

II A Theoretical Interlude

6 Theory before Policy

We theorize because a good theory can look across markets and countries to find common causal dynamics about how politics and policy shaping global and national markets. Our story is one of political economy. The preferences of the powerful across the globe, informed by their domestic political economies, the dynamics of negotiation, and the need to build support for proposed global actions ensure deeply political alternatives dominate governance.

Global market governance—whether by informal or formal agreements and institutions—is important because choices about the design of market governance influence the winners and losers and the innovation and efficiency in the global ICT market. These market-governance arrangements provide countries with collective capabilities including information, the facilitation of bargaining, and dispute resolution.

International institutions often make and administer rules for the marketplace including technical cooperation on standards and competition rules. Sometimes they provide global services. (For example, Intelsat provided global satellite services from the 1960s through the 1990s.) A significant choice in market governance is the decision about which powers to delegate to what formal (international organizations) or informal institutions (non-governmental organizations) because the choice of the agent implies an agenda for future bargaining and action. Changing global governance may require shifting the lead institution.

Imagine a typical, if stylized, dynamic for changing governance. Initially, changes at the technological frontier induce stakeholders to reconsider their market interests. If major changes in the leading powers' domestic market policies and political economies emerge, it disrupts the equilibrium of existing global market-governance arrangements. There are two disruptive paths. First, traditional diplomacy has to change. For example, the United States' move to a more competitive networked ICT model in the

1980s led the US to become a strong advocate for reorganizing the global governance of ICT markets. Second, the expectations of major stakeholders in important countries shifts. The breakup of AT&T and the United States' embrace of the emerging Internet prompted companies and expert ICT communities in other countries to consider more urgently whether the old arrangements were sustainable. They began to champion change in their own domestic markets and became more favorable to global change. However, the processes of strategic bargaining and the set of governance options for organizing world markets strongly influenced how the potential for change translated into a governance choice. The case studies in chapters 7–9 on competition and trade rules, organization of the global wireless infrastructure, and Internet governance show the potential for innovation and the compromises needed to accommodate global political economic realities.

Explaining Changes in Market Governance

Why do market-governance systems change in certain directions? Numerous explanations exist in scholarly writings on political economy. The four most pervasive are variants on power, technological determinism, ideas, and domestic politics. Let us briefly review how these explanations pervade people's thinking and then explain the problems with each of these four approaches that lead us to a different synthesis.

Power

The power explanation for market governance focuses on the distribution of global power. International outcomes often are described as the result of what the powerful seek for the good or ill of the world. But scholars tell a subtler story about when power may enhance global welfare. Two examples illustrate the dynamics. A dominant major power, or a small group of powers with closely aligned interests, may possess the incentive and ability to advance productive governance to achieve collective goods such as clean air. (The trouble with air-pollution control is that "free riders" do little but still breathe air made cleaner by others' donations.¹) From this perspective, collective success depends on the involvement of a major power because its stake in the outcome is large enough to push it to decide to use its own resources or induce others to contribute. Similarly, suppose there is strong interest in a common approach (e.g., deciding which side of the road to drive on), but a paralyzing conflict (e.g., the costs of switching) prevents a common approach. A great power may ignore dissenters

and push through an outcome that it prefers but also benefits others. Everyone can prosper because a great power finally pushes through a decision.²

The great power (or power club) has enormous influence because it usually sets the agenda for action. In any decision process, control of the agenda is a prime source of influence. In the global context, the powerful have a veto power that means that no alternative to the status quo can succeed without their consent. This has been dubbed “negative agenda power” in the study of legislatures.³ In a technologically dynamic market this negative agenda power has special portent because the powerful can block efforts to respond to market innovation by “nipping and tucking” the traditional arrangements for market governance. Deadlock can force consideration of new governance alternatives.⁴ Moreover, a great power has the ability to make side payments and manipulate linkages among diverse issues to reinforce its influence.

Both variants of the power story leave huge holes in explaining outcomes about global market governance. Power does not explain what the powerful seek—multilateral cooperation or a coercive empire, for example. Neither does power explain how the organization of decision making and action (market governance) shapes how preferences and influence are transformed into decisions. The United States may be the “indispensable power,” but its track record on diplomacy is spotty. If power does not explain most of motive or the bulk of outcomes, other explanations are needed. For example, the decision process itself affects outcomes.⁵

Technology

Technological determinism, a favorite of the business and scientific community, is the polar opposite of a power explanation. This approach assumes that technology has a logic built into it that dictates the path forward. The microchip and data storage, in this view, should dominate any account of ICT governance change because they changed the logic of technology. The accounts of US market governance and Internet governance in chapter 9 should put this notion to rest.

Important shifts at the technology frontier alter the costs and benefits of all stakeholders concerning market competition and its governance. They make new forms of organization possible and invite entrepreneurship in all parts of society. Still, this line of thinking errs. To begin with, as scholars of economic growth and technology have shown, societies have turned against technologies.⁶ In the 1980s, nuclear power plans were

curtailed in many countries. More critically, the mix of technologies deployed and their use varies significantly across societies. Railroads and automobiles play different roles in different countries. Medical practices and drug dosing diverge across national boundaries. The mix of ICT technologies and their applications also vary. The technological system embodies a legal and market “code” in its deployment that shifts this mix.⁷ For example, the path of technological innovation shifted when financial and legal reforms spurred venture capital markets and accelerated the decline of giant, vertically integrated companies.

Thus, large technological shifts pose major disruptive choices for society, but there is no one blueprint built into them. Analysts break this disruption into component pieces that can be more precisely matched against political and market dynamics.

Ideas

The role of ideas as an explanation of change has recurring appeal in the ICT community. It is a favorite of Hollywood—for example, the early *Star Trek* was a combination of a frontier Western and a testimony to the gospel that civilizing ideas could overcome human or extraterrestrial foibles.

Ideas might matter in several ways.⁸ Stakeholder communities, expert and amateur, organize around predominant ideas about cause and effect, and about moral desirability. As these ideas evolve they suggest an agenda that can sharply redirect policy. Human rights organizations and the arms control community are prime examples.⁹ In this perspective ideas are powerful forces that drive change. A narrower version holds that ideas organize information thereby permitting successful bargaining on collaboration by providing “focal points” for organizing strategic behavior. Thomas Schelling, a father of modern game theory, argues forcefully that the idea of “no first use” for nuclear weapons stabilized deterrence by guiding decision making by the nuclear powers.¹⁰ The “end-to-end” connectivity principle for Internet architecture was similarly critical.

The limits of ideas as an explanation for policy arise from a different question: Which ideas matter and why do they shift over time? Ideas cannot be reduced to questions of the preferences of the powerful or the interests of economic actors. However, their policy role is powerfully shaped by their relationship with those with power and interests. As chapter 9 shows, the de facto selection by the US government of one engineering community over another made a huge difference because different wings of the IT community had opposing ideas about networking architectures.¹¹

Domestic Politics

The fourth explanation is old-fashioned domestic politics. Typically, commentators remark on interest-group politics or bureaucratic politics.¹² The former looks for the influence of organized groups in shaping government decisions through lobbying, campaign donations, or political action with voters. The emphasis is on the privileged position of concentrated interests because they are easier to organize and have higher stakes in the outcomes as compared to the broad diffuse interests of consumers.¹³ Policy is the result of the give and take among organized interests.

A different but often complementary notion is bureaucratic politics. This views government officials or non-profit leaders as career-promoting and power-enhancing entrepreneurs who strive to build their domains. Policies often reflect conflict or cooperation among these bureaucratic players. One version of bureaucratic politics, public choice theory (much beloved by many economists), argues that the march to expanded budgets, higher taxes, and more regulation is a good first-order approximation of the predictable outcome of the process.¹⁴ When paired with interest-group theories, bureaucratic politics becomes an elaborate tale of an exchange of, usually legal, initiatives between bureaucratic agencies and interest groups with aligned interests.

These notions are appealing. Anyone with significant experience in Washington, Tokyo, or Paris will see some truth. Yet scholars point out deep flaws in their conception of politics and the role of political institutions. For example, in democracies top politicians seek elective office and effective control of their government.¹⁵ They respond to the imperatives of the ballot box and worry about what voters will support and how to build a dominant legislative party. Political parties are the vehicles used by political leaders to build “brand names” that appeal to voters. This has implications that are not captured by interest-group politics. Even the dance of bureaucrats ultimately responds imperfectly to the design by political leadership.

In summary: The four predominant explanations reviewed here point to important elements of a workable theory, but they have individual failings and omit important arguments. An alternative synthesis is needed. That comes next.

The Independent Variable: Forces Changing Global Market Governance

Choosing theories comes down to picking between parsimony and elegance and accounting for fine variations in the variables that explain the

detail in governance outcomes. Our approach is closer to engineering than physics. It is rooted in theory but meant to provide a blueprint for action that is more detailed than elegant. This synthesis builds on the explanations just reviewed.

What explains the choice of changes in governance? The argument, in brief, is that global market governance for ICT responds to political and economic forces of demand and supply. These changes always play out in an institutional and market landscape with established stakeholders. Thus, the choice of governance is never a green field design operation; it is a choice between the status quo and some alternative that is politically feasible. This section focuses on the demand side; the next section explores the supply side of the equation—the options for governance compared to the status quo.

On the demand side, a significant disruption in the domestic markets of the United States and other strong national markets inevitably precedes shifts in the important rules and institutions shaping world markets.¹⁶ These disruptions usually arise from technological shifts that induce two changes—shifts in interdependence and reconsideration by all stakeholders about their governance interests. These catalytic upheavals are decisively shaped and filtered by domestic political and economic institutions. In response to domestic changes, powerful countries use diplomacy when seeking change, but they exercise even greater influence using two other routes. First, they forge new domestic arrangements that erode everyone's faith in the credibility of old global governance bargains. This sets off a search for alternatives. Second, they often block alternative international responses to market forces to advance global alternatives more attuned to their new domestic governance approaches.

If the powerful provoke change, what shapes their preferences? Domestic institutions matter and respond to the broad impulses shaping society. Their leaders try to shape strategic alternatives around these forces. Thus, the critical role of technology in shaping ICT policy requires attention.

Technological Catalysts and Domestic Political Economy

Technology forces choices on the players in the global markets. It upsets the balance among interests and strategies of leading players by creating major opportunities and risks and challenges the prevailing intellectual model of the marketplace. In short, it raises the possibility of change, but it does not dictate a particular set of changes. As the cumulative degree of technological change explodes, market governance changes.

Significant shifts in the technology envelope can change global market interdependence dramatically.¹⁷ (Markets differ in the degree and form of their interdependence, so not all markets have similar starting points for global governance.) Analysts usually focus on supply-side interdependence—that is, the integration of global production systems or the degree of price convergence due to more open markets and stiffer global competition. Our discussion of the process revolution is in line with these analyses. However, for a significant input, such as ICT, user interdependence is equally important and has had major consequences for the global ICT infrastructure. As we noted earlier, since the 1950s large corporate ICT users have experienced major transformations. In many respects financial institutions and multinational manufacturers became information analysis companies that deliver financial or engineering product information. As users, they needed less expensive but more powerful continental and global ICT infrastructures to tie together their global product operations. However, telecom companies consistently lagged behind their customers in recognizing the importance of these changes. As we document in chapter 7, this helps explain why the corporate competition coalition pushed for global “trade in services” rules.¹⁸

Technologically enabled shifts in the market force all to rethink their interests about their market strategies and government rules influencing markets. Entrenched incumbents may have to cope with pricing changes. Opportunities open for new entrants. Other stakeholders in market governance, such as well-organized groups of consumers or the research community, also recalculate their interests. As the interest-group thesis suggests, strongly motivated stakeholders have the interest and ability to mobilize in the political arena and the marketplace.¹⁹

Change extends beyond interest-group thinking. Significant changes in the technology envelope attracts the attention of political entrepreneurs in the major powers, including ambitious legislators, denizens of think tanks, and others searching for the next big policy idea. The political policy establishment then seeks ways to modify policy to advance the public interest or to improve their political positions.²⁰ Knowing the dance steps is a prerequisite for idea-based explanations to matter.

When major technology shifts gather momentum, the fluidity of labor markets and of venture capital fueled American capital markets and strongly influenced how technology innovation in the United States differs from technology innovation in Europe.²¹ The arrangement of political institutions influences these market institutions. These variances in political and

market institutions in large countries set a baseline for the case studies of market governance change.

The Role of Powerful Countries: Diffusion and Agenda Setting

So far this picture of change has finessed an important question: Who sets the agenda for governance change? Major countries dominate the agenda setting for international arrangements and control the bargaining resources to ensure implementation. They can coerce, provide incentives, or link issues through the formal processes of government diplomacy, through transnational networks that advocate change, or through market processes.

Crucially, a domestic shift in the market leader sends a credible signal to all countries that a shift in governance is likely. More than a diplomatic initiative, reorganizing the domestic market means that the market leader is serious. Moreover, if the United States heads along one path, it forces firms and interest groups elsewhere to reconsider their commercial options. Thus, when the US broke up AT&T, large British, French, and Japanese banks asked themselves if the new US networking environment would give their US rivals operational and cost advantages. The absence of significant Internet regulation sent another powerful signal. Policy and political entrepreneurs worldwide wondered how each dramatic shift in an important growth sector altered their options. In time, policies in each major market shifted in response.²² The diffusion of reform among ICT market leaders eventually turned global trade negotiations into a coordination problem. At issue was how precisely to shift delegated authority to the WTO, but the major adjustment costs and risks involved in the change of governance were so difficult that they nearly sunk the WTO talks on liberalization.

Large mismatches between international and domestic market governance create deep structural tensions that can eventually fray governance arrangements and raise questions about global market governance. Calculations about the impact of the strategic market position of the leading market powers intersect with considerations of which arrangements are compatible with their domestic ICT governance. Inevitably, political and economic pressure on the global policy status quo increases.

Powerful countries have significant impact on the choices because they have strong influence over setting new agendas (at international institutions and when making unilateral changes of great international consequence) and on blocking incremental adjustments (negative agenda power) that may force larger alterations in governance. Deadlock at the International Telecommunication Union over the reform of standards setting led

to a dispersion of standards setting activities in ways that fragmented markets and changed innovation cycles. US preemptive action led to new non-governmental mechanisms, in the form of the Internet Corporation for Assigned Names and Numbers (ICANN) and the Internet Engineering Task Force (IETF), that put agenda setting in the hands of a technically sophisticated expert community with a common view of the future of networking.

Logically, international institutions could initiate a major shift in market governance at the international level. Smaller countries use international institutional efforts to advance initiatives that they cannot push alone. They use international institutions' voting rules to bolster their position and international meetings to publicize their cases among the voters of larger countries.²³ Smaller countries can exercise some collective market power because some policy reforms work better with, or even fail without, complementary international reforms. But initiatives on big ICT markets requiring the common agenda of many smaller players are more difficult to pull off.²⁴

So far the analysis has focused on how to conceptualize the forces that drive change. This is the equivalent of speaking only about the demand side of a market. The supply options also matter for the final outcome. Market-governance arrangements are the supply side of the equation.

The Path of Change: The Intervening Variables

Disruption of the status quo and plans for change are important, but global governance emerges out of the accommodation of diverse preferences in a world market with decentralized national authorities. The costs of organizing and implementing governance strategies are an important feature shaping the overall governance equilibrium. Social scientists think of these factors that can mediate or transform the original path of change as intervening variables. It is convenient to conceive of them as the supply-side options for governance. We focus on two aspects of the supply side. One is the role of market governance. The other is the structure of decision making and delegation, including the ideas around which delegation is organized.

Market Governance

On one dimension, market governance organizes, enables, or mediates three classes of outcomes that render market coordination easier and thereby generate efficiency gains.²⁵ On another dimension, negotiators

incorporate these outcomes in arrangements that scholars have dubbed “soft” or “hard” obligations, depending on how explicitly they are codified.

The first role of market governance is straightforward. Market governance can contribute to the facilitation of bargaining, decision making, and implementation of formal or informal agreements among international stakeholders. This is done in part by creating or endorsing arrangements that build consensus on the facts concerning a problem or help to mediate and settle disputes. To minimize their coordination costs, these institutions also gather information about compliance with rules and expected behavior.

Not all governance arrangements are efficient or desirable. They can become overly bureaucratic. Anyone who has endured an inter-governmental meeting has questioned coordination. Nonetheless, a shift in basic direction requires that the governments of the largest market centers agree on common principles to guide their collective undertakings. This rarely occurs unless they already have sorted their domestic choices and considered how international arrangements might help or hinder their prospects.²⁶ This means that the process of international discussion and bargaining is a time-consuming bottom-up process for three reasons. First, sharing information and making it credible to all parties is difficult. Voluntary consent requires credible information. Information is more believable when it is costly and verified.²⁷ This is why so much of governance is about structured sharing of information. Second, policy shifts rarely come out of the blue from the chief executive. Leaders proposing sweeping international changes may endorse ideas that would benefit all in the long term, but even the most benign change usually implies losses for some, adjustments for all, and relative winners and losers. It takes careful development of constituencies of sympathetic stakeholders and their mobilization to wield the political capital to work through the process.²⁸ Third, bargaining plus governance allows finer-grained choices about how much compliance to promises is needed for change to improve the status quo.²⁹

The World Trade Organization’s negotiating process typifies how governance can improve the information available to governments. The bargaining leading to the WTO telecom agreement collaterally created an informal network of information sharing among national communications authorities that influenced their policy views.³⁰ As we will show in chapter 7, the WTO also introduced innovations on how to schedule national commitments on market access and a mechanism for dispute resolution that

allowed countries better tradeoffs on the timing and degree of implementation of commitments.

A second role of governance systems is to set and administer rules on technical coordination and market competition. By establishing a system of property rights, ownership and control of the global marketplace is shaped. Since the early 1980s the rules setting global technical standards often were in turmoil. Simultaneously, the global rules governing competition and property rights underwent a revolution.

Those not familiar with international rule setting often assume that international rules are like domestic legislation, which can run to more than 100 pages for large and complex matters. Such rules do exist in the international realm, but the modes for setting international rules are much more diverse. Many rules are more like “commandments”—relatively brief statements of basic principles and obligations that coordinate expectations but do not lay out the details of implementation.

Two important developments in international coordination were keenly honed by the experiences of bringing the EU member countries together. The EU undertook “harmonization” of some important national regulatory obligations—a few things that each member country had to do in regard to a market. These were worked out in detail. Countries were free to have other national rules for the market, so long as they did not clash with the harmonized obligations. At the same time, the European Union forged “mutual recognition agreements” for many product markets. These pacts laid out the functional requirements that, for example, defined a safe product and characteristics of a process that could enforce the certification. After certification of a product’s safety by one EU member, others were required to accept it. (Mutual recognition agreements exist globally for many products, such as telecommunications terminal equipment.)

In a third role, governance can allow various actors and interest groups to create collective capabilities, including for the provision of global services. Early on international satellite communications was provided by Intelsat, an organization jointly owned by the government telephone authorities, which were intent on adapting the tradition of national monopolies to a new technology.³¹ This hybrid organization, combining elements of an international organization and a corporation, dominated international satellite services for more than 30 years before a tortuous process of disputes and diplomacy opened the market and ultimately privatized Intelsat. In the late 1990s, ICANN again exemplified the international provision of infrastructure. Although non-governmental in nature, some international functionalities (including the World Wide Web

Consortium, which coordinates the development of standards for the software code that makes the Web possible) are effectively global supply services.

A second dimension of global governance is the degree to which it is “soft” or “hard.”³² There is a rough cost-benefit analysis of the merits of making obligations into agreements that are spelled out in formal agreements and embodied in inter-governmental institutions. The institutions for market governance include formal government agencies (e.g., the Federal Communications Commission and the International Telecommunication Union) and less formal collaborations or synchronization of expectations. For example, national regulators may expect and anticipate that foreign regulators will act in a predictable manner. The choices of how much to formalize cooperation and how much to set in formal international rules (as opposed to depending on informal coordination) are an important design element.³³ Non-governmental institutions also may be included as part of the governance structure. Some agreements, including detailed arrangements for the sharing of intellectual property and ICT standards setting, primarily are worked out in the private sector. There is no single formula for organizations. However, governments tend to keep a tighter leash on choices dealing directly with security or major distributional implications flowing directly from choices made in an international arrangement.

Delegation and Governance

Choices for decision making and implementation are central to bargains about policy choices. They influence judgments about the credibility of proposed solutions and expectations about the future agenda of collective action. The importance of these arrangements pushed academic analysts beyond their original understandings of bureaucratic politics.

Scholars have developed a deep understanding of the implications of decision making and membership rules. In working through major governance choices there often are major conflicts among stakeholders; institutions vary in their ability to resolve them. As the number of decision points (veto points) in a policy process increases, the process becomes more likely to maintain the status quo or produce a decision skewed to serve the needs of players with the strongest veto power.³⁴ The ITU and other international institutions employ unanimity rules in decision making, further increasing veto power, although ad hoc political and economic pressure may induce reluctant parties to acquiesce.³⁵ This made it difficult to resolve issues over IPR commitments when setting technical standards.

Some conflicts over decision making are addressed by membership rules or by altering the obligations of members.³⁶ Limiting the range of countries involved may produce a group with more intense and similar preferences, thereby easing, but not ending, coordination problems. Regional trade associations and security pacts such as NATO are examples. Or organizations may have extensive membership and intense rules concerning obligations, but allow for more limited participation of members in some negotiations. The WTO's telecom negotiations involved only a minority of its members and initially only those participants submitted market access commitments. Those that abstained acquired no new obligations as a result of the agreement. This made the negotiations tractable for those interested in the pact. However, owing to the WTO's "most favored nation" rule, countries that did make telecom commitments had to extend them to all WTO members, not just those in the telecom pact. This created a complex diplomatic calculus.

The design process of institutions can be broadly conceived as a series of decisions about the "delegation" of authority by "principals" to their "agents." The main idea is that it is inefficient for national governments (principals) to do everything themselves. Sometimes they must cede authority to specialized actors (agents) that have expertise, the ability to gather information, and the authority to shape agendas for action. Moreover, these agents sometimes receive limited powers to make decisions under carefully understood procedures for voting and review. They also may help to monitor and administer a global resource (such as Internet domain names) or to resolve disputes. By granting authority to a highly motivated expert agent, over time the principals can lend policy credibility to an initiative because it takes significant effort to reverse decisions of the agent. For example, the US government stacked the deck for Internet governance in favor of a technological community whose fundamental beliefs rejected forms of industrial policy that the government opposed.

The advantages of creating agents are partly offset by the costs of monitoring their performance. Agents possess specialized information and their own agendas that may exceed the comfort zones of their principals. This can lead to the familiar complaint about "out-of-control" bureaucrats.³⁷ Nonetheless, principals employ a variety of methods to monitor, provide incentives to, and even overrule their agents. Structuring the process of decision making, and participation in decisions, is an important feature of this subtle control. By cleverly setting these terms, principals can rely on stakeholders to call their attention to problematic decisions that might

otherwise go unnoticed.³⁸ Or, as with the Internet, the principals can threaten to intervene to curtail the authority of ICANN in various ways.

In sum, the preferences of principals powerfully, if imperfectly, determine the general pattern of outcomes of agents. The principals may not know much about agents' detailed initiatives, but they have the ability to enforce their underlying agendas. If necessary, as happened in global communications, the market leaders will decide that an agent such as the ITU is locked into a rigid decision structure that cripples any efforts for it to change and evolve. They then alter the mix of agents to steer events. Indeed, the case studies show a critical element of changing ICT governance is the shift in the agents delegated to coordinate global markets. In view of the large stakes involved at the inflection point, we expect more such changes.

Choices about delegation are also closely tied to the emergence of problem-solving communities that permit the day-to-day coordination of a marketplace.³⁹ Indeed, a central feature of delegation can be awarding disproportionate influence to a selected problem-solving community.⁴⁰ Political maneuvering matters in networked marketplaces, but routine problem solving requires expectations among stakeholders about the logic of how market governance should work. This allows for decentralized problem solving.⁴¹ The worldwide shift from monopoly to competition made trade experts more important for resolving issues related to communications policy. The expectations of expert communities provide an anchor for the many participants in complicated international marketplaces that go beyond the formal code.⁴² Principals do not just hand over authority to experts, so transparent decision making for governance helps political leaders by allowing the contending parties to monitor the behavior of technocrats.⁴³ More important, certain principles and norms emerge (either by legislation or by informal guidance) in the governance of marketplaces. These principles and norms help guide decision making.

Understanding the Implications of Changes in Global Governance

We care about governance because it can change the path of a market.⁴⁴ The overall pattern of organizing markets and their consequences for economic performance are the ultimate outcome, the dependent variable, that drives our inquiry.

Large economic stakes are buried in global governance arrangements. They powerfully influence property rights, technical efficiency, the path of global innovation, and who wins and loses in the global arena. Critically, political leaders do not just choose between monopoly and competi-

tion; they chose specific forms of competition that favor certain types of new entrants and stakeholders. They do not just choose between letting technologists control Internet governance and handing it over to government decision makers. They select particular tradeoffs involving authority. Innovations in global governance can improve global welfare, but they usually do less than is theoretically possible because forces of political economy and imperfect knowledge are formidable. Imperfect reform provides the foundation of “pretty good” governance. As analysts we want to understand the imperfections and the realm of possible change in order to develop a realistic picture of the alternatives.

Students of international cooperation often are enamored of whatever functional gains emerge from cooperation. We began this book by noting that global coordination on standards can improve economies of scales, and that this was a standard explanation of cooperation for decades. But mandating uniform standards also reinforced a particular business structure and a particular set of competitive advantages by making it more difficult for newcomers to build innovative alternative designs. Standardization on functional requirements, rather than detailed design, was challenging to achieve because of its market implications, even if it was better for competitive efficiency and innovation.

The lesson from standards, or countless other choices, is that a clear idea is needed of what governance is attempting to accomplish. It is crucial to embrace a guiding theory and detailed policies to implement it. Our discussion of the three eras of ICT policy defined the theory as the “principles” guiding policy and the guidelines for policies as “norms.” These are categories invented to capture the central thinking that ordered problem solving and political bargaining. Focusing on principles and norms allowed us go to the core of the political economic and intellectual underpinnings of governance. By stating these premises explicitly, it illuminates the underlying logic of governance and its implications for economic performance and equity.

Until the 1960s, global governance of telecommunications rested on the principle that “monopolies of services and equipment were the most efficient and equitable way of providing public service both domestically and internationally. This principle assumed state control over international communications.”⁴⁵ From this followed a series of norms for organizing global communications capabilities. As we explained earlier, a result of the rise of “value-added governance” in the United States was that the old system was challenged by alternative principles and norms backed by the force of the American marketplace, by technological innovation, and by

diplomacy. Both monopoly and state control began to be displaced. Later, the switch of the US to “managed market entry” governance introduced yet another dramatic change to global governance. Similar debates were stirring in other advanced economies, but the US breakthroughs both anchored the global agenda and added urgency to debates in other countries. The case studies that follow analyze these changes in three aspects of ICT governance.

The market-governance arrangements captured by principles and norms shape economic performance by influencing the allocation and assignment of property rights, the entitlement that allows an actor to own and manage an economic asset.⁴⁶ Governments can alter property rights to strengthen or weaken the powers and responsibilities of owners. Some rules, such as restrictions on foreign ownership of infrastructures using radio spectrum, limit who can own an asset. Other rules dictate whether owners can freely sell their assets to buyers that have not first been approved for license by government authorities. Other rules, such as those about pricing, influence the ability of owners to manage their assets. Students of political economy have shown that property rights help structure the dynamics of marketplaces.⁴⁷

More generally, global governance influences the degree and the forms of competition in the world marketplace. If government rules tightly restrict competition in broadcasting, for example, but allow relatively free entry in Web content, that will channel competition and innovation in certain ways. It also will set up predictable struggles, such as the one now unfolding between digital universality of content on the Web and regulatory nationalism for broadcast.

Global governance also influences the transactional efficiencies of markets. For years, the regulation of global communications services imposed a specific way of paying for the termination of traffic from one country to another, and this system had incentives to inflate costs and profits. An elaborate “gray market” skirting the official system emerged in the 1980s and the 1990s that arbitrated inefficiencies of the existing system. But it took a reorganization of the global market through WTO rules to begin allowing new business models operating in transparent markets to emerge on a widespread basis.

The rules and institutions of global governance matter a great deal because of their distributional implications. Political infighting shapes governance rules and institutions and the form of governance has important consequences for understanding equity issues. Some changes in governance directly alter who wins and loses from the global marketplace.

Older electronic equipment firms faced major displacement as global services became more competitive. The failure of some national and regional economies to adjust to their decline hurt them in world markets. Some shifts in governance may not change who wins but do alter the terms on which leading firms or countries participate in the world economy. For example, IBM remains formidable but is less preminent than it once was. The basis for IBM's business success is different today than it was in the 1970s. Other alternations in governance may have surprising consequences for stakeholders. Many developing countries thought that more widespread competition and privatization in communications markets would harm universal service. Although some countries so botched the transition away from monopoly that it did no good, most countries ended up with more investment and connectivity as a result of the efficiencies of even somewhat competitive markets.

In ways not imagined in the late 1980s, some wealthier developing economies, including Mexico and South Africa, now are home to large multinational communications companies that invest heavily in developing economies. As changes in governance occur in other aspects of the global ICT infrastructure, the challenge will be for new arrangements of property rights and transaction institutions to enable a broader range of information applications in poorer countries.

Summing Up

Technology disrupts by shifting levels of interdependence and stakeholder interests with regard to market strategies and governance. These catalysts are filtered through domestic markets and political institutions. The time is ripe to confront significant internal changes, reorganize their domestic governance, and restructure of global governance in various powerful markets. The United States already has triggered two such shifts: the rise of value-added competition and managed market entry. These domestic changes sent a credible diplomatic message and created a transnational channel of change that led many other countries to simultaneously reconsider their market interests. These governance changes reflected the impact of the global negotiation process and the "supply-side" constraints on the alternatives for institutional arrangements. Yet the ensuing shifts in the delegation of power to institutions and expert communities and the reorganization of property rights altered the structure, the conduct, and the consequences of world markets. Today, a third shift in global governance is under way.

