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Literature:
- Chapter 6 Mankiw, Gregory; Macroeconomics, Worth Publishers.
5. Causes of Unemployment

5.1. Types of Unemployment

5.1.1. Frictional Unemployment

Causes of Frictional Unemployment

- Normal Labor Market Fluctuations
  - There is always a part of firms that reduces the demand for labor, because of firm-specific or sector-specific fluctuations.
  - Similarly, another part of all firms always increases the demand for labor, because of firm-specific or sector-specific fluctuations.
- The laid-off unemployed need time to search for new jobs:
  - They have to collect information about firms that demand employees with their qualification.
  - They have to transfer information about their qualification to firms.
  - Firms have to process this information and respond to applicants.
- Therefore, laid-offs are typically not immediately reemployed but join the "pool of unemployed" for while. This kind of unemployment is called "frictional unemployment" or "job search unemployment" or "natural unemployment".

Frictional Unemployment:

Since unemployed need time for job search, they stay some time in the pool of unemployed, until they find new jobs. This causes "frictional unemployment", even if the number of dismissals equals the number of new employments.

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5.1.2. Keynesian Unemployment

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Long-run Development of the German Unemployment Rate

Can the development of German unemployment be explained by frictional unemployment?

Share of Yearly Dismissals and New Employment in Total Employment

(1970-1991 West Germany, since 1992 Germany)

Source: BVR (2004/5)

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5. Causes of Unemployment

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5. Causes of Unemployment

5.1.2. Keynesian Unemployment

- As chapter 3 has shown:
  - Keynesian Unemployment
    - ...is caused by normal business cycle fluctuations.
    - ...increases in recessions.
    - ...decreases in economic upswings.

If a recession leads to a decline of the demand for goods, firms produce less goods and hence reduce their demand for production factors. Therefore, labor demand decreases. Only when firms start to adjust their prices (with a time lag of one year – see Chapter 3.4.), the demand for goods increases and hence firms' demand for labor.

If a boom leads to a raise of the demand for goods, firms produce more goods and hence increase their demand for production factors. Therefore, labor demand increases. Only when firms start to adjust their prices (with a time lag of one year – see Chapter 3.4.), the demand for goods decreases and hence firms' demand for labor.

- Causes for Keynesian Unemployment:
  - In the short run, firms adjust their production of goods to the demand for goods:
    - If a recession leads to a decline of the demand for goods, firms produce less goods and hence reduce their demand for production factors. Therefore, labor demand decreases.
    - If a boom leads to a raise of the demand for goods, firms produce more goods and hence increase their demand for production factors. Therefore, labor demand increases.

Long-run Development of the German Unemployment Rate

Source: Statistisches Bundesamt. 1 Share of Unemployed in Civilian Labor Force West Germany, Germany
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5.1.3. Classical Unemployment

- Classical unemployment
- ...appears in different variants.
- What all these variants have in common is a disturbed market mechanism that cannot equilibrate demand and supply.
- There is typically some institutionally caused form of wage rigidity, which disturbs the market mechanism.
- If this wage rigidity causes wages to be "too high", unemployment will be the result.

5.1.3.1. Insider/Outsider-Unemployment

- Insider/Outsider-Unemployment

- Following the insider-outsider theory of unemployment, there exists an economic incentive in collective wage bargaining systems for labor unions to negotiate wages that are above the full employment equilibrium wage rate and tolerate the resulting unemployment:
  - Following this theory, labor union officials care only about the welfare of the employed, since they are members of the labor union ("insiders") and pay in last instance the salaries of the officials.
  - The unemployed ("outsiders") are not paying trade union members and have no influence on the income of the trade union officials. Therefore their welfare is neglected by labor union officials.
- The following graphs illustrate the basic argument of the insider/outside theory of unemployment.
5. Causes of Unemployment

5.1.3.1. Insider/Outsider-Unemployment

Labor unions do therefore negotiate a real wage level above the equilibrium wage level \( w^*/p^* \).

Gain of wage payments of still employed workers (Insider)

Loss of wage payments of dismissed workers (Outsider)

Resulting Unemployment

Gain of wage payments of still employed workers (Insider)

Loss of wage payments of dismissed workers (Outsider)

Resulting Unemployment

5.1. Types of Unemployment

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5.1.3.1. Insider/Outsider-Unemployment

5.1.3.2. Efficiency-Wage-Unemployment

Following the efficiency-wage theory, unemployment can also be caused by firms paying voluntarily wages that are higher than the market equilibrium wage rate.

Historical Example:

“In 1913 the Ford Motor Company started paying its workers $5 per day. The prevailing wage at the time was between $2 and $3 per day, so Ford’s wage was well above the equilibrium level. Not surprisingly, long lines of job seekers waited outside the Ford plant gates hoping for a chance to earn this high wage.”

(Source: Mankiw, Macroeconomics, p. 167)
5. Causes of Unemployment

5.1.3.2. Efficiency-Wage-Unemployment

Business Report of the Ford Motor Company from 1914:

“The Ford high wage does away with all the inertia and resistance. (...) The workingmen are absolutely docile, and it is safe to say that since the last day of 1913, every single day has seen major reductions in Ford shops’ labor costs.” Absenteeism fell by 75%, suggesting a large increase in worker effort. Ford and his associates freely declared on many occasions that the high wage policy had turned out to be good business.

(Source: Mankiw, Macroeconomics, p. 167)

➤ Current Example for Efficiency-Wages:

“The automotive supplier Leoni currently employs more than 23,000 workers worldwide. Thereby, Leoni primarily selects production locations with a low wage level. However, at such locations Leoni pays relatively generous wages. For example, in a plant of Leoni in Stryi, Ukraine, Leoni pays significantly more than the local minimum wage, which equals 650 Grivna (100 Euro). Furthermore, Leoni voluntarily offers lunches at reduced costs as well as free health insurance. Such benefits are not common standard in the Ukraine.”

Source: Die Zeit, 28.04.05, “The Automotive Supplier Leoni on a Worldwide Search for Low-cost Locations”

➤ Causes for higher efficiency by higher wages:

- In many developing countries, better paid employees are in a better state of health and therefore more productive.
- Higher wages reduce the fluctuation of the employees of a firm, since there are less better paid job opportunities outside the firm. A lower level of fluctuation causes lower costs of on-the-job training for new employees.
- Higher than average wages paid by a firm give rise to more job applicants and hence a larger opportunity to select employees with a higher qualification.
- Higher than average wages cause a higher loss for an employee in case of a dismissal. Every employee has therefore a strong incentive to give no reason for a dismissal (long duration of employee’s illness, default, theft etc.)

Efficiency-wage caused Unemployment

- Following the efficiency-wage theory, firms voluntarily pay higher wages than the market equilibrium wage.
- Consequently, the wages actually paid, are higher than the wage level that equilibrates labor demand with labor supply.
- As a result, classical unemployment can emerge, as the following diagram shows.

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5.1.3.3. Hysteresis-Unemployment

"hys·ter·e·sis: a duration of an effect when the forces acting upon a body are changed (as if from viscosity or internal friction); especially: a lagging in the values of resulting magnetization in a magnetic material (as iron) due to a changing magnetizing force."

(Merriam-Webster Dictionary)

➤ In other words: „Ratchet-Effect“

- Conditions:
  1. Qualification of an employee decreases with the duration of unemployment (lack of “training on the job”…).
  2. Collective labor agreements prohibit lower wages for new employees.

- Consequences:
  ◆ A Keynesian recession causes unemployment.
  ◆ The unemployed lose qualification. After the recession their qualification is lower than before the recession.
  ◆ For firms, lower qualification means lower productivity.
  ◆ Firms engage workers with lower productivity only, if their wages are lower than wages of workers with high productivity.
  ◆ If collective labor agreements prohibit lower wages for new employees, firms engage less workers after a recession than dismissed before the recession.
  => A part of the unemployed stays unemployed even after the recession is over.

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5.1.3.4. Minimum-Wage-Unemployment

➤ Minimum Wage Unemployment:

- In many countries minimum wages are legally required:

<table>
<thead>
<tr>
<th>2014</th>
<th>Hourly Wages [EUR]</th>
<th>Share in Average Wages</th>
<th>Share in Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>7.43</td>
<td>40%</td>
<td>1.9%</td>
</tr>
<tr>
<td>USA</td>
<td>5.46</td>
<td>33%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.65</td>
<td>16%</td>
<td>1.3%</td>
</tr>
<tr>
<td>France</td>
<td>0.06</td>
<td>16%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Spain</td>
<td>3.01</td>
<td>38%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Portugal</td>
<td>2.22</td>
<td>41%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>1.06</td>
<td>36%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Poland</td>
<td>2.11</td>
<td>32%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>2.07</td>
<td>40%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Eurostat
5. Causes of Unemployment
5.1.3.4. Minimum-Wage-Unemployment

► Minimum Wage Unemployment:

■ If minimum wages are higher than the market equilibrium wage, they will cause unemployment.

■ If minimum wages are lower than the market equilibrium wage, they will have no effects.

The equilibrium wage rate for high skilled workers is typically higher than the equilibrium wage rate for low skilled workers.

Therefore, a minimum wage typically causes unemployment in the market segment for low skilled workers. The larger the market segment of low skilled workers and the higher the minimum wage the larger the share of the total labor force which is affected by a minimum wage.

5. Causes of Unemployment
5.1.3.4. Minimum-Wage-Unemployment

► Minimum Wages in Germany:

■ In Germany labor unions and employer associations can set minimum wages for their sectors. They are, however, only binding for firms, which are members of employer associations. This is the case for 57% of West German employees and of 41% of East German employees.

■ The federal minister for labor is, however, entitled by law to declare such collective wage agreements for generally binding in sectors where more than 50% of all employees are labor union members and the employers associations of these sectors agree.

■ Furthermore, following the “Arbeitnehmerentsendegesetz” for special sectors the federal minister for labor is entitled to declare minimum wage for binding.

■ For the year 2008 these were:
  * Demolition Industry: 9.10 € to 11.96 €
  * Main Construction Trade: 8.50 € to 12.50 €
  * Roofer Trade: 10.20 €
  * Paintshop Trade: 7.50 € to 11.05 €
  * Commercial Cleaning: 6.58 € to 10.80 €
  * Electrician Trade: 7.90 € (East), 9.40 € (West)
  * Post Services: 8.00 € to 9.80 €

Since January 2015 a general minimum wage of 8.5 € is obligatory in Germany.

The Ifo-Institute (Munich) expects a loss of about 1.1 million jobs at a minimum wage of 7.5 €.

The Council of Economic Advisers of Germany guesses that only a minimum wage not higher than 5 € will have no negative unemployment effects.

A minimum wage of 7.5 € would increase the wages of about 10% of all employees in Germany.
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5.1.3.5. Mismatch-Unemployment

5.1.3.6. Minimum-Wage-Unemployment

5. Causes of Unemployment

5.1.3.5. Mismatch Unemployment

➤ Mismatch-Unemployment:

- As chapter 1 has shown, the industrial structure of an economy changes steadily.

- The typical pattern is:
  - The industry sector loses share in GDP, while
  - the service sector gains share in GDP.

- How does this affect the labor market?
5. Causes of Unemployment

5.1.3.5. Mismatch Unemployment

This analysis shows:

- If the wages in the industry sector are downward fixed by collective labor agreements, and
- the qualification of industrial workers does not allow them to switch over to the service sector,
- the process of structural change will cause mismatch unemployment.

Mismatch-Unemployment
Up to this point we have simplified the analysis:
- The labor demand curve was constant over time.
- As growth theory (Chapter 2) has revealed, the capital stock of an economy steadily grows.
- If capital and labor are sufficiently complementary (Chapter 2), this will lead to a steadily growth of labor productivity.
- In other words: The more (and better...) machines are available, the higher is the productivity of a worker.
- Profit-maximizing firms are therefore willing to pay higher wages.
- Therefore, the labor demand curve will shift upward, when the capital stock grows.

This analysis shows:
- A growing capital stock (= positive net investment) allows for growing wages without necessarily causing unemployment.
- Only wages must not grow stronger than the intersection point of labor supply and labor demand.
- On a free and unregulated labor market, the wage level tends towards this level in the medium-term.
- On a regulated labor market with collective wage bargaining, the question arises every year by how much wages can be increased without causing a loss of jobs?

To cope with these kind of questions the German Council of Economic Advisers (Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung = "the five wise (wo)men") has developed the concept of productivity-oriented wage policy:
- Basic idea: The collectively agreed growth of wages must not be higher than the growth rate of labor productivity.
- Argument: If wages grow stronger than labor productivity, this will cause dismissal of workers by firms.

However, this concept has its perils:
- If wages grow just as strong as productivity, this will not cause dismissals.
- but may nevertheless cause unemployment, as the following analysis shows:
5. Causes of Unemployment
5.2. Productivity-oriented Wage Policy

Result:
- The target of productivity-oriented wage policy is to prevent employment reduction.
- Thereby it favors the interest of already employed workers, whose wages grow stronger as under free market conditions.
- However, since productivity growth is totally used to increase wages of already employed workers, total employment does not grow.
- Since the increase of wages is an incentive for households to supply more labor, unemployment is the consequence.
- To prevent this form of unemployment, the yearly increase of wages must be smaller as the yearly increase of productivity. In this case firms have an incentive to engage the workers additionally supplied by households.

5. Causes of Unemployment
5.2. Productivity-oriented Wage Policy

Unemployment

5.3. Labor Market Laws in Germany

The legal foundations of collective wage agreements:
- § 77(3), Works Council Constitution Act:
  - Single plant bargaining agreements between the workers council and the employee must not affect regulations of the collective wage agreement between the labor union and the employers association.
  - Exception: The collective agreement explicitly contains opening clauses.
- § 4(3), Collective Labor Agreement Act:
  - Deviations from the collective wage agreement are only possible, if these deviations lead to higher wages and/or less working time. Deviations from the collective wage agreement concerning a higher security of employment are not allowed for.
- § 3, Collective Labor Agreement Act:
  - If a firm leaves the employers association, the current collective wage agreement between this association and the labor union is still binding for this firm until a new agreement is negotiated.
5. Causes of Unemployment
5.3. Labor Market Laws in Germany

➤ Resulting Problems:

- Under these legal conditions the insider/outsider problem sets always a strong incentive for trade unions to increase wages stronger than productivity growth and accept the resulting unemployment.
- The following case study illustrates the dubious results of this legal framework.

Case Study: Viessmann/IG-Metall (1):
The heating manufacturer Viessmann had the intention to produce its new gas heating module “Pendola” in Myto, Czech Republic, because of lower labor costs. However, the German workers council of the Viessmann plant in Allendorf convinced the management to install the new production facilities in Allendorf, and guarantee to forgo dismissals for a span of time of 3 years, and engage 60 new workers there in exchange for a three-years increase in weekly working hours from 35 to 38 without wage compensation. 96.4% of the Viessmann employees ratified this contract.

However, this modification of the collective wage agreement was not accepted by the labor union (IG-Metall). The union brought the case to court and demanded an exclusion of the non-union members in the workers council of Viessmann (which held the majority in this council).

Case Study: Viessmann/IG-Metall (2):
The court decided that the modifications of the collective agreement were not admissible for workers that were labor union members by § 4(3) of the Collective Labor Agreement Act. Following the court, the workers council was not entitled to negotiate with the Viessmann management.

The court decision caused strong protest by the Viessmann workers so that finally the IG-Metall gave in and accepted a modification of the collective labor agreement.

The new gas heating module “Pendola” was successfully produced in Allendorf so that instead of only 60 new employees 600 new employees were finally engaged there.

(Quelle: nach Sinn (2004; S. 132-3)

5.4. Questions for Review

➤ You should be able to answer the following questions at the end of this chapter. All of the questions can be answered with the help of the lecture notes. If you have difficulties in answering a question, discuss this question with me at the end of the lecture, attend my colloquium or send me an E-Mail.

1. What causes frictional unemployment? How can frictional unemployment be reduced? Is frictional unemployment a good explanation for the development of unemployment in Germany?
2. What causes Keynesian unemployment? How can Keynesian unemployment be reduced? Is Keynesian unemployment a good explanation for the development of unemployment in Germany?
3. What is “classical unemployment”? What kinds of classical unemployment are to be distinguished?
4. What causes insider/outsider-unemployment? How can insider/outsider-unemployment be reduced? Is insider/outsider-unemployment a good explanation for the development of unemployment in Germany?
5. What causes mismatch-unemployment? How can mismatch-unemployment be reduced? Is mismatch-unemployment a good explanation for the development of unemployment in Germany?
7. What causes hysteresis-unemployment? How can hysteresis-unemployment be reduced? Is hysteresis-unemployment a good explanation for the development of unemployment in Germany?
8. What causes minimum-wage-unemployment? How can minimum-wage-unemployment be reduced? Is minimum-wage-unemployment a good explanation for the development of unemployment in Germany?
5.4. Questions for Review

9. Assume that w/P equals the monthly wage rate in the following diagram. Determine the equilibrium monthly wage rate. What will happen, if the government pays a social welfare benefit per month equivalent to 11 little quads? What happens if the welfare benefit is equal to 6 little quads only?