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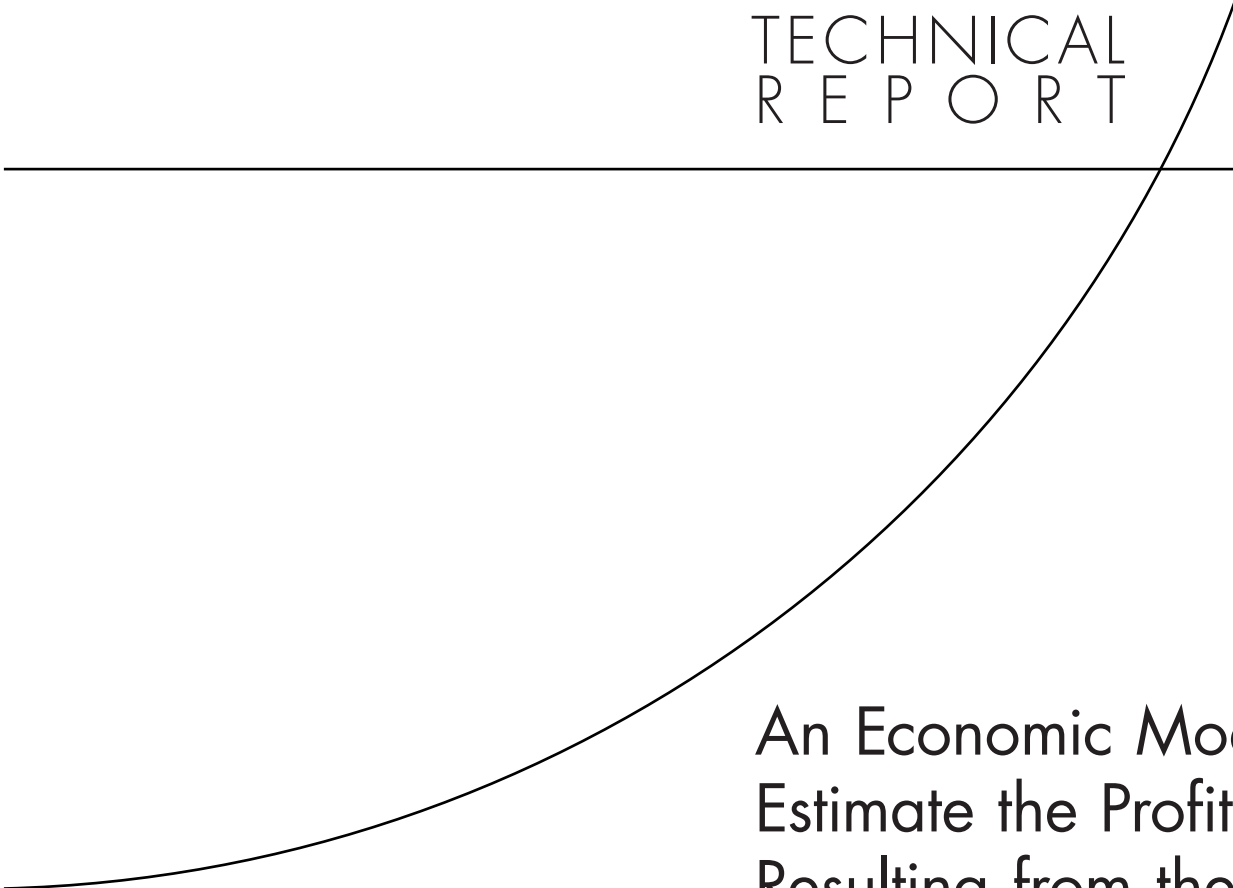
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# TECHNICAL REPORT

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## An Economic Model to Estimate the Profits Resulting from the Employment of Illegal Aliens

Claude Berrebi, Stephen J. Carroll, Jeffrey Sullivan

Sponsored by the Treasury Executive Office for Asset Forfeiture



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## Summary

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The Treasury Executive Office for Asset Forfeiture asked the RAND Corporation to develop an economic model that can be used by federal law enforcement officials as a tool for determining appropriate amounts of forfeiture, or payment in lieu of forfeiture, in cases where firms knowingly employ undocumented workers. We used basic concepts from accepted economic theory to develop a conceptual model that can be used to estimate what profits a firm would have realized if it had not employed any undocumented workers. The estimate of the profits it would have realized without employing undocumented workers can then be subtracted from the profits the firm actually obtained when employing undocumented workers to estimate the amount of profit the employer realized because of the employment of undocumented workers.

This report presents the economic model and the analysis used to develop the model. It also documents the decision-support tool developed to implement the model.

We assume that an employer who has employed illegal workers has organized his productive activities in a way that generates the maximum possible profits, given his resources (plant, equipment, labor of various types, etc.). We use the employer's actual resources, costs, revenues, and profits to estimate what must have been the relationship between resources and outputs, termed the production function, such that the resources available to him were used to generate the outputs necessary to yield his observed profits. Given the estimated production function, we can then estimate the profit-maximizing set of resources that the employer would have employed if he had not employed undocumented workers and what his profits would have been in that case. The difference between the employer's actual observed profits and the estimate of what his maximum profits would have been (given his production function) had he not employed illegal workers is the estimate of the profit the employer realized because he employed undocumented workers.

We developed a computer program that incorporates the calculations implied by the conceptual model.<sup>1</sup> A user can enter appropriate data for an employer who employed undocumented workers, and the program will generate an estimate of the resulting profits. The decision-support tool automatically generates alternative estimates of the profits realized as a result of employing undocumented workers and provides explanations of the assumptions that underlie the differences among the alternatives.

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<sup>1</sup> The program is available at [http://www.rand.org/pubs/technical\\_reports/TR599](http://www.rand.org/pubs/technical_reports/TR599).