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US Wage Determination System

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Section: Economics, Law and Political Sciences
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Editors

Gert Bruche

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Abstract:

This paper analyses the wage determination mechanism in the United States taking legislative, economic and cultural factors into account. Unlike European countries the US system is dominated by an uncoordinated non-union wage system. The mechanisms as well as the development of this system are outlined in this paper.

Dieser Aufsatz analysiert die Lohnfindungsmechanismen in den Vereinigten Staaten unter Berücksichtigung von legislativen, wirtschaftlichen und kulturellen Aspekten. Im Gegensatz zu vielen europäischen Ländern ist das US System nicht von Gewerkschaften geprägt. Die Mechanismen und Entwicklung dieses Systems werden in diesem Aufsatz beschreiben.

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1. Introduction

Economies have a variety of mechanism to choose from to find an institutional setting for wage determination. It can range from market determined systems to collective bargaining where a variety of institutions next to the market influence wage levels. Most likely wage bargaining system will arise out of the historical context and will develop over time rather than changing in an ad hoc manner since any change is constrained by the linkages with other institutions shaping labor relations (Hollingsworth, 1997, p.267). Consequently, wage determination mechanisms across different economies or even within an economy can diverge widely, resulting in a variety of wage negotiation processes. Much of the behavior of the individual bargaining units will be dependent on the institutional design and have a significant influence on the outcome of negotiations.

Wages levels and wage developments are vital figures in the central bank decision making process as inflation is significantly influenced by developments in the labor market. High coordination or centralization as one can often observe in European countries, where unions and/or the state play a significant role in the wage determination process, can achieve similar wage development in a region. This, however, is a constellation which is absent in the United States (US). Unlike most other developed countries, the US has an atomistic wage bargaining system, making the exact wage bargaining process less obvious.

This paper will attempt to analyze the drivers behind the US Wage bargaining system and try to develop a model which can explain the influencing factors in the wage determination process. Previous literature usually only focus on certain components, but it remains difficult to obtain an understanding of the entire process. The crucial point will be to identify the possible supplements to the coordination and centralization institutions which are common in most other industrialized countries.

2. Wage Bargaining Theory

Before taking a closer look at the US wage determination system, a brief introduction to some theoretical approaches seems useful. The main objective of this paper is the wage bargaining process; therefore labor market theory in general will not be the center of attention. More important for the scope of this paper is wage bargaining theory. As with any institutional arrangement, many designs are possible and a country specific system will have many parameters influencing the creation of a wage bargaining system. It should also be kept in mind that once in place the institutional design remains dynamic and will react to internal and external variables, reinventing and changing the current system. Several attempts have been made in classifying bargaining systems.¹ Models used, differ in the definition as well as in the number of dimensions. Most commonly, classification occurs along the degree of coordination or centralization. Both will be briefly explained below.

2.1. Degree of Centralization

Centralization measures the level at which wage determination takes place and takes the number of independent bargaining units into account (Cavallari, 2004, p.140). A model developed by Calmfors-Driffill (1988) introduces this classification methodology for wage bargaining institutions in an economy. A decentralized system is considered to be a system where negotiations take place at the company level. Consequently, the number of individual wage bargaining units is very high. On the other extreme a highly centralized system refers to setting wages on a national level. In this system the number of wage bargainers is minimized. An intermediate system refers to a system which is in between both extremes and usually can be best described by negotiations at industry level (Soskice, 1990, p.37).

2.2. Degree of Coordination

Coordination can be described as the level of impact which certain wage agreements have on other bargaining units. As with centralization, coordination may also vary from level to level. It can take place at the national, industry or company level. In a highly coordinated system, regardless of the level and centralization, one or very few bargaining units influence the wage setting of other negotiations. Its agreement is taken as a lead indicator and other bargaining units will usually use it for orientation. This does not imply that it will be followed in every detail, but variation will be limited. On the other hand uncoordinated bargaining implies that agreements of other bargaining units have no or little effect on subsequent negotiations. A more detailed distinction of coordination setting can be made in form of state-sponsored,

¹ A selection of studies is provided in Calmfors (2004, p.96).

inter-associational, intra-associational, state imposed coordination as well as pattern bargaining (Traxler, 2003, p.89).

2.3. Implications

Degree of centralization and coordination are often considered separately but each wage bargaining system will have both dimensions.² Therefore, by only considering one dimension, the relevant level of the other dimension may not always be covered (Dullien, 2004, p.22). Table 1 gives an overview of possible constellations based on combining the presented dimensions. Variations in the number of bargaining units (degree of centralization) are combined with the influence they have on preceding negotiations (degree of coordination). Neglecting the intermediate variations and focusing on the extreme points, four different classifications of wage bargaining systems become apparent.

Table 1: Two Dimensional Classification of Wage Bargaining Systems

		Centralization	
		Degree	High
Coordination	High	A - Few Bargaining Units - High Influence	B - Many Bargaining Units - High Influence
	Low	C - Few Bargaining Units - Low Influence	D - Many Bargaining Units - Low Influence

Even though centralization and coordination may be important components in the design of wage bargaining systems, it appears that the degree of coordination dominates the outcome (Soskice, 1990, pp.41). Whenever the degree of coordination is high, the degree of centralization becomes irrelevant. On the other hand, when it is low (scenario C and D), wage bargaining becomes problematic as the bargaining units are within an atomistic environment (scenario C) and lack sufficient communication. Considering the scenarios in Table 1, two of four scenarios are clearly dominated by high coordination (A and B), while scenario C and D are dominated by the atomistic structure or lack of coordination.

² Usually one of the dimensions will be used in combination with central bank independence to analyse the implications for the inflation level in an economy.

A closer look at the mechanisms behind the scenarios shall make Table 1 even clearer. In Scenario A and B, few or many bargaining units are negotiating in a highly coordinated system. Since the degree of coordination as well as the overall effect on the economy is high, real wage losses for example will be very similar for all workers. That entails that a few key players significantly influence settlements in preceding negotiations. If, for example, the key bargaining unit agrees on a 5% increase in nominal wages, most of the other settlements will refer to this benchmark only allowing for some variation.

Scenario C stands for a system with no powerful players to influence other bargainers, but at the same time a high degree of centralization. This system could be one where two strong unions organized at industry level dominate the wage bargaining system without communicating with each other. This could lead to independent wage developments.

Considering scenario D with an atomistic wage bargaining system with low levels of coordination a different setting is provided. The basic problem here is that each bargaining unit must anticipate the wage settlements of the others. Being too moderate in the wage negotiations may be punished, if others demand higher wages. Under such a scenario real wage losses may be highest for the most moderate bargaining unit. The atomistic structure creates a very heterogenic economic environment where each bargaining unit lacks knowledge of how others are negotiating. Wage developments resulting from the wage bargaining process cannot be pinpointed to a few players. In theory this would imply problematic predictability for all wage bargaining units.

3. Economic and Legislative Framework

3.1. Regional Economic Developments

Referring back to Table 1 the US wage determining system appears to best match scenario D: An atomistic wage bargaining unit arrangement with no obvious coordination mechanism within a flexible labor market. In such a scenario theory would expect a typical game theory problem where no bargaining unit can predict how the other will behave and each unit is too small to impact the total economy. In an uncoordinated setting wage moderation by one may be punished in real terms should others attempt to achieve higher wages or in the loss of jobs should others attempt to cut wages. The first part of the argumentation (higher wages) follows the assumption that wage bargaining units, specifically employees or multiple unions representing various skills, will always attempt to achieve higher wages under such a setting in fear of losing out to others. In the US wage bargaining system, unions do not have much power in most states or industries and for the majority neither does the individual employee. This then could set off a competition for low wages. These points shall just be briefly mentioned and will be returned to below when the union and non-union system are explained

Table 3: GDP per Capita of US States in USD

	1998	1999	2000	2001	2002	2003	2004
Mean	30,246	31,569	33,034	33,882	34,917	36,441	38,563
Max	48,382	51,294	53,862	56,636	58,318	61,732	65,385
Min	21,516	22,251	22,513	23,000	23,915	24,949	26,257

Source: Own calculation based on BEA and BLS data.

Table 4: Annual GDP, Nominal Hourly Wage Growth Rates and Unemployment of US States in Percent

	2002			2003			2004		
	GDP	Unemployment	Wage	GDP	Unemployment	Wage	GDP	Unemployment	Wage
Alabama*	4.7	5.4	0.9	5.7	5.5	1.2	6.9	5.2	0.9
Alaska	8.7	7.1	2.0	6.6	7.7	0.7	7.3	7.4	2.0
Arizona*	5.4	6.1	2.9	5.9	5.7	1.0	9.1	5.0	2.9
Arkansas*	3.9	5.3	1.7	4.7	5.8	1.5	8.5	5.6	1.7
California	4.3	6.7	2.1	5.5	6.8	2.5	7.8	6.2	2.1
Colorado	2.1	5.7	2.4	3.9	6.1	2.0	6.1	5.6	2.4
Connecticut	1.1	4.4	1.7	4.1	5.5	2.2	6.7	4.9	1.7
Delaware	4.3	4.0	2.9	7.4	4.2	1.6	7.5	4.0	2.9
Florida*	5.1	5.7	2.4	6.0	5.3	1.0	8.2	4.7	2.4
Georgia*	2.6	4.9	2.3	4.5	4.8	2.4	6.8	4.8	2.3
Hawaii	5.0	4.1	1.8	6.5	3.9	1.5	7.8	3.3	1.8
Idaho*	4.7	5.4	2.5	5.4	5.3	1.0	8.0	4.7	2.5
Illinois	2.0	6.5	2.7	2.8	6.7	2.5	4.4	6.2	2.7
Indiana	3.8	5.2	1.4	4.9	5.3	1.3	6.7	5.3	1.4
Iowa*	5.3	3.9	2.1	4.7	4.4	1.8	8.5	4.7	2.1
Kansas*	3.1	5.1	1.6	3.8	5.6	1.9	6.1	5.6	1.6
Kentucky	4.4	5.7	1.3	5.5	6.2	1.3	6.3	5.5	1.3
Louisiana*	-2.3	5.9	1.9	7.4	6.3	1.0	6.0	5.7	1.9
Maine	5.2	4.4	1.8	4.6	5.0	2.4	6.1	4.6	1.8
Maryland	5.4	4.5	2.9	5.0	4.5	2.6	7.0	4.3	2.9
Massachusetts	1.3	5.3	4.2	3.5	5.8	2.6	7.0	5.2	4.2
Michigan	3.3	6.2	2.0	3.6	7.1	1.5	3.5	7.0	2.0
Minnesota	4.6	4.5	3.3	5.5	4.8	2.3	6.5	4.6	3.3
Mississippi*	4.3	6.7	3.2	4.8	6.4	0.5	6.0	6.3	3.2
Missouri	2.8	5.2	1.1	3.6	5.6	2.4	4.9	5.8	1.1
Montana	5.6	4.5	2.4	7.0	4.4	1.1	7.4	4.3	2.4
Nebraska*	4.8	3.7	3.2	8.0	4.0	1.5	4.3	3.9	3.2
Nevada*	5.5	5.7	0.9	8.9	5.3	1.8	11.8	4.6	0.9
New Hampshire	3.9	4.5	2.8	4.5	4.4	2.9	7.6	3.9	2.8
New Jersey	4.3	5.8	3.0	4.3	5.8	1.2	5.6	4.9	3.0
New Mexico	4.9	5.5	3.1	6.9	5.9	2.1	6.9	5.7	3.1
New York	0.7	6.2	1.8	4.4	6.4	2.1	7.0	5.8	1.8
North Carolina*	4.9	6.6	2.1	4.7	6.4	1.7	6.6	5.5	2.1
North Dakota*	6.4	3.5	2.7	7.9	3.6	2.6	5.0	3.5	2.7
Ohio	2.9	5.7	2.0	3.4	6.2	1.4	5.3	6.2	2.0
Oklahoma*	3.0	4.8	2.1	6.1	5.6	1.2	6.4	4.9	2.1
Oregon	3.4	7.6	2.3	4.2	8.1	1.4	6.8	7.3	2.3
Pennsylvania	4.2	5.6	2.0	4.4	5.7	1.0	5.5	5.4	2.0
Rhode Island	4.4	5.1	2.6	6.3	5.4	2.8	5.9	5.2	2.6
South Carolina*	3.8	5.9	1.9	4.7	6.7	1.3	6.4	6.8	1.9
South Dakota*	7.1	3.3	4.1	5.9	3.6	-0.2	7.5	3.8	4.1

Tennessee*	6.2	5.3	1.7	6.1	5.7	1.8	7.2	5.5	1.7
Texas*	3.2	6.4	1.8	6.0	6.7	1.5	7.6	6.0	1.8
Utah*	4.5	5.8	2.1	4.1	5.6	2.1	7.7	5.0	2.1
Vermont	4.1	4.0	2.5	5.8	4.5	1.8	6.7	3.7	2.5
Virginia*	4.2	4.2	4.0	5.3	4.1	2.6	8.3	3.7	4.0
Washington	3.7	7.3	2.1	4.8	7.4	2.1	6.7	6.3	2.1
West Virginia	4.0	5.9	2.4	3.2	6.0	1.1	5.8	5.3	2.4
Wisconsin	3.9	5.3	2.6	4.5	5.6	1.7	6.8	5.0	2.6
Wyoming*	6.2	4.1	3.1	9.6	4.4	1.8	7.6	3.9	3.1

* Indicates Right-to-Work States.

Source: Own calculations based on BLS and BEA data.

Table 5: Nominal Hourly Wages in US States In USD

	2001	2002	2003	2004	2005
σ	1.75	1.87	1.76	2.01	2.01
Mean	15.58	16.26	16.44	16.93	17.21
Max	19.21	20.22	23.02	21.46	23.15
Min	12.64	13.06	13.08	13.55	13.24

Source: Own Calculations based on OES, BLS Data

The Bureau of Labor Statistics (BLS) data used to calculate the figures presented in Table 5 provide an overview of the wage developments for all occupations.³ The US has different average income levels with higher ones along the coastal lines and lower ones in the heartland, possibly reflecting variations in purchasing power (see Table 3). The standard deviation (σ), however, is not exorbitantly high. Wage developments also differ starkly across states. High GDP growth does not necessarily lead to higher wage growth rates; instead wage development appears to fluctuate (see Table 4). Overall the wage developments have a relatively low standard deviation but this does not imply simultaneous or similar wage adjustments across all regions, at least when regarding the aggregated figure for “All Occupations” which was used for the presented calculations. However, on average wage developments for the entire nation seem to balance out somehow. A clear pattern is not observable in Table 4 as even states such as Nevada with the largest GDP growth rates in 2004 saw a decrease in hourly nominal wage growth. Individual differences, therefore, are existent but in aggregate increases in certain sectors, regions or for certain skills are balanced out by decreases in others (Federal Reserve, Beige Book, multiple reports). For future research a more detailed look at wage developments will be necessary. To gain a better understanding, real wage developments would have to be considered. However, the aim of this paper is to analyze the wage determination system, not the wage development. Unlike systems found within the European Union (EU), at least when regarding each nation individually, the US does not have an apparent high degree of coordination or centralization which often comes about through direct state intervention, strong unionization, the existence

³ The Occupational Employment Statistics (OES) program of the Bureau of Labor Statistics did not begin producing the “all occupations” statistic until 2001 for all states.

of few key industries or companies which impact any preceding wage negotiations.⁴ In order to gain a better understanding of the key institutions and drivers of this process the paper will now present the wage determination system in more detail.

3.2. Legislation

The given institutional structure provided by the government will affect the behavior of workers as well as employers and the way they interact (Gangl, 2003, p.32). The government clearly represents an important institution and items directly relevant to wage determination shall be explained in further detail here.

First, federal or state unemployment insurance does not provide much financial benefits, increasing the dependence of having a job. Benefits vary by state, but usually are paid as a percentage of the last salary for 26 weeks (Department of Labor, Online). Lacking a sufficient welfare state is just another example of the more unregulated labor market in general which especially increased during the 1980s under President Reagan.

Second, the state sets a certain minimum wage which must be paid. Individual states can modify it and require higher rates as is the case for 20 states. Minimum wage can also have certain local adjustments and under special circumstances it can be below the federal rate. The federal rate was last adjusted in 1997 denoting that recipients have suffered significant real wage losses over this time period. However, some states have raised the rate despite not being obliged to by the federal government. Although minimum wages do set a certain limit, it is at such low levels that jobs are indeed being created but so are the so called "working poor". For the wage setting mechanism the rate provides the absolute lowest rate which an employer can legally pay. Even though it is low, it does provide a minimum, which in the non-union system of the US would otherwise most likely lead to even lower wages. Unions, specifically the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) are currently lobbying for an increase in minimum wages in Congress, but are facing resistance from the Republicans and a bill by Senator Edward M. Kennedy (Democrat) raising minimum wage to \$7.25 was rejected by Republicans on June 21st, 2006.

Third, other legislation has more far reaching implications beyond low skilled workers. The Davis-Bacon Act, Contract Work and Safety Standards Act, as well as the Walsh-Healey Public Contracts Act all share the common goal of requiring contractors of the government to

⁴ Systems in place in the EU vary from government or peak organizational involvement, up to imposition of wage freezes (i.e. Belgium) over industry level bargaining (Germany) to a mixture of industry and firm level bargaining (i.e. Italy) as well as the unique French system where wages are mostly determined in the large public or private companies and then accepted as a reference for subsequent wage negotiations (Soskice, 1990, p.47 / Hancké, 2002, pp.9).

pay the prevailing wage rate, fringe benefits as well as overtime. The Davis-Bacon Act covers all types of federally financed or assisted construction whereas the Contract Work and Safety Standards Act covers all contracts which provide services to the government. The interesting point here is the prevailing rate issue:

“Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character. The Davis-Bacon Act directs the Secretary of Labor to determine such local prevailing wage rates.” (Department of Labor, Online)

The law implies that the Department of Labor measures and sets the prevailing wage rates for a whole variety of job classifications. Wages are specifically monitored and published providing employees and employers relevant information enabling them to benchmark their compensation against others. The state takes on the role of a communicator and facilitator of wage levels, while also enforcing the prevailing rate for any company wishing to conduct business with the government. It should not be confused with having the government as a wage setter. Quite the contrast is the case as the government acts as an observer of the market, reporting wages determined by the market and only directly influences wages of contractors or sub-contractors which do business with it.

These federal acts could have consequences on how local wages are determined. For sure the Department of Labor does not set the wage rate, but by making information about the local prevailing wage rate easily accessible, it is providing the otherwise nearly unregulated market with substantial information. In addition the Bureau of Labor Statistics measures wages for all occupations in each state on an annual basis. Again, this information does not set wages, but by providing information it may certainly have an impact on the wage determination by creating a reference point which is accessible by all bargaining units at no cost. It is important to stress that the government does not do this on a national level but on a regional level. The provided information monitors wage developments on a county level. In how far this information actually influences the national or state wage determination will be difficult to measure.

4. US Wage Determination System

Though atomistic in structure the US wage determination system seems to have a certain degree of coordination which the government implements through its legal obligations described above. As mentioned above, wage bargaining systems are very unique and develop over time. Thus the current US system also had to develop and go through a transformation by reacting to various changing parameter. As a result, wage bargaining in the US has developed away from collective bargaining in the past decades and at a first look

one could get the impression that it is ruled according to neoclassical theory, where demand and supply find each other at a given wage rate without any government intervention. At this stage the paper will distinguish between the union and non-union system in regards to wage bargaining systems. In order to understand how these two systems developed and what the drivers behind them were, it is also important to consider historic developments as well as cultural aspects, since collective bargaining has steadily declined over the past several years.

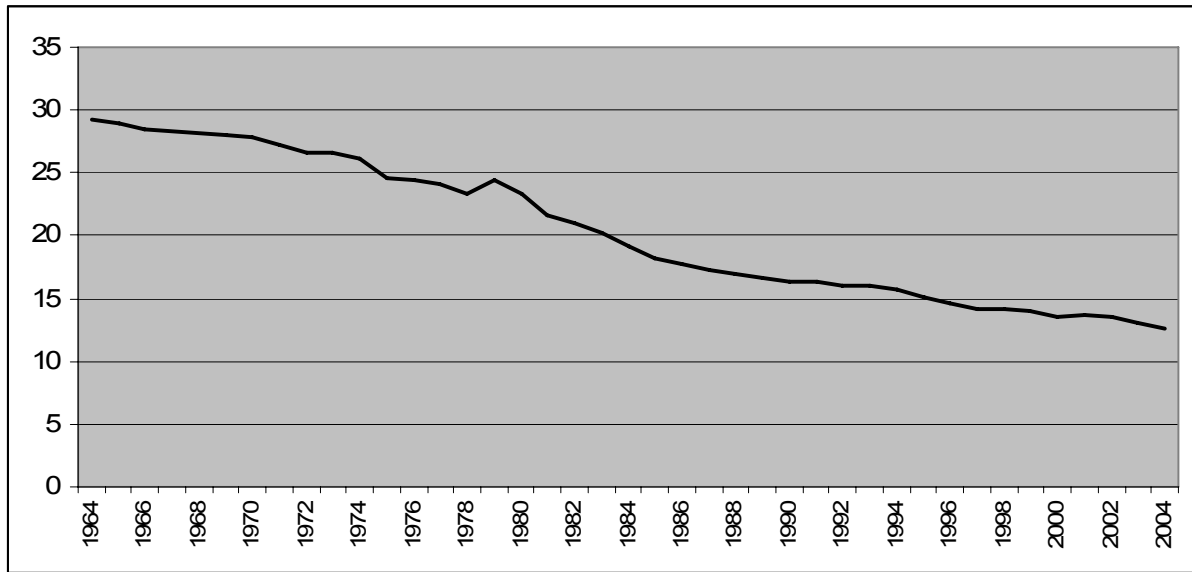
4.1. Union System

Historically union and non-union systems were in competition with each other in the early days of industrialization. It was not until after the Great Depression and the introduction of the National Relations Act, or Wagner Act, in 1935 when collective bargaining was established as the preferred wage determination mechanism, kicking off the so called New Deal Industrial Relations System (Kochan et al, 1994, p.7). Among other things the legislation gave workers the right to choose union organization and to engage in collective bargaining with the employer or employer's organization.

During the first years collective bargaining was able to establish itself in many industries, but usually bargaining was and still is conducted at the company or plant level quite in contrast to most European union based wage bargaining systems (Wever, 1995, p.59). Under this constellation wage bargaining took on a form with low coordination and centralization. One might argue that coordination was somewhat higher as some companies were indirectly influenced by the collectively negotiated agreements. For example companies such as IBM, Motorola, or Delta would match or exceed compensation patterns for its employees just to keep the company or plant union free (Kochan et al, 1994, pp.21).

These actions already indicate that not all employers were keen on endorsing collective bargaining. Regardless, union membership increased to its peak of around 35% of all non-agricultural workers by the mid 1950s. By this time unions were especially able to position themselves in manufacturing industries located in the "rust belt" in the North East of the US where most of the heavy industry, including automobile, was located.

Figure 1: Union Membership of Non-Agricultural Workforce 1964-2004 In Percent

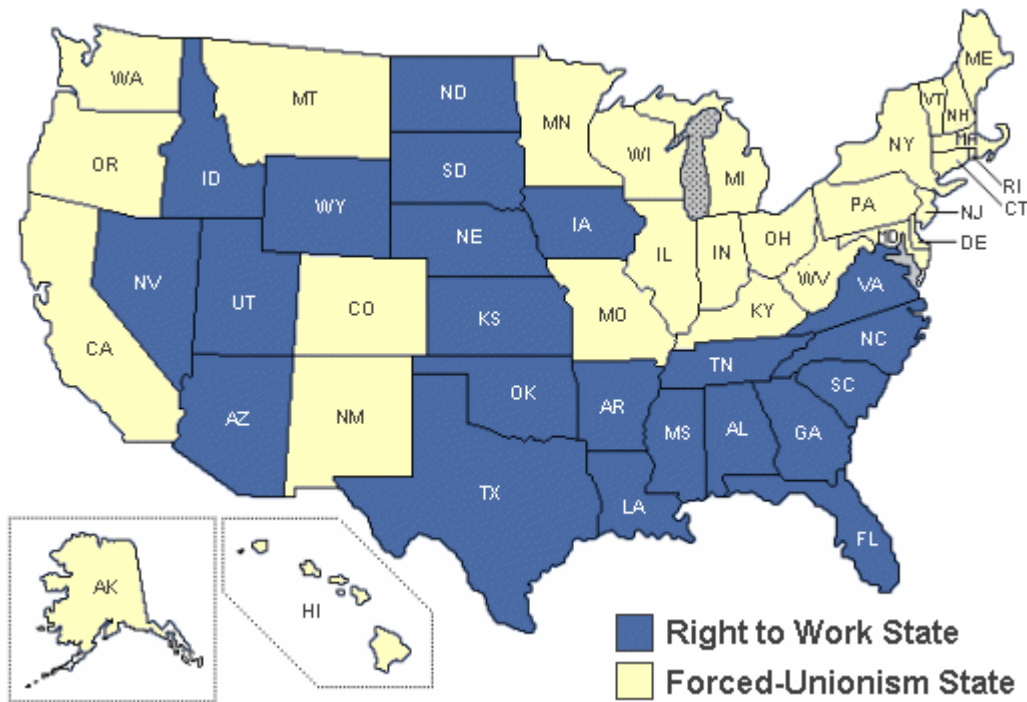


Source: BLS, 2005

After reaching its peak a whole battery of reasons lead to the decline of unionization, only two of which will be presented at this point, as expanding on all of them would be beyond the scope of this paper. The first reason is that the Wagner Act of 1935 was amended by the Taft-Hatley Act in 1947. An important provision included changing the ability of unions to keep workers who do not belong to them out of the company.⁵ This also implied that employers could reject union representation in a unionized company or plant. States were able to choose to enforce the provision, resulting in a separation of right-to-work states and states which did not adopt the changes. This typically was the case for the more industrialized states in the north east, around the Great Lakes, and along the Pacific coast (see Figure 2).

⁵ The Wagner Act of 1935 allowed unions and employers to agree on “closed shops”, which meant that new employees would not be hired unless they are members or could be fired if they failed to comply with union rules, i.e. by not paying dues.

Figure 2: Distribution of Right-to-Work States



Source: National Right to Work Committee, www.nrtwc.org/i/usmap.png

Wherever the provision is enforced, companies are allowed to choose between expanding in unionized or non-unionized plants in the relevant states. By the seventies many companies followed this strategy more aggressively by closing down older unionized plants and shifting to right-to-work states. Efforts to move from union areas can also explain the shift of the auto industry from its traditional cluster around Detroit to southern states, where General Motors (GM) and Japanese manufacturers first opened plants in the 1970s (Kochan et al, 1994, pp.70).⁶ Legislature gave opposing employers certain leeway across the US in order to come free from unions which they considered would significantly increase their labor costs without providing any balancing improvements (Wever, 2001, p.131).

A second reason is the negligence of unions themselves to use the moment and establish themselves as cooperative partners throughout the economy and all demographics. Presence was established in much of the manufacturing, blue collar jobs, but white collar and new industries were neglected. In addition, a lack of coordination between unions as well as the widening demographic diversity of the workforce in the US made it difficult for unions to cover all interests.⁷ The substantial diversity of the workforce, in terms of race, ethnic and religion generated heterogeneity of interests which combined with the large size and

⁶ Workers in plants in right-to-work states can choose to unionization by voting for it. Plants therefore had a very good chance of being able to prevent this from happening (Kochan, 1994).

complexity of the country made it difficult to engage in collective bargaining (Hollingsworth, 1997, p.292) In short, neglecting to coordinate among each other by finding ways to bridge diversity gaps and reacting to the challenging environment, as well as overlooking changes in the economy and demographics combined to having a reputation of combative labor relations with employers, which seldom regarded them as partners, lead to a steady decline in union membership.

Figure 1 illustrates the decline of union membership and consequently its decline in power on the overall economy. Yet, unions still form an institution which impact wage levels; it just varies by state and sector. As mentioned previously the amendments to the Wagner Act lead to the creation of right-to-work states and states which did not implement the changes, a development which is reflected in the current unionization figures. In the last few decades following the 1960s, union levels have decreased considerably, dropping by nearly 60% from 1964. Notably regional differences are observable when looking at the data, resulting in a spread ranging from 30%-80% decreases depending on the state (Bureau of Labor Statistics, Online).⁸

Bureau of Labor Statistics data indicates that unionization varies between 26.1% (New York) and 2.3% (South Carolina). Consequently the impact unions have on the labor market and wages vary to a great extent. In total there are 15.7 million union members, of which more than half (7.9 million) are concentrated in just six states⁹, although these states only account for less than a third of national wage and salary employment (Bureau of Labor Statistics, 2005, p.2). In addition to the low union membership percentage, union coverage is only insignificantly higher.¹⁰ This does not have to be the case as several European countries have a high coverage despite having low unionization, further stressing the atomistic nature of the US system.

Union activity in the US will not differ much across the country. Wherever unions are present they will take on a similar role and the bargaining system will not diverge. Activity in the wage determination process will be strongly atomized and uncoordinated at the same time (Ganßmann and Haas, 1999, p.181). As mentioned above employers were rather reluctant in accepting collective bargaining and unionization. Employers associations as known in the Europe did not exist in the same form, undermining any largely centralized or coordinated wage bargaining system. Next to the limited rather minuscule role in overall wage determination, unions as well as employers associations engage in significant lobbyist work. Unions are traditionally close to the Democratic Party fighting for labor issues, such as a rise

⁷ For example unions failed to win new labor entrants such as young baby boomers and women (Kochan, 1994).

⁸ Excluding Hawaii, which is the only state which actually increased by nearly 10% from 1964.

⁹ California, New York, Illinois, Michigan, Ohio, and New Jersey.

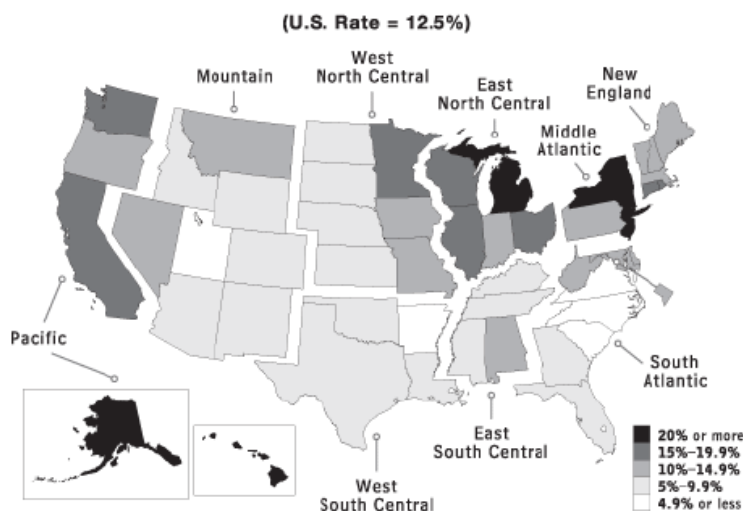
¹⁰ Union membership percentage refers to percentage of employees which have actually joined a union, whereas union coverage refers to the percentage of employees which are covered by union agreements even though they are not members.

in minimum wage level or other national issues pertaining to workers' rights, trying to influence the legislative framework. Employers associations naturally are closer to Republicans seeking to influence decision makers to their benefit.

4.1.1. Union Wage Setting

As has been mentioned before unions do not play a significant role for the overall economy, but in certain sectors they have either increased or maintained their power. In these sectors collective bargaining still has an important role for US standards, which certainly is not comparable with the high level of coverage in European countries. Union density is not only different in sector but also along demographics and regions. African American and 45-65 year old workers are the most likely to be union members, as it is the least likely for Hispanics and 16-24 year olds (Bureau of Labor Statistics, 2005, p.2). Figure 3 demonstrates the regional concentration of union membership in the old industrial centers in the Mid Atlantic and East North Central region as well as along the Pacific coast.

Figure 3: Union Membership Rates by States, 2005



Source: Current Population Survey, BLS, <http://www.bls.gov/news.release/pdf/union2.pdf>

Sector differences are also significant, with certain industries having nearly no unionization while others have comparably high levels. The public sector specifically stands out with the by far highest degree of organization, reaching 36.5% of all public employees. Studies conducted by Hills (1985) have indicated that the attitude of public employees significantly differ from those in the private labor market resulting in a higher propensity to unionize, whereas private workers have a far higher rejection rate (Troy, 1999, p.67).

Conversely, the average shrinks by a great extent when neglecting the public sector, dropping from 12.5% for the total employed to a mere 7.8% (Bureau of Labor Statistics, p.1). Currently union membership is strong in older and mature industries as well as, since unionization is at the plant level, in older plants or locations (Kochan et al, 1994, p.7), but has

also gained momentum in the IT sector, especially in Telecommunications (Bureau of Labor Statistics, p.7).¹¹

Union density in right-to-work states is far higher, more than double the figure, than in states not enforcing the law. Wages are between 12-15% higher than in right-to-work states for the years 2001-2005 indicating a correlation but by no means causality, as most right-to-work states are located in the poorer south, whereas the others are generally economically better developed. In addition the data does not indicate if higher wages can be attributed to union wage bargaining or presence. More detailed research in regards to union and non-union wage developments for various occupations would be necessary to come to a conclusion here.

As mentioned before bargaining is conducted on the company basis and most often at the plant level which often can be used to encourage interplant competition (Wever, 2001, p.132, 1995, p.15). In general coordination and centralization appear to be weak following many studies which have dealt with classification of union bargaining systems. In the automobile industry where unionization is relatively high, especially in the north east, the United Automobile Workers (UAW) union attempts a higher degree of centralization and coordination by negotiating with one company or plant and then using this as a standard for the others.¹² More influence comes from the peak level unionists, rather than leaving much authority to local unionists (Wallerstein and Lange, 1994, p.14). These coordination attempts do not appear to be significant for the rest of the economy, but rather limited to an industry or sub-industry.

Fragmentation, and also employers' rejection of unions, is further strengthened by the union wage negotiations. In contrast to European unions, American unions negotiate wage levels according to occupation which can lead to long tedious procedures. Agreements become extremely complex since unions require many, often very specific, job classifications, matching wage grades for which individual compensation rates need to be found (Wever, 2001, p.136). In sum, it appears as if there are a variety of influences in collective bargaining including stark variations in the distribution of unionization along multiple dimensions such as occupation, industry, firm size, or geographic region.

4.2. Non-Union System

With the reduction of union membership and the abandoning of collective bargaining, as well as having a nearly fully uncoordinated and decentralized bargaining system, an alternative system of non-union industrial relations gradually emerged. Therefore, it is of little surprise

¹¹ An explanation could be that many telecommunication companies resulted from then public AT&T with a higher unionization. After deregulation of the market the union structure were then transferred to the "Baby Bells".

that unlike in many European countries union coverage hardly exceeds union membership (Gangl, 2003, p.38).

Establishment of the non-union system certainly has neo-liberal roots and can be attributed to a set of political and political-economic conditions. In combination with American mentality of individualism a, what Thelen (2001, pp.78) calls, Liberal Market Economy (LME) evolved in the US. LMEs are associated with widespread managerial control and freedom which shy away from European style coordination with unions while preferring further deregulation. Consequently, unions are to be avoided and a unitary managerial path is preferred, resulting in decentralized wage bargaining at the plant or even individual level (Wever, 2001, p.134). In a similar classification approach Hollingsworth (1997, p.268) argues along the line of Thelen that LMEs¹³ are driven by the financial system which is highly driven by capital markets, leading to a tendency to minimize costs in order to please short-term interest of shareholders. Thus, a mentality in line with the general assumption of employers is displayed in which unions are regarded as a cost factor without the necessary balancing benefits.

If there is no collective action in the labor market, employers obviously choose an individual system of representation. An individual system matches more competitive markets as outlined by Hollingsworth and Thelen (Troy, 1999, p.9). Within the non-union system, which obviously contrasts the union system starkly, several innovations aimed at enlisting worker participation suggest that this system is somewhat more complex than just letting the market determine wages and labor demand (Thelen, 2001, p.92). These new human resource practices allow for greater flexibility as well as improved employee involvement in order to intrinsically motivate. A core component focuses on innovative work systems, stressing flexibility and participation through the creation of work groups which helped to reduce the wish of employees to organize (Kochan et al, 1994, p.62, pp.95). These work groups can be regarded as a small team which as a group bargains with the employer about conditions of employment, including compensation, in a way taking over the role of a union (Wever, 1995, p.90). Certainly this is just one example and not all companies will have work groups which engage in bargaining activity with their employers, but it provides a good indicator of the functionality of the non-union system. It is also rather unlikely that unskilled workers, which can be easily replaced, would engage in such activity due to the fact that hire-and-fire mentality is provided for by legislature. Subsequently, their bargaining leverage is only strong when the labor market for whatever skill they possess is tight. Flexible labor markets with very limited regulation from the state sets the stage for an environment of higher job flexibility. Employers will be less hesitant to fire a worker. At the same time employers will

¹² However, the deteriorating economic situation of the US automobile industry has reduced this leverage.

¹³ Hollingsworth labels them Mass Standardized Social Systems of Production, but despite some differences, the classification of the US and other Anglo-Saxon countries is similar or at least consistent with one another.

turn down an offer should they not regard it as satisfactory: A constellation which has led to significantly higher job turnover rates in the US than in Europe (Gangl, 2003, p.84).

The examples above illustrate the importance of the Human Resource department in a non-union system. Current research seems to unanimously agree that it is human resources which have contributed to the non-union systems by creating innovative measures and advertising the benefits of a union free environment to its employees. Companies were very successful in undermining the collective bargaining initiatives of the New Deal Era by finding ways to keep unions out and by slowly letting market forces undermine the system, creating a new industrial relations system and an individual representation system. Individual representation, however, cannot function if it is not accepted or tolerated by employees. Preference of non-union individual representation is thus essential (Troy, 1999, p.65). Coming back to the cultural dimension, employers and employees logically have the same cultural background and share certain American values. One key component is that everyone is responsible for their own fate and development. The idea of collective bargaining does not fit the cultural environment. Otherwise unionization must be higher, since at any given time workers could organize by making use of their legal right to vote for union representation. Currently, the non-union system appears to have distinct advantages in terms of costs and flexibility for employers while at the same time satisfying the interests of a significant proportion of the workforce (Kochan et al., 1994, p.108).

4.2.1. Non-Union Wage Setting

Over 90% of private sector and over 60% of public sector wages are determined by the non-union system. An influence of union wages on the non-union system are not observable for neither the private nor the public sector, raising the question of how most US wages are determined. Fitting the culture and belief system of its citizens every one should take on its own fate, therefore, the market according to neoclassical thinking would be the most obvious wage determination institution. There is no doubt that many agreements are individually based, a development which is also reflected in the steep rise in employment related lawsuits (Ganßman, 2001, p.72).¹⁴ Apparently the market has a decisive role in the wage determination process. However, demand and supply will, to an extent, always play a role in finding wages regardless of the degree of unionization. It is important to understand the function of the specific US wage determination or labor market as no market will function according to the theoretical ideal with all of its assumptions.

Several explanations of the non-union wage determination have been done in the past, attempting to explain how wages are determined within the atomistic framework. First, one

¹⁴ Individuals make use of their right to sue their employer for any wrong doing without relying on any union to stand up for their rights.

attempt considers the high skill/high pay (and the same for low) wage approach as a tool, meaning that the higher one's skill is, the higher the pay would be and vice versa. However, this appears to be the case for only 1/3 of companies and most only implement it in form of contingent pay (Wever 1995, p.8). Second, an approach states that there are high wage and low wage industries with the equivalent wages (Ganßman, 2001, p.189) suggesting wage flexibility. Lastly, work groups, as illustrated above, function as a kind of individual miniature union, but they too cannot explain wage determination for the majority of employers. Industry differentials, contingent pay, as well as higher pay for higher skill are no unique settings which cannot be found elsewhere. It also seems highly inefficient and impractical should each non-union worker negotiate with his or her employer over the individual compensation. Negotiating individually with each and every employee appears to be very problematic. If wages are not determined individually, then they must be determined and more or less given by the market. The question here is in how far it is freely set by the market.

As mentioned above the government seems to play an important role through collecting detailed local wage information. Managers, as well as employers, are able to access this data in addition to national and other specialized information and can determine the wage level which it can offer to its employees (Troy, 1999, p.127). Various forms of company surveys appear to be the driving force of communicating wage developments in the market. These can either be conducted by the government, service companies or the bargaining company usually targeting the local market while and this is very important, also monitoring national and industry developments.

A company example presented by Troy (1999, p.127) provides a good idea on how the system functioned in the case of a company with 1,100 employees. It surveyed nine local companies, four of them were unionized, of various sizes deviating around the companies own size. With this information and taking into account anticipated productivity of the company as well as national developments, wage proposals were determined.

Unlike union wage bargaining, non-union systems make less use of cost-of-living escalator payment systems, hinting that the consumer price index (CPI) may not be as important in wage determination (Kochan et al, 1994, p.102). Management control over terms and conditions and low negotiations level with employees are key characteristics of the non-union sector (Wheeler and McClendon, 1998, p.68), stressing that the process is employer driven. It should, however, be pointed out that no Manchester type capitalism has established itself. Human resource developments have taken on the key connection between workers and employers ensuring a degree of satisfaction. This represents a development that of course is not followed by all companies and to some low wages and unchallenged managerial authority is still key (Kochan et al, 1994, p.95).

Certainly an individual company survey will only be possible in cooperation with other local enterprises and only for such possessing relevant resources and skills to conduct such a

sophisticated survey and analysis. It should also be kept in mind that not all non-union organized companies follow a sophisticated model as outlined above nor do all implement new human resource approaches (Kochan et al, 1994, p.95). But as mentioned before the government provides detailed information on local wage grades for different occupations on a yearly basis at no cost to companies and employees. Employers may utilize this information adjusting it for productivity and inflation, in order to propose an agreement to employees. Employers can adjust wage and employment level downward or upward when necessary due to the flexibility of the US labor market. This, however, does show that the employer has an information advantage as it will be more difficult for employees to determine how fair the offer is since information on productivity will not necessarily be provided to them. Regardless if modern non-union systems are in place or not, for the majority of employees it is the employer who is the determining factor, acting as a wage setter. Wages are set by taking regional, national and industrial information into consideration next to company specific factors when proposing wages to its employees. The exact implemented non-union system will however differ from company to company as it allows for a high degree of flexibility.

4.2.2. Migration and Immigration Effects in an Unregulated Wage Determination System

The non-union wage setting system is unregulated as well as very individualistic. In addition wage levels are not always the same for the similar job qualification across regions. This gives rise to two additional considerations which shall be briefly introduced.

First, it should be analyzed in how far migration within the US contributes to balancing wage developments. To see if wages are strictly determined by the market following neoclassical theory one would expect that states with high wages or high wage growth would attract workers, increasing local supply and bringing wage levels down until equilibrium is again established. Given the fact that the US is a single country and most importantly sharing a common language, the US has the best preconditions for having a very flexible and mobile internal labor market. Looking at wage developments as well as population growth should provide a good idea if migration is a balancing item in wage determination for the entire nation. Bureau of Labor Statistics and Bureau of Economic Analysis data provide no indication of any significant relationship between population movements and wages. Population in recent years has not increased the most in states with the highest wage level nor in states with the highest growth rates. Equally there have been no large reductions in states with low or slowly increasing wages. It is rather those states with an hourly wage near

the mean that are achieving the highest population growth rates. Of course when looking at aggregate figures, details may become lost.¹⁵

In addition, a relationship between unemployment rate and population growth rates may also seem significant. Correlation for the years 2002-2005 is low, indicating that high unemployment rates do not lead to a significant migration to states with lower unemployment rates.¹⁶ When looking at state developments, migration does not seem to have an impact on establishing wages levels indicating that on a national basis market powers are not determined by the movements of employees. Migration measured by gross internal migration is higher in the US than within European Monetary Union countries showing that migration is more common, but has only a very limited connection to wage developments (OECD, 2005, p.89).¹⁷

Second, the steady stream of immigrants and their economic role in the US seems to have an influence on wage determination. Lately the largest influx has been coming from Central America and Asia. Immigrants just coming “off the boat” are very likely to accept low wages as well as poor working conditions. Some have argued that immigrants help to keep inflation in check by accepting lower wages, especially during an overheating economy (Broader, 2006, p.6). This argument might be true but at the same time one could also argue that they lead to wage cuts and deflation in time of a cool economy. A study done by Borjas (2003) has found that immigrants have significantly depressed wages for Americans in all income levels and job categories, with the impact being disproportionately high for low skilled workers. However, it should also be considered that many immigrants rely on their family as an employer and work in a relatively sealed economy which would be closed to any “native” Americans anyways (Ganßmann and Haas, 1999, p.55). Further, immigrants are concentrated in certain regions, mostly in large cities and especially in states near the Mexican boarder as well as Florida. In addition to legal immigrants, illegal immigrants are yet another factor to consider as they may further depress wages for low skill jobs.

4.3. Union and Non-Union Wage Determination Systems

There appears to be no relation between union and non-union wage determination systems. Regardless of union density wage differentials can be high or low, suggesting that coordination is extremely low. As a result of low union coverage and the lack of any significant influence on the non-union system, wage levels between union and non-union workers vary. In 2005 the median weekly compensation for non-union members was \$615

¹⁵ The „All Occupations“ data for each individual state has been used for the analysis. For a more detailed approach data for specific occupations needs to be regarded and checked for gains in population in this segment.

¹⁶ Correlation for the years 2002, 2003 and 2004 are $r=-0.074$, $r=-0.173$ and $r=0.097$ respectively.

¹⁷ Gross internal migration is measured by the proportion of working age population within the national economy that changed region of residence over the year (OECD, 2005, p.89).

compared to \$757 for union members, equivalent to 23% higher earnings (see Table 6). This of course could be explained by the fact that the so called working poor will be unlikely to be represented by unions, depressing the non-union wage levels.

Table 6: Median Weekly Wages for Public, Private Industry and Selected Union and Non-Union Wages for Occupations and Industries, 2005

Public	\$757			
Private	\$615			
Occupation		Union Members	Non-Union Members	Δ
	Computer and mathematical occupations	\$1,009	\$1,141	-
	Education, training, and library occupation	\$913	\$710	+
	Sales and related occupations	\$623	\$622	=
Industry				
	Professional and technical services	\$770	\$963	-
	Construction	\$933	\$590	+
	Telecommunications	\$937	\$923	=

Source: Bureau of Labor Statistics (2005)

Union membership may lead to higher wages on average but for individual industries or occupations this argument is not valid. Wages are sometimes below (-), above (+) or nearly equal (=) to non-union wages.¹⁸ But as seen for construction, differentials can be very significant. It may appear absurd why union wages would ever be below non-union wages, since one would think that workers would leave the union. A possible explanation here could be that low skilled occupations are represented by unions while high skilled occupations chose the non-union system. It is also surprising that despite the knowledge of higher union wages, most workers still reject union votes for their work place. However, for the economy this may have a wage dampening effect (Freeman, 1989, p.23).

Wages of similar qualified can vary according to industry, and have large differentials for the same job. These differentials do not appear to be temporary, following neoclassical theory, but are relatively stable over time (Ganßmann, 1999, p.189). In fact it appears as if this dual track wage bargaining contributes to wage diversions within jobs. Judging from the data, signaling does not seem to be attributed to union wage setting. In some regions or for some

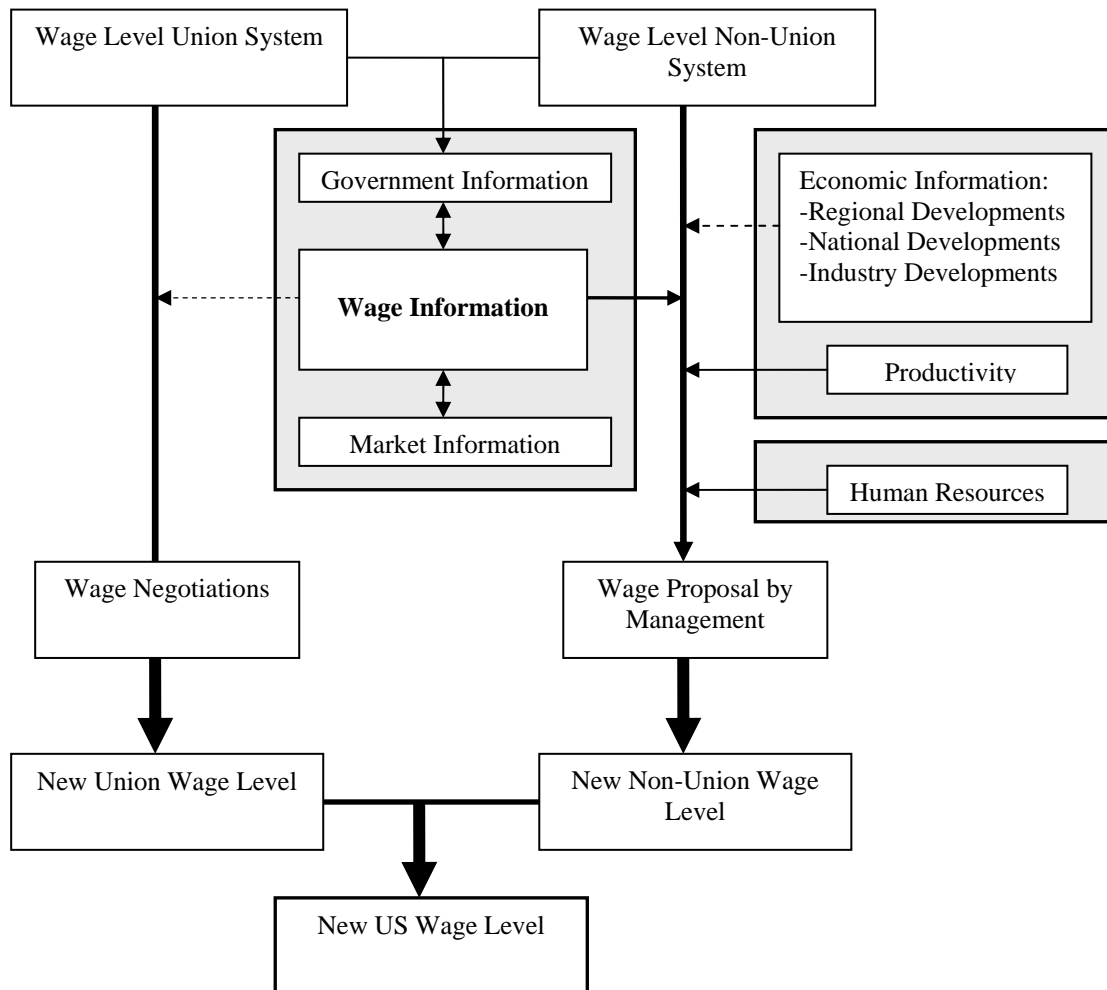
¹⁸ (-) indicates union wages for the occupation or industry are below those of non-union employees, while (+) indicates the opposite. A minimal difference in union and non-union wage level is indicated by (=).

occupations this may be the case, but it would be difficult to judge which is the dependent and which the independent variable. The result is a rather heterogeneous impression which is further strengthened when looking at occupation and industry data in more detail.

4.4. US Wage Determination Model

The changing legislation in combination with cultural and economic factors has established the necessary framework allowing the current system to emerge. We have seen that two systems have developed working separately from one another. It is difficult to judge the exact interlinkages and influences between the union and the non-union system, as this will very much depend on the industry, the state, the plant as well as if negotiations are taking place in the private or public sector. Without looking at specific constellations and instead speaking of the wage determination system in general terms, it appears that both systems scarcely influence each other. The model presented below is therefore very basic in nature as it attempts to illustrate a system for a very complex atomistic wage determination system. The exact existence and importance of certain variables will differ from state to state and within each state more differences may become apparent at the county level. In other words, the model can be understood as a basic representation of the US system, where every state will have a slightly different system yet similar to the one illustrated. Within each state again variations will occur. The only relatively stable components are the role of the government and the legislative framework. It is important to keep in mind that the government is monitoring regional wage developments and does not act as national institution.

Figure 4: Wage Determination in the USA



It should be clear that for the union system most negotiations take place at the plant level and coordination as well as centralization are very low.¹⁹ Second, although both systems seem equal in importance in this model, this is by no means the case. As mentioned above only 12.5% of employees are represented by unions of which most are within the public sector where unionization is stronger.

The non-union system is comprised out of three core components: Wage information, economic information and the human resource system in place. These three variables provide the employer with the necessary information to make a wage proposal to the employees. As described above, the employer enjoys an information advantage as the employee will be unlikely to monitor the market as closely and most of the economic data available to the employee will not be obtainable. It should also be clear that all three components are not independent from each other. The outlook of economic developments (including productivity) of other companies and industries will influence the market information the company obtains. If for example industry performance is moderate, the

¹⁹ Of course there are industry differences as the United Auto Workers Union example has illustrated.

market information will unlikely indicate steep wage increases. Certain skills, which are not industry specific and therefore flexible, however, may see steeper increases. It has been mentioned above that human resource plays an important role in keeping employees satisfied with their situation by creating innovative work systems. Section 4.2.1 introduces several new human resource approaches, but the essence is that human resource monitors the market and reacts accordingly to keep core employees within the company.

The most important part appears to be wage information. It provides the bargaining unit with the essential information prior to beginning negotiations and significantly helps to create some sort of coordination in this atomistic system. It is comprised of the information the government collects and provides at no additional charge as well as individual information a company may or may not collect. The Federal Reserve's Beige Book further collects information on certain skills and industries in the various Fed districts through industry contacts.²⁰ The government in a way sets the prevailing regional wage rate by publishing it through its legal obligations. The market may take this "wage snap shot" into consideration when making a proposal, indicating an interaction between the government's prevailing wage level. In addition, especially for low skilled labor, wages for immigrants and illegal aliens may become an additional weight and influence their bargaining power and the wage levels being proposed to them.

After monitoring and collecting information management will make a proposal to its employees. Of course all employees will not receive the same wage increase and due to the individualistic nature the exact wage will be determined in a less collective way than under a collective bargaining system. The exact mechanism within a company will vary and this analysis will also go beyond the scope of this paper.

5. Conclusion

The changing role of unions led to a new wage finding mechanisms which better reflected the needs of the economic system currently in place in the US. It appears that the most significant and influential labor market institution is the government, which is responsible for setting the legislative framework in which the labor market can function. Direct government legislation has had an important impact on the framework and workings of the labor market (Fortin and Lemieux, 1997, p.78). Federal as well as state laws have had an impact on how successful collective bargaining can be and how wages are determined. The historical perspective on unionization has shown that it was legislative initiative first promoting unionization and then providing the legal possibility of reversing such developments. Next to

²⁰Example taken from the Fed's publication: "Labor cost pressures were little changed. Most Districts reported that wages increased modestly on average. The only exception was Philadelphia, which reported that many of its contacts expected a faster rate of increase in average salaries and wages compared with 2005, as firms stepped up counteroffers to workers who were planning to change jobs. A shortage of qualified workers for skilled

the already mentioned legislation, the Fair Labor Standards Act of 1938, requiring a federal minimum wage, as well as several other federal acts require payment of the prevailing rate and compliance with certain labor standards in order for companies to receive government contracts.

Of course legislation is responsible for setting the legislative framework in most countries, so its role may not be exceptionally surprising. However, in combination with the mentioned cultural, economic and political influences, they are responsible for the creation of the current wage determination mechanism which for the most part relies on the non-union system. What makes the system unique though is the role the government. First, it establishes relatively far reaching legislative requiring local prevailing wages for companies wanting to conduct business with it through the Davis-Beacon Act and the Walsh-Healey Public Contracts Act. The exact scope of this legislative framework on national wage determination would require more in-depth analyses of wage developments of companies with government contracts and ones without. Second, it provides detailed local wage development information at no additional charge, reducing transaction costs. It does this in order to enforce legislation as well as to monitor wage developments for macroeconomic decisions. This information collection happens on two levels, the Department of Labor and the Federal Reserve, which needs information on wage developments to monitor inflation. As with the first point it would require further research to see in how far employees and employers make use of this information.

As mentioned above, the US best fits scenario D presented in Table 1: An atomistic wage bargaining unit arrangement with no significant coordination mechanism within the flexible labor market. In such a scenario theory would expect a typical game theory problem where no bargaining unit can predict how the other will behave and each unit is too small to impact the economy. Such an uncoordinated setting, wage moderation by one may be punished in real terms should others attempt to achieve higher wages. However, this argumentation follows the assumption that wage bargaining units, specifically workers or multiple unions representing various skills, will always attempt to achieve higher wages under such a setting in fear of losing out to others. Workers may also accept real wage loss in order to ensure future employment, should the employer threaten to reduce the workforce if wage levels develop in an unfavorably wage. It is rather the employer who provides the wage proposal to employees. Employees will only be in a good bargaining position if there is a shortage of their specific skill. In this case the employers will have to make an attractive enough offer in order to keep the employee. On the other side, employees will be willing to accept real wage losses in order to preserve their jobs should the employer threaten lay offs at current or rising wage levels. Market forces which heavily rely on government supplied data as well as the

positions in finance, construction, and manufacturing industries resulted in more rapid increases in pay for those

individual productivity performance will become the driving forces in the new wage level. Therefore the system could be described as one which attempts to determine wage levels by orienting itself to the market under the given legislative conditions set by the government.

It is clearly the non-union system which dominates the wage determination process while implementing an employer driven system. In addition, it is up to the employer in how far national developments are taken into consideration. It is only necessary in order to keep employees satisfied and prevent key employees from leaving the company. The government does in a way intervene in the market by setting a minimal wage level and by indirectly setting regional wage levels for contractors and sub-contractors. However, the influence on a national level may be limited. As a result an atomistic wage determination system prevails, but on a regional level the degree of coordination is increased by the role of the government. The degree of national coordination will require further insight, as it should be stressed that the model introduced above operates on many regional levels and only when combining all levels, a precise picture of the US systems comes apparent, further stressing the complexity of the US system. A detailed look at regional wage developments would be necessary to comprehend the exact functioning of the system and why increases in certain states are balanced by decreases in others.

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