Leveraging Federal Programs To Boost Local Innovation and Encourage Venture Capital Investment: Considering the Small Business Innovation Development Act and Derivative State-Level Incentives, with Specific Implications for Innovators and Legislators in Louisiana and the Southern States

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The Small Business Innovation Development Act of 1983 established the Small Business Innovation Research (SBIR) Program, which now requires every federal agency with an annual research budget in excess of $100 million to spend 2.5 percent of its research budget in the form of capital grants to small technology businesses that may advance the agency's research objectives.[1] In 2004, the total amount of federal dollars that passed to firms through the SBIR program exceeded $19 billion.[2] Many states have passed laws that offer various incentives to recipients of SBIR grants,[3] yet the funds tend to flow to the states in widely disparate amounts.[4] Businesses in California, Colorado, Massachusetts, Pennsylvania, Texas, and Virginia collected more than half of the total SBIR funds disbursed in 2004.[5] In the same year, the aggregate of businesses in twenty-five other states, most states in the southeast included, received less than ten percent of the total funds dispersed.[6] While there are likely many reasons why businesses that receive grants under the program would cluster in specific areas of the country, this Comment will identify legislative efforts at the state level that may affect the rate of SBIR capital flow to a given state.

The technology industry tends to "cluster" in certain cities or regions throughout the world,[7] a phenomenon that is likely correlated to the state-level disparity in funding flow from SBIR grants.[8] Cities and states throughout the Western world and parts of Asia have long courted the technology industry through various incentives and programs in an effort to diversify and grow their local economies.[9] Within the United States, the southern states tend to lag far behind the national average in terms of technology commercialization and innovation in general, to such an extent that the Southeast has forgone multiple billions of dollars in venture capital and Research and Development (R & D) investment

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1. Small Business Innovation Development Act of 1982, 15 U.S.C. § 638(f)(1)(c) (2000).

2. U.S. GOV'T ACCOUNTABILITY OFFICE, REPORT TO CONGRESSIONAL COMMITTEES No. 07-38, SMALL BUSINESS INNOVATION RESEARCH: AGENCIES NEED TO STRENGTHEN EFFORTS TO IMPROVE THE COMPLETENESS, CONSISTENCY, AND ACCURACY OF AWARDS DATA (2006).

3. *See infra* Table.

4. *See* Small Business Administration, 2004 SBIR State Rank Chart, http://www.sba.gov/SBIR/indexsbirsttr.html (last visited Oct. 8, 2008).

5. *See id.*

6. *See id.*

7. *The Fading Lustre of Clusters*, THE ECONOMIST, Oct. 11, 2007, http://www.economist.com/specialreports/displaystory.cfm?story_id=9928211.

8. *See* U.S. GOV'T ACCOUNTABILITY OFFICE, NO. 05-861T, FEDERAL RESEARCH: OBSERVATIONS ON THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM 1 (2005).

9. *See* SUZANNE SOTCHMER, INNOVATION AND INCENTIVES 4 (2006).

each year.[10] In the wake of hurricane Katrina, many critics argued that the affected Southern cities and states, and the City of New Orleans in particular, depended too greatly on industries and business models from earlier economic eras, and that the region needed to embrace new ideas and industries in order to restore its economic vibrance.[11] While many city officials may hope for a high-tech solution to be the miracle cure for their city's economic ills, in most cases such efforts fall flat.[12] However, the case for a viable high-technology industry in the City of New Orleans may be more plausible than most, and the idea seems particularly compelling as the Crescent City continues to rebuild. This Comment will consider local efforts to develop technology industries through the SBIR program, and will offer a concrete legislative proposal that may lay the groundwork for a high-technology industry in New Orleans.

First, this Comment will describe the Small Business Innovation Development Act and will survey scholarly analysis of the Act. Second, this Comment will survey state statutes that specifically target beneficiaries of the Act, and will explore the methods by which various states seek to either promote local businesses to apply for the program, or attract out-of-state recipients of the grants to move into the state. Finally, as a case study, this Comment will consider the application of an SBIR-based innovation incentive as a means to redevelop the economies of the State of Louisiana and the City of New Orleans.

I. OVERVIEW OF THE SMALL BUSINESS INNOVATION DEVELOPMENT ACT

A. The Program

The Small Business Innovation Development Act created the Small Business Innovation Research (SBIR) Program, which was later expanded to include research institutions through the Small Business Technology Transfer (STTR) Program.[13] The primary goals of the SBIR program are:

> (1) to assist small-business concerns to obtain Government contracts for research and development; (2) to assist small-business concerns to obtain the benefits of research and development performed under Government

10. SOUTHERN GROWTH POLICY BOARD, NOT INVESTED HERE: THE 2004 SOUTHERN INNOVATION INDEX 5-11 (2004).

11. *See, e.g.*, THE BROOKINGS INST., NEW ORLEANS AFTER THE STORM: LESSONS FROM THE PAST, A PLAN FOR THE FUTURE 11, 33-37 (2005), http://www.brookings.edu/~/media/Files/rc/reports/2005/10metropolitanpolicy_fixauthorname/20051012_NewOrleans.pdf.

12. *See, e.g.*, *The Fading Lustre of Clusters*, *supra* note 7.

13. 15 U.S.C. § 638 (b)-(e)] (2000).

> contracts or at Government expense; (3) to provide technical assistance to small-business concerns to accomplish the purposes of this section; and (4) to develop and maintain a source file and an information program to assure each qualified and interested small business concern the opportunity to participate in Federal agency small business innovation research programs and small business technology transfer programs.[14]

Every federal agency with an annual (R & D) budget in excess of $100 million must operate an SBIR program and fund it with 2.5% of the agency's annual budget for contracted "extramural" research.[15] As of 2006, eleven federal agencies participate in the SBIR program.[16] Of the eleven participating agencies, the DOD, NIH, NASA, DOE, and NSF are responsible for 96% of all federal SBIR expenditures.[17] Within the Department of Defense alone, at least eleven organizations administer SBIR and STTR programs.[18] The grant application and selection process varies somewhat between federal departments.[19] The SBIR program requires that agencies disburse grants in two phases: "Phase I" being an $80,000 six-month grant for a preliminary feasibility study, followed by "Phase II," a $750,000 grant for two years of extended R & D.[20] "Phase III" of the SBIR program, the final phase, requires funding from an outside source.[21] Venture-capital-backed companies are ineligible for Phase I and II SBIR funding,[22] and many firms that participate in the SBIR program experience a significant "funding gap" between Phase I

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14. *Id.* § 638(b)(1)-(4).

15. *Id.* § 638(f).

16. U.S. GOV'T ACCOUNTABILITY OFFICE, REPORT TO CONGRESSIONAL COMMITTEES NO. 07-38: SMALL BUSINESS INNOVATION RESEARCH: AGENCIES NEED TO STRENGTHEN EFFORTS TO IMPROVE THE COMPLETENESS, CONSISTENCY, AND ACCURACY OF AWARDS DATA 2 (2006). The "participating agencies are the departments of Agriculture (USDA), Commerce, Defense (DoD), Education, Energy (DoE), Health and Human Services, Homeland Security (DHS), and Transportation; the Environmental Protection Agency (EPA); the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF)." *Id.*

17. NAT'L RESEARCH COUNCIL COMM. ON CAPITALIZING ON SCIENCE, TECH., AND INNOVATION, AN ASSESSMENT OF THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM 1 (2008), http://www.nap.edu/catalog/11929.html.

18. *See* Office of the Sec'y of Def., http://www.acq.osd.mil/osbp/sbir/othersites/index.htm (last visited Oct. 8, 2008). The organizations include the Departments of the Army, Navy, and Air Force; the Defense Advanced Research Project Agency (DARPA), Defense Threat Reduction Agency, Missile Defense Agency, National Geospatial Intelligence Agency (NGA), Defense Logistics Agency; U.S. Special Operations Command (SOCOM); Chemical and Biological Defense; and the Defense Microelectronics Activity.

19. U.S. GOV'T ACCOUNTABILITY OFFICE, No. 99-114, FEDERAL RESEARCH: EVALUATIONS OF SMALL BUSINESS INNOVATION RESEARCH CAN BE STRENGTHENED 2 (1999).

20. 15 U.S.C. §§ 631-638 (2000).

21. *Id.*

22. *Id.*

and Phase II awards.[23] In response, the Department of Defense enacted a successful "Fast-Track" Program that provides funding priority for participants who can demonstrate that they have access to an outside source of funding beyond Phase II, a likely indicator of successful future commercialization.[24]

The SBIR program allows grant recipients to retain intellectual property rights in their project or product, and often offers a grant recipient the opportunity to be an exclusive supplier to the federal government should the funded project become successfully commercialized.[25] However, prospective SBIR applicants should be aware that the program may increase the risk of reverse-engineering and the resulting loss of trade secrets or possible patents; one court recently held that the government does have the right to circulate an SBIR-funded prototype among potential competing suppliers.[26]

After twenty-five years in existence, the SBIR program is due for reauthorization following a temporary extension through September 30, 2008.[27] Many members of Congress support the program,[28] however, some observers suggest that the program may face strong resistance during the reauthorization debate, and that the program will likely be completely overhauled during the reauthorization process.[29] Some members of Congress favor increasing the amounts of the Phase I and II grants to $149,000 and $1,115,000, respectively,[30] while other legislators, including both senators from Louisiana, advocate raising the required

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23. David B. Audretsch, Albert N. Link & John T. Scott, *Statistical Analysis of the National Academy of Sciences Survey of Small Business Innovation Research Awardees: Analyzing the Influence of the Fast Track Program*, THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE 291, 293-96 (Charles W. Wessner ed., 2000).

24. *Id.*

25. *See* Bayh-Dole Act, 35 U.S.C. §§ 200-212 (2000); *see also* WENDY H. SCHACHT, CRS REPORT FOR CONGRESS: THE BAYH-DOLE ACT: SELECTED ISSUES IN PATENT POLICY AND THE COMMERCIALIZATION OF TECHNOLOGY (2006).

26. *See* Night Vision Corp. v. United States, 68 Fed. Cl. 368, 379-82 (Fed. Cl. 2005), *aff'd*, 469 F.3d 1369 (Fed. Cir. 2006), *cert. denied*, 127 S. Ct. 2252 (2007).

27. Prior Art Citations to Office and Reexamination of Patents, Pub. L. No. 106-554, 114 Stat. 2763 (2000).

28. *See, e.g.*, YouTube.com, SBIR: America's National Technology Development Incubator, http://www.youtube.com/watch?v=j58ZMwk_sVc&feature=PlayList&p=8802A055AA8D7EB3&index=1 (last visited Oct. 22, 2008).

29. SBIR Insider, SBIR Reauthorization: Plain Speak on Why It May Fail, http://www.zyn.com/sbir/insider/sb-insider06-01-07.htm (last visited Mar. 29, 2008).

30. H.R. REP. NO. 4213, at 2.

funding percentage from 2.5% to 5% by 2013.[31] Congress has also recently amended the SBIR Program to add a focus on renewable energy.[32]

B. Unique Concerns with Federal Funding in Public/Private Ventures

Unlike private venture capital, government funded programs similar to the SBIR program can have unique negative effects on the disciplines or industries they serve.[33] However, such effects can be minimized with appropriate program design.[34] In a broad academic study of a different federal program, one feature of underperforming technology companies was a history of government grants from multiple sources.[35] Receiving one grant often made firms more attractive in applications for future grants, and in many cases a start-up high technology venture was able to misrepresent its lack of results as a justification for additional grant funding.[36] Firms that receive federal grants may also face external factors that would normally ruin a firm's chances in the private equity markets, as in cases where a publicly funded firm faces bankruptcy or a major lawsuit.[37] Another limiting factor common to most publicly funded technology start-ups is the lack of business experience among the firm's officers; in most cases involving private venture capital where the firm's management is untested, the venture capital firm will impose one of its vetted and experienced managers on the firm in order to monitor the firm's management and finances.[38] Such management support is often missing in businesses that rely on federal grants.[39]

In the case of publicly funded capital programs, some authors have noted that officials in such programs may "seek to select firms based on their likely success, and fund them regardless of whether the government funds are needed. In this case, they can claim credit for the firms' ultimate success even if the marginal contribution of the public funds was very

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31. S. REP. NO. 1932, at 2 (2007) (introduced by Senator Evan Bayh and sponsored by Senators John F. Kerry, Olympia Snowe, Mary Landrieu, and David Vitter).

32. Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007).

33. Josh Lerner & Colin Kegler, *Evaluating the Small Business Innovation Research Program: A Literature Review*, *in* THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE, *supra* not 23 at 307-23.

34. *Id.*

35. *Id.* at 316.

36. *Id.*

37. *Id.* at 317.

38. *Id.*

39. *Id.*

low."[40] By subsidizing the likely successes instead of the very innovative, higher-risk ventures, the government program will likely recognize a higher rate of success in commercialization with obvious political payoffs for the program administrators.[41] However, by doing that, a government will also be largely subsidizing firms that will succeed whether the firm receives the subsidy or not, likely undermining any policy goal of using the government to absorb the highest risk in most innovative ventures.[42] The intent of most federal capital programs is arguably not to pick the obvious winner, but to assume risk that private investors will not, in the hope of funding a true industry-changing innovator.[43]

Arguably, the challenges of public financing discussed above are a significant concern for Congress in all public-private ventures, including the SBIR program. However, this Comment argues that in government at the state and local level, the concerns discussed above are minimal. In fact, in the case of state-level incentives targeting such federal programs, the liabilities from the federal policy perspective discussed above are arguably completely reversed, and become a major justification for a heavily funded state incentive program. As federal administrators are prone to funding only the most successful ventures, the likely economic benefits accruing to the state from the state's incentives would tend to increase. A state or local government may freely leverage the best ideas from the smartest and strongest firms by lavishing rich incentives only upon those applicants who actually receive an SBIR award. The federal agencies will shoulder the administrative burden of determining whether the firm is a sound investment, and will assume the majority of financial and political risk in the selection process. By courting only the successful candidates, the state will reap the majority of external economic effects derived from the initial federal capital investment. Should the federal administrators of the SBIR program actually be risk averse and favor the likely to be independently successful ventures as described above, so much the better for the state.

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40. *Id.* at 316 (citing L.R. Cohen & R.G. Noll, *The Technology Pork Barrel*, *in* S.J. Wallsten, The Brookings Inst., The Small Business Innovation Research Program: Encouraging Technological Innovation and Commercialization in Small Firms? (1991) (unpublished manuscript, on file with Stanford University)).

41. *See id.*

42. *See id.*

43. *See id.* at 320.

C. The Impact of the SBIR Program

In a 1999 study, the GAO found that the geographic distribution of SBIR awards "generally followed the pattern of distribution of non-SBIR expenditures for R & D, venture capital investments, and academic research funds."[44] In areas with other venture capital activity, participants in the SBIR program in high-technology industries tended to grow significantly faster than non-SBIR participant firms, suggesting that winning an SBIR grant may indicate increased chances of commercial success.[45] That said, some commentators have argued that the SBIR program has not increased R & D activity within recipient companies.[46] A study comparing research quality and commercial success within the SBIR program indicates that SBIR-funded research is of high quality, independent of its commercial applications.[47] Case studies in specific markets suggest that the SBIR program promotes innovation, development of human capital, and generates positive economic effects beyond the value of the SBIR grants alone.[48] At least one author suggests that the SBIR program might be used to promote other specific scientific or economic development interests.[49]

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44. U.S. GOV'T ACCOUNTABILITY OFFICE NO. 05-861T, FEDERAL RESEARCH: OBSERVATIONS ON THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM 1 (2005).

45. *See* Josh Lerner, *The Government as Venture Capitalist: The Long Run Impact of the SBIR Program*, 72-73 J. BUS. 285 (1999).

46. *See* Scott J. Wallsten, *The Effects of Government-Industry R & D Programs on Private R & D: The Case of the Small Business Innovation Research Program*, 31 RAND J. ECON. 674-92 (2000).

47. ROBERT B. ARCHIBALD & DAVID H. FINIFTER, *Evaluation of the Fast Track Initiative: A Balanced Approach*, THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE, *supra* note 23, at 211, 211-16 (Charles W. Wessner ed., 2000).

48. *See* David B. Audretsch, Juergen Weigand & Claudia Weigand, *Does the SBIR Program Foster Entrepreneurial Behavior?*, *in* THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE 160, *supra* note 23, at 160-85 (Charles W. Wessner ed., 2000).

49. Thomas A. Kalil, *Nanotechnology and the "Valley of Death,"* 2 NANOTECH. L. & BUS. 265, 266-68 (Sept/Oct. 2005) (arguing that directing the SBIR program toward the nanotechnology industry could accelerate the commercialization of nanotechnology).

D. Survey of State Programs that Target the Small Business Innovation Development Act

Federal SBIR funds flow to most Southern states in relatively low amounts,[50] as does venture capital in general,[51] as outlined in the table below.

State	Applicable Statute/Program*	Type **	2004 Total Funds[52]	2004 SBIR %[53]	2004 Rank[54]	2003 Rank[55]	2002 Rank[56]
Ala.			$36,756,135	3.20	13	14	13
Alaska			$70,000	0.00	52	50	52
Ariz.	Ariz. Rev. Stat. § 41-1552.01	MG	$27,463,629	2.34	16	18	12
Ark.	Ark. Code Ann. §§ 15-3 to 15-5	MG	$5,554,760	0.48	41	43	47
Cal.	Cal. Gov. Code tit. 2, div. 3, pt. 6.7, ch. 3.6 (2007)	R	$415,698,563	36.21	1	1	1
Colo.	Colo. Rev. Stat. Ann. § 24-48.5-108	MG	$88,903,493	7.74	7	5	5
Conn.	Conn. Gov. Stat. Ann. §§ 32-344, 32-345		$34,631,585	3.02	15	15	17
Del.	Del. Code tit. 29, § 5035-37	MG	$9,977,547	0.68	33	41	43
D.C.			$4,872,564	0.45	43	35	28
Fla.			$42,228,732	3.68	12	11	14
Ga.			$20,852,375	1.81	23	25	25
Haw.	Haw. Stat. § 206M-15	AG, MG	$14,700,800	1.39	25	38	39
Idaho			$3,649,666	0.31	46	42	38
Ill.	20 Ill. Comp. Stat. 700/3001-04	MG, L	$27,088,702	2.32	17	17	22
Ind.			$12,587,835	1.05	26	26	27
Iowa	851 Iowa Ann. Code 9.2-10.6(28) (2008)		$3,502,502	0.29	47	34	34
Kan.	Kan. Stat. Ann. § 74-8108	MG, L	$5,313,502	0.46	42	40	35
Ky.			$7,297,532	0.65	37	49	37
La.	La. Rev. Stat. § 6015	TC	$3,762,972	0.31	45	44	40
Me.	5 Me. Rev. Stat. Ann. § 15303	AA	$9,607,963	0.88	34	37	44
Md.	Md. S.B. 680 (Feb 1, 2008)		$113,599,253	9.75	3	3	4
Mass.	Mass. Gen. Laws Ann.	MG	$277,575,983	24.18	2	2	2

50. *See* JIM CLINTON ET AL., INNOVATION WITH A SOUTHERN ACCENT: THE 2006 REPORT ON THE FUTURE OF THE SOUTH (2006); *see also infra* Table. In the period from 2002 to 2004, the Southern states generally ranked very low. *Id.*

51. *See* CLINTON ET AL., *supra* note 50, at 33 (chart).

52. Small Business Admin., "2004 SBIR State Rank" Chart (2004), http://www.sba.gov/SBIR/indexsbir-sttr.html.

53. *See id.* The author calculated percentages using total SBIR Phase I and Phase II figures by state and the sum of those figures.

54. *Id.*

55. *Id.* ("2003 SBIR State Rank" Chart).

56. *Id.* ("2002 SBIR State Rank" Chart).

State	Applicable Statute/Program*	Type **	2004 Total Funds[52]	2004 SBIR %[53]	2004 Rank[54]	2003 Rank[55]	2002 Rank[56]
	23G § 27(c)(5)						
Mich.	Mich. Comp. Laws Ann. 208.9 and 208.31a	TC, R	$35,082,016	3.04	14	10	16
Minn.	Minn. Stat. Ann. § 116J.656	AA	$22,080,760	1.90	22	16	15
Miss.	Miss. Code Ann. § 31-29-29	AG, MG	$4,060,724	0.36	44	45	41
Mo.			$10,867,734	0.91	28	39	30
Mont.			$8,149,180	0.67	35	32	31
Neb.			$5,873,218	0.53	40	51	48
Nev.			$10,159,621	0.96	32	33	29
N.H.	N.H. Rev. Stat. § 12-A:38	MG	$26,965,004	2.49	18	21	20
N.J.			$60,477,187	5.38	10	12	10
N.M.			$25,024,547	2.20	20	22	19
N.Y.	Ch. 43-A. art. 10-a. Title 1, § 3102-c(2)(c); N.Y. Comp. Codes R. & Regs. tit. 21, § 5905.8	MG	$99,760,156	8.72	5	5	7
N.C.	N.C. Gen. Stat. Ann. § 143B-437.81	AG,MG	$26,549,242	2.15	19	19	18
N.D.	N.D. Admin. Code § 95-05-01-03	MG	$1,767,016	0.14	49	47	49
Ohio	Rev. Code § 184.04B(2)(a)	MG, L	$71,230,736	6.11	9	7	6
Okla.	74 Okla. Stat. Ann. § 5060.19	AA	$11,658,389	0.98	27	36	36
Or.			$23,076,338	2.04	21	24	21
Pa.	2007 Pa. S.B. 993	MG	$71,769,199	6.18	8	8	8
P.R.			$300,000	0.02	50	52	51
R.I.			$10,309,695	0.94	30	30	33
S.C.	S.C. Code 1976 § 13-17-87	AA,G	$6,309,600	0.58	38	27	32
S.D.			$112,485	0.01	51	46	46
Tenn.	Tenn. Code Ann. § 67-6-209	TC	$10,294,063	0.93	31	28	26
Tex.	10 Tex. Code Ann. § 177.6 (2008), repealed Tex. Gov't Code § 481.301-310	R	$89,646,772	7.67	6	9	9
Utah			$10,663,761	0.86	29	23	23
Vt.			$5,958,998	0.55	39	31	45
Va.			$111,459,615	9.95	4	4	3
Wash.	Wash Rev. Code Ann. § 28B.20.297.	AA	$58,890,717	5.27	11	13	11
W. Va.	W. Va. Code § 18B-14-11	C	$8,035,011	0.74	36	29	50
Wis.	Wis. Adm. Code Comm. 106.90-99	BG, R	$20,182,744	1.67	24	20	24
Wyo.			$2,175,286	0.18	48	48	42

*For states that have no specific legislative recognition of the SBIR program, the field is blank.
**The following characters represent broad categories of the state programs: TC = Tax Credit, BG = Bridge Grant, MG = Matching Grant, AG = Application Grant, AA = Administrative Assistance, C = Commission to study SBIR grants, R = Repealed, L = Loans.

Across the last three years for which data are available, the flow of SBIR dollars to the Southern states has been relatively stable. As compared to all states, Virginia and Maryland each rank near third or fourth; Texas ranks near seventh or eighth, Alabama and Florida each rank near twelfth or thirteenth; North Carolina ranks near twentieth; Georgia ranks near twenty-fifth; Tennessee, West Virginia, and South Carolina rank in the thirties; and Arkansas, Mississippi, Kentucky, and Louisiana rank near the bottom.[57] Across the Southern states, the relative flow of SBIR funds to the states generally mimics the relative flow of private venture capital to the same states, although the southeastern states as a whole receive a smaller portion of the national pool of private venture capital relative to the portion of SBIR funds the states receive.[58]

States target the SBIR program using different approaches, ranging from no legislative mention at all to a detailed package of grants, incentives, and professional assistance. Delaware law typifies the matching-funds model, providing an equal amount of state dollars for each federal SBIR dollar awarded to a Delaware-based SBIR grant recipient.[59] Most states match funds to a statutory maximum, typically $100,000 or less.[60] The Maine and Washington statutes typify the professional assistance model, providing basic awareness and grant-writing assistance to firms who may be interested in the SBIR program.[61] Some states limit SBIR incentives to or provide specific SBIR incentives for firms in specific industries, like marine sciences in Massachusetts[62] or biosciences in Colorado.[63] Wisconsin's SBIR statute was unusually robust in its approach, providing grants for initial SBIR applications, matching funds up to $100,000, plus a "bridge funding" mechanism for companies that received a Phase I SBIR grant but cannot secure capital for the indeterminate operating period between Phases I and II of the SBIR program.[64] California and Texas, both leading states in attracting

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57. *See supra* Table.

58. *See generally* CLINTON ET AL., *supra* note 50; Thomson Venture Economics by State, http://vx.thomsonib.com/VxComponent/static/stats/2007q4/0MAINMENU.html (last visited Oct. 27, 2008); PriceWaterhouseCoopers, Venture Capital Regional Aggregate Data, https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=notice&iden=B (last visited Oct. 27, 2008).

59. DEL. CODE ANN. tit. 29, § 5035-37 (2008).

60. *See, e.g.*, MASS. GEN. LAWS ANN. ch. 23G § 27(c)(5) (2008). *But see* ARK. CODE ANN. § 15-4-3305 (2008) ($6.5 million cap).

61. ME. REV. STAT. ANN. tit. 5, § 15303 (2008); WASH. REV. CODE ANN. § 28B.20.297 (2008).

62. MASS. GEN. LAWS ANN. 23G § 27(c)(5) (2008).

63. COLO. REV. STAT. ANN. § 24-48.5-108 (2008); *see also* 2007 S.B. 993, 190th Gen. Assem., Reg. Sess. (Pa. 2007) (NIH focus).

64. WIS. ADMIN. CODE COMM. § 106.90-99 (2008).

SBIR dollars, have each repealed major portions of their SBIR-specific laws within the past decade, likely due to budget cuts.[65] Among the Southern states, Maryland, Virginia, Alabama, and Florida rank the highest in terms of SBIR dollars received despite having no history of state-level SBIR incentives.[66] Arkansas, Mississippi, and Louisiana all have incentive programs to varying degrees;[67] however, all three rank near the bottom of all fifty states in terms of both SBIR dollars and private venture capital dollars.[68]

While the possible number of variables affecting the flow of SBIR dollars to the states is sufficiently large to defy most reasonable statistical analysis, one basic trend that emerged from a survey of state SBIR incentives is that a small number of states without any SBIR incentives seem to have performed much better in terms of attracting SBIR dollars than those states that do have incentives, while a large number of states with no SBIR incentives have performed very poorly compared to all other states.[69] The states that do very well in attracting SBIR dollars seem to have specific structural advantages. Maryland and Virginia surround the District of Columbia, the administrative headquarters of all federal departments participating in the SBIR program, plus the corporate headquarters of many private firms specializing in government contracts. Given the number of firms specializing in federal contracting in the D.C. area, the benefits of the SBIR program are likely well known.[70] Similarly, California and Massachusetts, both hosting top-tier universities and many high-tech startups, as well as being the traditional domiciles of deep-pocketed venture capitalists, seem to have an excess of innovative companies.[71] Between the extremes of the leading and tailing states lies a collection of states with SBIR-specific incentives that seem to have varying degrees of success in attracting and/or retaining SBIR recipients. Arguably, a well-crafted SBIR incentive program could affect

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65. *See* TEX. CODE ANN. §§ 403.401-416 (2003), §§ 481.301-310 (1997); WEST'S ANN. CAL. GOV. CODE §§ 15379.20-52 (1999).

66. *See supra* Table. Note that the Maryland legislature introduced an SBIR incentive bill in February 2008. Md. S.B. 680, Gen. Assem., Reg. Sess. (Md. 2007).

67. *See supra* Table.

68. *See* CLINTON ET AL., *supra* note 49, at 56-62; Thomson Venture Economics by State, http://vx.thomsonib.com/VxComponent/static/stats/2007q4/0MAINMENU.html (last visited Oct. 27, 2008); PriceWaterhouseCoopers, MoneyTree Report, Regional Aggregate Data, https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=notice&iden=B (last visited Oct. 27, 2008).

69. *See supra* Table. The recent repeals in California and Texas may be significant, however, Massachusetts, Virginia, and Maryland have little to no direct SBIR incentives.

70. *See, e.g.*, Fred Patterson, *Business Development and the SBIR Program in Texas*, TEX. BUS. REV., Apr. 1, 2004, at 1, *available at*, http://www.allbusiness.com/technology/1167639-1.html.

71. *See id.*

a state's position relative to other states lacking the specific advantages described above.

II. THE FUTURE OF HIGH TECHNOLOGY AND INNOVATION IN THE SOUTHERN UNITED STATES, AND HOW THE SMALL BUSINESS INNOVATION DEVELOPMENT ACT MAY PLAY A ROLE

A. Innovative Companies Generate Economic Growth, and Should Be Encouraged

The National Academy of Engineering stated that "small high-tech companies play a critical and diverse role in creating new products and services, in developing new industries, and in driving technological change and growth in the U.S. economy."[72] Similarly, a report by the National Science Foundation observed that entrepreneurs and small firms were six times as effective as larger firms in utilizing research and development expenditures to generate new products.[73] It would follow that small technology firms can be an engine of development for local economies, and should be encouraged. As mentioned above, some suggest that federal funding programs like the Small Business Innovation Development Act may be used at the federal level as a policy tool to encourage specific industries and areas of research. As the enclosed table of state statutes targeting the SBIR program implies, many states also believe that the SBIR program has positive economic effects. However, no incentive program can work if it fails to address certain basic issues that would otherwise prevent a company or its employees from choosing to move to the area.

Local governments have always courted innovative industries using myriad physical, legal, and financial incentives.[74] Many states offer dozens of potential incentives for the biotechnology industry alone.[75] In many cases, they fail.[76] Some may fail in part due to a flaw in the incentive program itself;[77] others may fail because the offered incentive is

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72. NAT' ACAD. OF ENG'G, RISK & INNOVATION: THE ROLE AND IMPORTANCE OF SMALL HIGH-TECH COMPANIES IN THE U.S. ECONOMY 37 (1995).

73. NAT' SCI. BD., SCIENCE AND ENGINEERING INDICATORS 185 (1993); *see also* Anne Anderson, *Small Businesses Make It Big in the SBIR Program*, NEW TECH. WEEK, June 6, 1998, at 2.

74. *See* SOTCHMER, *supra* note 9, at 4-21.

75. *See, e.g.*, Mo. Biotechnology Ass'n, Policy Issues Supported by MOBIO http://www.mobio.org/pubPolicy/issues.asp (last visited Mar. 23, 2008) (listing all incentives offered by "top ten biotechnology states").

76. *See The Fading Lustre of Clusters*, *supra* note 7; *see also The Simpsons: Marge v. The Monorail* (FOX television broadcast Jan. 14, 1993).

77. *See* LERNER & KEGLER, *supra* note 33, at 316-19.

not sufficiently strong to entice many firms to relocate to an otherwise unattractive area.

B. Innovative Companies Often Respond Well to Economic Incentives

Innovative or not, all companies require a location with basic infrastructure, access to capital and labor, and a market for their goods or services.[78] Of those, capital is a key component to almost any technology venture.[79] Innovative businesses typically receive funding from three sources: corporate seed capital, federal funds, and private venture capital.[80] For smaller firms and high technology firms in particular, venture capital plays the most significant role.[81] Most states in the South receive relatively little of the national pool of private venture capital.[82] By increasing their portion of total SBIR dollars through an effective incentive program, the Southern states could begin to level the innovation playing field. Public and private money tends to flow where it has flowed before:[83] it follows that if a state can increase its share of the federal pie in the short run, its long-run share of both federal and VC dollars is also likely to increase. However, any state considering an SBIR-specific incentive program should consider the relatively small total pool of SBIR dollars available as compared to the available pool of venture capital; any aggressive SBIR incentive program should complement a broader private capital incentive program in order to maximize start-up funding efficiency in the state.

A second factor essential to many innovative companies of the sort that attract SBIR funding is the available labor pool. In the case of high-technology industry, the size of the labor pool in a given region appears to correlate with if not depend on the size of the technology market in the area.[84] Noting the extensive local professional networks that innovative

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78. *See, e.g.*, Joel Kotkin, *Uncool Cities*, Prospect.com, (Oct. 2005), http://www.prospect-magazine.co.uk/article_details.php?id=7072. Issues of basic infrastructure are beyond the scope of this Comment, as are issues of market creation or saturation. In the first case, functional infrastructure must arguably be assumed for any incentive program to work, and in the latter case, the market for innovative products and services is increasingly national, global and/or virtual, likely making this factor decreasingly relevant to innovative firms considering a corporate location. *See* RICHARD FLORIDA, CITIES AND THE CREATIVE CLASS 35 (2005).

79. *See generally* JAMES M. SCHELL, PRIVATE EQUITY FUNDS: BUSINESS STRUCTURE AND OPERATIONS (1999).

80. Lewis Branscomb, *Where Do High-Tech Commercial Innovations Come From?*, 5 DUKE L. & TECH. REV. 3 (2004).

81. *Id.*

82. *See* CLINTON ET AL., *supra* note 50, at 33.

83. LERNER & KEGLER, *supra* note 33, at 316-17.

84. SHARI GARMISE, PEOPLE AND THE COMPETITIVE ADVANTAGE OF PLACE: BUILDING A WORKFORCE FOR THE 21ST CENTURY 92 (2006).

employees have and the ability of technology professionals in innovative regions to move from employer to employer, one author argues that "individuals [in innovative industries] choose locations where they are comfortable losing a job."[85] Effectively, where innovative firms cluster, the unemployment risk to an employee is decreased, while the chance to leverage prospective employers against each other to the individual employee's benefit is increased. In all likelihood, an SBIR-specific incentive will do little to directly affect an individual's motivations to move to an area not already populated by innovative firms. However, a state could place an incentive premium on first-time entrepreneurs, local science and engineering graduates, or other highly skilled groups that have reasons external to their research or business for living in the target area.

A third factor essential to many innovative companies may have little or nothing to do with the firm's economic requirements, or the local labor pool. Some argue that many professionals of the sort who create and work in innovative companies often favor particularly attractive geographical and cultural conditions,[86] suggesting that traditional labor and capital-based incentives may be more effective in some communities than in others.[87] This line of reasoning is perhaps best supported by the work of Richard Florida, a Columbia-trained economist and professor of public policy at George Mason University who argues that a new world economy is forming around a new "creative class," whose professional choices are in part driven by their preferences for culturally rich, interesting, stimulating, and rewarding places to live and work.[88] Assuming Florida's ideas are valid and assuming the basic economics are comparable, some regions or cities may be more attractive to the

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85. *Id.* at 94-95.

86. *See* RICHARD FLORIDA, THE RISE OF THE CREATIVE CLASS 215-34 (2002). Although Florida's work has been subject to much debate, "[most accept the idea] that skilled people matter for economic dynamism. The controversy centers on the methods to increase the regional talent pool." GARMISE, *supra* note 84, at 89.

87. Robert E. Lucas, *On the Mechanics of Economic Development*, 22 J. MONETARY ECON. 38-39 (1988).

> If we postulate only the usual list of economic forces, cities should fly apart. The theory of production contains nothing to hold a city together. A city is simply a collection of factors of production—capital, people and land—and land is always far cheaper outside cities than inside. . . .
>
> It seems to me that the 'force' we need to postulate account for the central role of cities in economic life is of exactly the same character as the 'external human capital'. . . . What can people be paying Manhattan or downtown Chicago rents for, if not for being near other people?

88. *See* FLORIDA, *supra* note 78, at 1-26.

innovative "creative class" than others, meaning an innovation or technology-based incentive may be more effective in some places than in others.

The unique position of the SBIR program as one of the federal government's largest public private partnerships makes it a suitable target for state legislatures. Some argue the program's grant-selection process is much more transparent than similar analytical processes in the world of private equity, making a state-level SBIR incentive program inherently more fair and accessible than a similar private venture capital incentive program.[89] As mentioned above, a state can reasonably rely on the participating departments of the federal government to make rational decisions as to what ventures will receive grants, meaning the risk and the administrative overhead for the state-level SBIR incentive program would be remarkably low. As discussed above, the external economic effects of the SBIR program make state incentives a wise measure.

III. CRITICAL ISSUES IN DRAFTING EFFECTIVE AND COMPETITIVE SBIR-BASED TECHNOLOGY INCENTIVES

A. Spend Lavishly on Tax Credits and Grants; Offer the Sweetest Reward

As a tax expenditure, a tax credit for SBIR grant recipients is sound policy. Tax credits are broad-based and blind to the type of SBIR-funded innovation involved, meaning many ideas and industries might be interested. Also, tax credits only affect the state budget when companies claim the credit. Given the relatively low level of existing SBIR-funding in many states that may consider such an incentive, the early-year costs of the incentive program may be extremely low. From an interstate economic perspective, every SBIR dollar that enters the state is arguably a net gain in the state's balance of payments. Assuming that the bulk of SBIR grant dollars would likely be spent on employee salaries and/or rent, those dollars would likely flow into the local economy and could be taxed by the state as individual income. If an SBIR grant recipient were successfully attracted from out of state, the federal grant income would otherwise not have been available for the state to tax at all, and the resulting tax on the new SBIR-derived dollars would be a net gain in tax revenue for the state. Any legislature in a state near the bottom of the

89. *Strengthening the Participation of Small Businesses in Federal Contracting and Innovation Research Programs: Hearing Before the Comm. on Small Business & Entrepreneurship*, 109th Cong., 93-94 (2006) (statement of Michael Squillante, Chairman of the Bd., Small Bus. Tech. Council).

state SBIR rankings listed in the charts above has almost nothing to lose in the short run by offering an extremely lucrative tax credit to SBIR recipients. An SBIR-based incentive including matching funds or bridging funds would also seem to promote commercialization of the technologies identified and funded by the federal government;[90] the state investment in grants would pay off either when an SBIR-funded firm becomes a sole supplier to the federal government, or when a firm obtains a patent.

B. Promote Innovation Beyond the First Idea; Encourage Local Firms To Obtain Joint Patents

Encouraging a new business to relocate to a state is a suitable goal for a state legislature to be sure, and all state SBIR programs address that scenario.[91] But, one might ask, is it wise to only spend limited state resources to promote the development of a project that the federal government already explicitly desires? Doing so might restrict the formation and adoption of even newer, bigger ideas by diverting limited incentive funding away from more fertile ground for innovation and creativity. Consider the following:

> Redevelopment efforts should not be tied to firm and specific incentives, but rather be broadly directed to supporting the underlying conditions for creativity, innovation, and entrepreneurship . . . . [I]t would be a mistake to try and transform the area into a high-tech center by betting the farm on any one new industry, such as biotechnology . . . . [P]lanners should generally avoid or make only limited use of the practice of trying to pick winners, putting a great deal of resources into emerging industries or technologies that appear hot at the time. . . . No one knows what the next big thing will be. The best general policy is to build a broadly creative environment, conducive to the formation and adoption of new ideas.

In the redevelopment sense described in the above passage, an SBIR-based incentive could be well suited to promoting the underlying conditions for creativity. Those who qualify for and receive an SBIR grant arguably demonstrated their ability to be creative, or at least to have one marketable idea. Encouraging that person or a similar class of

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90. *Cf.* THE SMALL BUSINESS INNOVATION RESEARCH PROGRAM: AN ASSESSMENT OF THE DEPARTMENT OF DEFENSE FAST TRACK INITIATIVE *supra* note 23, at 33-34 (Charles W. Wessner ed., 2000). The DoD Fast-Track program provides a similar financial benefit to SBIR Phase I grant recipients by minimizing costs between Phase I and Phase II. Assuming state funds flow similarly as well as DoD funds do, the state's matching funds could serve a similar purpose and have a similar effect. Audretsch et al., *supra* note 23, at 293-96.

91. *See* all statutes listed *supra* Table; RICHARD FLORIDA, CITIES AND THE CREATIVE CLASS 165 (2005).

persons to move to an area seeking technological redevelopment seems wise, and it would seem that those who would apply for a federal funding grant would respond well to a financial incentive. However, assuming the above passage to be correct, a poorly defined program that mainly targets the project or firm worthy of SBIR funding will only attract a new business, and will accomplish little in the way of technological redevelopment. For a technology incentive program to have a significant and lasting impact, it must lay the foundations for and give rewards to the next round of brilliant ideas, and not just give rewards to the last.[92]

As an alternative to augmenting the federal SBIR grant, a state could stimulate the "broadly creative environment" championed above by offering incentives for innovative local firms to file for joint patents with collaborating firms. In a professional networking phenomenon similar to that in the market for technology employees described above, recent economic research from Europe on the use of patents by innovative small biotechnology companies suggests that coordination, cooperation, collaboration, and the future ability to collaborate with similar companies is a decisive factor in many decisions to patent by leaders in innovative businesses.[93] The authors of the study argue that patents best serve biotechnology firms not by providing an exclusionary right as most lawyers might believe, but by serving as a keystone for signaling firm competencies, facilitating "technology and knowledge training," and serving as "legal bargaining chips," thus "help[ing] to free innovations."[94] The authors additionally suggest that patents may also serve as "instruments to share the outcome of the collaboration, through a joint application for instance," meaning patents may "encourage the collective process of innovation by facilitating the sharing of the dividends of collaborations."[95]

A direct, SBIR-specific state grant without more is unlikely to affect a firm's motivation to collaborate with others, file a patent application, or work on the next big, lucrative, paradigm-shifting idea. Accordingly, such a limited program may fail to stimulate innovation broadly. A state-level SBIR program that promotes collaboration and idea sharing, perhaps by encouraging locally domiciled firms to file joint patents for their SBIR-funded research, by favoring the funding of firms

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92. *See* SOTCHMER, *supra* note 9, at 3-21.

93. Antoine Bureth, Rachel Levy, Julien Penin & Sandrine Wolff, *Strategic Reasons for Patenting: Between Exclusion and Coordination Rationales*, *in* INTELLECTUAL PROPERTY, COMPETITION, AND GROWTH 29-31 (Gustavo Piga ed., 2007).

94. *Id.* at 29-30.

95. *Id.* at 31.

that already possess jointly held patents, by encouraging local firms to file new joint patents in new disciplines with nonlocal firms, or by any combination thereof. Such a move would extend the incentive to the broader acts of innovation likely underlying the ideas that result in SBIR grants, and would hopefully stimulate a viable technology industry where innovation and creativity are the norm.

IV. THE CASE FOR A HIGH-TECHNOLOGY SBIR-ELIGIBLE ECONOMY IN NEW ORLEANS

The Southern states offer a wide area of diverse geography, politics, culture, and history.[96] Of the regions in the Southeast that offer a large college-educated population, interesting history, diverse culture, and have a need for economic redevelopment, perhaps no metropolitan area stands out more so than the City of New Orleans. Shortly after the federal levees failed in Hurricane Katrina, many national commentators declared that the city must seek new sources of economic strength or face the future of becoming a smaller version of itself; a tourist centered, toy-town, vacation destination.[97] More recently, perhaps reflecting a similar understanding of the area's economic future, Greater New Orleans, Inc., the regional organization charged with promoting economic development in Southeastern Louisiana, issued a master plan that identifies several key industries for future development and current government action.[98] Of the industries named in the plan, many align closely with the federal agencies responsible for disbursing the large majority of SBIR grants.[99] Given that innovation-based incentives seem to be effective and that Southeastern Louisiana needs to diversify its industrial base, a robust, broad-based, state-level innovation incentive targeting collaborative patents and the SBIR program seems to make sense for Southeastern Louisiana. Furthermore, several conditions suggest that an SBIR-based innovation incentive would be particularly successful in the City of New Orleans.

Although the city faces serious reconstruction challenges on several fronts, New Orleans also has several inherent features that may favor a

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96. *See* Wikipedia, Culture of the Southern United States, http://en.wikipedia.org/wiki/Culture_of_the_Southern_United_States (last visited Oct. 27, 2008).

97. *See, e.g.*, THE BROOKINGS INST., *supra* note 11, at 11-12, 33-37; Adam Nossiter, *New Orleans of Future May Stay Half Its Old Size*, N.Y. TIMES, Jan. 20, 2006, at 1.

98. Jaquetta White, *GNO Inc. Unveils Economic Development Plan*, TIMES-PICAYUNE (New Orleans), Feb. 13, 2008, http://blog.nola.com/tpmoney/2008/02/gno_inc_unveils_economic_devel.html.

99. *Compare id. with* NAT'L RESEARCH COUNCIL COMM. ON CAPITALIZING ON SCIENCE, TECH., AND INNOVATION, *supra* note 17, at 1.

robust high-technology economy. First, the city's unique cultural assets are a powerful draw for those who seek an experience different from mainstream America, which might be a factor appealing to many innovative firms and employees. The cost of living in most historic New Orleans neighborhoods pales in comparison to the costs in similarly historic neighborhoods in San Francisco, Boston, Chicago, and New York, other havens for Richard Florida's "creative class." Richard Florida, paraphrasing Jane Jacobs, a pioneer in the study of urban development, argued that "new ideas occur in old buildings."[100] If old buildings alone were all that new ideas required, the urban fabric of New Orleans would seem uniquely suited to creative enterprise.

Second, New Orleans is home to Tulane University, a founding member of the American Association of Universities and a top-tier private research institution. In a recent Texas-centered analysis of national SBIR funding flow, one author considered factors that might make Texas, ranked near sixth in total dollars received from the SBIR program, different from California and Massachusetts, the leading states in capturing SBIR funding.[101] One concrete distinction drawn by the author was the absence in Texas of a large, wealthy private research university free of the political, legal and ethical implications that might arise when public universities heavily support a small class of private entrepreneurs.[102] The author looked to Stanford in San Francisco and MIT and Harvard in Cambridge, noting that the entrepreneurial cultures there were much stronger than in the large cities in Texas, where the dominant universities are publicly funded.[103] While Tulane may not be as large or as wealthy as Stanford, Harvard, or MIT, neither is New Orleans as large or wealthy as San Francisco or Boston. A Tulane-New Orleans entrepreneurial relationship could be modeled after that of MIT and Harvard in Boston, or that of Stanford and UC Berkeley in San Francisco. The economic returns, while smaller in size, could be similar in proportion.

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100. *See* FLORIDA, *supra* note 78, at 168 (paraphrasing JANE JACOBS, THE DEATH AND LIFE OF GREAT AMERICAN CITIES 187 (1992) ("Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them. By old buildings I mean not museum-piece old buildings, not old buildings in an excellent and expensive state of rehabilitation—although these make fine ingredients—but also a good lot of plain, ordinary, low-value old buildings, including some rundown old buildings.")).

101. Patterson, *supra*, note 70, at 4.

102. *Id.*

103. *Id.* Apparently, Rice University in Houston, Texas, was not considered to be significant.

On the other hand, considering some factors, New Orleans may appear at first to be an average if not poor candidate for technology or innovation incentives.[104] A few factors, likely among others, include the facts that Richard Florida's "creative class" indices ranked New Orleans very low in terms of overall creativity,[105] that the city has a reputation of being insular and unwelcoming to out-of-state professionals,[106] and that the city has little recent history of supporting technological innovation.

First, the issues of creativity, innovation, and the City of New Orleans have been discussed often, most recently following the publication of *The Rise of the Creative Class* by Richard Florida. Florida's metrics rate New Orleans very low in terms of overall creativity. While his methodology is subject to much debate, the data that resulted in New Orleans' unusually low ranking was based in part on New Orleans' extremely low ranking in number of patents and number of technology-based companies,[107] and that relatively few New Orleans residents claimed in the 1990 census to be among a group of creative professionals tracked by Florida, a factor that correlates with high levels of creativity and innovation in a city.

While New Orleans' patenting rates are inarguably low, and are likely lower still following the failure of the levees during Hurricane Katrina, the low numbers make the need for a robust local incentive evident. Here, an innovation incentive that promotes collaborative patenting would directly address one of New Orleans' true technological shortcomings. If the city and its firms generate more patents, its creativity numbers will rise in Florida's analysis.

Florida's creativity indices track the number of people in a given city who claim to be professionally creative: dancers, musicians, artists, and architects, among others.[108] Florida's published indices were based on the 2000 census, and updated data for the City of New Orleans would likely show a marked increase in both the raw number and relative proportion of professionals working within Florida's "creative" professions. Since 2000, the television and film industry has boomed in Louisiana and particularly in New Orleans as a result of the state LIFT

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104. *See, e.g.*, THE BROOKINGS INST., *supra* note 11, at 11-12, 33-37 (cataloguing the city's problems following the failure of levees); Ben Toledano, *New Orleans—An Autopsy*, COMMENTARY, Sept. 2007, at 27-32 (arguing that the city's ruling class left a century ago, and that the "club culture" of the "local elite" is killing the city).

105. *See* FLORIDA, *supra* note 78, at 178.

106. Toledano, *supra* note 104.

107. Richard Florida, *Boho Numbers*, GAMBIT WEEKLY (2002), http://www.bestofneworleans.com/dispatch/2002-08-06/news_feat2.html.

108. *Id.*

tax credit, creating thousands of "creative" jobs.[109] A similar boom may soon occur with the recently enacted theater and performing arts tax credit.[110] Beyond the entertainment industry, recent adventure-seeking (and hopefully entrepreneurial) college graduates from across the nation have decided to move to New Orleans to join the rebuilding effort.[111] As the 2010 census will likely show, a massive decrease in "noncreative" employees following hurricane Katrina coupled with the steady if not increasing presence of film and entertainment professionals and firms in the region will cause a noticeable and significant "creativity" spike in Florida's analysis of New Orleans, suggesting under Florida's analysis that the city has become a better place for creativity and innovation.

Second, despite some high-profile abuses, the Louisiana film tax credit incentive has proved to be an economic and political success,[112] implying that the state economy has relevant experience in supporting new creative and innovative industries, and that the legislature is familiar with successful innovative legislation. The fact that both U.S. senators for the state recently sponsored a bill seeking to expand the federal SBIR program suggests that political support for a state-level incentive will be strong.[113] Furthermore, the state is facing a record surplus in revenues,[114] suggesting the political and economic costs of a new tax expenditure or outright expense in the name of innovation will be politically and economically easier to bear. Because many states now have similar film industry incentives,[115] the legislature might also consider a second large incentive program to establish a new competitive advantage.

If *properly drafted* and *sufficiently lucrative*, a simple and efficient innovation incentive based on collaborative patents and a successful application to the SBIR program would eliminate much influence from the local and state political process, making the program as transparent,

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109. *See* La. Dep't of Econ. Dev., Office of Entm't Indus. Dev., Film Tax Credit Generates Millions in Movie Business (2005), http://www.lafilm.org/media/index.cfm?id=243.

110. *See* LA. REV. STAT. § 47:6034 (2008) (Theater and recording arts credits modeled after the film credit.).

111. Molly Reid, *The Brain Gain: Young Professionals Moving in To Help Rebuild*, TIMES-PICAYUNE (New Orleans), Mar. 03, 2007, at A1; *see also* YURP.org, http://www.nolayurp.org/ (last visited Oct. 27, 2008).

112. *See* La. Dep't of Econ. Dev., *supra* note 109; Richard A. Webster, *Louisiana Film Incentives Attract Competitors*, NEW ORLEANS CITY BUSINESS, Feb., 14, 2005, at 5, http://findarticles.com/p/articles/mi_qn4200/is_20050214/ai_n10176323.

113. *See* S. REP. NO. 1932, at 2 (2007).

114. Jan Moller, *State's Surplus Expected to Double*, TIMES-PICAYUNE (New Orleans), Dec. 10, 2007, at A1.

115. Larry R. Garrison, *State Tax and Other Incentives for Motion Picture and Television Production*, J. MULTISTATE TAX'N 30, 2005 (noting that many states now have lucrative incentives for the film industry); Webster, *supra* note 112, at 5.

universally accessible, and as fair as most merit-based federal funding programs. Because a successful seed investment with federal SBIR dollars will likely attract future private capital,[116] states and regions where access to private venture capital or corporate seed money is low can establish new industries with minimal local government expense. In the case of incentives for innovation and new technologies in relatively low-tech regions like New Orleans, the incentives may generate lasting positive economic effects in the form of new investment and new industry, making a diverse and healthy local economy.

Richard Florida said that, "Investing in innovation and in our collective creative infrastructure is important for the United States and for the world . . . . [I]nvestments in innovations and ideas have extra-ordinary rates of return and promise to pay incredible dividends precisely because they are public goods; the benefits they confer are broad and reverberate throughout the entire economy."[117] The world is entering a new age of "mass innovation," where people with new ideas and the cities they live in will arguably be the driving factors in the global economy.[118] New Orleans,[119] the State of Louisiana,[120] the Southern states,[121] and arguably the United States itself will need to move quickly in order to not be left behind.[122]

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116. Andrew A. Toole & Calum Turvey, *How Does Initial Public Financing Influence Private Incentives for Follow-on Investment in Early-Stage Technologies?*, 34 J. TECH. TRANSFER (forthcoming June 2009) (finding that the probability of follow-on venture capital investment is more likely when firms reach Phase II of the SBIR program, and is more likely as the size of initial public investment in Phase I increases).

117. *See* FLORIDA, *supra* note 78, at 248.

118. *The Age of Mass Innovation*, THE ECONOMIST, Oct. 11, 2007, *available at* http://www.economist.com/specialreports/displaystory.cfm?story_id=9928291.

119. *See* RICHARD FLORIDA, THE FLIGHT OF THE CREATIVE CLASS: THE NEW GLOBAL COMPETITION FOR TALENT 284 (2005) (ranking the City of New Orleans 180th overall among U.S. cities in terms of creativity).

120. *See* CLINTON ET AL., *supra* note 50, at 62.

121. *Id.* at 12-16.

122. *Id.* at 11-12.