

Manufacturing Issues in the 2012 United States Presidential Campaign

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Preface

The study underlying this report was commissioned by the Washington, D.C., office of Japan's New Energy and Industrial Technology Development Organization (NEDO). Its authors, working together as the firm of Technology Policy International (TPI), have undertaken the study as independent consultants, although it should be noted that each has other professional affiliations and activities (see "About the Authors"). The opinions expressed in this report do not necessarily reflect the views of NEDO or the institutions with which the authors are affiliated.

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Introduction: The Politics of Manufacturing

Manufacturing industries play a continuing important role in the United States economy. In common with other advanced countries, manufacturing's direct role in the economy has been in slow decline for many years, especially as measured by employment in the sector. Manufacturing industries account for a large fraction of all privately-funded R&D and their products are essential to many advanced services. Productivity advances more rapidly in manufacturing than in the rest of the economy, so even though manufacturing employment is in secular decline, manufacturing's contributions to national output have remained relatively constant.

For a century or more, a job in manufacturing has often been the stepping stone to the middle class for poor and/or immigrant breadwinners. Manufacturing industries provided employment for the millions of African-Americans who migrated north from the agricultural south in the mid-twentieth century as traditional modes of farming were replaced by mechanized agriculture. A heavily unionized sector for most of the twentieth century, manufacturing paid relatively high wages to workers with relatively limited skills and offered a high level of job security to most workers.

Americans tend to view manufacturing industries as the core of the economy and as the place where young people with limited educations can find gainful employment. Many of America's proudest cities were built on a foundation of manufacturing, typically involving very large firms using mass production methods to produce standardized goods for domestic sale.

Despite its traditional roots, manufacturing is actually a very dynamic sector of the economy. The practice of routine technological innovation in manufacturing ensures that manufactured products are constantly changed or replaced by new products, often made by new or different firms. Manufacturing operations, especially those based on codified and routinized mass production methods, are easily shifted from high wage locations to places where wages are lower and skills are adequate. In the first half of the twentieth century, manufacturing jobs were typically shifted from the industrial north to the industrializing south of the United States. More recently, they have shifted from the United States to other countries through the well-known processes of foreign direct investment, globalization and

industrial outsourcing. The process of national modernization in many parts of the globe seems to involve manufacturing of, first, simple products; later, mass-produced products; and, finally, products based on advanced manufacturing. The result has been a wholesale shift of the locus of production of manufactured goods—especially consumer goods—sold in America from domestic manufacturers to those located in low-cost countries. In the 1960s, 70s and 80s, that shift was often toward production in Japan. More recently, of course, China, as well as other Asian nations such as Korea, Taiwan, Thailand, and Vietnam, has become the source of many manufactured consumer goods sold in the United States.

In light of the place of manufacturing in the American industrial evolution, political leaders at all levels, from city mayors to the President of the United States, often focus their energies and attention on seeking to improve the performance of American manufacturing and to, as is often said, help U.S. manufacturing firms create more “good jobs at good wages.”

As a consequence, manufacturing in the broadest sense is a frequent public policy and political concern. The need to “do something about manufacturing” is a staple of political campaigns and political party platforms. Candidates for public office, whether for state governor, Member of Congress, or President, make frequent campaign appearances at manufacturing plants, usually arranging “photo ops” in front of iconic products of manufacturing companies, surrounded by smiling workers and factory managers.

Both major political parties include concern for the health of manufacturing in their campaign oratory. However, there are often differences in what the parties propose to do, based on both constituency differences and differences of view about what roles government should play in the economy. Putting the matter too simply, Democrats tend to adopt the view of workers and organized labor that creating more good manufacturing jobs in America is the principal task. By contrast, Republicans pay more attention to improving manufacturing profitability by reducing corporate tax burdens and the costs of regulations born by manufacturing companies. Both parties tend to advocate for free trade in manufactured goods, although Democrats put more emphasis on helping workers adjust to the personal dislocations caused by changing levels and patterns of imports and exports, while Republicans focus more on “leveling the playing field” of international competition via lowering corporate taxes and opening closed markets overseas. Both parties support R&D

and technical assistance to manufacturing firms, although generally Democrats support more assertive engagement of government in this area than do Republicans via public-private partnerships and aggressive outreach to help firms compete. At the end of the day, however, there is a strong bipartisan consensus that manufacturing is important and that government needs to act, by one means or another, to help ensure its continued contributions to jobs, growth, income and wealth for Americans.

The remainder of this report discusses the present state of the national discussion in the United States about manufacturing policy. It begins with a review of a high-level debate that has gone on for the past several months about whether there is good reason for public policy to treat manufacturing differently from the rest of the economy. It then turns to a general assessment of the difficulties and challenges inherent in attempting to devise a policy focused on the health of manufacturing. The paper then examines how and why manufacturing is so important to contemporary Presidential politics, with a special focus on the relationship of the Electoral College to manufacturing issues.

To help set the stage for this discussion, it is useful to keep in mind that the modern U.S. presidency is often seen as being in permanent “campaign mode.” That is, when Presidents take action, they nearly always consider how that action might affect their ability to win re-election. So, it is difficult to distinguish in practice between actions the President takes as chief executive and those he takes as candidate for re-election. Of course, this dynamic changes radically when we have a President who is serving his second term, since the United States Constitution limits the President to two terms in office. Since President Obama is in his first term and is clearly a candidate for re-election, we must view everything he does as President as if it were a campaign statement. On the other hand, his challenger, Governor Mitt Romney, does not now have executive powers, so everything he says should also be seen through the lens of the political campaign.

Manufacturing Policy: Is Manufacturing Special?

In early 2012, as the President began to engage actively in the policy debate over the future of manufacturing, an interesting discussion emerged in the popular and business press about whether manufacturing is deserving of special treatment in public policy. This

is not a new theme; in fact, more than two decades ago, Stephen Cohen and John Zysman wrote a book entitled Manufacturing Matters to make the case that manufacturing industries play a special role in economic growth and prosperity.¹ In his January 2012 State of the Union address, President Obama singled out manufacturing as the focus of proposed new tax incentives and other favorable treatment. In response, the distinguished economist, Christina Romer, penned an editorial in the New York Times entitled, “Do Manufacturers Need Special Treatment?” After examining several arguments in favor of special treatment for manufacturing, she concluded that, “So far, a persuasive case for a manufacturing policy remains to be made, while that for many other economic policies is well established.”²

A number of authors responded more or less directly to Romer’s editorial. One of the most direct and hard-hitting was by Stephen Ezell, who contributes frequently to the Innovation Policy Blog at the Information Technology and Innovation Foundation. His posting two weeks later took sharp issue with Romer, arguing, *inter alia*, that manufacturing is the largest traded sector of the U.S. economy and that it contributes disproportionately to America’s export performance, R&D, high-wage jobs, and GDP growth. In a later post, however, Ezell also cautioned against ignoring the service sector while attending to manufacturing, noting that in the modern economy the two great sectors are highly synergistic.

Manufacturing Policy: The Challenge of What to Do

Crafting effective and acceptable public policies to improve the performance of manufacturing industries is challenging in the American context. Many factors account for this challenge, including but not limited to these:

¹ Stephen S. Cohen and John Zysman, Manufacturing Matters: The Myth of the Post-Industrial Economy, Basic Books, 1987.

² Christina D. Romer, “Do Manufacturers Need Special Treatment?” The New York Times, February 4, 2012. Her editorial was of special significance because Dr. Romer served as the first chair of the Council of Economic Advisors in the Obama Administration.

- Manufacturing is a highly diverse sector, with firms of all sizes and ages that make a plethora of products using a huge number of production methods
- Many U.S. manufacturing firms are multinational corporations that have production facilities in multiple countries
- It is generally the policy of the United States, in theory if not in fact, to avoid “picking winners” and losers at any level, from firms, to products, to technologies. This means that overt industrial policies are generally not acceptable
- The United States is a leading participant in the international trade regime that tends to favor free trade, and this puts a significant limitation on the degree to which the U.S. government might adopt trade or fiscal policies that would protect American industry from foreign competition
- Policies that may be highly advantageous from a national point of view may create considerable economic hardship at a local or regional level, which can create political pressure to adopt national policies that are suboptimal from a national perspective
- Policies that might favor the American economy are sometimes at odds with America’s foreign policy goals, and this tension is often resolved in favor of foreign policy at the expense of the economy

A public policy regimen that would systematically enhance manufacturing performance can involve elements from many domains of public policy, including R&D support, export promotion, trade negotiations, human resource development including education at all levels, labor policy, tax and investment policies, financial policies, environmental and workplace regulations, antitrust and business formation structural policies, and so on. Owing to how the responsibility for policy making is distributed among the many committees of the U.S. Congress, it is, to all intents and purposes, impossible for Congress to craft, consider and adopt comprehensive policies that address all of the relevant issues affecting manufacturing in a meaningful way. The result is that policies toward manufacturing, to the extent that they exist, are often seen by key constituencies as overly modest, piecemeal, and peripheral to the real problems of manufacturing. Simple and easy actions can be taken; the question is whether they are likely to make much difference.

Despite these many challenges to making manufacturing policies, proposals to encourage and direct manufacturing have long been a staple element of American public

policy debates. Perhaps the earliest case is the famous “Report on Manufactures,” issued by then-Secretary of the Treasury, Alexander Hamilton, in 1791.³ This report, delivered only two years after the ratification of the Constitution of the United States, was intended to mobilize support for a program of subsidies and tariffs to aid and protect fledgling U.S. manufacturers so as to reduce the dependence of the new republic on manufactured goods from Europe. It met considerable opposition, especially from persons aligned with the agrarian philosophy of Thomas Jefferson, who considered the conditions of work in European factories and the conditions of life in the large cities that hosted them to be morally unacceptable.

This is not the place to review the entire history of U.S. manufacturing policy since 1791. Suffice it to observe that America proved especially hospitable to the growth of manufacturing throughout the 19th and first two-thirds of the 20th centuries. By the late 1960s, American manufacturing dominated manufacturing throughout the “free world,” and, in fact, as compared with manufacturing in the nations aligned with the Soviet Union.

Beginning in the late 1960s, however, America’s manufacturing leadership began to erode as imports from industries in both developing countries and countries whose manufacturing industries had been seriously damaged in World War II began to make significant inroads into the American market. Expanded world trade, enabled by technological advances in transportation, communications and finance, as well as a relatively stable world political environment, meant that American manufacturing’s dominance was no longer assured. Subsequent challenges in industries such as autos, aircraft, textiles, furniture, consumer electronics, and semiconductors have been well documented.

Throughout the 1980s, 90s and first decade of the 21st century, many reports were issued and recommendations made to improve manufacturing performance, competitiveness, and contributions to jobs and the economy. At the same time, several

³ Alexander Hamilton, “Report on Manufactures,” December 5, 1791. The full report is on line at: http://www.constitution.org/ah/rpt_manufactures.pdf A brief survey of the report and its context is at: http://en.wikipedia.org/wiki/Report_on_Manufactures.

technical revolutions were underway in the organization, design, management, and operation of both manufactured products and manufacturing operations. The incorporation of digitally-based automation in both products and processes changed the nature of manufacturing. Changes in labor-management relations and shop-floor organization brought new levels of productivity to manufacturing operations. Buzzwords like “lean production,” total quality management, and worker empowerment characterized a new approach to manufacturing management at the plant level. Likewise, “core competencies,” outsourcing, offshoring and supply chain management were harbingers of massive changes in the organization of manufacturing at the firm level.

As a result of all of the changes in the manufacturing industries of the United States during the last two decades, those who are concerned about the health of U.S. manufacturing face a bit of a paradox. On the one hand, imports have taken over large portions of the market for low-end and standardized consumer products, leading to the closure of numerous small and medium sized manufacturers and a loss of many manufacturing jobs, especially those requiring limited skills. On the other hand, as U.S. manufacturers have moved to produce more technologically advanced and sophisticated products using the latest in manufacturing methods, U.S. manufacturing productivity has risen dramatically. The net result, as compared with two decades ago, is much greater manufacturing output, a relatively constant contribution of manufacturing to total national economic activity, and a sharp loss of jobs in manufacturing.

Thus, those who would propose to adopt policies to assist U.S. manufacturing sometimes see themselves as needing to choose between two strategies. One is to seek to create more favorable conditions for firms producing low and medium-tech goods in the United States, while the other is to try to help new and existing firms upgrade and develop new technologies, products, and processes. The former approach tends to focus on public policies such as tax incentives for capital investment, general corporate income tax reductions, relaxation of labor laws, reducing environmental regulations, and aggressive market opening and currency devaluation actions. The latter approach tends to focus on public policies such as tax incentives for R&D, technical assistance to new and small firms, workforce training and retraining, standards-setting, and facilitating R&D and technology cooperation among companies, universities and/or federal laboratories. In practical terms,

this is not so much a matter of making a choice between these two strategies as it is a matter of emphasizing one or the other while drawing elements from each.

The Politics of Manufacturing in the 2012 Presidential Campaign

Manufacturing is playing an unusually significant role in the 2012 presidential campaign. Several factors account for this situation:

- Employment in manufacturing, which has been trending down since 1980, took an even sharper downward trend beginning in 2000, and fell even more rapidly as a consequence of the general economic problems of the past four years. Objectively, this decline has resulted from high productivity growth in manufacturing, competition from imported manufactured goods, outsourcing of manufacturing jobs to other countries, and generally weak demand for U.S. manufactured goods in both domestic and international markets.
- Paradoxically, manufacturing output has remained relatively strong during the extended recession following the international financial crisis, and employment has even increased modestly in the past two years.
- As a result of the first two points, presidential candidates can point to data indicating that manufacturing is “coming back” and to other data showing a continuing crisis in manufacturing. From a purely political perspective, having a key part of the economy doing both well and not well at the same time, depending on the perspective, is perfectly suited as a basis for attacking the other candidate or defending one’s position.
- President Obama made “saving” U.S. manufacturing, especially the automobile industry, a centerpiece of his economic recovery strategy in 2009. To this end, he directed the U.S. Treasury to make substantial investments in the major U.S. automobile manufacturers, especially General Motors and Chrysler. (Ford rejected government investment.) These investments, which were widely understood to have enabled both G.M. and Chrysler to avoid bankruptcy, were highly controversial. Despite their evident success in helping G.M. and Chrysler return to financial solvency, they became a focal point for the argument made by conservative interests, including but not limited to the Tea Party movement, that the President is a Socialist, bent on establishing government control of the private sector.

Government purchases of financial interests in G.M. and Chrysler contributed, at least temporarily, to the large annual budget deficits that have been the norm during the Obama administration. (Most of the government's interest in the auto companies has been sold back to the private market, resulting in repayment of most of the initial outlays.)

- Republican presidential candidate, Governor Mitt Romney, has been a vocal critic of the auto industry bailout, even mentioning in a campaign speech in Detroit, Michigan, (the traditional heart of the U.S. auto industry) that he opposed the "bailout" of the auto companies and thought permitting them to go bankrupt would have been the better policy. Needless to say, many Michigan politicians as well as organized labor leaders, among others, expressed outrage that Governor Romney took this stance, especially in the home town of General Motors.
- President Obama also made support for "Green Manufacturing," "Green Energy," and "Green Jobs," key parts of his first presidential campaign in 2008 and of the early days of his administration. He made the argument that America should move as quickly as possible to embrace Green Energy and to move away from its dependence on fossil fuels, both domestic and imported. Green Energy, from his perspective, offered the potential to reduce energy-related pollution, including greenhouse gases. It also would play to the strength of the vigorous American venture capital-driven entrepreneurial culture since new green energy technologies would likely be produced by new, small firms using the latest technology. (In this he was supported by the Silicon Valley venture capital culture that saw green energy as the next great opportunity for entrepreneurial capitalism.) Along the way, green technologies would create, in the Obama formulation, large numbers of new jobs for Americans in factories that would produce the equipment needed to implement a Green Energy transformation of the American economy. To help "jump start" Green Energy companies, especially those manufacturing capital goods and equipment for capture and use of green energy, the President devoted a substantial fraction of the economic recovery funds made available to him by an act of Congress in early 2009 to make investments in such areas as solar energy devices, advanced batteries, and electric automobiles. Some of these investments were quite substantial, ranging into the several hundreds of millions of dollars for each of a number of companies.

- Unfortunately for the President, Green Energy and Green Manufacturing have been major disappointments. In several high-profile cases, green firms supported by government loans and other instruments have failed to thrive. The case of Solyndra, a new firm devoted to making solar energy collection devices of a unique design, has been featured in political attacks on the President's economic record.⁴ Solyndra received more than \$500 million in federal loan guarantees, but was never able to reach full-scale commercial production and has gone bankrupt. Defenders of the President's investment in Solyndra argue that it failed, not because it had a bad product or did a bad job, but because Chinese producers flooded the market with solar energy collection devices at artificially low prices that were lower than would allow Solyndra to prosper. Detractors use the Solyndra case to argue that President Obama's version of government involvement in the private sector is certain to fail. They have also tried to make the case that Solyndra received special treatment in the award of government financing and that their success with government resulted in part from allegedly corrupt practices within the U.S. Department of Energy. A related reality is that, to the extent that Americans have adopted green technologies such as solar power and electric vehicles, they have been more likely to create jobs in China or Korea than in the United States.
- Another important development has worked against the success of the President's Green Energy initiative; namely, the very rapid emergence of "shale gas" as a new, low-cost source of natural gas, a fossil fuel. At present, natural gas prices have become so low that "alternative energy" sources such as solar and biomass can't compete with natural gas in the marketplace. Production of shale gas is accompanied by as-yet unresolved conflicts over its environmental impact, but it

⁴ A reasonably objective summary of the facts regarding the Solyndra case can be found in Wikipedia at: <http://en.wikipedia.org/wiki/Solyndra> However, investigations continue regarding what actually happened in the relationship of Solyndra to the Obama Administration, the Department of Energy and others.

has rapidly gained market share in energy production at the expense of both green energy sources and coal.

- The Green Energy situation has made the President quite vulnerable to political attack. To illustrate, soon after Solyndra announced it had failed and would not be able to repay the funds loaned to it by the federal government, Governor Romney staged a high-profile news conference in front of the closed Solyndra factory at which he discussed the failures of the Obama policy. Conservatives generally have pointed to Solyndra and others similar to it as illustrations that the government usually fails when it tries to “pick winners.”
- Governor Romney, on the other hand, has his own political liabilities when it comes to American manufacturing. Recently, the President and his supporters have called the attention of potential voters to the fact that Bain Capital, the private equity firm once led by Mr. Romney, has played a major role in facilitating the movement of U.S. jobs to other countries. Allegations have been made that Bain has assisted a number of U.S. firms to restructure their operations so as to “off-shore” jobs formerly carried out here. By the end of June 2012, the President and his supporters were referring to Governor Romney as “offshorer in chief” and accusing him of creating jobs in China rather than in the United States.⁵
- Last, but not least, manufacturing is highly visible during this presidential campaign season because of the mathematics of the electoral college and the fact that the election will likely be won or lost based on the votes of only a few “swing” states, a number of which are especially strong in (dependent on) manufacturing industries and jobs. This subject is complex enough that we give it its own section of this paper, which follows.

⁵ “Obama Calls Romney Possible ‘Outsourcer in Chief,’” *The New York Times*, June 26, 2012. On line at: <http://www.nytimes.com/2012/06/27/us/politics/obama-calls-romney-potential-outsourcer-in-chief.html>

Manufacturing and the Swing States in the 2012 Campaign

Manufacturing issues are important to the campaigns of both candidates as they vie for the votes of the all-important swing states. In this section, we review how the rules of presidential elections in the United States—especially the role of the Electoral College—tend to cause the candidates to focus on winning the votes of just a few states, commonly known as swing states, and how the focus on swing states may cause this year’s candidates to pay particular attention to manufacturing issues.

The Electoral College structure has a profound effect on the dynamics of presidential election campaigns in the United States.⁶ Most important, the Electoral College votes of most states can be predicted with considerable certainty well before election day

⁶ According to the U.S. Constitution, our Presidents are elected by a select group of individuals who are elected by the people to be members of the Electoral College. Except in the case of ties, the winner of the presidential election is the person who receives the most votes in the Electoral College. Thus, the winner of the presidential election is not determined by who receives the largest number of individual votes.

Each state is entitled to a number of electors equal to its number of members of the House of Representatives plus two electors to reflect its two Senators. It is the electors who are elected by the popular vote of the people in the presidential election. Generally, people who stand for election to the position of elector have pledged to support a specific presidential candidate.

The various states award electors to the presidential candidates in different ways. In most states, the winner of the popular vote in the state receives all of the electoral votes from that state. In two states, Maine and Nebraska, the winner of the popular vote for President in a congressional district is awarded the elector for that district, and the electors for the two Senate positions are awarded based on the state-wide popular vote. In each presidential election in modern times, there may be a number of candidates. However, for the most part, the candidates of the Democratic and Republican parties dominate the campaigns and the voting outcome. From time to time, a strong third or even fourth party candidate may amass enough support to be a credible candidate. However, no third party candidate has won the presidency for more than one-hundred and fifty years.

Following the presidential election, the persons elected as members of the Electoral College “meet” to cast their votes for President. The outcome of this vote is rarely in doubt, since each elector ran on the basis of a commitment to support a specific presidential candidate. A presidential candidate must receive an absolute majority of the electoral votes to win in the Electoral College. The Constitution specifies rarely-used procedures to resolve the matter if no candidate wins by this standard.

because the outcome of the popular vote in those states can be predicted reasonably well based on the history of party preferences in the state, records of voters' party affiliations, and preference polls taken throughout the campaign season. Since the winner of the popular election in each state typically gets all of the electoral votes of the state, it is possible to predict the electoral vote outcome even if the popular vote outcome is not known with precision, so long as the popular vote in the state is not expected to be close.

Typically, only a few states' electoral vote outcomes are uncertain in any given presidential election. These are the "swing states;" so-called because their expected popular vote totals may "swing" toward a majority for one candidate or the other. Candidates tend to focus most of their campaign efforts and budgets on winning the swing states, confident in the knowledge that they are highly likely to win the electoral votes of states in which the voters seem favorable to them. Because of the electoral college, candidates have little incentive to try to maximize the popular vote in states where they expect to win.

Because judging the likely outcome of a state's presidential campaign is uncertain, so is the list of swing states in any given election. As of mid-2012, the following are considered to be the 2012 election swing states by the political staff of the New York Times:

1. Colorado (9)
2. Florida (27)
3. Iowa (7)
4. Nevada (5)
5. New Hampshire (4)
6. Ohio (20)
7. Pennsylvania (21)
8. Virginia (13)
9. Wisconsin⁷ (10)

The numbers in parentheses show the number of electoral votes held by each state, out of the national total of 539.

⁷ <http://elections.nytimes.com/2012/electoral-map>

In arriving at its list of swing states, the Times categorized each state as to whether it is firmly for Obama or Romney, leaning toward a vote for Obama or Romney, or could easily swing toward one or the other. They project a total of 217 electoral votes firmly or likely to be for Obama and 206 for Romney. A candidate needs 270 votes to win. The nine swing states on the Times' list have a total of 116 votes. To win the election, Obama must win 53 of these votes, whereas Romney must win 64.

If the New York Times is correct, it is these nine states where most of the campaigning will be conducted.

As may be apparent, candidates who are in search of the electoral votes of the swing states have an incentive to focus their campaign efforts on areas that are of greatest concern to the voters of those states. So, for example, Florida has large numbers of retired people who moved there from other states, as well as large numbers of persons of Hispanic descent, with an especially well-organized group of Cuban Americans around Miami. It also has a number of large military installations, and it is home to Cape Kennedy, the principal launch facility for the U.S. civilian space program. It is also home to agricultural interests. Political candidates and their consultants and advisors pay exquisite attention to communicating to each of these sorts of interests the ways in which their election would benefit powerful constituencies in the various swing states.

It is interesting to examine the importance of manufacturing to the swing states in the Electoral College. For electoral purposes, the percentage of all jobs in a state that are in manufacturing is a reasonable measure of the importance of manufacturing. Here is the New York Times list of nine swing states ordered according to the percentage of jobs in the state in manufacturing:

Table 1. Manufacturing and Electoral Votes in the Swing States

STATE	% *	ELECTORAL VOTES	CUMULATIVE ELECTORAL VOTES
Wisconsin	15.8	10	10
Iowa	13.6	7	17
Ohio	12.3	20	37
New Hampshire	10.5	4	41
Pennsylvania	10	21	62

Virginia	6.4	13	75
Colorado	5.6	9	84
Florida	4.3	27	111
Nevada	3.4	5	116
(United States)	9	539	---

* Data on the percentage of employment in the state in manufacturing is taken from the National Association of Manufacturers at: http://www.nam.org/~media/7F271F10D41743108571B21B7FE8BCB8/Manufacturing_Employment_by_State.pdf

The nine swing states divide relatively clearly into two groups: five with relatively high proportions of their employment in manufacturing and four with much lower percentages. The five high-manufacturing swing states (Wisconsin, Iowa, Ohio, New Hampshire, and Pennsylvania) hold 62 electoral votes.⁸ President Obama needs only 53 of these votes to win a second term as President. Governor Romney would need all of these 62 votes plus two other votes to win. The traditional manufacturing states of Ohio and Pennsylvania have large numbers of electoral votes and will undoubtedly be the foci of a lot of the candidates' efforts.

On the other hand, the four low-manufacturing swing states (Virginia, Colorado, Florida and Nevada) hold 54 electoral votes. This is just enough to enable President Obama to win, if he carries them all, whereas Governor Romney needs these 54 plus 10 votes from high-manufacturing states to win.

In theory, President Obama could win a second term while paying little attention to the manufacturing concerns of the high manufacturing swing states, but Governor Romney has no alternative—he must try to win at least one of the larger high-manufacturing states.

Of course, both candidates will vie vigorously for all of the swing state votes, and they will not completely ignore the “safe” and “leaning” states now thought to be in their camps.

⁸ Wisconsin has the highest proportion of its workforce in manufacturing of any state.

It is also apparent, however, that the electoral-college math essentially compels both candidates to pay attention to the interests of manufacturing and the high-manufacturing swing states in particular.⁹

Concluding Observations

The health of American manufacturing industries and the need to create more jobs in manufacturing have become significant issues in the 2012 Presidential campaign. Manufacturing has been a continuing concern of the Obama Administration since he took office in January 2009. His initiatives have had a mixed record. Some, highlighted by the auto industry bailout, look like successes to objective observers. Others, like his support for Green Energy and Green Manufacturing, have not done so well. High-profile failures of government-supported Green companies are a continuing problem for the President.

Governor Romney insists that President Obama's approach to strengthening all of the economy, including manufacturing, has been misguided and unsuccessful. He has indicated he would reduce government involvement in the economy and cut government spending on programs to help industry. His leadership of Bain Capital, which owned many companies that actively moved jobs from the United States to other countries, has been seized on by Obama supporters to suggest that the Governor does not have a good record in creating jobs for Americans, despite his private sector experience.

The particular logic of the U.S. system for electing a President through the archaic and arcane institution, the Electoral College; combined with the fact that five of the nine key "swing states" are manufacturing-intensive, almost ensures that the needs and problems of manufacturing and manufacturing policy will continue to be important campaign issues up to the November 2012 elections.

⁹ All of the swing states except Virginia and Florida are in the northern or western part of the country. Furthermore, Florida is in many respects more like a northern than a typical southern state, and Virginia has rapidly evolved into a much more urban and cosmopolitan state than it was even a decade ago. Thus, the Electoral College logic is likely to lead the candidates to downplay their connections with the more fundamentalist and conservative perspectives that dominate southern state politics today.