this substitution among the law trade processes that we can expect (and observe) general, market-wide trends in falling transaction costs. It is through this substitution that we expect the self-reinforcing, 'endogenous' nature of the trend to manifest – better technology produces better laws and better laws produce better technology.

This survey has provided some law-market specific examples of declining secular trends in transaction costs. Though not a proof, these examples supplement evidence referenced earlier from other fields—financial economics and exogenous growth theory. To the extent this is convincing of the general trend, we are ready to look at some predictions.

Predictions and Implications

Declining Resource Consumption per Law Trade

The first set of predictions is a restatement of the Law Markets thesis (that transaction costs in the law market are declining), but in a different form. Rather than looking at each method of trading laws and observing where costs are falling, these predictions look at each resource consumed in the transaction process and predict they will decline. These predictions are generally qualitative rather than quantitative and the confirming evidence, where it exists, is anecdotal rather than comprehensive. Both of these deficiencies could be remedied with statistical analysis, in principle.

Time Cost: Increasing Speed of Execution

Trades arise from the potential of mutual benefit among counterparties. The elapsed time from when the potential arises to when the benefit is realized is a transaction cost. The parties to a transaction would like to complete the trade as quickly as possible so they can enjoy the benefit as soon as possible. The (discounted) present value of the benefit of the trade declines the longer it takes to execute the trade.

Stock prices were once published daily in the Wall Street Journal and trading happened through a broker over the phone. Today, stock prices are published with a fifteen-minute delay and trading happens over the Internet in a few seconds. Goods markets see increasing speed of execution through overnight delivery, just in time manufacturing, and globally integrated distribution channels.

Increasing speed of execution in laws implies faster realization of all methods of trade. There are significant delays inherent in each of the methods of law trade. From the point a group recognizes the potential mutual benefit, execution of the trade (through migration, representative voting, founding a new government, etc.) may take years, rather than seconds, to execute. As markets become efficient, this delay will decrease. At the point the law market is as efficient as the stock market, law trades will be executed on the order of seconds. Indeed, it is already possible to move many types of assets from one legal regimen to another within these timeframes.

Opportunity Cost: Discrete Choices

This paper has discussed the 'bundled' nature of laws (bundles of provisions), votes (bundles of endorsements), and citizenship (bundles of laws) in some detail. Financial engineering is the process of de-bundling risks and cash flows in securities markets. Examples include short selling, options, bond strips, swaps, ADR's, and all forms of derivatives. Similar engineering is possible, and even precedented, in the law market.

A vote in a representative democracy is a large bundle of endorsements. Fully de-bundling the vote implies voting for each measure independently, as in a direct democracy, something that technology and the Internet increasingly enable. The 'Senator On-Line' project in Australia, for example, de-bundles the endorsements of a vote for Senator. A 'dummy' candidate runs for office in the real election. If he is elected, all bills are posted online where citizens vote for them directly. The opinion resulting is passed to the 'dummy' candidate in the real legislature. This effectively turns every bill into a referendum and eliminates the 'basket' effects of representative democracy. A further step is de-bundling bills, which are themselves large bundles of individual provisions (each of which may or may not be endorsed by a given citizen). With increasing 'financial engineering', individuals will be able to select just those provisions they prefer and leave the rest.

Citizenship combines membership in a bundle of laws and access to a physical territory. Fully de-bundling citizenship implies people would be able to select laws from particular cities, states, countries—and physical access to territories—individually. Some of this is possible today, through migration, tourism, international trade, and multiple-citizenship. Privatization and globalization allow people to choose laws for themselves and their assets increasingly independently. As transaction costs fall, all of these choices will be increasingly discrete.

Information Cost: Transparency and Prices

Search, the acquisition of information about a trade in advance of execution, is a costly process—costly in time, money, labor and opportunities. The term 'transparency' describes the availability of information and the cost of acquiring it. In efficient markets, search cost is minimized through the existence of prices. It is through prices that consumers and producers can quickly and easily observe the precise opportunity costs and benefits of goods. Buyers and sellers are able to compare, budget, and negotiate transactions only to the extent they have an objective view of the offers available to them: the prices of goods on the market. Lack of prices (lack of transparency into the opportunity cost of an item) is a tremendous barrier to exchange. In the absence of prices, most exchange simply halts or occurs in black markets. Currently, there are only limited examples of prices in the market for laws.

There exist both legal and black-market prices for citizenship. Most countries, including the U.S., have the notion of an 'investor visa', whereby anyone in the world can become a legal resident (and eventually a citizen) if he invests enough money in the country. Many skilled workers migrate each year on sponsored work visas (H1-B in the U.S.). Several countries (Germany, Singapore) have 'guest worker' programs for low-skilled workers, with associated costs. Such programs exist because of economic pressures—countries drop these programs at the risk of their global competitiveness. Costs incurred by firms and workers who participate in these programs are effectively legal prices for citizenship/residency. Where there is the potential for gains from trade but no legal avenue, there is a black market for residency. Prices for illegal migration (smuggling) are also quoted widely.

There are also legal and black-market prices for votes. Elected representatives exist as agents to facilitate the exchange of rights among citizens, so money transferred between representatives and their constituencies in either direction constitute prices for votes. Legal examples of representatives 'buying' votes from constituencies include earmarks, 'pork-barrel' projects, and patronage. Legal forms of individuals 'buying' votes from representatives include campaigning (donating, volunteering, organizing, 527 groups) and lobbying. Representatives 'buy' votes from each other through logrolling. As with migration, these exchanges (and associated prices) exist because of economic pressures. Again, where the potential for gains from trade exists but no legal avenue a black market emerges (with its own prices and transaction costs).

As with all other markets, as transaction costs fall, prices can be expected to become increasingly transparent. In the representative process, votes will have prices and, as votes become de-bundled, votes for individual bills, and eventually provisions within bills, will have transparent prices. In the migration process, citizenship, residency permits, and all forms of visas will have prices (and in de-bundled form).

As with goods, services, labor, and securities, the prices of laws will be determined dynamically by supply and demand.

Rising Transaction Volume in Law Trades

As transaction costs in a market fall, the volume of transactions in that market tends to rise. We can predict this theoretically, through simple partial equilibrium analysis, and we can observe this empirically in a wide variety of markets. The volume of shares traded on the NYSE has risen from an average of 3 million shares per day in 1960 to 1.6 billion shares in 2005.[17] We can expect to see greater volumes of transactions in the law market, such as:

- More ad-hoc contracts
- More immigration (long-term international migrants have increased from 75 million in 1965 to 150 million in 2000)[18]
- More laws (and de-bundling of bills into higher volume discreet sub-components)
- More countries (countries in the world have increased from 57 in 1900 to 192 in 2000)[19]
- More autonomous regions (Nunavut, Basque, Catalonia, Scotland, Kurdish Iraq, West Bank and Gaza etc.)

Welfare, Preferences, and the Invisible Hand

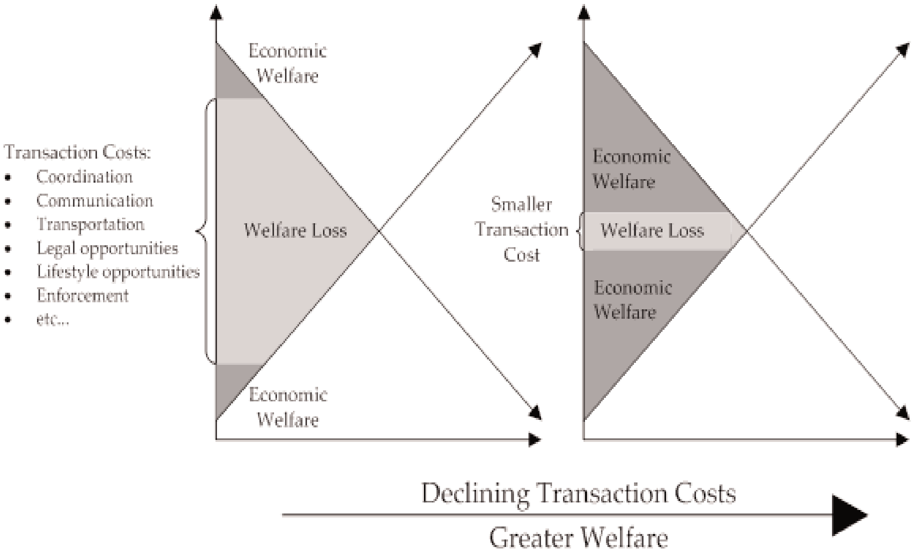
Economic welfare analysis can be applied to the law market to suggest the impact of falling transaction costs. Supply, demand, and transaction costs combine to determine equilibrium price and quantity as well as producer/consumer surplus and deadweight loss. Lower transaction costs imply lower deadweight loss and higher welfare benefit from producer/consumer surplus.

In law markets, this means the more easily people can choose their laws, the more accurately laws will track their preferences. If there is a law I am subject to that I do not like, I usually put up with it, because migrating or campaigning or running for office is too costly. But to the extent that I can select in and out of laws discretely and costlessly, I will opt out of offending laws (and in to mutually agreeable ones). Adam Smith's (1776) 'invisible hand' principle suggests that unencumbered markets are effective at allocating scarce resources.[20] Low transaction cost law markets are effective at allocating rights.

Since value is relative, it is impossible to determine the 'goodness' of any particular law in an objective sense, but we can make some inferences about outcomes that might be close to universally held. Outcomes such as long life expectancy, low infant mortality, high literacy, and high wealth/income are good candidates for universal preferences. We can observe a strong correlation between the presence of choice over laws and the presence of these 'universal' preferences.[21] Though we have not measured, we expect transaction costs in the law market to be dramatically higher than in other markets. This suggests that there are dramatic welfare gains to be expected as transaction costs fall.

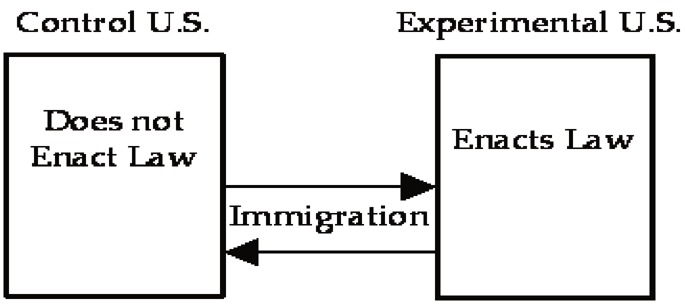
The Asymptotic Case: A Zero Transaction Cost Law Market

The Efficient Markets Conjecture proposes that per-unit transaction costs will fall perpetually. A thought experiment envisioning the (unreachable) asymptotic endpoint of this process produces interesting implications regarding existing laws with negative net value (and non-existing laws with positive net value). Imagine two countries, identical in every way—same geography, same people, same firms, etc.—and that people can migrate between them instantly and costlessly. Now imagine that



one of these countries, call it the 'Experimental U.S.', changes some law while the other, call it the 'Control U.S.', does not, and imagine resulting immigration flows between the two. As an example, let's assume the law is a 100 percent import tariff on new cars, applied only in the Experimental U.S. We might expect that consumers of cars in both countries would migrate away from this law (towards the Control U.S.) while producers of cars would move towards the law (to the Experimental U.S). After this migration, consumers in the Control U.S. would have duty free access to imported cars (imported from the experimental U.S. or from other countries). But producers in the Experimental U.S. would have no tariff-bound consumers to sell their cars to. The producers could either repeal the tariff (taking things back to the way they were) or leave the tariff in place (exporting to their former customers, now in the Control U.S., but without the tariff). In either case, the presence of costless migration negates any impact of the law—the law effectively disappears.

This analysis has several interesting implications. First, it suggests that this particular law has no net value (value to producers and consumers in aggregate), otherwise the law would have remained in place. More generally, it provides a method to infer the net value of any law by imagining whether a given law can survive zero-cost migration. Finally, and most interestingly, it implies that zero or negative net-value laws exist only because of, and to the extent of, transaction costs associated with people leaving the law. We can imagine a wide range of laws that people would leave if they had the chance – laws that people are tied to only because of the high transaction costs associated with leaving. Laws with zero or negative net-value are what Mancur Olson (1971) refers to as laws with 'concentrated benefits and diffuse costs.'[22] It is exactly this type of law that we expect to disappear as transaction costs fall. Also note that this 'migration test' could have used any other method of law trade instead. If there were zero transaction costs in a representative democracy, direct democracy, in ad-hoc contracts, or in founding new institutions, the effects would be the same.



It is important to note that a world of zero transaction costs does not imply a world of zero laws. We can easily apply the migration test to the law banning murder, for example. Murderers would migrate to the country that allowed murder and non-murderers would go to the country that banned it. The murderers would be expected to kill each other and the non-murderers would live happily and safely. Just as with Crusoe's theft law, laws will tend to exist exactly to the extent they add value, as determined by the individual through his choices. We can use this technique to appreciate that the value of particular laws, like the value of particular goods, is relative to the individual rather than universal across society. A law that bans smoking in bars, or national health care, for example, might attract some people while repelling others – both 'countries' could exist indefinitely, even with zero-cost migration.

How would the world look under a zero transaction cost law market? Anyone would be able to enter (or exit) any law at any time, the instant that he perceived a benefit from joining (or leaving). In this scenario, all laws would be 'instantly and universally unanimous'. Note that 'unanimous' here does not mean 'ubiquitous' (covering every person in the world). 'Unanimous' here means anyone who wanted to join could do so and therefore anyone who does not join implicitly views the laws negatively. The zero-transaction-cost law market is sometimes referred to as a 'pure Coasean world.'[23]

Law Consumers and the Nature of Government

As with goods, laws do not have an 'absolute' or 'objective' goodness or badness. As with goods, the value of a law is relative to both the individual choosing it and to the time of his choice. We may use the above model to identify laws that have net negative value (and thus that we expect will disappear as transaction costs fall), but many laws should have partial but not complete adherence among the worlds population. In this way, the individual acts as a 'consumer of laws', participating only in the laws from which he perceives value and avoiding the rest.

If the individual is a consumer of laws, then the government is a sort of producer of laws. Governments with unpopular laws will see people exit and the value of their citizenship fall. They will be forced to improve their laws, and even to specialize and market themselves in order to retain customers (citizens). We can already observe this happening as countries and states compete for tourists, skilled workers, and investment. Once prices of various citizenships are observed in a dynamic, real-time open market (as with stocks) we can expect countries to consider the market value of their citizenship a matter of national pride. They will create better laws in order to drive up this market price, and in the process benefit their citizens. As migrating (and moving assets) becomes easier and as prices become more transparent, this trend will only accelerate.

It is important to recall that Law Markets is a strictly positive theory. It does not advocate declining transaction costs, it predicts them. Indeed, Law Markets has no normative stance on any of the trends or predictions here—and certainly no normative stance on any particular law. Suggesting so would be akin to suggesting the study of microeconomics has a normative stance on the prices of apples or oranges.

Conclusion: Can This Really Happen?

Even if one believes in principle that there is a market for laws with declining transaction costs one may justifiably question how far these transaction costs could possibly fall. It may be too big a leap to believe that transaction costs could fall as dramatically as would be required to approach 'instantly and universally unanimous' laws. To address these reservations I offer some parallels.

There is one well-studied market in which transaction costs have taken a trajectory akin to what is projected here for the law market - that market is religion. Historically (and in many countries today) the 'transaction costs' associated with changing religion were severe, including death. As would be predicted, few new religions were started in such environments, participation was coercive, and innovation slow. Over time, these transaction costs fell—most dramatically in the U.S. through the first amendment and gradually throughout much of the rest of the world. Where this has happened, the range of religions flourished, participation and engagement increased, and with it welfare gains implied by voluntary participation.[24] A market that once had the threat of death as a transaction cost is now something people change at will (often several times in a lifetime). Religion also provides an example of how people following different sets of rules can live amicably together—

all the more so where switching costs are low. The dramatic downward trend in transaction costs in the market for religion is a perfect parallel for what is anticipated in the market for laws.

Another parallel is the market for online computer games—known as 'virtual worlds'—such as 'World of Warcraft' and 'Second Life'. These worlds already contain tens of millions of daily users who spend hours each day interacting with each other online and generating real value in economies with real currencies—over $1 billion per year.[25] In these worlds, migration-related transaction costs really do approach zero, as shown in the migration-based thought experiment above. And as expected, the game developer (the virtual government) is forced by competitive pressure to maintain 'good' laws, as defined on a player-by-player basis. There are no dictatorships in the virtual world; people would never stay in a world where their property could be confiscated or their character arbitrarily imprisoned or beaten. As people spend increasing time in virtual worlds (and whatever they evolve into) competitive pressures through low exit costs will ensure that those institutions progressively approach the zero-transaction-cost asymptotic utopia described here. Conceivably, the threat of 'exodus to the virtual world' could provide the same competitive pressures on 'real world' governments that the threat of emigration has always posed. Real-world governments would have to reform in order to compete with ultra-efficient governments of the virtual world.

As a closing point, I would like to refer back to the notion of Law Markets as a positive theory rather than a normative one. The trend described here of constantly declining transaction costs spans the entire world—developed and developing; democratic and autocratic; past, present, and future. It does not depend on any individual person, any particular policy, or any specific technology. It is a truly an 'endogenous', self-reinforcing trend for which there is no end in sight, and for which the implications are dramatic.

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