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Getting the Blend Right: Public-Private Partnerships in Risk Management

Cary Coglianese*

Pollsters have long asked Americans if they think the United States has *too much* or *too little* government regulation. Only a minority of Americans ever report thinking that the country has too little regulation; most believe the government imposes either too much or “about the right amount” of regulation (Dugan 2015).¹ Such a Goldilocks-style poll question can surely prove informative to public opinion researchers interested in tracking patterns of political ideology in a two-party American system that divides into competing pro-government and pro-market camps. But such a question turns out not to be very relevant to public and private sector decision-makers when they confront concrete real-world problems and need to know how to structure the interaction between business and government to solve those problems. The question for decision-makers is not one of *more* or *less* government regulation in general; the key question is *how* government should relate to and interact with the private sector in the specific context confronting decision-makers. In other words, the issue is really one of how to build effective relationships—or partnerships—between the government and the private sector to solve problems and deliver meaningful public value to society. When trying to solve major risk management problems, such as those stemming from climate change and its effects, the most vital challenge lies with getting the right blend between business and government in specific settings, not worrying about the overall “amount” of governmental intervention.

In the context of concrete problems, effective risk management necessitates the finding of the appropriate type of public-private relationship or partnership to solve those problems. Exactly *how* should government interact with business to deliver improved conditions in the world? Sometimes the appropriate terms of a public-private partnership will put government and business at arm’s length with each other, even potentially in an adversarial relationship. Many other times, though, society will be best served when the public and private sectors work in tandem, in cooperative partnerships. What defines each relationship or partnership, as well as affects its ultimate success, can be captured by four core factors that I will describe here as *interface*, *incentives*, *information*, and *institutions*. Making public-private partnerships effective—that is, getting the blend right between business and government—will depend on choosing and designing, for each problem, the governmental and private sector institutions that

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¹ According to Gallup’s annual Governance survey in 2015, more Americans say government regulation of business is “too much” (49%) than “too little” (21%). In that same year, 27% reported that they thought the amount of regulation just right. A similar pattern has generally existed as long as pollsters have been asking the public about regulation, notwithstanding underlying changes in the numbers and economic impacts of government rules over time. Commenting on polls from the 1930s through the early 1980s, Lipset and Schneider (1983) note that “a majority has consistently opposed increased regulation of business at any given moment. Most people have generally taken the position that the current amount of regulation was about right or too much.”

will ensure the best information will come forward and that relevant actors' incentives will be suitably aligned to solve the underlying public problem.

The Growth and Appeal of Public-Private Partnerships

For the past several decades, innovative government leaders have recognized the value of public-private partnerships, particularly when it comes to improving the environment and managing risk (see Freeman 1997; Pongsiri 2002).² Starting in the 1990s, the language of “partnership” enveloped the government reinvention movement, with the Clinton administration’s National Performance Review eventually even being renamed the National Partnership for Reinventing Government (Kamarck 2013).

At that time, the U.S. Environmental Protection Agency (EPA) launched a series of programs that sought to facilitate voluntary improvements through the creation of public-private partnerships, with some of the earliest being the agency’s 33/50 Program (designed to encourage the voluntary reduction of designated toxic chemicals by 33% and ultimately 50% of current levels) (Arora and Cason 1995) and the Common Sense Initiative (promising to cut red tape and develop sector-based public-private partnerships to redesign environmental regulation) (Coglianese and Allen 2005). The now well-known Energy Star program was also established around that same time to offer a wide range of manufacturers of consumer products the possibility of earning a governmental energy efficiency designation for their products (Brown, Webber, and Koomey 2002). Over the years, the EPA has created dozens of other so-called partnership programs (Borck, Coglianese, and Nash 2008). For example, the agency’s nine-year flagship partnership program known as the National Environmental Performance Track offered private facilities public recognition and regulatory relief if they demonstrated various beyond-compliance commitments (Coglianese and Nash 2014). The EPA’s Burn Wise program currently offers consumers financial incentives to replace old, highly polluting wood-burning stoves used in residential buildings (EPA 2018a). These and dozens of other similar innovative programs established by the EPA and the Department of Energy have charted a way toward what has sometimes been called a “next generation” approach to environmental protection and energy conservation in the United States (Chertow and Esty 1997; see also Gunningham and Sinclair 2002).³

A similar emphasis on partnership has figured prominently in recent risk management responses to climate change. For example, although the Obama administration’s EPA made a number of high-profile efforts to initiate traditional forms of regulation to address climate change, such as its Clean Power Plan aimed at regulating energy efficiency and emissions in the electric utility sector, the agency also continued to sponsor a variety of voluntary partnership programs designed to encourage businesses to make progress in reducing carbon and methane emissions.⁴

² The focus in this chapter will be on public-private partnerships for addressing domestic policy problems. Considerable interest has also emerged over the use of partnerships for addressing international governance matters (Linder and Rosenau 2000; Börzel and Risse 2005).

³ Interestingly, the number of such partnership programs is hard to pin down. In a 2007 report, the EPA’s Office of Inspector General stated that “Depending on the source, the number of EPA voluntary programs varies between 54 and 133” (EPA 2007).

⁴ For a current list of “many programs and projects that partner with industry and others to reduce greenhouse gas emissions,” see EPA (2017).

The Obama administration also launched a series of new public-private partnerships to improve infrastructure resilience in response to climate change, such as the Department of Energy’s Partnership for Energy Sector Climate Resilience (U.S. Department of Energy 2015), the Resilience AmeriCorps program (AmeriCorps 2015), Climate Services for Resilient Development (White House 2015), and other similar programs.

Presumably a “business friendly” Trump administration prefers these kinds of so-called voluntary initiatives over the conventional forms of regulation that the administration has targeted for repeal or modification. Not only has the Trump administration undertaken efforts to repeal or replace various conventional environmental regulations, but its EPA has established a new Smart Sectors program modeled on the Common Sense Initiative (Joselow 2018). The EPA describes Smart Sectors as “a partnership program that provides a platform to collaborate with regulated sectors and develop sensible approaches that better protect the environment and public health” (EPA 2018b).

This pervasive and continuing interest in public-private partnerships is understandable, especially in an era of continued legislative gridlock. With one main exception, Congress last passed major U.S. environmental legislation over a quarter-century ago.⁵ Looking forward, legal uncertainty will likely continue to surround the use of the Clean Air Act to address climate change (or to reverse course and rescind the Clean Power Plan), and there seems to be no realistic prospect of any new, major national climate change legislation on the horizon in the United States.⁶ As a result, those seeking to respond to climate change—or any other emerging or unaddressed public risk management problem—have understandably turned to other tools, in particular voluntary partnerships. It is telling that, just a day after President Trump announced his intention to withdraw the United States from the Paris Agreement on Climate Change, former mayor Michael Bloomberg announced “a partnership among American cities, states, and businesses” to honor and fulfill the U.S. commitment under the Paris Agreement (Bloomberg 2017; see also Stokols 2017).

A renewed interest in partnerships is only likely to be reinforced by the federal government’s continued fiscal constraints. The kinds of investments needed to adapt the nation’s vital infrastructure and prepare communities to withstand the effects of climate change will depend, by necessity in an era of government austerity, on leveraging private sector resources, including those from private foundations and major corporations.

In addition to these various operational constraints and strategic considerations that have made public-private partnerships attractive in recent decades, it bears noting that the very term and concept of “partnership” generates its own warm glow. Especially in an era of partisan polarization and seemingly intractable policy conflict, the idea of creating partnerships offers

⁵ The recent exception is the passage in 2016 of the Frank R. Lautenberg Chemical Safety for the 21st Century Act which amended the Toxic Substances Control Act of 1976.

⁶ That said, in December 2015, Congress did renew federal tax credits for investments in solar and wind energy, which may help significantly encourage movement toward the eventual “decarbonization” of the U.S. energy system (Cusick 2015). Still, legislative debate persists over whether to extend those tax credits further—and the Trump administration has entertained the possibility of providing subsidies for coal and nuclear energy. Perhaps a future federal initiative to expand infrastructure funding might well keep renewable energy tax credits in place or perhaps offer increased subsidies for renewable energy development.

something refreshing and positive, enhancing its appeal to policymakers and citizens alike. Moreover, because partnerships are voluntary, they skirt all the negative criticisms of excessive burdens and costs associated with mandatory risk regulation. When private firms get involved in public-private partnerships, they presumably do so because they believe the costs of their participation are justified by the benefits.⁷

Why Risk Management Requires Public-Private “Partnership”

Contemporary policy discussions typically treat the concept of a “public-private partnership” as having a very specific meaning, namely government initiatives aimed at leveraging, on a voluntary basis, the efforts or resources of private sector firms to achieve public goals (see, e.g., Coglianesi and Nash 2006). However, decision-makers can yield value from taking a broader perspective and conceiving of the entire domain of risk management as necessitating a reliance on public-private partnerships—although of widely differing kinds. Seeing all risk management as a “partnership” may seem at first glance to be an unjustifiably expansive claim, but in fact virtually every effort to manage risk in society involves some interaction between the public and private sectors.⁸ Even if we do not immediately perceive such interaction in some instances to look like a “partnership,” in reality, if any risk management intervention is to be effective, it must be based on an optimal relationship or balance between the public and private sectors.⁹ That public-private relationship may well need in some cases to be adversarial, built on coercion by state authority in the form of regulation—a type of relationship that might seem anathema to the concept of a “partnership.” But even within the domain of risk regulation, there remain vital ways in which cooperative interactions between the public and private sectors enhance public value.

When seeking to impose regulations on the private sector, for example, government officials depend on the involvement and cooperation of the private sector in developing new regulations and ensuring compliance with them, even if we do not usually see that type of interaction as a kind of partnership. Or if business-government cooperation over regulation is viewed as a partnership, it usually is understood to be an undesirable one of lobbyists “capturing” government officials to advance their own special interests. Still, it cannot be ignored that for decades the federal rulemaking process in the United States has been self-consciously designed to provide numerous opportunities for private sector firms to work with government regulatory authorities in the development of regulation, whether minimally by submitting public comments or more significantly through participation in federal advisory committees (Coglianese 2006). Government regulators’ need for information has provided the longstanding justification for

⁷ Yet just because “partnership” may generate a warm glow, that does not mean public-private partnerships are meaningful or effective merely because of that glow. Reflecting on a four-year field study of America’s towns and cities, James and Deborah Fallows (2018) included public-private partnerships on their list of the ten essential ingredients for a thriving city; however, they made a point specifically to say that such partnerships need to be more than just a “slogan.”

⁸ This point bears some affinity with Martha Minow’s observation of a “continuum of relationships between government and private groups” (Minow 2003). She notes that, of course, “a more complicated analysis would pursue many dimensions” of public-private partnerships, not just a single continuum. As she explains, “The government may forbid, permit, encourage, subsidize, or establish private entities.”

⁹ As Donahue and Zeckhauser (2006) put it in the context of what they call “collaborative governance,” the outcomes for society depend on being able to “fine-tune” the interaction between the public and private sectors so as to “maximize the benefits less the costs.” They define “cooperative governance” as “the pursuit of authoritatively chosen public goals by means that include engaging the efforts of, and sharing discretion with, producers outside of government.”

participation by private actors in public rulemaking processes. Regulatory officials based in Washington, DC, after all, generally know much less than private sector firms do about the risks those firms create or the strategies for mitigating those risks; hence, effective regulation depends vitally on public sector regulators gaining access to and learning from information held by private sector firms (Coglianese, Zeckhauser, and Parson 2004; Coglianese 2007).

In addition, public sector regulators rarely have the capacity to monitor compliance by every firm and must depend extensively on the “voluntary” compliance of regulated entities. In many cases, those regulated entities are responsible for the very testing and conformity assessment efforts upon which public sector authorities rely. For example, private pharmaceutical companies conduct the safety tests mandated by the Food and Drug Administration before a new drug can be approved for marketing. Likewise, automobile manufacturers subject their vehicles to the emissions testing requirements imposed by the Environmental Protection Agency. To be sure, as the recent Volkswagen crisis makes plain (Gates et al. 2017; see generally Coglianese and Nash 2017), reliance by public authorities on private implementation of regulations can at times be abused, but nevertheless the regulatory system in the United States (and elsewhere) depends to an unmistakably large degree on the expectation that businesses will comply with rules even if the prospects for detection of noncompliance are remote.

The main point is that, even with regulation, risk management depends in vital ways on productive, even though at times optimally adversarial, relationships between the public and private sectors and on how those relationships are managed. Much the same point can be made with respect to other types of risk management responses. Move to the other end of the public-private spectrum and consider a seemingly completely free-market risk management tool: private insurance markets. Not only do private insurance contracts provide for compensation in the face of losses, but the pricing of premiums in insurance markets can be a tool to induce sound risk management measures without any seeming intervention of the public sector (see, e.g., Ben-Shahar and Logue 2012; Coglianese and Kunreuther 2016). Insurers, after all, do not make money if they price premiums below expected losses, so a competitive insurance market exerts pressures on purchasers of insurance to manage their risks and thereby earn or maintain lower premiums. Private insurance companies may also impose their own private “regulatory” standards on their insured companies—for example, when they will not insure facilities that do not install or operate specified risk controls—and they may also offer technical risk management assistance to their customers (Freeman and Kunreuther 1997). All of this socially valuable effort on the part of private insurance companies inducing positive risk management by private sector companies might seem to undermine the claim that all risk management depends on a public-private partnership. But here, too, the partnership claim is valid once we step back and look more carefully. For one thing, all markets depend on some background support from government to maintain the viability of contracts and the kind of rule-of-law stability that makes any economic market possible, including an insurance market. In addition, insurance markets are themselves regulated markets, which means that getting government regulation of these markets right is absolutely vital to ensuring that the insurance mechanism works well as a risk management strategy.

With respect to a variety of important problems, the successful deployment of insurance as a risk management strategy will also depend on public intervention in the form of regulatory mandates to purchase insurance (see, e.g., Moore and Viscusi 2014). If only hazardous drivers purchased

automobile insurance, and if only older individuals or those with health problems bought health insurance, insurance companies would be unable to spread risk. In a similar vein, risk-rated premiums for property insurance will only induce optimal land development patterns and risk mitigation efforts that reduce property damage and loss of life from floods and wildfires if all property owners need to buy insurance and if those requirements are adequately enforced (Kunreuther 2015). If property owners can just drop their insurance coverage instead, the incentive effects of insurance will be lost. Hence, instances of what may at times look like a purely “market-based” approach through insurance will depend ultimately on sound and credibly enforced regulation by public sector institutions.¹⁰

Essential Components of Effective Public-Private Partnerships

Seeing all risk management—even government regulation and private insurance markets—as different types of public-private partnerships can yield important insights about improving the ways that risks are managed in society, as well as help reveal insights about what can and cannot be reasonably expected from the more limited, contemporary meaning of public-private partnerships reflected in programs such as Energy Star and the Resilience AmeriCorps. These latter, narrower programs—Energy Star, Resilience AmeriCorps, and the like—are called “partnerships” in the contemporary policy lingua franca, but I will refer to them in this chapter as “P3 initiatives,” to distinguish them from the broader category of all possible coordinated public-private interactions or partnerships.

Thinking broadly, the essential components of any type of effective public-private partnership are: *interface*, *incentives*, *information*, and *institutions*—or what I will refer to as the “four *i*’s,” as shown in Table 1. Let me begin with the first “*i*,” interface.

Table 1. Essential components of an effective public-private partnership

Interface	How well does the partnership fit with the underlying risk management problem it is intended to solve?
Incentives	How well does the partnership align incentives to encourage optimal behavior by public and private actors?
Information	How well does the partnership leverage the respective informational advantages of businesses and government in identifying and redressing risks?
Institutions	How well do the rules and structures of a partnership support and deliver in terms of interface, incentives, and information?

¹⁰ It bears noting as well, of course, that public sector institutions are themselves often staffed and supported by private sector contractors. For cautionary accounts of the extensive reliance of the federal government on private contractors, see Verkuil (2007) and DiIulio (2014).

Interface

Interface refers to the way in which a public-private partnership fits with the specific risk management problem it is intended to help solve. The effectiveness of the interface will be very much a function of the other three *i*'s, but it will also depend on other features of the partnership that relate to the specific problem to be solved. To solve a problem, a public-private partnership, as with any strategy, has to address the underlying causes of that problem. A public-private partnership that promotes childhood literacy might be superbly well designed to improve reading skills, but it will obviously do little to improve the climate resilience of the nation's energy system. Such a program would have a poor interface with the latter problem because it does not address at all the underlying problem of energy sector resilience. However, a program that squarely aimed to improve the climate resilience of the energy grid but which still failed in fact to address the underlying vulnerabilities in the energy system would also prove ineffective. Much the same would apply to a partnership program that aimed to mitigate climate change in the first place but completely ignored carbon dioxide and methane emissions.

The importance of a good interface may seem like plain common sense, but its obviousness can be sometimes lost on policy leaders who want to set up partnership programs. An extensive study that Jennifer Nash and I conducted of the EPA's National Environmental Performance Track indicated that this P3 initiative suffered from a low-quality interface between the program and the underlying problems it sought to solve (Coglianese and Nash 2014). Performance Track sought to recognize and reward facilities for undertaking voluntary efforts to improve their environmental performance. To participate in the program, facilities had to demonstrate a relatively clean compliance track record, make commitments to improve their environmental performance in specific areas, establish and maintain an environmental management system, and engage with their local communities. As initially conceived, the program intended to shift what the EPA called "the environmental performance curve," inducing firms to undertake beyond-compliance actions in order to secure the rewards the EPA offered through the program. Unfortunately, the rewards the EPA offered through this program were not all that significant, so the number of facilities participating was but a tiny fraction of all regulated firms. More importantly, our research indicated that the key feature distinguishing facilities that participated in Performance Track turned out not to be their levels of environmental performance; rather, it was the facilities' managers' propensity to engage in public outreach. In other words, Performance Track tracked more "extroverted" facilities, not necessarily the better performing facilities—a disconnected interface between program and problem.

The Performance Track program illustrates a still more fundamental point: the purpose of public-private partnerships should be to solve real problems, not merely to create certain kinds of public-private partnerships. Sometimes, public officials have reason to create P3 initiatives so as to make it look like they are doing something (what social scientists call "credit claiming"), when they are really not doing much of anything at all. In the 1990s, for example, the EPA devoted much effort and attention to a program it called the Common Sense Initiative (CSI), but without actually accomplishing much of anything for the environment. Part of the CSI focused on the metal finishing sector, but it attracted private-sector participation from only the tiniest fraction of metal finishing firms; as a result, it had remarkably little impact (Coglianese and Allen 2005). Some observers have suggested that CSI and other early EPA voluntary programs

were mainly intended to make the EPA appear more “business friendly” and stave off opposition in Congress to conventional environmental regulation, rather than deliver tangible, significant environmental results. If that was true, then perhaps the CSI succeeded. But surely if the core aim of the CSI or any other P3 initiative is to reduce risks or enhance resilience, it needs to effectuate meaningful change in investment or environmental behavior—not just amount to a public relations strategy that makes the government look more cooperative or makes agency officials look like they are doing something meaningful when they are not.

Incentives

The possibility that government officials may, at least on occasion, have incentives to engage in certain types of public-private partnerships as mere symbolic gestures brings us to the next “*i*”—*incentives*. Incentives matter in both public and private behavior generally, as well as specifically with respect to public and private actors’ involvement in modern P3 initiatives. Effective public-private sector partnerships need to align incentives to encourage optimal behavior by both public and private actors.

If governmental officials may sometimes act upon suboptimal or narrow incentives to create P3 initiatives for symbolic gain, private actors also can respond to socially suboptimal incentives to participate in these initiatives. Private sector actors may favor P3 initiatives for symbolic reasons too. Participation can make them look good. A positive public image and reputation may advance their private interests, especially if their customers value socially responsible businesses (Reinhardt 2000). Participation in P3 initiatives could also be used strategically by some firms as part of an effort to stave off costlier (even if, from the public’s standpoint, more effective) regulatory requirements (Lyon and Maxwell 2004). A further concern is that, if firms’ main incentive to participate in P3 initiatives is to get a government agency’s seal of approval, these initiatives may prove insufficient to induce deep, sustained behavioral change. Of course, one need not succumb to conspiratorial theories about either public officials or private-sector managers to see the larger point: namely, that incentives matter. In order to manage risks well, incentives must be carefully analyzed and addressed in taking into account how the relationship between business and government is structured. To the extent that private actors’ incentives are misaligned with broader public goals, then a particular kind of public-private partnership—the one called “regulation”—will likely be needed. This is clearly the case when businesses create negative externalities, which by definition are costs that a firm’s activities impose on third parties who are not in a direct contractual relationship with the firm. If a business invests in efforts to control these externalities, it reaps benefits for community members, future generations, or others who are not paying for them—but it does not yield equivalent private benefits to the firm itself. In cases of such so-called market failure, the public sector needs to adopt clear rules and impose a meaningful possibility of penalties for noncompliance with those rules (Breyer 1984; Viscusi, Harrington, and Sappington 2018). When significant externalities exist, P3 initiatives like the EPA’s Performance Track will not be sufficient to provide the kind of incentives firms need to make the necessary improvements in their environmental performance.

On the other hand, when firms already have some private incentives to incur costs to deliver goods or services of public value, then regulation may not be needed. For example, telephone companies, railroads, and energy firms presumably have some incentive of their own to protect their infrastructure from natural disasters, for if their services were to be so unreliable that they broke down following the slightest storm or stress, they would not likely remain in business for very long. Especially when competition is robust, regulation will not be as needed to induce firms to undertake socially valuable efforts to address climate resilience if the firms have some private interests to do so already. Of course, the operative word in the preceding sentence may be “as,” because even though private firms have some private incentives to invest in climate resilience, they still may not have sufficient incentives to engage in the socially optimal level of risk management. This may be especially true for infrastructure industries that effectively operate natural monopolies and therefore are protected from competitive pressures.

Nevertheless, the fact remains that incentives matter and that, to be effective, partnership programs must seek to augment whatever existing incentives firms may have to engage in socially desirable behavior. Private firms today may well already have a greater degree of inherent self-interest in making their operations more resilient to the ravages of climate change than they did in decades past—or than they do even now in protecting someone else’s health or property from the risks created by local air pollution. For this reason, the twenty-first century’s P3 initiatives to promote climate resilience may well prove more successful than late twentieth century’s P3 initiatives aimed at improving environmental quality, simply because the former may require fewer additional incentives to be provided by the P3 initiative.

Information

Accurate, relevant information is essential for effective interface—that is, for ensuring that public-private partnerships actually help solve problems. Business and government will have varying levels of knowledge about particular problems and their solutions, and the relative degree to which each has informational advantages may vary from problem to problem as well as over time. When it comes to identifying risks caused by business activity, business will often have better information about those risks and their solutions (Coglianese, Zeckhauser, and Parson 2004). Yet this will not always be the case. Small businesses, for example, may not know as much as government does about how to fix problems that the businesses themselves are creating. More generally, businesses of all sizes may have a lower capacity to understand systemic effects, such as flood patterns and other natural disaster risks that might affect their operations.

When government decides it needs to impose regulation on firms, it will be able to do so more effectively if it thinks about what kinds of partnerships it needs to forge with industry in order to gather the information necessary to determine how to design and enforce an effective regulatory scheme (Coglianese 2007). Sometimes that “partnership” in the regulatory context will simply take the form of picking up the phone and calling a manager or representative in the industry to gather relevant information. Sometimes it will entail holding a public hearing or conducting a site visit. Other times, it may well require creating formal P3 initiatives that enable government regulators to forge relationships with leading-edge firms. This latter strategy may be ultimately

the most important value the EPA gained from its flagship Performance Track partnership program. Managers at the EPA reported that they learned more about effective environmental management from their engagement with the kinds of outward-facing facilities that participated in Performance Track. If that knowledge fed back into the development of regulations so that they were made more effective and efficient, then the EPA and the public may have gained considerably from Performance Track, notwithstanding the program's small or undeterminable direct impact on the environment (Coglianese and Nash 2014).

Institutions

Although private firms may often have better information about risks than their public sector counterparts, this does not mean they will have sufficient incentives to act on that information to deliver public value. Institutions need to be designed that can provide the appropriate incentives needed to induce required behavioral change. By institutions, I refer to the rules and structures of any public-private partnership—or what is sometimes called “choice architecture.”¹¹ The challenge is often one of structuring the partnership's architecture in a way that shapes incentives so that businesses can either reveal information to government regulators or directly put to use the informational advantage they have.

Up to this point, I have mainly been distinguishing between two types of institutional arrangements: traditional *regulation* and more innovative *P3 initiatives*. But this dichotomy has largely been used for ease of exposition. The reality is that there are not just two institutional forms, but a multitude. Within the category of regulation alone, institutional variation is reflected in the highly diverse forms of regulatory instruments that can be deployed in any regulatory response to public problems: design or specification standards; performance standards; management-based regulation; information disclosure requirements; tradable permits; regulatory taxes; and so forth (see, e.g., Richards 2000; Coglianese 2012; Transportation Research Board 2018). Just as with regulatory instrument choice, the potential institutional variation across P3 initiatives is widespread as well. The dozens of voluntary programs the EPA has launched since the 1990s have been structured in highly varying ways. Even putting aside the substantive requirements for membership in the EPA's partnership programs, some of these programs have been administratively easy to join while others have imposed quite onerous administrative hurdles for participation. Some have been harder to stay in than others. In addition, the benefits of membership have varied as well. Some programs have offered regulatory relief to members; others have offered technical assistance; still others have only offered public recognition (a product label or even a flag that the business could display at its facility). In one study that Jennifer Nash and I conducted, we found that these kinds of institutional details correlated closely with business participation in different EPA programs (Coglianese and Nash 2009). We found, perhaps not surprisingly, that irrespective of membership benefits, the greater the administrative hurdles for participation in P3 initiatives, the fewer firms participated. Obviously institutions matter.

¹¹ On institutions, see North (1991). On choice architecture, see Thaler and Sunstein (2009). For a discussion of institutional structure in the specific context of voluntary environmental programs—or partnerships—see Potoski and Prakash (2005).

Conclusion: Implications of Viewing Risk Management as Relational

Putting together the “four *i*’s,” it is possible to reach an overarching conclusion about what it takes to make public-private partnerships effective. Decision-makers need to build institutions that ensure that the best information comes forward and that incentives are suitably aligned to induce the behavior needed to solve the underlying problems that decision-makers intend to solve.

Viewing risk management as a relationship between the public and private sectors helpfully moves beyond thinking just about whether there should be “more” or “less” governmental intervention in the marketplace. The key question is not one of more or less government, but of how business-government relations should be structured. In other words, what is the proper design of risk management’s inherent public-private partnership? How should the *relationship* between business and government be structured and managed to ensure it results in meaningful, net-beneficial effects?

In addition to framing these questions more clearly, one more implication follows from what I have been describing as a *relational* view of risk management, a view that all successful risk management requires the right kind of partnership between the public and private sectors. The remaining implication is this: *people matter*. Ordinarily, risk management is viewed as a highly technical enterprise, calling for extensive scientific assessments of risks and rigorous economic analysis. Undoubtedly sound science and careful analysis are essential. Yet an important body of research on the behavioral economics of insurance markets and risk decision-making, much of it produced at the Wharton Risk Management and Decision Processes Center over the last 30 years, has made clear how much human psychology factors into what might otherwise be thought to be a purely expert-based enterprise called risk management (see, e.g., Kunreuther, Meyer, and Michel-Kerjan 2013; Michel-Kerjan and Slovic 2010).

A relational perspective of risk management builds on behavioral research by suggesting that, in addition to human psychology, other aspects of business-government relations matter as well, specifically aspects that might ordinarily be captured under the banner of “politics.” Considering the politics of business-government relations demands attention to *incentives, information, and institutions*, and how they affect the *interface* between problems and their solutions. Politics brings into better focus issues of equity, in addition to effectiveness and efficiency, because politics is driven by how society’s pie is divided more than by how large the pie is. Politics matters crucially in “getting the blend right” between public policy and private action because risk management is ultimately about people: their fears, their interests, their futures, and their behaviors.

Managing risk, then, requires managing relationships—that is, building partnerships between actors with different and sometimes misaligned goals and interests. Sometimes those relationships will be by necessity adversarial; many times, they will be synergistic or cooperative. In the end, how well risk management succeeds will depend on how the core features of partnerships, as discussed here, are aligned so as to make sure public and private sectors work effectively to deliver more optimal and equitable outcomes for society overall.

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