

Fact Sheet: Jobs & Environmental Regulation

What effect do regulations have on jobs?

High unemployment numbers have put a spotlight on the impact of environmental regulations on jobs—the news is overrun with claims about how many jobs will be “created” or “killed” due to new protections.

These competing statements often do more to confuse than clarify the debate on whether or not to put a new rule in place, or scale back existing protections, especially since they sometimes directly contradict each other.

Given the complexity of the economic system and the uncertainty of the future, no economic model can accurately capture all consequences of implementing environmental protection. So their results must be accurately reported to avoid misleading the public and used carefully when informing policy choices.

Below are some definitions and questions to help make sense of the rhetoric that can cloud this debate, based on the recent Policy Integrity report, *The Regulatory Red Herring*.

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Definitions

Net jobs predictions: jobs ‘gained,’ ‘created,’ ‘lost,’ ‘destroyed,’ or ‘killed’

Analyses that describe the net effects of a regulation would account for both hiring and layoffs associated with a policy or regulation. Since they take into account the whole economy, they may offer a total number of net jobs created or lost due to a regulation. It may be appropriate to use terms like jobs “created” or “killed” in these cases where models show a net increase or decrease in total employment as the result of a policy.

Unfortunately, given the complex dynamics of the economy and the limitations of most models, it is very difficult to model net job effects and most don’t try. But to correctly use phrases like jobs “gained” or “killed,” a model must consider all employment repercussions and offer a net result.

Industry- or region-specific jobs predictions: ‘hiring’ or ‘layoffs’

Most models are better at estimating regional or sectoral shifts in employment, rather than aggregate gains or losses. Unlike net jobs predictions, these narrower analyses can’t make broad employment claims. They can only be used to examine small areas or industries and don’t capture any induced hiring or layoffs that may be offset elsewhere in the economy. When models only examine a portion of total effects, it is more accurate to call the estimates “hiring” or “layoffs” rather than jobs “created” or “destroyed.”

New permanent position vs. employment years

A new permanent position is a job that will be filled for the foreseeable future as opposed to employment years, which are single years of fulltime employment for one person. Sometimes the results of job impact models will report a number of employment years as total jobs “created,” which creates a misleading impression of a permanent position.

Temporary layoff vs. long term layoff

The costs of temporary unemployment are, naturally, smaller—both for the individual experiencing the layoff as well as society at large. The loss of productivity in the economy is relatively small, while the economic, social, and personal costs associated with a long period of unemployment can be substantial. Most of the models used to try to predict employment effects do not incorporate this distinction and it bears a follow up question.

Questions

Ideally, analyses will make clear their limitations, methodologies, and procedures. Here are some questions to ask if they do not.

Have the model, modeling choices, and assumptions been made public?

The results of job impact models are sensitive to model structure (which includes the equations used in the design of the model and the underlying assumptions of the model) as well as the data inputted into the model. All models make simplifying assumptions. Changing the underlying assumptions of a model can dramatically change model results. Any analysis that does not make its modeling choices public should be questioned, and a request for that information should be made.

Has “sensitivity analysis” been conducted to determine which assumptions and variables are driving the outcomes?

One way to communicate the uncertainty associated with job impact analyses is to determine how sensitive model results are to any change in the model structure. A good analysis will show how model results change when the structure or underlying assumptions of a model change. This is termed sensitivity analysis. The purpose of sensitivity analysis is threefold: (1) to determine how robust (or reliable) the results of the model are; (2) to determine which aspects of the model are most strongly driving results; and (3) to detect potential errors in the model. If sensitivity analysis is not conducted or is incomplete, it calls into question the results reported by the model.

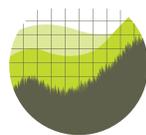
Has the analysis been subjected to any independent peer review?

Ideally, analyses are peer reviewed or are at least replicable. Reports that have undergone peer review are usually more reliable than those that have not, if only because their assumptions and underlying data are likely to have been made available and tested. Requests to view the underlying information that goes into job analyses should be made in all cases.

Where do hiring and layoffs fit within the larger cost-benefit analysis of a regulation?

Environmental protection has a wide range of economic costs and benefits, including public health improvements and expenditures on pollution control technology. Regulation can also induce hiring and cause layoffs. These effects should be considered within the context of a complete cost-benefit analysis of a proposed rule. In many cases, effects on employment are likely to be relatively small compared to both public health benefits and compliance costs. For example, EPA estimates that its rule to reduce mercury contamination from power plants will generate benefits of about \$90 billion with costs of about \$10 billion. EPA predicts that 8,000 workers would be hired permanently and about 50,000 temporarily, to comply with the rule, a relatively small portion of the overall economic effects.

Even in cases like these, job impacts are important for the individuals affected and should be given appropriate weight in the decisionmaking process.



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