

EconWorks Expert Task Group 2018 Q1 Meeting Minutes

Tuesday, March 27, 2018 • 1:00 – 2:00 PM Eastern
American Association of State Highway and Transportation Officials Office
444 N Capitol St. NW – Room 381 - Washington, DC 20001
Call in: 866-203-7023 Code 8980060415

ATTENDEES (IN BOLD):

<u>Members</u>	<u>Liaisons & Others</u>
<ul style="list-style-type: none"> • Alan Dybing, North Dakota State University • Mac Hughes-Cromwick, American Public Transportation Association • Ben Gruswitz, Delaware Valley Regional Planning Commission • Kelly Gwin, Georgia DOT • Jeff Harris, Utah DOT • Bill Keyrouze, Association of Metropolitan Planning Organizations • Subrat Mahapatra, Maryland State Highway Administration • Sebastian Montagne, North Carolina DOT • Ben Orsbon, South Dakota DOT • Steve Polzin, University of South Florida • Eric Randall, Metropolitan Washington Council of Governments • Joseph Schofer, Northwestern University • David Schwartz, Kansas DOT • Jeff Sudmeier, Colorado DOT • Kevin Verre, Nevada DOT 	<ul style="list-style-type: none"> • Mara Campbell, CH2M • Ryan Endorf, Federal Highway Administration • Brian Gardner, Federal Highway Administration • Steve Fitzroy, Economic Development Research Group, Inc. • Lei Zhang, University of Maryland • Eirini Kastrouni, University of Maryland • Cui Qingbin, University of Maryland • Paul Schonfeld, University of Maryland • Dorothy Parnian, University of Maryland • Rahil Saeedi, University of Maryland • Liana Montoya, University of Maryland • David Donaldson, University of Maryland • Matthew Hardy, AASHTO • Pam Hutton, AASHTO • Stefan Natzke, Federal Highway Administration • Jen Smoker, CH2M • Valentin Vulov, Federal Highway Administration

SUMMARY OF TOPICS

1. Welcome and Rollcall
2. Review Agenda
3. FHWA-Update and Comments
4. Update and Live Demonstration of the Functionality of Web Based Tools
5. Long Term Approach for EconWorks – Pooled funder Initiative Update
6. Final Questions/Topics
7. Wrap-up and Adjourn

SUMMARY

1. WELCOME AND ROLLCALL – MARA CAMPBELL

Mara Campbell welcomed everyone to those who were participating via conference call. She thanked them in advance for their participation.

2. REVIEW AGENDA – MARA CAMPBELL

Mara noted there several agenda items to be addressed on the conference call. She proceeded to outline the agenda and paused to request any additional comments or agenda items to be included for discussion today – there was none so she then introduced Brian Gardner to give the FHWA Update.

3. FHWA UPDATE – BRIAN GARDNER

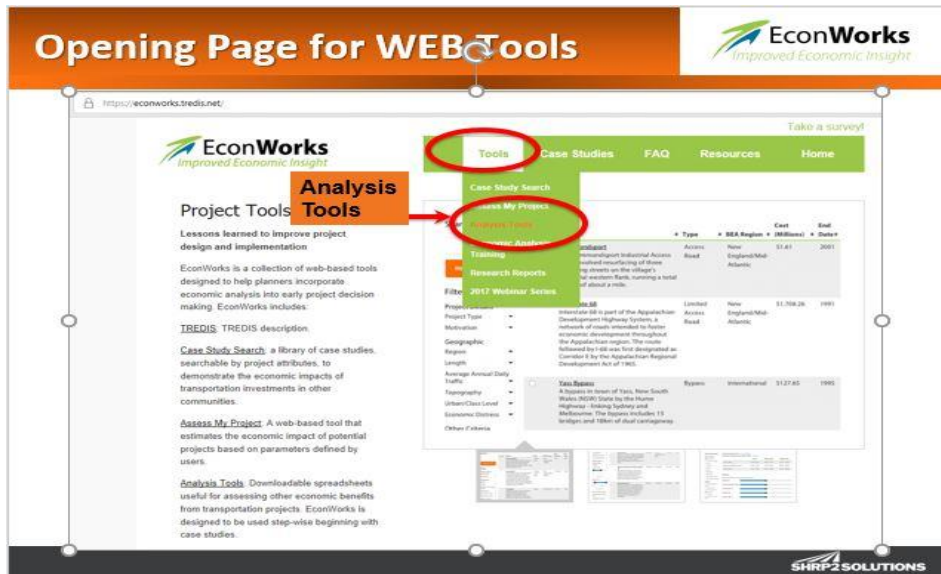
Brian reported on the wrapping up the implementation systems portion of the SHRP2 effort. Brian thanked all the states and MPOs who partner on this effort. The next focus will be moving forward with the work from SHRP2, in partnership with AASHTO. He mentioned he is looking to do lessons learned with respect to sub patterns of Post ADHOC analysis

Mara thanked Brian for the update and presentation. She opened the conversation up to the ETG members for comments and questions for Brian. There were none, so she introduced Steve Fitzroy, EDR Group, to give an update of the conversation of the WEB based tools that are underway.

4. UPDATE, FUNCTIONALITY AND DEMONSTRATION OF WEB BASED TOOLS – STEVE FITZROY

Steve reviewed how the Analysis tools have helped DOTs/MPOs use real data to analyze economic benefits for project decision making. These tools uncover the economic returns for transportation investments. Steve then proceeded with a Live Demonstration of the Analysis Web Tool.

As featured in the presentation (and refer to PowerPoint slide 7 and 8), the following updates have



been made:

- This tool is User Friendly
- Tool Icon drop down menu
- Choose the “Analysis Tool”
- Register First see [Register](#) Link at bottom of the initial web page
- User Login screen



- a. Once logged in this Tool is ready to go, you can create new projects, add description then select the questions/answers on the pre-selected tool will be highlighted in orange on the screen, select fields you want to see data on, etc.
- b. Or Select a current project with data information points to select
- c. A variety of categories and fields, geography, scenarios and markets.
- d. Hive on the field description icon and a popup screen appears providing additional info, etc.
- e. Use the Web Tool and Review
- f. All review comments should be sent to Mara Campbell or Steve Fitzroy by April 13th

Steve opened the discussion for any questions. Mara thanked Steve Fitzroy of EDR Group for his efforts in providing a relatively easy and efficient update to the Web Tool.

Steve received good feedback from the ETG regarding accessibility to the casually user. He offered the ETG the opportunity to provide more input and looks forward to additional comments on the Web Tool. Mara offered to send the ETG a link to the “testing” for the WEB conversion. The timeline for the webtool review and comments will be two weeks. Mara wants feedback back by April 13th. She encouraged everyone to offer feedback, as the desire is that everyone who uses it – needs to have a good experience. ***(As a reminder: the link will be to the Test server NOT the Production server. ETG group won’t have access to the rest of functionality of EconWork. The user code allows access only to the Iframe on the Tool section so some case studies information won’t be available.)***

5. REVIEW OF META ANALYSIS UPDATE – STEVE FITZROY

The Meta Analysis Update target was March 27th which was accomplished by EDR Group. Steve gave a very brief review of the Meta Analysis of finding to-date and also reviewed the refining the equations which are used to estimate results. They are about 95 percent complete, but are anticipating a few changes going forward.

Currently, the new 92 cases are being restricted to highways cases because there are not enough transit or freight case studies to create reasonable estimations. The Meta Analysis still focuses on highway cases but instead of 57 cases to base the analysis on, now there are 92 cases. The introduction of the new case studies reduced the effects of the economic activity and distress characteristics. Some of these turned out to not be significant as it were with the initial cases. Also, the effect of population density was reduced in some new cases. So, the question arises, what is it about these new cases which cause these effects? Steve believes there are many of the same questions still unanswered. Is 92 cases reliable for statistical results – probably not. However, it’s preferred to characterize EconWorks as a database of cases not a tool that rivals more sophisticated economic models one may apply to some of these projects. Progress has been made identifying what to expect when there are new cases.

Steve explained the Data Aggregation Analysis grouped Case Studies into two categories: Roadways and Point-to-Point type of projects aggregated by mixed, rural and metro settings. This excludes international projects, freight-intermodal, big dig, and transit projects. It is based upon estimations. The first step is the explanatory variables being used during the testing process (see the list below)

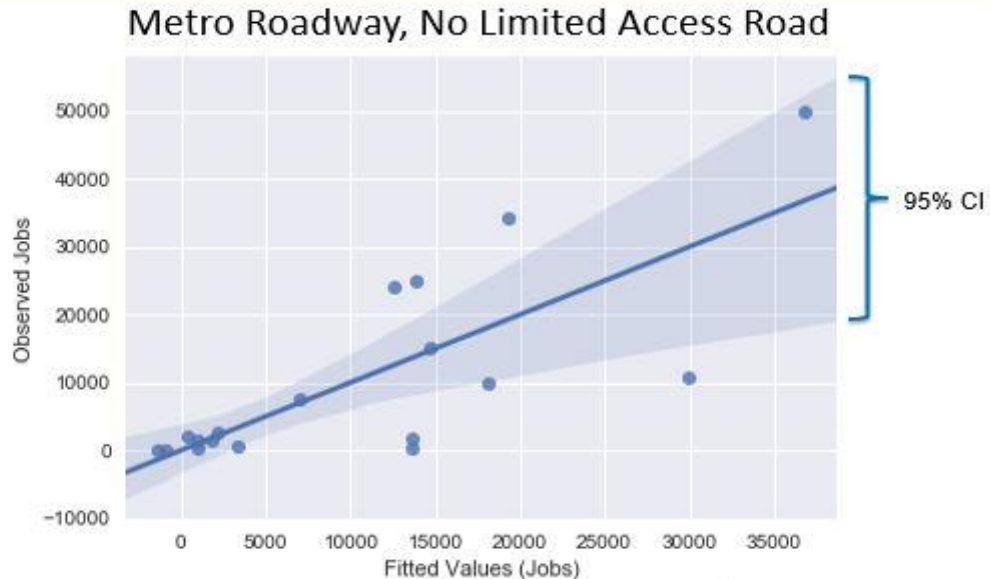
as they looked at the quantitative analysis portion of the data not qualitative analysis which was discussed in lengthy in the documentation, previously. These are the variables used in the equations.

Case Data Aggregation Analysis grouped Projects into Two Categories	
Roadways	Point to Point
Beltways	Access Roads
Bypasses	Bridges
Limited Access Roads	Connectors
Widening	Interchanges

Case Data Aggregation Bases of Estimation		
Settings	Roadway	Point to Point
Rural	10	12
Mixed	13	7
Metro	25	25
Note: Excludes international projects, freight intermodal, Big Dig and Transit projects		

Case Data Aggregation Explanatory Variables	
AADT	Pre-project distress dummy variable
VMT	Infrastructure dummy (positive or negative)
Length (miles)	Business climate dummy (positive or negative)
Scale of project (Lane Miles)	Land use dummy (positive or negative)
Urbanization (Population Density)	Airport travel distance
Market size (population w/in 40-minute drive)	Motivation (transportation motivation, economics motivation, transportation and economics motivation)
Terrain (extent of mountain terrain)	Pre-project distress dummy variable
Pre-project income per capita	Infrastructure dummy (positive or negative)
Pre-project distress level	Business climate dummy (positive or negative)
AADT	Land use dummy (positive or negative)
VMT	Airport travel distance
Length (miles)	Motivation (transportation motivation, economics motivation, transportation and economics motivation)
Scale of project (Lane Miles)	Pre-project distress dummy variable
Urbanization (Population Density)	Infrastructure dummy (positive or negative)
Market size (population w/in 40-minute drive)	Business climate dummy (positive or negative)
Terrain (extent of mountain terrain)	Land use dummy (positive or negative)

Regression Results – Metro

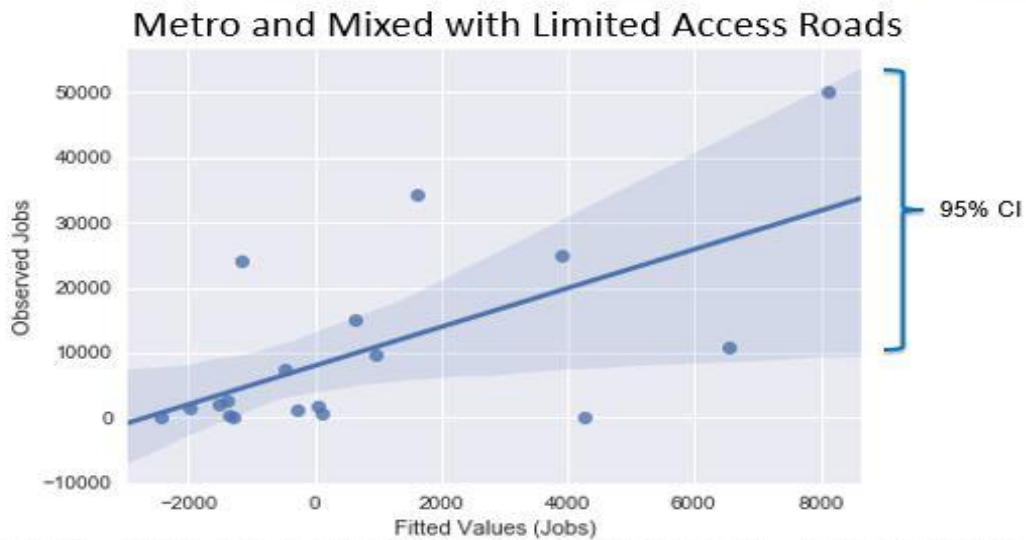


$$\text{DIRECT JOBS} = -1,586.86 + 0.0033 * \text{VMT} + 0.0073 * \text{MARKET SIZE}$$

Adj. R2 = 53%

This an example of how ERG Group looked at this. In fact, there are different ways of configuring and specifying the equations and data set which goes into them. What was found in metro roadways got better results when if they took out limited access roads and put under a separate set of equations. So, they are doing that.

Regression Results: Metro/Mixed



$$\text{DIRECT JOBS} = -6,432.179 + 0.0006 \cdot \text{VMT} + 11.9944 \cdot \text{LANE MILES} + 0.1304 \cdot \text{INCOME}$$

Adj. R² = 70%



This is another example included not only limited access road but the aggregate the Metro regions to give an idea how this changes the results. In this case, there are more observations and better R² and you can see how some of the coefficients are changing. The presentation and background information available to you as the documentation is completed.

Complementary Infrastructure and Policies		
	Factor	Number Reported (Original Cases)
Positive Synergies	Infrastructure (sewer, water, broadband, transit - Positive	48 (32)
	Land Use Management - Positive	63 (44)
	Financial Incentives/Business Climate – Positive	70 (45)
Lack of Appropriate Synergies	Financial Incentives/Business Climate – Negative	13 (10)
	Infrastructure (sewer, water, broadband, transit – Negative	11 (6)
	I Land Use Management - Negative	9 (6)
N=132 (97)		

Based on the review of the case studies and the narratives which were generated by those case studies along with understanding some of the challenges involved in putting together the case studies. The EDR Group found the following:

- There is a lot more interpretation and need for more careful definition of what business incentives include.
- There is quite a range of quality associated with the varies job training programs, levels of taxes are declining and abatements are high localized. Steve suggested some of this wide-ranging variation in business incentives is leading to an increasing spread of these effects in the meta-analysis. Therefore, it's a footnote to those using the tool to read the documentation that provides a better understanding instead of relying on the project tool verses the case studies.
- This is a lot of information to absorb (just the tip of the iceberg) and EDR Group will be producing descriptive statistics for all the project types going forward.

Steve turned the meeting back to Mara. Mara opened the floor to the ETG to offer discussion, clarification or questions to be addressed by Steve.

Question 1: Given the variation you have witnessed in the case studies, obviously a larger sample can modify the results. Is there any feedback in terms definition or interpretation or measurement issues that can help improve the consistence of the technical information for the case studies, that might explain some of the variation across context?

Answer: Yes, the experience working with UMD and experience with our own staff doing these things re-enforces the idea that the training modules available in various forms are very important. We must open the case studies process to reinforce the idea people should have some level training or some exposure to the training modules. People need to understand the concepts involved and the purpose of the case studies as well as how things are being defined. The next wave of case studies entered will rely on instructional materials and tutorials to be a help and way to 1.) improve consistency and definitions and 2.) get a more practical way of looking at ex=post analysis from people in the real world. These are real contributions from EconWorks to the state of the practice and improving meta-analysis work looking at results.

This will be a way to accomplish:

- Improve the consistence in the definition between the cases,
- Begin to get a practice ready way of looking at X Post-analysis out into real people in the world who will be doing this.
- These are the real contributions that the EconWorks system can make to the state of the practice when come to X Post-analysis
- Assist in provide EconWork do a better job with the meta-analysis and qualitative analysis in looking at the results of the cases.

Question 2: Should Meta-Analysis be collected for transit data, once there are enough case studies in the pool?

Answer: This a question for the ETG to answer. Our response is it should be contemplated after looking at some of descriptive statistics, range of the transit case studies, the condition of the ground and unique circumstances would seem we will need a lot of transit case studies to begin to draw conclusions that we can translate into tools similar to the highway tools. The primary contribution of the transit case studies is to help people identify situations are similar to theirs. Secondary benefits maybe in the future looking at statistical analysis but we will need around 70/80 transit case studies to begin a have any confidence in the statistics we are drawing from.

Mara called for any additional questions then moved on to the next topic – which was the Long-Term Approach for EconWorks with Jeff Harris from Utah DOT providing an update on the Pooled Fund Initiative.

6. LONG TERM APPROACH FOR ECONWORKS POOLED FUND INITIATIVE UPDATE

Jeff explained there is a procurement issue at UDOT that he is working through. In essence, to bring the existing consultant team forward into the next effort by means of a pooled fund, his state requires an exception to their current procurement policy. He has scheduled a meeting on Monday, April 2, 2018, with senior leaders within UDOT to obtain this exception.

Mara gave the ETG members a quick overview on the long-term approach for the pool fund, which is once Jeff clears the procurement hurdle, he will set up a pool fund which the States DOTs' can participate in. Based on the number of state DOTs willing to participate, this will fund the EconWorks website and additional case studies in the future. The team is hoping to confirm the number of States willing to participate and what FHWA might contribute by early summer. In the end, this will determine whether there is enough interest and enough financial support to keep EconWorks going for the next 5 years through a Pooled Fund supported initiative by state DOTs and supported by FHWA. Mara opened the discussion for any additional questions about the proposed approach moving forward.

Jeff Harris explained that while Colorado DOT had originally agreed to be the Pooled Fund Sponsor, changing roles and assignments of the Colorado DOT, caused AASHTO to reconsider and ask UDOT (Jeff Harris) to be the sponsor. Utah wants to see EconWorks move forward and they are very interested in improving and refining the tool. There is potential for this tool to be used as an example to move SHRP2 efforts forward. He praised what the consultant team has done with respect to the web based tool conversion. He thought it was awesome in terms of usability and has increased it's potential for use with other DOTs and MPOs. AASHTO's discussion with DOTs seems to show support to move EconWorks forward.

7. FINAL QUESTIONS/TOPICS

Mara asked for any additional questions or comments about moving forward. Mara concluded that ETG members were appointed under the SHRP2 Initiative. AASHTO is interested in knowing if any of the current ETG members are interested in continuing in the role of an ETG member moving forward through the transition from SHRP2 into a freestanding project under the Pool Fund initiative. A new ETG will be created to help determine the number of case studies, types, etc. She extended the opportunity to everyone on the call and who is currently serving in this capacity of an ETG member,

to continue in that role if interested. Anyone interested should let Dr. Matt Hardy at AASHTO or Mara know.

8. WRAP-UP AND ADJOURN

Mara thanked everyone for their participation and asked the ETG members if there were any additional questions or topics they would like to discuss.

- Steve will be sending a link to review new web based tool.
- You will be kept posted on the creation of the Pool Fund and how many States are participating and how it is maturing.
- Meeting notes will be sent out next week.
- Mara thanked Steve for his excellent job on the web based tool conversion.

9. MEETING MATERIALS

- ETG Meeting Agenda
- Slides of Meeting Presentations