estimates nonetheless include the cost estimates for that rule and others that have long since been proven to be significantly overestimated.) The additional assumption that 1993 costs must be at least as great as 1974 costs replicates these same errors by arbitrarily inflating 1993 costs to an already-inflated 1974 level and by failing to consider that innovations over time could indeed make compliance less costly over a 20-year timespan.

Given the absolute lack of credibility of the entire enterprise of the Crain and Hopkins report, OMB should more thoroughly explain its statement in last year's final report that the Crain and Hopkins report is unreliable in its specific calculations but still somehow is "useful as a relative indicator of regulatory activity rather than as an absolute indicator of the overall burden of regulation."[38] The specific conclusions about the "burden" of regulation are utterly unreliable, yet those conclusions are the very basis of the "relative" allocations OMB discusses. If OMB has figured out a way around the "garbage in, garbage out" problem, it should share that secret with the rest of us. Until then, it should assiduously eliminate all references to Crain and Hopkins and leave that study in the wastebin in which it belongs.

II. OMB POSES A FALSE AND MISLEADING TRADE-OFF BETWEEN CORPORATE COMPETITIVENESS AND PROTECTION OF THE PUBLIC.

Despite the best efforts of commenters who responded to last year's draft report, OMB has decided to repeat in this year's report a misguided and misleading section that suggests we need more of the Bush administration's dismantling of public safeguards in order to shore up the competitiveness of American corporations in the global marketplace. OMB insists that the "strongest evidence of the impact of" what it calls "smart regulation" (by which it means its hostility to protections of the public interest, especially those that act before the public has suffered significant harm) is a comparison of economic growth of countries with "different regulatory systems."[39] Although the United States already has the least restrictive regulation in the world[40] and is third on the list of the world's top ten economies,[41] OMB adds, "Less well known are the significant differences in growth rates . . . seen among economies with *smaller differences* in the degree of government control and regulation."[42] Apparently, OMB hints, it is not enough that American regulatory policy is already the least restrictive in the world; we must continue to dismantle the public's protections and block the development of new ones.

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38. *See* 2004 Final Report, *supra* note 21, at 102.

39. *See* Draft Report, *supra* note 2, at 30.

40. *Id.* at 33 text accompanying note 22.

41. *Id.* at 30 text accompanying note 16.

42. *Id.* at 30 (emphasis added).

OMB's argument is overly simplistic. Among other things, there are many confounding variables that preclude universal generalizations from mere comparisons of regulatory stringency. For example, the United States has a history of using military and defense line items to subsidize important innovations (primary recent examples being containerization, desktop-sized computers, and the Internet) that are then spun off into private industry, which is primed to seize a competitive advantage in the market that is essentially made possible by that hidden subsidy. Aside from the unaddressed gap between correlation and causation, OMB fails to cite any evidence for its "[l]ess well known" conclusion that small downward adjustments in the strength of regulatory protections can lead to "significant differences in growth rates." The footnote for that conclusion cites an article that provides no support for the thesis but, instead, compares the United States' regulatory protections to the U.S.S.R. on a scale of "dictatorship" and "disorder."[43]

The evidence that OMB cites for its larger discussion of regulation and competitiveness is not at all relevant to the issue as OMB has framed it, much less to the conclusions OMB wants to draw about its anti-regulatory ("smarter regulation") and anti-science ("sound science") policies. The scholarly studies that would be relevant are noticeably absent, possibly because they simply do not tell the story OMB is so desperate to tell.

A. OMB's strained and simplistic conclusions are not supported by the World Bank and OECD studies that OMB cites.

Other scholarly reviewers have already exhaustively documented the deficiencies of OMB's proffered evidence for its simplistic conflation of low regulation and comparative wealth, including it's extensive reliance on a World Bank report. These deficiencies include the following:

- OMB's simplistic conclusions ignore other means of market interventions used by wealthy countries in place of direct regulation, such as elaborate and heavy taxes on industrial practices disfavored by the government.[44]

- OMB assumes that the benefits of "economic freedom" will continue to accrue equally at every level of deregulation.[45] This conclusion is particularly unsuited for policy in the United States which, according to an OECD study that OMB cites, is already the second least regulated country and one that already follows the World Bank's major recommendations by guaranteeing

43. SIMEON DJANKOV, EDWARD L. GLAESER, RAFAEL LA PORTA, FLORENCIO LOPEZ-DE-SILANES & ANDREI SHLEIFER, THE NEW COMPARATIVE ECONOMICS 23-25 (Nat'l Bureau of Econ. Research, Working Paper No. 9608, April 2003), *available at* <http://www.nber.org/papers/w9608>.

44. Countries such as Denmark, praised in OMB's report, and Norway and Sweden use such an approach. *See* Verchick, *supra* note 28, at 6.

45. *Id.* at 6-7.

property rights, protecting consistency in its treatment of business, and enforcing contracts. OMB provides no support for its conclusion that rolling back health, safety and environmental protections will achieve continued benefits in economic growth.[46]

- Health, safety, and environmental regulations, the types of regulations OMB is most concerned about, are not even addressed in the World Bank study. The World Bank assumes, in comparing regulations affecting market entry, for example, a business that "(1) 'is not using heavily polluting production processes,' (2) is not subject to industry-specific regulations (such as many environmental regulations), and that (3) is operating in the country's most populous city."[47] As Profs. Heinzerling and Ackerman point out, "obviously... many of the rules reviewed by the OMB pertain to heavily polluting industries which are subject to industry-specific regulations and which are not operating in New York City."[48]

- The OMB report erroneously equates wealth and well-being.[49] If measures of well-being such as average infant mortality rates and average life expectancy at birth are considered, the comparatively "less regulated" United States ranks below Greece, Italy, Portugal, Ireland, and France, all among the most regulated nations. In fact, "among all nations, the country whose figures are among the closest to U.S. figures is Cuba, one of the most repressed and regulated on earth."[50] (In this year's draft, perhaps in response to this criticism, OMB cites a report by the Fraser Institute of Vancouver, B.C. that suggests that "economic growth does not appear to come *at the expense of* ... other measures of well-being"[51] like life-expectancy and infant mortality. That economic growth doesn't necessarily hurt other measures still does not support OMB's conclusion that continued deregulation of health, safety, and environmental protections will lead to increased wealth and well-being.)

OMB should finally acknowledge that its section on regulatory protections and competitiveness lacks any relevant support for OMB's arguments.

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46. Heinzerling & Ackerman, *supra* note 16, at 5.

47. Verchick, *supra* note 28, at 7.

48. Heinzerling and Ackerman, *supra* note 16, at 4.

49. *Id*., at 4-5; *see also* Verchick, *supra* note 28, at 7-8.

50. Verchick, *supra* note 28, at 8.

51. Draft Report, *supra* note 2, at 30-31 (emphasis added).

B. OMB has chosen to ignore the rich scholarship disproving the regulation-competitiveness trade-off.

OMB appears to be using inapposite evidence in order to avoid scholarly evidence that militates for a contrary conclusion. That OMB would maintain this section in the report despite the paltriness of the evidence is perplexing, at least until the actual scholarly debate on regulation and competitiveness comes into clearer focus. That debate, as outlined below, trends toward a completely different conclusion. In fact, given the scholarly evidence below, it would appear that competitiveness concerns should drive us in the opposite direction of this administration's hostility to public protections; we should, instead, embrace them, for the world of good they do for us in terms of public health, safety, civil rights, environment, and now the economy as well.

1. Environmental protection does not necessarily reduce U.S. competitiveness.

The argument that regulation harms U.S. competitiveness is based primarily on the theory that pollution-intensive industries will move to areas with more lax environmental regulations ("pollution havens") in order to avoid the costs of compliance with more stringent environmental protections. Though some economists have found a pollution haven effect, many economists have discovered that regulation has no negative impact on competitiveness, and some have even argued that regulation may increase competitiveness. Even in studies that have found that regulation hampers competitiveness, the effect tends to be insignificant or, at most, significant but relatively minor. Overall, factors such as wages and trade agreements play a much larger role than regulation in determining U.S. competitiveness. Economists have been unable to find the strong correlation between regulation and competitiveness that OMB insinuates.

The draft report tends to ignore or downplay the vast wealth of economic studies finding regulation has little or no impact on competitiveness. OMB failed to mention, for instance, the 1995 survey of economic studies by Jaffe et al., which concludes that "overall, there is relatively little evidence to support the hypothesis that environmental regulations have had a large adverse effect on competitiveness, however that elusive term is defined."[52] Eban Goodstein not only corroborated Jaffe's conclusions but has also found that, between 1979-1989, the industries that spent more on regulation compliance actually exhibited superior performance compared to imports from developed and developing countries.[53] OMB systematically ignores the divergent economic opinion on regulation and competitiveness and instead chooses to focus only on inapposite evidence mischaracterized as corroborating its deregulatory agenda.

Economists look at several economic indicators to determine the impact of regulation on competitiveness, such as plant location, industry imports and exports, and foreign direct investment (FDI). If the pollution haven theory holds, then firms will choose to open new plant locations in areas

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52. Jaffe et al., *Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?*, 33 J. ECON. LIT. 132, 157 (1995).

53. Eban Goodstein, *A New Look at Environmental Protection and Competitiveness*, Briefing Paper for the Economic Policy Institute, Washington, DC (1997).

with less regulation. Similarly, if regulation impacts competitiveness, then there should be a positive correlation between regulation and net imports of an industry: as regulation increases, countries with more lax regulations will gain a great share of the import market. Further, if the pollution haven theory is to hold, then stringent regulation in the United States will induce high polluting firms to disproportionately invest overseas.

The Jaffe et al. study looked at all three indicators of competitiveness and found on all accounts that regulation was not a major factor in competitiveness. In the case of plant location decisions, Jaffe et al. found that there is little evidence to support the conclusion that stringent regulation is a major determinant in plant location decisions. This finding is corroborated by a host of other economists. Timothy J. Batrik studied the impacts of state government environmental regulation expenditures on plant location decisions and found that such expenditures had an insignificant effect on plant locations.[54] Kevin Gallagher found that plants moving to Mexico are not the ones with highest pollution abatement costs; overseas movement of industries is affected more by labor costs than by regulation.[55] A look at plant location within India found that increased government spending on environmental regulation not only did not deter plant location but actually had a positive impact.[56]

Clark, Marchese, and Zarrilli examined industry decisions to conduct offshore assembly in developing companies. Consistent with the findings on plant location, the authors found that pollution intensive industries were less likely to conduct offshore assembly. They argued that the U.S. has a comparative advantage in highly polluting industries, while developing countries have a comparative advantage in simple assembly industries. At the same time, "the cost of pollution control and abatement are too small to influence the competitive performance of location decision of these activities."[57]

Further, several economic studies have found that stringent regulations have not led to increases in imports. Jaffe et al. examined a number of studies on the impact of regulation on imports and exports and concluded once again that regulation has no significant impact. Grossman and Krueger, for instance, looked at the impacts of NAFTA on net imports and found greater imports in industries with the lowers pollution costs. Moreover, they found that "traditional determinants of

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54. Timothy J. Batrik, *The Effects of Environmental Regulation on Business Location in the United States*, 19 GROWTH CHANGE 22 (1988).

55. Kevin Gallagher, *Trade Liberalization and Industrial Pollution in Mexico: Lessons for the FTAA*, Working Paper for Global Development and Environment Institute (October 2000).

56. Muthukumara Mani, Sheoli Pargal & Mainul Huq, *Does Environmental Regulation Matter? Determinants of the Location of New Manufacturing Plants in India in 1994*, World Bank Working Paper, at 1-26.

57. Don P. Clark, Serafino Marchese & Simonetta Zarrilli, *Do Dirty Industries Conduct Offshore Assembly in Developing Countries?*, 14 INT'L ECON. J. 75, 86 (2000).

trade and investment patterns" have a significant impact on net imports while environmental costs have a minor and insignificant impact.[58]

A 1997 briefing paper by Eban Goodstein confirmed the findings of Jaffe et al. Moreover, Goodstein's study also found that "over the 1979-89 period, *industries that spend more money complying with environmental regulations actually demonstrated superior performance against imports from developed countries*."[59] Goodstein found the same relationship "for imports from developing countries, but the relationship was not as strong."[60] Goodstein expanded on existing research on the effect of regulation on net imports by exploiting the large dataset made available by the National Bureau of Economic Research (NBER). Again, he concluded from the data that environmental regulation does not harm U.S. competitiveness. A look at the top 20 industries that experienced growth of import share by less-developed countries (LDC) from 1973-79 and 1979-89 shows that industries with high environmental costs were not the industries experiencing growth in net imports. In fact, "only three of the top 20 in the early period were industries with higher-than-average environmental costs; only one in the latter. It seems, then that low-wage industries, not 'dirty' ones, dominate the list of LDC import leaders."[61]

Despite predictions to the contrary, several economic studies have found foreign direct investment to increase with environmental stringency, implying that environmental regulation does not deter foreign investors. In a recently published article for the *International Trade Journal*, Elizabeth T. Cole and Prescott C. Ensign have found that U.S. FDI into Mexico is moving toward low polluting industries.[62] In fact, air pollution decreased in the United States at a time when foreign direct investment was increasing.[63]

Thus, the bulk of the economic literature contradicts OMB's claim that regulation seriously hampers U.S. competitiveness. As Jaffe et al. conclude, "studies attempting to measure the effect of environmental regulation on net exports, overall trade flows, and plant-location decisions have produced estimates that are either small, statistically insignificant, or not robust to tests of model

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58. Gene M. Grossman & Alan B. Krueger, *Environmental Impacts of a North American Free Trade Agreement*, *in* THE US-MEXICO FREE TRADE AGREEMENT 13 (Peter Garber ed. 1993).

59. Goodstein, *supra* note 53, at 2.

60. *Id.*

61. *Id.* at 6

62. Elizabeth T. Cole & Prescott C. Ensign, *An Examination of U.S. FDI into Mexico and its Relation to NAFTA: Understanding the Effects of Environmental Regulation and the Factor Endowments that Affect Location Decision*, 19 INT'L TRADE J. 1 (2005).

63. DAVID WHEELER, RACING TO THE BOTTOM? FOREIGN INVESTMENT AND AIR POLLUTION IN DEVELOPING COUNTRIES (Development Research Group, World Bank, 2001), *available at* <http://papers.ssrn.com/sol3/ papers.cfm?abstract_id=632594>. Wheeler's study shows a correlation and not causation.

specification."[64] Other economic factors, such as labor costs, play a much more significant role in the movement of industries. Concludes Goodstein, "Highly polluting industries are relocating to poor countries; but the reason, overwhelmingly, is low wages."[65]

Despite OMB's characterizations, economic opinion on the existence of a pollution haven effect is by no means conclusive. Economic studies deviate broadly on the subject. According to one literature review, "much of the empirical literature that has attempted to test this assumption has arrived at differing conclusions, ranging from a modest deterrent effect of environmental regulatory stringency on economic activity to a counterintuitive modest attract effect."[66] Even in the most damning characterizations, regulation still is only said to have a modest impact on U.S. competitiveness[67]

Even if *some* evidence does point to a pollution haven effect, OMB cannot dismiss the wide range of divergent economic opinion on the subject. As Tim Jeppensen, John List and Henk Folmer conclude in a 2002 article for the *Journal of Regional Science*, "casual perusal of the literature [on regulation and competitiveness] indicates that construction of a consensus point is akin to finding a needle in a haystack."[68]

2. Regulation does not cost jobs.

Economists have also refuted the claim that increased regulation decreases jobs. Economist Eban Goodstein at the Economic Policy Institute has written substantially on the relationship of jobs and the environment. According to Goodstein, the jobs-environment trade-off is largely a myth. Goodstein's book *Jobs and the Environment: The Myth of a National Trade-Off* finds a small positive effect of environmental regulation on overall employment, especially in the area of manufacturing

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64. Jaffee et al., *supra* note 52, at 157-158.

65. EBAN GOODSTEIN, JOBS AND THE ENVIRONMENT: THE MYTH OF A NATIONAL TRADE-OFF 19(1994).

66. Smita B. Brunnermeier & Arik Levinson, *Examining the Evidence on Environmental Regulations and Industry Location*, 13 J. ENVT. & DEVEL. 6 (2004).

67. See Keller & Levinson, *Pollution Abatement Costs and Foreign Direct Investment Inflows to U.S. States*, 84 REV. ECON. & STATS. 691 (2002), in which they found that environmental regulation does have significant negative impact on FDI into the United States, but the magnitude is economically small. See also Arik Levinson, *Environmental Regulation and Manufacturers' Location Choices: Evidence from the Census of Manufacturers*, 62 J. PUB. ECON. 5 (1996), in which Levinson found that the manufacturing sector is sensitive to environmental regulation, but again the impact is small in magnitude. Though the sector was sensitive to regulation, "the degree of aversion to stringent states does not seem to increase for pollution-intensive industries."

68. Tim Jeppesen, John A. List, & Henk Folmer, *Environmental Regulations and New Plant Location Decisions: Evidence from a Meta-Analysis*, 42 J. REGIONAL SCI. 19, 36 (2002).

workers.[69] Goodstein also finds that environmental regulation does not lead to manufacturing plant shutdowns.

Regulation leads to job creation and innovation of new technologies that can then expand the economy. Government spending on environmental regulation includes "investments in pollution control equipment and personnel, scientific studies to test pesticides and chemicals, the clean-up of hazardous wastes at Superfund sites, and the bill paid to your local garbage collector."[70] All of these costs *create jobs*. Moreover, these jobs are overwhelmingly blue collar and, by nature, domestic.[71] According to Goodstein, "the one comprehensive estimate available suggests that, in 1992, just under 4 million jobs were directly or indirectly related to pollution abatement and environmental protection the United States."[72]

Even the more equivocal work of Richard D. Morgenstern, William A. Pizer, and Jhih-Shyang Shih cannot avoid the job-creating potential of environmental protection: they conclude that environmental regulation is *just as likely* to create jobs as to cause job losses. "While environmental spending clearly has consequences for business and labor, the hypothesis that such spending significantly reduces employment in heavily polluting industries is not supported by the data," they write.[73] Morgenstern et al. examined the pulp and paper, plastics, petroleum and steel sectors and found "that a million dollars of additional environmental expenditure is associated with an insignificant change in employment."[74]

They explain: "Most importantly, there are strong positive employment effects in industries where environmental activities are relatively labor intensive and where demand is relatively inelastic, such as plastics and petroleum. In others, where labor already represents a large share of production costs and where demand is more elasticity, such as steel and pulp and paper, there is little evidence of a significant employment consequence either way."[75]

Berman and Bui also found that regulation had no impact on labor demands. The authors examined the impact on labor demands of increased air pollution abatement in the Los Angeles area.

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69. *See generally* Goodstein, *supra* note 65.

70. Eban Goodstein, *Jobs or the Environment? No Trade-Off*, 38 CHALLENGE 41, 46 (1995).

71. Frank Ackerman & Rachel Massey, *Prospering with Precaution: Employment, Economics, and the Precautionary Principle* (Precautionary Principle Project, Aug. 2002), *available at* <http://www.healthytomorrow.org/pdf/prosper.pdf>.

72. *Id.* at 42.

73. RICHARD D. MORGENSTERN, WILLIAM A. PIZER, & JHIH-SHYANG SHIH, JOBS VERSUS THE ENVIRONMENT: AN INDUSTRY-LEVEL PERSPECTIVE (Resources for the Future Discussion Paper No. 99-01-REV, 2000) 25.

74. *Id.* at 24.

75. *Id.*

In looking at data from 1979 through 1992, a period that saw sharp increases in environmental regulation, they found that increased regulation had no effect on employment in refineries.[76]

3. Regulation can improve efficiency.

OMB dismisses entirely the Porter "hypothesis" that regulation can actually increase productivity by increasing the efficiency of operations. Porter's theory was developed in response to real-world observations, such as OSHA's Cotton Dust Rule, in which regulations to protect the public had indirect benefits of inducing technological innovations and improved efficiencies in business operations. Since Porter elaborated his argument, the real world examples have continued to multiply. His "hypothesis" is now backed by a robust body of empirical evidence:

- Though regulation certainly does result in some cost to industry, it can also spur economic growth and increased efficiency. Jaffe points to a 1990 Barbera and McConnell study that "found that lower production costs in the nonferrous metals industry were brought about by new environmental regulations that led to the introduction of new, low-polluting production practices that were also more efficient."[77] EPA itself has in fact argued that environmental regulations generate "more cost-effective processes that both reduce emissions and the overall cost of doing business."[78]

- A study of the impacts on food manufacturing of trade liberalization between Mexico and the U.S. found that free trade would benefit Mexican producers because of resulting productivity growth, not because of the country's more lax environmental regulation. In fact, increased environmental regulation actually stimulated greater productivity in Mexican food manufacturing. "Pollution abatement efforts encouraged by the Mexican Government's inspection program manifestly have stimulated improvements in food processing efficiency as well as in environmental quality."[79] The enhanced productivity offset any consequence for the profitability of Mexican food manufacturing in the aftermath of the new pollution controls. At the same time, the authors

76. Eli Berman & Linda T. M. Bui, *Environmental Regulation and Labor Demand: Evidence from the South Coast Air Basin*, 79 J. PUB. ECON. 265 (2001).

77. Jaffe et al., *supra* note 52, at 155.

78. Office of Air and Radiation, Environmental Protection Agency, *The Clean Air Marketplace: New Business Opportunities Created by the Clean Air Act Amendments–Summary of Conference Proceedings* (July 24, 1992).

79. Ebru Alpay, Steven Buccola, & Joe Kervilet, *Productivity Growth and Environmental Regulation in Mexican and U.S. Food Manufacturing*, 84 AMER. J. AGR. ECON. 887, 894 (2002).

found "U.S. pollution regulations have had no impact on the profitability or productivity of U.S. food manufacturing."[80]

- Berman and Bui also found that in meeting more stringent environmental standards, oil refineries in the Los Angeles Air Basin actually increased their productivity and efficiency. Interviews with "plant managers and environmental engineers suggested that productivity increases were not accidental. They resulted from a careful redesign of production processes induced by the need to comply with environmental regulation."[81]

- Stephen Meyer compared regulation across states in the United States found that environmental regulation did impact economic prosperity. In fact, "states with stronger environmental regulations tended to have higher growth in the gross domestic products."[82] Though the correlation does not suggest causation, it does indicate that environmental regulation does not hinder state's economies. The correlation held true even during times of recession. In an update focusing on the 1990-91 recession, Meyer found states with stronger environmental regulation were not more likely to face economic decline during a period of recession than states with weaker environmental standards.[83]

After completely mischaracterizing Porter's insights in last year's draft report,[84] OMB has opted this year to ignore the matter altogether. Clinging to disproven and unsupported theories tendentiously applied to support its anti-regulatory hostility, OMB is missing out on an opportunity to stimulate truly smarter regulation by paying attention to Porter's theory and the evidence that backs it up.

III. OMB'S "NET BENEFITS" APPROACH IS MISLEADING AND USELESS FOR SENSIBLE SOCIAL POLICY.

Despite the bankruptcy of its usual regulatory "accounting" methods, OMB has made the problems of those methods even worse by producing a chapter on "net benefits." Extensive methodological and logical weaknesses make the net benefits measure a misguided waste of public resources with no real usefulness to policymakers for assessing the health, safety, and environmental

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80. *Id.* at 887.

81. Eli Berman & Linda T. M. Bui, *Environmental Regulation and Productivity: Evidence from Oil Refineries*, 83 REV. ECON. & STATS. 498, 508 (2001).

82. Stephen Meyer, *Environmentalism and Economic Prosperity: An Update* (Department of Political Science, Massachusetts Institute of Technology, Feb. 1993), at 2.

83. *Id.* at 9.

84. *See* Heinzerling & Ackerman, *supra* note 16, at 9.