Economic Analysis of Public Policy

Mini Project Presentation Comments

Three Gorges Dam: Students Average 8.1; Instructor 9.3

(Baozhi Gu, Kenji Kurotobi, Yuri Kim, Felipe Francisco de Souza)

Instructor Comments:

- It is impressive that the group succeeded in making the cost-benefit analysis of such a complicated project coherent and intelligible. The consistent format of having methodology and limitations sub-sections has worked well.
- The Executive Summary is much too short. Also, it should contain the summary table of CBA results.
- Need more detailed versions of Tables 2 and 3 that contain major components of benefits and costs.
- Page 5: Discussions in the Limitations section need streamlining of the arguments.
- Page 9: More explanation is necessary for your choice of the shadow price for carbon emission.

Students Comments:

- Final report: the executive summary is precise, being easy to understand the main arguments on cost and benefit analysis, especially by highlighting the limitations with components analysis and results. The introduction provides an historical approach on the Three Gorges Dam construction, then, the research question is clearly presented and a brief research methodology is described. The chapter on costs and benefits components is well structured considering their definitions, methodology, and the support of a qualitative analysis explaining the limitations on each evaluated component. Also, the methodology and the data presented are carefully supported by a good literature review helping the reader to easily follow the research progress. Analysis validity: the research was carefully organized to address a complicated project in a comprehensive and understandable way. The report presents an important summary table of the diverse methodologies used for costs and benefit analysis, but it lacks a summary table with numbers and calculations – possibly due to the extensive amount of data. Finally, the report could be improved with a better analytical explanation on CBA ratios results and with a better qualitative debate and recommendations related to clean energy policies and dam constructions.
- Their presentation is clear. In the sensitivity analysis part of their report, for some cost benefit components, they did not state clearly how they decide the minimum and maximum scenario. For example, electricity generation, they did not explain why power generation level in 2012 is used as the minimum scenario.
- Understandable and clear writing. Appropriate use of terminology. Overall very good impression and well organized. Covers different various costs and benefits of dam, but there are limitation in estimating cost and benefits, what makes an impression that the estimation is not very precise, but in some way it gives a some standing point how much the projects cots, one example of benefit of flood control, different sources of data on cost and uncertenteniers to which extend that dam is protecting against the flood and there is always human risk in unpropriate control of water level (very evident case of huma e error causing hudge flood was in Thailand 2011, where human mistake caused extreme flood with extreme damage). Thus, human error shall be included also in the risk part, not only earth quake (i.e. in other case, although not flooding, like Fukushima disaster, not only earthquake but human error was a cause of damage). CO2 emission reduction shall be also calculated along improoving efficiency of shipment, together with improving shipment, the replacement of land transportation with water transportation would bring also benefit in reduction of CO2 emisssson. Dam construction and mantanance, aside from the cost, brings also a benefit in terms of job creation, even providibg housing for people, it often happens that dam construction brings a job to workers, who also receive housing, as dam building takes time and workers need to settle down. Shadow prices for
Environmental damage could be much higher, but methodology just use adjusted prices from 1980s where people were asked to pay to save panda. More ecological damage needs to be considered.

- The presentation is beautifully presented, information is clear and precise. The report is well organized; covers fruitful information and references are well indicated. The calculation is clear, with both minimum and maximum assumptions, with NVP and social discount rate (5% and 10%) mainly taken into consideration. Good analysis based on existing papers and reports.

  - Interesting project, and they used different sources for their data. Cost benefit analysis seemed comprehensive. Engaging.

  - Generally speaking, this paper is very informative, very clearly laid out, and very comprehensive. Executive summary was informative and clear, but could have been a bit longer. Calculations and methodology and references in the body are excellent, although some more prominent figures or charts would have been useful. The wide sensitivity analysis range is a bit concerning, but I think you did a great job with research and calculation and I think such variation is inevitable.

- The paper is so excellent with very clear structure, well consideration of essential parts of the CBA analysis, good research of related research paper, and good consideration of the possible range of the CBA estimation result. and sensibility. To make it more perfect, my suggestions are

  1. We are so expecting that the author could provide a year to year financial and discounting table instead of a very general result since we must consider that the construction took a long time and thus the investment cost is not put into the project all in one time (in fact it has not finished now). We are not sure which of the above 2 methods the author chose. If the answer is the latter one, then it will significantly influence the result of the cost part analysis. Besides, just a citation from other’s paper without taking into consideration that the research period of the cited paper and how to due with the on going construction cost seems not plausible.

  2. It is quite understandable that many data of the price are not firsthand due to the shortage of data availability. But the year of data matters. If the data is in the year 1999, when the author hopes to use it at the beginning year of the project, discounting factor should be considered instead of using it directly without consideration of the different year of the original price data. Special the time of year matters when Yuan changed to dollars considering the huge change of exchange rate these years, the method of calculating which is not mentioned by the author either.

  3. We are not sure whether the cost of constructions should include the stop of shipment during construction time the data for estimating it could be available.

  4. The paper seems not to have mentioned the payment time of the lumpsum compensation for the migrants. Neither there is assumption that the compensation is made once for all in which year.

  5. We are doubting that it is proper to just add the 306,000 people that did not receive proper compensation to the total of people of displacement. Improper in fact might not equal displacement. For most cases, it might refer to that they have not received full amount of compensation fee, but they moved to another place given by the government with the people of the same village or even several neighboring villages. In this case, the result number should be narrowed significantly.

  6. The cost of displacement part could be more accurate if the author considers that in fact the social relations are not lost totally in fact since the moving is usually with unit of the whole village or neighboring villages instead of every individual.

  7. The price for CO2 is based on the news from http://finance.stockstar.com/JC2013061800002591.shtml. In fact it only give 30 Yuan as cost instead of a range of 10 Yuan to 30 Yuan. Besides it mentioned that China’s price is similar with EU’s, but the author seems not to have paid attention this statement, which is contrary to the group paper’s idea that EU and China have different different price.

- The report is well organized and the analysis is convincing and complete;
Presentation goes smoothly with every member having his or her contribution. No free-riders.

Follow the instructions from professor strictly
Instructor Comments:

- This is an extremely well crafted report that exceeds my expectation for the 2 credit course. The weak side is the sensitivity analysis. More systematic evaluation of the reliability of the estimates would enhance the credibility of the paper.
- On the suicide issue on page 8, more systematic international comparison would be useful. Intuitively, handguns would have little impacts on suicide in the long run, considering very high percentages of suicides in East Asia.
- On page 13, numbers in the equations need more explanation. For example, how did you come up with $418.
- On page 19: You should provide intuition about the numbers such as $178,362....

Students Comments:

- Final report: the executive summary is very precise, being easy to understand the main arguments on cost and benefit analysis. The introduction provided is very brief, and it lacks more information to help the reader to understand the gun ideology in USA, which somehow is mentioned in the qualitative analysis. The chapter on benefits and costs is very clear, explaining the definitions, the methodology to evaluate it, equation and results. Also, all the data is carefully supported by a good literature review helping the reader to follow easily the research process. The chapter on sensitivity analysis presents a sound explanation on social discount rate and compliance rate, and the chapter on secondary market presents the study limitation due to the lack of proper data. The qualitative analysis could be expanded as it validates even more the research results on implementing gun control policies. Analysis validity: the group presented a very organized analytical framework, carefully designed considering most of professor’s and students previous recommendations.
- The presentation is intriguing because they present the widest range of the cases imaginable generally with the image of the gun. I think picking up the other representative market which is influenced by the ban of gunfires such as attorney, would make more correct cost of this program. Paper also covers all important things necessary for considering Cost of ban of gunfires based on the presentation. And, especially one of the variables sensitivity analysis focuses on is the compliance rate, which is not considered in the dam project and shows the clearer values.
- Brief but still well managed analysis. Clear conclusion and presentation of data, for example in analysis of 10 years, individual years are also presented, not sum of 10 years. I have some doubts on estimation, if it’s fully valid. For example, in chapter on Lost of Tax, 48.47% was assumed as a lost of tax, however, the 48.47% that was used, was a share of firearm industry devoted to handguns according to Firearms Commerce, it does not not mean it is equal to revenue/tax, possibly the better profit/higher tax brings producing guns for military, thus share of production does not mean share of income. In lost of security it was taken percentage of household who own the gun times 2.6 people as average number of people in the household, however, it is not certain if all household keep gun to secure themselves, moreover, if the gun will be banned, it is possible that sense of security might increase and not all people will need gun to protect themselves. For instance, the CBA includes reduction in robbery, which is one the proof showing that security will increase. Same with reduction of number of assaults, which was also considere in the Analysis. Doubtful is considering children in lost of security (if we consider own perception of people we do not know if children lose sense of security, unless we consider point of view of parents, however, which house have gun for security which for other reason, is not sure.
- Lack of consideration of alternative weapons that could replace the gun and emerging black market, which would coae a hudge lost of governmental revenue and maybe other type of insecurity.
- Presentation clearly shows a clear CBA finding of banning handguns in the US. The report is also shows the findings, with a clear calculation of total benefits, total costs and total value.
• Clear presentation, well-organized layout of paper and simple, straight explanation. However, some questions still remain.
  For benefits:
  - reduction in deaths (both homicides and suicides) caused by handguns is calculated with number of incidents but in my understanding, the injuries caused by failed homicides and suicides may have higher value than deaths as we learned in the class. Therefore, the benefits may be larger.
  - it is unclear whether cost of robberies adopted from previous literature are robberies with hand-gun or all robberies.
  For costs:
  - gun buy-backs and lost in jobs in the industry are assumed to be one-time payment processed in one year. Yet, it may be possible that those losses happen over one year.
• The paper is clear structured and, and it could be remarked as a very impressive work considering the difficulty to find related data. Here are some comments and recommendation:
  1. Research time span. When introducing the research methods or target, it is necessary to introduce the time span your project covers. It finally appeared at the last part of the main text 2004-2012, which tends to cause confusion from readers. Besides, from the conclusion part, it is better to give the exact year instead of the sequence of the year, since we do not know that it is downwards or upwards sequencing.
  2. Differentiation of facts and assumptions. In many places of the paper, assumptions are seldom mentioned. For example, the group just use the 928 dollars as price criteria for cost of loss of security feeling directly. It means the number is a actual price for security feeling loss. If there is not so much confidence, then it would be better to mention we assume…
  3. Unclear time of some numbers. For example, for the unemployment part, the data of average salary 909 dollars, there is no indication about which year it refers to. If it does not average salary for 2004, then the calculation is wrong. In fact in most part of the analysis, it is not clear that which year the calculated number is for.
  4. When calculating the benefit of crimes, the group adjusts the Australian’s number by the difference of natural crime rate between the two countries. However, if the difference of the ratio of homicide in total natural crime and the adolescence homicide occasion (the occasion adolescence are too young to be punished by law), for example, is also considered when converting Australian’s number, then it would be perfect.
  5. The match of the numbers. Due to my poor reading skills, I wonder what the relationship between calculation numbers of every item of benefit and cost in the analysis part and those numbers in the conclusion part. I expected that the number for example for the benefit of homicide decrease should appear in some place of the benefit discounting table, while maybe due to my careless reading, there is not.
  6. Price of security feeling loss. I am a little doubted about the criteria it chosen to estimate cost of loss of security feeling. The buyback price is not proper for estimating the loss of security feeling. Usually, this number would be smaller than the price of security feeling. It might be worth to consider the price of most popular type of handgun, and adjusted it with some factor, like estimated average used years of handguns.
  7. Secondary market of shotgun. Unavailability is not so proper to be covered by a subjective denial of the effect of shotgun without sufficient support since there is no citation. It is said that buyers buy handgun is in order to carry it everywhere. Is it sufficient to conclude that there is no substitution between the two firearms?
• The topic of the report is interesting and the report is well organized and convincing in general although some aspects of the analysis are debatable.
  Presentation goes well with contributions from each group member;
  Follow the instructions from professor strictly;

Number Plate Auction: Students Average 7.7; Instructor 9.1
(Zhao Yu, Gaye Kim, Marcin Jarzebski Pawel)
Instructor Comments:

- This report is still incomplete in presentation, with a lot of grammatical errors, typos, and rough edges in the analysis, but it works on an interesting but difficult topic. I value the challenging spirit highly.
- Section 2 on the CBA of auctioning must be streamlined. The present one is difficult to follow. Next time, make sure that you take time to reorganize what you want to say after deriving your results.
- Net benefits are usually “with” minus “without”. Reversing these is confusing.
- It is desirable to provide the numbers for important variables such as $P^h$ and $P^{hb}$.

Students Comments:

- Final report: the executive summary is confusing, lacking a brief explanation on auction and lottery systems, and then, a clear explanation on research questions and major components or methodology used for the CBA analysis and results. The introduction goes better, with sound explanation on procedures and issues related to car-plate license systems, but seems that part of the text is missing on the research analysis explanation. In chapter 2, the theoretical analysis is comprehensive and detailed, still hard to follow, but table 2.2 and graphs 2.3, 2.4 and 2.5 provide a good summary and insights on analysis results. In chapter 3, the variables are sound explained and the calculation of externality is presented. The conclusion somehow is a unique attempt if the reader wants to understand the research process, and should’ve been incorporated as the executive summary. Analysis validity: the group tried to make clear the research question and the two system’s comparison this time, but they do not take in account some professor’s and students recommendations. It is quite hard to read the report and follow the methodology description – for instance, in chapter 2 on research method, three different theories are mentioned “game theory, classical first-price sealed-bid theory and lottery theory” without explaining why they were chosen and what sort of relation they might have to answer the research question and help with the analysis results. With so many details on the mechanisms of auction and lottery, and different calculations and methodology approaches, the group should’ve used more visual elements, and a short explanation below every graph. Honestly speaking is hard to validate the group analysis because it was really hard to understand it, but even with an extensive quantitative analysis, I think the work lacks a better qualitative analysis. Even if auction efficiency was “measured” with a complicated methodology and stated as better than lottery system, future risks – complicated to measure – seem to be neglected and the group should be careful to promote auction as an ideal model to solve congestion problems.
- Their research topic is a difficult one, and they did a good job. For VTTS, they calculated a unified standard, but VTTS should be different for different people (e.g. for business purposes, for leisure purposes, etc.). I am not sure if it is required in their study, because I think it is better to explain why they used a standard VTTS in the report.
- I realized that this auction and lottery system are deeply related to the transportation policy in China through the presentation. They make an economic analysis based on the game theory, which includes the probability. Generally, the economic analysis seldom use the probability, and the probability depends on the government policy (ratio of winning), but this policy is reflected well. Therefore, I highly evaluate making this complicated analysis in this final report.
- Honestly, presentation was not beautiful and the findings were complicated. In the report, there’s clear introduction to the paper, main findings and the combined final outcome of the results, with a list of limitations. Probability had been included in the calculation, with various scenarios of assumptions, as Professor requested. The calculation is well above the learning level of the course, and it deserves much credit for the effort.
- Interesting topic. There seems to be much more improvement than the first time but still some confusing aspects.
- Executive summary was informative, and background information was helpful. Diagrams and charts were very useful and well done. Still, at times I had trouble finding the main takeaways, especially since the formatting varied from section to section. I think a policymaker might have trouble interpreting the various
- Wrong numbering of chapters and some minor misarrangement in the layout (e.g. lack of numbering for figures and tables, incomplete sentence).
- Difficult to understand the overall flow of the paper.

- The topic is interesting and the research is innovative. Significant improvement has been made compared to the presentation considering the theoretical analysis, externality, and integrity of the main parts of the paper. Limitations are
  1. Reason should be given for the choice of discount ratio.
  2. To be more scientific, a range instead of a specific number should be given for the final result of cost and benefit analysis.
  3. There are little research paper on this topic, and the research limitations are significant.
  4. If the research could make for a longer run, it would be better.
  5. There are still room for the game theory to be more deep and accurate.

- The topic of the report is novel and interesting. However, the analysis is kind of confusing and seems not easy to understand.
  Presentation goes beyond the time limit with contributions from each group member;
  Doesn’t follow the instructions strictly, with some ingredients of cost and benefit analysis missing.