Economic Crisis and Political Change in the United States, 1900 to the Present

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Abstract

Many scholars suspect that crises play a catalytic role in national and international politics, although there is little agreement as to what that role is or on the specific causal mechanisms by which economic crises affect politics. The Great Recession and the political turmoil that has characterized the decade since it began has ignited new interest in crisis and its role in political change, but it has not yet led to a solution to the enduring problem of how to understand the relationship between the two. In this paper, we argue that economic crises, often sharp and concentrated in time, set in motion subsequent political changes that then evolve over a number of electoral cycles. We present a theoretically grounded mechanism by which economic crises lead to political change. We argue that heightened risk increases incentives for socio-political actors to abandon existing institutions and throw existing political coalitions into flux. Changes in relative prices, in turn, alter the interests of these actors, giving rise to the potential for new political alignments. We provide suggestive evidence that periods of crisis-induced political change can be identified and understood as the result of the central mechanisms this paper proposes.

Economic crises are prominent explanations of political change. Many scholars suspect that crises play a catalytic role in national and international politics, although there is little agreement as to what that role is or on the specific causal mechanisms by which economic crises affect politics. The Great Recession and the political turmoil that has characterized the decade since it began has ignited new interest in crisis and its role in political change, but it has not yet led to a solution to the enduring problem of how to understand the relationship between the two.[1] In this paper, we argue that economic crises, often sharp and concentrated in time, set in motion subsequent political changes that then evolve over a number of electoral cycles. We do not expect to see a sharp break in politics following an economic crisis but, rather, a more gradual but nonetheless significant change in politics as political entrepreneurs craft new programs and build new social coalitions.[2]

The election of 2016, which was surely shaped in important ways by an economic landscape altered fundamentally by the Great Recession, underscores the need to consider the relationship between economic crises and political change in more general theoretical terms. It is unclear whether the 2016 Presidential election presages a fundamental change in American politics. It appears that the Republican coalition of internationally-oriented business, nationally-oriented business, and socially-conservative "values" voters is coming apart at the seams. White working class voters in the old coalition have been mobilized, at least in part by their sense that Donald J. Trump will defend their economic interests – a defense that would involve a serious

[1] Roubini and Mihm 2010, Chinn and Frieden 2011, Kahler and Lake 2013.

[2] Our analysis is similar to but not the same as the rich literature on political realignments in US politics (Burnham 1970 and Sundquist 1983). The idea that there have been critical moments when electoral coalitions realigned has been, in our reading, largely debunked, though not entirely forgotten (Mayhew 2004). While the critical realignment literature emphasizes "critical elections" that mark a decisive break with the past, we are interested in how crises catalyze shifts in the societal makeup of political coalitions over a longer time horizon.

departure from the pro-globalization, anti-welfare state orthodoxy of the party. The country's technologically intensive industries, for their part, seem to be accelerating their movement toward the Democrats. Leaving aside the personal characteristics of the candidates, the 2016 campaign revealed major tensions within the Republican party. It seems possible that the Great Recession of 2007-2009, like the Great Depression of the 1930s and the economic crisis of the 1970s, may lead to significant political transformation in the coalitional and ideological orientations of the major parties. An examination of the relationship between economic crises and political change can help to explain why Trump succeeded in 2016, and situate prospective changes in existing political coalitions within the broader context of American political history.

We present a theoretically grounded mechanism by which economic crises lead to political change. It emphasizes how two specific features of crises, heightened risk and major relative price changes, can trigger political change. We argue that heightened risk increases incentives for socio-political actors to abandon existing institutions and throw existing political coalitions into flux. Changes in relative prices, in turn, alter the interests of these actors, giving rise to the potential for new political alignments. We provide suggestive evidence that periods of crisis-induced political change can be identified and understood as the result of the central mechanisms this paper proposes. Our theory provides a general explanation of crisis-driven changes in political coalitions, such as those that currently appear underway. We to not claim to be able to predict the nature of the political coalitions that may emerge in the wake of economic crises. We have stronger expectations about the likelihood that coalitions will break apart, but political entrepreneurs are capable of constructing new coalitions in imaginative ways that lie outside our analysis. Nonetheless, our approach leads us to anticipate that the political coalitions that underpinned both parties from the New Deal on, and that were modified substantially during

the 1970s and early 1980s, are likely to end.

Section I proposes a simple model of politics in non-crisis conditions. Section II presents our central argument about how crises increase risk and relative price changes in ways that undermine existing political coalitions by giving strategic political actors incentives to defect from the previous political equilibrium. Section III uses historical data on prices and stock market volatility to identify historical periods that meet our criteria for unusually large relative price changes and high risk. We find that the episodes identified by our measures coincide with received wisdom on periods of intense political change in the United States: the Great Depression of the 1930s, the Crisis of the 1970s, and the current Great Recession. The correspondence between the periods identified by our measures and periods of party-system change in the US lends plausibility to our analysis and suggests that, at the very least, periods of heightened risk and relative price change are correlated with political change. Section IV reviews the historical record to demonstrate in more detail the episodes in which increased risk and major relative price changes are associated with dramatic changes in the structure of political coalitions. Section V closes with a more systematic test of the argument, analyzing whether periods with high stock market volatility and large relative price changes are correlated with changes in voting patterns in Congress since 1900.

Politics in Normal Times

We begin with a rudimentary model of politics in non-crisis periods, based on standard political-economy approaches, including that of open economy politics.[3] The starting point is a stable environment in which individual socio-economic agents pursue their interests in both the economic and political arenas. In the economic arena, agents maximize expected returns by

[3] For a survey and evaluation of open-economy politics, see Lake 2009.

traditional market means. In the political arena, agents seek policies that will increase expected returns, everything from coordinated standards setting to regulatory restrictions and barriers to trade that create rents for incumbents.

We evaluate the tradeoff between economic and political activity on the basis of the material interests of agents. We recognize that interests vary along multiple dimensions, including religion, gender, culture, and the desire for social stability, and are often subject to framing effects.[4] We emphasize material interests because we believe they are basic to politics—all actors are concerned by their material well-being, whereas other dimensions appear more or less salient under different circumstances--and because they lend themselves to empirical analysis (see section III below). In this context, agents form political coalitions that pursue economic policies that lead to relative price changes and that create winners and losers. Agents in sectors with increasing relative prices are winners, and share interests with others who benefit from similarly increasing relative prices, while those in sectors with decreasing relative prices are typically losers, and share interests with others who are similarly disadvantaged.

Both political and economic action have opportunity costs, and agents evaluate the expected return from their activities in markets and politics on the basis of how successful they expect to be in each.[5] Relatively more (less) successful economic agents are less (more) prone to turn to politics, especially if they expect the political system to be more (less) hostile to them than the market. Economically successful agents have a relatively high rate of return to time, effort, and other resources in the market, and face higher opportunity costs of entering the political arena. All else constant, economically unsuccessful agents will be more likely to turn to

[4] Even on attitudes toward globalization, the quintessential economic policy issue of the contemporary era, non-material factors influence how individuals conceive of their interests, see Sabat 2012. On inequality aversion, see Lu at al. 2012.. On family status, see Goldstein et al. 2007. On framing, see Naoi and Kume 2011.
[5] Becker 1983.

politics in pursuit of their interests.

The expected rate of return to political activity reflects the expected government policy. Agents' success in obtaining favorable policies is a function, among things, of collective action, so that the choice to engage in politics will reflect the expected costs and benefits of political action. Agents form coalitions to increase their expected impact, which means that they must compromise in the interest of expanding the size and impact of the coalition. The art of politics is, in large part, about shaping coalitions which can be seen as investments in particular sets of policies. This suggests the standard capital asset pricing model (CAPM): in these terms, a coalition can be thought of as a political asset that yields an expected return via policy, with some risk inherent in the political environment.[6] Agents choose among potential coalitions in search of the one with the highest expected return. They can compare this expected "political" rate of return to the market rate of return, choosing whichever promises greater expected benefits.

The political rate of return is a function of two variables. The first is the expected benefit of the policy, equivalent to the "risk-free" rate of return on an asset within the CAPM. The second factor is risk. In the case of financial instruments, risk reflects that assets fluctuate in value, as does the income stream they produce over time. It is central to our theory of crisis that political risk is a function of policy volatility, which in turn is a function of both the agent's own decision about supporting a particular coalition and the choices of other agents, especially whether they are likely to continue to cooperate to support the policy or will defect to an

[6] The CAPM is $r_a = r_{rt} + \beta_a(r_m - r_{rt})$, where r_a is the rate of return on an asset, typically a financial instrument, r_{rt} is the rate of return on a risk-free asset (i.e., Treasury bills), r_m is the overall market rate of return, and β_a is the risk of the particular asset. β_a is typically measured as the volatility in the price of the asset over some period of history (e.g., 10 months, 10 years, or any theoretical or practical window). By analogy, the political risk of different coalitions and policies is substituted into the standard formula for β_a. We discuss operationalization of political volatility below.

alternative coalition with different policy goals. Thus agents must be attentive not only to the direct effects of the policy, but also to the strategic calculus of current and potential coalition partners. The greater the policy volatility, the greater the political risk. As in financial markets, agents may face a risk-return tradeoff: policies with lower risk-free returns and lower volatility may be compared to those with higher risk-free returns but greater volatility. Controlling for the rate of return, lower volatility is better than higher; controlling for volatility, a higher rate of returned is preferred to a lower.

When expected political returns are high, stable coalitions are expected to arise. Individuals are more likely to participate in collective action, form coalitions, and maintain political bargains, and the greater is their expectation of future returns. Labor can support farmers' demands for subsidies, even if the result is more expensive food, if workers expect farmers to support their demand for, say, unemployment compensation, reflation or trade protection. The coalition of iron and rye in late nineteenth century Germany is a classic example of a coalition that produced a set of policies than neither group preferred on its own but that, together, produced higher political than market returns.

Although in principle agents might constantly consider the marginal benefits of altering coalitions, in normal times coalitions will be relatively robust. First, estimating expected returns from alternative policies and coalitions can be extremely difficult, especially with a new and previously untested policy. Second, agents may become vested in the policies produced by the coalition, so that their interests become entrenched in a way that depends upon the policies. Some actors, are more tied to their current economic activities than others.[7] The assets in question might be physical and more or less specific to a particular use, or they might consist of

[7] On asset specificity, see Klein 1978. As a variable in politics, see Frieden and Rogowski 1996 and Hiscox 2002.

skills that are more or less tightly tied to their current employment. Unskilled labor is generally regarded as more mobile than skilled labor. Farmland typically has fewer alternative uses than urban tracts. At all times, both normal and "hard" times, fixed asset holders are more likely to enter the political arena; they may have more at stake in policy, but they also have fewer attractive options to cope with adverse circumstances. With lower exit opportunities, they grow more vocal. Mobile asset holders, on the other hand, can redeploy their investments to more profitable sectors or activities, and will be comparatively less likely to seek redress through government intervention. With more exit opportunities, the incentives to pursue "voice" are lower.

Public policy also influences patterns of asset acquisition. Enduring coalitions and policy stability prompt agents to invest in more assets that are fixed or dependent on the prevailing policy. Comparatively disadvantaged industries that receive protection will maintain and perhaps even expand investments in their sector. Farmers who receive subsidies will acquire additional land for cultivation, and will reinvest returns back into agriculture rather than investing in more diversified portfolios. Comparatively advantaged industries react the same way. If free trade is expected to prevail, they will expand investment and, in turn, production to meet anticipated global demand. In this way, agents can become locked into a specific policy regime, and act to defend policies from challenge as the environment evolves. This reinforces the status quo, as long as expectations of future returns remain robust.

Thus, in normal times, politics favor incrementalism and act as constraints on political change. Like run-off from a mountain, individuals and groups normally follow the existing riverbed, while modifying it over time, rather than cutting a new channel. In normal times, investments in economics or politics become self-reinforcing. The coalition in support of a

particular policy becomes, over time, more deeply vested or entrenched in that policy, making political change less likely. It takes a significant shock to disrupt such a political equilibrium.

II. Politics in Hard Times

It is now possible to understand how crises disrupt the prevailing political equilibrium. *Economic crises are characterized by large increases in risk and changes in relative prices that dramatically alter the expected future gains from current political activity relative to other alternatives.*

The degree of political risk affects expected future returns from political activity, and in turn the propensity to form and sustain political coalitions. Increased volatility can reduce the expected value of the policy and make alternative coalitions, or market activity, more attractive. Even if the agent's own returns do not become significantly more volatile, increases in the volatility of coalition partners' returns may throw the existing coalition into question or create conditions for new coalitions that may produce even more attractive policies. Political risk arises both from the volatility of the asset held by an agent and from systemic volatility

While volatility creates new coalitional possibilities and throws politics into flux, it does not necessarily, by itself, trigger meaningful political change. To understand how people respond to increased political risk, we turn to the second element of crisis, a large change in relative prices. An unanticipated change in relative prices alters the incentives facing individuals and expected future gains from existing policies. Under normal circumstances, changes in relative prices are gradual, incremental, isolated within a few sectors, and--within limits--predictable. A crisis, on the other hand, is distinguished by both increased volatility and a substantial unanticipated, change in relative prices that affects a large number of actors.

Although the shock could be endogenous or exogenous, political or economic, it is

simpler to regard it as exogenous and economic for our initial purposes. The shock thus alters market prices suddenly and substantially. During the Great Depression, for example, prices of primary commodities dropped fast and far, while prices of standardized (mostly labor-intensive) manufactures dropped somewhat less, and prices of more sophisticated (mostly capital-intensive) manufactures dropped least of all – as did prices of non-traded goods and services.[8] As we discuss below, these relative price trends shaped the emergent New Deal coalition.

Two responses may follow from a change in relative prices. First, in the economic arena, actors may move out of less-attractive activities and into more-attractive ones. If the world price of wheat drops precipitously and is expected to remain low, for example, farmers will shift production from wheat to other crops, and some may even leave farming. Second, actors who are now facing less attractive economic circumstances can move into the political arena. Wheat farmers facing a major drop in wheat prices can exert increased pressure on the government to support grain prices, subsidize exports, ease taxation, or otherwise aid them. This is especially true for actors whose assets are fixed in specific sectors of the economy or who are dependent on a particular policy regime. Faced with large changes in relative prices, liquid asset holders will mostly redeploy investments from one economic activity to another. The more illiquid (fixed) the assets, the more difficulty their holders have in redeploying in response to a change in relative prices. Holders of relatively fixed assets cannot easily change their economic focus, but they can shift some of their resources (such as their time and energy) into the political arena to search for support. Everything else equal, the more fixed the asset, the more likely its owner is to engage in the second form of resource reassignment, from the economic arena to politics. In summary, then, a shock causes a shift in relative prices and resources are subsequently reallocated in two

[8] On relative price changes during the depression, see Kindleberger 1973, 143 and 188.

directions: from less to more profitable economic activities, and from the economic to the political arena.[9]

A simplified depiction of the economic and political result of an exogenous shock thus runs on two tracks—politics and economics--over two periods. In the first period, those with relatively mobile assets shift them into more attractive areas of economic activity, while troubled fixed asset-holders concentrate on political activity. As fixed asset-holders in difficulty redouble their political efforts, they are likely to receive some at least short term relief from now more sympathetic governments. Policy in this period will thus reflect the actions of the fixed asset-holders who have successfully overcome their collective action difficulties. In the second period—more generally, over the long run—the economic activities relatively favored by the shock will grow in importance as resources shift into them. The long-term growth of these activities will lead to a new balance of political power more favorable to these sectors.[10]

It is the *combined* effect of both increased political risk and shifts in relative prices that produce political change. An increase in political risk makes the current coalition and its associated policy less attractive overall, and less attractive compared to the economic or market option. Changes in relative prices shuffle the interests and, thus, the coalitional possibilities of agents. Depending on the direction of change in relative prices, new winners and losers from politics are likely to emerge, creating new possibilities for agents to form new political alliances.

Political risk and relative prices are each, by themselves, unlikely to produce significant political change. Heightened risk without changes in relative prices may make coalitions more fragile, but without changes in interests this fragility is unlikely to translate into the emergence of

[9] A favorable change in relative prices might also lead previously politically active actors to abandon political activity; thus some protectionist forces reduced their lobbying as the dollar depreciated after 1985.
[10] For a formal presentation as applied to trade, see Mussa 1974; also Rogowski 1989.

new coalitions and policies. Changes in relative prices without increased risk may produce shifts in policy, but political behavior is likely to play out within existing political coalitions. We argue that *both* increased volatility and large changes in relative prices are necessary to send an otherwise stable political system into turmoil.

The political outcomes precipitated by these two variables is theoretically indeterminate. Our approach argues that economic forces unleashed during periods of crisis disrupt existing political equilibria, but it does not predict the precise parameters of the new political equilibrium. We can identify "winners" and "losers," sectors that enjoy increased returns due to positive relative price shocks and sectors that suffer from decreased returns (see below). But multiple possible coalitions will exist, and our ability to predict exactly which one will form is limited. A coalition of "losers" might arise that uses policy to reverse the effects of relative price shocks, so that losers lose less and winners win less than if the relative price effects were allowed to pass through directly into the economy. Farmers in the Great Depression, for instance, succeeded in getting agricultural price supports that arrested their political decline. Conversely, coalitions of "winners" might arise that allow the full effect of the relative price shocks to wash through the economy and, thus, ensure their political triumph over the longer term. Mixed coalitions are also possible, where relative losers ally with relative winners in a policy regime that is ideal for neither but acceptable to both--as in the coalition of Iron and Rye in late-nineteenth century Germany. Such "Baptist and bootlegger" coalitions of unlikely partners may be especially prominent among fixed asset holders—both winners and losers—who enter the political arena.

Particularly important in the formation of new coalitions are political entrepreneurs who can identify the raw interests at stake and negotiate new coalitions among groups that may not have entirely complementary interests. Exactly how political entrepreneurs pull off such feats of

political imagination and engineering is beyond our theory. This indeterminacy extends to the timing of political change following economic crises as well. As crises shatter the prior equilibrium, exactly when a new coalition will form remains open – and may not even be entirely clear to those living through it. It is unlikely that those in the New Deal coalition understood the epic change in which they were engaged. Similarly, few involved in the political realignment of the 1970s may have imagined the political polarization of the country that eventually resulted. In similar ways, the Great Recession is splitting apart previous coalitions, but what exactly will eventually take their place remains to be seen. Dating the timing of a "sea change" remains beyond our model. Even if we cannot predict which new coalition will necessarily form or when, however, we can identify periods in which structural economic conditions, namely the confluence of increased political risk and large changes in relative prices, set the stage for long-term political change.

III. Increased Volatility and Relative Price Changes in Crises

In the remainder of this paper, we demonstrate that abnormally high political risk and relative price shocks are associated with commonly regarded periods of political change. We operationalize political risk by stock market volatility (S&P 500) as estimated by a generalized autogressive conditional heteroskedasticity (GARCH) model. We measure relative price shocks by the dispersion of available producer price indices. We focus only on the United States from 1900 to 2015 due to data availability. This precludes us, sadly, from examining any of the major 19th century crises. We underscore that the following analysis is not a rigorous test of a theory but rather an empirical "plausibility probe" of the conceptual scheme. We do hope that our efforts in the following sections will set the stage for more rigorous work.

In what follows, we examine trends in stock market volatility and relative price changes

from 1900 to the present, identifying those periods characterized by high values on both indicators, which we expect to be marked by significant political change. To the extent that the time periods we identify through these measures coincide with economically turbulent historical periods that are commonly considered harbingers of significant political change, the plausibility of our argument about the crisis-led economic drivers of political change is tentatively established. Indeed, our measures identify two major eras of crisis politics in the twentieth century--the Great Depression and the troubled economic times of the 1970s--that are commonly regarded as dramatic periods of political change in American history. In addition, our measures suggest that the Great Recession will be politically consequential. Volatility and relative price dispersion during the Great Recession are second only to the levels reached during the Great Depression, which suggests that the conditions are ripe for significant political change in our own day.

Heightened political risk is crucial to our theory of crisis. Like all other analysts, we cannot measure risk directly. Rather, we operationalize risk as the volatility in asset values, measured by share prices for publicly traded firms. Unlike economic risk in the CAPM, which focuses on volatility in the value of a single financial instrument (e.g., share prices for a single corporation), we measure political risk by the volatility of the S&P 500 index. As the volatility of the stock market as a whole increases, it increases the risk that partners will defect from the coalition even if the agent's own choices would not otherwise change.

We estimate stock market volatility through an asymmetric GARCH model, as explained in the Appendix (Section A.1). In conventional econometric models, the variance of the disturbance term is assumed to be constant. However, many economic time series exhibit periods of unusual volatility followed by periods of relative tranquility — "hard times" and "normal

times." A large literature finds evidence of conditional heteroskedasticity in asset returns, with previous findings strongly suggesting that variance in asset price returns is dynamic over time.[11] Our methodology loosely follows that of Bernhard and Leblang (2006). We first estimate the GARCH model using weekly closing price data from, as noted, the S&P 500 index from January 1900 to December 2015. The weekly S&P index is the only comprehensive stock index that spans the entirety of the twentieth century.[12] Since we are primarily concerned with percentage changes rather than price levels, we estimate all models using log differences of the index. We index volatility to the most recent volatility value available, thus setting July 2016's predicted value to 100. Figure one plots our results (we plot the volatility series at monthly intervals in order to facilitate comparison with our relative price series below).

Figure 1 About here

Abnormally high stock market volatility is not, on our account, sufficient to trigger political change; as we noted in our theoretical discussion, periods of elevated risk must coincide with significant relative price change in order for political change to ensue. To measure changes in the relative price structure of the economy, we calculate the variance of monthly changes in producer price indices across a sample of major industries, a procedure suggested by Grier and Perry (1996). The measure and indexed industries are described in the Appendix (section A.2). Only a handful of price indices are available for the entire period between 1900 to the present; as a result, we divide our sample into two sub-periods (1900 to 1950 and 1950-present) for analysis. Relative price data is only available at monthly intervals, which we smooth by taking quarterly centered moving averages.

[11] Theodossiou 1994, Theodossiou and Koutmas 1994, Tufte and Lobo 1998.
[12] We performed similar analyzes for many different overall and sectoral stock market indices for shorter time periods. Although there is considerable sectoral variation, the results for the other overall indices are usually consistent with those for the S&P index. All results are available from the authors on request.

This measure of relative price dispersion derives from our earlier theoretical argument on relative prices. During ordinary times, monthly sectoral price movements are relatively stable across time periods, and political coalitions develop around these consistent and predictable price signals. In crisis periods, however, these patterns are disrupted. As the prices of some goods increase or decrease relatively quickly, the variance of sectoral price changes increases as well. During crisis periods, therefore, we expect the variance of monthly sectoral price changes to be significantly greater than in non-crisis periods.

Figure 2 About here

We now bring together our empirical measures of risk (stock market volatility) and relative price change (dispersion in producer price indices) to identify periods of crisis-driven political change. While increases in volatility and relative price dispersion must be temporally proximate in order for us to consider any given year a "crisis year," it is unrealistic to expect these increases to coincide perfectly. We therefore define a crisis period as a year in which both of our volatility and relative price measures were at least two standard deviations above their respective means for at least two out of three months in any given quarter of that year or in two consecutive months across quarters.[13] Figures 3a and 3b plot the relative price and volatility series in conjunction (for both the pre-1950 and post-1950 periods) in order to identify crisis years according to the criteria discussed above. We also group adjoining years in which only one index breaches the two-standard deviation threshold (e.g., relative prices exceed the threshold only in 1933, whereas stock market volatility is high from 1929-1933; rather than limit the crisis

[13] Note that we do not require our two series to breach the two-standard deviation threshold during the *same* quarters in order to consider a particular year a crisis; for instance, if our volatility series breaches the one standard deviation threshold for at least two months of the year's first quarter, while our relative price series does so for at least two months during a different quarter in which the volatility series does not meet the standard deviation threshold, we still consider the entire year a crisis.

to only 1933, we consider the entire period 1929-1933 as a crisis).

Figure 3a and 3b about here

Table 1 indicates the years in which each index was at least two standard deviations above its mean for at least two months in a given quarter or in consecutive months. As we discussed above, we locate full-blown "crisis years" at the intersection of these two sets, producing crises in only 1929-1933, 1973-1974, and 2008-2009. The periods 1986-1987 and 2000-2001 are "near misses," that should be considered more minor crises, though they do not appear to have had the substantial political effects of the other crises.

Table 1 about here

Our volatility and relative price dispersion indices allow us to identify periods in which economic crises might be expected to produce political change according to theoretically-anchored ex-ante criteria, rather than the historical record itself. That the biggest episodes of crisis-led political change we identify overlap with major episodes examined by Gourevitch (1986), and that are conventionally regarded as periods of dramatic political change in American history, testifies to the face validity of our measures.

Our effort to "postdict" the time periods in which economic crises triggered substantial political change helps to clarify both the historical record, as well as our own time. With respect to the former, our approach allows us to better understand certain "non-events" in American political history. That is, many (often severe) economic and financial crises (as identified by economists) do not spiral into broader periods of political turmoil that give rise to substantial political change. By clarifying the conditions under which economic crises have political repercussions, we are able to explain this historical variation. For instance, while the financial crisis of 1907 was a critical event in twentieth century American economic history, it is not

associated with substantial political realignments. To be sure, it occurred in the middle of the Progressive era and preceded an important split in the Republican Party in the 1912 election; however, its political effects were (especially compared to other economic crises) fairly short lived. Our account suggests that the reason is that while this economic crisis was marked by some increase in risk (as indicated by stock market volatility), it did not cross our two-standard deviation threshold and, though opening decades of the twentieth century saw dramatic relative price changes, these did not coincide closely with volatility in the stock market. Conversely, World War I was accompanied by significant economic turmoil, as witnessed by dramatic fluctuations in relative prices; however, it did not disrupt the political status-quo because the risk environment remained stable, allowing actors to accommodate these price changes within existing political structures. Our deductive approach to the question of economic crises and political change, in short, can explain economic crises that were "dogs that didn't bark," politically speaking.

In addition to casting light on the historical record, our approach can help to clarify our own times (as well as future economic crises). Volatility and relative price dispersion reached their highest levels since the Great Depression in 2008, during the height of the Great Recession. This suggests that the Great Recession was not simply an economic crisis that left the political status-quo unchanged, but an event that will likely lead to broader political repercussions.

IV. Economic Crises and Political Change in the United States

The previous section established the plausibility of our approach by demonstrating that periods of economic crisis marked by large changes in relative prices and high volatility appear to coincide with historical eras marked by significant long-term political change. In this section, we draw on historical scholarship to explore how relative price dynamics in a heightened risk

environment shaped the emergence and demise of American political coalitions.

In an influential work on American political development, Bensel (1984) argues that sectional cleavages have been the axis along which political coalitions have formed. Bensel's conceptual framework implies a sectional divide in America's political geography between an industrial core in the Northeast and Midwest, and an underdeveloped periphery in the Southern and Western (i.e. Sunbelt) regions. Antagonistic economic interests between core and peripheral areas have given rise to political conflict between these areas; Bensel conducts roll call analysis on selected bills from the House of Representatives to quantify the severity of "sectional stress" along the core-periphery divide. While the form and strength of the sectional divide, as well as its impact on "secondary structures" in the political system (i.e. the party system, the power and scope of the central state, formal institutional arrangements, and ideological contestation) varies, the sectional axis has consistently structured political conflict over time.

From Reconstruction to the New Deal Alliance

The creation of the New Deal coalition in 1932 marks a dramatic break with the partisan configuration of sectional coalitions that prevailed since Reconstruction. In this section, we discuss the political coalitions that took hold following Reconstruction, and how the economic shock of the Great Depression altered relative prices in a way that disrupted this pattern and induced a move to a new political equilibrium.

Bensel's historical discussion suggests that in the fifty years between 1880 and 1930, the sectional divide in American politics between the industrial core and the agrarian periphery mapped on to the partisan cleavage in the party system, such that Democrats represented the Southern and Western periphery while Republicans represented the Northern industrial core, both coalitions of smaller regional subgroups. Party coalitions, in other words, were rooted in

regional support bases, and did not include interests on opposite sides of the sectional divide. This axis of political conflict, between a Northern industrial core represented by Republicans (who unified workers and industry through their support for high tariffs) and an agrarian periphery (of agricultural and raw materials producers) represented by Democrats, was the central feature of what scholars label the "Fourth Party System" in the United States.[14]

This naturally leads to the questions of why the regional basis for party competition remained in equilibrium, and why a long-lasting, more regionally heterogeneous political coalition failed to arise. Our answer, in short, is that the set of economic circumstances and issues confronting actors in the pre-Depression era supported this equilibrium pattern of party coalitions. More specifically, the central political issue during the post-Reconstruction/pre-Depression era concerned the process of industrialization, and the "politics of industrialization was a sectional politics, with the separate regions perhaps further separated in basic political concerns than at any other point in American history."[15] Indeed, industrialization required a menu of anti-agricultural policies (such as high tariffs) that precluded an alliance between the Southern periphery and Northern workers, the trans-sectional alliance that eventually became the Democratic New Deal coalition.[16] In turn, each section, when in power, adopted policies favorable to its constituents, reinforcing patterns of investment in each region rather than leading to greater economic diversity in the same area of the country.

The Great Depression dramatically destabilized the economic environment, and thereby facilitated the transition to a new political equilibrium, one in which a trans-regional political

[14] Sundquist (1973, 147-150). Although there were periods of instability, especially around the election of 1912, Bensel (1984, 369) argues that no *lasting* trans-regional coalition that spanned the sectional divide was forged during the period between Reconstruction and the Great Depression.
[15] Ladd, quoted in Bensel 1984, 372.
[16] Sundquist 1973, Gourevitch 1986, Burnham 1970.

coalition was indeed possible. The economic destruction wrought by the Great Depression unsettled the traditional Republican alliance between Northern industry and workers, providing Democratic political entrepreneurs with a window of opportunity to peel away urban workers from their traditional base in the Republican Party, and unite them with Southern agricultural interests in a coalition that would dominate American politics for the next several decades. Whereas in the post-Reconstruction era, the central cleavage in the party system simply reflected the sectional divide between core and periphery, the New Deal political alliance effectively bridged this sectional divide to bring together "Southern plantation interests and Northern labor" within a single political coalition.[17] Gourevitch's (1986, 152) analysis, though not explicitly sectional in its analytic lens, makes a similar point about the nature of the quid-pro-quo that anchored the trans-sectional coalition between urban workers and Southern agricultural interests:

> Labor reversed its historic antipathy to higher food costs, accepting them in exchange for agrarian backing for the new industrial relations system, social security, and more active government pursuit of full employment. Agriculture, meanwhile, overcame its traditional hostility to labor, ethnics, and the city, paying that price for stabilization of the countryside.

How, specifically, did the trans-regional New Deal coalition form? That is, given the Democratic Party's inability to permanently incorporate the Northern working class into its coalition prior to the 1930s, how did the Depression create the structural conditions that allowed them to finally do so? Addressing this question allows us to illustrate the importance of the relationship between relative price changes and political change in the empirical context of the Great Depression. With respect to labor, the failure of nominal wages to adjust to falling overall price levels led to a real wage rate above that consistent with a full-employment equilibrium. The relatively high price of labor in a deflationary environment, in other words, created the urban unemployment that activated previously dormant class conflict within the Republican coalition,

[17] Bensel 1984, 372; Sundquist 1973.

and created a new urban constituency in favor of active government support for the labor market. In the South, the collapse in farm prices in the run-up and especially during the Great Depression led to a decline in agricultural incomes that generated new demands for government assistance to the agricultural sector (note the collapse in agricultural prices/farm product in Table 2). In short, both labor and agriculture shifted greater effort into the political arena to promote their interests.

Table 2 About Here

Suggestive evidence for the impact of relative price changes on the shape of the New Deal coalition is found in price data for industries included in our relative price dispersion index, which casts light on finer grain inter-industry cleavages during the Great Depression. In particular, we would expect prices in relatively capital-intensive sectors to be less downwardly flexible than prices in relatively labor-intensive sectors as a result of product differentiation and variation in market structure. To explore whether evidence for such a cleavage shows up in our price data, we draw on data from the 1927 census of manufactures and calculate the ratio of an industry's capital costs to its total input costs (i.e. capital + labor costs), a rough proxy for an industry's capital intensiveness.[18] Table 3 lists our sectors in ascending order, by capital intensity, along with the magnitude of the price decline suffered by each industry between 1929 and 1932 in percentage terms (i.e. the percentage decline in the price of an industry's products during the Great Depression). We note that capital-intensive industries towards the bottom of our table fared relatively better (i.e. suffered lower relative price declines) during the Depression than relatively labor intensive industries (towards the top of our table), who were the relative

[18] Because our price data and our "capital intensity" data come from different sources, there is not an exact match between industries used in the price series and industries for which we calculated capital intensity measures. However, we were able to find roughly analogous industry classifications in both series. For instance, while our price index contains prices for "industrial commodities", the Census of Manufactures data allows us to calculate a capital intensity measure for "iron and steel", which should correspond with the former.

losers. Though there is insufficient data for a more formal analysis, it appears that less capital-intensive sectors fared relatively worse than more highly-capital intensive sectors during the height of the Depression. After dividing our sectors into high and low capital intensity groups (with industries above Gas and Heating classified as "low capital intensity" and everything below and including Gas and Heating classified as "high capital intensity"), the mean relative price decline between 1929 and 1933 for the "low capital intensity group" was 49.89%, while the decline for the high-capital intensity group was only 22.98%; this difference is highly statistically significant.[19] Evidence for a split between labor and capital intensive industries therefore tentatively appears in our relative price data.

Table 3 About Here

This empirical evidence for a split between capital intensive and labor intensive sectors resonates with theoretical and historical work carried out by Ferguson (1984), who argues that free-trading capital-intensive industries, whose interests did not directly conflict with the interests of workers, could afford to join the coalition of free-trading Southern agricultural interests and Northern labor. On the other hand, labor intensive Northern industries "could not afford higher social insurance, could not pay higher wages, [and] could not accept a union," which led to a conflict of interest between labor-intensive industries and workers (Ferguson 1984, 49). As Ferguson (1984, 50) argues, capital intensive industries were better able to "afford a coalition with labor" (and thereby pursue their interest in free trade) through the Democratic party, while labor intensive industries, with interests antagonistic to workers, remained within

[19] The P-value in the difference of means test is <0.0022. We also tried an alternative specification of groups, with the Gas and Heating industry classified as "low capital intensity" (i.e. with a different threshold between the two groups). Under this specification, the mean relative price decline for the low capital intensity group is 43.45%, while the mean decline for the high capital intensity group is 24.3 percent. The difference remains statistically significant at conventional levels, though the P-value is considerably larger (P value<0.044).

the Republican camp. Relative price dynamics in Northern industry, in short, opened up a political cleavage between capital and labor intensive industries in ways that ultimately affected the shape of the New Deal coalition; given the compatibility of workers' interests with those of capital-intensive industry, the New Deal coalition now pitted Northern workers, capital-intensive industry, and Southern agriculture (represented by Democrats) against Northern labor-intensive industry (represented by Republicans). Relative price movements during the Depression, in other words, not only peeled away Northern workers from their traditional home in the Republican Party, but capital-intensive industry as well.

These relative price dynamics laid the foundation for a lasting political realignment, though such a realignment was in no sense inevitable. As noted above, our framework is better at anticipating periods of change than predicting exactly which coalitions will form. Whether economic change translates into lasting political change, as it did during the Great Depression, is also affected by other factors, which we do not mean to downplay. For instance, even when broader structural conditions favor a departure from the current political equilibrium, effective political entrepreneurship seems essential for actually catalyzing change. In the context of the Depression, Democratic political entrepreneurs recognized the possibility for an enduring trans-sectional coalition between now-politically adrift workers, capital-intensive industries that would benefit from free trade, and the long-suffering agricultural South. Nonetheless, we argue that this entrepreneurship was made possible by the political opening created by the unusually high levels of volatility and large changes in relative prices that marked the Great Depression.

We do not expect changes in political coalitions to have immediate policy effects. The Reciprocal Trade Agreements Act (RTAA) passed in 1934, for instance, did not start producing

significant tariff reductions by bilateral treaty until later in the decade.[20] Other programs, however, such as the Agricultural Adjustment Act, passed in May 1933, and the National Industrial Recovery Act, passed in June 1933 and creating the Public Works Administration, had more rapid impacts. Nonetheless, some of the sectors most central to the New Deal coalition, in turn, appear to have enjoyed something of a rebound early on (see Table 4b). Agriculture and raw materials, the hardest hit sectors between 1929 and 1933, enjoyed the largest increase in relative prices between 1934 and 1936. Wool, one of the more labor intensive sectors, also rebounded early, though textiles and clothing took longer to benefit. Although the evidence here is circumstantial, consistent with our analysis the sectors brought into the new coalition do appear to have benefited disproportionately from the new policies. This may have locked groups into policies dependent on the vitality of that coalition and, thus, solidified the New Deal coalition for the coming decades.

The Decline of the New Deal Coalition and the Crisis of the 1970s

One area where the core and peripheral wings of the New Deal coalition had clearly antagonistic preferences was in the domain of civil rights policy. However, Northern interests largely turned a blind eye to Southern segregation, viewing it as a necessary price for cooperation in an effective trans-sectional coalition. Indeed, President Franklin Roosevelt ignored civil rights issues in favor of economic ones over which the different regional wings of the Party could achieve compromise. As a result, desegregation remained a mere aspiration of the Northern wing of the party, with no concrete legislative program behind it.[21]

As the Depression receded, however, the relative indifference of the Democratic Party's

[20] Some small countries signed agreements almost immediately, but agreements with France became effective only in 1937 and the United Kingdom only in 1939. For a list of agreements and dates, see Lake 1988, 207, fn. 253..
[21] Bensel 1984, 151.

Northern wing to Southern segregation gave way to increasing hostility towards Jim Crow. With the enactment of major civil rights legislation starting in 1964, the New Deal coalition, on Bensel's account, effectively collapsed. However, while civil rights legislation ripped the regionally bipolar Democratic New Deal coalition asunder, it was the unsettled economic conditions of the 1970s – marked by high volatility and large changes in relative prices, according to our empirical indicators -- that effectively ushered in a new era of core-periphery conflict in a partisan framework dramatically different from that seen during the New Deal era. In essence, though tensions within the Democratic party existed well before the crisis, the economic difficulties of the 1970s decisively broke the sectional support bases of the two parties, with Republicans becoming the party of the Sunbelt periphery and Democrats the party of the urban industrial core. Thus, the bipolar Democratic coalition of the New Deal gave way to a newly polarized system, one in which the parties effectively swapped their long-standing sectional support bases.

Our emphasis on the role of relative price changes in activating political conflict between winners and losers, as well as shuffling political coalitions, is borne out remarkably well in Bensel's empirical analysis of sectional conflict during the early 1970s. The oil embargo of 1973 led to a dramatic spike in energy costs (see Table 4), which accelerated the relative decline of the manufacturing core and led to high unemployment by driving up the price of inputs to industry. In contrast, the relative economic standing of the periphery, with a comparative advantage in energy production, improved with the rise in energy prices; in effect, the surge in energy costs improved the domestic terms of trade of the Southern and Western periphery relative to the urban core. In addition to buttressing the periphery's energy sector, it also altered the economic geography of the nation by triggering an outflow of capital and energy-intensive industries from

the core economy towards the periphery, so as to be closer to the relatively cheaper domestic energy supply[22]. The devastation of the core economy accelerated Republican flight to the periphery; the relative economic ascendance of the periphery heightened the incentive to make a play for a region where antipathy towards the Democratic legacy on civil rights left traditionally democratic voters' partisan loyalties in flux. It also unified (at least temporarily) the Democrat's new core-centric coalition, since both Northern workers and labor-intensive industry (previously part of the Republican coalition) had a mutual interest in promoting public policies that would slow down or reverse industrial decline.[23] To be sure, the urban core was already in relative decline as a result of various structural factors; however, the relative price shock triggered by the Oil Crisis accelerated this process considerably, and thereby increased the political salience and intensity of sectional conflict over the geographic distribution of the economic pie.

Table 4 About Here

More concretely, how did increasing partisan polarization across sectional lines, and the resulting sectional conflict, manifest in changing policy coalitions? One example can be found in foreign economic policy, where the relative price effects of the economic crisis may have contributed to a historical shift in the structure of political coalitions over free trade. Historically, as is well known, Democrats were the party of trade liberalization, while Republicans supported trade protection. These preferences, of course, flowed naturally from the parties' respective sectional support bases, since Northern labor-intensive industry represented by the Republican party benefitted from protective tariffs, while the Southern agricultural and internationally competitive capital intensive industries represented by the Democratic party were hurt by trade protection. As the parties' sectional support bases began to shift, however, their positions on

[22] Bensel 1984, 259.
[23] Bensel 1984, 316, 274.

trade policy flipped accordingly. A casual glance at congressional roll-call voting over trade legislation suggests that the early to mid-1970s represents the "break point" when this historical inversion in trade policy preferences took place.

In Table 5, we reproduce the table from Hiscox {Becker, 1983 #553} on Congressional votes on major trade bills between 1870 and 1994. We present roll call results for house votes, indicating protectionist bills (following Hiscox's coding) with a *. Following Hiscox, we can classify the history of American trade policy into three eras, based on partisan patterns of support for free trade legislation. It is clear that until 1930, when the Smoot Hawley tariff was passed, the traditional cleavage over trade policy is readily apparent, with Republicans supporting protection, and Democrats supporting free trade. Following the passage of the RTAA, we see evidence of convergence among the two parties towards a preference for freer trade (especially following World War II); on Hiscox's account, this is because World War II reoriented the interests of the Republican constituency in favor of an open trade regime. We see this convergence in party preferences, for instance, in votes over the RTAA during the 1950s. However, this interregional, inter-partisan "détente" over trade policy broke down starting in about 1970, as Democrats began to take up the mantle of protectionism while Republicans began their path towards free trade. This shift, of course, coincides with the shift in the parties' sectional support coalitions that begins, on Bensel's account, in 1965. Hiscox's (1999, 687) discussion echoes Bensel's, and is worth quoting:

> The [Republican] party…began to draw electoral support increasingly from the South and West where export industries-including agricultural producers who deserted the Democrats in these years, along with newer, high-tech manufacturing and service industries-accounted for larger shares of the economy. Democrats, once a minor force in the great urban and commercial centers of the East, began to draw heavy support from the large northeastern cities and the cities of the Midwest. Even as many Republicans continued to shift away from protectionism in the postwar era, many Democrats shifted in the other direction.

Trubowitz also notes that "by the 1980s, the Republicans, once the party of protection, had become the party of free trade."[24] Interestingly, Table 5 suggests that 1974 was the point of transition from the post-war alignment of preferences over trade policy, to the new era in which Democrats became – for then, at least -- the party of protection and Republicans the party of free trade. Certainly, there seems to be a decisive break in the Republican camp between 1970, when the Republican coalition split its vote over the protectionist Mills Bill, and 1974, when it voted decisively in favor of the liberal Trade Reform Act. Though more work is, of course, needed to draw an explicit link between the crisis and this decisive shift towards a preference for free trade within the Republican party, our analysis suggests the possibility that the relative price shocks of the 1970s, by reshaping the country's economic geography and accelerating the Republican flight to the periphery, may have driven this shift in the structure of trade policy preferences. Once again, we note a suggestive affinity between the empirical historical record on important political change, and the theoretical connection that we have drawn between the shift in relative prices induced by crises, changes in political coalitions, and ultimately, the transformation of preferences, policy and institutions.

Table 5 About Here

The changes in America's economic and political geography over the course of the 1970s were the product of many factors, ranging from improvements in transportation technology to the widespread adoption of air-conditioning in the South. Coalitional change was also the product of political entrepreneurs taking advantage of underlying changes in the economy, especially President Richard Nixon's "Southern strategy" employed during the 1972 campaign. Nevertheless, in the absence of the dramatic spike in the price of energy and the corresponding

[24] Trubowitz 1998, 200.

increase in volatility, these changes might not have been as rapid or as dramatic as they in fact were.

The after-effects of the tumultuous 1970s played out well into the 1980s. The much discussed "Reagan coalition" and the definitive shift of the South into the Republican column reflects the new sectoral alignment that emerged from the instability of the 1970s. This coalition seems to have prevailed until recently; indeed, a causal glance at an electoral map from the 1990s and 2000's appears to confirm that Democrats remained the party of the industrial (and now, increasingly, post-industrial) core economies located in the Northeast, Midwest, and West Coast, while Republicans consolidated their hold over the Sunbelt. This realignment was also consolidated by relative price movements by economic sector. Where the New Deal coalition bridged regions, the new Republican coalition was more clearly composed of economic "winners." Those sectors that enjoyed significant increases in relative returns during the crisis continued to benefit from higher relative prices throughout the 1980s, including fuel and energy products and industrial commodities, disproportionately located in the economic periphery. Only agriculture, hard hit during the crisis, is a central piece of the coalition that continues to fall behind in terms of relative prices (compare Table 6a and b). This coalition of winners, in turn, undergirded the Reagan revolution and its subsequent politics, including the gradual repeal of Keynesian social welfare policies, the progressive deregulation of economic sectors – especially finance, and the adoption of more market-oriented policies generally{Gourevitch, 1986 #186}.[25]

The Great Recession

The next full-blown crisis, according to our volatility and relative price and measures is the Great Recession of 2008-2009. This economic crisis appears to have broken up the Reagan

[25] Hall 2013.

coalition forged during the crises of the 1970s and reinforced by the 1980s. First the rise of the Tea Party and then the successful campaign of Trump for president appears to have split the Republican Party over economic issues. There is some evidence to suggest that the Trump coalition includes prominently both people who might be considered relative economic "losers" from globalization, and pensioners (and prospective pensioners) who see Federal spending not on the elderly as a threat. Traditional import-competing industries appear to have been especially hard hit by changes in relative prices during the Great Recession. Indeed, compared to past economic crises, the Great Recession appears to have contributed to greater price instability (see Figures 2b and 3b). As shown in Table 6, heavy industries in which blue collar workers predominate have fared relatively poorly compared to services and finance (chemicals is the exception, but this appears largely driven by capital intensive pharmaceuticals). With often fixed assets, and looming large in local economies, the decline of heavy industry has effects far beyond the employment of individual workers. As a recent Gallup survey demonstrates, it is not the employment status of the respondent that matters for Trump supporters but broader economic conditions in their communities and, especially, their beliefs about future economic prospects for the next generation.[26]

Table 6 About Here

This economic dynamic may well have contributed to Trump's support among white working class voters (many of whom were previously reliable Democrats who voted for Barack Obama) in the declining Rustbelt, which powered his Electoral College victory. Though the overall

[26] See Rothwell. The Washington Post gave significant coverage to this working paper: https://www.washingtonpost.com/news/wonk/wp/2016/08/12/a-massive-new-study-debunks-a-widespread-theory-for-donald-trumps-success/?postshare=7681471127564540&tid=ss_mail. Its conclusions have been heavily criticized, not least because of multicollinearity: see blog post by James Kwak: https://baselinescenario.com/2016/08/16/that-massive-new-study-says-nothing-about-economic-anxiety/

margins in some of these Rustbelt states (such as Michigan and Wisconsin) were narrow, more fine-grain comparisons of electoral results between 2016 and 2012 underscore the significance of the Trump-led GOP's incursion into the "heartlands of 20th century liberal populism" for the future of the party system.[27] For illustration, consider the following:

- In Pennsylvania, Obama won counties in Scranton and Wilkes-Barre by 27 and five points, respectively; Hillary Clinton, on the other hand, won Scranton by 3 points and lost Wilkes-Barre by 27.[28]
- In Ohio, Obama won Youngstown by more than 20 points; in 2016, the result in Youngstown was a virtual draw (Cohn November 9)
- Maine's second congressional district swung from a 8 point win for Obama in 2012 to a 12 point win for Trump in 2016.[29]
- In Michigan's Lake County, Obama defeated Mitt Romney 52% to 47%, while Donald Trump defeated Hillary Clinton 59% to 36.

Trump's victory can be attributed to such patterns playing out across the Rustbelt. On the other hand, Clinton appears to have made gains in certain Republican strongholds dominated by professional-class whites (one component of the three-pronged Obama coalition, which also includes millennials and minorities). For instance, she won Darien, Connecticut by 12 points (a 43 point swing to the Democrats from 2012) and New Canaan, Connecticut by 10 points (a 39 point shift from 2012); however, outside of the affluent professional classes, she did more poorly than hoped among suburban middle-class whites, who ultimately "came home" to the Republican nominee (which prevented her from making up losses among working-class whites). Moreover, her substantial gains in economically prosperous urban centers in "blue states" such as Boston, Seattle, and DC-the "winners" of the post-crisis economy (buoyed by industries such as finance, education, technology, and consulting) and the strongholds of the Obama coalition-were nullified by the political geography of the electoral college, while her strength with the

[27] See http://www.nytimes.com/2016/11/10/us/politics/donald-trump-voters.html
[28] See http://www.nytimes.com/2016/11/15/upshot/how-did-trump-win-over-so-many-obama-voters.html?smid=tw-share&_r=1&mtrref=t.co
[29] See http://www.nytimes.com/2016/11/10/upshot/why-trump-won-working-class-whites.html

Obama coalition was not strong enough to win Sunbelt states (such as Florida, Georgia, and Arizona) that could have compensated for the loss of the Rustbelt.[30] As Ronald Brownstein perceptively notes:

> Clinton ultimately stumbled between the party's past and its future: While Trump toppled heavily blue-collar Rustbelt states that stand as the last monuments to the Democrats' earlier working-class-based coalition, Tuesday made clear the party's new coalition of minorities and white-collar whites has not yet grown large enough to reliably hold behemoth Sunbelt battlegrounds such as Florida and North Carolina (much less Arizona or Georgia), especially against a Republican surge in those states' own substantial blue-collar and non-urban populations.[31]

This election may well be viewed by future analysts as (in Brownstein's words) a "hinge point in American history", one which presages the ultimate inversion of the party's sectional support bases (relative to the party system that came into existence in the wake of the Crisis of the 1970s), with Republicans turning into the champions of declining industrial areas with large concentrations of white voters, and the Democratic party turning into the vehicle of coastal and sunbelt-states with large concentrations of minorities and professionals.[32]

As noted above, our approach does better in predicting when and how economic crises induce political change than in forecasting the results of that process, which is the product of the strategic choices of political entrepreneurs operating in a crisis environment. Certainly we could not have predicted the Trump campaign and victory. But our approach does in fact lead us to

[30] See http://www.nytimes.com/2016/11/15/upshot/how-did-trump-win-over-so-many-obama-voters.html?smid=tw-share&_r=1&mtrref=t.co
[31] See http://www.theatlantic.com/politics/archive/2016/11/trumps-road-to-victory/507203/
[32] See http://www.theatlantic.com/politics/archive/2016/07/trumps-path-through-the-rustbelt/491699/

expect substantial political upheavals – and it is hard to deny that we are currently witnessing such an upheaval. Questions remain about the future of the American party system, but it seems quite conceivable that internationally-oriented, human capital intensive industry – which, as in the New Deal, can tolerate somewhat greater redistribution to low income workers (Ferguson 1984) -- will move into the Democratic Party. This might propel the Democrats further towards a coalition of highly educated voters working in export-oriented firms and industries and minority workers, often in the service industry, unified by greater tolerance for multiculturalism and redistribution. If so, Republicans would consolidate the groups mobilized by Trump and turn inward, opposing increased trade, immigration, and globalized finance. The result could be not simply a geographic shift in coalitions, but a more fundamental reorientation in the axis of American political conflict from one based primarily on the size of government and the scope of redistributive activity, to one based on a more fundamental cosmopolitan/nationalist divide that is shaped by economic disagreements over the global economy and philosophical disagreements over the merits of America's increasingly multicultural identity.[33]

This is not to say that the role of government and redistribution won't be issues in American politics going forward. For instance, members of a potential new Republican coalition are likely to favor social programs for the elderly, such as Medicare and Social security, and oppose those that tend to redistribute income toward those with low incomes.[34] However, to the extent that the former tend to benefit white voters, while the latter tend to benefit younger minorities, political conflicts over redistribution may well be subsumed within this more fundamental political conflict between cosmopolitan and nationalist coalitions. Whether such a

[33] See http://www.nytimes.com/2016/11/18/upshot/is-the-slide-into-pure-identity-politics-inevitable.html
[34] For one speculative analysis along these lines, see http://www.nytimes.com/2016/08/11/opinion/campaign-stops/is-trump-wrecking-both-parties.html?smprod=nytcore-iphone&smid=nytcore-iphone-share&_r=0

cleavage does structure politics going forward of course depends on how Trump governs, and how the Democrats respond to their loss and the new challenges and opportunities that lie before them. What is clear, however, is that the potential for a major political realignment is more real now that at any time since the 1970s.

V. Evidence from Congressional Voting

If our arguments above are on the right track, economic crises should be reflected in Congressional voting patterns. In this final section, we check the plausibility of our approach by testing for the effects of economic crises on DW-Nominate scores by Congressional district since 1900. This allows us to establish two points. First, our crisis periods do correlate with significant shifts in Congressional voting patterns. Second, inasmuch as political institutions can be "sticky," and the stock market volatility and relative price changes we identify are continuous variables, the effects of economic crisis on political change are not instantaneous. Rather, economic crises tend to lead political change over some time. Looking at voting patterns across our three crisis periods suggests that the peak effects of economic disruptions on politics occur after approximately two to four years (one to two Congresses).

To identify potential political changes, we analyze the evolution of ideal points held by Representatives in a given district over time using DW-Nominate scores. We conduct this analysis over a time period spanning from the 56th (1899-1900) through the 113th Congress (2013-2014), the most recent available. Our key variable is the first dimension of the DW-Nominate score by Congress. This dimension is typically interpreted as measuring a left-right ideology with specific emphasis on revealed preferences on government intervention in the economy. Our expectation is that stock market volatility and relative price changes should be associated with larger changes in the voting behavior of members of Congress, all else constant.

To measure changes in voting patterns, we regress up to five lags of the DW-Nominate score by district on the current score. Essentially, we gauge the degree to which the ideal point held by a representative in a given district at time t is predicted by ideal points at t-1, t-2, etc. This is intended to capture any trends in the district and thus satisfy our ceteris paribus condition. In regressions presented below, we use lags of five Congresses, although our results are not especially sensitive to this choice.[35] To minimize bias, we employ a quasi-maximum likelihood estimator suggested by Kripfganz (2015).[36] We also include fixed effects at the Congressional district level. This is a within estimator - basically subtracting out time-invariant effects at the district level. The regression model thus seeks to identify an effect based on variation within districts over time.

To identify potential periods of political change, we first add a set of dummy variables for Congresses that occurred during the "crisis periods" identified above. These crisis periods are our primary independent variable. The logic here is that, after taking into account lagged ideal points, and time-invariant district factors, the coefficients of individual Congresses indicate whether or not there was a substantial change in voting patterns and, presumably, policy. Essentially, we want to know if intercepts vary by Congress, all else equal.

In Table 7, we report Congress dummy variables with the largest substantive effect on voting patterns in the decade after each crisis period identified above. Figure 4 presents the change in ideal points for each Congress in the years before and after each crisis period. Our first and third points noted above are readily evident. First, economic crises are associated with

[35] Upon looking at the data, we noticed that several Congressional districts had multiple ideal point measures in a given Congress, likely due to special elections. For simplicity, we coded "replacements" as separate districts, ensuring that our analysis centers upon the original elected representative in each district.
[36] Any error correlated with an individual at time t will be correlated with individuals at all times, violating the regression assumption of independent errors needed for OLS. Furthermore, Nickell bias arises when one uses fixed effects on dynamic panel data.

significant changes in voting patterns in Congress. Although we report only the "peak" effect in the table, Figure 4 indicates that Congresses subsequent to the crisis are different from other Congresses in our dataset. There are, of course, other reasons why ideal points in Congress may shift, and we do not explore alternative explanations. Yet, the peak effects reported in Table 7 are typically among the largest effects identified when estimating Congress dummies over the last century. Indeed, the shifts in DW-Nominate scores in the 73rd and 112th Congresses are the two largest since 1899.

Table 7 about here

Figure 4 about here

Second, as Figure 4 indicates, crises appear to have an impact that peaks approximately two Congresses after the economic crisis begins. The largest substantive effect of the Great Depression is felt in the 73rd Congress (1933-1934), but continues through the 76th, likely picking up changes induced by World War II. The Oil Crisis is felt quickly, producing the largest change in the 94th Congress (1975-1976), and ends quickly by the 96th Congress – with some residual changes after the 1980 election. The Great Recession is harder to assess because we may still be feeling its effects. Nonetheless, the peak to date was in the 112th Congress (2011-2012), with no significant effect in the 113th. As in both prior economic crises, there may be residual changes in voting patterns up to a decade later.

Finally, in Table 7 we also report the continuous effects of stock market volatility and relative price changes by Congress on DW-Nominate scores without dummies for our crisis periods. This allows us to estimate the effects of our crisis variables on voting patterns in Congress. The key variable here is the interaction term between stock market volatility and relative price changes, lagged one Congress. The coefficient indicates that high levels of both

stock market volatility and relative price changes are, indeed, highly correlated with changes in voting patterns, which is what our theory expects. Incidentally, it also appears that economic crises as we have identified them here also lead to more "liberal" economic policies, though we have no theoretical priors on this point. Negative values of the first dimension of DW-Nominate are normally understood to represent support for greater intervention in the economy. Although Figure 4 suggests considerable variation in the direction of policy change as each crisis unfolds, the negative sign on the interaction term in models 4 and 5 in Table 7 implies that the Congress immediately following higher levels of both stock market volatility and relative price changes typically supports more interventionist economic policies. More important, though, is that these continuous measures of economic crises are – as predicted -- significantly correlated with future changes in voting behavior in Congress. Confirming the peak effects identified with the crisis dummies, moreover, the effect of crises is also most evident here one Congress after they occur.

Conclusion

Crises are clearly worth studying. They provide unique opportunities to observe political behavior in times of momentous battles and crucial decisions. Yet, it is not sufficient to use crisis as an error term to explain what is otherwise puzzling. For the analysis of crises to help resolve ongoing debates in Political Science, analysts must generate testable hypotheses about how specific mechanisms during crisis periods are expected to affect political behavior and outcomes.

Our purpose in this paper has been to set forth a systematic framework for analyzing politics in times of crisis. We began with a simple theory of individual and group behavior within the constraints of existing institutional and political patterns of cooperation. We then distinguished two features of crises with predictable effects on political behavior. Increased political risk, measured by broad volatility in asset values, calls existing coalitions into doubt as

economic agents change their own political strategies and anticipate that other agents will change theirs. Changes in relative prices lead actors to reallocate resources both from one economic activity to another and from the marketplace to the political arena. Together, these two features give rise to political realignments. Empirical evidence from the United States over the last century provides suggestive evidence for this theory of crisis-induced political change.

The study of political economies in crisis is important. It can only be fruitful for social scientists, however, if it is carried out in a methodical manner. This requires the construction of careful analyses of the system in "normal times," a precise idea of how the crisis is expected to affect the system and the actors in it, the development of ex ante measures of crises that are independent of the political changes that ensue, and a test of causal hypotheses in specific cases. This essay is an attempt to encourage such systematic investigation. In the process, it yields—depending on one's perspective--a foreboding or perhaps encouraging vision of the future and suggests that we are, today, living through a major political realignment that is likely, given the infrequent nature of economic crises, to structure American politics for at least another generation. It suggests, moreover, that the Trump realignment is rooted in and precipitated by the Great Recession of 2008-2009. If so, the effects of that sharp economic crisis will likely be felt politically for a generation or more.

Appendix

A.1. GARCH Models

ARCH models were developed as a means of modeling conditional heteroskedasticity in error terms (Engle 1982){Theodossiou, 1994 #2203;Tufte, 1998 #2204;Theodossiou, 1994 #2202}. These models are based on the assumption that errors are not independent and that variance is an autoregressive process resulting in conditionally heteroskedastic errors linked to the squares of earlier innovations. Essentially, ARCH models assume that conditional variance can be represented by the autoregressive process:

$$\hat{\varepsilon}_t^{\,2} = \alpha_0 + \alpha_1 \hat{\varepsilon}^2{}_{t-1} + \alpha_2 \hat{\varepsilon}^2{}_{t-2} + \cdots + \alpha_q \hat{\varepsilon}^2{}_{t-q} + v_t$$

where v_t is a white noise process. Hence, ARCH models are able to capture periods of tranquility and volatility in data series and seem well-suited to modeling uncertainty in stock returns.

We are most interested in GARCH models (generalized autoregressive conditional heteroskedasticity). GARCH builds upon conventional ARCH models by allowing the conditional variance to be an ARMA process. In a simple ARCH process,

$$\varepsilon_t = v_t \sqrt{\alpha_o + \alpha_1 \varepsilon^2{}_{t-1}}$$

where v_t is a white noise process. In a GARCH process,

$$\varepsilon_t = v_t \sqrt{h}$$

where $\sigma^2{}_v = 1$,

$$h_t = \alpha_0 + \sum_{i=1}^{q} \alpha_i \, \varepsilon^2{}_{t-i} + \sum_{i=1}^{p} \beta_i \, h_{t-i},$$

and the conditional variance of ε_t is the ARMA process given by the expression for h_t. In other words, a GARCH(p,q) model allows for both autoregressive and moving-average components in the heteroskedastic variance. GARCH(p,q) models are generally more parsimonious than high-

order ARCH models and entail fewer coefficient restrictions.[37]

Prior to specifying the models, we created a sequential date variable for the S&P index to take into account weekends and holidays. Estimating a model without taking into account non-business days would bias our results.[38]

We perform several tests to determine whether conditional heteroskedasticity is a plausible assumption for the S&P index. We ran the Lagrange Multiplier Test, a test for the lag length of ARCH errors. This test obtains the squared errors of a regression and regresses them on *q* lagged values. The null hypothesis is that the coefficients of the lagged values will be 0 in the absence of ARCH components. We ran Lagrange Multiplier tests for 5 lags for each index. We next ran Portmanteau Tests on each index and calculated the Ljung-Box Q-Statistics. This tests for autocorrelation in the residuals of a model. We calculated the Ljung-Box Q-Statistic for up to 10 lags for each index. Overall, the results provide strong indication that ARCH and GARCH effects are present for S&P returns.

Next, we ran GARCH models for the S&P 500 index. We started with simple GARCH, and then ran models using an AR(1) term -- allowing for the possibility that the expected value of the index may be a function of the mean in the period *t-1*. Next, we added a simple asymmetric term to each GARCH model to control for leverage effects (i.e., the possibility that downturns may increase volatility more than upswings). Finally, we specified a model that both follows an AR(1) process and contains leverage effects. The ARCH, GARCH, and asymmetric terms were overwhelmingly significant in each model, as evidenced by the p-values of individual coefficients as well as Wald tests for joint significance.

[37] Enders 2010.
[38] Global Financial Data. 2011. *Equity Series* [Data File] Retrieved from https://www.globalfinancialdata.com/platform/search.aspx?db=gfdatabase

In order to select the best fitting model, we examined Schwarz's Bayesian Information Criterion (BIC) for the models. This criterion selects the parameters of an ARMA model so as to maximize the log likelihood function including a penalty for each parameter estimated. Generally, the more negative the value, the stronger the model. The BIC suggested that the data is best represented by an asymmetric GARCH model without an autoregressive AR(1) term.

A.2. Relative Price Dispersion

Given breaks in producer price time series (which reflect changes in the broader makeup of the economy) we examine a different set of sectors in the pre- and post-1950 periods.Pre-1950s producer price indices are taken from online databases at the National Bureau of Economic Research (NBER);[39]post-1950s indices are taken from the Bureau of Labor Statistics' online Producer Price Index (PPI) database.[40]Formal tests for seasonality built into the Census X-13 ARIMA-SEATS package suggested that the relative price series do not, for the most part, possess significant seasonality. In order to eliminate noise and estimate trend-cycle components, we smooth the relative price data using a quarterly centered moving average.

Relative price dispersion is measured as:

$$RPD_t=\frac{1}{n}\sum_{i=0}^{n}\ (\pi_{it}-\pi_t)^2$$

where π_{it} is the monthly change in the *i*th sector's Producer Price Index (PPI) and π_t is the average monthly change for all price indices in the dataset.

The sectors factored into our measure of relative price dispersion in the 1900-1950 time period are: fuel and lighting, metals and metal products, farm products, building materials,

[39] National Bureau of Economic Research. *NBER Macrohistory: Prices*[Data File]. Retrieved from http://www.nber.org/databases/macrohistory/contents/chapter04.html

[40] Bureau of Labor Statistics. (2011). *Producer Price Indexes* [Data File]. Retrieved from http://www.bls.gov/ppi/. Federal Reserve Bank of St. Louis. 2011. *FRED Economic Data* [Data File]. Retrieved from http://research.stlouisfed.org/fred2/categories/31

chemicals and drugs, textiles, and hides and leather products. Sectors factored into our measure of relative price dispersion from 1950-2011 are: chemicals, farm products, consumer goods, metals and metal products, industrial commodities, capital equipment, iron and steel, fuels and energy products, and crude materials.

Table 1. Economic Crises

	Stock Market Volatility		
Relative Price Dispersion		*Normal*	*Greater than two s.d. above the mean*
	Normal	***Normal Times*** *All other years.*	***Potential Crises*** 1937-1938, 1940, 1987
	Greater than two s.d. above the mean	***Potential Crises*** 1902, 1916, 1919-1920, 1986, 1990, 2005, 2014	***Hard Times*** 1929-1933, 1973-1974, 2008-2009

Table 2: Relative Winners and Losers in the Great Depression

a. Crisis: 1929-1933 (Industries listed in descending order, from relative winners to losers; Industries listed in bold are included in the calculation of the overall dispersion index)

Industry	Slope of Crisis Trendline
Passenger Automobiles	-0.30***
Fuel and Lighting	-0.38***
Metals and Metal Products	-0.43***
Building Materials	-0.46***
Chemicals and Drugs	-0.51***
Wool	-0.56***
Hides and Leather Products	-0.58***
Industrial Commodities	-0.64***
Print/Cloth Mills	-0.65***
Textiles	-0.67***
Raw Materials	-0.91***
Farm Products	-1.13***

b. Early New Deal: 1934-1936

Industry	Slope of Post-Crisis Trendline
Farm Products	1.12***
Raw Materials	0.74***
Wool	0.64**
Hides and Leather Products	0.38***
Chemicals	0.19***
Fuel and Lighting	0.17***
Industrial Commodities	0.09**
Metals	0.01
Building Materials	0.02
Textiles	-0.07
Passenger Automobiles	-0.20
Print and Cloth Mills	-0.30*

*=<.05; **=P<.01; ***=P<.001; all others are not significant at conventional levels

Table 3. Pre-Crisis Capital Intensity and Relative Price Changes, 1929-1933

Industry	**Capital Intensity (Value of Capital Costs/Value of Total Input Costs, 1927)**	**Magnitude of Relative Price Decline (Percentage Change in Price, 1929-1933)**
Clothing (Men's, Youths', and Boys'; Summary for all Factories)	0.7317526	59.6491228
Woolen Goods	0.7325668	57.1052632
Textiles	0.7366387	42.7027027
Iron and Steel	0.7370922	40.1063201
Gas, Manufactured, Illuminating, and Heating	0.7559935	17.6959620
Manufactures of Nonferrous Metals and Alloys	0.7790854	20.6793207
Chemicals	0.7909736	24.3723849
Motor Vehicles (average number employed during year)	0.8050204	13.5527590
Leather: Tanned, Curried and Finished	0.8302276	38.6243386

Table 4. Relative Winners and Losers in the Crisis of the 1970s

a. Crisis: 1973-1975 (Industries listed in descending order, from relative winners to losers; Industries listed in bold included in the calculation of the overall dispersion index)

Industry	**Slope of Crisis Trendline**
Fuels and Energy Products	3.69***
Chemicals	2.75***
Iron and Steel	2.00***
Metals and Metal Products	1.72***
Industrial Commodities	1.55***
Capital Equipment	1.33***
Consumer Goods	1.18***
Transportation Equipment	0.89***
Crude materials	0.77***
Farm Products	0.40**
Electronic Accessories	0.23***

b. Post-Crisis: 1976-1980

Industry	**Slope of Post-Crisis Trendline**
Fuels and Energy Products	2.34***
Crude materials	1.10***
Industrial Commodities	1.04***
Metals and Metal Products	1.01***
Consumer Goods	0.96***
Iron and Steel	0.92***
Capital Equipment	0.81***
Chemicals	0.79***
Transportation Equipment	0.76***
Electronic Accessories	0.87***
Farm Products	0.70***

***=P<.001

Table 5. Vote Margins (Yeas-Nays), by Party, on Trade Legislation, 1875-1994

Year	Legislation (* Denotes Protectionist)	Democrats	Republicans
1875	Tariff Act*	-74	86
1884	Morrison Bill*	-110	109
1888	Mills Bill	152	141
1890	McKinley Tariff*	-138	162
1894	Gorman Tariff	179	126
1897	Dingley Tariff*	-110	199
1909	Payne-Aldrich Tariff*	-156	212
1913	Underwood Tariff	279	-124
1922	Fordney McCumber Tariff*	-81	201
1930	Smoot Hawley Tariff*	-131	221
1934	RTAA	267	-107
1937	RTAA Extension, 3 Years	275	-84
1940	RTAA Extension, 3 Years	192	-141
1943	RTAA Extension, 2 Years	184	93
1945	RTAA Extension, 3 Years	193	-107
1948	RTAA Extension, 1 Year	-126	213
1949	RTAA Extension, 2 Years	228	21
1953	RTAA Extension, 1 year	173	??
1954	RTAA Extension, 1 Year	141	86
1955	RTAA Extension, 3 Years	52	33
1958	RTAA Extension, 4 Years	145	74
1962	Trade Expansion Act (5 Year Authority)	179	-6
1970	**Mills Bill***	**53**	**-3**
1974	**Trade Reform Act (5 Year Authority)**	**-9**	**144**
1979	Trade Agreements Act	242	146
1984	Trade Remedies Reform Act*	169	-6
1986	Omnibus Trade Bill*	241	-88
1988	Omnibus trade and competitiveness act*	239	92
1991	Disapprove Fast Track Extension*	81	-122
1993	NAFTA	46	89
1993	GATT Fast-Track Extension	43	127
1994	GATT Uruguay Agreement	78	65

* Denotes Protectionist Legislation. Excludes RTAA Extension in 1951, passed by voice vote, and RTAA Extension in 1979, not coded by Hiscox.

Source: Hiscox

Table 6. The Great Recession, 2007-2010

(Industries listed in descending order, from relative winners to losers; Industries listed in bold included in the calculation of the overall dispersion index)

Industry	**Slope of Crisis Trendline**
Real-Estate Loan Products (Besides Home Equity)	1.14***
Chemicals	0.44***
Residential Construction	0.41***
Hospitals/Healthcare	0.39***
Investment Banking and Securities Dealing	0.38***
Farm Products	0.34**
Consumer Goods	0.28***
Transportation Equipment	0.22***
Metals and Metal Products	0.21**
Industrial Commodities	0.19***
Capital Equipment	0.14***
Iron and Steel	0.25
Fuels and Energy Products	0.14
Crude Materials	0.06
Commercial Banking Products	-0.18***
Electronic Accessories	-0.23***
Home Equity Loans	-1.03**

=P<.0, 1*=P<.001

Table 7. Economic Crises and Voting Patterns in Congress

	Great Depression	Oil Shock	Great Recession	Pre—1950	Post-1950
DW-Nominate t-1	0.663*** (0.018)	0.663*** (0.018)	0.665*** (0.018)		
DW-Nominate t-2	0.142*** (0.019)	0.137*** (0.019)	0.138*** (0.019)	0.385*** (0.017)	0.525*** (0.016)
DW-Nominate t-3	0.007 (0.015)	0.008 (0.015)	0.003 (0.015)	0.052*** (0.017)	0.085*** (0.014)
DW-Nominate t-4	0.012 (0.014)	0.011 (0.014)	0.009 (0.014)	-0.002 (0.013)	-0.007 (0.013)
DW-Nominate t-5	0.048*** (0.013)	0.046*** (0.013)	0.047*** (0.013)	0.027* (0.014)	-0.007 (0.014)
Cong. 73 (1933-34)	-0.148*** (0.021)	-	-	-	-
Cong. 94 (1975-76)	-	-0.082*** (0.017)	-	-	-
Cong. 112 (2011-12)	-	-	0.157*** (0.026)	-	-
Stock Market Volatility (t-1)	-	-	-	2.489*** (0.336)	4.825*** (0.616)
Relative Price Changes (t-1)	-	-	-	2.537*** (0.338)	4.792*** (0.613)
Stock Market Volatility x Relative Price Changes (t-1)	-	-	-	-0.025*** (0.003)	-0.048*** (0.006)
Constant	0.012*** (0.002)	0.011*** (0.002)	0.157*** (0.026)	-251.5*** (33.67)	-483.5*** (61.76)
Observations	9915	9915	9915	7887	12236

All regressions with district fixed effects and robust standard errors.

*=<.05; **=P<.01; ***=P<.001

Figure 1.
Monthly Volatility

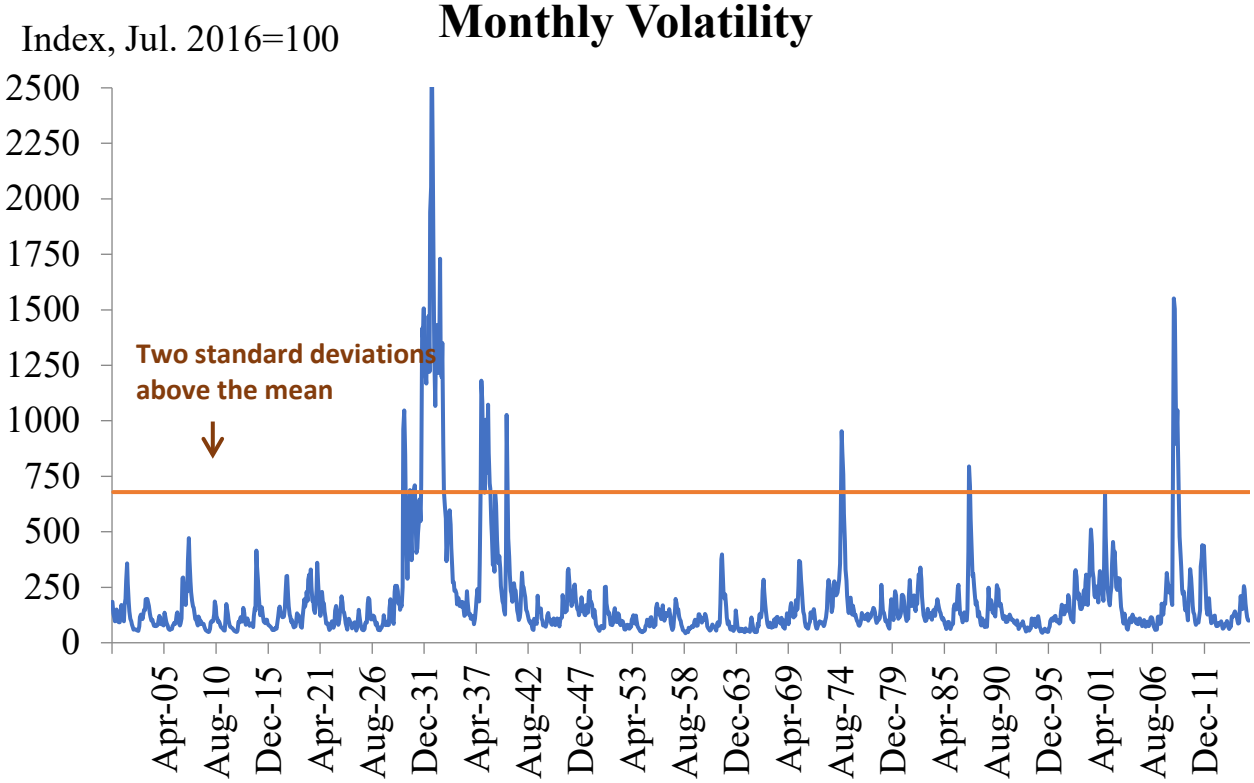


Figure 2a.
Relative Price Dispersion, before 1950

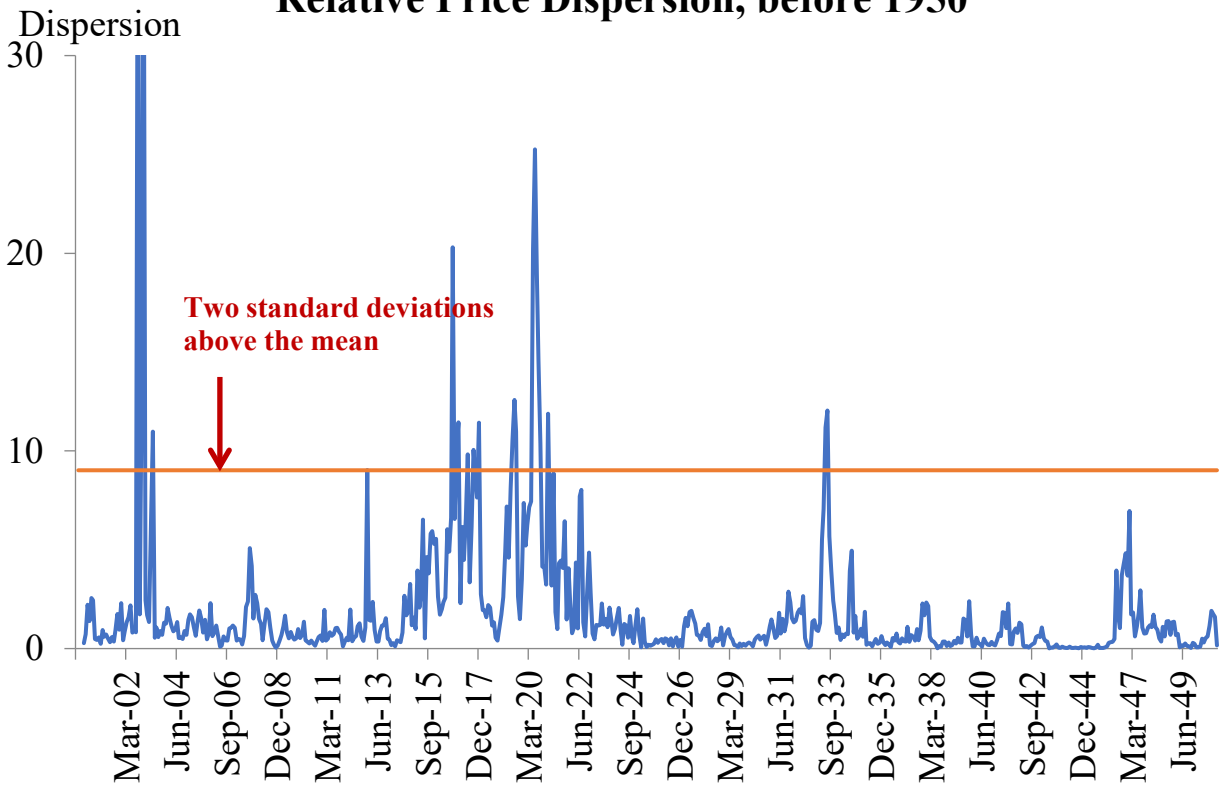


Figure 2b.
Relative Price Dispersion, post-1950

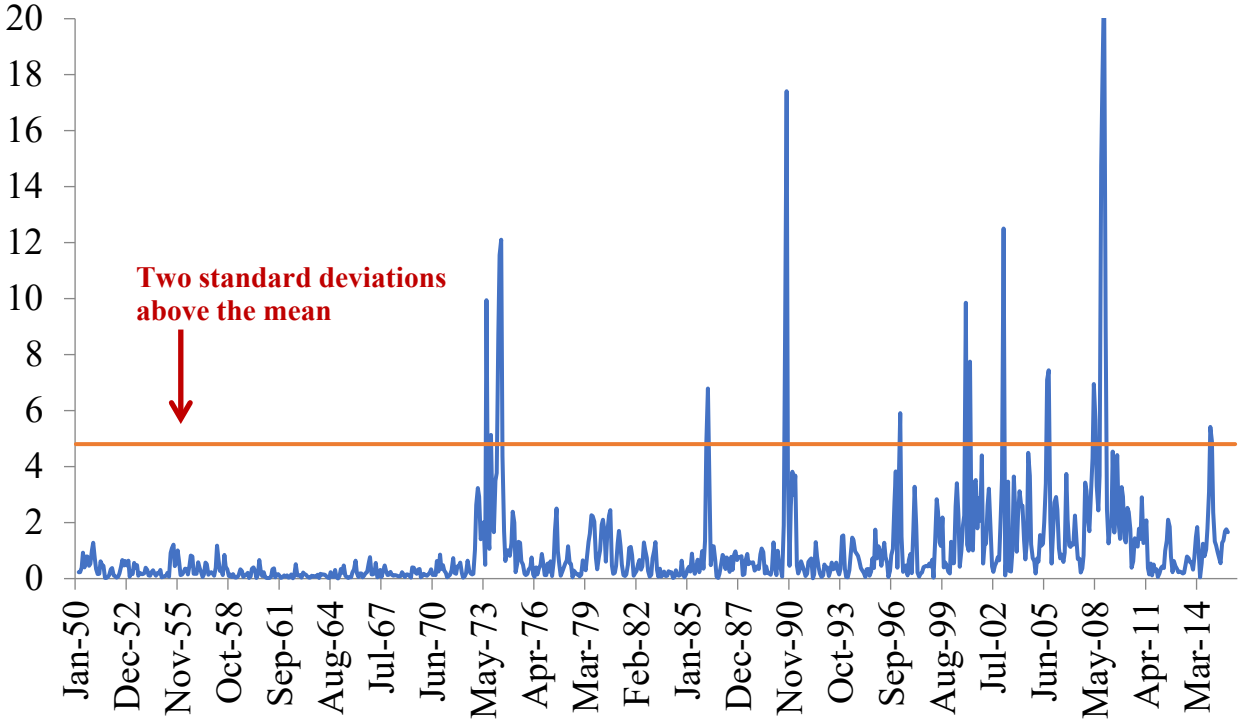


Figure 3a.
Relative Price Dispersion, before 1950

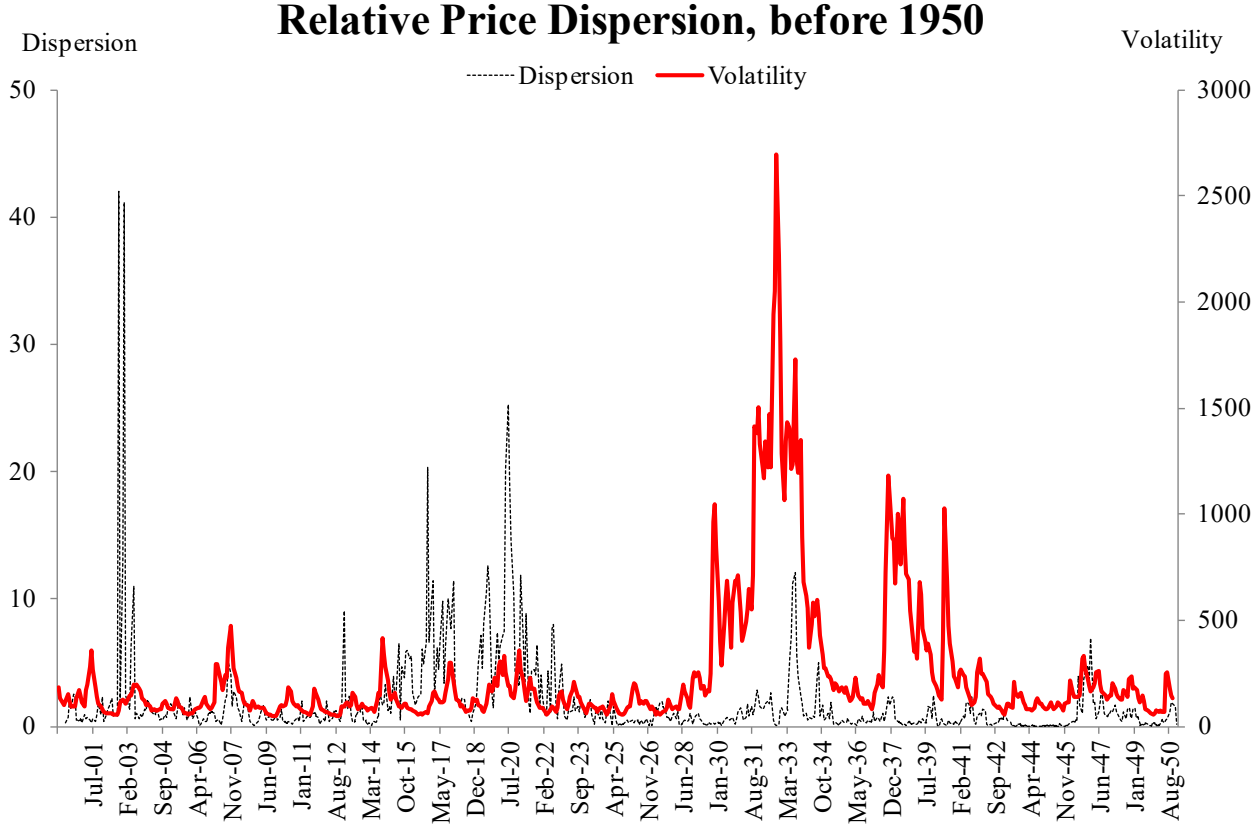


Figure 3b.
Relative Price Dispersion, post-1950

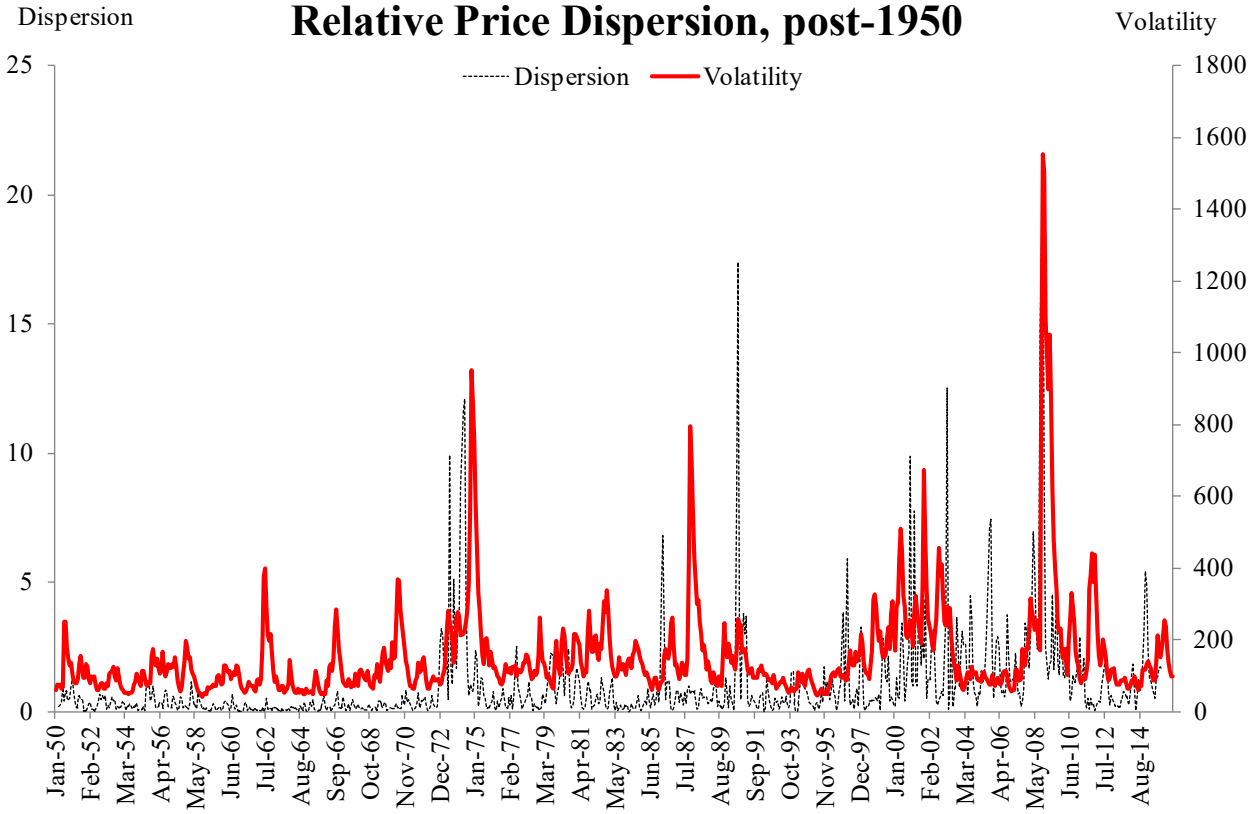
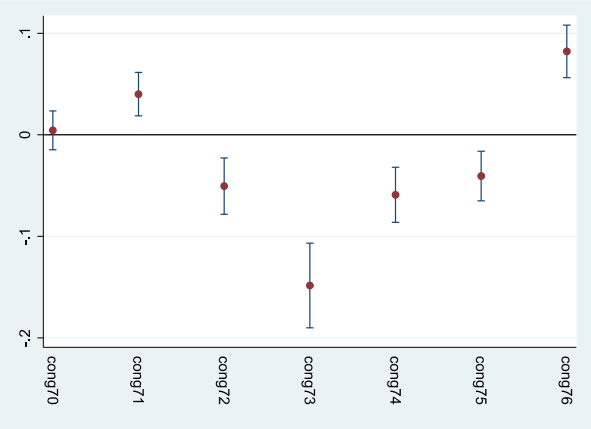
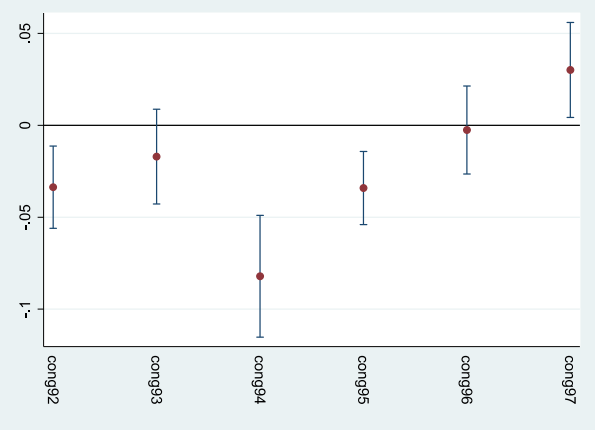


Figure 4: DW Nominate Scores by Crisis and Congress

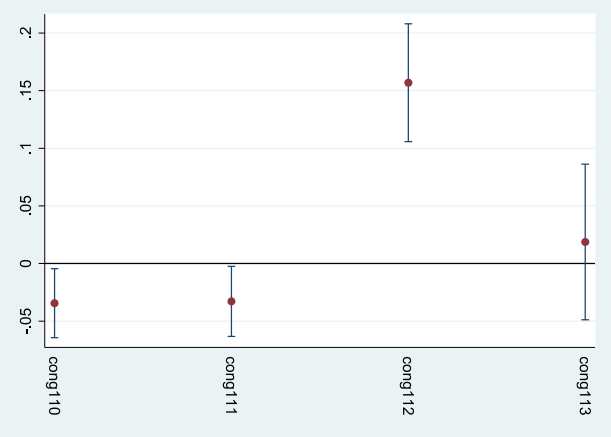
a. The Great Depression



b. The Crisis of the 1970s



c. The Great Recession



References

Becker, Gary S. 1983. "A Theory of Competition Among Pressure Groups for Political Influence." *Quarterly Journal of Economics* 98 (3):371-400.

Bensel, Richard. 1984. *Sctionalism and American Political Development, 1880-1980*. Madison, WI: Univeristy of Wisconsin Press.

Bernhard, William, and David Leblang. 2006. *Democratic Processes and Financial Markets:Pricing Politics*. New York: Cambridge University Press.

Burnham, Walter Dean. 1970. *Critical Elections and the Mainsprings of American Politics*. New York: W. W. Norton/

Chinn, Menzie D., and Jeffry A. Frieden. 2011. *Lost Decades: The Making of America's Debt Crisis and the Long Recovery*. New York: W. W. Norton.

Engle, Robert F. 1982. "Autoregressive Conditional Heteroskedasticity with Estimates of the Variance of United Kingdom Inflation." *Econometrica* 50 (4):987-1007.

Ferguson, Tom. 1984. From Normalcy to New Deal: Industrial Structure, Party Competition, and American Public Policy in the Great Depression, *International Organization* 38 (1): 41-94.

Frieden, Jeffry A., and Ronald Rogowski. 1996. "The Impact of the International Economy on National Policies: An Analytical Overview." In *Internationalization and Domestic Politics*, ed. R. O. Keohane and H. V. Milner. New York: Cambridge University Press.

Goldstein, Judith, Yotam Margalit, and Douglass Rivers. 2007. "Producer, Consumer, Family Member: The Relationship Between Trade Attitudes and Family Status." Palo Alto, CA: Stanford University.

Gourevitch, Peter Alexis. 1986. *Politics in Hard Times: Comparative Responses to International Economic Crises*. Ithaca, NY: Cornell University Press.

Grier, Kevin, and Mark Perry. 1996. "Inflation, Inflation Uncertainty, and Relative Price Dispersion: Evidence from Bivariate Garch-M Models." *Journal of Monetary Economics* 38 (2):391-405.

Hall, Peter A. 2013. "The Political Origins of Our Economic Discontents: Contemporary Adjustment Problems in Historical Perspective." In *Politics in the New Hard Times: The Great Recession in Comparative Perspective*, ed. M. Kahler and D. A. Lake. Ithaca, NY: Cornell University Press.

Hiscox, Michael J. 2002. *International Trade and Political Conflict: Commerce, Coalitions, and Mobility*. Princeton, NJ: Princeton University Press.

Kahler, Miles, and David A. Lake, eds. 2013. *Politics in the New Hard Times: The Great Recession in Comparative Perspective*. Ithaca, NY: Cornell University Press.

Kindleberger, Charles P. 1973. *The World in Depression, 1929-1939*. Berkeley, CA: University of California Press.

Klein, Benjamin, Robert G. Crawford, and Armen A. Alchian. 1978. "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process." *Journal of Law and Economics* 21:297-326.

Lake, David A. 2009. "Open Economy Politics: A Critical Review." *Review of International Organization* 4:219-44.

Lu, Xiaobo, Kenneth Scheve, and Matthew J. Slaughter. 2012. "Inequity Aversion and the International Distribution of Trade Protection." *American Journal of Political Science* 56 (3):638-54.

Mayhew, David R. 2002. *Electoral Realignments: A Critique of an American Genre*. New

Haven, CT: Yale University Press.
Rajan, Raghuram G. 2010. *Fault Lines: How Hidden Fractures Still Threaten the World Economy*. Princeton, NJ: Princeton University Press.
Roubini, Nouriel, and Stephen Mihm. 2010. *Crisis Economics: A Crash Course in the Future of Finance*. New York: Penguin Press.
Sabet, Shahrzad. 2012. "Feelings First: Non-Material Factors as Moderators of Economic Self-Interest Effects on Trade Preferences." In *Annual Meeting of the International Political Economy Society*. Charlottsville, VA.
Sundquist, James. 1973. *Dynamics of the Party System: Alignment and Realignment of Political Parties in the United States*. Washington, DC: The Brookings Institution.
Theodossiou, Panayiotis. 1994. "The Stochastic Properties of Major Canadian Exchange Rates." *The Financial Review* 29 (2):193-221.
Theodossiou, Panayiotis, and Gregory Koutmos. 1994. "Global Finance Journal." *5* 2:277-87.
Trubowitz, Peter. 1998. *Defining the National Interest: Conflict and Change in American Foreign Policy*. Chicago: Universith of Chicago Press.
Tufte, David, and Bento Lobo. 1998. "Exchange Rate Volatility: Does Politics Matter?" *Journal of Macroeconomics* 20 (2):351-65.