

ECONOMIC RESEARCH SERVICE OMB
CLEARANCE PACKAGE

SECTION A

for

GENERIC CLEARANCE TO CONDUCT
EXPERIMENTAL ECONOMIC RESEARCH FROM
FY2012 THROUGH FY2014

Prepared by

Resource, Environmental, and Science Policy Branch

April 30, 2012

Supporting Statement – Part A

The Economic Research Service (ERS) of the United States Department of Agriculture (USDA) requests approval from the Office of Management and Budget (OMB) for a generic clearance that will allow ERS to conduct experimental economic research using state-of-the-art methodologies.

The primary mission of ERS is to provide economic and other social science information and analysis for public and private decisions on agriculture, food, natural resources, and rural America.¹ ERS has constructed a set of key strategic goals in support of this mission.² The anticipated generic clearance will authorize research in furtherance of an ongoing initiative to use insights from behavioral economics to provide economic intelligence, research, and analysis to inform agricultural resource and conservation policies, including those related to development of markets and incentives for environmental services, reduced greenhouse gas emissions and renewable energy production, and to improve food choices and weight outcomes, particularly among children and low income adults.

The specific purpose of this generic clearance is to allow ERS to develop and implement state-of-the-art research methodologies to evaluate policies for its customers³ in response to both specific requests and in anticipation of future need. This generic clearance will be particularly useful when ERS is tasked with evaluating prospective policies.

Section A. Justification

1. Circumstances making the collection of information necessary

The primary function of the Economic Research Service is to provide economic and social science research, analysis, and to disseminate data under the authority of 7 U.S.C. 2204 (a) and Section 17 of 7 U.S.C. 2026 (a)(1).

ERS is requesting a generic clearance in order to respond quickly to emerging issues and data collection needs. The schedule ERS must adhere to in order to provide research that is relevant to policy debate rarely allows for adequate time to post notices to the Federal Register prior to using the research methods that are the subject of this clearance request. For instance, collecting public comment for individual instruments

¹ *Code of Federal Regulations*, Chapter XXXVII, Part 3700.1.

² Economic Research Service Strategic Plan for 2007-2012. Available at: http://www.ers.usda.gov/AboutERS/ERSstrategicPlan2007_2012.pdf

³ ERS's primary customers are: USDA policy officials and program administrators, the Office of the White House, Congress, and agricultural, environmental, consumer, and rural public interest groups, including farm groups and industry. *CFR*, op. cit.

would effectively prevent ERS from providing research on prospective policy in time for the research to be valuable during debates about introducing new institutions (e.g. markets for environmental services) or altering existing ones (e.g. changing the layout of school cafeterias to highlight healthier options).

ERS needs to have an ongoing OMB clearance institution in place to continue to improve the overall quality of its research program and to lessen the burden it places on respondents when it does utilize laboratory and field techniques. Data collections of the type described in this document are inherently iterative – by changing the research instrument in light of initial results, ERS can streamline procedures to make data collection more efficient.

2. Purpose and use of the information collection

Information obtained from randomized comparison studies (lab and field techniques) will be used to develop and calibrate models of behavior. Models of behavior will be calibrated based on the responses of farms, farmers and other individuals. ERS uses behavioral models to estimate a variety of policy outcomes, for instance the level of farmer participation in voluntary conservation programs under alternative contract terms or changes in the nutritional quality of meals chosen when healthy items are displayed more prominently. Variation in behavioral response can have important implications for performance measures such as economic efficiency and effectiveness, and can help predict unintended consequences of policy-design options. Improved models of behavior will help policymakers and program managers as they face decisions that affect agriculture, nutrition and the environment. Findings will be published in two ERS publication outlets that are available to the public and widely read by policymakers: ERS Economic Briefs and Amber Waves, ERS's award-winning magazine.⁴ Prior to each research project under the anticipated clearance ERS will provide OMB with a copy of the research instrument (if one is used) and all other materials describing the project. ERS envisions using a number of research techniques, as appropriate to the individual investigation. These include laboratory and field techniques, exploratory interviews, pilot experiments, and respondent debriefing. In all cases, participation will be voluntary and time commitments will be minimal (10-90 minutes). Laboratory and field techniques are two methodologies based on comparison of outcomes over groups that have been randomized into different treatments.

1. Laboratory techniques refer to controlled experimental testing of hypotheses inside of a laboratory environment. In the social sciences a “laboratory” typically refers to a

⁴ Agricultural & Applied Economics Association 2008 *Quality of Communication* Award, National Association of Government Communicators 2004 *Gold Screen Award* for best electronic publication.

computer lab or other meeting room to which participants are invited. A synthetic economy is created, wherein voluntary participants interact in a controlled environment, making economic decisions and receiving monetary payment based on these decisions. A protocol containing instructions governing interaction in the synthetic economic environment is used to guide these sessions, which are administered by a trained monitor. Laboratory techniques allow the researcher to choose among competing hypotheses with greater confidence than any of the other methods enumerated here. Laboratory techniques allow the researcher to exert a high degree of control over the causal factors affecting economic outcomes. This degree of control supports *internal validity*, the confidence with which a researcher can be said to have identified a causal pathway. An iconic example of laboratory techniques is given by Chamberlin.⁵ Chamberlin created an economy inside of a classroom, in which student participants assumed the role of buyers and sellers for an artificial good. The study provided an early illustration of the process of what is now called “price discovery,” i.e. the determination of an equilibrium price of an asset through continued interaction of buyers and sellers.

2. Field techniques refer to controlled experimental testing of alternative hypotheses in a natural setting, i.e. a setting outside of a laboratory environment. Rather than interaction through computer terminals, for example, participants interact naturally. As with laboratory techniques, data on economic decisions and outcomes are recorded. Field techniques afford a researcher relatively less control and thus generally have lower internal validity. By virtue of taking place outside a laboratory setting, however, field techniques support *external validity*. An evaluation is said to have a high degree of external validity if its results effectively represent the population under study. A very early example of field techniques is given by Bohm.⁶ Bohm’s 1972 study addressed a classic problem in economics: how a group of people determine a price for a good they will collectively purchase and consume. Rather than use an artificial good, Bohm used a real good: access to a closed-circuit showing of a comedy sketch featuring two popular Swedish comedians. The extra context of the real good differentiates field techniques from laboratory techniques.
3. Pilot experiments are frequently conducted prior to implementing laboratory or *field techniques* in a full-scale experiment. Small-scale testing of an experimental instrument ensures that the larger body of information collected from the public during full-scale testing is effective. Respondent debriefing after pilot experiments or interviews ensure

⁵ Chamberlin, E. H. (1948). "An Experimental Imperfect Market." *The Journal of Political Economy* 56(2): 95-108.

⁶ Bohm, P. (1972). "Estimating demand for public goods: An experiment." *European Economic Review* 3(2): 111-130.

that individuals understood the instrument, which in turn ensures that resulting data collections are effective. These techniques are meant to reduce the total public burden of the information collection by ensuring that the large-scale information collection is optimized. In some cases we may discuss the experiment with participants after the experiment is completed, in an effort to provide real-world context for the sometimes stylized experiments.

3. Use of improved information technology and burden reduction

ERS will employ information technology as appropriate to reduce the burden of respondents who agree to participate in its research. Most laboratory experiments will be held at university-run facilities that are equipped with computer terminals, which make collecting data from participants substantially less burdensome than paper-and-pencil instruments.

In certain circumstances it will be easier and more natural to use written instruments.

4. Efforts to identify duplication; use of similar information

Laboratory and field studies will not be undertaken unless they are necessary to answer questions that have not yet been satisfactorily addressed in the literature. In some cases it will be appropriate to replicate previous laboratory and field studies with a new population, as much of the economic and social science literature does not address the specific target populations for ERS's research, such as farmers or participants in USDA nutrition programs.

5. Impact on small businesses or other small entities

The impact on small businesses or other small entities will be kept to a minimum. No more than 5% of the total number of respondents are expected to be small businesses.

6. Consequences of not conducting data collection, or of collecting information less frequently

The quality of research that ERS can provide to its stakeholders will be decreased if ERS cannot conduct the requested studies, or if the studies are conducted less frequently. The quality of quantitative research into prospective policy will be especially impaired, as the observational data necessary to conduct prospective studies do not, by definition, exist.

7. Special circumstances that would cause an information collection to be conducted so as to require respondents to report information to the agency more often than quarterly

There are no special circumstances associated with this information collection. Most information collections under this generic clearance will require only a single interaction between the agency and respondents.

8. Comments in response to the Federal Register Notice and efforts to consult outside the agency

We received no comments in response to the 60-day federal register notice: Federal Register Vol. 76, No. 232, Friday, December 2, 2011: 75521-75522.

9. Explanation of any payment or gift to respondents

Respondents in laboratory and field studies will almost always receive monetary incentives for participating. Although the amount of participation incentive will be identical for all respondents in a given experiment, it will vary among studies based on types of respondents recruited for a given study. Typical participation incentives will range from \$5 to \$50, with less incentive being paid to students, e.g., than farmers, who require larger incentives to obtain a similar response rate.

In addition, respondents will almost always receive earnings from the experiment that are tied to the decisions or choices they make during the experiment. The theory of incentives is a cornerstone of economic science: economists believe that individuals will respond differently when their decisions are consequential than if they were not. A situation is consequential if the possibility of gain (or loss) exists. Therefore, economics experiments are structured so that respondents' decisions are tied to monetary incentives, which vary according to the respondents' choices. For example, risk attitudes of respondents may be measured by presenting individuals with the opportunity to choose between a smaller amount of money, such as \$100, and the chance of a larger amount, such as a 50/50 chance of receiving \$200.⁷ Depending upon the respondent pool and the task, these payments can vary between \$10 and \$1,000.

The decision to incentivize respondents by paying them does not place respondents at risk, nor does it increase burden, as respondents volunteer to participate in the studies.

10. Assurance of confidentiality provided to respondents

⁷ This risk aversion measurement methodology is akin to those in Charles Holt and Susan Laury, Risk Aversion and Incentive Effects, American Economic Review, December 2002, 1644-1655.

Respondents participating in all studies under this generic clearance will be advised that their participation is voluntary. Further, participants in computerized experiments (those experiments in which all economic interaction is through a computer terminal) will be advised that ERS will work to maintain the confidentiality of their information such that no organization or individual not identified as directly involved in conducting the study will have access to their personally identifiable data. Participants in experiments that involve human interaction will be advised that ERS will work to maintain the confidentiality of the data generated in the experiment, but that ERS cannot control information shared outside the study by their fellow participants.

In addition, subjects will be told that all records of their responses maintained by ERS will be treated in a confidential manner. Participants in computerized experiments (those experiments in which all economic interaction is through a computer terminal) will be advised that ERS will work to maintain the confidentiality of their information such that no organization or individual not identified as directly involved in conducting the study will have access to their personally identifiable data. Participants in experiments that involve human interaction will be advised that ERS will work to maintain the confidentiality of the data generated in the experiment, but that ERS cannot control information shared outside the study by their fellow participants.

Respondents will be informed that ERS will only use their information for research or statistical purposes. Any information publically released, such as statistical summaries, will be in a form that does not personally identify any respondent.

Confidentiality of data is assured under the ERS Data Security Policy. Pursuant to the Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA), Title V of the E-Government Act of 2002 (Public Law 107-347), the protection of data collected under this law is supported by a penalty of a Class E Felony for a knowing and willful disclosure of confidential data. This includes imprisonment for up to five (5) years and fines up to \$250,000.

11. Justification for sensitive questions

No questions of a sensitive nature are anticipated in work conducted under this generic clearance. At most, simple demographic questions may be asked as part of a study in order to control for income effects, gender effects, and other effects that the researchers believe may reasonably influence outcomes. Respondent participation and all activities within the laboratory study are voluntary; subjects will be made aware of this fact.

All respondents are free to opt-out of a data collection at any time, and for any reason.

12. Estimates of hour-burden including annualized hourly costs

Table 1. Projected Annual Response Burden

Type of research instrument	Estimated number of respondents	Estimated number of responses per respondent	Average burden-hours per response	Estimated total annual burden hours requested
Pilot experiments / debriefing	100	1	1	100
Laboratory study	1,000	1	1.5	1,500
Field study	700	1	≤1	700
Total	1,800			2,300

Estimated annualized burden costs:

ERS expects to use 1,800 unique respondents in this study.

An average hourly salary of approximately \$22.65 is assumed for all respondents, based on the Bureau of Labor Statistics Establishment Data.⁸ With a maximum annual respondent burden of 2,300 hours, the overall annual cost of respondents' time for the proposed interviews is estimated to be a maximum of \$52,095 (2,300 hrs X \$22.65). There will be no direct costs to respondents. Additionally, much of this direct time burden will be (at least partially) offset by payments to respondents.

Table 1 refers to the estimated annualized burden hours and cost. The proposed generic clearance is for three years. As such, the total number of respondents are expected to be 5,400, the total number of response are expected to be 5,400, and the total estimated burden hours are expected to be 6,900.

13. Estimate of other total annual cost burden to respondent or recordkeepers

There will be no capital, operating, or maintenance costs to the respondent as the result of participation in an information collection under this generic clearance.

14. Annualized cost to the Federal Government

⁸ Average hourly earnings in private industry, August 2010.

The annual cost to the Federal Government generated by research projects covered under this generic clearance is approximately \$210,000. This assumes a median GS-13 annual salary of \$102,388 for an ERS PhD Economist to guide the design and evaluation, and a median GS-09 annual salary of \$59,372 for administrative support in processing individual research instruments (support in preparation of travel, preparation of materials, and processing instruments through clearance).⁹ Details are provided in the table below.

ERS has budgeted \$80,000 for experimental payments during the term of the proposed clearance.

Activity	Description	Cost
Administration of research	ERS PhD Economist, 50% FTE @ \$102,388	\$51,194
	ERS support staff, 15% FTE @ \$ 59,372	\$8,905.80
Respondent remuneration	ERS budget for experimental payments	\$80,000
Cooperative research	Collaboration with academic experts, graduate student support and use of academic laboratory facilities	\$100,000
Total		\$240,099.80

15. Changes in burden hour

This is a new data collection.

16. Plans for tabulation, publication, and project time schedule

ERS research leads to methodological improvements to future research.

Methodological improvements will be published as technical articles in peer reviewed journals and as articles in ERS's two in-house research publication series that are freely available to the public and widely disseminated in print and on ERS's website: ERS Economic Research Reports and ERS Economic Information Bulletins. Findings published as technical articles are regularly distilled and combined with policy research into ERS Economic Briefs and *Amber Waves* articles.

⁹ Based on 2010 Office of Personnel Management salary tables.

Data collection, analysis, and publication will span the entire period of the anticipated generic clearance. ERS plans to conduct an ongoing program of research and therefore plans to apply for an extension to the anticipated generic clearance when it expires.

Because of “publication-lag” a typical academic journal article is published anywhere from one to two years after initial submission.¹⁰ The publication process for ERS in-house products can be quicker than that for external academic publications, but because in-house publications undergo a peer review process similar to that used by professional journals, it typically takes no less than six months.

Data collection for a professional publication based on laboratory experimentation typically takes three to four months, or a single academic semester.¹¹ Data analysis and article preparation typically lasts another three to four months. Thus professional articles in a peer-reviewed outlet of any kind are estimated to be published from 12 months to 30 months from the time that data collection can begin.

17. Reasons display of OMB expiration date is inappropriate

No exemption is requested.

18. Exceptions to certification for paperwork reduction act submissions

This data collection has been designed in accordance with the requirements specified in Item 19 of the OMB 83-I. No exceptions to certification are requested.

¹⁰ The most recently available data indicate that average time to publication for the leading economics journals are approximately 19 months. A leading journal in the field appropriate for research on issues of conservation and environmental issues in agriculture is the Journal of Environmental Economics and Management (JEEM). JEEM has an average time to publication of approximately 13 months. Reference: Heintzelman, Martin and Nocetti, Diego (2009) "Where Should We Submit Our Manuscript? An Analysis of Journal Submission Strategies," The B.E. Journal of Economic Analysis & Policy: Vol. 9 : Iss. 1 (Advances), Article 39. Available at: <http://www.bepress.com/bejeap/vol9/iss1/art39>.

¹¹ In the case of cooperative agreements with academic professionals, most research is done during one of the two semester periods in the academic year.