

State Government Public Goods Spending and Citizens' Quality of Life

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Abstract

A growing literature across the social sciences uses individuals' self-assessments of their own well-being to evaluate the impact of public policy decisions on citizens' quality of life. To date, however, there has been no rigorous empirical investigation into how government spending specifically on public goods impacts well-being. Using individual-level data on respondents' self-reported happiness and detailed government spending data for the American states for 1976-2006, I find robust evidence that citizens report living happier lives when their state spends more (relative to the size of a state's economy) on providing public goods. As an important spuriousness check, I also show that this relationship does not hold for total government spending or for government spending on programs that are not (strictly speaking) public goods like education and welfare assistance to the poor. Moreover, the statistical relationship between public goods spending and happiness is substantively large and invariant across income, education, gender, and race/ethnicity lines – indicating that spending has broad benefits across society. These findings suggest that public goods spending can have important implications for the well-being of Americans and, more broadly, contribute to the growing literature on how government policy decisions concretely impact the quality of life that citizens experience.

Keywords: public goods, government spending, public policy, quality of life, happiness

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What effects do government policy decisions have on citizens' quality of life? A growing literature across the social sciences uses individuals' self-assessments of their own well-being to evaluate the impact of various types of public policy decisions on quality of life. Perhaps the most prominent and widely cited of these studies are those that assess the effects of the size of the state (typically measured in terms of total government spending) on citizens' reports of subjective well-being (e.g., Bjørnskov, Dreher, and Fischer 2007; Kacapyr 2008; Flavin, Pacek, and Radcliff 2014). Intriguingly, these studies have tended to come to differing conclusions – with some finding that a larger and more spendthrift government promotes greater happiness, others that more spending leads to lower levels of well-being, and still others that there is no discernable relationship between the size of government and quality of life.

To date, however, there has been only limited scholarly attention devoted to the composition of government spending – how funding is allocated across spending categories. Perhaps most notably, there has been little rigorous empirical investigation into how government spending specifically on public goods – goods that are non-rivalrous and non-excludable and, therefore, will be underprovided (if at all) by the private market – impacts the quality of life that citizens experience. This shortcoming in our understanding is surprising given that, unlike spending on more politically contentious areas like the generosity of poverty assistance programs or unemployment benefits that aid specific individuals, there is generally broad public support for at least some minimal level of public goods spending and provision across the political and ideological spectrum (Page and Gilens 2017, 72-89).¹ Simply stated, there are both sound theoretical and practical reasons to turn our attention to public goods spending.

¹ However, it is important to note that spending decisions for some public goods like national defense and environmental protection are indeed politically contentious.

This paper's original contribution is to ask: Does state government spending on public goods systematically relate to citizens' quality of life? Using individual-level data on respondents' self-reported levels of happiness from the General Social Survey and detailed government spending data for the American states from the U.S. Census Bureau's "Historical Finances of State Governments" for 1976-2006, I find robust evidence that citizens report living happier lives when the state they live in spends more on providing public goods such as libraries, parks and recreation, natural resources, highways, and police protection. As an important spuriousness check, I also show that this relationship does not hold for total state government spending or for government spending on programs that are not (strictly speaking) public goods like education and welfare assistance to the poor. Moreover, the relationship between public goods spending and quality of life is substantively large and is invariant across income, education, gender, and race/ethnicity lines – indicating that spending has broad benefits across society. Taken together, these findings suggest that public goods spending can have important consequences for the well-being of Americans and, more broadly, contribute to the growing literature on how government policy decisions concretely impact the quality of life that citizens experience.

Background and Theoretical Expectations

The literature on the effects of government spending decisions on citizens' subjective well-being has grown steadily since the early 2000s. As indicated above, the bulk of these studies have focused their attention on overall government spending or the size of the state. Regarding their answer to the question of whether more spending/bigger government leads to higher levels of subjective well-being, they have tended to come to (sometimes widely) differing

conclusions. For example, in a cross-sectional analysis across 74 countries, Bjørnskov, Dreher, and Fischer (2007) find that average life satisfaction decreases as government spending (measured as a percentage of a country's GDP) increases (also see Ovaska and Takashima 2006; Rodríguez-Pose and Maslauskaitė 2011). By contrast, in an analysis of 21 advanced industrialized countries over time, Flavin, Pácek, and Radcliff (2014) find that individuals report living more satisfying lives as levels of government spending increase (also see Perovic and Golem 2010; O'Connor 2017). Perhaps muddling the picture even further, Hessami (2010) finds an inverted curvilinear relationship between the size of government and citizens' quality of life, Ott (2010, 2011) finds that the relationship is contingent on the technical quality of government, and another set of studies finds no discernable statistical relationship at all (e.g., Kacapyr 2008; Ram 2009).

In part because of the conflicting conclusions of studies on overall government spending or consumption, a small but growing literature instead assesses the effects of particular types of government spending on citizens' well-being. To date, these studies focus almost exclusively on the impact of various measures of welfare state generosity. Notably, DiTella, MacCulloch, and Oswald (2003) find that more generous unemployment benefits are associated with higher levels of national well-being. Sjöberg (2010) comes to a similar conclusion, theorizing that unemployment insurance reduces insecurity and uncertainty which, in turn, increases well-being. Additionally, a more comprehensive appraisal of welfare policies by Pácek and Radcliff (2008) finds a strong positive effect of indicators of decommodification and the social wage on life satisfaction (also see Kotakorpi and Laamanen 2010; Flavin, Pácek, and Radcliff 2011), while Bandelj and Mahutga (2010) find that levels of well-being decreased in post-communist countries when the state receded and the private sector expanded. By contrast, Ouweneel (2002)

finds a strong negative effect of unemployment benefit generosity on well-being and Ono and Lee (2016) conclude that a larger welfare state increases the happiness of some citizens at the expense of others through redistribution of resources. In addition, other analyses find no relationship at all between welfare state expenditures and quality of life (e.g., Veenhoven 2000). Similar to the literature on overall government spending, these studies also seem to paint a somewhat confusing picture about the precise effects of the generosity of the welfare state on human well-being.

From a practical standpoint, decisions about the overall size of government and welfare generosity can be deeply divisive politically, with liberals and conservatives staking out markedly different views on the course of action they want the government to take. Indeed, even if the literature discussed above did point to a clear and unambiguous conclusion, it is likely that many policymakers would pay little attention anyway because the findings do not align with their political and ideological predispositions. By comparison, government spending on public goods – goods that are non-rivalrous and non-excludable and, therefore, will be underprovided (if at all) by the private market – are arguably less politically contentious because even most proponents of small and limited government would concede at least a minimal role for government in this specific spending area where market failures abound (Page and Gilens 2017, 72-89). However, perhaps surprisingly, to date there has been little empirical analysis of the specific effect of levels of government public goods spending on citizens' assessments of their own well-being.²

² Interestingly, one series of studies has attempted to use surveys of life satisfaction to estimate the dollar value citizens might assign to public goods that are (by definition) almost always provided at no charge to the public (Mitchell and Carson 1989; Frey, Luechinger, and Stutzer 2009; Levinson 2012).

The limited number of studies to date that have examined the nexus of government public goods provision and quality of life have tended to be quite narrowly focused both in terms of the type of public good under consideration and the setting for which it is studied. For example, one recent study of 10 American cities finds a significant relationship between happiness and access to cultural and leisure amenities (such as museums, concert halls, and libraries) as well as access to convenient public transportation (Leyden, Goldberg, and Michelbach 2011). Similarly, Larson, Jennings, and Cloutier (2016) find that the quantity, quality, and accessibility of public parks in 44 cities are associated with higher levels of subjective well-being and Cattell et al. (2008) uncover evidence that greater access to public spaces that allow for social interactions (parks, streets, and markets) boosts well-being among citizens surveyed in East London (also see Florida, Mellander, and Rentfrow 2013; Mafrolla and D'Amico 2016). Taking stock of the limited literature to date, there appears to be a positive relationship between the provision of various types of public goods and citizens' assessments of their own well-being.

This paper goes beyond previous studies to make an original contribution by examining the relationship between government public goods provision and citizens' well-being more comprehensively using variation across the American states and across time. From a theoretical perspective, I expect that states that devote more resources to providing public goods will (all else equal) have happier citizens for three primary reasons.

First, greater investment in public goods can help to make communities more "livable" (Leyden, Goldberg, and Michelbach 2011; Larson, Jennings, and Cloutier 2016). For example, prioritizing spending on public parks and recreation enhances their proximity and availability for citizens to enjoy. Likewise, investing in more and better public roads and highways can help to lessen commute time and frustration and promote greater satisfaction. Similarly, high quality

public safety departments like police and fire provide important services as well as peace of mind to citizens. Simply stated, by devoting substantial resources to amenities that tend to be underprovided by the private market (if at all), government can help to create and sustain communities that are more enjoyable to live in.

Second, greater prioritization of public goods, and the public spaces created through their provision, can help to boost levels of social connectedness among citizens that previous studies have linked to higher levels of life satisfaction (Helliwell, and Putnam 2004; Bjørnskov 2008; Rodríguez-Pose and von Berlepsch 2014). When states invest in public goods that are non-rivalrous and non-excludable, they often can have the effect of bringing people together in a common space and enhancing the likelihood of social interaction and engagement. Aggregated over time, these subtle interactions can help to strengthen social ties among citizens and, in doing so, promote greater well-being.

Third, smart investment in public goods can enhance property values for homeowners and increase their financial well-being. Given the well-established link between financial status (at least up to a point) and subjective well-being (Easterlin 1995; Frijters, Haisken-DeNew, and Shields 2004; Kahneman and Deaton 2010), we should expect that rising levels of wealth in the form of home values will contribute to higher levels of well-being. Notably, this connection has a self-reinforcing effect, since the boost in property values that is precipitated by public goods spending generates a larger tax base that can then be used to fund further public goods investments.³

³ However, it is important to note that public goods must be financed, typically through the assessment of taxes on the general population that will be utilizing them. This financial obligation may attenuate some of the potential positive benefits of public goods discussed above.

Importantly, I also expect that the hypothesized positive relationship between public goods spending and quality of life will extend broadly across all people in society and not advantage some segments of a state's population over others (i.e. the benefits are not zero-sum). This expectation is grounded in the very nature of public goods – they are typically available to all people equally regardless of demographic characteristics and not targeted toward one specific group. Therefore, I do not expect the relationship between public goods spending and well-being to vary based on citizens' income, education, gender, or race/ethnicity.

Data and Empirical Strategy

To evaluate the relationship between state public goods provision and citizens' quality of life, this paper uses citizens' self-assessments of their own happiness commonly referred to as subjective well-being (SWB). As the scientific study of happiness has grown across the social and medical sciences, a well-developed literature has responded to an array of potential theoretical and methodological concerns about its usage. For example, standard or conventional survey items used to measure SWB have been rigorously tested and found reliable and valid (Myers and Diener 1997). Moreover, scholars have grown increasingly confident that the scientific study of well-being is not particularly marred by social desirability bias or the desire to report one is happy or satisfied when that is not the case (Myers and Diener 1995). Individuals who self-report higher levels of happiness on surveys also tend to demonstrate other attitudinal and behavioral characteristics that communicate happiness. For example, they are more likely to laugh, smile, and report higher levels for other (self-reported) measures of satisfaction (Watson and Clark 1991; Myers 1993; Myers and Diener 1997). Self-reported levels of well-being also

correlate highly with evaluations that come from external sources, such as family, friends, or professional/clinical assessments (Myers and Diener 1997).

Recent research on SWB typically relies on a single, direct question that asks respondents to report on how satisfied they feel with their lives “in general.” Asking this question in a simple and direct way has been documented to perform as well or better than more complex multi-item approaches (Veenhoven 1993). For example, after examining in detail a large number of concerns over the scientific utility of self-reported satisfaction, Veenhoven (1996, 4) concludes that most doubts “can be discarded.” As he puts it, the “literature on this point can be summarized as saying that simple questions on happiness and life satisfaction measure subjective appreciation of life quite validly” (1997, 157). In short, the available evidence strongly suggests that we can measure citizens’ self-assessments of their quality of life with reasonable accuracy.

To measure citizens’ self-reported level of happiness, I use data from the General Social Survey (GSS) for 1976-2006. To my knowledge, the GSS is the only public opinion survey available that asks a large sample of respondents about life satisfaction in a uniform way across an extended timeframe. Crucially, the survey also geocodes respondents to their state of residence. The precise question wording for the happiness item is: “Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?” This three point happiness scale (with greater happiness coded higher) is the primary dependent variable in the analysis presented below.⁴

⁴ The GSS has experimented with alternative survey items to probe respondents’ subjective well-being (for example, a seven point happiness scale in 2002 and 2012). Unfortunately, these alternative survey items have only been asked sporadically and do not lend themselves to analysis over time.

To measure state government spending on public goods, I use data from the U.S. Census Bureau's (2010) "Historical Finances of State Governments" file that provides detailed information on state spending by program area over time. The most pressing methodological decision that needs to be made at the outset is what spending categories to designate as public goods spending for the purposes of this analysis. While arguably a wide array of government spending could be classified as promoting "the public good," I decide to define public goods (in line with standard economics textbook definitions) only as spending categories on goods that are generally non-rivalrous and non-excludable. After a detailed examination of the categories included in the spending data, I operationalize public goods spending as state spending on (1) libraries, (2) parks and recreation, (3) natural resources, (4) highways (only regular, not toll), and (5) police protection.⁵ Importantly, I choose not to categorize state spending on the two major

⁵ The five spending categories are defined as follows: Libraries. Provision of state public library facilities and services, and support of local public library services. Parks and Recreation. Provision and support of recreational and cultural-scientific facilities and activities including golf courses, playing fields, playgrounds, public beaches, swimming pools, tennis courts, parks, auditoriums, stadiums, auto camps, recreation piers, marinas, botanical gardens, galleries, museums, and zoos. Also includes building and operation of convention centers and exhibition halls. Natural Resources. Conservation, promotion, and development of natural resources, such as soil, water, forests, minerals, and wildlife. Includes irrigation, drainage, flood control, forestry and fire protection, soil reclamation, soil and water conservation, fish and game programs, and agricultural fairs. Regular Highway Facilities. Construction, maintenance, and operation of highways (excluding toll roads), streets, bridges, tunnels, ferries, street lighting, and snow and ice removal. Police Protection. Preservation of law and order and traffic safety. Includes police patrols and communications, crime prevention activities, detention and custody of persons awaiting trial, traffic safety, and vehicular inspection.

budget areas of education and public welfare (poverty assistance) as public goods spending because these two areas do not, strictly speaking, meet the public goods definition of non-rivalrous and non-excludable.⁶ Nonetheless, I do examine the relationship between spending on

⁶ The two spending categories are defined as follows: Education. Schools, colleges, and other educational institutions (e.g., for blind, deaf, and other handicapped individuals) and educational programs for adults, veterans, and other special classes. Higher Education includes activities of institutions operated by the state, except that agricultural extension services and experiment stations are classified under Natural Resources, and hospitals serving the public are classified under Hospitals. Revenue and expenditure for dormitories, cafeterias, athletic events, bookstores, and other Auxiliary Enterprises financed mainly through charges for services are reported on a gross basis. Direct Elementary and Secondary Education comprises direct state payments (rather than intergovernmental payments to local governments) for operation of local public schools, construction of school buildings, purchase and operation of school buses, and other local school services. Direct state expenditure for Other Education includes state educational administration and services, tuition grants, fellowships, aid to private schools, and special programs. Public Welfare. Support of and assistance to needy persons contingent upon their need. Excludes pensions to former employees and other benefits not contingent on need. Expenditures under this heading include: Cash Assistance paid directly to needy persons under the categorical programs (Aid to Families with Dependent Children) and under any other welfare programs; Vendor Payments made directly to private purveyors for medical care, burials, and other commodities and services provided under welfare programs; and provision and operation by the government of welfare institutions including nursing homes not directly associated with a government hospital. Other Public Welfare includes payments to other governments for welfare purposes, amounts for administration, support of private welfare agencies, and other public welfare services.

education/public welfare and citizens' well-being as a check against spuriousness in the analysis presented below.⁷

As a means of making state spending on public goods comparable across a 30 year time period (1976-2006), I use total state public goods spending (the sum of dollars spent in the five budget categories listed above) as a percentage of that state's gross state product (GSP) for that year. This calculation technique has two advantages. First, compared to using a per capita measure of raw dollars spent, it does not require me to decide on an inflation adjustment approach across years. Second, it means that public goods spending is measured relative to the size of a state's total economy and, therefore, accounts for the fact that richer states may spend more (on a per capita basis) on a wide array of government programs than poorer states. In other words, using public goods spending as a percentage of GSP allows for direct comparison across states and across years because it measures, in effect, a state's prioritization of public goods spending in relation to their overall ability to pay.

With individual GSS respondents as the unit of analysis, I model the self-reported happiness variable as a function of public goods spending in their state of residence (total public goods spending as a percentage of GSP) for that year and a series of covariates at both the individual and state level that follow model specifications from previous studies (e.g., DiTella,

⁷ Levels of spending for each of the five expenditure categories that together comprise state public goods spending for this analysis are primarily decided on in a state's annual or biennial budgeting process. The spending can take the form of direct state expenditures or intergovernmental transfers to local governments for that specific budget purpose. Revenues to fund state public goods spending are raised from a combination of state taxes and intergovernmental transfers from the federal government to the states (which, for 1976-2006, averages 22.5% of total state revenues).

MacCulloch, and Oswald 2003; Flavin, Pacek, and Radcliff 2014).⁸ At the individual level, I include controls for (un)employment status, marital status, gender, race,⁹ age,¹⁰ education, family income,¹¹ self-reported health status, and frequency of church attendance. At the state level, I include covariates for unemployment rate, income inequality (Gini coefficient), the strength of left government power (Berry et al. 2010), the percentage of workers who are in a labor union (union density), the annualized nominal economic growth rate for that year, the violent crime rate, and (given the literature on the effect of racial diversity on support for spending on public goods) the percentage of a state's residents who are non-white (Alesina, Baqir, and Easterly 1999; Habyarimana et al. 2007).¹²

⁸ Descriptive statistics for all variables included in the analysis are reported in Table A-1 in the Appendix. Additionally, Table A-2 reports the mean and range (maximum – minimum) for public goods spending within states for 1976-2006 and Table A-3 reports how much, on average, each of the five component spending categories that are added together to compute total state spending on public goods make up in terms of spending (both as a percentage of GSP and as a percentage of total state spending).

⁹ The GSS did not begin categorizing Hispanics as a distinct race/ethnicity until 2002, so I only include an indicator for African American in the estimations (with whites and all other race/ethnicities as the reference category).

¹⁰ I include a covariate for both age and age squared because of the expectation of a curvilinear relationship such that both young and old respondents tend to, on average, be more happy/satisfied with their lives than those who are middle aged.

¹¹ Family income is reported by the GSS in constant (inflation adjusted) dollars using 1986 as the base year.

¹² Although the analysis of randomly selected GSS respondents within states over time is not (strictly speaking) a time-series cross-sectional analysis, the question of non-stationarity is nonetheless an

Because the self-reported happiness variable has three discrete categories (very happy, pretty happy, or not too happy), I use an ordered probit estimator. In addition to the covariates discussed above, I also include state and year fixed effects in all estimations. Including state effects accounts for all of the ways in which states are different from one another that are constant over time (history, culture, etc.). Including year effects accounts for events that might affect citizens' subjective well-being in all states uniformly in a given year. For all models, I report robust standard errors that are clustered by state to account for the fact that respondents nested within the same state are not statistically independent from one another (Primo, Jacobsmeier, and Milyo 2007; Arceneaux and Nickerson 2009). Notably, in a series of robustness checks, I find substantively identical results to those reported below when I use the same model specification but instead use a multi-level regression (individuals nested within states) with random intercepts for states and years. Similarly, I find the same results when I instead code the dependent variable dichotomously with only respondents who report being "very happy" coded as a one and all others coded as a zero and use a probit model.¹³

Finally, despite my attempt to account for a litany of alternative explanations by including the series of individual and state-level covariates described above, the fact that public goods spending is not randomly assigned by state leaves open the possibility that any statistical relationship between state public goods spending and citizens' happiness is spurious. For

important potential concern. A unit root test using Stata's "xtunitroot" syntax reveals that all state-level variables in the analysis are stationary.

¹³ The full results of these robustness checks are reported in Tables A-4 and A-5 in the Appendix. Additionally, Table A-6 reports the results for the models in Table 1 without state and year fixed effects included and reveals that the results are substantively similar.

example, it could be the case that happier citizens self-select by moving to states that spend comparatively more on public goods. In addition, it is possible that instead of public goods spending impacting happiness, it is the case that happier citizens support higher spending on public goods and elect state officials to deliver on that policy. Because of these possible limitations of the empirical strategy employed, I am careful throughout the discussion of the analysis below to merely assert a statistical association between variables rather than a causal effect.

Analysis

The results of the ordered probit estimations with the three category happiness measure as the dependent variable for each model are presented in Table 1. The measure of government spending used in the model is listed at the top of each column. The main result is reported in Column 1 and shows that the coefficient for state government public goods spending as a percentage of GSP is positive and bounded above zero at conventional levels of statistical significance ($p < .05$). From a practical standpoint, this finding indicates that citizens report higher levels of happiness when they live in a state that devotes a greater amount of resources to providing for public goods. Looking to the other coefficients in the model, the results are generally consistent with previous studies on the predictors of subjective well-being. As expected, individuals who are married, healthier, and more affluent report higher levels of happiness, while people who are unemployed report lower levels of happiness. Looking to the state-level covariates, people living in states with greater union density are happier while people living in states with greater racial diversity report being less happy. Interestingly, the coefficient for a state's unemployment rate and annual economic growth rate are both in the expected

direction (negative for unemployment, positive for economic growth) but are not statistically distinguishable from zero. Most important for the focus of this paper, however, is the positive and statistically significant coefficient for public goods spending reported in the top row of Column 1.

[Table 1 about here]

To investigate the robustness of the relationship between state government public goods spending and citizens' happiness and ensure that the relationship is confined only to public goods spending and not to government spending more broadly, I estimate a series of additional ordered probit models. Column 2 of Table 1 reports the results when I measure state government public goods spending as a percentage of total state spending (instead of as a percentage of GSP) and the coefficient for public goods spending is, similar to the main result discussed immediately above, positive and statistically different from zero. By contrast, Column 3 uses total government spending as a percentage of GSP as the primary independent variable and the coefficient is not statistically distinguishable from zero. Practically speaking, this finding indicates that the total level of government spending (relative to the size of a state's economy) is not discernably related to citizens' self-reported happiness. Columns 4 and 5 add state education and public welfare (poverty assistance) spending to the analysis. Specifically, Column 4 adds education and public welfare spending to the main measure of public goods spending used in Column 1 and, when those two spending categories are included, the spending coefficient is now not statistically different from zero. Additionally, Column 5 uses only state spending on education and public welfare as a percentage of GSP as the primary independent variable and, again, the spending

coefficient is not distinguishable from zero.¹⁴ Taking stock of these additional estimations in their totality, the results reveal that citizens' levels of subjective well-being are linked only to state public goods spending narrowly defined and not to overall government spending or measures that include education and public welfare spending which are not, strictly speaking, public goods. These additional estimations allow for increased confidence that there is a meaningful relationship between government public goods spending and citizens' well-being and help to address potential concerns about spuriousness.

[Table 2 about here]

Substantively, the relationship between state government public goods spending and citizens' happiness is sizable when compared with other common predictors of well-being. Table 2 reports the predicted change in the probability (or likelihood) of a respondent reporting her/himself in the highest "very happy" category for the dependent variable when varying the independent variable as indicated and holding all other variables in the model at their mean value (using the model specification from Column 1 of Table 1). Notably, the table reveals that moving from one standard deviation below the mean to one standard deviation above for government public goods spending produces a predicted increase in the probability of being "very happy" that is only slightly less than moving from one standard deviation below the mean to one standard deviation above for family income. In short, the statistical relationship between state public goods spending and happiness is substantively important.

[Table 3 about here]

¹⁴ Importantly, additional regression estimations find that the coefficient for state government spending is not statistically different from zero when only education spending is included in the model and when only public welfare spending is included.

Does the relationship between public goods spending and happiness vary by demographic group, or is it equally distributed across society? To examine this question, I create a series of interaction terms whereby I multiply state public goods spending as a percentage of GSP by income, education, gender, and race/ethnicity and then (separately) include each interaction term in the same model specification used for the estimations in Table 1. Inclusion of these interaction terms allows me to assess whether the rich benefit (in terms of an increase in happiness) more or less than the poor, the highly educated more or less than the less educated, women more or less than men, and African Americans more or less than white respondents. The coefficients for the interaction terms are reported in Table 3 and display a consistent result. Namely, none of the interaction terms is statistically different from zero.¹⁵ Practically speaking, these results indicate that the relationship between state public goods spending and citizen happiness is invariant for key demographic characteristics and is broadly distributed across society.

Conclusion

One perennial source of political debate centers on how governments should allocate their scarce resources in response to competing demands. If one goal of government is to (all else equal) encourage higher quality of life among the citizens it serves, then studies that evaluate possible linkages between the composition of government spending and citizens' well-being can provide important insights toward more effectively pursuing that goal. In this paper, I present evidence that citizens report living happier lives when the state they reside in spends more

¹⁵ A visual inspection of the plotted predicted effect of government public goods spending on well-being reveals that it is positive, statistically different from zero, and flat across the entire range of values for the four demographic characteristics (income, education, gender, and race/ethnicity).

(relative to the size of a state's economy) on providing public goods. I also show that this relationship does not hold for total government spending or for government spending on programs that are not (strictly speaking) public goods like education and welfare assistance to the poor, and that the statistical relationship between public goods spending and happiness is substantively large and invariant across income, education, gender, and race/ethnicity lines. From a practical politics standpoint, these findings are notable because, unlike spending on more politically contentious areas like the generosity of poverty assistance programs or unemployment benefits that aid specific individuals, there is generally broad public support across the political and ideological spectrum for at least some minimal level of public goods spending and provision.

Despite a growing literature across the social sciences that investigates possible linkages between total government spending (or the size of the state) and citizens' well-being, to date there has been only limited scholarly attention devoted to a more granular evaluation of the composition of government spending. This is unfortunate, because the most relevant choice facing governments at the state and local level is not necessarily how much or little to spend in total but how to prioritize and allocate spending across different categories given their budget constraints. Therefore, future empirical studies should examine how other categories of government spending correlate with measures of subjective well-being. Doing so will help to enhance our understanding about how government policy decisions can concretely impact the quality of life that citizens experience.

References

- Alesina, Alberto, Reza Baqir, and William Easterly. 1999. "Public goods and ethnic divisions." *Quarterly Journal of Economics* 114(4): 1243-84.
- Arceneaux, Kevin, and David W. Nickerson. 2009. "Modeling Certainty with Clustered Data: A Comparison of Methods." *Political Analysis* 17(2): 177-90.
- Bandelj, Nina, and Matthew Mahutga. 2010. "How Socio-Economic Change Shapes Income Inequality in Central and Eastern Europe." *Social Forces* 88(5): 2133-61.
- Berry, William D., Richard C. Fording, Evan J. Ringquist, Russell L. Hanson, and Carl E. Klarner. 2010. "Measuring citizen and government ideology in the US states: A re-appraisal." *State Politics & Policy Quarterly* 10(2): 117-35.
- Bjørnskov, Christian, Axel Dreher, and Justina A.V. Fischer. 2007. "The bigger the better? Evidence of the effect of government size on life satisfaction around the world." *Public Choice* 130(3): 267-92.
- Bjørnskov, Christian. 2008. "Social capital and happiness in the United States." *Applied Research in Quality of Life* 3(1): 43-62.
- Cattell, Vicky, Nick Dines, Wil Gesler, and Sarah Curtis. 2008. "Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations." *Health & Place* 14(3): 544-61.
- DiTella, Rafael., Robert .J. MacCulloch, and A.J. Oswald. 2003. "The Macroeconomics of Happiness." *Review of Economics and Statistics* 85(4): 809-27.
- Easterlin, Richard A. 1995. "Will raising the incomes of all increase the happiness of all?" *Journal of Economic Behavior & Organization* 27(1): 35-47.

- Flavin, Patrick, Alexander Pacek, and Benjamin Radcliff. 2011. "State Intervention and Subjective Well-Being in Advanced Industrial Democracies." *Politics & Policy* 39(2): 251-69.
- Flavin, Patrick, Alexander C. Pacek, and Benjamin Radcliff. 2014. "Assessing the impact of the size and scope of government on human well-being." *Social Forces* 92(4): 1241-58.
- Florida, Richard, Charlotta Mellander, and Peter J. Rentfrow. 2013. "The happiness of cities." *Regional Studies* 47(4): 613-27.
- Frey, Bruno S., Simon Luechinger, and Alois Stutzer. 2009. "The life satisfaction approach to valuing public goods: The case of terrorism." *Public Choice* 138(3): 317-45.
- Frijters, Paul, John P. Haisken-DeNew, and Michael A. Shields. 2004. "Money does matter! Evidence from increasing real income and life satisfaction in East Germany following reunification." *American Economic Review* 94(3): 730-40.
- Habyarimana, James, Macartan Humphreys, Daniel N. Posner, and Jeremy M. Weinstein. 2007. "Why does ethnic diversity undermine public goods provision?" *American Political Science Review* 101(4): 709-25.
- Helliwell, John F., and Robert D. Putnam. 2004. "The social context of well-being." *Philosophical Transactions of the Royal Society B: Biological Sciences* 359(1449): 1435-46.
- Hessami, Zohal. 2010. "The Size and Composition of Government Spending in Europe and Its Impact on Well-Being." *Kyklos* 63(3): 346-82.
- Kacapyr, Elia. 2008. "Cross-country determinants of satisfaction with life." *International Journal of Social Economics* 35(6): 400-16.

- Kahneman, Daniel, and Angus Deaton. 2010. "High income improves evaluation of life but not emotional well-being." *Proceedings of the National Academy of Sciences* 107(38): 16489-93.
- Kotakorpi, Kaisa, and Jani-Petri Laamanen. 2010. "Welfare state and life satisfaction: Evidence from public health care." *Economica* 77(307): 565-83.
- Larson, Lincoln R., Viniece Jennings, and Scott A. Cloutier. 2016. "Public parks and wellbeing in urban areas of the United States." *PLoS One* 11(4): e0153211.
- Levinson, Arik. 2012. "Valuing public goods using happiness data: The case of air quality." *Journal of Public Economics* 96(9): 869-80.
- Leyden, Kevin M., Abraham Goldberg, and Philip Michelbach. 2011. "Understanding the pursuit of happiness in ten major cities." *Urban Affairs Review* 47(6): 861-88.
- Mafrolla, Elisabetta, and Eugenio D'Amico. 2016. "Does public spending improve citizens' quality of life? An analysis of municipalities' leisure supply." *Local Government Studies* 42(2): 332-50.
- Mitchell, Robert Cameron, and Richard T. Carson. 1989. *Using surveys to value public goods: the contingent valuation method*. Washington, DC: Resources for the Future Press.
- Myers, David. 1993. *The Pursuit of Happiness*. New York: Avon Books.
- Myers, David, and Ed Diener. 1995. "Who is Happy?" *Psychological Science* 6(1): 10-19.
- Myers, David, and Ed Diener. 1997. "The Science of Happiness." *The Futurist* 31(5): 1-7.
- O'Connor, Kelsey J. 2007. "Happiness and Welfare State Policy Around the World." *Review of Behavioral Economics* 4(4): 397-420.

- Ono, Hiroshi, and Kristen Schultz Lee. 2016. "Welfare states and the redistribution of happiness." *Behavioral Economics of Preferences, Choices, and Happiness*. Springer Japan: 463-91.
- Ott, Jan C. 2010. "Good governance and happiness in nations: Technical quality precedes democracy and quality beats size." *Journal of Happiness Studies* 11(3): 353-68.
- Ott, Jan C. 2011. "Government and happiness in 130 nations: Good governance fosters higher level and more equality of happiness." *Social Indicators Research* 102(1): 3-22.
- Ouweneel, Piet. 2002. "Social Security and Well-Being of the Unemployed in 42 Nations." *Journal of Happiness Studies* 3(2): 167-92.
- Ovaska, Tomi, and Ryo Takashima. 2006. "Economic policy and the level of self-perceived well-being: An international comparison." *Journal of Socio-Economics* 35(2): 308-25.
- Page, Benjamin I., and Martin Gilens. 2017. *Democracy in America?: What Has Gone Wrong and What We Can Do about It*. Chicago: University of Chicago Press.
- Perovic, Lena Malesevic, and Sivia Golem. 2010. "Investigating macroeconomic determinants of happiness in transition countries: How important is government expenditure?" *Eastern European Economics* 48(4): 59-75.
- Primo, David M., Matthew L. Jacobsmeier, and Jeffrey Milyo. 2007. "Estimating the impact of state policies and institutions with mixed-level data." *State Politics & Policy Quarterly* 7(4): 446-59.
- Radcliff, Benjamin. 2013. *The political economy of human happiness: how voters' choices determine the quality of life*. New York: Cambridge University Press.
- Ram, Rati. 2009. "Government spending and happiness of the population: additional evidence from large cross-country samples." *Public Choice* 138(3/4): 483-90.

- Rodríguez-Pose, Andrés, and Kristina Maslauskaitė. 2011. "Can policy make us happier? Individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe." *Cambridge Journal of Regions, Economy and Society* 5(1): 77-96.
- Rodríguez-Pose, Andrés, and Viola von Berlepsch. 2014. "Social capital and individual happiness in Europe." *Journal of Happiness Studies* 15(2): 357-86.
- Sjoberg, Ola. 2010. "Social Insurance as a Collective Resource: Unemployment Benefits, Job Insecurity, and Subjective Well-Being in a Comparative Perspective." *Social Forces* 88(3): 1281-1304.
- U.S. Census Bureau. 2010. "Historical Finances of State Governments."
<https://www.census.gov/programs-surveys/state.html>.
- Veenhoven, Ruut. 1993. *Happiness in Nations*. Rotterdam: Risbo.
- Veenhoven, Ruut. 1996. "Developments in satisfaction research." *Social Indicators Research* 37(1): 1-46.
- Veenhoven, Ruut. 1997. "Quality of Life in Individualistic Societies." In *The Gift of Society*, eds. Mart-Jan DeJong and Anton C. Zijderveld. Nijkerk: Enzo Press. 149-170.
- Veenhoven, Ruut. 2000. "Well-being in the welfare state: Level not higher, distribution not more equitable." *Journal of Comparative Policy Analysis: Research and Practice* 2(1): 91-125.
- Watson, David, and Lee A. Clark. 1991. "Self vs. peer ratings of specific emotional traits." *Journal of Personality and Social Psychology* 60(6): 927-40.

Table 1: Main Results

	(1)	(2)	(3)	(4)	(5)
	<i>Public Goods as % of GSP</i>	<i>Public Goods as % of Total Spending</i>	<i>Total Spending as % of GSP</i>	<i>Public Goods + Education & Welfare as % of GSP</i>	<i>Education & Welfare as % of GSP</i>
State Government Spending	0.133* [0.043]	0.019* [0.005]	-0.007 [0.009]	-0.000 [0.014]	-0.016 [0.015]
<i>Individual-Level</i>					
Unemployed	-0.367* [0.057]	-0.366* [0.058]	-0.366* [0.057]	-0.366* [0.057]	-0.366* [0.057]
Married	0.454* [0.016]	0.454* [0.016]	0.454* [0.016]	0.454* [0.016]	0.454* [0.016]
Female	0.041* [0.014]	0.041* [0.014]	0.041* [0.014]	0.041* [0.014]	0.041* [0.014]
African American	-0.238* [0.027]	-0.239* [0.027]	-0.238* [0.027]	-0.238* [0.027]	-0.238* [0.027]
Age	-0.020* [0.004]	-0.020* [0.004]	-0.019* [0.004]	-0.019* [0.004]	-0.019* [0.004]
Age ²	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]
Education	0.007* [0.003]	0.007* [0.003]	0.007* [0.003]	0.007* [0.003]	0.007* [0.003]
Family Income	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]
Self-Reported Health	0.355* [0.011]	0.355* [0.011]	0.355* [0.011]	0.355* [0.011]	0.355* [0.011]
Church Attendance	0.042* [0.003]	0.042* [0.003]	0.042* [0.003]	0.042* [0.003]	0.042* [0.003]
<i>State-Level</i>					
Unemployment	-0.012	-0.008	-0.011	-0.012	-0.011

Rate	[0.009]	[0.009]	[0.010]	[0.009]	[0.009]
Income Inequality	-0.381 [0.496]	-0.482 [0.500]	-0.319 [0.472]	-0.316 [0.478]	-0.325 [0.473]
Left Government Power	-0.010 [0.044]	-0.000 [0.045]	-0.017 [0.043]	-0.018 [0.043]	-0.015 [0.043]
Union Density	0.010* [0.005]	0.010* [0.005]	0.008 [0.005]	0.009 [0.005]	0.008 [0.005]
Economic Growth	0.002 [0.002]	0.001 [0.002]	0.001 [0.002]	0.001 [0.002]	0.001 [0.002]
Violent Crime Rate	0.000 [0.000]	0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]
% Non-White	-0.003* [0.001]	-0.004* [0.001]	-0.002 [0.001]	-0.002 [0.001]	-0.002 [0.001]
Cut Point #1	0.001 [0.286]	-0.017 [0.288]	-0.360 [0.294]	-0.255 [0.285]	-0.399 [0.281]
Cut Point #2	1.840* [0.288]	1.822* [0.291]	1.479* [0.297]	1.584* [0.287]	1.440* [0.283]
State Effects?	Yes	Yes	Yes	Yes	Yes
Year Effects?	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	.09	.09	.09	.09	.09
N	26,007	26,007	26,007	26,007	26,007

Unit of analysis is individual GSS respondent for 1976-2006. Dependent variable is 1-3 self-reported happiness (happier coded higher). Measure of government spending used as independent variable in model listed at the top of each column. Cell entries are ordered probit coefficients with standard errors clustered by state reported beneath in brackets. * denotes $p < .05$ using a two-tailed test.

Table 2: Substantive Effects

Independent variable	Predicted percentage point change in probability of responding “very happy”
<i>State Public Goods Spending</i> 1 SD below mean → 1 SD above mean	4.6 [1.3, 7.7]
<i>State Public Goods Spending</i> Minimum → Maximum	21.7 [5.9, 37.1]
<i>Unemployed</i> No → Yes	-11.2 [-13.5, -8.8]
<i>Marital Status</i> Not married → Married	15.4 [14.4, 16.4]
<i>Family Income</i> 1 SD below mean → 1 SD above mean	6.4 [5.3, 7.6]
<i>Self-Reported Health</i> 1 SD below mean → 1 SD above mean	20.2 [19.2, 21.3]
<i>Church Attendance</i> 1 SD below mean → 1 SD above mean	7.7 [6.7, 8.7]

Cell entries are the predicted percentage point change in the probability of a respondent reporting her/himself in the highest “very happy” category for the 1-3 happiness dependent variable when varying the independent variable as specified and holding all other variables at their mean values (generated using CLARIFY from the model specification in Column 1 of Table 1). The 95% confidence interval for the predicted change is reported in brackets beneath the estimate.

Table 3: Demographic Interaction Terms

	(1)	(2)	(3)	(4)
	<i>Family Income</i>	<i>Education</i>	<i>Female</i>	<i>African American</i>
Public Goods Spending x Demographic	0.001 [0.001]	0.004 [0.004]	0.033 [0.025]	-0.031 [0.051]

Unit of analysis is individual GSS respondent for 1976-2006. Dependent variable is 1-3 self-reported happiness (happier coded higher). The demographic characteristic interacted with the state government public goods spending measure is listed at the top of each column. Models include all of the same covariates as the models reported in Table 1. Cell entries are ordered probit coefficients with standard errors clustered by state reported beneath in brackets. N=26,007. * denotes $p < .05$ using a two-tailed test.

Appendix

Table A-1: Descriptive Statistics

<i>Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Happiness (Not Too, Pretty, Very Happy)	2.19	0.63	1	3
Happiness (Not Too/Pretty=No, Very=Yes)	0.31	0.46	0	1
Public Goods Spending as % of GSP	1.25	0.50	0.49	4.91
Public Goods Spending as % of Total Spending	10.85	3.70	3.53	26.19
Total Spending as % of GSP	11.66	2.29	6.00	31.59
Public Goods + Education & Welfare as % of GSP	7.36	1.40	3.77	15.41
Education & Welfare Spending as % of GSP	6.11	1.20	2.53	11.49
Unemployed	0.03	0.17	0	1
Married	0.53	0.50	0	1
Female	0.55	0.50	0	1
African American	0.14	0.34	0	1
Age	44.82	17.08	18	89
Age ²	2300.99	1708.22	324	7921
Education	12.81	3.11	0	20
Family Income (\$1000s, base year 1986)	30.78	27.72	0.28	162.61
Self-Reported Health	3.03	0.84	1	4
Church Attendance	3.82	2.69	0	8
Unemployment Rate	6.19	2.03	2.20	15.70
Income Inequality (Gini)	0.49	0.03	0.40	0.58
Left Government Power	0.50	0.22	0.00	0.98
Union Density	16.95	8.24	2.80	38.70
Economic Growth (Annual, Nominal)	8.40	5.77	-5.98	33.87
Violent Crime Rate (per 100,000)	563.73	238.28	47.00	1244.30
% Non-White	22.93	12.26	1.80	64.03

N=26,007 for 1976-2006.

Table A-2: State Public Goods Spending Within States, 1976-2006

State	% of GSP		% of Total State Spending	
	<i>Mean</i>	<i>Range</i>	<i>Mean</i>	<i>Range</i>
Alabama	1.56	1.03	11.40	7.36
Alaska	3.46	2.59	15.25	12.86
Arizona	1.70	1.83	14.68	10.68
Arkansas	1.98	1.30	15.20	12.73
California	0.89	0.41	7.32	3.35
Colorado	1.18	0.97	12.25	7.19
Connecticut	0.87	0.80	8.35	7.07
Delaware	1.44	0.84	12.45	3.85
Florida	1.22	0.63	12.74	7.09
Georgia	1.24	1.26	12.57	11.96
Hawaii	1.53	1.89	8.61	7.59
Idaho	2.32	1.18	17.53	10.26
Illinois	0.98	0.69	10.52	6.59
Indiana	1.23	0.59	12.25	8.40
Iowa	1.92	0.76	15.62	8.80
Kansas	1.58	0.78	15.03	7.73
Kentucky	2.03	1.49	14.91	10.99
Louisiana	1.47	1.03	12.70	10.87
Maine	1.79	0.91	11.33	6.21
Maryland	1.65	1.39	13.09	7.14
Massachusetts	0.90	0.59	7.47	5.78
Michigan	1.12	0.53	8.55	4.36
Minnesota	1.45	0.62	11.39	5.28
Mississippi	2.16	1.50	13.96	12.42
Missouri	1.24	0.54	13.51	9.28
Montana	3.16	1.54	19.02	10.72
Nebraska	1.83	1.05	18.43	13.21
Nevada	1.27	1.11	12.69	8.88
New Hampshire	1.20	1.31	12.06	9.72
New Jersey	0.84	0.49	7.37	4.73
New Mexico	2.35	1.77	13.91	9.62
New York	0.62	0.25	4.69	2.62
North Carolina	1.39	0.74	12.45	4.96
North Dakota	2.72	1.13	17.05	7.46
Ohio	1.00	0.33	8.38	4.98
Oklahoma	1.51	0.73	12.02	7.84
Oregon	1.77	1.09	13.02	9.89
Pennsylvania	1.21	0.78	10.01	5.23
Rhode Island	1.12	0.89	7.03	3.75

South Carolina	1.46	0.93	9.77	5.14
South Dakota	2.52	1.54	21.22	11.37
Tennessee	1.38	1.20	13.83	11.13
Texas	0.90	0.46	11.65	8.61
Utah	1.79	1.28	12.91	8.57
Vermont	2.31	1.12	14.22	6.99
Virginia	1.58	1.32	14.78	9.40
Washington	1.29	0.70	10.20	7.34
West Virginia	2.65	1.56	15.98	13.65
Wisconsin	1.24	0.40	9.49	2.47
Wyoming	3.00	2.41	22.24	22.33
AVERAGE	1.62	1.04	12.66	8.32

Cells report the mean and range (maximum – minimum) for annual public goods spending for 1976-2006 as a percentage of GSP and as a percentage of total state spending.

Table A-3: Five Components of State Public Goods Spending

<i>State Spending Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
% of GSP				
Libraries	0.01	0.01	0.00	0.13
Parks and Recreation	0.06	0.05	0.00	0.82
Natural Resources	0.27	0.20	0.04	1.91
Highways (only regular, not toll)	1.16	0.51	0.31	3.67
Police Protection	0.11	0.05	0.00	0.39
% of Total State Spending				
Libraries	0.11	0.08	0.00	0.78
Parks and Recreation	0.50	0.34	0.00	4.00
Natural Resources	2.04	1.09	0.27	6.89
Highways (only regular, not toll)	9.11	3.50	2.21	33.37
Police Protection	0.90	0.36	0.02	2.91

Descriptive statistics for five categories of annual state spending. 50 states for 1976-2006.

Table A-4: Multi-Level Regression with Random State and Year Intercepts

	(1)	(2)	(3)	(4)	(5)
	<i>Public Goods as % of GSP</i>	<i>Public Goods as % of Total Spending</i>	<i>Total Spending as % of GSP</i>	<i>Public Goods + Education & Welfare as % of GSP</i>	<i>Education & Welfare as % of GSP</i>
State Government Spending	0.024* [0.010]	0.004* [0.001]	0.000 [0.002]	0.005 [0.003]	0.003 [0.004]
<i>Individual-Level</i>					
Unemployed	-0.188* [0.029]	-0.188* [0.029]	-0.189* [0.029]	-0.189* [0.029]	-0.189* [0.029]
Married	0.231* [0.008]	0.231* [0.008]	0.232* [0.008]	0.232* [0.008]	0.232* [0.008]
Female	0.020* [0.007]	0.020* [0.007]	0.020* [0.007]	0.020* [0.007]	0.020* [0.007]
African American	-0.118* [0.014]	-0.119* [0.014]	-0.118* [0.014]	-0.117* [0.014]	-0.117* [0.014]
Age	-0.010* [0.002]	-0.010* [0.002]	-0.010* [0.002]	-0.010* [0.002]	-0.010* [0.002]
Age ²	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]
Education	0.003* [0.001]	0.003* [0.001]	0.003* [0.001]	0.003* [0.001]	0.003* [0.001]
Family Income	0.002* [0.000]	0.002* [0.000]	0.002* [0.000]	0.002* [0.000]	0.002* [0.000]
Self-Reported Health	0.179* [0.005]	0.179* [0.005]	0.179* [0.005]	0.179* [0.005]	0.179* [0.005]
Church Attendance	0.022* [0.002]	0.021* [0.002]	0.022* [0.002]	0.022* [0.002]	0.022* [0.002]
<i>State-Level</i>					
Unemployment	-0.002	-0.002	-0.000	-0.001	-0.000

Rate	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Income Inequality	0.117 [0.155]	0.194 [0.153]	0.076 [0.158]	0.031 [0.155]	0.043 [0.153]
Left Government Power	-0.004 [0.016]	0.001 [0.017]	-0.006 [0.016]	-0.007 [0.016]	-0.006 [0.016]
Union Density	-0.001 [0.001]	-0.001 [0.001]	-0.002* [0.001]	-0.002* [0.001]	-0.002* [0.001]
Economic Growth	0.001* [0.001]	0.001 [0.001]	0.001 [0.001]	0.001* [0.001]	0.001* [0.001]
Violent Crime Rate	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]
% Non-White	-0.000 [0.001]	0.000 [0.001]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]
Constant	1.468* [0.101]	1.405* [0.103]	1.533* [0.100]	1.520* [0.099]	1.533* [0.097]
Log Likelihood	-22884.44	-22883.35	-22887.97	-22886.60	-22887.53
N	26,007	26,007	26,007	26,007	26,007

Unit of analysis is individual GSS respondent for 1976-2006. Dependent variable is 1-3 self-reported happiness (happier coded higher). Measure of government spending used as independent variable in model listed at the top of each column. Models include random intercepts for states and years. Cell entries are multi-level regression coefficients with standard errors clustered by state reported beneath in brackets. * denotes $p < .05$ using a two-tailed test.

Table A-5: Dichotomous Measure of Happiness

	(1)	(2)	(3)	(4)	(5)
	<i>Public Goods as % of GSP</i>	<i>Public Goods as % of Total Spending</i>	<i>Total Spending as % of GSP</i>	<i>Public Goods + Education & Welfare as % of GSP</i>	<i>Education & Welfare as % of GSP</i>
State Government Spending	0.139* [0.055]	0.016* [0.007]	-0.006 [0.011]	-0.003 [0.018]	-0.020 [0.018]
<i>Individual-Level</i>					
Unemployed	-0.257* [0.068]	-0.256* [0.068]	-0.256* [0.068]	-0.256* [0.068]	-0.256* [0.068]
Married	0.461* [0.020]	0.461* [0.020]	0.462* [0.020]	0.461* [0.020]	0.461* [0.020]
Female	0.058* [0.014]	0.058* [0.014]	0.058* [0.014]	0.058* [0.014]	0.058* [0.014]
African American	-0.190* [0.031]	-0.191* [0.031]	-0.190* [0.031]	-0.190* [0.031]	-0.191* [0.031]
Age	-0.018* [0.003]	-0.018* [0.004]	-0.018* [0.003]	-0.018* [0.003]	-0.018* [0.003]
Age ²	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]
Education	-0.002 [0.003]	-0.002 [0.003]	-0.002 [0.003]	-0.002 [0.003]	-0.002 [0.003]
Family Income	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]
Self-Reported Health	0.353* [0.011]	0.353* [0.011]	0.353* [0.011]	0.353* [0.011]	0.353* [0.011]
Church Attendance	0.048* [0.004]	0.048* [0.004]	0.048* [0.004]	0.048* [0.004]	0.048* [0.004]
<i>State-Level</i>					
Unemployment	-0.013	-0.010	-0.013	-0.014	-0.013

Rate	[0.009]	[0.009]	[0.010]	[0.010]	[0.010]
Income Inequality	-0.721 [0.607]	-0.790 [0.595]	-0.645 [0.574]	-0.644 [0.580]	-0.653 [0.572]
Left Government Power	-0.005 [0.050]	0.003 [0.050]	-0.012 [0.048]	-0.013 [0.048]	-0.010 [0.048]
Union Density	0.006 [0.006]	0.006 [0.006]	0.004 [0.006]	0.005 [0.006]	0.004 [0.006]
Economic Growth	0.003 [0.003]	0.001 [0.003]	0.001 [0.003]	0.002 [0.003]	0.001 [0.003]
Violent Crime Rate	0.000 [0.000]	0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]
% Non-White	-0.001 [0.002]	-0.002 [0.002]	-0.000 [0.002]	-0.000 [0.002]	-0.001 [0.002]
Constant	-1.632* [0.338]	-1.573* [0.325]	-1.276* [0.342]	-1.340* [0.335]	-1.190* [0.322]
State Effects?	Yes	Yes	Yes	Yes	Yes
Year Effects?	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	.09	.09	.09	.09	.09
N	26,007	26,007	26,007	26,007	26,007

Unit of analysis is individual GSS respondent for 1976-2006. Dependent variable is dichotomous self-reported happiness (Not Too/Pretty Happy=0, Very Happy=1). Measure of government spending used as independent variable in model listed at the top of each column. Cell entries are probit coefficients with standard errors clustered by state reported beneath in brackets. * denotes $p < .05$ using a two-tailed test.

Table A-6: State and Year Fixed Effects Not Included

	(1)	(2)	(3)	(4)	(5)
	<i>Public Goods as % of GSP</i>	<i>Public Goods as % of Total Spending</i>	<i>Total Spending as % of GSP</i>	<i>Public Goods + Education & Welfare as % of GSP</i>	<i>Education & Welfare as % of GSP</i>
State Government Spending	0.047* [0.021]	0.008* [0.002]	0.001 [0.004]	0.009 [0.007]	0.006 [0.008]
<i>Individual-Level</i>					
Unemployed	-0.367* [0.057]	-0.366* [0.057]	-0.368* [0.057]	-0.368* [0.057]	-0.368* [0.057]
Married	0.454* [0.016]	0.453* [0.016]	0.455* [0.016]	0.455* [0.016]	0.455* [0.016]
Female	0.039* [0.014]	0.039* [0.014]	0.039* [0.014]	0.039* [0.014]	0.039* [0.014]
African American	-0.230* [0.027]	-0.232* [0.027]	-0.229* [0.027]	-0.228* [0.027]	-0.228* [0.027]
Age	-0.020* [0.003]	-0.020* [0.003]	-0.020* [0.003]	-0.020* [0.003]	-0.020* [0.003]
Age ²	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]	0.000* [0.000]
Education	0.006* [0.003]	0.006* [0.003]	0.005* [0.003]	0.005* [0.003]	0.005* [0.003]
Family Income	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]	0.003* [0.000]
Self-Reported Health	0.352* [0.011]	0.352* [0.011]	0.352* [0.010]	0.352* [0.011]	0.352* [0.011]
Church Attendance	0.043* [0.003]	0.043* [0.003]	0.043* [0.003]	0.043* [0.003]	0.043* [0.003]
<i>State-Level</i>					
Unemployment	-0.003	-0.004	-0.001	-0.001	-0.001

Rate	[0.006]	[0.006]	[0.005]	[0.005]	[0.005]
Income Inequality	0.232 [0.307]	0.387 [0.304]	0.149 [0.312]	0.059 [0.306]	0.083 [0.303]
Left Government Power	-0.008 [0.032]	0.003 [0.033]	-0.010 [0.032]	-0.013 [0.031]	-0.012 [0.032]
Union Density	-0.002* [0.001]	-0.001 [0.001]	-0.004* [0.001]	-0.003* [0.001]	-0.004* [0.001]
Economic Growth	0.002* [0.001]	0.002 [0.001]	0.002 [0.001]	0.003* [0.001]	0.002* [0.001]
Violent Crime Rate	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000 [0.000]
% Non-White	-0.000 [0.001]	0.000 [0.001]	-0.001 [0.001]	-0.001 [0.001]	-0.001 [0.001]
Cut Point #1	0.134 [0.202]	0.261 [0.205]	0.004 [0.198]	0.029 [0.197]	0.003 [0.193]
Cut Point #2	1.968* [0.208]	2.094* [0.212]	1.837* [0.204]	1.862* [0.203]	1.836* [0.199]
State Effects?	No	No	No	No	No
Year Effects?	No	No	No	No	No
Pseudo R ²	.08	.08	.08	.08	.08
N	26,007	26,007	26,007	26,007	26,007

Unit of analysis is individual GSS respondent for 1976-2006. Dependent variable is 1-3 self-reported happiness (happier coded higher). Measure of government spending used as independent variable in model listed at the top of each column. Cell entries are ordered probit coefficients with standard errors clustered by state reported beneath in brackets. * denotes $p < .05$ using a two-tailed test.