Comment on Baker and Deal's analysis of Proposition 71

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Laurence Baker, an Associate Professor of Health Research and Policy at Stanford University, and Bruce Deal, a Managing Principle of Analysis Group, Inc., have authored what they claim is an economic cost-benefit analysis of Proposition 71. It is clear, however, from their omission of several categories of cost, their dubious methodology of counting benefits, and their selective choices in framing their conclusions, that their "analysis" is actually an advocacy paper paid for by and tailored to the pro-Proposition 71 forces.

My comment is not meant to be a full-fledged cost-benefit analysis, rather, it will solely point out several areas in which the Baker and Deal (hereafter B&D) analysis is lacking. In each area B&D have erred on the side of overstating benefits and understating costs. Although B&D's conclusions are probably what the supporters wanted to hear, I am led to the conclusion that their analysis is worthless. If the Californians for Stem Cell Research and Cures wanted an unbiased analysis, they should get their money back.

B&D's Analysis of Costs

In counting the costs of Proposition 71, B&D focus solely on the state's borrowing approximately $3 billion, deferring interest payments for the first five years (hence borrowing more) and paying back principal and interest by the end of year 35. They estimate the total undiscounted cost as $5.4 billion.

B&D seem totally unaware that massive borrowing, especially given the state's current fiscal imbalance, could have any deleterious economic effects. This is remarkable given the recent past which included: the recall of the governor; unprecedented and oxymoronic "borrowing to balance the budget;" sharp increases in student fees and other user fees; delayed raises and forced renegotiation of labor contracts; state raids of local funds leading to library, police, and fire cutbacks; cutbacks in emergency room and hospital funding; and downgrading of the state's credit rating; all because the state has spent more than it can afford and has had to borrow to cover the difference.. Given this fiscal setting, borrowing $3 billion more could hardly be prudent. Costs that should have been counted include: (1) further possible deterioration in the state's credit rating which will raise interest costs on all of the state's future borrowing; (2) general suppression of economic activity as taxes have to be raised to pay back the borrowed principal and interest; and (3) further inefficiencies caused by the diversion of loanable funds from projects that do meet the market test to projects that apparently do not meet the market test. Unfortunately, if Proposition 71 passes we will never know what benefits we had to forego because the $3 billion was not spent differently. Additionally, although of somewhat lesser importance, is society's cost due to the further entrenchment of the wealthiest citizens who are the only ones in position to take fullest advantage of the tax-free nature of the $3 billion in bonds that will be sold. Tax-free government bonds are (and always have been) anti-populist distortions in the economic landscape that disproportionately favor the well-to-do.

B&D are also unaware of significant costs of obtaining eggs to be used in the research that Proposition 71 will sponsor. Since, according to the proposition, women cannot be paid to "donate" their

eggs (reimbursement of expenses is allowed), any costs to the women over and above this reimbursement, will be borne directly by the women themselves, and are in addition to the $3 billion of expenditure in the bond measure. The state may not have to pay these at first, but they are costs nevertheless, and, if there are long-term adverse consequences, the state will end up paying the bill. These costs are unknown but potentially large, especially for repeat donors. Egg extraction involves women taking hormones and undergoing an invasive medical procedure, the long-term consequences of which are simply unknown.

B&D's Analysis of Benefits

In the "Key Conclusions" section B&D list five areas of monetary benefits coming from the proposition, throw in an opinion about job creation, and mention but do not attempt to quantify the benefit that potentially improved health status might bring. These will be treated below.

The first two "specific revenues and savings" that are mentioned are the "direct" and the "additional" collections of income and sales tax, together amounting to "at least" $2.4 billion and perhaps as much as $4.4 billion or more. B&D are either purposefully trying to mislead or are fatally short-sighted in reaching this conclusion. The truth is that there will be zero (and maybe even negative) additional tax revenues. This is not a matter of speculation, it is a simple matter of basic economic theory. There is no doubt that income and sales taxes will be collected on the $3 billion of expenditures on embryonic stem cell research. There is also no doubt that these tax collections will be exactly offset by the decreased tax collections on the $3 billion of lost expenditures that will not take place if the funds are diverted to stem cell research. Money does not grow on trees and the lenders that buy the $3 billion in bonds would have invested in something else instead, and the taxpayers who have to pay back the $5.4 billion, would have been able to spend their money on something else instead. These other investments and expenditures would have tax consequences equivalent to those counted as benefits of the proposition. At best, Proposition 71 leads to level tax collections; however, tax collections could actually go down. When individuals in the private sector spend their own $3 billion, they expect to get at least $3 billion in benefit–otherwise they would not spend the money. Alternatively, when a massive, newly-created-by-the-proposition, bureaucracy directs the expenditure of the taxpayers' money (after skimming 3% in bureaucratic administrative costs), there is no guarantee that the state's citizens get or even expect to get $3 billion of benefit. To the extent that the state's scarce resources are used less efficiently because of the proposition, the economy actually becomes smaller and tax collections go down. (As an aside, B&D mention that Proposition 71 might even cause an increase in private investments in the area of stem cell research. However, it is probably even more likely that Proposition 71 will displace other private investment in stem cell research that would have taken place anyway. This aside is actually just another facet of the shifting of expenditure as opposed to the creation of expenditure.)

The third and fourth "specific revenues and savings" that are mentioned are the "direct" and the "additional" health care cost savings of the state government, private businesses, insurance companies, and individuals, amounting to "at least" $12.6 billion and perhaps as much as $25.3 billion. Since "at least" implies a rock bottom guarantee, the "minimum" financial return of over four times the original expenditure makes investment in this research too good to pass up–either that, or too good to be true. To assess the believability of B&D's claim, one could simply ask why, if such returns are guaranteed, won't private sector entrepreneurs be jumping to get in on the action? On the one hand, if these calculations really are legitimate, then there is obviously no need for Proposition 71. Insurance companies, business interests, and even individuals would be investing in such research to participate in the higher profits implied by the lower costs. On the other hand, in the apparent absence of such private investment, one must conclude that these "minimum" benefits are too uncertain, too far in the future to be relevant, or just flat out overstated. At another level one could assess the veracity of B&D's claims by delving into the methodology of their

analysis. Unfortunately, there is not much to go on here. Out of the blue, B&D assert in their conclusions that the minimum, worst-case scenario is that embryonic stem cell research will lower medical costs of treating six specifically targeted diseases by 1%. One must be amazed how they have ruled out .99%, .98%, .97%, and the rest. In the "key conclusions," B&D call their 1% cost saving assumption "modest," which is also remarkable especially since they recognize in their analysis section that new therapies might actually increase costs and expenditures. In my opinion, an increase in expenditure not only might happen, it is usually the case. X-ray machines, CT scans, Magnetic Resonance Imaging, and a variety of blood tests are all great diagnostic tools, and may lead to better therapeutic results, but they do not decrease expenditure on health care. Perhaps a better example is organ transplantation, which can lead to great results, but clearly does not decrease expenditure on health care. The fact that B&D ignore the possibility that embryonic stem cell research may actually increase expenditure on health care in stating their conclusions and instead choose to report only the savings of "at least" $12.6 billion is evidence of their bias. In my opinion, there will be no health care cost savings from this proposition. Undoubtedly, many people hold great hopes for new therapies that delay the onset or even cure serious maladies. At present such therapies are highly speculative. If and when they arrive, they will be experimental and extremely expensive. (As an aside, B&D do recognize that there can be real benefits to therapeutic breakthroughs in terms of better health outcomes. Better health is particularly hard to put a dollar value on, and B&D do not try. This does not justify their conclusion that the dollar amount of health care costs will be reduced.)

The fifth "specific revenues and savings" that is mentioned is "state royalty revenues of from $537 million to $1.1 billion." B&D base their calculations on estimates of revenues and research costs in the private sector for "major biotechnology therapies," and on the assumption that the state will earn a 2% royalty rate. Both of these assumptions can be challenged. Comparing the results of Proposition 71 research to the private sector overstates the potential gains of stem cell research, simply because if stem-cell research were expected to be as lucrative as the research done in the private sector, then the private sector would already be doing it. In the private sector, the expected return justifies the investment in research. The expected return on embryonic stem cell research must be lower, or there would be no justification for Proposition 71 in the first place. The 2% royalty rate can also be called into question. B&D state that "Proposition 71 includes explicit provisions for the State to share in the gains from any patents or other intellectual property developed with Initiative funding." The actual language of the Initiative states,

> The ICOC shall establish standards that require that all grants and loan awards be subject to intellectual property agreements that balance the opportunity of the state of California to benefit from the patents, royalties, and licences that result from basic research, therapy development and clinical trials with the need to assure that essential medical research is not unreasonably hindered by the intellectual property agreements."

This is anything but explicit. There is no minimum guarantee for the state's share even though the state may be paying for all of the research. In fact, the language explicitly favors the research groups. The language guarantees California only an "opportunity" while guaranteeing that the researchers are "not unreasonably hindered." This is what I would call a "non-guarantee" guarantee. Thirty-five years from now if the state of California has not earned a single penny even though research institutions have been flush with corporate welfare, and even though royalty and patent profits have been siphoned to private interests, everyone can still claim that the letter of this clause has been followed. Furthermore, who is the ICOC (stands for the Independent Citizen's Oversight Committee) which must establish and oversee the standards? According to Proposition 71, the ICOC must be made up of 29 members specifically picked from University campuses, Hospitals, research institutions, and "disease advocacy groups" which are specifically enumerated. Unashamedly, these are exactly the groups that will be receiving the $3 billion. There must be members from groups for each of the following diseases: spinal cord injury, Alzheimer's disease, type II diabetes, multiple sclerosis or amyotrophic lateral sclerosis,

type I diabetes, heart disease, cancer, Parkinson's disease, Mental Health, and HIV/AIDS. Undoubtedly, this laundry list was designed specifically to gain the support of these groups for the initiative. These members will obviously be heavily lobbied to support specific funding projects and to develop the specific language of patent royalty sharing, Moreover, each group has an inside member on the ICOC to look after its interests. But who will lobby on behalf of the California taxpayer? Economic analysis and theory, especially that of the Public Choice school of thought, indicates rather clearly that the widely dispersed taxpayers with no direct representation will not stand a chance against the organized, concentrated lobbying efforts of the potential grant recipients who are directly represented. B&D predict the state will get a minimum of $527 million, I say do not hold your breath.

Finally, and briefly, B&D make claims about job creation. This methodology is flawed for the same reason that counting tax revenues from Proposition 71 spending without offsetting the decreases in spending elsewhere is flawed. New jobs in stem-cell research are offset by lost jobs in industries where the $3 billion would otherwise have been invested. This might be in mass transit, cleaner fuel technology, housing, computers, or otherwise. New jobs in stem cell research are lost jobs in whatever areas Californians have to cut back in order to afford the increased taxes necessary to pay back $5.4 billion. If increased taxes force someone to delay purchasing a newer, safer, cleaner car, then that person is at extra risk of serious injury. How ironic if a health care initiative actually ruins someone's health. This potential cost is no less real than the potential benefits sought in stem cell research.