

Micro- and Macro-Economic Determinants of American Attitudes toward Immigration

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| ABSTRACT |

While previous studies have focused on individual-level economic concerns, this paper considers how the ebb and flow of the macroeconomic conditions combine with individual objective and subjective economic concerns in shaping public attitudes toward immigration. Using 1992-2004 American National Election Studies (ANES), we find that changes in state-level macroeconomic conditions, especially inflation rates, indeed have a significant consequence on attitudes toward immigration above and beyond the effect of individual economic concerns and that, once the effect of economic contexts is considered, what it is an individual's objective position in the labor market that drives one's attitude toward immigration rather than one's subjective economic perceptions. In addition, this paper shows that the effect of the objective economic interests is conditional on the level of inflation rates: the gap in attitudes toward immigration between individuals with varying levels of skill becomes greater as the inflation rates rise. In other words, we find that a negative economic contextual cue intensifies the opposition to immigration among those who are already predisposed to oppose immigration, rather than mobilizes a broader public.

Key Words | attitudes toward immigration, macroeconomic contexts, inflation rates, economic interests, position in the labor market

While its status on the public agenda has waxed and waned over time (Tichenor 2002), immigration has been one of the most salient issues in recent American politics. Recent release of the American Community Survey reveals that the foreign-born population in the United States now consists of more than 12% of the total population. Beyond a handful of the traditional ports of entry, today's immigrants are settling in both small towns in interior areas and large coastal cities (Frey 2006). In 2006, reflecting mounting demographic pressures, 10 percent of Americans in 2006 named immigration as the most important problem facing the country in an open-ended question, which is the highest level in more than 15 years of polling by a non-profit survey research center (Pew Research Center 2006). Local immigration policy activism has spread across the U.S. cities and states, and numerous communities have considered and passed anti-immigrant ordinances (Varsanyi 2010).

The issue of immigration in the U.S. is multifaceted, and therefore, public attitudes toward it can be grounded in many different factors including symbolic predispositions and group identity. Among others, the literature shows that economic concerns play an important role in forming American attitudes toward immigration. Previous studies have found that economic characteristics of individuals—whether they are measured by objective positions in the labor market like skill level or occupation (Kessler 2001; Mayda 2006; Scheve and Slaughter 2001a) or by subjective perceptions of the national economy (Chandler and Tsai 2001; Citrin et al. 1997; Espenshade and Hempstead 1996; Sides and Citrin 2007)—significantly shape their opinion on immigration: lower skill levels and negative evaluations of economic conditions lead individuals to have more negative views toward immigration. Of course, other non-economic factors, such as racial prejudice and cultural threat, are no less significantly associated with attitudes toward immigration; however, even after controlling for them, individual economic characteristics still exert significant influence on the public opinion toward immigration.

We take this line of research a step further and examine how macro-level economic conditions and individual economic concerns combine in influencing public attitudes toward immigration. While many studies have documented the important role of macroeconomic conditions in influencing electoral outcomes, little research has yet examined the possibility that macroeconomic conditions may similarly affect the American public opinion regarding specific policy issues (for exception, see Kam and Nam 2008). In this respect, we raise two main questions in this paper. First, we examine to what extent changes in macro-level economic conditions influence individual attitudes toward immigration beyond what previous studies have explained based on individual economic concerns. Simply put, if some people are more strongly oppose immigration than others, it is also possible that the opposition to immigration is higher in some times and places than others. Second, we explore the mechanism in which macroeconomic conditions influence public attitudes toward immigration. Specifically, by examining whether and how individual economic concerns and macro-level economic conditions interact in influencing public attitudes toward immigration, we attempt to differentiate two possible ways in which changes in macroeconomic conditions trigger negative attitudes toward immigration: Do deteriorating economic contexts intensify the opposition to immigration among those who are already predisposed to oppose immigration, or mobilize a broader public whether or not they are already concerned about economic threats from immigration?

I. Economic Concerns and Public Attitudes toward Immigration: Predisposition vs. Context

Throughout the industrialized world, general public responses to immigration are often characterized by opposition to existing immigration levels and negative feelings about the most recent cohort of migrants (e.g., Cornelius et al. 2004; Simon and Lynch 1999), and Americans are not exceptional in this regard. What explains popular anti-immigration sentiment? Studies have found that a number of attitudinal characteristics are significantly related to one's opinion about immigration. For instance, receptivity increases with years of education, especially college education, which are significantly related to greater tolerance and more cosmopolitan cultural values (Chandler and Tsai 2001; Hainmueller and Hiscox 2007). Attitudes on immigration policy are also contingent upon racial prejudices and stereotypical beliefs about the work ethic and welfare dependency of newcomers (Burns and Gimpel 2000; Dustman and Preston 2007). In addition, anti-immigration sentiments are more prevalent among people with a strong sense of national identity, and in particular a national identity that is predicated on ethnic superiority or cultural homogeneity (Chandler and Tsai 2001; de Figueiredo and Elkins 2003; Fetzer 2000; Sides and Citrin 2007). Nevertheless, in spite of significant effects these attitudinal characteristics may exert, most studies agree that the economic factors play a prominent role in influencing the public attitudes toward immigration, if not a sole determinant.

To make the connection between individual economic interests and immigration policy preferences, economists typically focus on how impacts of immigration are differently borne by individuals with varying skill levels. The standard models of international trade suggest that, with abundant unskilled labor in the global South and skilled labor in the global North, the international

movement of labor forces should benefit skilled workers in host states and unskilled workers in countries of origin, and that low-skilled workers in host states should see their wages fall (Scheve and Slaughter 2001a and 2001b). In consequence, policy preferences regarding immigration are expected to hinge upon individuals' position in the labor market, with the unskilled workers have a clear economic incentive to oppose increased immigration. Studies have indeed found that individuals with a lower level of skill, measured by various indicators such as occupation, wage, and levels of education, indeed have more negative attitudes toward immigration (Mayda 2006; Kessler 2001; Scheve and Slaughter 2001a), and regardless of their own skill levels, people are generally more supportive of accepting skilled immigrants than unskilled ones (Hainmueller and Hiscox 2010).

A couple of considerations, on the other hand, make the explanation based on individuals' objective position in the labor market less than fully satisfactory. First, the assessment of the benefits and costs from immigration may include not only concerns on increased competition in the labor market, but also opportunities or challenges regarding economic development, public finance, and social policies (Dustmann and Preston 2006). For instance, people who think immigration is generally good for the economy are significantly less likely to show negative attitudes toward immigration, even after we control for the notion that immigrants take jobs away (Bauer, Lofstrom, and Zimmermann 2001). Second, the actual effects of immigration on the economy of receiving countries are typically modest, and public attitudes toward immigration reflect substantial misconceptions, some of which may reflect citizens' tendency to respond to migration on emotional or affective levels rather than on the basis of objective self-interest or personal experience (Cornelius and Rosenblum 2005). In fact, focusing on individuals' economic skill tends to obscure the fact that, as with many other issues, people may be poorly informed and uncertain about the relationships between immigration and changes in their personal

economic status.

Students of public opinion and political psychology, in this respect, have focused on the effects of subjective economic perceptions on attitudes toward immigration. Subjective economic perceptions are typically measured using individuals' retrospective evaluations of the overall national economy ("sociotropic" concerns) and personal financial situations ("pocketbook" concerns). Using these measures, previous studies have found that people who have more optimistic assessments of the national economy tend to be more receptive to current or even higher levels of immigration (Chandler and Tsai 2001; Citrin et al. 1997; Espenshade and Hempstead 1996; Sides and Citrin 2007). On the other hand, when controlling for sociotropic concerns, the effect of pocketbook concerns is greatly diminished or often becomes statistically insignificant (Citrin et al. 1997; Sides and Citrin 2007).

Taken together, previous studies by economists and political scientists have shown that individuals with low levels of skill and with pessimistic views about the national economy are "predisposed" to have more negative attitudes toward immigration.¹⁾ However, people's policy attitudes arise not only from their predispositions and other individual-level characteristics, but also from the political and economic contexts where they find themselves. A series of recent experiments show that opposition to immigration among subjects tends to increase with some contextual cues—"situational triggers"—above and beyond what can be explained by a concern of economic well-being or national identity (Brader, Valentino, and Suhay 2008; Sniderman, Hagendoorn, and Prior 2004). In other words, if those who feel economic threats from immigration are more likely to oppose immigration, an important question is

1) We consider sociotropic perceptions as an individual predisposing factor, because economic assessments are strongly influenced by media exposure and partisan identification (Duch, Palmer, and Anderson 2000; Gerber and Huber 2010; Hetherington 1996).

what contextual cues heighten people's sense of vulnerability and thus trigger negative attitudes toward immigration.

In this respect, we examine how changes in macroeconomic conditions trigger negative attitudes toward immigration among Americans. While a number of studies have examined how demographic contexts, i.e., geographic concentration of immigrants in one's neighborhood, influence the residents' attitudes toward immigration (Ha 2010; Hopkins 2010; Rocha and Espino 2009), there is few focusing on the effect of contextual cues of economic nature. This inattention is ironic since, in aggregate, public opposition toward immigration seems to move in tandem with macroeconomic conditions (Espenshade and Belanger 1998; Lapinski et al. 1997). While the aggregate relationship makes a quite intuitive sense, it has not been validated whether American people are indeed more likely to oppose immigration as the objective conditions of the economy deteriorate. Suggestive, but conflicting, evidence is provided from the other side of the Atlantic. Across European countries, Quillian (1995) finds that, anti-immigrant prejudice is higher in countries with poor economic conditions, especially when combined with the presence of a larger foreign-born population. In contrast, with expanded sample of European countries, Sides and Citrin (2007) report that macroeconomic conditions, whether measured by GDP per capita or by unemployment rates, play a very small role in explaining individual attitudes toward immigrants.

To revisit the relationship between macroeconomic conditions and individual attitudes toward immigration in the United States, this paper takes a slightly different approach from previous studies. First, macroeconomic conditions in Quillian (1995) and Sides and Citrin (2007) are measured at the national level and they may be too crude indicators to capture concrete effects of situational triggers. In this respect, we use state-level, rather than national, measures of macroeconomic data. This choice is based on the presumption that the impact of immigration on the economy may differ across states because

immigrants still tend to concentrate on specific states where opportunities abound. Furthermore, state-level macroeconomic conditions can have more direct relevance to its residents possibly through the personal experiences of their close acquaintances. Second, macroeconomic conditions observed at one fixed point of time may not appropriately capture the effect of situational triggers because citizens' response to them can be primarily based on how they improve or deteriorate compared to past experiences. In this respect, we combine individual-level survey data across multiple years and examine how changes in macroeconomic conditions trigger negative attitudes toward immigration across individuals with different economic concerns.

In addition, of particular interest in this paper is how the situational trigger interacts with predisposing factors in influencing negative attitudes toward immigration among the American public.²⁾ From an analytical point of view, two alternative mechanisms may bring about the similar aggregate relationship. First, a situational trigger may mobilize a broader public whether or not they are already concerned about economic threats from immigration; in this case, the deterioration in macroeconomic conditions should lead to the diminished effects of economic interests on individual attitudes toward immigration. Alternatively, a situational trigger may intensify the opposition to immigration among those who are already predisposed to oppose immigration; in this case, the deterioration in macroeconomic conditions should accelerate the effects of economic interests.

2) In fact, both Quillian (1995) and Sides and Citrin (2007) also examined the interaction effects between individual-level determinants and macroeconomic conditions but found little evidence of cross-level interaction.

II. Data and Measures

Empirical data for this paper come from the American National Election Studies (ANES), 1992-2004. Since 1992, the ANES have included a question that solicits respondents' opinion about immigration restriction: "do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased or decreased?"³⁾ The response to this question ranges from "increased a lot," "increased a little," "left the same as it is now," "decreased a little," and "decreased a lot." As the five-category variable is very skewed, with less than 3% of respondents supporting increasing immigration a lot and another 5.5% supporting increasing immigration a little, the dependent variable is created by dichotomizing the original variable: those who think immigrants to the U.S. should be decreased (whether "a little" or "a lot") are coded 1 and those who think immigrants should be increased or remain the same are coded 0. One should note that this variable essentially measures the respondents' evaluation of current and future immigration policies rather than the optimal level of immigration, as the question is phrased to measure their perceptions of current number of immigrants.

The first set of key independent variables consists of individual economic concerns, measured both objectively and subjectively, and represents predisposing factors affecting attitudes toward immigration. For a measure of objective economic concerns, we include each respondent's *Skill*. Conventional measures of one's skill include self-reported personal income (Burns and Gimpel 2000; Espenshade and Hempstead 1996; Mayda 2006; Sides and Citrin 2007), occupation (Citrin et al. 1997; Mayda and Rodrik

3) The 2002 ANES did not ask this question and therefore excluded from the analysis.

2005) or wage matched with each identifiable occupation (Kessler 2001; Scheve and Slaughter 2001a), often in combination with years of education. It is hard to find a single indicator that appropriately measures an individual's skill, as it could be determined by many observable and unobservable factors. Occupation-based wages seem to be the most appropriate, but there are usually too many missing cases that need statistical fix such as multiple imputation that requires additional assumptions (Scheve and Slaughter 2001a and 2001b).⁴⁾ Thus, following Baker (2005), we construct a skill measure with three proxies (education, self-reported income, and an ordered list of occupation categories) by conducting a principal component analysis. Table 1 shows that the analysis detects one common component with eigenvalue greater 1, with which all of these three individual characteristics are highly correlated. We take the scores from this common component as a measure of objective economic interests.

In operationalizing subjective economic concerns, we simply use each respondent's retrospective evaluations of the national economy. The ANES include a question asking respondents whether the national economy has gotten much worse off, somewhat worse off, stay the same, somewhat better

<Table 1> Principal Component Analysis of Economic Skill

	Loadings
<i>Education</i>	0.5905
<i>Income</i>	0.5466
<i>Occupation</i>	0.5938
Eigen Value	1.7813
Proportion of Variance Explained	0.5938

4) The proportion of the missing cases ranges 25% to 45% of the total number of observations in relevant ANES (Scheve and Slaughter 2001a, 138).

off, or much better off over the past year. Responses to the questions are used to create the variable *Sociotropic Perception*, with higher values indicating more optimistic assessments of the economy.⁵⁾ Although an analogous question with respect to the personal financial situation is also available, we focus on perceptions about the national economy because previous studies have shown that the effect of pocketbook concerns is greatly diminished or often becomes statistically insignificant once sociotropic perceptions are controlled for (Citrin et al. 1997; Sides and Citrin 2007).⁶⁾

Economic contexts are measured using three state-level macroeconomic indicators: productivity, inflation, and unemployment. First, we measure the state's productivity using Gross State Product (GSP), the state-level equivalent of Gross Domestic Product, available from the Bureau of Economic Analysis. We take a per capita measure of GSP and then calculate the percentage change from the previous year. Second, the state-level inflation rate is compiled from Berry, Fording, and Hanson (2000).⁷⁾ Combining the Consumer Price Index (CPI) for various geographical units with family budget data collected by the Bureau of Labor Statistics, Berry, Fording, and Hanson (2000) estimate the state-level cost of living index that is comparable both cross-sectionally and inter-temporally. We calculate the inflation rate for each state by taking the percentage change in cost of living index from the previous year. Third, we include the state-level unemployment rate, which is available from the Bureau

5) Of course, this taps the national level economic perceptions and may not be consistent with our focus on state-level macroeconomic conditions in this paper. However, the ANES does not have a similar question regarding state-level economic perceptions.

6) In fact, further including pocketbook perceptions in empirical models estimated below does not significantly change our results.

7) The dataset originally constructed in Berry, Fording, and Hanson (2000) covers the period between 1960 and 1995. The revised version of the state-level cost of living index, with an extended coverage up to 2007, is available at one of the authors' webpage (<http://mailer.fsu.edu/~wberry/garnet-wberry/a.html>).

of Labor Statistics. As unemployment rate is often reported to the public in the percentage form, we take the percent-point change from the previous year.

Besides the variables measuring individual-level economic concerns and macroeconomic conditions, we include a number of control variables. Most of all, we need to control for the demographic context of the state, i.e., concentration of the immigrant population in the state, which is well-known to be related to public attitudes toward immigration (e.g., Ha, 2010; Hopkins 2010; Rocha and Espino 2009). The vast majority of analyses of demographic context rely on the decennial U.S. census. However, given the period that this paper covers, the census data are not appropriate for our purpose since we observe the immigrant population only two points in time. In this respect, we take the number of immigrants admitted to the state of residence in a given year, compiled from a series of Yearbook of Immigration Statistics.⁸⁾⁹⁾ In addition to being an official count of incoming immigrants to each state, this measure is particularly useful because it naturally represents the short-term dynamic aspect in the context of immigration. As Hopkins (2010) shows, it is *changes*—rather than *levels*—of immigration that are consistently related to

8) One may argue that this is not an appropriate measure because the same number of new immigrants can have a very different implication depending on the state's existing immigrant population. However, this concern is not warranted as the increase in new immigrants tends to be concentrated in the state with a large immigrant population. For instance, the correlation between the number of new immigrants admitted to the state in 2000 and the proportion of foreign-born population in the 2000 census data is 0.7417; the correlation between the sum of new immigrants admitted to the state from 1990-2000 and the proportion of foreign-born population in the 2000 census data is 0.7183.

9) This number reflects those who were admitted through legal procedures and cannot be indicative of the number of illegal immigrants in each state. Public attitudes toward immigration include both legal and illegal immigrants and the latter may have a greater weight in shaping individuals' attitudes. However, given the nature of the phenomenon, reliable estimates of illegal immigrants are not available. While this cannot be explicitly controlled for, it is also reasonable to expect that illegal immigrants are highly concentrated in the states that a large number of their legal counterparts are heading for.

public attitudes toward immigration.

As individual-level control variables, we include the general liberal-conservative ideology, along with partisan identification, as political orientations often have more significant effects on social and political attitudes than measures of economic self-interest do (Sears and Funk 1991). We also include two variables that measure respondents' attitudes toward racially-targeted policies—the federal assistance to blacks and other minority groups and the affirmative action in hiring and promotion—to reflect previous findings that public attitudes toward redistributive policies in favor of minority groups tend to drive opposition to immigration (Burns and Gimpel 2000; Dustmann and Preston 2007). Additionally, though an individual's level of education is already included in constructing our *Skill* measure, a separate dummy variable of college education is also included in the models. A number of studies have found that public attitudes toward immigration and free trade tend to be driven by differences in the overall understanding of the international economy and racial or cultural tolerance that college-level education provides (e.g., Hainmueller and Hiscox 2006 and 2007). Finally, standard demographic controls, such as gender, race, age, and nativity,¹⁰⁾ are also included.

10) The recent ANES do not provide information on respondents' place of birth. Instead, they ask respondents whether both of their parents were born in the United States or not. The variable *Nativity* is constructed based on the responses to this question, and therefore it takes the value of 1 for the respondents both of whose parents were born in the United States and 0 otherwise.

III. Results

The question we raise in this paper requires a complex estimation technique that can account for the structuring of data in multiple levels of observation, individuals clustered in states across six survey-years. Simply including changes in state-level macroeconomic conditions in a classical regression model does not correct for differences across states and years beyond what is included in the predictors, while contexts of non-economic nature also certainly influence public attitudes toward immigration. Another approach would be to augment the individual-level model with fixed effects of each state-year pair but, in this case, it would be impossible to include measures of state macroeconomic conditions because of collinearity. Multilevel models can overcome these problems by simultaneously incorporating information from all levels of analysis in a coherent model (Gelman and Hill 2006; Steenbergen and Jones 2002). As the dependent variable is dichotomous, we estimate a series of three-level multilevel logit model in the following form:

$$\Pr[y_i = 1] = \text{logit}^{-1} (\beta_{0sy} + \beta_{1sy} \times Skill_i + \beta_{2sy} \times Sociotropic_i + \beta_K \times Control Variables_s)$$

$$\beta_{0sy} = \gamma_{sy} + \gamma_{01} \times GSP_{sy} + \gamma_{02} \times Inflation_{sy} + \gamma_{03} \times Unemployment_{sy} + \gamma_{04} \times Immigrants_{sy} + \epsilon_{0sy}$$

$$\beta_{1sy} = \gamma_{10} + \gamma_{11} \times GSP_{sy} + \gamma_{12} \times Inflation_{sy} + \gamma_{13} \times Unemployment_{sy} + \epsilon_{1sy}$$

$$\beta_{2sy} = \gamma_{20} + \gamma_{21} \times GSP_{sy} + \gamma_{22} \times Inflation_{sy} + \gamma_{23} \times Unemployment_{sy} + \epsilon_{2sy}$$

$$\gamma_{sy} = \gamma_{00} + \eta_{State} + \eta_{Year}$$

where all $\epsilon_{.sy}$ and $\eta_{.}$ are assumed to be normally distributed with the mean of 0 and the respective standard deviation $\sigma_{.}$. The parameters of the model are estimated using **lmer** function in **R**.

<Table 2> Effects of Economic Concerns and Macroeconomic Conditions on Attitudes toward Immigration (N = 8126)

	Model 1	Model 2
<i>Skill</i>	-0.099** (0.027)	-0.144** (0.027)
<i>Sociotropic Perception</i>	-0.098** (0.024)	-0.004 (0.023)
<i>GSP</i>		0.012 (0.014)
<i>Inflation Rates</i>		0.075* (0.039)
<i>Unemployment Rates</i>		-0.168** (0.058)
<i>Number of Immigrants</i>		0.001 (0.001)
<i>Ideology</i>	0.073** (0.019)	0.081** (0.019)
<i>Democrats</i>	0.059 (0.059)	0.053 (0.058)
<i>Republicans</i>	-0.003 (0.063)	-0.029 (0.063)
<i>College Graduates</i>	-0.482** (0.068)	-0.378** (0.067)
<i>Oppose Aids to Minorities</i>	0.120** (0.024)	0.122** (0.024)
<i>Oppose Affirmative Action</i>	0.134** (0.020)	0.136** (0.020)
<i>Nativity</i>	0.387** (0.067)	0.382** (0.067)
<i>Nonwhites</i>	0.030 (0.063)	0.013 (0.063)
<i>Age</i>	0.034** (0.016)	0.039** (0.016)
<i>Union Membership</i>	0.060 (0.066)	0.039 (0.066)
<i>Employed</i>	0.128** (0.061)	0.169** (0.061)
<i>Female</i>	0.017 (0.049)	0.033 (0.049)
<i>Intercept</i>	-1.058** (0.262)	-1.815** (0.231)

	Model 1	Model 2
Variance Components		
σ_0		0.263
σ_{State}	0.123	0.127
σ_{Year}	0.460	0.044

Note: Entries are logit coefficients with standard errors in parentheses. $p < 0.05^{**}$ and $p < 0.1^*$

Table 2 clearly shows that it is important to consider economic contexts, in addition to individual-level economic concerns, in explaining public attitudes toward immigration. In the first column of Table 2, when we consider only individual-level economic concerns, both objective and subjective economic interests have statistically significant effects on attitudes toward immigration restriction. However, once we include measures of state-level macroeconomic conditions in Model 2, the effect of *Sociotropic Perception* disappears while that of *Skill* remains significant. Therefore, it is an individual’s objective position in the labor market, not one’s subjective economic perceptions, that drives one’s attitude toward immigration. This finding suggests that previous findings stating the importance of sociotropic perceptions (Chandler and Tsai 2001; Citrin et al. 1997; Espenshade and Hempstead 1996; Sides and Citrin 2007) may be a by-product of how individuals adjust their attitudes toward immigration responding to changes in macroeconomic conditions.

Taking a closer look at the effects of situational triggers, two state-level macroeconomic indicators turn out to significantly affect individual attitudes toward immigration. In a state with high levels of inflation, individuals tend to have more restrictive views about immigration. This is quite intuitive because higher inflation rates imply that people experience a rapid deterioration in their current standard of living, which may in turn trigger more negative attitudes toward immigration. In contrast, compared to inflation, changes in productivity

(GSP) are only remotely related to everyday lives of citizens and thus do not have much influence on their attitude toward immigration.

Interestingly enough, it is found that the support for immigration control significantly decreases as unemployment rates increase. As an individual predisposition, it is true that individuals with lower skill levels—thus facing greater competition with immigrants for job opportunities—are more likely to oppose immigration. As a contextual cue, however, competition in the labor market itself does not necessarily lead to a higher level of opposition toward immigration after controlling for the productivity and inflation rates in the state: if anything, opposition to immigration is slightly lower in states with increasing unemployment rates. In this respect, it is also suggestive that, in Table 2, the employed show significantly more negative views on immigration than the unemployed. This finding implies that the conventional notion that the public's aversion toward immigration is rooted in job displacement of native workers by immigrants is largely unwarranted (e.g., Card 2005); rather, a majority of Americans feels that immigrants occupy jobs that natives do not want rather than take jobs from American citizens, suggesting the existence of “dual labor market” (Cornelius 2002; Espenshade and Belanger 1998). These findings are also consistent with Dustmann and Preston (2006) that shows that the perception of possible harmful effects of immigration is less associated with labor market competition than with worries about immigrants being a fiscal burden on the overall economic system.

Turning to control variables, a number of variables surface as consistent predictors of public attitudes toward immigration control. First of all, preferences on welfare and affirmative action policies exert significant influences on attitudes toward immigration. If an individual has more conservative positions on these issues—opposing to financial assistance or preferential hiring/promotion for members of racial minority group—he or she consistently has more negative views on immigration. Similarly, the general

conservative stance also leads one to support stricter immigration control. In contrast, after controlling for general ideology as well as preferences on social policies, partisan identification does not significantly influence attitudes toward immigration policy.¹¹⁾ On the other hand, college graduates and individuals of foreign-born parents maintain much more liberal positions on immigration restriction. Generally, individuals tend to become more negative toward immigration as they get older, while one's gender and race do not have any significant effect.

In Table 3, we introduce the cross-level interaction effect between individual-level economic concerns and different indicators of statewide macroeconomic conditions. As we discussed, identifying how economic predispositions and economic contexts interact in shaping public attitudes toward immigration is important because it helps us understand what segments of population are prone to mobilization against immigration under dire economic conditions. If contextual cues magnify the effects of individual-level economic concerns, it implies that the deterioration in macroeconomic conditions intensifies anti-immigrant sentiments among those who are already predisposed to oppose immigration. On the other hand, if the relationship between economic contexts and individual-level economic concerns is purely additive, it implies that the deterioration in macroeconomic conditions tends to mobilize the broader public, including those who were not necessarily predisposed to oppose immigration.

In Table 3, we can see that there is a significant interaction effect between individual-level economic interests and state-level inflation rates; and its

11) Historically, immigration is not an issue owned by a major political party (Tichenor 2002): Republicans can support open border policy to obtain cheap labor forces, while opposing the expansion of social policies to immigrants. Democrats may oppose liberal immigration policy to protect the interests of working class, while generally being supportive of other policies regarding the rights of immigrants.

<Table 3> Interactive Effects of Economic Interests and Macroeconomic Conditions on Attitudes toward Immigration (*N* = 8126)

	Model 1	Model 2	Model 3	Model 4
<i>Skill</i>	-0.165** (0.074)	0.028 (0.088)	-0.144** (0.033)	0.012 (0.104)
<i>Sociotropic Perception</i>	0.004 (0.068)	-0.143* (0.079)	0.002 (0.026)	-0.277** (0.096)
<i>GSP</i>	0.013 (0.031)			0.003 (0.032)
<i>Inflation</i>		-0.068 (0.081)		-0.164* (0.084)
<i>Unemployment</i>			-0.300** (0.108)	-0.312** (0.110)
<i>GSP × Skill</i>	0.003 (0.011)			0.008 (0.011)
<i>GSP × Sociotropic</i>	0.003 (0.010)			0.004 (0.010)
<i>Inflation Rates × Skill</i>		-0.059** (0.028)		-0.069** (0.029)
<i>Inflation Rates × Sociotropic</i>		0.057** (0.025)		0.084** (0.026)
<i>Unemployment Rates × Skill</i>			0.049 (0.040)	0.048 (0.040)
<i>Unemployment Rates × Sociotropic</i>			0.049 (0.038)	0.044 (0.039)
<i>Number of Immigrants</i>	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
<i>Variance Components</i>				
σ_0	0.266	0.263	0.266	0.263
σ_1	0.203	0.201	0.203	0.201
σ_2	0.086	0.085	0.086	0.085
σ_{State}	0.128	0.127	0.128	0.127
σ_{Year}	0.044	0.044	0.044	0.044

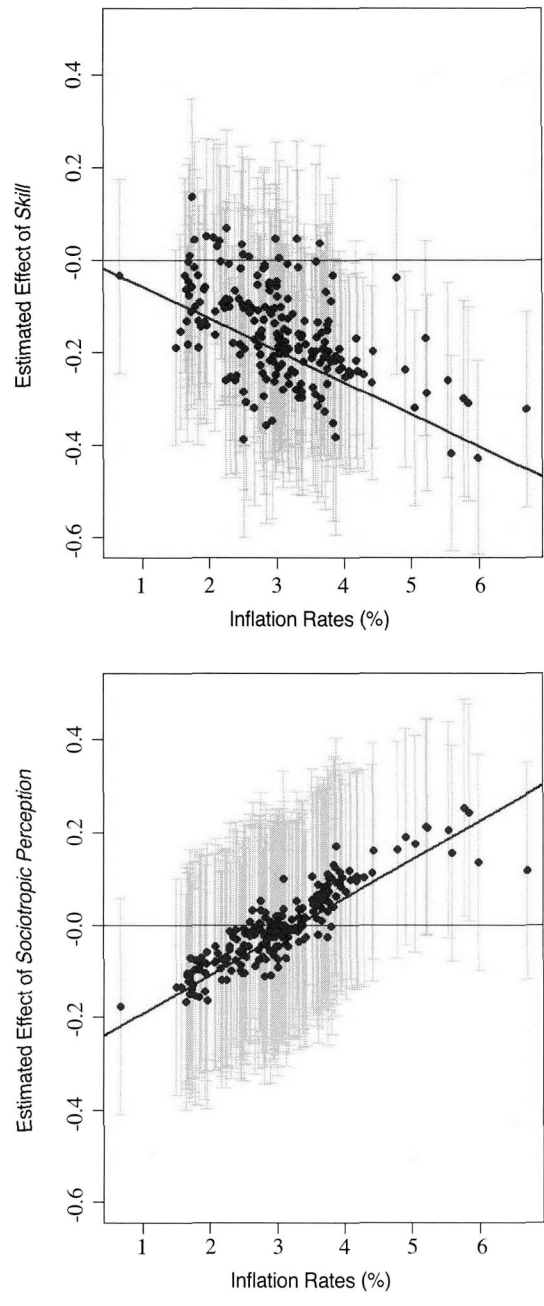
Note: Entries are logit coefficients with standard errors in parentheses. Although all four models also include a series of individual-level control variables used in Table 3, they are omitted here because results are virtually the same as in Model 2 of Table 3. $p < 0.05^{**}$ and $p < 0.1^*$

pattern strongly suggests that (some) negative contextual cues tend to intensify the opposition toward immigration among those who are predisposed to do so, rather than mobilize a broader public. In other words, in a state with very low inflation rates, there is practically no difference between individuals with high skill levels and those with low skill levels in the probability of opposing immigration; however, as inflation rates increase, the individuals with higher skill levels become much less likely to oppose immigration compared to those with higher skill levels. This interaction effect is graphically displayed in the first panel of Figure 1. In the panel, estimated effects of Skill—with estimates \pm one standard error, represented by gray intervals—are plotted against inflation rates holding other macroeconomic conditions constant at their means. We can clearly see that the effect of *Skill* continues to increase in magnitude with increasing inflation rates.

Table 3 also reports a significant cross-level interaction effect between subjective economic perceptions and inflation rates. Interestingly, the direction of the interaction effect is in the opposite direction compared to the objective economic interests. However, we have to be careful in interpreting this contrasting finding. As the second panel of Figure 2 shows, this significant interaction effect is largely a statistical artifact: the estimated effects of *Sociotropic Perception* are in fact not significantly different from zero except in very rare cases with extreme value of inflation rates. Therefore, as we saw in Table 2, subjective economic perceptions do not have much influence on public attitudes on immigration once changes in state-level macroeconomic conditions are taken into consideration.

In contrast to inflation rates, changes in unemployment rate do not differentially trigger public attitudes toward immigration depending on individuals' economic predispositions. The interactions between changes in unemployment rate and objective or subjective economic interests are not statistically significant, while the marginal effect of *Unemployment Rates*

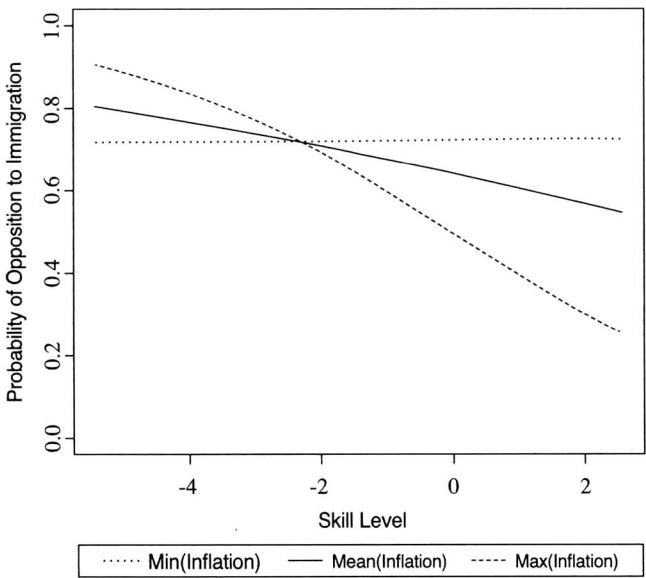
<Figure 1> Estimated Effects of Skill and Sociotropic Perception by the Level of Inflation Rates



largely remains unchanged. This indicates that changes in unemployment influence public attitudes toward immigration in a purely additive way irrespective of an individual's economic concerns. However, one should also note that its substantive effect is quite small: substantively, an increase in *Unemployment Rates* from 0 (when the statewide unemployment rate stays the same as in the previous year) to the maximum value observed in the sample, holding all other variables at their means, is associated with a decrease only of 8% in the probability of opposing immigration

For ease of interpretation of our main finding, Figure 2 displays how the probability that an individual opposes immigration changes as a function of one's skill levels with different values of inflation rates. When the inflation rate is very low, there is practically no difference in the probability of opposition to immigration between individuals with a low skill level and those with a high skill level. On the other hand, when the inflation rate is set at the mean

<Figure 2> Changes in the Probability of Opposition to Immigration by Skill Levels and Inflation Rates



value, the probability that an individual with the highest skill level opposes to immigration is almost 26% lower than the probability that an individual with the lowest skill level opposes to immigration. Last, when the inflation rate is very high, the difference in the probability of opposition to immigration is as large as 65% between individuals with the lowest skill level and those with the highest skill level.

IV. Discussion

After an extensive review of immigration control policies and their outcomes in eleven advanced industrial countries, Cornelius and colleagues conclude that most of these countries have experienced difficulties in controlling unwanted immigration, with increasing gaps between stated policy objectives and actual policy outcomes (Cornelius et al. 2004). Some even argue that, in liberal democracies, immigration policy-making is frequently captured by the “client politics”: lobbying by powerful employer groups, religious groups, ethnic and immigrant advocacy groups, and even labor unions leads governments to adopt more expansionary immigration policies, even when the economy goes bad and general public opinion turns hostile to immigrants (Freeman 1994 and 1995). Nevertheless, as studies on immigration policy-making in the United States attest (Gimpel and Edwards 1999; Tichenor 2002), public opinion still exert significant impacts on the course of development of U.S. immigration policies, and therefore, it is important to understand how the American public forms their attitudes toward immigration.

This study revisits the relationships between the economy and public attitudes toward immigration by considering economic interests at multiple

levels. While previous studies have focused on individual-level economic concerns, whether measured objectively or subjectively, we also incorporate changes in state-level macroeconomic conditions as a contextual cue that triggers different attitudes toward immigration. Our analysis shows that changes in macroeconomic conditions significantly influence on residents' attitudes toward immigration above and beyond the effect of individual-level economic interests. The most important macroeconomic indicator that influences public attitudes toward immigration is inflation rates. Although changes in unemployment rates also affect public attitudes toward immigration, their substantive effect is somewhat limited. The importance of inflation in shaping public opinion can be understood in two ways. First, the deterioration in the current standard of living due to a high level of inflation rates is quite obvious and experienced by almost everybody; on the other hand, changes in the productivity is only remotely perceived by citizens and the effect of rising the unemployment rates is primarily borne by those are marginal in the labor market. In fact, our finding is consistent with Kam and Nam (2008), who find that state-level inflation, neither state-level productivity nor unemployment, consistently shapes attitudes toward social issues. Second, it is possible that people may blame "outsiders" as a scapegoat once economic circumstances around them deteriorate. Immigrants are adequately to fulfill this role because of their political, social, and economic disadvantages.

Another important finding from our analysis is that there is a significant interaction effect between the objective economic interests of individuals and changes in inflation rates. While individuals with higher skill levels are on average less likely to oppose immigration, the effect of skill level becomes increasingly salient as the inflation rates rise. In other words, the gap in attitudes toward immigration between individuals with varying levels of skill tends to become greater in times and places of economic hardship. A negative economic contextual cue intensifies the opposition to immigration among those

who are already predisposed to oppose immigration based on their position in the labor market, rather than mobilizes a broader public whether or not they are already concerned about economic threats from immigration.

Of course, we do not argue that our analysis provides a complete picture of how Americans think of the issue of immigration. First of all, a few anomalous findings invite more thorough analysis and further research. Unlike conventional wisdom, we find that individuals' support for immigration control decreases with higher unemployment rates and that the employed are more likely to oppose liberal immigration policy than the unemployed. Although this finding is not new and studies often find that the notion that the public's aversion toward immigration is rooted in job displacement of native workers by immigrants is largely unwarranted, we need to reassess the relationship between attitudes toward immigration and the labor market by incorporating all scattered empirical evidence and the literature on immigration and economy.

Second, in this paper, we consider only one particular type of situational triggers. In addition to statewide macroeconomic conditions, there are many different types of contextual cues that may trigger an individual's opposition to immigration, whether independently from or interactively with predisposing factors. For instance, though we focus here on state-level economic contexts for a number of reasons, it is also possible that Americans also respond to the movement of the economy at the national level; in this respect, we may consider the effect of situational triggers at multiple levels of contexts—possibly conflicting with each other. On the other hand, American attitudes toward immigration can also be influenced by non-economic contextual cues, such as public discourse that triggers a certain emotional reaction (Brader, Valentino, and Suhay 2008), a sense of threat to cultural identity (Sniderman, Hagendoorn, and Prior 2004) or changes in media coverage and national saliency of immigration issue (Hopkins 2010). In this respect, future research

needs to consider how economic and non-economic contextual cues combine in shaping American public opinion toward immigration.

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[논문요약]

이민에 대한 미국인들의 태도에 대한 미시경제적, 거시경제적 요인의 영향력

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본 논문은 거시경제 상황이 개인 수준의 객관적, 주관적 경제 변수들과 어떻게 상호작용하면서 미국인들의 이민에 대한 태도에 영향을 끼치는지 분석하고 있다. 1992년부터 2004년까지의 미국선거연구(American National Election Studies) 자료를 사용하여 본 논문은 주 단위의 거시경제 상황, 그중에서도 물가상승률이 이민에 대한 대중의 태도에 중요한 영향력을 발휘하며, 이러한 거시경제 상황을 통제한다면 기존 연구에서 주장하던 것과는 달리 주관적인 경제 인식은 이민에 대한 태도에 별다른 영향을 끼치지 않는다는 것을 보여주고 있다. 이에 덧붙여서 본 논문은 개인의 객관적인 경제적 이해관계의 영향력은 물가상승률의 수준에 따라 달라진다는 것을 보여준다. 노동시장에서의 위치에 따른 이민에 대한 태도의 차이는 물가상승률이 상승할수록 더욱 증가하며, 이는 거시경제 상황 악화가 이민에 대한 부정적인 태도를 많은 사람들에게 확산시킨다기보다는 이민에 대해 이미 부정적인 사람들로 하여금 부정적인 태도를 더욱 심화시키도록 한다는 점을 보여준다.