Who believes in fiscal and monetary stimulus?

David, Amdur

Muhlenberg College

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David Amdur
Muhlenberg College†

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Abstract

Does the public believe that fiscal and monetary stimulus reduce unemployment? I present survey evidence on this question from a random sample of Pennsylvania residents. Few respondents express a consistently Keynesian view of fiscal and monetary stimulus. In fact, the typical respondent believes that an increase in government spending makes unemployment *worse*. Views on monetary stimulus depend on how the question is framed. The typical respondent believes that Fed money creation worsens unemployment while a Fed interest rate cut improves it. I show how opinion varies by political party, educational attainment, income, and other demographic characteristics. Favorable opinions about government spending are strongly associated with support for President Obama's economic policies, even after controlling for political party and for respondents' opinions about the current state and trajectory of the economy.

JEL Classification: A20, E12, E52, E62

Keywords: Opinion survey, fiscal stimulus, monetary stimulus, unemployment, Keynesian economics

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†Muhlenberg College, Department of Accounting, Business and Economics, 2400 Chew Street, Allentown, PA 18104, USA. Tel: 484-664-3257. E-Mail: damdur@muhlenberg.edu.

1 Introduction

Few economic policies are as controversial as fiscal and monetary stimulus. John Maynard Keynes famously argued during the Great Depression that the government can and should actively raise employment when private demand is unusually low (Keynes, 1936). Such government stimulus, Keynes argued, could be fiscal or monetary. Fiscal stimulus involves greater government spending or lower taxes, while monetary stimulus amounts to reduced interest rates via monetary injections by the central bank. Decades of "saltwater" versus "freshwater" debate ensued, with numerous critics of Keynes arguing that government stimulus was ineffective or harmful.[1] Despite the enormous academic literature, there has been relatively little attention to *what ordinary people think about the effectiveness of stimulus policies.* This paper presents findings from an opinion survey that asked a random sample of Pennsylvania residents about the unemployment effects of four broadly framed stimulus programs.

Public opinion matters because voters' opinions help shape actual policy outcomes. Voters elect lawmakers, and lawmakers decide whether to enact fiscal stimulus in a recession. Although central banks are farther removed from public opinion, they are still ultimately accountable to legislative bodies.[2] Understanding what kinds of macroeconomic policies are likely to emerge in practice therefore requires an understanding of public opinion about those policies. This point remains valid even if people are poorly informed or confused about the policies (Blinder and Krueger, 2004).

My main finding is that few respondents express a consistently Keynesian view of fiscal and monetary stimulus. The typical respondent believes that an increase in government spending makes unemployment *worse* while a tax cut makes unemployment *better*. Views on monetary stimulus depend on how the question is framed. The typical respondent believes that Fed money creation makes unemployment *worse* while a Fed interest rate cut makes unemployment *better*. Both asymmetries are at odds with Keynesian economic reasoning. The asymmetry between money

[1] Surveying the academic literature on Keynesianism, monetarism, and new classical economics is well outside the scope of this paper. Blinder (2007) and Snowdon and Vane (2005) are good entry points.

[2] In the U.S., the Fed's accountability to Congress has been especially visible in recent years. In 2009, Congress introduced legislation that would have opened the Fed's monetary policy decisions to government audits (Falsenthal, 2009). The bill did not pass at the time but was recently reintroduced (Falsenthal, 2012). In 2011, Congress blocked Peter Diamond's nomination to the Federal Reserve Board, largely due to his views on monetary stimulus (Zumbrun, 2011). Another recent bill would have replaced the Fed's dual mandate with a single mandate of price stability (Lawder, 2012).

creation and reduced interest rates also suggests a lack of belief in, or ignorance of, the liquidity effect, which predicts that an increased money supply causes interest rates to fall in the short run.

Subject to several caveats, I find that political affiliation is associated with public opinions about stimulus policies. By itself, this may not seem very surprising; we are used to thinking of Democrats as "Keynesians" and Republicans as "supply-siders." However, a detailed analysis reveals some interesting results. First, the gap between Democrats and Republicans is larger and more robust for government spending than for tax cuts. Second, independents are the least likely to find each stimulus policy effective. Third, a number of demographic variables have strong predictive power even after controlling for political party. High income and older respondents are more likely to support government spending, while nonwhite respondents are *less* likely to support a tax cut and more likely to support Fed money creation.

In response to the 2008 financial crisis and the severe recession that followed, President Obama vocally championed fiscal stimulus, ultimately signing into law the American Recovery and Reinvestment Act (ARRA) of 2009. An explicit goal of ARRA was to create new jobs and save existing ones (Recovery.gov website, 2012). Public debate about the effectiveness of this stimulus has been intense (see, e.g., Hilsenrath (2010)), accelerating in the run-up to the 2012 presidential and congressional elections. I find that respondents who see government spending as effective stimulus are more likely to approve of President Obama's economic policies. This relationship survives even after controlling for political party and for respondents' opinions about the current state and trajectory of the economy.

I am aware of few opinion surveys about the *positive* aspects of fiscal and monetary stimulus. The closest paper in terms of methodology is Blinder and Krueger (2004). However, their opinion questions are mostly normative and do not address fiscal or monetary stimulus. My paper relates to the literature comparing the economic views of the public with economists' views.[3] The main message from this literature is that there is a persistent opinion gap between the public and economists. This paper reports an analogous opinion gap between the public and *Keynesian* economists on the specific topic of fiscal and monetary stimulus.

The rest of the paper proceeds as follows. Section 2 describes the survey design. Section 3

[3]See, e.g., Blendon et al. (1997), Caplan (2002), and Walstad and Rebeck (2002). Alston et al. (1992) and Fuller and Geide-Stevenson (2007) survey economists' views and find broad consensus on a range of topics.

presents some of the more interesting tabulations and cross-tabulations of the data. Section 4 develops and estimates a set of econometric models of public opinion. Section 5 offers concluding remarks.

2 The survey

The survey was conducted by Muhlenberg College's Institute of Public Opinion (IPO) in December of 2011. IPO used random-digit dialing to survey a random sample of Pennsylvanians eighteen years and older.[4] As is typical for this kind of survey, the response rate was low: 20% of working residential and cellular numbers. Perhaps surprisingly, existing studies suggest that such low response rates do not cause serious biases (Blinder and Krueger (2004); Keeter et al. (2000)). The sample consists of 447 adult Pennsylvanians, which I weighted to match the 2011 population estimates of the U.S. Census Bureau's Current Population Survey (CPS) for age, gender, educational attainment, and race/ethnicity. All the results reported here reflect this weighting.[5]

The survey covered opinions on a number of topics in addition to macroeconomic policy.[6] In this paper, I focus on four specific questions about fiscal and monetary policy that I contributed to the survey. The lead-in to these questions was as follows:

> The unemployment rate measures the portion of the workforce that wants to work but can't find a job. The next few questions ask you to consider the effects of different government policies on unemployment in the United States.

The four questions were as follows:

1. First, when the government increases its spending in a given year, does that tend to make unemployment better or worse?
2. When the government cuts taxes in a given year, does that tend to make unemployment better or worse?
3. When the Federal Reserve creates more money in a given year, does that tend to make unemployment better or worse?

[4] The interviews started on November 28 and ended on December 7. The survey protocol called for up to five callback attempts.

[5] Without weighting, the survey oversamples older citizens, women, college graduates, and non-Hispanic whites. I derive the weights for each observation using an iterative procedure that balances the four variables; therefore, I do not match the CPS proportions exactly. Most of the results reported in this paper also hold in the unweighted data. Unweighted results are available on request.

[6] For example, the survey solicited opinions about various political figures, natural gas drilling in Pennsylvania's Marcellus shale, privatization of Pennsylvania's state-owned liquor stores, and same sex marriage.

4. When the Federal Reserve lowers interest rates in a given year, does that tend to make unemployment better or worse?

Each question asked the respondent to choose "better" or "worse," although a substantial percentage volunteered "no effect" or "not sure" on each question. I define the canonical Keynesian response to each question as "better." This definition seems broadly consistent with Blinder (2007). Standard undergraduate textbook models (e.g., the AD-AS model) also predict "better" for each question, at least in the short run (see, e.g., Mankiw (2011)). The words "in a given year" were intended to focus respondents on the short run.

I tried to make the questions as simple and nontechnical as possible. Support for this approach comes from Blinder and Krueger (2004):

> Economists often want to see survey questions that make sense *to them*. Such questions may involve complicated concepts and numerous provisos that leave ordinary people confused. Good poll questions need to be understandable by ordinary people with limited attention spans and no training in economics.

The wording of the questions aims for simplicity in several ways. First, I kept the policies as general as possible. For example, I didn't spell out exactly *what* the government spends its money on in Question 1. Second, I deliberately avoided asking whether the unemployment rate "increases" or "decreases," on the grounds that some respondents might accidentally associate "increases" with "good" and "decreases" with "bad." Third, I didn't restrict the questions to a "less than fully employed economy." Admittedly, respondents' views about these policies may well depend on the business cycle.[7] However, at the time of the survey, the unemployment rate was quite high (8.5%), and only 8% of respondents described the economy as "good" or "excellent." It seems unlikely that respondents had a fully employed economy in mind when answering these questions.

The questions do not ask about inflation or budget deficits. So, for example, a respondent could (plausibly) believe that Fed money creation would make unemployment "better" while making inflation "worse." I made no attempt to solicit opinions about these kinds of tradeoffs. My goal

[7] According to the textbook Keynesian models, if the economy is at full employment at the time the policy is implemented, than the decrease in the unemployment rate will be temporary; if the economy is under-employed, then the decrease will be permanent. Therefore, a respondent focused on the *long run* might have answered "no effect" if she had a fully employed economy in mind and "better" if she had an under-employed economy in mind. However, note that the wording of the questions was intended to focus respondents on the short run.

is much simpler: to evaluate whether the public believes there are *any* potential benefits of fiscal and monetary stimulus. If such benefits exist, they must surely relate to unemployment. I chose to focus on unemployment (rather than, say, GDP) because unemployment is likely to be relevant and generally understood by people with no economics training.

3 Straight facts

3.1 Fiscal stimulus

Does the public believe that fiscal stimulus reduces unemployment? A large plurality (45%) of the sample said that increased government spending makes unemployment *worse*; only 26% said better (Table 1). On the other hand, respondents view tax cuts quite favorably. 44% of the sample said that a tax cut makes unemployment better; 24% said worse. Only 14% of respondents said that *both* increased government spending and a tax cut would improve unemployment. The typical respondent appears to believe that a tax cut creates jobs while government spending destroys them. This contrasts with Keynesian thinking, which would predict an improvement in unemployment in response to both policies.

Beliefs about the effectiveness of government spending differed significantly across subsets of the population. Not surprisingly, Democrats (40%) were much more likely than Republicans (17%) to say that government spending improves unemployment ($p = 0.000$ on a design-based F-test). Interestingly, though, independents were the least likely to hold this belief (4%).[8] High income people (36%) were more likely than low income (20%) to see government spending as fiscal stimulus ($p = 0.001$).[9] Men (32%) were somewhat more likely than women (21%) to give a positive response ($p = 0.015$).

Views on tax cuts also ran along partisan lines. Republicans (57%) were more likely than Democrats (41%) to say that a tax cut improves unemployment ($p = 0.006$), with independents (34%) the least likely to hold this view. Married (51%) and separated/divorced people (50%) were

[8] I coded 4 respondents from "other" parties as independents, grouping them with 46 respondents who explicitly claimed to be "independent."

[9] The question about income asked respondents to choose one of the following categories: under $20,000, $20-40,000, $40-60,000, $60-80,000, $80-100,000, or over $100,000. I coded the first three categories as "low income" and the last three as "high income," so the dividing point was $60,000. Using this split, about 46% of the sample was high income and 54% was low income.

Table 1: Beliefs about the effect of fiscal and monetary stimulus on unemployment (percent of sample).[a]

	Better	Worse	No effect	Not sure/no resp
Government spending	26	45	11	18
Tax cut	44	24	19	12
Fed money creation	23	42	12	24
Fed interest rate cut	46	16	16	22

[a] The numbers in each row are the percent of the sample reporting that the given policy makes unemployment better, worse, has no effect, or not sure/no response. Rows may not sum to 100 due to rounding.

more likely to give a positive response than single (28%) or widowed (29%) people. A design-based F-test of independence across all four categories indicates significance (p = 0.001).

3.2 Monetary stimulus

Opinions on monetary stimulus hinged crucially on how the question was framed. A large plurality (42%) said that increased Fed money creation makes unemployment *worse*; only 23% said better (Table 1). On the other hand, a large plurality (46%) said that a Fed interest rate cut makes unemployment better; 16% said worse. Only 16% of respondents said that *both* Fed money creation and a Fed interest rate cut would improve unemployment. The textbook liquidity effect predicts that an increased money supply causes interest rates to fall. The typical respondent appears not to believe in, or is ignorant of, the liquidity effect.[10]

Looking across subpopulations, Democrats (29%) were more likely than Republicans (17%) to believe that Fed money creation makes unemployment better (p = 0.011); independents (8%) were the least likely to hold this view. Non-whites (38%) were more likely than whites (20%, p = 0.014) to give a positive response on money creation. Interestingly, Democrats (53%) and Republicans (49%) had similar views on interest rate cuts, while independents (18%) were much less supportive (p = 0.000 on a design-based F-test across all three categories). Support for interest rate cuts was also significantly higher for for separated/divorced people (71%) than for others (43%, p = 0.004).

[10] The non-response rates for the monetary stimulus questions were substantially higher than for fiscal stimulus; see the last column of Table 1. This suggests that respondents may have felt less knowledgeable about monetary policy.

3.3 Support for Obama's economic policies

A separate survey question asked respondents whether President Obama's policies had "helped the economy, hurt the economy, or haven't made a difference." 24% of the sample said that Obama's policies have helped the economy, 40% said hurt, 30% said no difference, and 6% were not sure or didn't respond. Not surprisingly, these views fell along partisan lines. 42% of Democrats said Obama's policies have helped, while only 9% of Republicans agreed (p = 0.000). Independents (13%) were closer to Republicans than to Democrats. Respondents who said that the state of the economy today was "good" or "excellent" (71%) were much more likely than others (20%) to see a positive effect from Obama's policies (p = 0.000).[11] Similarly, respondents who said that the economy is "getting better" (68%) were much more likely than others (15%) to give a positive response (p = 0.000).[12]

Opinions about the abstract stimulus policies are closely associated with support for Obama's policies. Respondents who said that government spending is good for unemployment (54%) were much more likely than others (14%) to believe that Obama's policies have helped the economy (p = 0.000). Similarly, respondents who said that Fed money creation improves unemployment (41%) were more likely than others (19%, p = 0.000) to give a positive response, even though Obama (of course) does not control the Fed. Supporters of interest rate cuts (31%) were somewhat more likely than others (18%) to support Obama's policies (p = 0.006). However, supporters of tax cuts were no more or less likely than others to give a positive response.[13]

4 Econometric results

4.1 A Simple Model

What characteristics of the respondents best predict their beliefs about the effectiveness of different stimulus policies? And do beliefs about stimulus policies help predict support for Obama's economic policies more generally? To answer these questions, we need an econometric model. Admittedly, this requires strong assumptions about the exogeneity of specific independent variables, which is

[11] Possible responses for the state of the economy were "excellent," "good," "not so good," and "poor."

[12] Possible responses for the trajectory of the economy were "getting better," "getting worse," or "about the same."

[13] Some demographic variables were also significant. High income people and nonwhites were more likely to support Obama's policies, and separated/divorced people were less likely.

why I have focused on descriptive cross-tabulations so far. Nonetheless, I proceed to write down an estimable model.[14] Although valid objections may be raised about identifying restrictions, my view is that such models can reveal interesting conditional correlations that are not apparent from simple cross-tabulations.

Let $OP_{i,j}$ be respondent i's opinion about the unemployment effects of stimulus policy $j \in \{1, 2, 3, 4\}$, where the four policies (in order) are increased government spending, a tax cut, Fed money creation, and a Fed interest rate cut. I code $OP_{i,j}$ as 1 for respondents who say that policy j will make unemployment "worse," 2 for "no effect" or "not sure" (or no response), and 3 for respondents who say "better."[15] Let P_i be respondent i's self-reported political party (Democrat, Republican, or Independent/Other). Let X_i be a vector of self-reported demographic variables. These are educational attainment (college graduate versus non-graduate), income (high income versus low), age (older versus younger), gender, race (nonwhite plus Hispanic versus non-Hispanic white), and marital status.[16] I focused on discrete (mostly binary) explanatory variables because all survey responses were recorded categorically. This made it difficult, for example, to treat income as a continuous variable (especially as the highest income category was "over $100,000"). I collapsed categories where practical in order to keep the list of explanatory variables manageable. The basic model for explaining opinions about stimulus policies is as follows:

$$OP_{i,j} = f(P_i, X_i) + \epsilon_{i,j} \tag{1}$$

I estimate ordered probit models for each stimulus policy. I also estimate a model explaining support for President Obama's policies. I code $OP_{i,ob}$ as 1 for respondents who say that Obama's policies "hurt the economy," 2 for "made no difference" or "not sure" (or no response), and 3 for "helped the economy." I allow $OP_{i,ob}$ to depend on respondents' opinions about the stimulus policies, respondents' opinions about the state and trajectory of the economy, and demographics. Let S_i be a vector of variables capturing respondent i's opinions about the current state and

[14] Blinder and Krueger (2004), after noting similar caveats, take a similar approach.

[15] I chose to keep three categories because a substantial number of respondents volunteered "no effect" or "not sure." Dropping respondents who reported "not sure" (along with the non-responders) doesn't change the main results.

[16] "High income" refers to respondents earning over $60,000. "Older" refers to respondents over 49 years old.

trajectory of the economy. The model is then:

$$OP_{i,ob} = g(OP_{i,1}, OP_{i,2}, OP_{i,3}, OP_{i,4}, S_i, P_i, X_i) + \epsilon_{i,ob} \tag{2}$$

4.2 Fiscal stimulus

Table 2 reports estimates for the two fiscal policies – increased government spending and a tax cut. Note that all independent variables are discrete. Each reported estimate is the discrete change in the probability of reporting "better" from the base level. Thus, higher estimates denote a stronger belief that the given policy will improve unemployment. High income respondents (incomes over $60,000) and older respondents (over 49) are significantly more likely to believe that increased government spending makes unemployment better, with separated/divorced and widowed respondents marginally less likely to hold this belief. When political party is included, it is highly significant. Holding the other variables constant, Democrats are 22% more likely than independents to give a positive response for spending. Republicans resemble independents on this question.

Married and separated/divorced respondents are significantly more likely to believe that a tax cut will improve unemployment, while nonwhites are much less likely to think so. Older respondents are marginally more likely to see a tax cut as effective stimulus. When political party is included, it is marginally significant. Holding the other variables constant, Republicans are 14% more likely than independents to give a positive response for tax cuts (significant at the 10% level). Democrats resemble independents on this question. Interestingly, the Democratic tendency to view higher spending as stimulus is more robust than the Republican tendency to view tax cuts as stimulus.

4.3 Monetary stimulus

Table 3 presents estimates for the two monetary policies – Fed money creation and a Fed interest rate cut. College graduates and nonwhites are significantly more likely than others to believe that Fed money creation makes unemployment better. When political party is included, Democrats are marginally more likely to give a positive response. When the question is framed as an interest rate cut, the significant explanatory variables change. Separated and divorced respondents are more likely to believe that an interest rate cut improves unemployment, and there is no longer a significant

Table 2: Ordered probit models for the effect of fiscal stimulus on unemployment.[a]

	Government spending		Tax cut	
Independent variable	(s1)	(s2)	(t1)	(t2)
Republican[b]	...	0.04	...	0.14*
		(0.06)		(0.07)
Democrat[b]	...	0.22***	...	-0.00
		(0.06)		(0.08)
College graduate	-0.00	0.02	0.08	0.07
	(0.04)	(0.04)	(0.06)	(0.05)
High income[c]	0.17***	0.15***	-0.01	-0.01
	(0.05)	(0.04)	(0.06)	(0.06)
Older[d]	0.10**	0.13***	0.10**	0.09*
	(0.04)	(0.04)	(0.05)	(0.05)
Female	-0.06	-0.08*	0.03	0.04
	(0.04)	(0.04)	(0.05)	(0.05)
Nonwhite	0.01	-0.05	-0.30***	-0.28***
	(0.08)	(0.07)	(0.07)	(0.08)
Married[e]	-0.05	-0.01	0.21***	0.21***
	(0.06)	(0.06)	(0.07)	(0.07)
Separated/divorced[e]	-0.17*	-0.15*	0.35***	0.33***
	(0.09)	(0.09)	(0.08)	(0.08)
Widowed[e]	-0.16**	-0.10	-0.04	-0.09
	(0.07)	(0.08)	(0.07)	(0.08)
No. of observations	358	342	358	342
Design-based F	3.96	5.82	6.36	4.59
p-value for F	0.000	0.000	0.000	0.000

[a] The dependent variable for columns (s1) and (s2) is the respondent's opinion about the effect of increased government spending on unemployment, where "worse" = 1, "no effect" or "not sure" = 2, and "better" = 3. The dependent variable for columns (t1) and (t2) is the respondent's opinion about the effect of a tax cut on unemployment, similarly coded. Non-responders were classified as "not sure." All independent variables are discrete. The top number in each row is the discrete change in the probability of reporting "better" from the base level ("discrete marginal effect"). Standard errors are in parentheses. *** denotes significance at the 1% level, ** at the 5% level, and * at the 10% level.

[b] The omitted category is those who answered "Independent" or "Other."

[c] Respondents reporting a salary of over $60,000 were coded as "High income."

[d] Respondents over 49 years old were coded as "Older."

[e] The omitted category is "Single."

difference between whites and nonwhites. When political party is included, both Democrats and Republicans are much more likely than independents to give a positive response. However, opinions on interest rate cuts seem somewhat random. Even when political party is included, the null hypothesis that all coefficients are zero cannot be rejected at the 5% level according to a design-based F-test.

4.4 Support for Obama's economic policies

Table 4 presents estimates from ordered probit models explaining support for President Obama's economic policies. Again, all independent variables are discrete. Each reported estimate is the discrete change in the probability of reporting "helped the economy" from the base level. Thus, higher estimates denote stronger support for Obama's policies. In column (o1), I include only political party and demographic characteristics as explanatory variables. Democrats, the college-educated, and nonwhites are significantly more likely to support the President's policies. When I include respondents' opinions about the state and trajectory of today's economy (column (o2)), both variables are highly significant. Respondents who report the state of the economy as "good" or "excellent," and those who report that the economy is "getting better," seem to attribute some of this success to Obama's policies. Finally, in column (o3), I include respondents' opinions about the four stimulus policies. One policy stands out as highly significant: government spending. Holding the other variables constant, respondents who see government spending as effective stimulus are 19% more likely to believe that Obama's policies have helped the economy. On the other hand, respondents who see a tax cut as effective stimulus are marginally *less* likely to support Obama's policies. Even Obama supporters are not consistent believers in textbook Keynesian stimulus.

5 Conclusion

This paper presented results from an opinion survey of Pennsylvania residents. Few respondents expressed consistent support for broadly framed Keynesian stimulus programs. Most notably, the typical respondent expressed the view that increased government spending makes unemployment *worse*. Support for different stimulus policies fell largely along partisan lines.

Further research should dig deeper. What priority do people place on deficit reduction versus

Table 3: Ordered probit models for the effect of monetary stimulus on unemployment.[a]

	Money creation		Interest rate cut	
Independent variable	(m1)	(m2)	(i1)	(i2)
Republican	...	-0.04	...	0.19***
		(0.06)		(0.08)
Democrat	...	0.10*	...	0.25***
		(0.06)		(0.08)
College graduate	0.09**	0.10**	0.08	0.10*
	(0.04)	(0.04)	(0.06)	(0.06)
High income	-0.06	-0.07	-0.001	-0.02
	(0.04)	(0.04)	(0.06)	(0.07)
Older	-0.03	-0.005	0.03	0.02
	(0.04)	(0.04)	(0.06)	(0.06)
Female	0.06*	0.06	-0.02	-0.003
	(0.03)	(0.04)	(0.05)	(0.05)
Nonwhite	0.30***	0.23***	0.10	0.06
	(0.08)	(0.08)	(0.08)	(0.08)
Married	-0.05	-0.05	0.01	-0.02
	(0.05)	(0.06)	(0.08)	(0.08)
Separated/divorced	0.05	0.07	0.22**	0.21**
	(0.09)	(0.09)	(0.11)	(0.11)
Widowed	-0.04	-0.01	0.001	-0.00
	(0.07)	(0.07)	(0.10)	(0.10)
No. of observations	358	342	358	342
Design-based F	3.42	3.20	1.06	1.78
p-value for F	0.001	0.001	0.388	0.062

[a] The dependent variable for columns (m1) and (m2) is the respondent's opinion about the effect of increased Fed money creation on unemployment, where "worse" = 1, "no effect" or "not sure" = 2, and "better" = 3. The dependent variable for columns (i1) and (i2) is the respondent's opinion about the effect of a Fed interest rate cut on unemployment, similarly coded. Non-responders were classified as "not sure." See table 2, notes b-e, for more detail about the specification. All independent variables are discrete. The top number in each row is the discrete change in the probability of reporting "better" from the base level ("discrete marginal effect"). Standard errors are in parentheses. *** denotes significance at the 1% level, ** at the 5% level, and * at the 10% level.

Table 4: Ordered probit models for the effect of Obama's policies on the economy.[a]

	Obama's policies		
Independent variable	(o1)	(o2)	(o3)
Spending good	...	...	0.19***
			(0.05)
Tax cut good	...	...	-0.05*
			(0.03)
Money creation good	...	...	0.01
			(0.04)
Interest cut good	...	...	0.01
			(0.03)
Economy good	...	0.31***	0.21**
		(0.09)	(0.09)
Economy getting better	...	0.43***	0.38***
		(0.06)	(0.07)
Republican	-0.08	-0.03	-0.06
	(0.06)	(0.05)	(0.05)
Democrat	0.21***	0.20***	0.12**
	(0.07)	(0.06)	(0.06)
College graduate	0.10**	0.10***	0.09***
	(0.04)	(0.03)	(0.03)
High income	0.01	-0.04	-0.05*
	(0.04)	(0.03)	(0.03)
Older	0.01	0.002	-0.01
	(0.04)	(0.03)	(0.03)
Female	-0.01	-0.00	0.03
	(0.04)	(0.03)	(0.03)
Nonwhite	0.22***	0.13*	0.12**
	(0.08)	(0.07)	(0.06)
Married[b]	0.03	0.06	0.06
	(0.05)	(0.04)	(0.04)
No. of observations	342	338	338
Design-based F	6.65	9.90	10.21
p-value for F	0.000	0.000	0.000

[a] The dependent variable is the respondent's opinion about the effect of President Obama's policies on the economy, where "hurt the economy" = 1, "made no difference" or "not sure" = 2, and "helped the economy" = 3. Non-responders were classified as "not sure." See table 2, notes b-e, for more detail about the specification. All independent variables are discrete. The top number in each row is the discrete change in the probability of reporting "helped the economy" from the base level ("discrete marginal effect"). Standard errors are in parentheses. *** denotes significance at the 1% level, ** at the 5% level, and * at the 10% level.

[b] The model also included demographic controls for two other categories of marital status, not shown here. The other categories were not significant at the 10% level in any of the specifications.

job creation, and do they see a tradeoff between the two? When people say that government spending harms jobs, do they believe this is true in the short run – or are they concerned about the long-run impact of paying off the associated debt? How well do people understand subtle concepts like the multiplier effect and the crowding out of investment? When respondents answer questions about policy, to what extent do they rely on ideological heuristics (e.g., "government spending is always wasteful" or "tax cuts only benefit the rich")? The answers could inform educators, in particular, as they seek to equip students to thoughtfully assess real-world macroeconomic policies.

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