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Evaluating and Improving TIGER Grants

by Baruch Feigenbaum



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Evaluating and Improving the Transportation Investment Generating Economic Recovery (TIGER) Grants

By Baruch Feigenbaum

Executive Summary

The Transportation Investment Generating Economic Recovery (TIGER) grants constitute a discretionary federal grants program funded by Congress and administered by the Department of Transportation (DOT). TIGER I grants are a part of the American Recovery and Reinvestment Act of 2009, better known as The Stimulus, while TIGER II and TIGER III grants are separate discretionary funding awards dispersed in November 2010 and December 2011 respectively.

This brief explains the purpose and history of the program, evaluates the program and concludes with ten ways that DOT could improve the program's processes in order to reduce these problems. It evaluates the program's strengths and weaknesses against eight measures:

- Metrics
- Review Process
- The Quality of Supporting Documentation
- Geographic Dispersions
- Public Information
- Political Equality
- The Quality of Economic Analysis
- The Rural/Urban Bias

The following is a selection of the more serious problems with the TIGER grants:

- The metrics that DOT used to evaluate the applications lacked quantitative components.
- Certain funding applications contained incorrect information that the DOT used in press releases to justify the funding of those applications.
- DOT provided limited information to the public explaining the process.
- Grant funding was not determined by rigorous application of DOT's own evaluation: DOT funded almost as many Recommended projects (25) as Highly Recommended projects (26). Meanwhile, only 23% of the 110 projects ranked Highly Recommended were funded. The Review Team offered no official written explanation of its selections. The Team offered notes in draft form and a memo; these only created more questions by explaining that in many cases the projects selected were no better than the projects not selected.
- A disproportionately large number of projects were funded in Democratic districts. In TIGER I, TIGER II Capital, TIGER II Planning and TIGER III, Democratic districts were awarded a higher percentage of grants than their overall proportional representation. In TIGER III, districts represented by Democrats received 69% of the funding despite Democrats holding only 47% of the total congressional seats.



Gerald Desmond Bridge in Long Beach, California

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Part 1

History and Grant Purpose

Overview

Congress appropriated \$1.5 billion in Stimulus funds for TIGER I grants distributed in February 2010, \$600 million from the DOT budget for TIGER II grants distributed in November 2011, and \$527 million from the DOT budget for TIGER III grants distributed in December 2011.¹ According to the Department of Transportation (DOT), the awards “...provide a unique opportunity for the U.S. DOT to invest in road, rail, transit, and port projects that have a significant impact on the nation, a region, or a metropolitan area.”²

Legislation authorizing TIGER I grants is part of the 2009 American Recovery and Reinvestment Act (ARRA), informally known as The Stimulus. (TIGER II and TIGER III programs are also based on this legislation.) In stimulus funding the government borrows money to increase spending. Stimulus spending ends after a certain time period, increasing unemployment and adding uncertainty to the business process. The Stimulus and subsequent similar federal grants are controversial. Many economists and even some policymakers argue that such “Keynesian” government spending on short-term projects is harmful to the long-term health of the economy. While these funds could create new jobs, much of the money in 2009’s ARRA plugs budget holes in state governments. This delays government restructuring while creating little private sector economic activity. Additionally, the amount of funds dedicated to transportation is only 2% of the stimulus total.³ Nonetheless it is worth investigating the way the grants are made and the money is spent. This Policy Brief analyzes the TIGER grant program by evaluating the grant processes.

How the TIGER Program Assigned the Grants

While much of the decision-making was left to the DOT, the law required that the grants (1) preserve and create jobs, (2) invest in transportation infrastructure that will provide long-term economic benefits, and (3) assist those most affected by the current economic downturn. The Department was also required to ensure both an equitable geographic distribution of funds and an accurate balance of funds between urban and rural communities. Unlike most federal transportation funding, the grants in rural areas could fund 100 percent of project costs. President Obama sent a memo directing transparent, merit-based selection criteria. He directed the DOT to award grants to projects with a “demonstrated or potential ability” to “deliver programmatic results, achieve

economic stimulus by optimizing economic activity and the number of jobs created, achieve long-term public benefits, and satisfy the Recovery Act’s transparency and accountability objectives.”⁴

According to DOT, “The TIGER programs used rigorous, multi-modal selection criteria and the results of economic analysis to select projects and track the effectiveness of TIGER investments through focused project-specific performance measurement plans. The program funded road improvements, railway improvements, streetcar lines, bicycle and pedestrian facilities and redevelopment of industrial facilities.”⁵

A total of 136 grants were awarded to various states. There were 51 TIGER I Grants, 42 TIGER II Capital Grants (17 of them rural), 33 TIGER II Planning Grants administered jointly by DOT and the U.S. Department of Housing and Urban Development (HUD) (11 of which were rural) and 46 TIGER III Grants (of which 20 were rural).⁶

The DOT used a set of criteria to evaluate the projects. Primary criteria included:

1. Long-Term Outcomes that consisted of:
 - State of Good Repair
 - Economic Competitiveness
 - Livability
 - Sustainability
 - Safety
 - Job Creation and Economic Stimulus
2. Secondary selection criteria included:
 - Innovation
 - Partnership⁷



DC newspaper headline for grant to improve pedestrian and bicycle access to rail stations

Applicants were expected to identify, quantify and compare expected costs and benefits. In TIGER I, this requirement was sometimes waived for applicants seeking less than \$20 million; it was required to be comprehensive for applicants seeking in excess of \$100 million. In TIGER II and TIGER III, cost-benefit analyses were required for all applications. Applicants with the ability to prepare detailed economic analysis were encouraged to provide a plan that could be used to evaluate the success of the project.⁸ The program also enforced federal laws that guaranteed equal opportunity. Additionally, no more than 20 percent of the funds could go to any one state.⁹

Since Stimulus projects were expected to proceed quickly, the DOT also considered:

- Project Schedule
- Environmental Approvals
- Legislative Approvals
- State and Local Planning
- Technical Feasibility
- Financial Feasibility¹⁰

The review process consisted of 10 Evaluation Teams, one Control and Calibration Team, and one Review Team.¹¹ In TIGER I, each Evaluation Team, which conducted the rankings of the projects, was composed of five employees from different divisions. The participating divisions in DOT included Highways, Transit, Railroad, Office of the Secretary, Aviation, Maritime and the Office of the Inspector General.¹² At least one employee from the appropriate project division (e.g., Federal Highway Administration for a road maintenance project) was chosen to review that project. In TIGER II and TIGER III, the Evaluation Teams were mode-specific, reviewing only one type of project, such as Highway. First, team members individually evaluated each project by providing an individual ranking for each criterion. Then, the team members met together and selected an overall team ranking for each project. DOT guidance recommended that projects in which four or five team members gave Highly Recommended scores should be advanced, that projects in which three team members gave Highly Recommended scores could be advanced on a case-by-case basis, and projects with scores of less than three not be advanced. A Control and Calibration Team selectively reviewed and advanced applications that received less than a Highly Recommended score from the Project Teams throughout the process to ensure consistency, to support statutory requirements and to satisfy the request of the Review Team.¹³



DOT's Transportation Investment Generating Economic Recovery sign. TIGER grants have become an annual discretionary grant program with limited relevance to Economic Recovery.

The Review Team was the final team that analyzed applications. The Review Team consisted of 12 senior staff, including the Deputy Secretary, Under Secretary, three Assistant Secretaries, the Chief of Staff, the General Counsel, the Federal Highway Administration administrator (FHWA), the Federal Railroad Administration administrator (FRA), the Federal Transit Administration administrator (FTA), the Maritime Administration administrator and the Research and Innovative Technology Administration

(RITA) administrator. The Review Team was responsible for 1) ensuring that award recommendations met statutory requirements, including equitable geographic and urban/rural distribution, 2) assessing the merits of advanced projects, 3) seeing that potential awardees were eligible and ready-to-go, and 4) recommending projects and the appropriate funding levels.¹⁴ At the

conclusion of the process, the Review Team wrote a memo detailing each project's strengths, benefits and alignment with TIGER criteria. The Secretary approved all 51 projects forwarded by the Review Team.

There were minor differences among the TIGER I, TIGER II and TIGER III processes. TIGER II grants included multi-agency planning grants with the Department of Housing and Urban Affairs.

This was a result of the DOT-Environmental Protection Agency (EPA)-HUD "Partnership for Sustainable Communities."¹⁵ According to the Partnership "[People will] gain access to affordable housing, more transportation options, lower transportation costs, and a cleaner environment." TIGER II Planning Grants were jointly funded by the Department of Transportation and the Department of Housing and Urban Development. TIGER II applications were funded under the 2010 Appropriations Act. TIGER III applications were funded under the 2011 Appropriations Act. In TIGER I, the minimum grant was \$20 million, though this rule could be waived by the Secretary.¹⁶ For TIGER II and III, the minimum grant was \$10 million; in rural areas the minimum was one million dollars.¹⁷ In TIGER II and TIGER III, approximately \$140 million of the funding was designated for rural areas that the U.S. DOT defines as any area that is not a densely settled territory.¹⁸ TIGER II and TIGER III evaluation teams were mode-specific. Because of poor benefit/cost analysis in TIGER I, TIGER II and TIGER III, notices also included a detailed guide to conducting a benefit-cost evaluation.¹⁹



Milton-Madison Bridge linking Indiana and Kentucky

Part 2

Problems with the Current Process

A. Vague Metrics

Despite DOT's emphasis on "rigorous" selection criteria and "project-specific performance measurement," the quality of analysis was poor. While DOT provided general explanations for its requirements, its definitions were vague and lacked quantitative metrics. Some concepts, such as Livability, were difficult to rank, but quantitative metrics have nonetheless been developed and reviewed by subject experts for each criterion. Therefore, DOT should have included at least two quantitative metrics for each ranked criterion. For example, in the Livability section statement, DOT could have revised metric (I) from, "Will significantly enhance user mobility through the creation of more convenient transportation options for travelers" to the metric, "Will provide missing links in the network providing connectivity. This will reduce travel times by an average of five minutes per trip." Metric (II) could change from, "Will improve existing transportation choices by enhancing points of modal connectivity on existing modal assets" to "Will enhance the highway mode resulting in increased throughput."

In Economic Competitiveness, the quality of the analysis was particularly problematic. The Department references, "The quality of jobs supported will be considered as well as number of jobs." In the Atlanta Streetcar Project, the largest project funded by TIGER II, the forecast for the number of jobs created was greatly inflated. This occurred in part because the DOT confused job-years with jobs. Additionally, PolitiFact, an independent fact reviewer, highlighted that, contrary to the claims of streetcar proponents, the project would only create 23 jobs to operate the trolleys and 467 jobs to build the rail line, all of them temporary.²⁰ The temporary employees would create other temporary jobs in restaurants and retailers, but those jobs would be considerably fewer than the 4,000 claimed by proponents. Despite the problems with the application, DOT used the inflated numbers in a press release. Problems existed for other projects and other elements of the metrics.

Further, as reported by the DOT Inspector General, "DOT's planned method to separate indirect jobs from total jobs in future reports did not consider factors such as wage increases that can reduce indirect jobs—which means DOT's indirect jobs estimates could be overstated. In addition, the report did not state exactly how DOT calculated the total number of jobs funded or note whether jobs were created or sustained."²¹ Clearly, DOT needs to develop a better system to accurately measure the number of new jobs.



Sign included with American Recovery and Reinvestment Act. The signs were controversial; some leaders thought they diverted money from actual construction and others thought the signs were political.

projects so that Job Creation and Economic Stimulus received 24% each of the score and Innovation and Partnership 8% each. The scoring could vary by project or by Evaluation Team. This could certainly lead to different scores.

The weighting of each criterion was another problem. There were no specific instructions that detailed the percentage weight of the primary or the secondary criteria. The lack of numerical guidance created scoring discrepancies among the Evaluation Teams, forcing the Control and Calibration and Review Teams to interpret different scores. With ten Evaluation Teams in TIGER I, and without quantitative instructions for the reviewers, all ten teams could not have placed the exact same weight on each criterion. Even within teams there were discrepancies. For example, one team member could review projects so that each long-term outcome constituted 9% of the score, Job Creation and Economic Stimulus 18% each and Innovation and Partnership 14% each.

Another team member could review

B. Confusing Review Process

DOT's review process was complicated and did not adequately ensure that projects were reviewed equally. Project review began with the Evaluation Teams.²² Each of the five members of each Evaluation Team ranked each project individually against each of the selection criteria. Then the Evaluation Teams discussed the projects in a group setting to arrive at a consensus agreement. Highly ranked projects were advanced to the Review Team. Projects not ranked highly were rejected. Then the Control and Calibration Team "selectively" reviewed and advanced projects, including some rejected by the Evaluation Teams, supposedly to ensure consistency. There was no explanation for how the Control and Calibration Teams chose projects to review or any definition for what "selectively" means. The Review Team chose projects advanced by both the Evaluation Teams and the Control and Calibration Team and sent the final list to the Secretary. The Secretary could have made further changes to the list but did not.

During the TIGER I grants review process, when the Evaluation Teams had employees from each DOT division, projects may have been reviewed by only one subject expert. A highway project could have been reviewed by one Federal Highway Administration (FHWA) employee, one Federal Transit Administration (FTA) employee, one Federal Railroad Administration (FRA)

employee, one Maritime Administration official and one Office of the Secretary of Transportation employee. Four DOT officials with limited knowledge of highways could reject a project over the objection of the one subject matter expert from the FHWA. To its credit, DOT fixed this problem in TIGER II and TIGER III by creating dedicated Evaluation Teams. One Evaluation team analyzed all highway projects, another Evaluation team all port projects, etc.

Also troubling was the composition of the Review Team. The Team's 12 staff members were all political employees. While some political appointees were necessary, the Review Team could have included at least some career professionals. Political appointees were more likely to approve transportation projects beneficial to the president regardless of their merits in other respects.



Artist rendering of proposed Cincinnati streetcar.

Yet only 26 of the 51 projects that were awarded funding were Highly Recommended projects. The other 25 were Recommended projects. Of the 115 Highly Recommended applications advanced by the Evaluation Teams, only 26 were awarded funds.

Why did the DOT award so many Recommended projects over Highly Recommended projects? During the TIGER I grant process, 115 of the 1,457 applications received a grade of Highly Recommended. Those projects requested \$7.7 billion in funding, five times the allocated \$1.5 billion. Yet only 26 of the 51 projects that were awarded funding were Highly Recommended projects. The other 25 were Recommended projects. Of the 115 Highly Recommended applications advanced by the Evaluation Teams, only 26 were awarded funds. The Control and Calibration

Team advanced 50 applications that were rated Recommended and one, the Cincinnati Streetcar Project, which was rated Not Recommended.²³ The projects advanced by the Control and Calibration Team had significantly poorer merits than the projects advanced by the Evaluation Teams. Control and Calibration Team projects received a Highly Recommended rating less than 25% of the time; Evaluation Team projects received a Highly Recommended score about 67% of the time. Despite these ratings only 26 of the 115 Evaluation team projects (23%) received funding, yet half of the Calibration Team projects (25 out of 50) were funded.

C. Poor Documentation

While the DOT documented the Evaluation Teams' reasons for decisions and assessment, it neither documented nor explained the Control and Calibration Team's or the Review Team's decisions.²⁴ Nor did the DOT document the Review Team's meetings where the final decisions were made. Any record of the proceedings was limited to draft minutes that were neither finalized nor approved. While some of the draft minutes focused on financial commitments or considered whether the project was ready to proceed, many others noted that a specific project that received funding was no more compelling than other similar projects that did not receive funding.

As there was no internal documentation, DOT did not demonstrate the reasons for its award selections. Further, as DOT did not provide documentation, some experts believe DOT could have met all of its criteria while choosing only Highly Recommended projects.²⁵ The DOT acknowledges that documentation of activities is vital for the accountability of its decision-making. Yet in regards to the TIGER Grants, DOT did not provide any substantial written record of decision-making.

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DOT's Office of Inspector General (OIG) had previously raised questions about discretionary grant selections, noting that projects that scored the highest in technical review were often not the projects selected.²⁶ The OIG recommended that when DOT decided to fund projects that scored relatively lower in technical review than other projects, a more thorough review was required and documentation was necessary. In TIGER I, DOT did not follow these steps. In March 2009, during Ray LaHood's early months as Secretary, DOT produced a *Financial Guidance Manual* that provided a standardized set of procedures for processing and awarding grants and requiring documentation when DOT decided not to fund projects with the highest priority. DOT violated its own guidelines when it funded projects with lower review scores without explaining its reasoning.

D. Geographic Requirements

Part of the explanation for the failure to allocate funding to Highly Recommended projects over Recommended projects arose from Congress' insistence in TIGER I and DOT's insistence in TIGER II and TIGER III that the grants be awarded proportionally to the four geographic areas (Northeast, Midwest, South, West) of the country. While political realities required that a certain amount of funding be allocated to each of the four geographic regions, it seemed unlikely that complete regional equality was necessary. A better alternative would have been to guarantee 12% funding to each of the four regions and allocate the other 52% to the best projects regardless of location. In TIGER I, the agency rejected several Highly Recommended projects in the West and Midwest to award Recommended projects in the South. However, the South had 23 Highly Recommended projects. Of the 23 projects, only two were selected by the Review Team for funding.²⁷ The Review Team insisted that the other 21 Highly Recommended projects were denied for financial or other reasons. Thus, of the eight TIGER I projects awarded to the South, only two were Highly Recommended projects while six were merely Recommended projects. In the absence of any publicly available explanatory notes, the Review Team's justification was difficult to understand. Regardless, if the Review Team believed that projects in the South were not qualified, it should have dedicated more funds to other regions of the country.

E. Limited Information on Selected Process Available and Released to Public



Texas State Highway 161 in suburban Dallas

While DOT explains the grants process and criteria satisfactorily, the reasons for funding certain projects are explained poorly. DOT does not publish the reasons for the Review Team's decisions, including any explanation as to why some applicants with similar scores are selected and others denied.²⁸ While technical analysis explaining other federal agencies' decisions to award grants is also lacking, the DOT, unlike many of these agencies, has a model program from which to work. In the New Starts program the DOT publishes all scores for each application and uses these scores exclusively as the determination for distributing awards. DOT could use this process for the TIGER grants. The Department of Education's Race to the Top program that releases its scores to the public is considered a model for effective public information.

In TIGER II and TIGER III DOT has not significantly increased its information disclosure to the public. Although DOT officials admit this would increase transparency, show accountability, and offer an opportunity to improve applications, the DOT is worried that releasing this information could hamper deliberation in future discretionary grant processes. All decisions have advantages and disadvantages. Since the advantages of a more transparent process outweigh the disadvantages of DOT making minor changes to its evaluation process, more public information should be released.

F. Democratic Congressional Districts Receive More Funding than Republican Congressional Districts

Independent analysis indicated that Democratic House districts received 29 percent more Stimulus funding than Republican House districts. While the grants were supposed to fund projects based on project qualification and not the political identification of the district, this was not reality. The first table shows the political representation of the districts where the grants were funded. The second table shows the political representation of relevant elected state and federal officials.

...there were no definitive factors other than politics that explained how Democrats received 80% of the funding despite controlling only 58% of the seats during TIGER I and TIGER II. It is equally mystifying how Democrats received 69% of the funding while controlling only 47% of the seats during TIGER III.

Funding Round	Congressional Representation of Places that Received TIGER Grants	Number of Projects	Percentage of Projects	Total Funding (in dollars)	Amount of Funding
TIGER I	Over 60% D	35	69%	1,093,756,988	72%
	Between 40-60% D	3	6%	135,551,028	9%
	Over 60% R	13	25%	290,943,000	19%
TIGER II Capital	Over 60% D	30	71%	425,826,385	77%
	Between 40-60% D	1	2%	10,000,000	2%
	Over 60% R	11	26%	120,751,206	22%
TIGER II Planning	Over 60% D	25	76%	35,521,078	87%
	Between 40-60% D	0	0%	0	0%
	Over 60% R	8	24%	5,534,319	13%
TIGER III	Over 60% D	28	61%	354,927,942	69%
	Between 40-60% D	2	4%	19,814,700	4%
	Over 60% R	16	35%	136,680,505	27%

Table 2: Political Representation of Governors, State Legislatures and Select Congressional Committees from 2009 and 2011

	Dem	Rep	Other		Dem	Rep
2009 U.S. House	256	178	1*	2009 Senate Approps	20	12
2011 U.S. House	193	242		2011 Senate Approps	16	14
2009 U.S. Senate	58	40	2 ^	2009 Trans & Infra	45	31
2011 U.S. Senate	51	47	2 ^	2011 Trans & Infra	26	33
2009 Governor	25	25		2009 EPW	11	8
2011 Governor	20	29	1 ^	2011 EPW	10	8
2009 State Legislature	27	14	8#	2009 Banking	14	10
2011 State Legislature	15	26	8#	2011 Banking	12	10
2009 House Approps	38	23		2009 Commerce	15	12
2011 House Approps	21	29		2011 Commerce	13	12

* Other equals the number of Empty Seats

^ Other equals the number of Independents

Other equals the number of Split Legislatures

Some of the Tiger II Planning grants were jointly administered by DOT and the Department of Housing and Urban Development (HUD). Additionally, over 40% of the funds in the TIGER I, TIGER II Capital and TIGER II Planning grants were awarded to Republican members on the Transportation and Infrastructure Committee.²⁹ The four highest-ranking Democrats on the Transportation and Infrastructure Committee also received at least one grant for their districts.

TIGER III grants were awarded during the first session of the 112th Congress. In this Congress 53% of the members were Republicans and 47% of the members were Democrats, yet districts represented by Democrats still received 61% of the funds.³⁰ The party controlling Congress typically receives more funding in discretionary grant processes. This tilts the process toward favoring the most influential politicians rather than the most needed projects. So what happened in TIGER III?

There are several theories. The first theory is that Democratic constituents favor stimulus-style spending, therefore cities and counties in Democratic districts usually apply for more grants. However, in TIGER I an equal number of projects in districts represented by Democrats and Republicans applied for grants.³¹ Second, Democratic districts are often located in central cities with a more critical need for infrastructure. To counter these effects Congress in TIGER I required that at least 20% of the funding be awarded to rural areas. The DOT in TIGER II and TIGER III required that at least \$140 million of the funds be given to rural areas. In reality, DOT awarded \$258 million in TIGER II and \$227 million in TIGER III to rural districts.³² Republican districts received 2/3 of these rural grants.³³ Third, Republicans controlled the House but Democrats controlled the Senate, limiting the effect of either party. As Republicans held a 50-seat lead in the House while Democrats held a two-seat lead in the Senate, this should have led either to an equal number of grants for Democratic and Republican districts or a larger number of grants for Republican districts.



American Recovery and Reinvestment Symbol

During TIGER I and TIGER II, Democrats controlled both the House Transportation and Infrastructure Committee and the Senate Environmental and Public Works and Banking Committees.³⁴ Yet for the TIGER III grants when the House was under Republican control, Democrats continued to receive substantially more than 50% of the grants. From 2008–2010 there were 25 Democratic governors and 25 Republican governors. The 2010 elections changed the balance to 29 Republican governors, 20 Democratic governors and one Independent governor. State leadership remained consistently more Republican than congressional representation.³⁵ According to the National Council of State Legislators, after the 2008 elections Democrats controlled 27 states, Republicans 14 states with the remaining 8 split.³⁶ After the 2010 elections the numbers reversed; Democrats controlled 15, Republicans controlled 26 and 8 were split.³⁷

Democrats outnumbered Republicans on both Senate and House Transportation Committees in 2009. As a result of the 2010 elections, Republicans gained the lead on the House Transportation and Infrastructure Committee.³⁸ The Democrats' large advantage in Committee membership may have increased the discrepancy in grants and funds awarded to the two parties. The 2011 Transportation and Infrastructure Committee had 33 Republicans and 26 Democrats.

Other factors are challenging to document. States have different forms of governments. In some states the DOT takes the lead role in applying for TIGER grants; in others cities, counties or MPOs made most of the applications.³⁹ Some states, such as Texas, are very conservative yet have Democratic areas such as downtown San Antonio whose local policy makers may view things differently than policy makers in suburban Dallas.



Artist rendering of CSX train

The DOT should fund the best projects. If projects in Democratic districts are substantially better than projects in Republican districts then that could explain the difference. If projects in the Northeast are substantially better than projects in the South then that could explain the difference. If projects in urban areas are substantially better than projects in suburban areas then that could explain the difference. However none of these hypotheticals are reality in the TIGER grants.

Considering all of the above, there were no definitive factors other than politics that explained how Democrats received 80% of the funding despite controlling only 58% of the seats during TIGER I and TIGER II. It is equally mystifying how Democrats received 69% of the funding while controlling only 47% of the seats during TIGER III. Even a Democratic president, Democratic state assemblies, Democratic governors and Democratic local officials should not tip the funding balance this much.

G. Poor Quality of Economic Analysis

According to Jack Wells, chief economist of the Department of Transportation, the quality of the general economic analysis of the TIGER grants was “pretty bad.”⁴⁰ Dr. Wells analyzed the different projects using a cost-benefit analysis on a scale of 1–4 where 1 was not useful at all and 4 was very useful. For the first round of TIGER grants, the average score of a project that received funding was 2.20, which translated to marginally useful. For the second round of TIGER grants the average score of a project that received funding was 2.30. An average score of 2.30 on a 1–4 scale suggested that many marginal projects were funded. Despite the additional TIGER II guidance, the

average score of funded projects in the TIGER II round only increased 0.10 over the average score of funded projects in the TIGER I round. The quality of analysis had little to do with the size of the applicant; some large cities prepared poor cost-benefit analyses while some small towns prepared good cost-benefit analyses.

Dr. Wells believes in the importance of all agencies conducting cost-benefit analyses. Mediocre analyses are better than no analyses.⁴¹ Still, with real budget constraints, it may be unrealistic in the future to expect smaller agencies to perform this analysis. In the future this could result in a disproportionately large share of the grants being awarded to bigger cities.

H. Rural Areas Receive Special Exceptions

TIGER grants are ostensibly intended to complement existing sources of funding. Projects for urban areas can be funded up to 80% of their total costs, although the projects that receive the most funding contribute substantially more than the 20% minimum local share. However, TIGER I grants in rural areas are permitted to fund up to 100% of a project’s total costs.⁴² If projects are 100% federally funded, there is less incentive for local government officials to keep costs down or to prioritize projects that add the most value. The Department should require all projects to have some local co-funding. This increases the likelihood that only the highest-priority projects are funded and also increases incentives to control costs.

I. Inconsistent Modal Funding

To determine mode share, this analysis splits TIGER grants into six categories in the table below. Transit is the dominant award winner. Total funding for the other modes varies between TIGER I, TIGER II Capital, TIGER II Planning and TIGER III Capital. Sixteen highway projects are funded in TIGER I while only five highway projects are funded in TIGER II Capital.

The 33 TIGER II planning projects include 14 projects coordinated with HUD, such as brownfield redevelopment or low-income housing.⁴³ As these projects are not generally transportation-related, project funding becomes an issue when a substantial amount of the funding originates from gas tax revenues. Since DOT does not disclose the percentage of funding from each agency there is no way to determine if transportation funds support community development projects.

Type of Mode	Highway	Transit	Rail	Port	Green	Other	Community/Economic Development
TIGER I/TIGER II Capital	21	26	17	11	14	2*	0
TIGER II Planning	0	5	0	0	10	0*	16
TIGER III	13	13	6	4	7	3*	0

*The other projects include four intelligent transportation systems projects and one Electric Vehicle Support network.⁴⁴

DOT funds significantly more Transit and Green projects than Highways projects. Multimodal transit hubs receive the largest number of grants. Grants should fund the most nationally important projects according to rational and impartial transportation criteria. TIGER II Planning grants fund only local projects. Whereas some of the TIGER I, TIGER II Capital and TIGER III projects fund rail or highway improvements in multiple states and can be considered national projects appropriate for the federal government, most of the TIGER II Planning projects affect one city or county. A few of the larger projects affect a metro region or state. All of the TIGER II Planning grants and many of the TIGER I, TIGER II Capital and TIGER III grants are for small local projects that should be funded and coordinated at the state or local level.



Artist rendering of Normal IL multimodal function

Part 3

Remedied Problems

DOT fixed several of the problems with its applications process that were identified by the Government Accountability Office (GAO), the Office of the Inspector General (OIG) and other reports. However, many other problems remain. DOT made no changes in its process between TIGER II and TIGER III.

There were several improvements between TIGER I and TIGER II. DOT streamlined the review process by requiring applicants to document that projects were eligible, ready-to-go, and had secured any necessary non-federal funding. DOT improved the review process by separating the Evaluation Teams into modes for evaluation including Highway, Transit and Railroad.⁴⁵

DOT fixed several of the problems with its applications process that were identified by the Government Accountability Office (GAO), the Office of the Inspector General (OIG) and other reports. However, many other problems remain.

DOT explains that projects are eligible for partial funding and that projects with a higher local match are more likely to receive funding. Many other federal funding programs operate in this way so this should not surprise the applicants. Still, more information is better than less information. DOT's most valuable improvement is providing detailed instructions on how to conduct cost-benefit analyses. Unfortunately this does not measurably improve the quality of the analyses by the applicants.

DOT has satisfactorily addressed the quality of Economic Analysis. However if large applicants continue to produce poor quality work, the agency should consider penalizing these applicants by not selecting their projects for funding.

Part 4

The Problem with Discretionary Grant Processes

Stimulus funding is short-term and does not improve the economy over the long-term. Additionally, job creation is a flawed metric in determining economic effectiveness. However, there are some merits to objective grant programs. Discretionary grant programs provide a method for projects that might be overlooked in the traditional formula grant process to receive funding. Forcing applicants to compete for federal funding can improve the quality of a project while decreasing the cost.

Unfortunately, the TIGER grant program is a poorly-designed discretionary grant project. It embodies a view of transportation in which “sustainability”, novelty, and partnership are more important than cost-benefit analysis, national interest and the effective movement of people and goods. The DOT is reluctant to make any changes to the shortcomings of the TIGER program. The DOT’s failure to share information or follow its own quantitative metrics makes a mockery of President Obama’s promise of accountability and performance-based analysis. The TIGER grants are an abysmal failure and should end immediately.

Creating an acceptable discretionary grant program is challenging if not impossible. For this reason the federal government should avoid discretionary grants.

Creating an acceptable discretionary grant program is challenging if not impossible. For this reason the federal government should avoid discretionary grants. Current federal transportation goals are very fuzzy. With the lack of a national vision for transportation, resources are spent on projects promoted by a particular administration or earmarked by a legislator interested in securing reelection.

However, if Congress and the DOT insist on a discretionary grant process, the following recommendations could create the least objectionable program.

Part 5

Possible Methods to Improve Discretionary Grant Programs

- 1) *Decrease the Number of Review Metrics and Improve the Analytics of the Remaining Metrics:* Under the current metrics, there are at least 16 different criteria to consider. Many of the criteria overlap and are not related to transportation. The DOT should reduce the number of criteria and make them transportation-related. The six most appropriate criteria are:
 - national benefit (required)
 - cost-benefit ratio (must be 1.5 or greater)
 - efficient movement of people and goods (must demonstrate number and location)
 - numerical metrics showing good repair
 - numerical metrics for safety
 - numerical metrics for economic benefits

The DOT needs to define the meaning of its criteria with numbers. For example, good repair increases the pavement smoothness by 50%; economic benefits reduce travel time by 15% equivalent to \$30 in monetary value. All metrics should receive a numeric score. All Review Teams should use these numeric scores. Applications with the highest numeric scores should be advanced. Using vague ordinal levels (Highly Recommended, Recommended) increases hidden bias.

- 2) *Eliminate the Control and Calibration Team and Balance Political and Professional Team-Members:* DOT needs only two rounds of review to evaluate projects. The Control and Calibration Team is a check to ensure the consistency of the Evaluation Teams. With detailed numeric scoring, that check is less important. However, if the Review Team believes a worthwhile project is not advanced, the team itself should feel free to examine and advance that project. The Evaluation Team should include career employees who advance or reject applications based on quantitative scores. The Review Team, which should make the final decisions, should include mostly political members, but also at least

four career employees. The four career employees could examine any project the Review Team believes should merit a second look and inform the political members as needed.

- 3) *Create an Accurate System for Determining Economic Benefits:* The Atlanta Streetcar is one project that uses incorrect economic data. The Streetcar project lacks an accurate economic analysis. The Streetcar receives more funds than any other TIGER II project despite its flawed economic data. To prevent this in the future, the economic analysis process should feature several detailed steps. The process should have standard Evaluation Teams and an Advanced Team. The Advanced Team should spot-check the evaluations to ensure the applications are being accurately reviewed. Any applicants using questionable analysis should receive an especially thorough review.
- 4) *Increase the Quality and the Quantity of Documentation Explaining the Decision-Making Process:* There are no formal minutes of Review Team meetings and the draft notes are incomprehensible. Evaluation Team documentation can also be improved. Each Evaluation Team member should fill out an analysis sheet that explains his/her decision. These anonymous sheets should be posted online. Both Evaluation and Review Team meetings should include officially recorded notes of all projects indicating the reasons for approval or rejection of each project. These notes should also be posted online. Off-the-record discussion should be eliminated as much as possible.
- 5) *Improve the Communication of the Process and the Scoring to Applicants and the Public:* Fixing the metrics is not sufficient; DOT needs to post these metrics on its website and in the Federal Registrar, and provide detailed answers for any applicant questions. After awarding the grants, DOT should post a list of all project applicants explaining why the project was approved or denied for funding, including the funding amount. Each project should include a detailed set of notes. DOT posted this list for TIGER I, but not for TIGER II or TIGER III. The New Starts program may be a helpful guide in creating a communication model.
- 6) *Show More Flexibility in Geographic Requirements:* Political realities require DOT to award a certain percentage of funding to each geographic area. One way of balancing political realities and maximizing funds for the best projects is for DOT to designate some of the funds for each geographic region while reserving the rest for the best projects regardless of geography. One possible combination is for DOT to award 12% to each of the four geographic regions of the U.S. and reserve the other 52% to the best projects regardless of geography. This combination provides a near 50/50 split. Other mathematical options are possible.
- 7) *Maintain Political Balance:* Political balance requires that spending is split between Democrats and Republicans with neither party receiving more than a 10% disproportionate share of the grants compared to the number of seats held in Congress. Neither party should receive a share of funds in excess of 15% above or below its political representation in Congress. The remaining projects and funds should be awarded to the most deserving district regardless of its political representation. In the 112th Congress, Republicans are 53% of the members and Democrats are 47% of the members.

- 8) *Reduce Guaranteed Funding to Rural Districts:* In TIGER II and TIGER III, \$140 million of the total spending is dedicated to rural areas. This equals 20–25% of the total spending. While funding some projects in rural areas is a political necessity, only 5% of the total funding should be dedicated to rural areas. Excess funding should support the best projects regardless of location.
- 9) *Eliminate Modal Requirements and Community Development Funding:* The DOT tries to fund every transport mode available. However some modes are more effective in moving people and goods than others. The modes with the biggest transportation benefits are highways, rail, port and certain transit projects. All communities have highway projects. Most communities have some combination of highway, rail and either seaport or aviation projects. There is no political or economic justification in funding other modes. While community development projects may be worthy of HUD funding, they should not receive any transportation funds.
- 10) *Fund Only Programs in the National Interest:* Federal transportation spending should prioritize nationally significant projects. Each project must benefit more than one state. Local road, transit, rail, aviation and port projects should not be funded.



The SR-91 express lanes in Orange County

Part 6

Conclusion

The TIGER grants program may have funded some helpful infrastructure projects. But since short-term government spending can be ineffective in helping the economy and can make the economy worse over the long-term, it is questionable if these projects have any lasting economic benefit. Even if stimulus funding is effective, it is challenging to determine whether these projects are the best available transportation projects. That fewer than 25% of Highly Recommended projects are funded while almost 50% of the Recommended projects that the Calibration Team examined are funded is troubling. Also troubling are the vague metrics, the complicated review process, the quality of supporting documentation, the geographic dispersions, the public information, the political equality, the poor quality of economic analysis and the rural/urban bias.

DOT made no significant changes between TIGER II and TIGER III, and continues to make excuses for its vague metrics and limited available public information.

The TIGER program of continuous stimulus funding has too many flaws. The program in its current form should be abolished. Since the DOT plans to award another round of TIGER grants in 2012 using the same flawed process as the previous grants, Congress should force DOT to award these projects on a merit basis or eliminate this funding from its budget.

Although grant projects seldom work, if the DOT and Congress insist on creating a grant program, the preceding suggestions provide a method for DOT to create a more appropriate program. This new program should fund only nationally important transportation projects with proven economic benefits. Whether DOT could implement a program in a political environment is questionable.

While infrastructure investments are critical for economic growth, the source of the funding and the choice of the project matter. Spending money indiscriminately on politically popular projects increases the deficit, requires localities to maintain questionable projects, and provides very little economic benefit.

About the Author

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Prior to joining Reason, Feigenbaum handled transportation issues on Capitol Hill for Representative Lynn Westmoreland. He earned his Master's degree in City and Regional Planning with a concentration in Transportation from the Georgia Institute of Technology. Feigenbaum holds a Bachelor's Degree in Public Policy from Georgia State University.

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