

# The Unemployment Severity Index as a Measure of Qualitative Changes in Unemployment

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## 1. Introduction

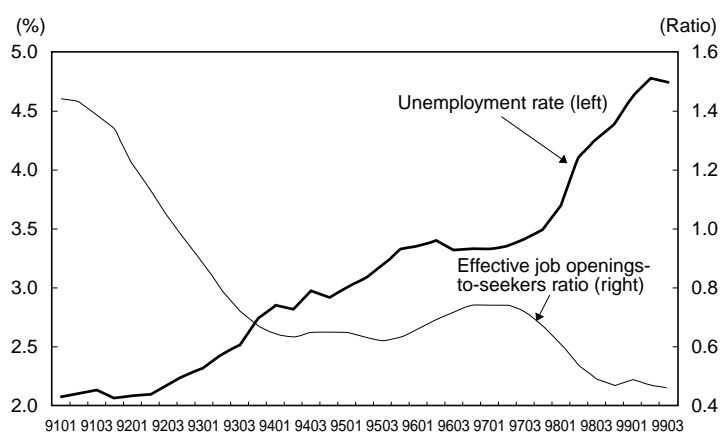
Japan's unemployment situation remains grim. The unemployment rate, though slightly improved from its high, remains in the mid 4% range, while the effective job openings-to-seekers ratio has settled below 0.5.

However, in addition to the high level of unemployment, a disturbing trend has been the growing loss of jobs due to corporate bankruptcy and restructuring. As a result, the unemployment severity index – which measures qualitative aspects of unemployment – has risen steeply since 1998, indicating that unemployed persons are experiencing greater financial distress.

While the economy shows signs of recovery, unemployment appears unlikely to improve significantly in quantitative terms. However, the severity index points out some important *qualitative* changes occurring in the unemployment situation.

**Figure 1 Recent Trends in Employment-Related Indices**

Source: MACA, *Labor Force Survey*, Ministry of Labor, *Employment Placement Through Labor Exchanges*.



## 2. The Severity Index as a Qualitative Indicator

The unemployment rate measures the number of “unemployed” persons – those who currently have no job, but are actively seeking one and can start work immediately. However, for any given unemployment rate, actual conditions of joblessness can vary considerably, particularly with respect to the amount of financial distress that is incurred.

In other words, quantitative trends measured by the unemployment rate alone are insufficient for an overall understanding of the impact of the jobless situation. This realization led us to create an index that measures the severity of conditions among the unemployed.

The severity index measures four attributes thought to aggravate the distress of unemployment: (a) reason for seeking employment, (b) relationship to the head of household, (c) type of job sought, and (d) amount of relief provided by unemployment benefits.\*

*Reason for seeking job* – Compared to persons who voluntarily become unemployed to find a better job, unemployment is a more serious problem for those who are forced to leave their jobs because of restructuring or corporate bankruptcy. (Involuntarily unemployed = high severity; voluntarily unemployed = low severity.)

*Relationship to head of household* – Because the term “head of household” generally refers to the person who earns most of the household income, that person’s unemployment is a more serious problem than the unemployment of a secondary income earner. Moreover, a middle-aged head of household who loses a job has great difficulty finding a new job, further aggravating the level of severity. (Unemployed householder = high severity; unemployed dependent = low severity.)

*Type of job sought* – Since persons seeking a part-time job while studying or doing housework can rely on other income sources, their situation is considered to be less severe than those seeking a full-time job. (Seeking full-time job = high severity; seeking part-time job = low severity.)

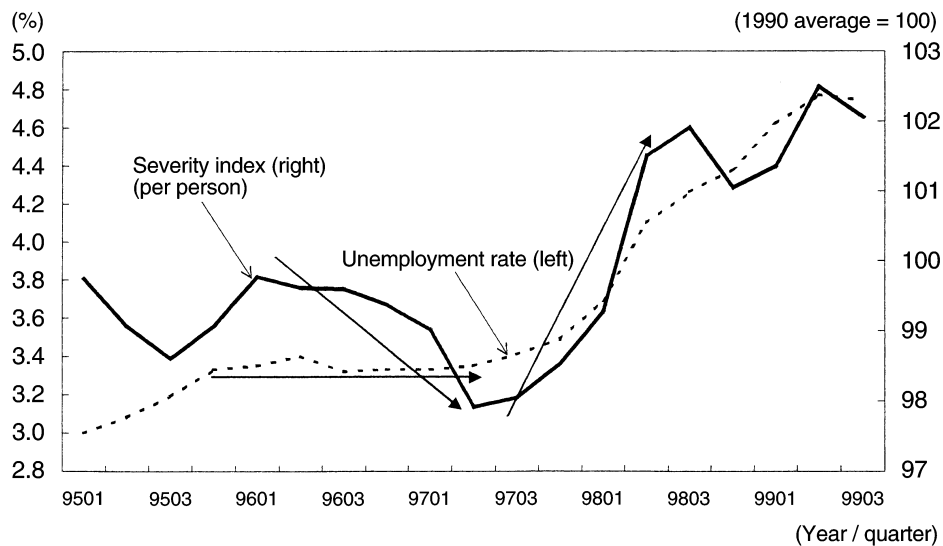
*Relief due to jobless benefits* – The degree to which the social safety net of unemployment benefits can offer relief is also important in determining the severity of unemployment. The higher the benefits as a percentage of former earned income, the lower the severity of unemployment.

While the duration of unemployment may be contributing to the recent increase in severity, monthly statistics for unemployment duration are not published and are therefore not included

in the structural parameters of the index.

Figure 2 shows trends in the severity index (1990 average = 100) for unemployed persons based on the above factors.

**Figure 2 Unemployment Rate and Severity Index**



Source: Compiled from MACA, *Labor Force Survey*; others.

### 3. Rapid Rise of the Severity Index Since 1998

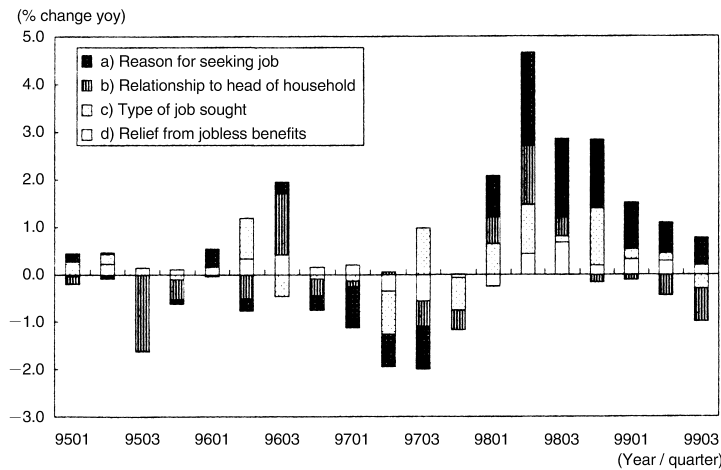
#### (1) Severity Index Trends Since the Bubble's Collapse

As Figure 2 shows, although the unemployment rate leveled off temporarily in the post-bubble recovery, the severity index actually dipped slightly. This occurred because of the relative increase in persons who voluntarily quit to seek other jobs. In particular, involuntary unemployment caused by restructuring began to decline from late 1996 to 1997, while voluntary unemployment continued to increase. Thus while the unemployment rate fluctuated only slightly, the severity of unemployment lessened.

In 1998, however, the trend changed. Along with a sudden surge in unemployment, the severity index also showed a definite increase. This was mainly because the unemployment rate rose with the rapid deterioration of the economy, causing the proportion of involuntary unemployment to rise. Nearly all of the increase in unemployment at that time was caused by layoffs as companies restructured or failed. Although the weight of unemployed heads of households in

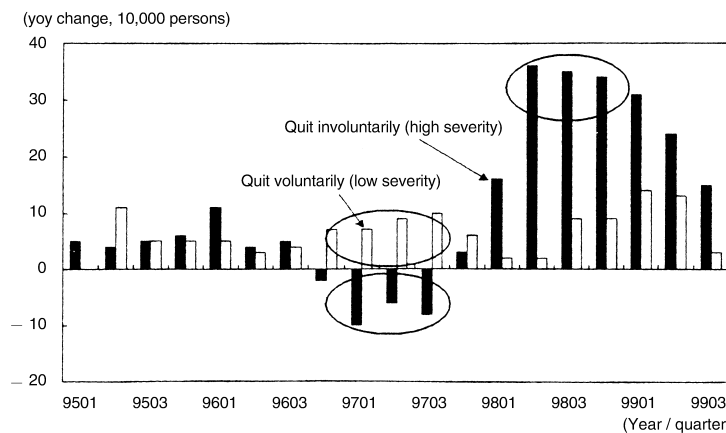
the unemployment figures was almost unchanged, the weight of those seeking full-time rather than part-time jobs grew and this served to increase the severity index.

**Figure 3 Factors Contributing to the Severity Index (yoy)**



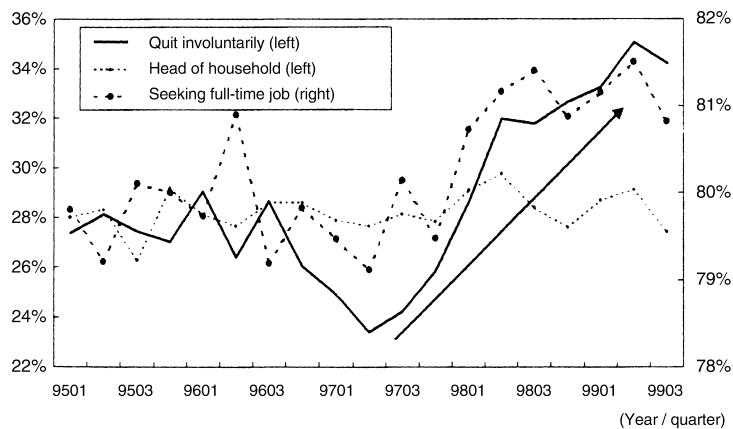
Note: The bar graph shows factor contributions to the yoy change in the severity index.

**Figure 4 Increase in Unemployment by Reason for Seeking Job**



Source: MACA, *Labor Force Survey*.

**Figure 5 Increase in Proportion of High-Severity Unemployment Since 1998**

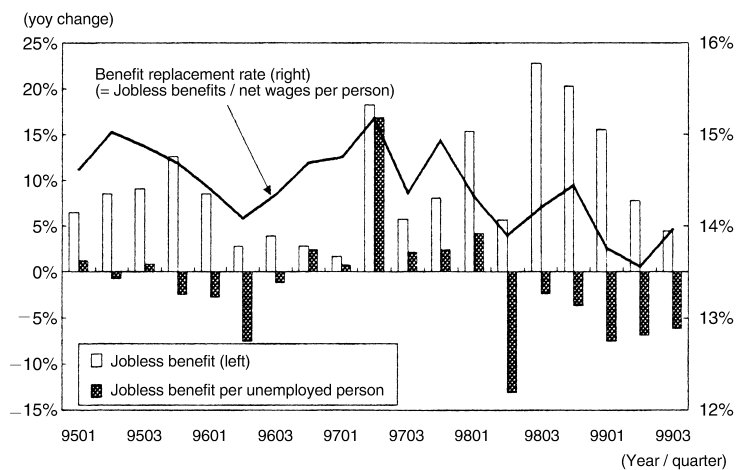


Note: Shows proportion of unemployed persons with high severity.  
Source: MACA, *Labor Force Survey*.

## (2) Jobless Benefits Have Limited Effect in Reducing Severity

With the severity index thus increasing after 1998, has unemployment insurance performed as a safety net in mitigating financial distress? As the employment environment worsened, total jobless benefits increased significantly. However, after the April-to-June quarter of 1998, benefits per person actually began to fall. This is because the proportion of unemployed persons receiving benefits fell as more unemployed persons either were not vested or had depleted their benefits. The benefit replacement rate, which measures benefits as a proportion of earned income while employed, has continued to fall since 1997. Clearly, the severity of unemployment since 1998 has not been mitigated significantly by jobless benefits.

**Figure 6 Limited Effect of Jobless Benefits on Severity**



Note: The benefit replacement rate is seasonally adjusted.

Jobless benefit amount is per unemployed person. Net wage is per worker.

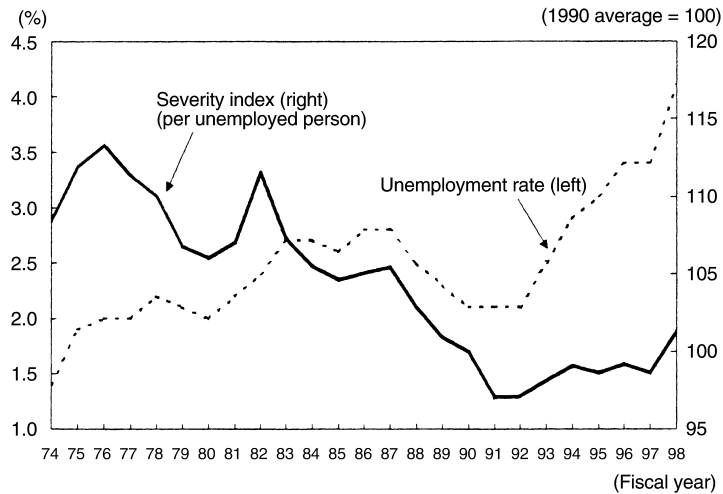
Source: Ministry of Labor, *Monthly Report on Labor Statistics*, and *Monthly Report on Unemployment Insurance*.

## 4. Long-term Decline of the Severity Index

### (1) Long-term Trends in the Severity Index

As shown above, since 1998 the severity index has risen in tandem with the unemployment rate. However, the long-term trend since the 1970s has been for the severity index to fall even as the unemployment rate has climbed.

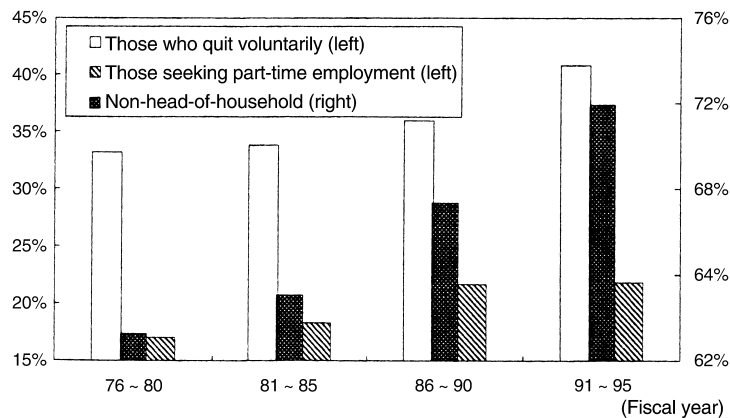
**Figure 7 Long-Term Trends in the Unemployment Rate and Severity Index**



Source: Compiled from MACA, *Labor Force Survey*; others.

This is explained by the rising proportion of low severity unemployment with respect to reason for seeking job, relationship to head of household, and type of job sought. For example, the average proportion of voluntary unemployment rose from 33% in fiscal 1976-1980 to over 40% in 1991-1995. Even though involuntary unemployment is now rising as a result of restructuring and other changes, the proportion of voluntary unemployment still accounts for 35% (Q3 1999), which exceeds the pre-1990s level. The average proportion of non-head-of-household unemployed, including spouses and single-person householders, has also risen from around 60% in the 1976-1980 period, to 70% in 1991-1995.

**Figure 8 Long-term Rise in Proportion of Low-Severity Unemployment**



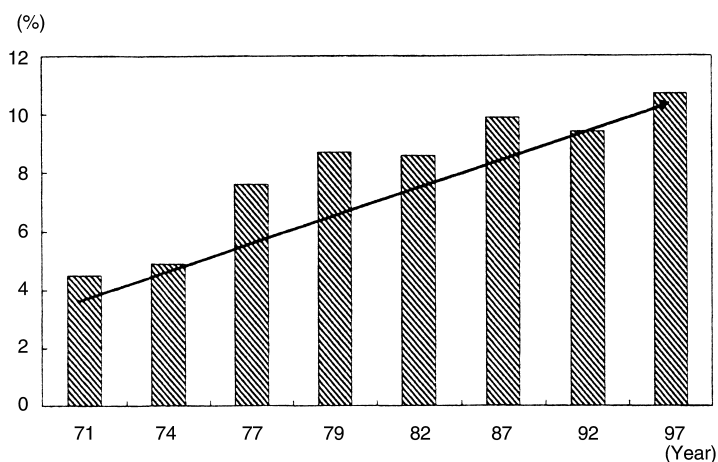
Notes: (1) Proportion of overall unemployed with low-severity attributes. (2) Values are averages for each five-year period. (3) Values from 1984 are from MACA, *Labor Force Survey*; statistics before 1984 are from MACA, *Special Labor Force Survey*.

## (2) Background to Long-Term Decline of Severity Index

The rising proportion of low-severity unemployment can be attributed to several background factors.

*Change in work attitude mainly among the young* – The proportion of new employees expressing a desire to remain at the same company until retirement is falling every year, while the proportion avowing to change jobs as circumstances dictate is rising over the long term. The proportion who want to change jobs also continues to rise over the long term. While in the first half of the 1970s these people accounted for less than 5%, the most recent survey (1997) shows that this group now exceeds 10%, despite the economic doldrums of post-bubble Japan.

**Figure 9 Proportion of Workers Wanting to Change Jobs**



Note: Proportion of workers wanting to change jobs = Persons wanting change / persons employed  
Source: MACA, *Basic Survey On Employment Structure*.

*Increase in part-time jobs* – The proportion of part-time jobs is growing. This trend also appears to be contributing to the increase in voluntary unemployment.

*Increase in non-head-of-household workers* – In addition, the increase in the rate of participation of women in the workforce has pushed up the weight of non heads of household workers in the labor market. This has also resulted in the rise in the weight of non heads of household in the unemployment figures.

In the past, for workers reluctant to become unemployed without a compelling reason, becoming unemployed was a very painful experience. But because of the changes in work attitudes and forms of employment, workers who would have stayed on in the past are now leaving their jobs, while a growing number of unemployed workers are remaining in the labor market.

In other words, adding the comparatively low-severity unemployed to the more traditional unemployed (those reluctant to become unemployed without good reason) sharply pushes up the total number of unemployed, and as a result dilutes the severity per individual.

However, the low severity index per individual should not be confused with a low severity index for the labor market overall. For example, although the severity index since 1990 has been lower than in the 1970s, today's unemployment rate of around 4.5% is quantitatively more than double the 2% of the 1970s. Thus to judge the level of severity for the overall labor market, we must consider both quantitative and qualitative aspects.

## 5. Future Outlook

The grim employment situation since 1998 reflects both the surge in unemployment rate and the rise in the severity index at the individual level. In other words, the severity has increased both quantitatively and qualitatively. How will the employment situation change in the future?

### (1) Unemployment Rate Predictions

Despite signs of a slight improvement in the unemployment rate, which is a quantitative index, any further improvement in the future is unlikely.

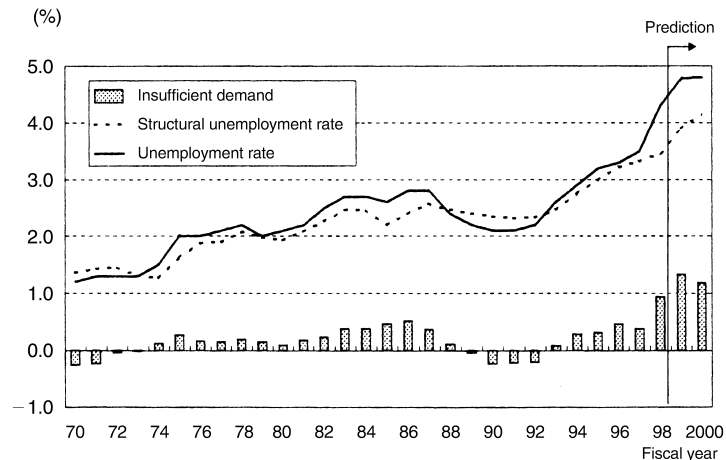
First, the weak demand for labor will not fully recuperate because the weak economic recovery remains weak and growth is expected to be low for some time.

Also, as mentioned earlier, Japan's labor market contains much low-severity unemployment that is not greatly affected by the ups and downs of the economy. Even if the economy continues to improve in the future, the unemployment rate itself may not improve much because of the increase in voluntary unemployment and in non-head-of-household unemployment.

The limitation in improvement of the unemployment rate can be demonstrated quantitatively. As Japan's unemployment rate has risen over the long term, so too has the structural unemployment component. Structural unemployment arises because job seekers are not qualified for the jobs available, and exists even when supply and demand are in quantitative balance in the overall labor market. If we explain the unemployment rate using variables for cyclical factors (effective job openings-to-seekers ratio) and variables for structural factors (such as the age mismatch index), structural unemployment is estimated to rise to around 4%. This means that even if the economy recovers and the labor demand and supply come into balance, the unemployment rate will drop only to 4% (Figure 10).



**Figure 10 Unemployment Rate Prediction**



Notes: The structural unemployment rate is that part of unemployment explained by proportion of workforce in tertiary industry, and age mismatch index. Insufficient demand derives from the effective ratio of job openings-to-seekers. index of mismatch between ages)

Source: MACA, *Labor Force Survey*; Ministry of Labor, *Employment Stability Statistics*.

Therefore, little significant improvement can be expected in the unemployment rate in the meantime because of the weakness of the economic recovery (lack of demand for labor) and the rise in the structural unemployment rate. The unemployment rate for fiscal 2000 is expected to remain high at 4.8%, unchanged from fiscal 1999 (estimated).

## (2) Severity Index Could Decline Further

On the other hand, there is still room for decline in the severity index. From 1998 the proportion of high-severity unemployed persons (involuntarily unemployed, head of household, and looking for full-time job) has increased rapidly. However, this proportion could revert to its long-term trend and start declining in the future.

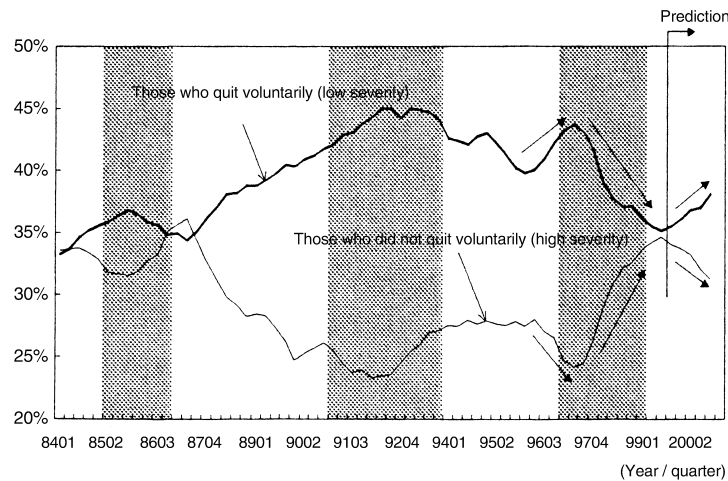
For example, after increasing sharply from 1998, unemployment due to restructuring and corporate bankruptcy may start to decline in the future along with an economic recovery. At the same time, we may well see an increase in voluntary unemployment.

In the economic downturn after April 1997, companies began reducing employment with greater determination than ever before in Japan. As a result, companies now seem to be over the peak of their employment adjustments, and some have declared their restructuring complete.

In actual fact, involuntary unemployment resulting from corporate restructuring and bankruptcy, which continued to increase from October 1997, began to decline about two years later in November 1999. Overall unemployment has continued to increase year-on-year (as of

November 1999), but this is because of an increase in voluntary unemployment. We have begun to see signs of the high unemployment rate persisting and the severity index falling.

**Figure 11 Proportion of Unemployed by Reason for Seeking Job**



Note: The shaded areas indicate recessions.

Source: MACA, *Labor Force Survey*

Of course, it is desirable for unemployment to improve both quantitatively and qualitatively. However, with the unemployment rate unlikely to manage more than a small drop, we should focus more on qualitative aspects when considering the future employment outlook. The severity index is an important factor in grasping relevant trends.

With respect to employment policy, it is vital to focus not just on the employment rate, which shows the quantitative aspects of the problem, but on the qualitative aspects as well, and to place emphasis on policies for decreasing high-severity unemployment.

\* In compiling the severity index, weights and categories were derived from EPA, *Unemployment: Its Structure and Severity* (1988).