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Recommended Citation

Richard A. Epstein, "The Political Economy of Crowdsourcing: Markets for Labor, Rewards, and Securities," 82 University of Chicago Law Review Dialogue 35 (2015).

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The Political Economy of Crowdsourcing: Markets for Labor, Rewards, and Securities

Richard A. Epstein[†]

One of the major transformations of the communications era has been the rapid rise in connectivity between persons who are otherwise strangers. The Internet and social media allow any individual to communicate almost instantly with millions of others in ways that were wholly impossible just a generation ago. This increased connectivity improves information flows among parties, concerning everything from breaking news to stock market information to personal chitchat. One notable crowdsourced business, Wikipedia, has proved indispensable to this transformation. Its various contributors have assembled information in a way that reduces the research time of new entrants—including myself—into any field.¹ By lowering the cost of entry, Wikipedia facilitates competition within and across academic disciplines.

In many other cases, communication operates not as a prelude to improved competition, but rather as a precondition for improved cooperation among previously unconnected persons. These cooperative ventures could take place in the domain of personal services, in the transfer of various kinds of goods, or in investment in new businesses. The term “crowdsourcing” is one way to describe these mass interactions between various individuals—interactions done with an eye toward further joint activities. It is common today to celebrate the gains in cooperation and trade sparked by increased connectivity.² But the task of analysis should go beyond celebration to include some

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¹ For my path of entry, see Wikipedia, *Crowdsourcing* (Jan 2, 2015), online at <http://en.wikipedia.org/wiki/Crowdsourcing> (visited Jan 17, 2015).

² See, for example, *Silicon Valley's “Crunchie” Awards Honor Innovation, Entrepreneurship* (CCTV America Feb 6, 2015), online at <http://www.cctv-america.com/2015/02/06/silicon-valleys-crunchie-awards-honor-innovation-entrepreneurship> (visited Feb 7, 2015).

understanding of both the uses and limits of crowdsourcing in the various areas in which it is deployed.

In order to undertake that analysis it is necessary to accomplish two related tasks. The first is to identify those areas in which crowdsourcing is likely to produce the greatest gains. The second is to identify the conditions in which crowdsourcing is likely to give way to more-traditional ways of doing business. This Essay aims to undertake these tasks in three such areas: labor, rewards, and securities. The overall conclusion is that, on balance, the gains from crowdsourcing are greatest in collaborative business areas but are more limited in both rewards and securities markets.

The analysis offered here is largely descriptive insofar as it explains the different levels of crowdsourcing success in these three markets. But this analysis quickly becomes normative when considering a perennial question relating to the legal reception of all transformative forms of new communications technology: To what extent do the traditional common-law rules of property, contract, and tort supply workable solutions to problems that arise in these areas, and to what extent do various systems of regulation assist or impede the development of these new technologies? This question is of especial importance in these labor, rewards, and securities markets, because it highlights the critical interaction between nongovernment means of social control and formal legal constraints, both at common law and by direct regulation. In many cases, the self-help mechanisms built into a program by its controller—loosely speaking, any person with ultimate authority over a given project—turn out to be the single most effective tool for social coordination. It follows that direct regulation—like that offered by the SEC—is likely to impose burdens that are not worth the purported benefits that they generate.³

³ See Peter C. Sumners, *Crowdfunding America's Small Businesses after the JOBS Act of 2012*, 32 *Rev Bank & Fin L* 38, 47 (2012) (“[T]he costs of SEC reporting may prevent crowdfunding from being beneficial to many startups and may deter numerous investors.”).

I. CROWDSOURCING IN LABOR MARKETS

The paradigmatic case of crowdsourcing arises in labor markets, most notably in connection with the decentralized development of complex software.⁴ What is distinctive about crowdsourcing in this context is that the controller invites self-selected outsiders to participate, typically without compensation,⁵ in the development of some key components of a larger, integrated project. This practice is distinctive because the relevant outsiders are *not* selected by parties inside the firm. Consider the following description:

Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers.⁶

This system of crowdsourcing may establish a distinctive form of organization, but it cannot escape the imperative that governs every multilateral arrangement, insofar as it must guarantee, at least in expectation, gains to all the players in the system in order for its use to be sustainable over time. In most conventional business arrangements, the gains from trade are explicit: I sell you a product in exchange for cash, in a deal that leaves us both presumptively better off than we were before the exchange. The first feature of crowdsourcing is a vastly increased number of potential parties to the common venture—many of whom cannot take advantage of the simple sales model. Instead, a wide variety of indirect benefits must be

⁴ For an example of such decentralized development, see Stuart Thomas, *Microsoft Launches Crowdsourcing Blog for Windows 8* (Memeburn Aug 16, 2011), online at <http://memeburn.com/2011/08/microsoft-launches-crowdsourcing-blog-for-windows-8> (visited Feb 4, 2015) (describing crowdsourcing used by Microsoft during the development of Windows 8).

⁵ See Erin R. Frankrone, Note, *Free Agents: Should Crowdsourcing Lead to Agency Liability for Firms?*, 15 Vand J Enter & Tech L 883, 887–89 (2013) (describing the unpaid-volunteer model of crowdsourcing).

⁶ Jeff Howe, *Crowdsourcing: A Definition*, Crowdsourcing Blog (June 2, 2006), online at http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html (visited Jan 17, 2015).

conferred—especially on the outsiders—in order to create mutual gains over the long haul. Ironically, many prominent crowdsourcing theorists reinvent the wheel by insisting that crowdsourcing works only by bringing together individuals with different skills, temperaments, and abilities in a coherent venture. One definition from Enrique Estellés-Arolas and Fernando González Ladrón-de-Guevara brings the point home as follows:

Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or a company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage that which the user has brought to the venture, whose form will depend on the type of activity undertaken.⁷

It is one thing to offer an accurate definition of this important process. It is quite another, however, to explain how crowdsourcing proves viable, on the one hand, and why, notwithstanding its comparative advantage in some niches, it does not take over the entire space for cooperation on the other. The first challenge is to explain how this system can work when the firm does not choose project participants. One advantage of this strategy is that it avoids a pitfall of *ex ante* selection, which always requires a firm to make extensive and expensive investments to identify the participants best able to perform the chosen task from a large group of potential applicants.

This advantage of crowdsourcing could prove especially significant when, for instance, a firm issues batch requests for correction of a large number of bugs that have developed in its software, or of some factual errors on Wikipedia.⁸ At this point,

⁷ Enrique Estellés-Arolas and Fernando González Ladrón-de-Guevara, *Toward an Integrated Crowdsourcing Definition*, 20 *J Info Sci* 1, 9–10 (2012).

⁸ See Frankrone, 15 *Vand J Enter & Tech L* at 890–91 (cited in note 5) (describing the cognitive-piecework employment model of crowdsourcing, which involves paying participants to complete discrete tasks).

individuals looking at the long list of problems can make guesses as to where their comparative advantage lies, and where it does not. There is no obvious point beyond which there are diseconomies of scale in the process, given the low marginal cost of further information dissemination. Indeed, it may be possible to make the opposite case. As the number of opportunities increases, the system may become more efficient because it is easier to secure useful matches as the number of problems and the number of contributors both increase. And as the number of potential matches increases, the sorting mechanism gains additional traction because it eliminates the ever-growing number of small pre-clearance practices that otherwise must take place.

To be sure, once the correction or improvement is proposed, the controller—which could be “an individual, an institution, a non-profit organization, or [a] company”⁹—has the final say. In some cases, as with Wikipedia entries, the best strategy may be to allow passage into the system without prior review—at least until these contributions generate controversy that requires a closer look. On the other hand, since flawed software fixes could have wide functional impacts, the best protocol may be for the controller to review the particular corrections or improvements to see if they meet internal quality standards and, further, whether they can be successfully integrated into the larger project. It is for this reason that even open-source¹⁰ programs have a centralized governance structure to determine which of the decentralized lines of code are incorporated into the basic system.¹¹ Thus, for example, Linux’s arrangement has been described as follows:

In the case of the Linux kernel, Torvalds who is perhaps the archetype of a Benevolent Dictator For Life, possesses ultimate authority to decide which contributions (“patches”) to the Linux operating system kernel should be accepted and which should be refused. Torvalds no longer personally manages the whole of the kernel and has delegated

⁹ Estellés-Arolas and Ladrón-de-Guevara, 20 *J Info Sci* at 9 (cited in note 7).

¹⁰ For a definition of “open-source,” see Josh Lerner and Jean Tirole, *The Simple Economics of Open Source* *1 (HBS Finance Working Paper No 00-059, Oct 2000), online at http://papers.ssrn.com/paper.taf?abstract_id=224008 (visited Feb 4, 2015) (describing the process as “software developers at many different locations and organizations sharing code to develop and refine software programs”).

¹¹ See *id.* at *21–22 (discussing leadership, organization, and governance of open-source programs).

authority to a number of trusted associates to manage particular subsystems and hardware architectures, but it remains his authority to appoint these so-called “lieutenants” and to supervise their work. A document distributed with the Linux kernel source code that is subtitled “Care And Operation Of Your Linus Torvalds” describes him as “the final arbiter of all changes accepted into the Linux kernel.”¹²

Consistent with this general view, the standard open-source license does not put the source code into the public domain but instead contains explicit provisions that require anyone who has made an improvement that is incorporated into the system to offer a royalty-free license to any subsequent system user.¹³

One more caveat must be addressed. Simply because a controller can exercise final authority does not mean that the controller should not pay attention to the earlier stages of a project. A firm that develops a reputation for inexpertly soliciting work will not stimulate much of it. Firms are therefore likely to take considerable care in framing requests with the correct level of specificity, knowing that if they avoid confusion they will increase the private return to anyone who commits him or herself to this process. Ex ante instructions can improve the overall quality of the work that comes in, thereby minimizing the necessary task of ex post inspection. Nevertheless, the ex post process of examining the improvement and seeing how it fits with the overall project remains critical.

Indeed, one reason why modularity fits so neatly into the crowdsourcing definition is that it allows for increased separability: one part of a system can be totally removed and replaced with another, so long as the preset standards for measurable inputs and outputs are satisfied by the substitute component. This system design means that partial upgrades can be made

¹² Jeremy Malcolm, *Linux – Governance: On the Balance between Hierarchy and Control*, P2P Foundation (July 27, 2011), online at http://p2pfoundation.net/Linux_Governance (visited Jan 9, 2015).

¹³ For a previous discussion of open-source licensing, see generally Richard A. Epstein, *Why Open Source Is Unsustainable*, *Fin Times* (Oct 21, 2004), online at http://msl1.mit.edu/furdlog/docs/2004-11-01_ft_open_source_debate.pdf (visited Jan 18, 2015). The point of the (overstated) title was to stress that an internal governance structure is needed for this system to work, so that the code created does not become a pure public good. The linchpin of this system is the General Public License, which provides: “You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.” *Id.* at *1.

independently and sequentially, alleviating structural bottlenecks without disrupting the overall architecture. That advantage applies not only to crowdsourced products but also to products created by single firms that integrate all their production functions.¹⁴ Reducing the cost of traditional industrial production and crowdsourcing may change their relative advantages, probably in favor of crowdsourcing. But the reason for the latter's popularity is that it makes both rival methods of production more efficient.

To be sure, there is always a cost associated with tilting procurement policy toward crowdsourcing. Under this pattern of industrial development, individual developers bear the risk that many parties will duplicate efforts to create similar fixes to a particular problem, which will result in some wasted effort and awkwardness in awarding credit for work done, which is a common informal payment mechanism in crowdsourcing.¹⁵ Accordingly, crowdsourcing is less likely to work in large projects in which extensive front-end investments are necessary. At this point, crowdsourcing could fail because multiple parties may well prove unwilling to engage in those activities without any assurance that they will receive compensation for their inputs.

The argument here is not unique to crowdsourcing—it often applies in medicine. This helps explain the Bayh-Dole Act,¹⁶ which requires institutions that receive public funding to make good faith efforts to commercialize patentable research developed from their governmental grants and to give the inventor that option if the institution decides to pass on the project.¹⁷

At one level this is counterintuitive because it seeks to privatize information that would otherwise be in the public domain.

¹⁴ See Frits K. Pil and Susan K. Cohen, *Modularity: Implications for Imitation, Innovation, and Sustained Advantage*, 31 *Academy Mgmt Rev* 995, 995 (2006) (“Modularity in product design allows a firm to exploit technological opportunities . . . through recombination, modular innovation, and outsourcing.”).

¹⁵ See Frankrone, 15 *Vand J Enter & Tech L* at 892 (cited in note 5) (“[P]eer recognition remains a prominent incentive. Particularly in the development and design fields, responses to open calls can foster career advancement by generating attention, developing the participant’s skills, and facilitating the development of the participant’s professional portfolio and network, which fuels participation.”) (citations omitted).

¹⁶ Pub L No 96-517, 94 Stat 3015 (1980), codified at 35 USC § 200 et seq.

¹⁷ See 35 USC § 200 et seq. There are, of course, multiple complications. One is that the patentee must grant “a nonexclusive, nontransferable, irrevocable, paid-up license to practice” the invention around the world. 35 USC § 202. See also generally Ari K. Rai and Rebecca S. Eisenberg, *Bayh-Dole Reform and the Progress of Biomedicine*, 66 *L & Contemp Probs* 289 (2003).

The explanation for that outcome is similar to that developed in this Essay. When there are extensive front-end development costs, parties may refrain from participation if they know that other parties have secret entitlements to make commercial processes from the public invention. Bayh-Dole limits that risk. To be sure, it does not protect people against the risk that rival inventors will enter the same space with different technology, which is needed if competition is to thrive in these markets. But the general success of the statute could stem from the fact that limited exclusivity over a particular process (as opposed to a general field) may stimulate invention.

Thus, crowdsourcing is far more useful for eliminating bugs from existing software than it is for designing new software. In the latter environment, the costs of duplication by independent software developers are very high, such that most experienced market participants will not undertake the initiative unless they have some assurance of compensation for any major expenditures. Accordingly, more-traditional procurement policies are likely to dominate when firms—often at their own expense—submit a request for proposal that, if accepted, becomes the basis for cooperative work. These ventures are even more likely to occur when cooperation at the design stage is needed between the developer of the new component and the proprietor of the integrated unit. Designating a single party to undertake the assignment should reduce coordination costs as well as the risk of widespread unwanted dissemination of critical firm information, which often results in the leakage of trade secrets.¹⁸

Taking these considerations into account, the increased complexity of the designated task suggests a tipping point at which crowdsourcing starts to give way to traditional procurement methods.¹⁹ Fortunately, the tipping point exists along a continuum, and the process by which it occurs should be self-regulating, which explains why these two methods for collaboration can be exploited side by side without government intervention. Through constant experimentation, various controllers will identify those cases in which crowdsourcing is likely to generate consistent gains from trade. Those controllers will similarly

¹⁸ See Elizabeth A. Rowe, *Contributory Negligence, Technology, and Trade Secrets*, 17 *Geo Mason L Rev* 1, 3 (2009) (explaining that monitoring and protecting sensitive data is essential to protecting trade secrets).

¹⁹ For instance, soliciting bids through requests for proposals.

avoid cases in which the costs imposed on outside developers are so high that some firm selection makes economic sense.

II. CROWDSOURCING REWARDS

A second area in which crowdsourcing has had some success is rewards systems. The objectives of a rewards system are far more modest than those that drive crowdsourcing of labor markets.²⁰ Under a rewards system, a party solicits modest funding in order to pursue some small project.²¹ Traditional rewards programs featured requests by future writers and artisans for small amounts of capital from a large number of private parties whose payments would entitle them to a book or an object to be delivered upon successful completion of the project. To give some idea of the scale involved, a musician, Amanda Palmer, turned to nearly 25,000 backers in order to raise approximately \$1.2 million in capital—which averages to about \$50 per person—to cut a new album and prepare a new art book.²² Similarly, Hans Fex raised approximately the same amount of capital from a group of about 5,000 investors for his “Mini Museum” project, at an average of about \$250 per person.²³

Clearly, these small projects pale in comparison with the crowdsourcing activity that drives computer development. This should be expected given that, in light of the limited demand for these performances, there are really no gains to scale. Nor is any commercially successful author or musician likely to resort to this method to produce a blockbuster when much larger sums are needed for development and advertisement. The tipping point toward traditional procurement methods is reached far earlier in these creative endeavors. The real challenge in this

²⁰ See Salvador Briggman, “*All or Nothing*” vs. “*Flexible Funding*”—Which Is a Better Choice for a Crowdfunding Campaign, Crowd Crux (2013), online at <http://www.crowdcru.com/all-or-nothing-vs-flexible-funding-crowdfunding> (visited Jan 18, 2015).

²¹ See Paul Belleflamme, Thomas Lambert, and Armin Schwienbacher, *Crowdfunding: Tapping the Right Crowd*, 29 *J Bus Venturing* 585, 586 (2014) (“The concept of crowdfunding is rooted in the broader concept of crowdsourcing [C]rowdfunding helps firms obtain money from large audiences (the ‘crowd’), in which each individual provides a very small amount.”).

²² See *Amanda Palmer Raises \$1.2 Million on Kickstarter, and the Crowd Goes Wild*, Case Studies (Techdirt June 1, 2012), online at <https://www.techdirt.com/blog/casestudies/articles/20120601/01173819160/amanda-palmer-raises-12-million-kickstarter-crowd-goes-wild.shtml> (visited Feb 5, 2015).

²³ See Hans Fex, *Mini Museum* (Kickstarter Feb 18, 2014), online at <https://www.kickstarter.com/projects/2054592112/mini-museum> (visited Jan 21, 2015).

area is similar to that which arises in connection with purchases on eBay: What can be done to ensure quality, especially for a product that has yet to be designed or manufactured? In dealing with this issue, self-help mechanisms are again critical because the small amounts at stake preclude any thorough form of inspection *ex ante* or litigation *ex post*.

Within this setting, the comparative advantage of crowdsourcing derives from its implicit process of information aggregation. The heightened connectivity of the Internet allows a diverse, unrelated group of potential investors to pool information, even in the absence of any direct communication. Given the low cost involved, it seems likely that the individual investors will rely on the responses of others, especially since it is far too expensive to make any due diligence inquiry. The advantage of crowdsourcing in this context is that each person—by his or her individual decision—signals a judgment that the investment is worth making. And there is no potential liability in the event of a judgment error. Others then consider the frequency of individual investments alongside their own information and make yet another judgment that is added to the mix.

The issue, then, is how to integrate these various bits of information. Two options are available to aggregate preferences so as to allow all individuals to free ride off each other. The first option, flexible funding, allows any money raised to go into the venture, even if it falls short of the original target.²⁴ In general, that option is less popular than its alternative, an all-or-nothing campaign, under which all monies are returned to the original contributors unless the full financial target is met.²⁵ The implicit logic behind this result is that each investor wants to see a critical mass of other investors before committing funds.

In addition, early funders will want the option to withdraw if the volume of approval is insufficient. If a project falls short of its target and partial sums are not returned to the original investors, two problems arise. First, if the proposal does not receive sufficient support, initial investors who want only to remain with the venture if others join may devalue their decision. At this point, the all-or-nothing decision better fits their preferences. Alternatively, if the momentum starts to build, it looks as

²⁴ See Briggman, “*All or Nothing*” vs. “*Flexible Funding*” (cited in note 20).

²⁵ See *id.* (recommending the use of flexible funding for cause-related or donation-based projects and all-or-nothing campaigns for rewards projects that are contingent on receiving enough funds to create the product).

though these early investors' judgment has been confirmed, so any given investor is less likely to want to withdraw. Again, the all-or-nothing option seems to fit well.

Second, it is often far from clear that partial sums will prove sufficient to carry out the venture in accordance with the original program design, at which point it is less likely that the deliverable will be supplied in its proper form. Adhering to an all-or-nothing option goes a long way toward raising purchaser confidence by guarding against both these risks, at the cost of killing off the occasional project that might have succeeded with partial funding. (Interestingly, when crowdfunding is directed toward purely charitable options, there is a stronger case for allowing the limited funding to be used for its purpose because there is no longer any concern about diminished returns.)²⁶

Which risk is greater is a straight business judgment, and the market suggests a generalized judgment that the all-or-nothing form may be preferable.²⁷ Indeed, that judgment has to be general because it is highly doubtful, given the small sums involved, that anyone has the time or ingenuity to decide which projects ought to be governed by one form or the other. The argument here does not preclude proportionate financing if people prefer that method. But it suggests that one method is likely, on average, to prove superior.²⁸ To the extent that it matches a plausible account of market rationality in the face of imperfect information, it is an argument against regulation.

²⁶ See id:

If distributing your rewards (often times a copy of the product), is dependent on receiving enough funds to actually produce the product, then I'd recommend going with an all or nothing campaign. If your project is more cause related or donation based, then a flexible funding campaign may be more appropriate because it ensures that you will at least receive some funds that can be used to forward your cause.

²⁷ See Chance Barnett, *Donation-Based Crowdfunding Sites: Kickstarter vs. Indiegogo*, *Forbes* (Sept 9, 2013) online at <http://www.forbes.com/sites/chancebarnett/2013/09/09/donation-based-crowdfunding-sites-kickstarter-vs-indiegogo> (visited Jan 21, 2015) (noting that Kickstarter credits its success over competitor Indiegogo—which allows flexible and all-or-nothing funding—partly to its strict all-or-nothing funding policy).

²⁸ See Douglas J. Cumming, Gael Leboeuf, and Armin Schwienbacher, *Crowdfunding Models: Keep-It-All vs. All-or-Nothing*, Paris Finance Association (Sept 27, 2014), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2447567 (visited Jan 21, 2014) (finding that, on the Indiegogo platform, 34 percent of all-or-nothing campaigns are successfully completed, while only 17 percent of flexible-funding campaigns achieve their goal).

Of course, there is no reason for any putative regulator to insist that only one form of funding be used. Indeed, one drawback of that approach is that it prematurely blocks any useful evolution of the form of business vehicles. As experience with the crowdfunding system grows, it may be in the interest of entrepreneurs with good track records to make more-complex offers that require larger sums (though this reputational capital could be destroyed by poor performance in earlier engagements). The old Hayekian case against central planning via regulation applies with equal force to these novel markets.²⁹ That knowledge-utilization problem remains even if the regulator somehow intuits a sensible form,³⁰ because the regulator's one guess could preclude the emergence at some later time of a valuable alternative made possible by some yet-unknown technological advance. In an area characterized by high rates of change, regulation is almost always likely to lag behind technology.

A second structural justification for this rewards program derives from the performance aspect of the project. In dealing with works of art or music, it is generally easy for the soliciting party to observe the performance. It is clear that the in-kind contributions have to be of the same quality as those that may be sold in the standard retail market, which is a powerful, if implicit, form of quality insurance that can be easily monitored by recipients. And it is therefore highly unlikely that the entrepreneur will produce an inferior product. Indeed, if that transpired, a variety of fair trade statutes with public-enforcement provisions could fill the gaps here just as with other kinds of consumer transactions.³¹ Class actions, given the identity of positions, could be used as well. I am not aware of any actual litigation on the remedial front, which may suggest that, in most cases, the reputational sanctions are strong enough that the imperfect legal ones need not be called into play. In these cases, investors are primarily protected by holding a diversified portfolio, in which the few large winners offset numerous small losses. It makes little sense to litigate whether bad luck or bad execution resulted in the entrepreneur's bankruptcy or insolvency, which

²⁹ See generally Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 *Am Econ Rev* 519 (1945).

³⁰ See *id.* at 520.

³¹ See, for example, Cal Bus and Prof Code § 17200.

is why a diversified portfolio is the preferred approach.³² On balance, the scheme should work sufficiently well that the occasional failure will not taint the entire market.

III. CROWDSOURCING SECURITIES

The last area of crowdsourcing discussed here involves the funding of small financial ventures. In many ways, these are similar to the rewards programs—many persons choose to invest in small ventures without any coordination. It is quite clear that small ventures of this sort could not operate under the existing US securities laws given the high cost of registration and the heavy disclosure obligations.³³ Nonetheless, as with rewards programs, it has long been apparent that there is a nascent market of small investors who would participate in these crowd-funding markets if regulatory barriers were lowered.³⁴ In most instances, it is unlikely that anyone would make small cash contributions for some future dividend or liquidation preferences. But there may well be some who think that a diversified strategy of this sort makes sense. Nevertheless, these persons could choose the more conventional path of investing in mutual funds, many of which are quite willing to accept initial investments of \$500, with additional contributions of as little as \$500.³⁵ But these mutual funds are not an acceptable substitute for the many individuals who invest in firms because of some altruistic

³² See Seth C. Oranburg, *Bridgefunding Startups across the Private Equity Gap* *9 (Florida State University working paper, Jan 2015), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2544365 (visited Feb 18, 2015) (noting that \$25 crowdfunded investments enable broad portfolio diversification). A similar practice involves larger “angel” investors: “Angels need to diversify [their] investment[s]. Studies show that angels who invest in 10 or fewer startups generally lose money. Since 52% of startups fail, to earn a market rate of return (about 2.5x), angels have to invest in about 50 startups.” Id at *38 (citations omitted).

³³ See Andrew A. Schwartz, *Crowdfunding Securities*, 88 *Notre Dame L Rev* 1457, 1468–70 (2013); Oranburg, *Bridgefunding Startups* at *16 & nn 76–77 (cited in note 32).

³⁴ See C. Steven Bradford, *Crowdfunding and the Federal Securities Laws*, 2012 *Colum Bus L Rev* 1, 6 (explaining that “[e]ntrepreneurs seeking . . . financing through crowdfunding will often be selling securities” and stating that registering securities under the Securities Act is prohibitively expensive for some). See also Sumners, 32 *Rev Bank & Fin L* at 47 (cited in note 3) (“[M]any entrepreneurs may see these requirements as too burdensome to attempt to raise a potentially modest amount of money through crowdfunding.”).

³⁵ See Christine Benz, *The Best Funds for Entry-Level Investors*, *Morningstar* (Apr 5, 2005), online at <http://news.morningstar.com/articlenet/article.aspx?id=130594> (visited Jan 21, 2015).

or rooting interest.³⁶ For these parties, the major concern is not financial returns but some business assurance that their investment will not be diverted for improper purposes.

These cases are, however, more difficult than the rewards cases because it is more difficult to monitor whether the issuer that raised the capital has put the money to good use. In order to address these problems, in April 2012 Congress passed legislation provocatively titled the Jumpstart Our Business Startups Act (“JOBS Act”).³⁷ The JOBS Act aims to lower the regulatory requirements for those entrepreneurs who hope to start a new business by receiving small contributions from a large number of investors.³⁸ Under the JOBS Act scheme, all contributions must go through some intermediary organization,³⁹ which must be registered with the SEC either as a traditional broker-dealer or as a novel “funding portal.”⁴⁰ In both cases, the intermediaries’ activities will be subject to future SEC regulations established by administrative rulemaking⁴¹—a process that is designed to prevent these intermediaries from overreaching by engaging in activities such as offering investment advice, soliciting purchases, compensating employees, or managing employees.⁴² In addition, these intermediaries must withhold the public funds from the issuer until the requisite target amounts are collected, and they must give individual investors the opportunity to cancel their investment before those funds are paid over.⁴³

The crowdsourcing statute is hedged about with a variety of limitations that make it impossible for crowdfunding to raise major sums of money.⁴⁴ Chief among these is the \$1 million limitation on the amount of capital that any individual issuer may

³⁶ See Yan Lin, Wai Fong Boh, and Kim Huat Goh, *How Different Are Crowdfunders? Examining Archetypes of Crowdfunders and Their Choice of Projects* *10 (working paper series, Feb 17, 2014), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2397571&download=yes (visited Feb 7, 2014) (“[R]esearch suggests that participants fund projects to support creators and causes, thus affirming certain values that participants held.”).

³⁷ Pub L No 112-106, 126 Stat 306 (2012), codified at 15 USC § 77 et seq.

³⁸ See Schwartz, 88 Notre Dame L Rev at 1458, 1460–61 (cited in note 33).

³⁹ 15 USC § 77d(a)(6)(C).

⁴⁰ 15 USC § 78c(a)(80).

⁴¹ 15 USC § 78c(h)(1).

⁴² See 15 USC § 78c(a)(80).

⁴³ 15 USC § 77d-1(a)(7).

⁴⁴ See Oranburg, *Bridgefunding Startups* at *1 (cited in note 32) (“Regulation Crowdfunding is too limited and too expensive to work. Other exemptions provide much cheaper ways to raise money. Startups raised almost a trillion dollars under the regulation D exemption in 2012 alone.”).

raise annually.⁴⁵ Of equal importance is the limitation on individual purchasers: It provides that no person whose income or net worth is under \$100,000 may invest more than \$2,000, or 5 percent of his or her annual income, in crowdfunded securities annually.⁴⁶ Individuals whose annual income or net worth exceeds \$100,000 may invest up to 10 percent of their annual salary, capped at \$100,000, per year.⁴⁷ The intermediary is obligated to ensure that individual investors do not exceed these statutory limitations.⁴⁸ The intermediary is also charged with ensuring that both the SEC and the individual investors have an opportunity to examine the various disclosures no later than three weeks before trading begins.⁴⁹

The initial question about this regulatory scheme is whether the benefits obtained are worth the costs. Note that none of the above statutory limitations have been adopted in the unregulated marketplace for rewards crowdsourcing, so it is an open question why any should be required in this context. Thus, some projects in the rewards context exceed the \$1 million cap that applies in the securities context.⁵⁰ So long as there is no sign of breakdown in that market, the presumption should be that the informal institutional constraints at work in that market carry over to the securities market as well. Similarly, no intermediary is required in the rewards system, so why demand the use of intermediaries here? The same question can be asked about the various disclosure and delay requirements that are baked into the JOBS Act.⁵¹ The most charitable explanation for these requirements is that they are a grudging exception to the standard regime of strict investor protection.⁵² In principle, it is possible to challenge that judgment. But in Congress those market-based challenges will get short shrift, such that a highly restrictive regime now passes muster as a clear liberalization from the previous regulatory scheme. Yet note that if all these limitations were

⁴⁵ See 15 USC § 77d(a)(6)(A).

⁴⁶ See 15 USC § 77d(a)(6)(B)(i).

⁴⁷ 15 USC § 77d(a)(6)(B)(ii).

⁴⁸ See 15 USC § 77d-1(a)(8).

⁴⁹ 15 USC § 77d-1(a)(6).

⁵⁰ See, for example, Rob Thomas, *The Veronica Mars Movie Project* (Kickstarter 2013), online at <https://www.kickstarter.com/projects/559914737/the-veronica-mars-movie-project> (visited Jan 9, 2015) (noting that the moviemakers of *Veronica Mars* raised more than \$5.7 million from 91,585 backers during a one-month period).

⁵¹ See Schwartz, 88 *Notre Dame L Rev* at 1463 (cited in note 33).

⁵² For an argument that the risk of fraud associated with crowdfunding is overrated, see Oranburg, *Bridgefunding Startups* at *3, 25–28 (cited in note 32).

removed, the informal mechanisms—such as all-or-nothing financing—used in other areas could be employed here as well. If the diffuse objectives of these crowdfunding arrangements can support larger ventures, it is all to the good. Yet a venture's size is something that the issuer always declares up front.⁵³ Investors can take that number into account in initially judging how far to proceed. Their greatest protection, moreover, comes from a diversified portfolio of small investments in multiple stocks.⁵⁴

Making this assumption about the need to protect investors has profound implications for how these firms are regulated. The first concern is that these regulatory requirements will drive some parties from the market and reduce the rate of return obtained by others. Therefore, it looks as though the legislation opts for fewer investments with greater protection. Yet there is no reason to think that lower administrative costs and a wider portfolio will offer lower expected returns than the JOBS Act's crowdfunding regime. At this point, there is no observed breakdown in other crowd markets. Why regulate in this market on the assumption that these errors will occur?

Secondly, it is highly unlikely that any other regulatory device will be used in this context. Professor Andrew Schwartz is right to conclude that a secondary market is not likely to emerge in any crowdfunded stocks.⁵⁵ The amounts invested are too small and the likelihood of major economic gains are too slight to justify the investments that would be required to create a secondary market. Takeover bids will not be a part of the picture. Nor do I think it likely that these investors will shift, as Schwartz suggests,⁵⁶ to a debt model in order to avoid the possible risk of derivative suits by small investors. The issuer is likely to have only limited funds, and the creation of a debt-equity capital structure additionally strains the business by requiring mandatory payouts. If these investors (who have shunned standard mutual funds) are not looking for dividend income, they will not be interested in the few dollars of interest income that the

⁵³ See Sumners, 32 *Rev Bank & Fin L* at 43 (cited in note 3) (explaining that the JOBS Act requires "startups to inform potential investors about investment risk, financial statements, and the amount of capital necessary for a particular project to succeed").

⁵⁴ See note 32 and accompanying text.

⁵⁵ See Schwartz, 88 *Notre Dame L Rev* at 1463 (cited in note 33) (predicting that the secondary market for crowdfunded securities will be very small "because the number of shares in the marketplace is likely to be orders of magnitude smaller for a crowdfunded issue than a registered one").

⁵⁶ See *id.* at 1482–84.

venture could generate. In all likelihood, they will care more about seeing the venture grow. Accordingly, no controversy would likely develop over the usual issues that arise in corporate contracts—such as fiduciary duties, voting rights, or examination of books and records, all of which Schwartz covers in his paper.⁵⁷ The key insight is that the self-help mechanisms of diversification and reputation should dominate this market, meaning that Schwartz’s final recommendation is correct insofar as he warns the SEC not to be unduly concerned with the risk of fraud.⁵⁸ I reach my conclusion by different routes, but his warning is one that I would second. So I shall close this Part with Schwartz’s words: “[T]he SEC should tread carefully and try not to embellish the Act with extensive disclosure and other requirements, or it runs the risk of snuffing out securities crowdfunding entirely, not just its fraudulent forms.”⁵⁹

CONCLUSION

The rise of various crowdsourcing mechanisms starts from the simple premise that there is often wisdom in crowds that can guide individual decisions. The choice of the word “crowd” in this context is especially apt, because it suggests a large number of unorganized individuals who share common objectives that they hope to implement through weakly cooperative efforts. The way in which those efforts organize is heavily dependent on the type of market involved—labor, rewards, and securities markets all respond to somewhat different incentives.

In dealing with these markets, it is critical to avoid assuming that the wisdom of crowds, as it were, expresses itself as a form of spontaneous order unguided by a single hand. Rather, it is the product of self-organization, much in the way that biological organisms evolve by natural selection. There may well be illustrations of spontaneous economic and social orders, but in general I am skeptical that these can coalesce over long periods of time.⁶⁰ Still, it is clear in all these arrangements that a central figure is needed to organize the particular actions in question.

⁵⁷ See *id.* at 1482–87.

⁵⁸ See *id.* at 1489–90.

⁵⁹ Schwartz, 88 *Notre Dame L Rev* at 1490 (cited in note 33).

⁶⁰ See Richard A. Epstein, *How Spontaneous? How Regulated? The Legal Evolution of Property Rights Systems*, 100 *Iowa L Rev* (forthcoming 2015), online at http://www.law.tau.ac.il/Heb/_Uploads/dbsAttachedFiles/RAE_Spontaneous_order.docx (visited Jan 28, 2015).

That central authority has real power over many network industries, which face major problems ensuring the compatibility of old elements with the new framework. The central authority is less evident in crowdfunding for rewards and for capital contributions, in which competition among small businesses is surely the order of the day. Thus far, wholly without special regulation, the crowdsourcing of separate activities seems to have moved along constructive lines. Therefore, the call is not for more regulation but for no special regulation, or less of it. Self-help, diversification, reputation, and inspection matter in these markets. The great risk of regulation is that its inevitable burdens—especially on small entities with altruistic ambitions—might snuff out new voices with a cultural and social impact far greater than the dollars and cents involved.