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# THE IMPACT OF THE EMPLOYEE FREE CHOICE ACT ON THE U.S. ECONOMY

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## Summary

### *Background:*

- The Employee Free Choice Act (EFCA) is intended to make it easier for unions to organize by possibly replacing secret ballot elections with card check, inserting federal control into the mediation and arbitration process and raising penalties on employers that illegally hinder an organizing campaign.
- In economic terms, a union is a form of monopoly or cartel, because it is the single “seller” of labor to a business. Monopolies reduce competition and consequently distort markets. In this case, labor unions raise wages, which raises production costs, in turn raising prices and reducing output.
- The result is that unions depress firm profitability by increasing labor costs without increasing productivity—sometimes even *decreasing* productivity through inefficient work rules.
- Increasing unionization would damage the U.S. economy by raising production costs, distorting resource allocation, and reducing our international competitiveness.

### *Findings:*

- If the EFCA returns unionization rates to 1970s levels, it could reduce economy-wide employment and gross domestic product by close to 4 percent. This translates to about 4.5 million jobs lost and over \$500 billion in lost output and income.
- Job loss resulting from EFCA will tend to fall disproportionately on workers with relatively low levels of education and skills. Ironically, these are the very workers the proposed legislation is intended to help.
- EFCA will be particularly costly to small businesses, which typically start out with small profit margins, face high initial failure rates, and are less likely to have specialized human resources staff to deal with labor disputes and union organization. Between 2003 and 2006, 84 percent of new union certification elections were held at companies with less than 100 employees.

### *Conclusion:*

- In this increasingly globally competitive economy, increasing wages and expanding the pool of high paying jobs requires increasing worker productivity, not suppressing competition through increased unionization. Alternative policies, including subsidies for education and job training, can promote wage growth for lower-skilled workers more efficiently than unionization.

## 1. Introduction

The Employee Free Choice Act (EFCA) is one of the most significant proposed changes to labor law of the last half century. If passed, EFCA, at least in its current form, will change how a union is recognized and significantly amend bargaining between a union and employer if an initial agreement cannot be reached. This report analyzes the economic implications of EFCA on the U.S. economy. The report focuses on the current version of the bill, though some in Congress have suggested a revision that eliminates the “card check” component of the EFCA, in which a union would be recognized if 50 percent of workers signed a card requesting representation from a specific union. Whether it is revised or not, the EFCA’s broader goal of making it easier to organize firms and increase unionization rates will remain.

Gauging the impact of higher unionization on the economy, however, depends on how many more workers are unionized, how much their wages rise as a consequence of unionization and how this additional unionization indirectly impacts other aspects of the economy. To address these issues, I consider different assumptions regarding the number of new union members resulting from the passage of EFCA and different assumptions regarding how much their average wages would rise. I estimate that the impact of EFCA could reduce both the number of jobs and our gross domestic product by close to 4 percent under the assumption that unionization rates return to their levels in the 1970s, and these losses would persist for as long as unionization rates remained high.

Moreover, I find that job loss resulting from EFCA will fall disproportionately on workers with relatively low levels of education and skills. Ironically, it is these individuals

that EFCA is specifically intended to help whom I find would be most negatively impacted by the proposed legislation. There are alternative policies that can promote wage growth for lower-skilled workers that are more efficient than unionization, including subsidies for education and job training. For example, each year, 10 million workers could receive \$5,000 per year in training and education subsidies, which is only 1/10 of the possible cost of EFCA under the assumption that unionization rates return to their 1970s levels.

Section 2 of this report provides some background, and Section 3 offers a benchmark for broadly evaluating EFCA by summarizing the importance of competition in a market economy and describing how unionization creates monopoly. Section 4 summarizes the decline in unionization in the United States, which is one of the main factors cited by proponents of EFCA, and describes how higher levels of competition in the economy have contributed to this decline. Section 5 covers the cost of unionization, including evidence on union wage premia and the impact of unionization on productivity. Section 6 describes the potential impact of EFCA on small businesses. Section 7 analyzes the quantitative impact of EFCA on the U.S. economy in terms of changes in output, employment and investment. Section 8 concludes and offers alternative policies.

## **2. Background: What's at Stake**

EFCA is controversial among the public and among policymakers, partially because in its current version it eliminates private ballot union certification elections. Current law allows employers to call for a private ballot vote by employees for a union, and the resulting election is supervised by the National Labor Relations Board. Passage of EFCA would require a firm to recognize a union as long as a simple majority of workers sign an

authorization card requesting that specific union. EFCA also would require that the union and employer begin bargaining within 10 days after union recognition and must submit to federal mediation if an agreement is not reached within 90 days. If an agreement is not reached within 30 days of mediation, then binding arbitration would be imposed on the two parties, which would last for two years.

EFCA would also raise penalties on employers for unfair labor practices, including threatening to discharge or discriminate against employees during an organization campaign. The bill would increase the amount an employer is required to pay when an employee is illegally discharged or discriminated against during an organizing campaign or first contract drive to two times back pay as liquidated damages, in addition to the back pay owed, for a total of three times the back pay. The bill would provide for civil fines of up to \$20,000 per violation against employers found to have willfully or repeatedly violated employees' rights during an organizing campaign or first contract drive.

### **3. The Importance of Competition in the United States Economy**

A union is a form of monopoly or cartel. It is a single seller of labor services to a business. EFCA is intended to increase unionization. Economists typically favor as much competition as possible and thus tend to oppose policies that suppress competition. In markets for goods and services, competition is important because it means that only the most efficient organizations survive, and that these organizations produce at the lowest possible price. Competition is also important because it leads society to use its scarce resources most efficiently. When competition is significantly limited in the markets for

goods and services, prices exceed the cost of production, and consumers pay more for goods and services than they otherwise would. Policymakers have long understood the importance of competition in these markets. The Sherman and Clayton Antitrust Acts were passed to prevent and correct the economic damages that occur when competition breaks down in these markets.

The same economic reasoning about the social benefit of competition and the social cost of monopoly also applies to the labor market. Specifically, employers will hire workers as long as the cost of employment – compensation plus other costs of employing a worker – does not exceed the value of what the worker can produce. Thus, the maximum that an employer will pay for a worker is the value of that worker’s production.

Competition among employers in the labor market means that wages will tend to be pushed up to this maximum level. Competition among workers in the labor market means there is a strong incentive for workers to provide their labor services efficiently in their employment relationship.

The long-run historical record indicates a high level of labor competition in the United States, with compensation closely tracking worker productivity. Figure 1 is a graph assembled by the Heritage Foundation that shows employee compensation and worker productivity between 1968 and 2008. The figure shows a very close relationship between productivity and compensation, which is consistent with a competitive and well-functioning labor market.



**Figure 1 – Productivity and Real Compensation Per Hour**

Many years ago, however, there was less competition in labor markets in some geographic locations in the U.S., and some economists have argued that unions played an important role during this period of limited labor market competition, including addressing workplace health and safety issues. But labor market conditions are much different today. Most workers now live in locations with many employers competing for their services, and workplace health and safety is largely covered by federal and state laws.

The key message to policymakers is that policy that suppresses competition is sharply at variance with promoting economic efficiency. Evaluations of EFCA, or any policy that reduces competition in any market, should be judged on the basis of whether

there are good economic reasons to suppress competition. I do not find any compelling arguments to suppress competition in today's U.S. labor market. However, promoting higher living standards for American workers can be addressed through different policies that achieve greater economic efficiency than increasing unionization rates.

#### **4. The Decline of Unionization in the United States**

One of the primary arguments in support of EFCA is that it would reverse decades of declining unionization rates. Unionization has declined considerably among private employers, falling from a peak rate of more than 30 percent of nonagricultural employment in the late 1940s to around 7 percent today. In contrast, unionization rates have not declined over time for public sector employees.

Economists cite a number of factors that have contributed to this decline in private sector unionization, and one of these factors is increased competition (see for example Farber, 1987 and Hirsch, 2008, and references therein). Unionization by its very nature is likely to be more successful in raising wages in industries that are less competitive, rather than in highly competitive industries. This is because competition limits how much unions can increase compensation. As described in the previous section, competition for workers pushes wages up to the value of a worker's production, and competition between producers drives down the return to capital to the minimum level consistent with employing capital in an industry. These competitive forces that raise wages and limit the return to capital leave relatively little room for unions to raise wages.

In contrast, if there is limited competition within an industry, profits will exceed the normal rate of return to capital. Economists call these profits that exceed the normal return to capital *economic rents*. In this case of limited competition, a union, as a monopoly supplier of labor services, can raise wages by capturing some of the rents in the industry. Thus, the economic rents that result from too little competition are divided between labor and capital, and the relative division between these two parties depends on their respective bargaining positions.

Not surprisingly, much union organization, particularly during the height of organization drives in the United States in the mid-late 1930s, focused on highly concentrated industries in which there was little competition, such as autos and steel (see Cole and Ohanian, 2004). Unions are likely to be more successful in raising wages in highly concentrated industries because it is feasible to unionize the entire industry, as exemplified by the success of the United Auto Workers in organizing General Motors, Ford, and Chrysler in the 1930s. If some firms are not unionized and the output across producers is similar, then unions would have a hard time raising wages significantly. Higher wages would increase unit labor costs for unionized firms, which in turn would tend to lead to higher prices. But higher prices in these unionized firms would lead to a significant drop in their market share, thus costing union members their jobs.

Today, however, the United States economy is much more competitive than it was when unionization rates were higher, and increased competition has contributed to lower unionization rates over the last few decades. One channel of increased competition is deregulation of the trucking, airline, and telecommunications industries. For example,

economists have estimated that the price of regulated trucking services would have been as much as 35 percent higher under regulation (see Thomas Gale). Lack of competition in trucking and the economic rents arising from this regulation made trucking a prime industry to unionize. In 1977, 60 percent of drivers were unionized, but this fell substantially and quickly to 28 percent by 1985, just five years after the start of deregulation in that industry.

U.S. producers also face increased competition globally due to the considerable rise of international trade. For example, imports were equal to about 5 percent of gross domestic product in 1970, but equal about 18 percent today. This percentage is even higher in manufacturing, with net imports equal to about 25 percent of manufacturing sales (see Bivens, 2004).

There has also been increased competition among the states. In 1947, the Taft Hartley Act gave states the right to outlaw the union shop by adopting what are known as “right to work” laws. Today, 23 states have passed these laws, including most of the South and much of the Midwest and the Mountain West states (<http://www.nrtw.org/rtws.htm>). The share of employment in these right to work states has increased from about 24 percent of employment in 1955 to about 38 percent today. Thomas Holmes (1998) has studied how right to work laws impact the location of industry and found that these laws are quantitatively important determinants of where manufacturers choose to locate. Using detailed county-level data, Holmes examined business activity at state borders in which a right to work state borders a non-right to work state. He found that the manufacturing share of employment increased by 1/3 in the right to work state at the border compared to

the state on the other side of the border, and concluded that this higher share of manufacturing was significantly due to differences in these unionization policies.

This competitive force is clearly illustrated by the location decisions of foreign companies like Toyota and Honda. When these companies decided to produce autos in the United States, they chose to locate in right to work states, including South Carolina, Texas, Mississippi, and Alabama. Foreign companies now produce about 1/3 of autos manufactured in the United States, and this production share will almost certainly increase in coming years as General Motors and Chrysler scale down their operations. The large decline in unionization of auto workers is partially accounted for by the substantial growth in non-union employment in this industry.

These changes in the auto industry show how significant increases in both domestic and international competition have been an important determinant of the decline in unionization and shed light on why declining unionization rates are not just shifts out of unionized sectors into less-unionized sectors. The growth of non-union employment in previously heavily unionized sectors is made more broadly by Hirsch (2008), who shows that unionization rates in manufacturing and construction declined from about 40 percent in the early 1970s to less than 15 percent in 2006, and from about 50 percent in transportation, communications and utilities in the early 1970s to about 20 percent in 2006.

Another example of how competition - or the lack of competition - impacts unionization is public sector unionization. By its very nature, the public sector tends to be

much less competitive than private industry, and unionization rates in the public sector have remained both stable over time and relatively high.

This foregoing analysis shows how competition impacts unionization rates, and also indicates that the increasingly competitive global and domestic economy places important limitations on what unions can plausibly achieve today compared to what they were able to achieve in the past. In today's economy, American workers compete increasingly with workers from around the world. This means that significantly raising wages through new unionization will result in job loss, not higher incomes, for American workers.

#### **5. The Economic Costs of Unionization: Wages, Productivity and Capital Valuation**

Unions affect production costs through their impact on productivity and on wages, and they affect capital costs through their impact on stock market values. Studies imply that unions raise unit labor costs, as unions systematically raise wages but do not raise productivity. These higher costs lead to lower firm valuation in unionized firms.

There are many studies that estimate the size of the union wage premium, which is the percentage difference between unionized and non-unionized wages. While these estimates vary across industries and over time, there is a general consensus that wages for workers in unions are higher, and that the premium is larger in the United States than in other countries (see Hirsch, 2008).

Many union wage premium estimates lie in the range of about 12 – 20 percent. For example, David Card (1996) has estimated a union wage premium of about 15 percent based on 1988 data. David Blanchflower and Alex Bryson, focusing on how the wage premium has changed over time, find that the premium has averaged around 18 percent

between 1973 and 2001 and has declined over time for private sector workers, though not for public sector workers, where competition is much more limited.

Studies have also found that unions compress the wage structure of their members by raising wages significantly for lower-wage earners but much less for high-wage earners. For example, Card's analysis shows that the union premium is the highest for the lowest quintile (the lowest 20 percent) of union wage earners, but is close to 0 for the upper 40 percent of union wage earners.

Most of the emphasis on the impact of unions has focused on how unions raise wages. But unions also can have other effects in the workplace, including impacting work rules that govern how production takes place. There is debate among economists on the impact of unionization on productivity. On the one hand, some economists have concluded that there is little effect on productivity. Professors Victor Fuchs, Alan Krueger, and James Poterba surveyed economists asking, "What is your best estimate of the percentage impact of unions on productivity in unionized companies?" The median response to this question was zero - that is, unions have no impact on productivity - and the mean response was about 3 percent. With a union wage premium of about 15 percent, these survey responses about productivity indicate that unions raise production costs to unionized firms, which in turn lead to higher prices to consumers and lower firm production.

While the Fuchs et al. survey indicates that unions have a small impact on productivity, there are some case studies that indicate unions can substantially depress productivity through inefficient work rules, which leads to substantially lower output and

substantially higher costs for a given level of production inputs. These case studies are useful because they analyze a particular industry in great detail and thus provide a precise answer regarding the impact of unionization and competition on productivity in that sector. James Schmitz (2005) has studied the American iron ore industry and found that union work rules depressed efficiency by as much as 50 percent. He compared output per hour in unionized iron ore mines around the Great Lakes region before and after these mines faced international competition from Brazil. In particular, Schmitz's analysis shows that because of lack of competition, prices of ore were sufficiently high around the Great Lakes area as to make it profitable for Brazilian mines to ship ore to this area. This foreign competition threatened the domestic industry's survival and led to significant changes in union work rules. Schmitz shows that output per hour roughly doubled after union work rules were modified, and that this change in work rules accounted for virtually all of the productivity increase. In particular, there was no change in the technology used to mine ore, there was no new capital investment, and the same mines used before Brazilian competition were also used afterwards.

Schmitz, Dunne and Klimek (2008) studied the U.S. cement industry and also found that increased foreign competition led to a large change in union work rules and a substantial gain in productivity. Productivity declined by more than 20 percent in the industry between the late 1960s and the early 1980s, which was a period of virtually no imports of cement. After the early 1980s, the import share grew from about 5 percent to more than 25 percent. The U.S. industry responded with a large change in work rules, and since then productivity has advanced nearly 50 percent. Moreover, industry output, which

was virtually constant between the 1960s and the early 1980s, has increased almost 50 percent since the early 1980s.

It is highly unlikely that iron ore mining and cement are the only industries in which unions have depressed productivity through inefficient work rules. For example, the United Auto Workers book of union work rules totaled 5,000 pages, and a number of analysts have concluded that these work rules contributed to the Detroit auto industry crisis.

Unionization thus increases unit labor costs, and these higher labor costs depress firm profitability, which depresses the return to capital. Recent research shows that unionization also drives down share prices. Lee and Mas (2009) have conducted research on how unionization affects stock values. Their event study analysis shows that unionization results in a loss of equity value equal to about \$60,000 per worker. That is, the decline in the value of the firm is equal to the number of workers multiplied by \$60,000. Their analysis also suggests that the decline in equity values associated with new unionization may be lower, but they nevertheless find that doubling the rate of unionization today would depress stock market values by 4.3 percent for all firms at risk of unionization.

Research on wages and productivity shows that unions raise production costs, and, in some cases, raise these costs substantially through inefficient work rules. Moreover, research shows that unionization leads to lower equity values, reflecting lower returns to capital. Higher production costs mean higher prices for consumers and an inefficient

allocation of society's scarce resources, and equity losses from unionization mean less wealth and lower future investment.

## **6. Small Business and Unionization**

Small businesses are an important engine of growth in the U.S. economy, as they account for a significant fraction of job creation seen today. Moreover, some of today's small businesses will become very successful and thus become tomorrow's large employers. But EFCA will be particularly costly to small businesses, as many, especially start-ups, have very low profit margins and, consequently, high initial failure rates. Increased unionization will disproportionately raise costs to small businesses which will lead to even higher failure rates and higher economic distress to these enterprises.

Very small firms may not have staff specialists in legal and human resource services with the necessary expertise to address union organization and bargaining. Out of the 8802 union certification elections between 2003 and 2006, 21 percent were at firms with less than 10 workers. It is indeed plausible that these very small businesses may not even have one employment specialist within their business, making them particularly vulnerable to increased unionization under EFCA.

The additional costs of hiring legal and human resource specialists, together with the costs of potentially higher wages from unionization, may be sufficiently high to lead to failure for some of these firms. This would be a particularly significant problem because EFCA mandates mediation and binding arbitration if an agreement cannot be reached. With thin profit margins, coupled with expectations of significant wage hikes by newly unionized workers, the initial bargaining process among small businesses and workers may

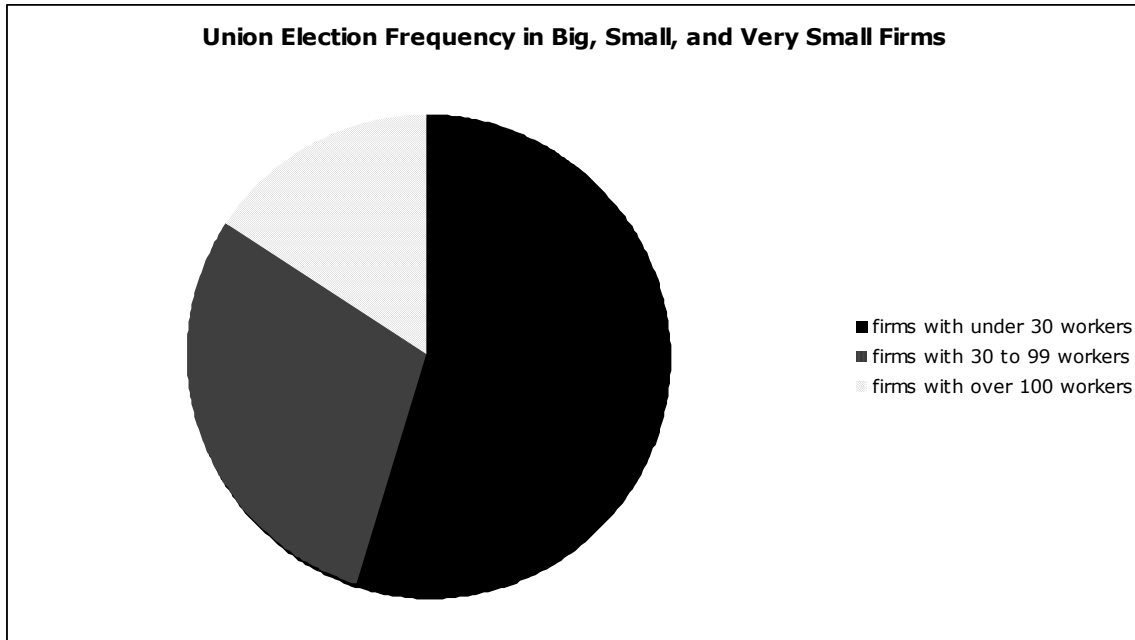
not lead to an agreement This drawn-out process would be expensive for small businesses, as it means that business owners and/or other key management personnel would need to take significant amounts of time away from managing operations to instead address union issues. Moreover, with small profit margins, binding arbitration may threaten the viability of small business survival if wages are increased even slightly.

Proponents of EFCA argue that small business owners need not be worried about the Act, claiming that small business employees do not demand unionization:

“It may well be that employees in small firms have little demand for union representation. Interestingly, rates of union representation in small employers are currently lower than those in larger organizations in the United States, even though unions are in fact more likely to win representation elections in small than in large units. This means many small business owners should not be overly concerned about the possible changes in the law governing union organization.” (U.S. Senate Testimony by Dr. Paula Vroos, March 10, 2009).

However, recent data show that most union certification elections are indeed among small businesses. Using data from 2003-2006, Professor Richard Posner (2009) shows that 55 percent out of a total of 8,802 certification elections were at businesses with less than 30 employees, and 84 percent were at businesses with less than 100 employees. Figure 2 shows the relative incidence of recent union elections by firm size.

Figure 2: Union Election Frequency in Big, Small, and Very Small Firms



This data shows that small businesses should be very concerned about changes in law governing unionization, because it is in small businesses where certification elections tend to occur today. Raising the costs of production for small business means depressing one of the key growth engines in our economy.

## 7. The Quantitative Impact of Increasing Unionization

My recent research has analyzed how labor and unionization policies that raise wages have affected the overall U.S. economy (e.g Cole and Ohanian, 2004). I found that policies that significantly increased wages led to significantly lower employment, income, and production. I now use a similar analytical framework to quantify how EFCA would impact aggregate employment and production. In this analysis, increased unionization increases wages but leaves worker productivity unaffected. Given assumptions about how

many new workers would be unionized, and how much their wages would rise as a consequence of unionization, the analysis then traces what could happen to overall employment and output.

It is reasonable that an upper bound on the wage premium that newly unionized workers would receive is the current union premium, which is around 15 - 20 percent. It is also possible that all newly unionized workers may not be able to extract this level of wage premium, because those who are not currently unionized may have less bargaining power on average than those who presently are in unions. Recent research by John Dinardo and David Lee (2004) analyzes how the fraction of workers within a set of firms voting for a union is related to subsequent changes in wages, firm survival, and other firm attributes. Their research shows that union elections that are won with just over 50 percent result in smaller wage gains for union members than when elections are won by a large majority of workers. This suggests that if EFCA primarily generates new union formation with little more than 50 percent of worker support, then the wage premium would be lower than the current average premium. I therefore consider three possible values for the wage premium: 15 percent, 10 percent, and 5 percent.

To address the issue of how much unionization would rise as a consequence of EFCA, I consider three possible unionization rates: 25 percent of the workforce, which would return unionization rates to their early 1970s level; 20 percent, which is the rate that prevailed in the early 1980s; and 15 percent, which is the rate that prevailed in the early-mid 1990s.

These three levels of the wage premium, combined with three levels of increased unionization, yield nine different scenarios on how higher unionization could impact the economy. I summarize the economic impact from these scenarios in Tables 1 and 2.

Table 1 shows how aggregate employment would decline as a consequence of higher unionization. I find that employment loss would range from around 4.46 million jobs in the case that unionization rates returned to their 1970s levels and the wage premium remained at 15 percent, to about 540,000 jobs in the case that unionization returned only to its 1990s level and with just a small wage premium of 5 percent.

**Table 1 - Estimated Job Loss Under Higher Unionization (Millions of Lost Jobs)**

Premium for New Workers/Union Share	25% Union Share	20% Union Share	15% Union Share
15% Wage Premium	4.46	2.84	1.49
10% Wage Premium	2.97	2.16	1.08
5% Wage Premium	1.50	1.09	.54

Table 2 shows that higher unionization would generate significant declines in real GDP, ranging from output losses of more than \$500 billion when 25 percent of the workforce is unionized and the union wage premium remains at 15 percent, to a loss of about \$70 billion under the assumption that unionization rises only slightly and the newly unionized workers receive a 5 percent premium. Moreover, these employment and output losses would persist as long as unionization rates and wage premia persisted.

**Table 2 -Estimated GDP Loss Under Higher Unionization (Billions of Dollars of Lost GDP)**

Premium for New Workers/Union Share	25% Union Share	20% Union Share	15% Union Share
15% Wage Premium	518	350	162
10% Wage Premium	350	238	135
5% Wage Premium	182	135	70

My analysis thus far has focused on the impact of higher unionization on economy-wide employment and output. I now turn to the impact of unionization on workers with different levels of education. I address this issue because one of the most widely expressed arguments in favor of EFCA is that fostering higher unionization would reduce wage inequality by boosting wages of moderate and low-wage earners. Wage inequality has increased over the last 30 years, and there is substantial evidence that widening wage inequality is not the result of declining unionization per se, but rather is related to differences in the nature of technological change and how new technologies disproportionately affect the productivities of workers with different skill levels. Studies find that the central factor for understanding why the wage gap between workers with high levels of education and those with lower levels has widened since around 1980 is technological change, which tends to raise the productivity of highly educated workers but not others.

My research on historical changes in wage inequality suggests that job loss will fall disproportionately on those workers with relatively low levels of education (see Krusell, Ohanian, Rios-Rull, and Violante, 2000). Specifically, this analysis implies that employers

will have an incentive to substitute capital goods for workers as a consequence of unionization, and that this process will fall much more on less-educated workers.

This implication follows from our findings that widening inequality is the consequence of rapid efficiency improvements in high technology capital goods, such as computers, computer software, and peripherals. These advances in high technology capital goods have significantly raised the productivity of highly educated workers because they complement the skills of these workers, but they have had the opposite effect on workers with lower education levels. Specifically, as capital goods get better and cheaper over time, they tend to become substitutes in production for less educated workers and thus drive down the wages of these workers. An example of this substitution is how the process of loading cargo ships has changed. After World War II, thousands of longshoremen worked at the Ports of New York and New Jersey loading cargo and freight. But today, the longshoremen are gone, as the process of moving cargo is now done by higher-skilled workers operating sophisticated capital equipment. Thus, relatively cheap capital goods have replaced unskilled labor in this industry.

Another important issue regarding unionization and low-wage workers is that they tend to be relatively young, and young workers can expect to achieve substantial wage growth over their careers, reflecting continued advances in their human capital. Wages on average roughly double between the ages of 20 and around 55. Thus, for many young workers, low wages are a transitory event.

## 8. Conclusion

EFCA is intended to raise unionization in the United States. Proponents of EFCA argue that increased unionization is necessary for restoring prosperity to lower and middle income workers. My analysis, however, indicates that increasing unionization would damage the U.S. economy by raising production costs, distorting resource allocation, and reducing our international competitiveness.

Specifically, I estimate that if unionization were to return to levels of the 1970s and if that led to wage hikes on the order of those that unions typically have obtained, then employment would decline by about 4.5 million and GDP would decline by about \$500 billion. I also find significant losses even if unionization did not rise much, and even if it did not generate wage increases on par with the historical union premium. I estimate that if unionization rates only returned to their 1990s levels, and the resulting wage hikes were only about five percent, then employment would decline by more than half a million jobs, and GDP would decline by about \$70 billion.

I also conclude that job loss from higher unionization would disproportionately fall on low-wage workers, as these workers are more substitutable with capital than are highly-skilled workers. This means that the workers which EFCA is primarily intended to help are those at most risk under EFCA. There are, however, alternative policies to promote wage growth, particularly for lower-skilled workers, that would be more efficient than increased unionization and that would not carry the employment loss risk associated with unionization. These policies include providing subsidies that reduce the cost to low-wage workers to acquire increased education, training, and job skills. For example, each

year 10 million workers could receive about \$5,000 for job training and education, which could cost as little as just one-tenth of increasing unionization back to 1970s levels.

The central lesson we have learned from living in an increasingly globally competitive economy is that increasing wages and expanding the pool of high paying jobs requires increasing worker productivity, not suppressing competition through increased unionization.

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