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Minimum wage in Chile:
An example of the potential
and limitations of this
policy instrument

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Foreword

What happens to the wage structure, the contractual situation of workers and the level of employment when increases in the minimum wage are not in phase with the rest of the economy, e.g., when adjustments are well above the increase in consumer prices and gains in labour productivity over several years and at a time when the economy enters recession?

The analysis contained in the paper answers this question by focusing on the Chilean situation between 1998 and 2000 and using the National Socio-Economic Characterization (CASEN) survey. Using the CASEN data makes it possible to disaggregate the analysis by firm size and sectors of the economy and thus to examine whether increases in the minimum wage might have contributed to the informalization of employment.

The main findings of the paper suggest that in enterprise of all sizes and in all sectors of the economy, there has been an increase in the number of workers receiving less than or around the minimum wage and that a larger number of workers did not have a written contract in 2000 than in 1998. It also suggests that the wage structure of enterprises remained largely unchanged following the rise in the minimum wage. In conclusion, one major objective of the minimum wage policy, e.g. the amelioration of living conditions of low-paid workers, could not be achieved within this context.

Finally, the paper draws our attention to the necessity of carefully designing the minimum wage fixing machinery as such a situation was made possible because adjustments were based on economic forecasts that turned out to be unrealistic.

It is with pleasure we welcome ILO field colleagues in Santiago (Chile) into our Employment Paper series. We hope for more inputs from them in the future.

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A. Introduction

The yearly adjustment in the minimum wage, effective from June of each year, has been a common practice in Chile for many years. During the 1990s, the basic method used to establish the percentage of adjustment involved taking into account expected changes in inflation and productivity to compensate for loss of purchasing power and, furthermore, to increase the real value of the minimum wage in accordance with changes in the economy.

When the three-yearly adjustment was set for 1998-2000 (31 May 1998), the Chilean economy was undergoing rapid growth, inflation was in the single digits and continuing to fall, productivity was increasing rapidly and the labour market had the lowest unemployment rate of the decade. The economic forecast at this time was for a yearly GDP growth rate of 5.7 per cent. Minimum wage adjustment was based on estimates of an average yearly inflation rate of 4 per cent and a productivity increase of 4 per cent. Moreover, it was considered necessary to include a third factor of further adjustment in order to compensate for the shortfall noted in the changes in the real minimum wage with respect to productivity in the 1990s (given that previous adjustments had been based on expected, and not actual, productivity).

However, a few months after the adjustment to the minimum wage had been implemented, the Chilean economy reacted to the effects of the Asian crisis, the consequences of which were severe and significantly changed the outlook established at the time of setting the adjustment to the minimum wage. Inflation continued to fall as had been forecast, but the increase in productivity was considerably more modest than anticipated (2.3 per cent instead of 4 per cent per year). Furthermore, the economy went into recession and the unemployment rate went into double figures. In this new context, the adjustments to the minimum wage were much greater than those that took place for other wages, and this gave rise to obvious imbalances both in the average level of wages and in some branches of economic activity, in particular, in small enterprises.

It was noted that the three-yearly agreement that set the increases to be implemented over the 1998-2000 period had changed a series of relationships that had been relatively stable in the first half of the 1990s. The minimum wage adjustments of the 1998-2000 triennium were very significant in real terms and did not reflect the economic situation, which entered a recessive phase. As such, these increases were not transferred to the rest of the wage structure by enterprises.

When information from the 1998 and 2000 CASEN surveys is compared, it can be seen that the number of wage earners receiving less than, or very near, the minimum wage has increased, that a larger number of wage earners do not have a written labour contract, and that these situations have become common in all sizes of enterprise and in all economic sectors. The conclusion is that, during the time that economic growth was undergoing a brutal check, the large increases in the minimum wage were not able to be absorbed by the wage scale of enterprises and, therefore, were not able to improve significantly the situation of the wage earners employed and of workers in general.

The indicators used for the adjustment carried out in 2001 would seem to show that there have been no significant changes with regard to the relationship between the minimum wage and other wages. On the contrary, the relationships prevailing in 2000 would seem to have stabilized.

In a broader analysis, the relationship between wages and consumption is discussed. On the one hand, it is a known fact that the Chilean economy is having serious problems in

creating new jobs. In fact, during the 1998-2001 period, practically no net new jobs were created. On the other hand, monthly wages show very low growth in recent years. As a result of the low level of job creation and the relative stagnancy in the purchasing power of wages, total wages (which are calculated on the basis of the number of wage earners and their average income) are more or less constant, which undoubtedly is one of the factors that explains why domestic consumption remains weak. In this respect, discussion should focus on whether a large increase in the minimum wage would be a useful factor in increasing internal demand.

This document examines the situation described and endeavours to contribute criteria to the debate of the parties concerned on the adjustment of the minimum wage. It is divided into six sections. The first section looks at general classification criteria and the characteristics of the minimum wage systems that are applied in various countries. The second section focuses on the Chilean experience in order to contrast the evolution of the minimum wage with that of a selected group of macroeconomic indicators in the long term. In the third section, the structure of employment in Chile in 1998 and 2000 is reviewed and wage earners with income around the level of the minimum wage are quantified and characterized. The fourth section examines evolution of the minimum wage in comparison with the general wage average and the average wage of unskilled workers, particularly in three branches characterized by their low wages. The fifth section examines the relationship between the evolution in wages and domestic consumption and questions the role of the minimum wage in this context. Finally, the effect of hypothetical increases in the minimum wage on labour supply and demand are assessed, calculating the unemployment rate that would arise as a result.

B. Characteristics of the minimum wage

1. *Forms of classification*

At present, the authorities in most countries are facing restrictions on intervention in factors relating to fixing wages. Apart from emergency situations, in which they are able to apply a wage freeze or set a maximum limit to adjustment, in practice the responsibility for determining wages has been given to the social actors. Collective bargaining is a fundamental instrument in many sectors, especially where the nature of the work and legislation make possible the development of trade union organizations. However, a decrease in cover can be seen in many countries. In this way, wage fixing in many cases arises out of a more fragmented and even more individual negotiation process. Within this general framework, the importance of the minimum wage is growing, not only because it sets a lower limit for collective bargaining but particularly because it establishes a floor for those wage earners in the formal sector who are not covered by any collective agreement.

Although the minimum wage is widely used and easily understood, its application varies considerably. The policy of a minimum wage can have various objectives: adopt specific mechanisms and procedures; use different criteria for first setting it or for carrying out subsequent adjustments; and have more or less broad cover. However, the experiences in the various countries can be classified according to two general criteria: its extent of application and its cover. Each one of these has various ways of being implemented. These will be examined in the following pages and some of the criteria used when introducing a minimum wage, along with some of the methods of adjustment that can be used, will be summarized.

2. Extent of application

There are four possible ways of classifying the minimum wage according to its application, distinguished by varying degrees of complexity, with preference for one or the other depending on the choice of objectives.

The first and broadest is a national minimum wage, which is valid throughout the country. Although setting an appropriate minimum wage for an entire country is relatively complex, once this has been implemented its dissemination and monitoring is relatively simple. This is the system most used in various countries, such as, France, Netherlands, Portugal, Spain, and the United States, and in various Latin American countries, such as Argentina, Brazil, Chile and Uruguay.

Another is to set minimum wages applicable in specific regions or areas of a country that have a relatively similar degree of economic development and labour market situation. Japan, for example, has nationally coordinated regional minimum wages that group 47 prefectures into three relatively homogeneous groups. The Government provides these with general guidelines for adjustment. Brazil had 24 minimum wages (one for each state) and reduced these to one; Mexico also simplified its minimum wage system by reducing it to three levels applicable according to geographic areas of similar development. Given the size of the two latter countries and their distinct regional dissimilarities, the topic comes up for debate on a regular basis.

A third way of setting minimum wages is according to economic sector. In Austria, Denmark, Finland, Germany and Sweden, minimum wages are set through collective bargaining at the level of the branches of activity and are compulsory for all enterprises in each sector. In these countries, there is quite significant cover. However, this method can also be directed towards the more vulnerable sectors in the labour market. This was the area on which the Wages Councils that existed in Great Britain prior to the Conservative Government of Margaret Thatcher focused. In this situation there was limited state intervention and there was no impact on the wage scale.

A fourth way, more fragmented than the previous way, is to set minimum wages according to professional category. Without a doubt, this is the most complex system. In 1987, in Costa Rica, there were 520 minimum wages for different types of work. However, as the system already did not correspond to reality – some occupational categories were already disappearing, while new ones were not included in the old classification – this was simplified to 72 minimum wages with more generic occupational descriptions, thereby abolishing at the same time the regional differences that existed in the past.

3. Extent of cover

Minimum wage systems also differ with regard to the cover desired. General application of a minimum wage seeks to cover all workers without exception. Usually, a minimum wage on a national scale also has general cover.

There are also systems that have a general application but that, in specific circumstances, take into account some exceptions, which certain categories of workers, types of enterprises or specific locations can apply for through an administrative procedure.

One example is Portugal where, between 1975 and 1989, struggling enterprises with fewer than ten workers, could be exempt from applying the minimum wage. Enterprises that wished to take advantage of this exemption had to request authorization from the Ministry of Labour. This rule was introduced during a period of generalized economic difficulties, when the concern was to avoid creating unemployment. Once the situation was

resolved, there was a considerable reduction in the number of exemptions approved and the demand for these by the enterprises decreased. Another example is the Republic of Korea which exempted small enterprises with fewer than ten workers.

A common exception in recent years to the application of the minimum wage has been among young people. On the one hand, there is the supposition that their productivity is less than that of older workers. On the other, it is important to facilitate their inclusion in the labour market as it is very usual to note that the rate of unemployment among young people is higher than that of other groups. In Uruguay, those younger than 18 years receive 75 per cent of the minimum wage; in Holland, there is an ascending scale which begins at 15 years and reaches 100 per cent at 23 years. Belgium, France, New Zealand, Norway, Portugal and Spain also have specific minimum wages for young people.

Finally, there are minimum wage systems that are restricted to certain sectors with the intention of protecting the most vulnerable workers. These systems can be directed at providing cover for those activities where there are no trade unions, or collective bargaining is not well developed. Along these lines, for example, a minimum wage might be set for domestic workers.

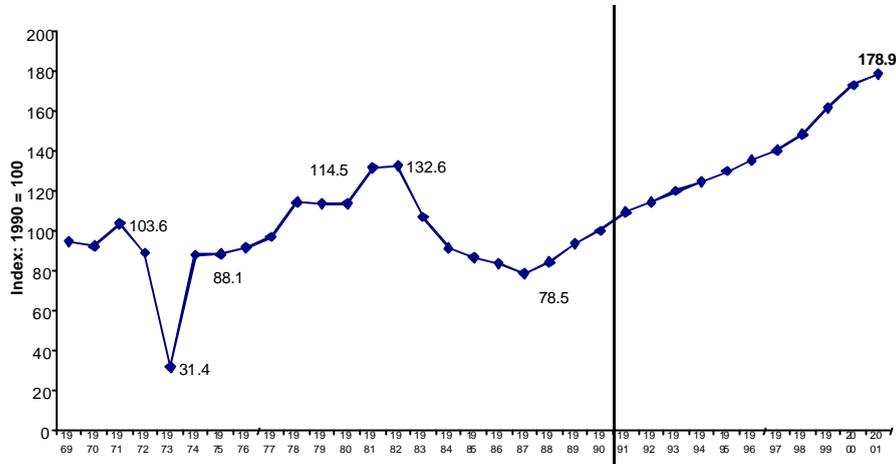
C. The minimum wage: Its social function and importance as a factor of efficiency

This section looks at the social aspect of the minimum wage, i.e. the change in purchasing power after one year as a basis for comparison. The real minimum wage is also examined as a factor of efficiency, by virtue of its evolution in comparison with GDP per capita, the general wage scale and productivity.

1. *The minimum wage and its social aspect: Purchasing power*

In 2001, the real minimum wage continued the growth pattern that had begun in 1988. It can be seen that the levels reached have no historic precedent in the past 32 years (figure 1). This long-term approach gives rise to two observations. First, compared with the first half of this period, when the real minimum wage increased erratically, from 1987 there were 14 successive real increases. Second, by 1999 the real minimum wage had surpassed the previous highest point, which occurred in 1982. However, it should be noted that after 1982 one of the most serious crises in the past century occurred in the Chilean economy, causing severe imbalances, while at the present time, the situation differs considerably.

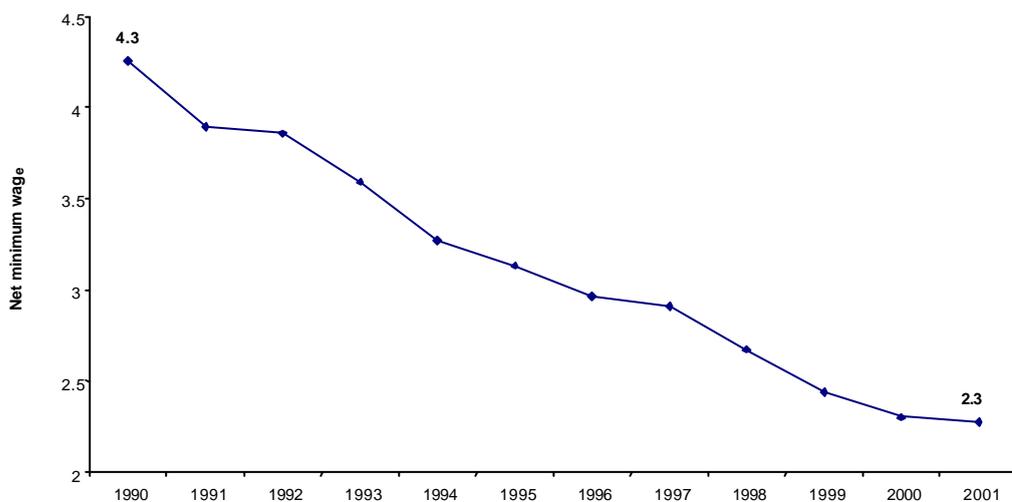
Figure 1. Change in purchasing power of the minimum wage for 1969-2001



Source: ILO, based on data from the INE, the Central Bank and N. Garcia (PREALC, 1991).

A different method of analysing the purchasing power of wages is to compare them to the cost of a basket of basic needs. This reflects a continuing improvement in the purchasing power of the minimum wage, although at the same time it shows that it is still not enough to cover the basic needs. The number of minimum wages required to acquire a basket of basic necessities fell from 4.3 in 1990 to 2.3 in 2001 (figure 2a).

Figure 2a. Chile: The net minimum wages necessary to cover a basket of basic needs (Nov. 1990-Nov. 2001)

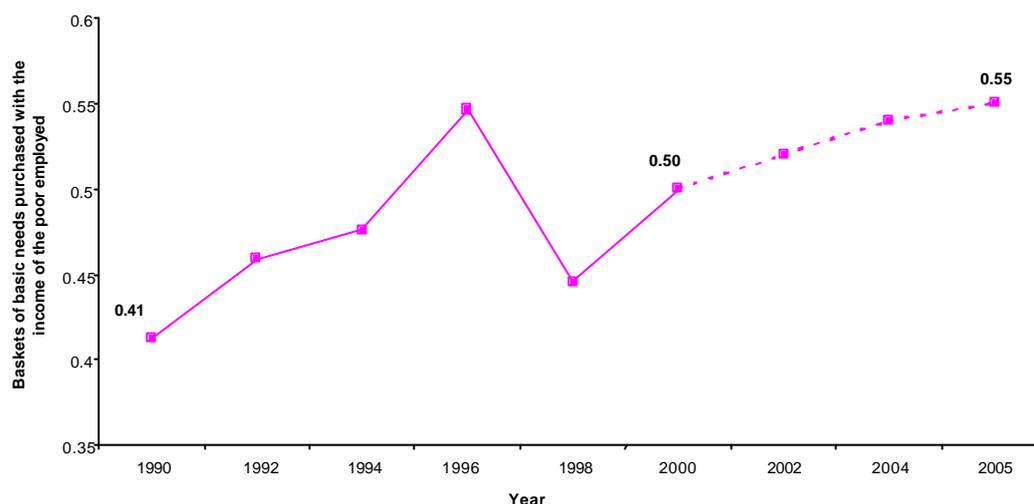


Source: ILO, based on CASEN survey data.

Another way to analyse the social aspects of the minimum wage is to observe what happens with the relationship between poor families' income from work and the number of

baskets of basic needs (poverty line) that can be purchased with this. In order to quantify this relationship, the data used were the average number of employed in poor families and the average family income from work for each year. This allowed computation of the total income through work of these families. This income was compared with the value of a basket of basic needs, looking at the quantity or proportion of the basket that poor families were able to buy with their total income from work (figure 2b).

Figure 2b. Income from work and degree of satisfaction of the basic needs for poor families, 1990-2005 ^{*.1} (percentage)



* Estimated.

¹ The average number of employed per poor family was 1.08 (1990), 1.13 (1992), 1.09 (1994), 1.26 (1996), 0.95 (1998) and 1.04 (2000).

Source: ILO, based on CASEN survey data.

The relationship indicated improved over the past decade, increasing from 0.41 baskets that poor families were able to purchase with their income from work in 1990 to 0.50 baskets in 2000 (figure 2b). It should be pointed out that this increase was basically due to the improvement in the real minimum wage, given that the number of employed in each poor family has remained practically stable throughout the decade. Moreover, the relationship between the net minimum salary and the average income of poor families is increasing: from 0.6 in 1990 to 0.9 in 2000. This shows the importance of the policy of a minimum wage in improving the purchasing power of the poorest families.

2. The minimum wage as a factor of efficiency

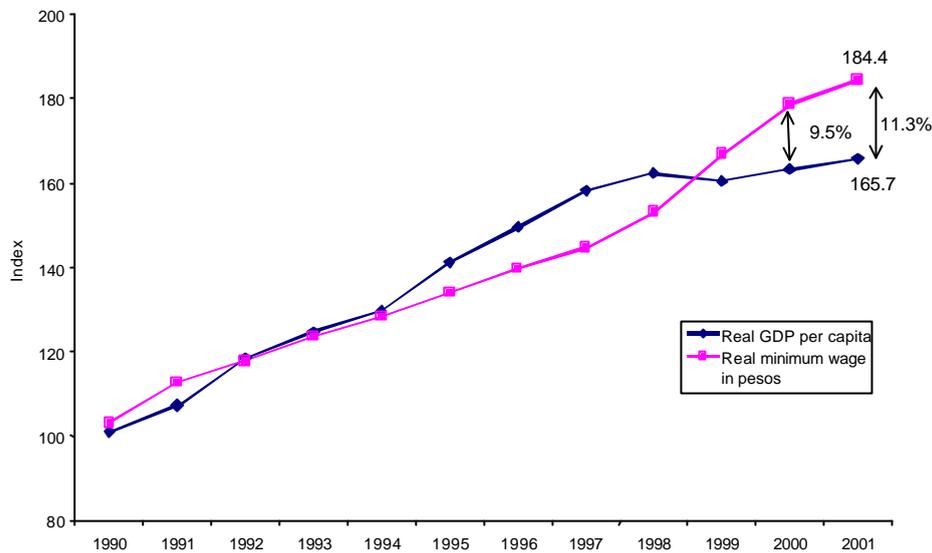
While the purchasing power of the minimum wage gives an account of its role as a social variable, it is insufficient for analysis of its role in the enterprise. To do this, the subject of the minimum wage as a factor of efficiency is examined. This is carried out by comparing its evolution with that of GDP per capita, productivity and general wages.

3. The minimum wage and GDP per capita

The 1990-2001 period can be divided into three sub-periods (figure 3). During the first, from 1990 to 1994, the real minimum wage and real GDP per capita grew at the same rate. During the second, from 1995 to 1998 the GDP per capita grew more rapidly than the real minimum wage, thereby creating a gap between the two. In 1999, this gap was

reversed and the minimum wage index overtook that of GDP per capita. In spite of a moderate increase in the minimum wage, which took place in 2001, the gap between these indicators widened from 9.5 per cent to 11.3 per cent, i.e. by 1.8 percentage points.

Figure 3. Changes in the real minimum wage and GDP per capita, 1990-2001 (Index 1989-90 = 100)



Source: ILO, based on data from the INE and the Central Bank.

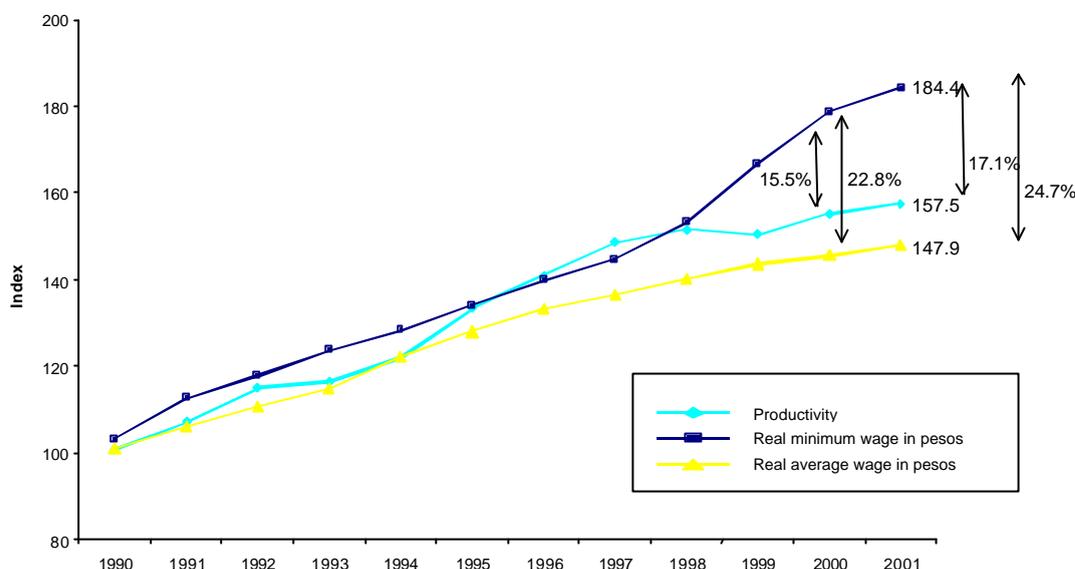
4. The minimum wage and productivity

The comparison of the change in the real minimum wage with productivity shows that up until 1998 both followed a similar path (figure 4). From 1999, a gap opened up in favour of the minimum wage, which in 2001 reached 17.1 per cent. This means that in 2001 this gap increased by 1.6 percentage points.

5. The minimum wage and the general wage

A further macroeconomic criterion is given by the changes in the minimum wage and the real general wage as an indicator of salaries in the private sector (figure 4). Once again, up until 1997, both indicators grew at a similar rate (with the minimum wage at around 5 per cent higher). However, after this time, the evolution in the general wage was adjusted to productivity, these following parallel trajectories. The gap between the real general wage and the real minimum wage reached 24.7 per cent in 2001, 1 per cent greater than the figure for the previous year.

Figure 4. Changes in the real minimum wage, the real average wage and productivity, 1990-2000
(Index 1989-90 = 100)



Source: ILO, based on data from the INE and the Central Bank.

The information presented shows that between 1998 and 2000 an imbalance was created between the evolution of the minimum wage and macroeconomic indicators. This can be explained by the economic crisis and the subsequent fall in GDP in 1999, which caused the productivity and inflation forecasts for the triennium, carried out at the beginning of 1998 and used to calculate the adjustment, to be overestimated. As a result of the adjustment set at the beginning of 1998, the nominal minimum wage reached 100,000 pesos in 2000.² Instead, if the adjustment was implemented taking into account only actual inflation and productivity, the average nominal minimum wage for 2000 would have been 82,698 pesos, i.e. 17.1 per cent less than the actual minimum wage.

As a result of the distinct evolution of both indicators, the minimum wage increased as a proportion of the general wage very strongly over a very short time. The increase in the minimum wage carried out in 2001 effectively would have maintained the situation that occurred in 2000. This point will be further developed in section E.

D. Who earns the minimum wage? A comparison of 1998 and 2000

This section presents the structure of workers employed with respect to income from their main area of work for 2000 based on the CASEN survey and, in some cases, a comparison is made with the results for 1998. The data presented in this study take into account only wage earners, without correcting for hours worked. This implies a slight overestimation of employees earning low income as the full minimum wage rate applies to wage earners who work a full working day (those working less hours are entitled to the corresponding proportion of the minimum wage).

² According to the exchange rate at the end of December 2000, the minimum wage equalled US\$175.

1. Definitions and explanations of methodology

The legal minimum wage is a monthly value that sets the minimum wage for wage earners in the private sector who work a full day. On the one hand, self-employed workers are not covered by the minimum wage and they are not taken into account in this study. On the other hand, there are workers who do not work a full day and, because of this, they have an income that is below the minimum. If this situation were to be corrected by taking into account hourly income, some of these workers would receive more than the minimum wage calculated on an hourly rate.

It was considered that to identify workers who earn the minimum wage or less was not enough for the objective of this study, as the areas immediately above the minimum wage are also directly affected by any increase in the minimum wage. An increase in the minimum wage produces some adjustment of the wage scale. Increases in the minimum wage require a certain overflow in the following areas in order to maintain the existing wage differences, particularly in areas of low income.

Therefore, it is possible to refer to a “range of direct influence” (where increases in the minimum wage should be passed on almost one for one) and of “extended influence” (where increases in the minimum wage can be passed on in smaller proportions). The following ranges were therefore established: up to 1 minimum wage, more than 1 and up to 1.25 minimum wages, more than 1.25 and up to 1.5 minimum wages. In this section, the minimum wage used is the net minimum wage, comparable to the definition of income used in the survey.

2. The importance of the minimum wage for agricultural and for non-agricultural wage earners

In 2000, 43 per cent of wage earners had incomes of up to 1.5 minimum wages, while 14 per cent had incomes less than or equal to the minimum wage. When separating out wage earners employed in the farming sector and those not employed in the farming sector, it was seen that the minimum wage in the former is particularly significant (78 per cent of wage earners in agriculture have incomes of less than 1.5 minimum wages, compared to 36 per cent in the non-agricultural sector) (figures 5 and 7).

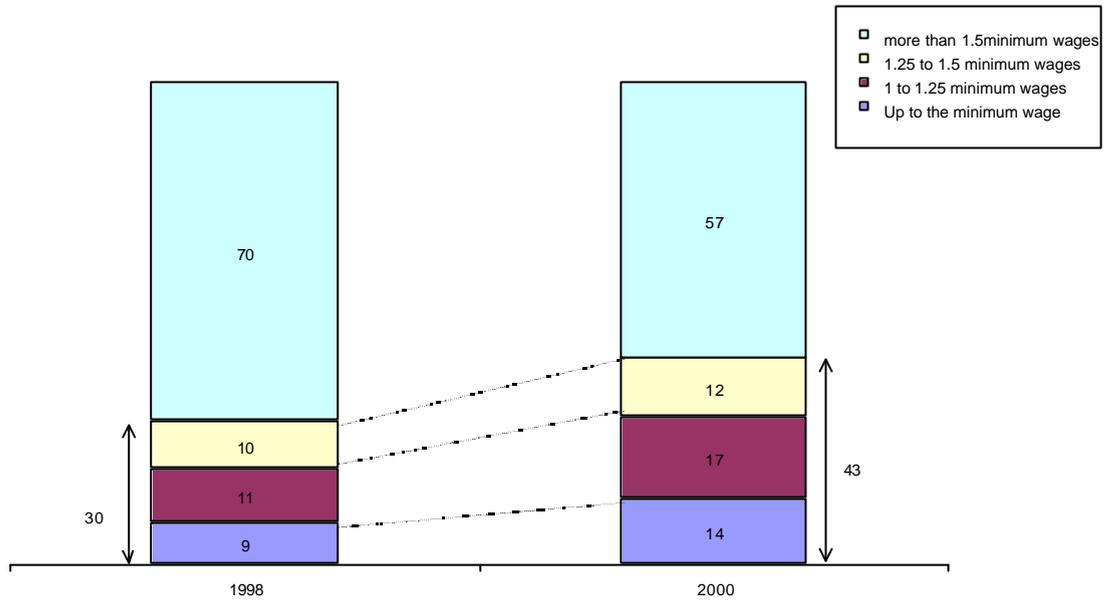
Comparing these percentages with those from 1998, there is a strong increase in the proportion of wage earners with low incomes. In 1998, 30 per cent of wage earners had incomes of up to 1.5 minimum wages, and in 2000 this proportion had reached 43 per cent (figure 5). There were increases in all ranges of the minimum wage: up to 1 minimum wage went from 9 per cent to 14 per cent, from 1 to 1.5 minimum wages went from 11 per cent to 17 per cent, and from 1.25 to 1.5 minimum wages went from 10 per cent to 12 per cent.

The non-agricultural sector showed a strong increase, with the proportion of wage earners with incomes of up to 1.5 minimum wages rising from 24 per cent in 1998 to 36 per cent in 2000 (figure 6). The agricultural sector, although characterized by its low wages, also showed an increase from 71 per cent to 78 per cent of the proportion of wage earners with incomes of up to 1.5 minimum wages (figure 7).

The increase mentioned in the proportion of low-income wage earners took place during a period of strong real adjustments in the minimum wage as a result of the three-yearly agreement. In many cases, the increases in the minimum wage could not be effectively applied in enterprises and in some cases they did not extend over the wage scale. The result, therefore, was that a large percentage of workers were grouped in the lowest income ranges. This information shows that applying large increases that do not

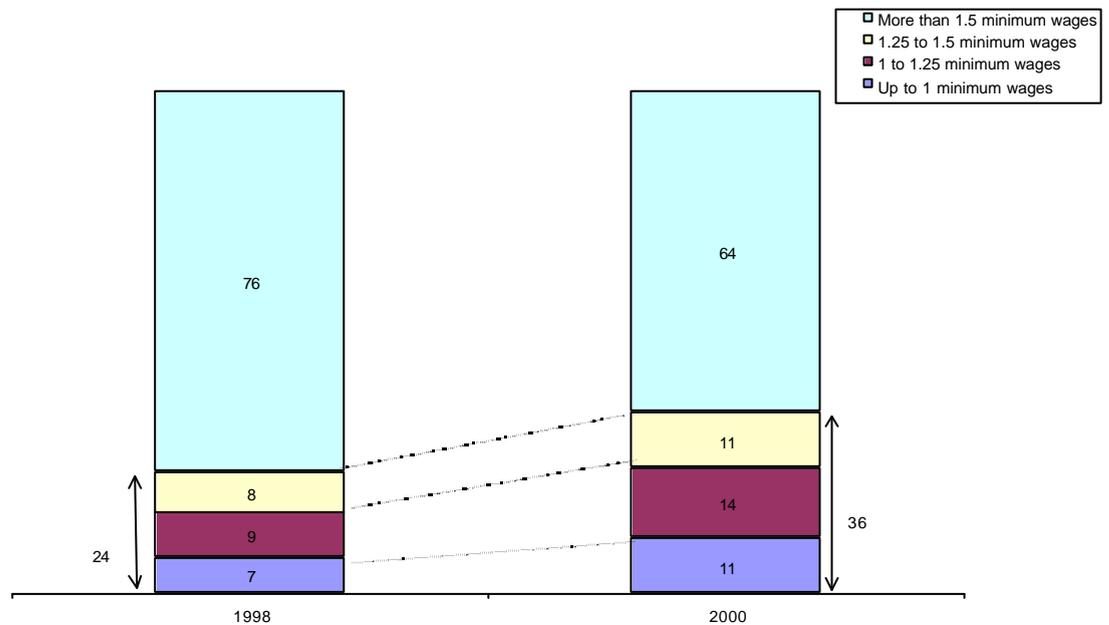
correspond to the macroeconomic trends can compromise the use of the minimum wage instrument itself in that they lower the compliance with the laws thereby having the opposite effect to what was intended.

Figure 5. The importance of the net minimum wage for all wage earners, 1998 and 2000 (percentage)



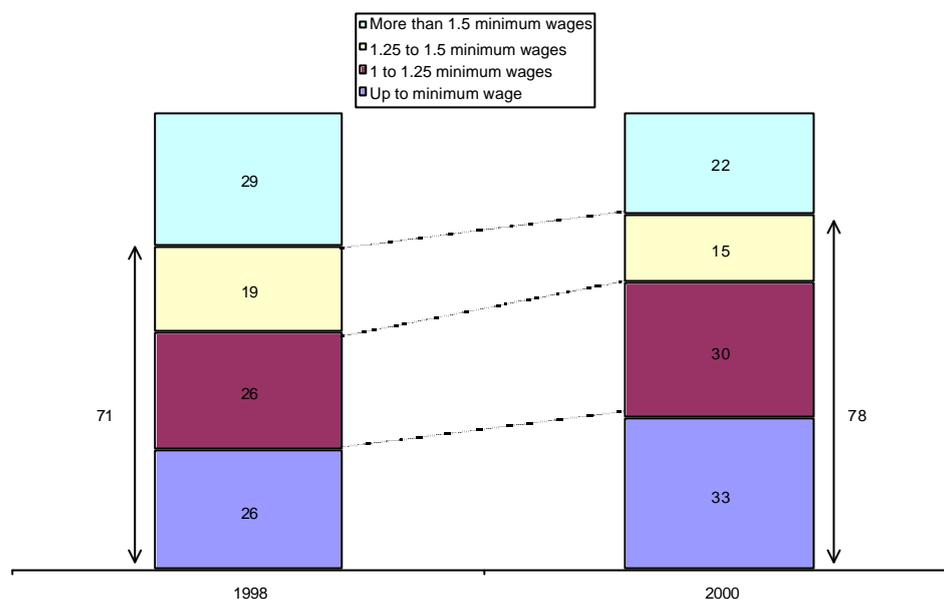
Source: ILO, based on the 1998 and 2000 CASEN surveys.

Figure 6. The importance of the net minimum wage for non-agricultural wage earners, 1998 and 2000 (percentage)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

Figure 7. The importance of the net minimum wage for agricultural wage earners, 1998 and 2000 (percentage)

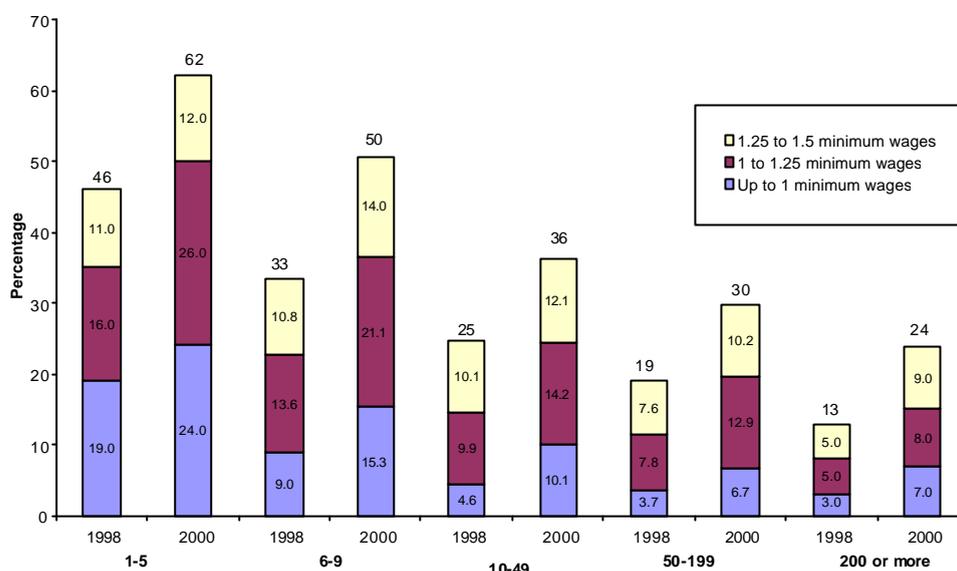


Source: ILO, based on the 1998 and 2000 CASEN surveys.

3. *The importance of the minimum wage in relation to the size of the enterprise*

The number of wage earners in the non-agricultural sector who receive low wages is greater in smaller sized enterprises (figure 8). In 2000, 24 per cent of employees in microenterprises (enterprises of between one and five employees) received less than the minimum wage and this number was 7 per cent in enterprises with 200 employees or more.

Figure 8. Distribution of non-agricultural wage earners by amount of minimum wage according to the size of the enterprise, 1998 and 2000 (as a percentage of the size of the enterprise)



Source: ILO, based on the 1998 and 2000 CASEN, surveys.

Taking into account the direct and extended ranges of influence of the minimum wage, it can be seen that 62 per cent of workers in microenterprises have incomes of up to 1.5 minimum wages. This percentage falls progressively in proportion to the increasing size of the enterprise, and is 24 per cent in enterprises with 200 workers and more. These numbers reflect the clear-cut weighting that the minimum wage has according to the size of the enterprise.

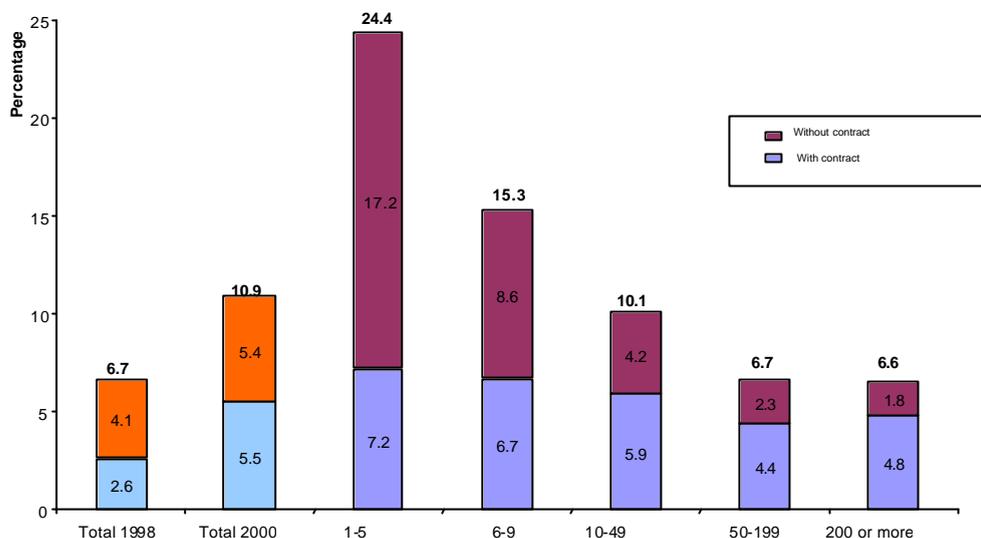
Comparing these percentages with those for 1998, there was a substantial increase in the percentage of low-income wage earners in all sizes of enterprise. In microenterprises, in 1998, 19 per cent of wage earners received up to the minimum wage and 46 per cent earned up to 1.5 minimum wages; in 2000 these percentages rose to 24 per cent and 62 per cent, respectively. In the case of larger enterprises of 200 or more workers, the increase in the number of low-income wage earners is similar. In 1998, 3 per cent of wage earners in these enterprises earned up to the minimum wage and 13 per cent earned up to 1.5 minimum wages. In 2000, these percentages rose to 7 per cent and 24 per cent, respectively.

This shows that all enterprises had difficulties absorbing the increases in the minimum wage carried out for the 1997-2000 period. Towards 2000, it was confirmed that the concentration of low-income workers was no longer a phenomenon characterizing solely micro and small enterprises, but had begun to affect even the larger enterprises.

4. The minimum wage and the contractual situation of workers

It can be assumed that, given that the minimum wage is compulsory, workers who have incomes below the minimum wage do not have a written labour contract. Therefore, the range of incomes of up to the minimum wage should show a high percentage of workers who have no labour contract (figure 9).

Figure 9. The contractual situation for non-agricultural wage earners with incomes up to the minimum wage, 1998 and 2000 (as a percentage of the wage earners in each size of enterprise)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

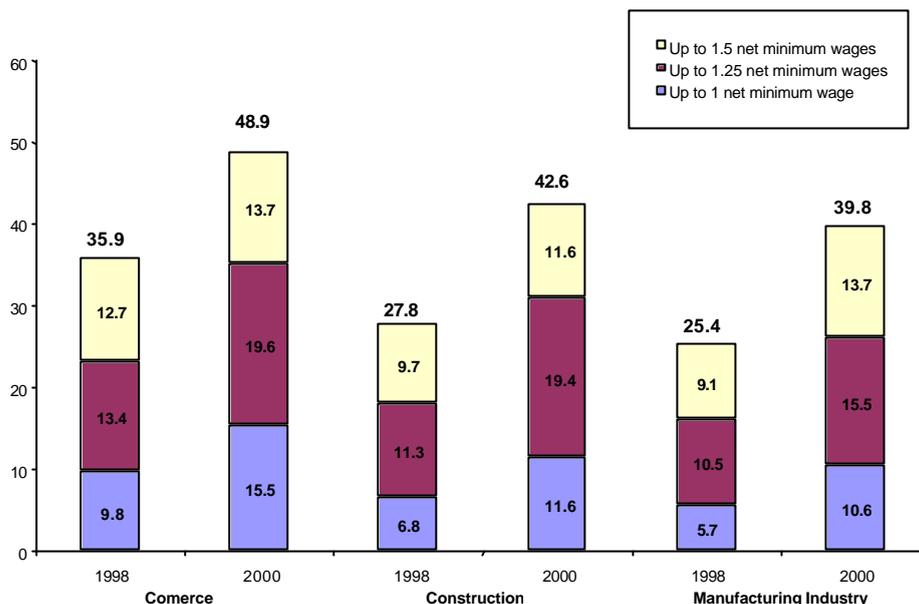
Although between 1998 and 2000 there was an increase in the number of wage earners earning up to the minimum wage, the contractual situation of these workers did not particularly deteriorate. In 1998, there were 6.7 per cent of wage earners with incomes up to the minimum wage, of whom two in every three did not have a labour contract. In 2000, although the number of wage earners with incomes up to the minimum wage had increased to 10.9 per cent, one in every two did not have a labour contract. This could be a result of an increase in the number of workers earning exactly the minimum wage or an increase in the number of workers earning less than the minimum wage because they work fewer hours than a whole day.

However, the precariousness of contracts decreases from small-sized enterprises to large ones as can be seen for 2000. The lack of a written labour contract continues to be the exception in large enterprises; on the contrary, it is relatively generalized among low-income wage earners in micro and small enterprises.

5. The concentration of employment in areas of income around the minimum wage according to branch of activity

Some branches of the non-agricultural sectors stand out for their concentration of wage earners who receive incomes around the level of the minimum wage (figure 10). Taking into account the range of extended influence (up to 1.5 minimum wages), in 2000, these constituted 49 per cent of those employed in commerce (i.e. one in every two wage earners in commerce), 42.6 per cent in construction and 39.8 per cent in industry (i.e. two in every five industrial wage earners). In all cases there was a notable increase compared to the percentages for 1998.

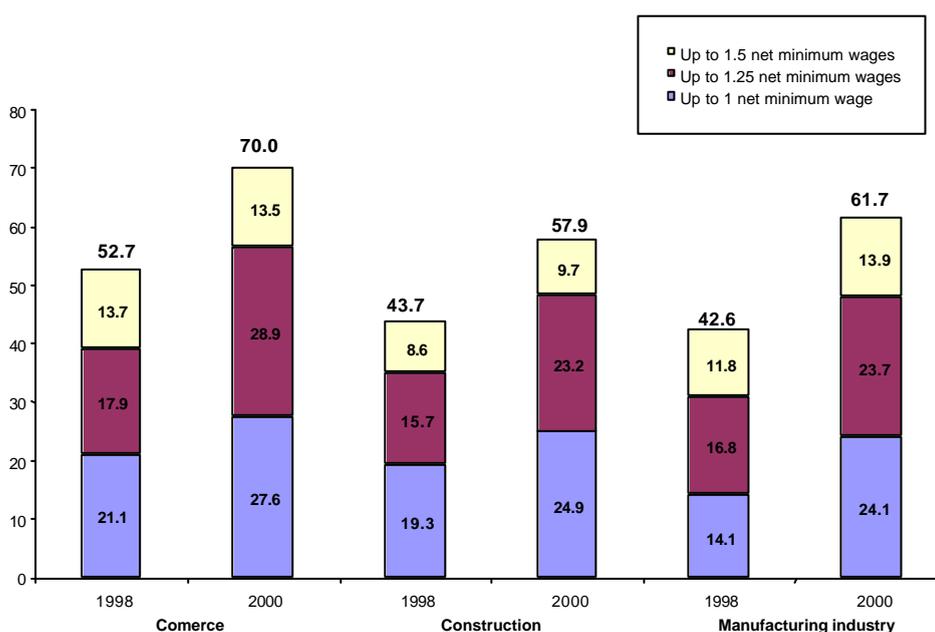
Figure 10. Distribution of wage earners according to branch of economic activity and amount of net minimum wage, 1998-2000 (percentage)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

These percentages increase considerably when the analysis focuses on enterprises with up to five employees (figure 11). For example, an average of two in every five workers in industry have incomes of up to 1.5 minimum wages (39.8 per cent), while in small enterprises in the same branch two in every three workers are in this situation (61.7 per cent). At this level, there is also a notable increase in the concentration of workers in the low-income ranges when comparing 1998 and 2000.

Figure 11. Distribution of wage earners by branch of economic activity and amount of net minimum wage in microenterprises (up to five employees), 1998-2000 (percentage)

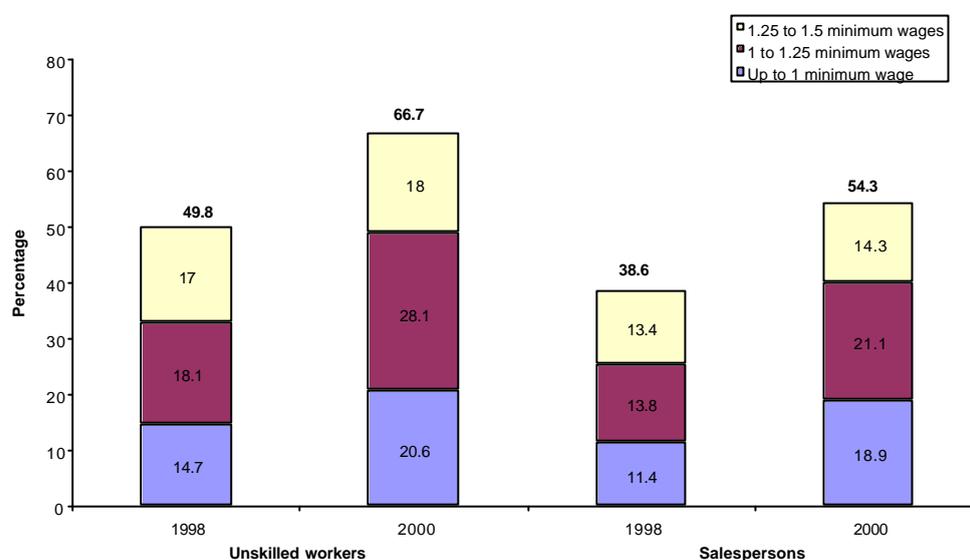


Source: ILO, based on the 1998 and 2000 CASEN surveys.

6. *The minimum wage and low-income occupational groups*

From the CASEN survey of 1998 onwards, it could be seen that a high percentage of low-income wage earners were concentrated in three occupational groups. These were unskilled workers, machine operators and salespersons. In 2000, workers in these groups continued to earn wages that were very low or near the minimum wage, and in larger numbers than those for 1998 (figure 12). For example, in 1998 one in every two unskilled workers earned up to 1.5 minimum wages, while in 2000, two in every three unskilled workers were in this situation.

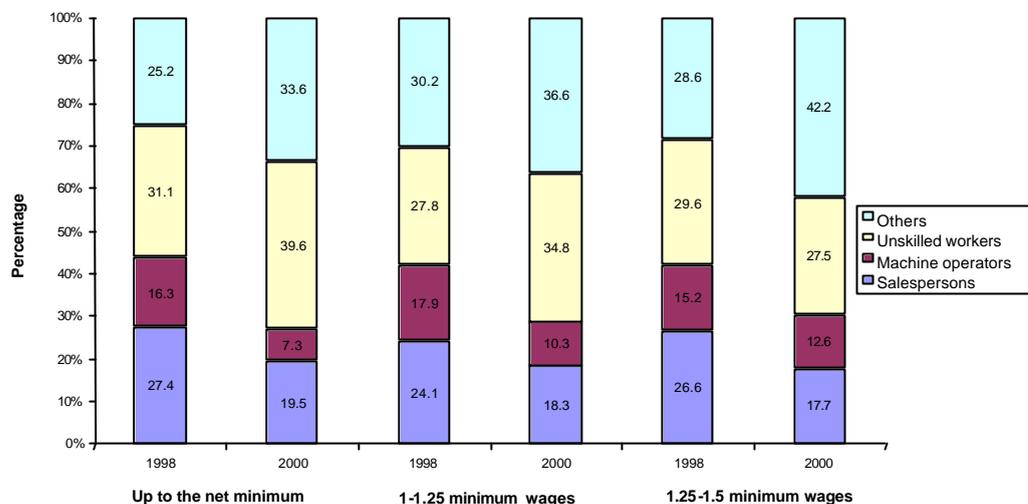
Figure 12. Unskilled workers and salespersons according to amount of net minimum wage, 1998 and 2000 (percentage)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

However, other occupational groups are increasingly present in the low-income range as they also approached the level of the minimum wage. Figure 13 shows that in 1998 one in every four wage earners with incomes of up to the minimum wage belonged to an occupational group other than the three mentioned (25.2 per cent). In 2000, this number had increased to one in every three (33.6 per cent). Similar occurrences took place at other low-income levels.

Figure 13. Main non-agricultural occupational groups according to amount of net minimum wage, 1998 and 2000 (percentage)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

However, although unskilled workers and sales persons continued to be the groups most strongly influenced by the minimum wage and, as such, a good indicator for monitoring the impact of this policy, the influence of the minimum wage is being extended to other occupational groups.

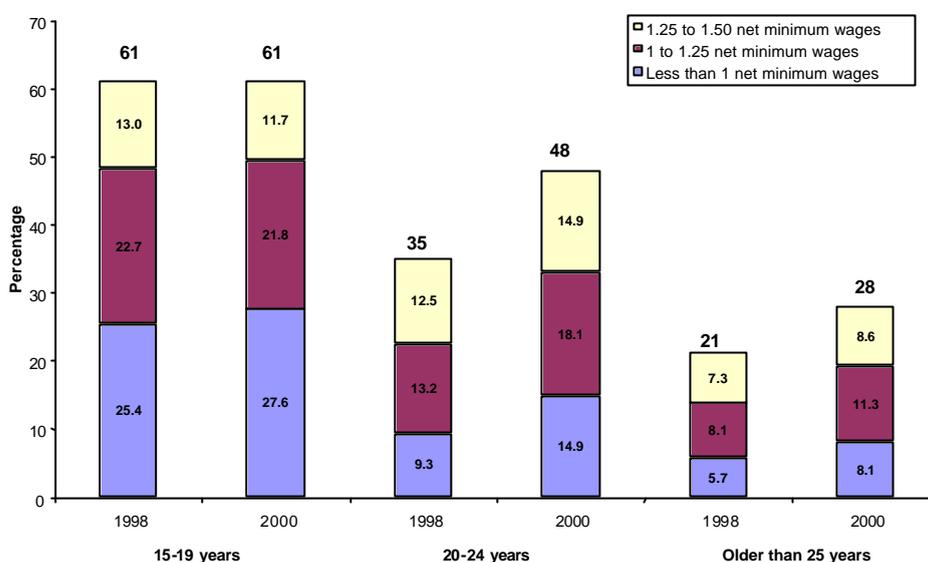
7. Young people with low incomes

Young people may be characterised by low incomes and a precarious situation with regard to labour contracts. In this sense, the minimum wage is a very important reference for this group. In fact, the current minimum wage policy incorporates a lower level for young people aged 15-17 years (83,703 pesos as of July 2002, while adult workers would earn 111,200 pesos). However, this is a relatively small subgroup (approximately one-third of young people find themselves in the 15 to 19-years age bracket, i.e. some 20,000 people).

Taking the minimum wage for adults (which is a small overestimation for the 15-19-year subgroup), in non-agricultural sectors, 61 per cent of young wage earners receive incomes of up to 1.5 minimum wages (figure 14). It should be noted that this is the same percentage as in 1998. Therefore, the income situation of this group has not substantially worsened on a percentage basis.

With regard to the contractual situation of young people aged 15-19 years, half of this group have no written contract. Obviously, this situation is much more pronounced amongst those that earn up to the minimum wage (some 75 per cent have no contract). In the 20-24-year age group, the number of young people with incomes of up to the minimum wage, without a written labour contract, was 53 per cent.

Figure 14. Percentage of young and adult non-agricultural wage earners with incomes of up to 1.5 net minimum wages, 1998-2000 (percentage)



Source: ILO, based on the 1998 and 2000 CASEN surveys.

In conclusion, the information presented in this section shows that young people make up a group that often earns an income of less than the minimum wage and have a precarious contractual situation (in many cases linked to non-compliance with the minimum wage).

E. The minimum wage and wage indicators

1. *The minimum wage and general average wage and unskilled workers*

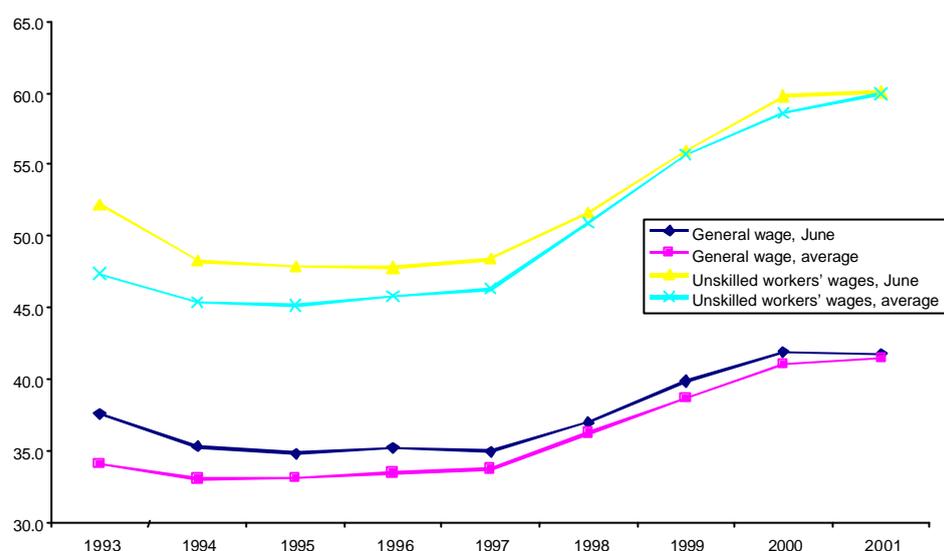
One way of analysing the capacity of enterprises to absorb increases in the minimum wage is to note the relationship between the minimum wage and average wages. For this the survey of wages generated by the INE since 1993 was used. The relationship was calculated for June each year, the month in which the adjustment is made and the month that represents the maximum value of each year, as well as the average of the 12 months of each minimum wage in force, i.e. June of one year to May of the following year.

First, the stability of the relationship between the minimum wage and the average wage should be noted, at between 33 per cent and 34 per cent for the 1993-97 period (figure 15). Following that period there was an increase in the relationship to 41.5 per cent in 2001. Then there was an abrupt increase in this relationship between 1998 and 2000, although between 2000 and 2001 it had stabilized. Therefore, the most recent increase in the minimum wage, carried out in June 2001, would have been in accordance with the general evolution in wages.

The relationship between the minimum wage and the wage of unskilled workers was considerably higher than the relationship between the minimum wage and the average general wage, and the gap between the two had widened in recent years. While between 1993 and 1997 the relationship between the minimum wage and the wage of unskilled

workers hovered between 45 per cent and 47 per cent, in 2001 this was to be found at 59.9 per cent. In this case, the relationship of the minimum wage with wages of unskilled workers continued its upward trend as a result of the most recent adjustment, which indicates that this group of workers has difficulty in seeing their wages keep up with the increases in the minimum wage.

Figure 15. The minimum wage as a percentage of the general wage and of the wage of unskilled workers (for June and the average for 12 months)



Source: ILO, based on data from the INE.

The changes in the relationships between the minimum wage and the general average wage or the wages of unskilled workers can also be analysed through the correlation existing between these variables (table 1). For the 1993-97 period, there was a high correlation between the real minimum wage and the real general wage, with a correlation coefficient of 0.78, and between the real minimum wage and the real wage for unskilled workers (0.799). However, the correlation between these indicators has fallen in the past four years. For the 1998-2001 period, the relationship between the real minimum wage and the real general wage was 0.677, and that between the real minimum wage and the real wage of unskilled workers turned negative (-0.247).

Table 1. The correlation coefficient of the real minimum and real general wage and real wage of unskilled workers

Relationship/period	1993-97	1998-2001	1993-2001
Real minimum wage – real general wage	0.780	0.677	0.819
Real minimum wage – unskilled workers' wage	0.799	-0.247	0.635

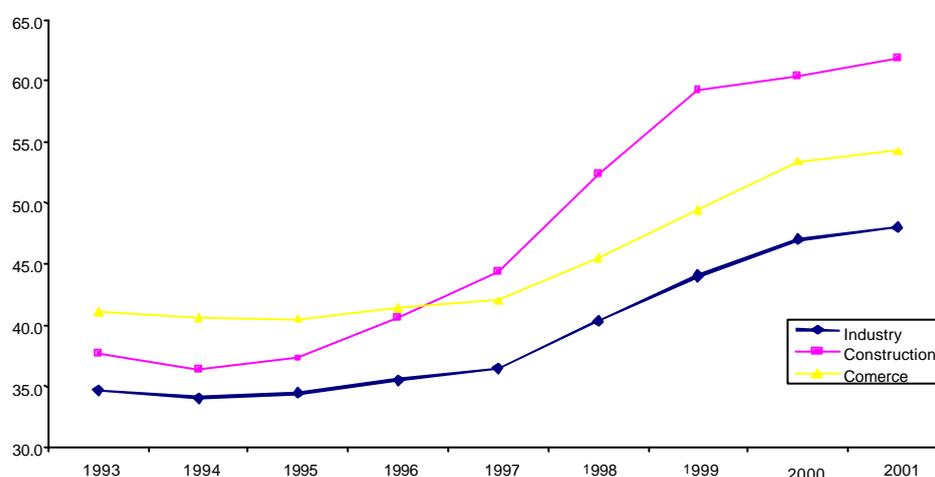
Source: ILO, based on data from the INE.

This indicates that the real general wage has remained closely linked to the minimum wage over the entire period. However, the relationship between the real minimum wage and the real wage of unskilled workers has changed radically as a result of the marked increase of real minimum wages and the stagnation of the real wages of unskilled workers.

2. The minimum wage and the average wage in selected branches

The branches of economic activity also registered a large increase in the relationship between the minimum wage and the respective average wages, particularly during the 1998-2000 period (figure 16). In industry, this relationship went from around 35 per cent in the middle of the 1990s to 48 per cent in 2001. In commerce it moved from an average of 41 per cent in the 1993-97 period to 54.3 per cent in 2001. The greatest leap was found in construction, which went from an average of 39 per cent in 1993-97 to 61.8 per cent in 2001. This leap was a result of the combination of a strong increase in the minimum wage along with a fall in the real average wages in construction.

Figure 16. The relationship between the minimum wage and the average wage in three branches of economic activity, 1993-2002 (percentage, average over 12 months)



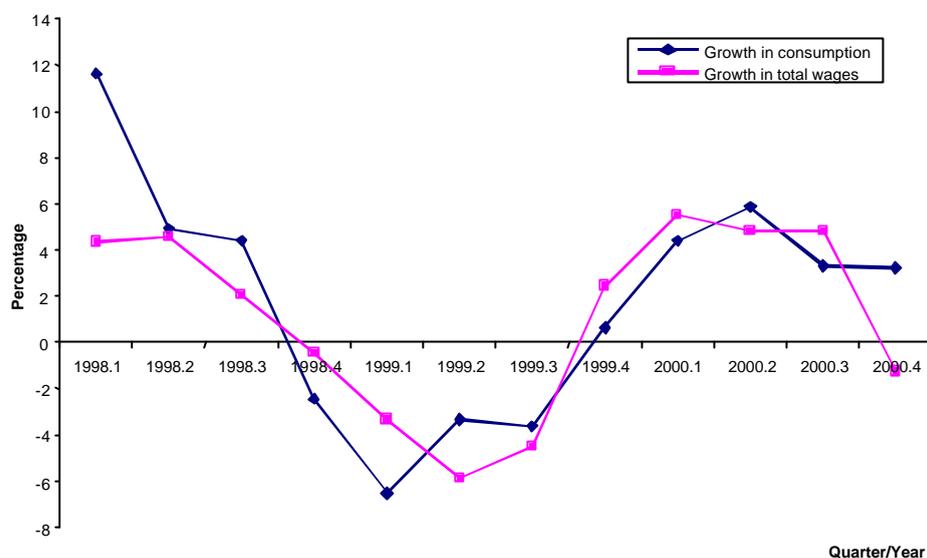
Source: ILO, based on data from the INE.

F. The minimum wage and total wages

In recent years, the Chilean economy has had difficulty in creating new jobs. In fact, net new job creation was very limited during the 1998-2001 period. Moreover, increases in the hourly wages in recent years do not faithfully reflect the increase in the purchasing power of wages as there was a sizeable reduction in the number of hours worked. As a result, the evolution in real monthly wages shows a slight increase in recent years. While real hourly wages increased annually by 2 per cent in the 1997-2001 period, real wages increased by 1 per cent (real general monthly wages).

As a result of the limited capacity for job creation and relative stagnation in the purchasing power of wages, total wages (total income of wage earners) were almost constant. This is a completely different situation from that which occurred during the first half of the 1990s, during which both employment and real monthly wages grew rapidly. Without a doubt, the stagnation in total wages is one of the factors that might explain why domestic consumption remained low (figure 17). In this respect, the total income of wage earners – who have a high propensity towards consumption – represents around half of total private consumption.

Figure 17. Chile: Changes in total wages and private consumption, 1998-2001^a
(Rate of growth calculated on a yearly basis)



^a Data for quarterly consumption in 2001 are not available.
Source: ILO, based on data from the Central Bank and the INE.

Based on the figures for changes in real wages and on the number of wage earners, the variation in total wages can be estimated in real terms. Moreover, comparing the latter data with those for growth in GDP leads to an observation on the probable change in the participation of wage earners in national income for 1998-2001. In this respect, it is estimated that total wages decreased by 0.2 per cent annually, while income grew by 2.6 per cent annually for the period. This suggests that wage earners' participation in national income contracted during the years under review. It should be pointed out that wage earners' participation in national income was nearly 40 per cent in 1998.

Weak consumption and the evident loss of wage earners' participation in national income are factors that lead to the belief that a large increase in the minimum wage might help stimulate the economy and reincorporate workers in the national income. In favour of the first point is the fact that the tendency of low-income wage earners to spend is very high and, as such, an increase in the minimum wage would tend to impact directly on consumption.

However, there are two factors that oppose this train of thought. On the one hand, in recent years, increases in the minimum wage were not fully absorbed by the wage scale. That is to say, large increases in the minimum wage did not stimulate large increases in general wages, and therefore the number of workers on very low incomes increased. In this way, an increase in the minimum wage in 2002 affected a much larger number of wage earners than in previous years, for which reason the "pull" effect of the minimum wage on other wages is even more doubtful. On the other hand, it is understood that a large increase in the real minimum wage can have different types of effects on employment, depending on the period of time under review. In this respect, section G introduces a series of estimates of the unemployment rate in four different scenarios involving an increase in the real minimum wage.

G. Estimates of the unemployment rate for situations involving different increases in the real minimum wage for 2002-05

This section tries to estimate the impact of an increase in the minimum wage on the unemployment rate. In accordance with economic theory, an increase in the minimum wage should have negative repercussions on labour demand and positive repercussions on labour supply. However, the final result will depend on the size of the effect of these two opposing tendencies.

1. Methodology

Econometric models for the medium term were used to forecast unemployment in Chile over the 2002-05 period. Both supply (economically active population) and demand (total number of employed) for labour were modelled on the basis of four external variables: the real minimum wage, the real exchange rate, the gross domestic product, and real average wages. Information available from the first quarter of 1986 up until the fourth quarter of 2001 was used. Unemployment was calculated as the difference between the estimates for supply and demand.

The forecasts were estimated on the basis of three-monthly data and the hypothesis of average yearly growth for the application periods of the new minimum wage. In order to evaluate the impact of the minimum wage on unemployment, the reference period for the minimum wage, which is adjusted every year in June, was taken as the second semester of one year and the first semester of the following year.

2. Short-term: Unemployment rate not affected by changes in the minimum wage

In 2001-02 (the second semester of 2001 to the first semester of 2002), the rate of growth for real wages was 1.7 per cent, for the real exchange rate 16.2 per cent, and for variations in GDP 2.9 per cent (Table 2). Finally, growth in the real minimum wage was 2.5 per cent, resulting from the increase in the minimum wage carried out in June 2001 and expected inflation for that period.

Table 2. Summary of the assumptions for the estimates for unemployment (2002-05)

Quarter/Year	Growth in the real minimum wage	Growth in GDP	Growth in the real average wage	Growth in the real exchange rate
2000-2001	5.7	4.3	1.4	9.7
2001-2002	2.5	2.9	1.7	16.2
2002-2003		3.5	1.8	1.0
2003-2004		4.3	2.0	1.0
2004-2005		4.8	2.3	1.0
Average 2002-2005		4.2	2.0	1.0

The unemployment rate for 2002, with one quarter to complete the period for the current adjustment to the minimum wage, shows the average yearly unemployment rate to be similar to that of 2001, at around 9.5 per cent, provided that the adjustment to the real minimum wage does not exceed 6 per cent (a nominal increase of 9 per cent) (table 3).

In order to estimate the impact of the current adjustment of the minimum wage in effect from 1 June 2002 on unemployment, the figures for the rate of growth of real wages were estimated at 1.8 per cent, for real exchange rates at 1 per cent and for GDP at 3.5 per cent. Four growth situations in the real minimum wage were used: zero (0 per cent), low (2 per cent), average (4 per cent) and high (6 per cent).

The estimates show that the unemployment rate for June 2002 to June 2003 would be less than the unemployment rate for the same 2001-02 period in all situations, independent of the increase in the minimum wage and would be around 9 per cent (table 3). However, it was estimated that there would be some elasticity in the relationship of unemployment to the real minimum wage of approximately zero, as a result of which the increase in the minimum wage would have no effect on unemployment for 2002-03.

Table 3. Estimated effect of the real minimum wage on unemployment (2002-05)

Quarter/Year	Estimated unemployment rate with yearly increases in the net minimum wage from 2002-03			
	0 per cent	2 per cent	4 per cent	6 per cent
2001-2002	9.5	9.5	9.5	9.5
2002-2003	8.9	8.9	9.0	9.0
2003-2004	8.1	8.4	8.7	8.9
2004-2005	7.3	7.8	8.3	8.7
Average 2002-2005	8.1	8.4	8.7	8.9

Source: ILO, based on the model for employment and unemployment.

3. *Medium-term: unemployment rate affected by changes in the minimum wage*

Forecasts for the medium term are also estimated on the basis of three-monthly data and the hypothesis of average yearly growth in real wages of around 2 per cent (2003-04) to 2.3 per cent (2004-05) and of a real exchange rate of around 1 per cent annually for the entire period. Variations in GDP are accounted for by a situation of moderated upward growth in GDP, i.e. 4.3 per cent for 2004 and 4.8 per cent for 2005, respectively (table 2). Finally, four situations were again proposed for the increase in real minimum wages: zero (0 per cent), low (2 per cent), average (4 per cent) and high (6 per cent).

Taking this hypothesis into account, there is a tendency towards growth in the estimated unemployment rates for the various situations as growth in real minimum wages increases. Therefore, for zero growth in the real minimum wage, there is an estimated strong decrease in the unemployment rate, which moves from 8.9 per cent in 2002-03 period to around 7 per cent in 2004-05 period. On the other hand, the forecast using a high rate of growth in real minimum wages (6 per cent on average) shows a comparatively greater unemployment rate than that of the previous hypothesis and, moreover, shows a strong rigidity towards decreasing, moving from 9 per cent in 2002-03 to only 8.7 per cent in 2004-05.

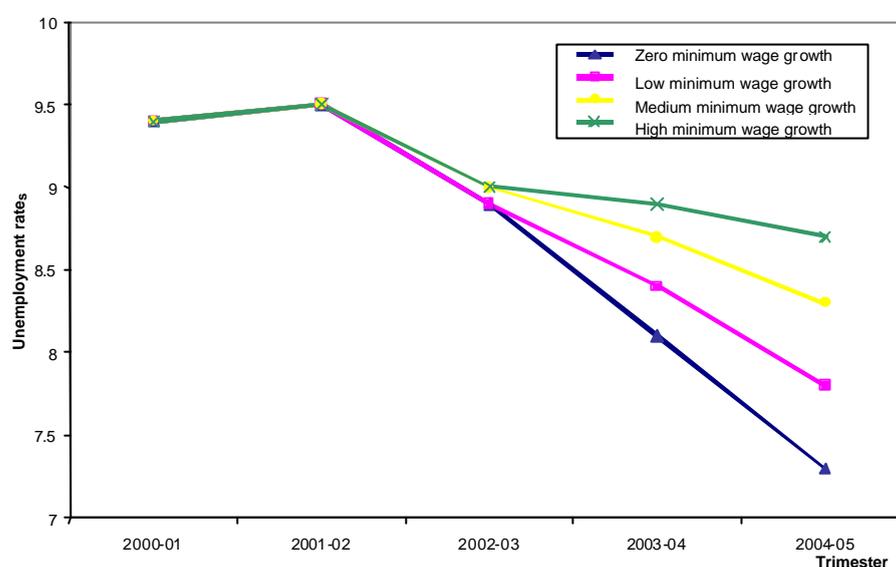
However, in the medium term there is anticipated flexibility of unemployment to the real minimum wage, which averages 0.2 between 2003 and 2005 and increases with time. Therefore, the effect of a higher growth rate in the minimum wage seems to be greater with time, creating more unemployment.

4. Summary

In the period from June 2001 to June 2002, the unemployment rate will remain similar to that registered for the June-to-June period for 2000-01 – around 9.5 per cent – while the 2002-03 period will see a decrease in the unemployment rate to around 9 per cent, which will occur independently of the adjustment to real minimum wages that is taking place at present.

In the medium term, while greater growth would translate to a decrease in the unemployment rate, the size of this decrease will depend largely on the size of the adjustment to the minimum wage (figure 18).

Figure 18. Chile: Observed and estimated unemployment rates for four situations, 2000-05 (percentage)



Source: ILO, based on the model for estimating employment and unemployment.

The unemployment rate for the June to June period for 2004-05 would be 7.3 per cent in the case of zero real growth in the minimum wage, and 8.7 per cent in the case of a real increase in the realm of 6 per cent.

In other words, each additional point of increase in the real minimum wage leads to 0.25 per cent less reduction in unemployment. Therefore, while in the short term there is no estimated negative impact of the growth in the minimum wage, in the medium-term forecasts confirm that there is a moderately negative relationship between both factors.

It should be pointed out that the estimated effect of increases in the real minimum wage on the unemployment rate do not take the causal relationships of two factors into account. The first is the structural change caused by the increase in the real minimum wage with regard to productivity in the 1998-2001 period; this factor is not taken into consideration in the econometric model, which has been partially balanced and does not use productivity indicators, particularly as regards demand. The second is the nature of the supply model, which does not take into account how supply can react to changes in education and the female labour force.

H. Conclusions

In some ways, the case of Chile from 1990 onwards illustrates the potential of a minimum wage policy, as well as its limitations. During the first phase of accelerated and sustained economic growth, the real increases in the minimum wage made it possible for the lowest wages to increase at the same time as general wages. In this way, they protected wage earners with the lowest income and enabled them to enjoy the benefits of the economic development occurring at that time. Therefore, it could be said that the policy for adjusting the minimum wage applied during this period was extremely successful given that it protected the most vulnerable wage earners, without compromising formal employment.

As regards the three-yearly adjustment set in 1997, this clearly shows that a minimum wage policy which no longer reflects the prevailing economic situation has serious limitations. Since economic growth forecasts were not realized, the previously set nominal increases in the minimum wage were very high in relation to the economic situation. Although on the one hand this increased the income of the lowest wage earners during a period of recession, on the other, the main result was that the percentage of wage earners with income around the level of the minimum wage increased and, to a lesser extent, conditions of work deteriorated (for example, not having a labour contract). In summary, the fixed wage increases were very high in real terms for a period of economic recession. This did not compromise the minimum wage instrument, but did in some ways weaken it.

The idea of establishing a three-yearly adjustment was an attempt, on the one hand, to make adjustments foreseeable and, on the other, to reduce the drawbacks of having to discuss the adjustment of the minimum wage each year. It should be noted that once it became clear that the economy was going into a recession and that the previously established adjustments did not correspond to the situation, there was no discussion on the advisability of revising the magnitude of the adjustments.

Therefore, we believe that the institutional structure established to set the minimum wage might have been inadequate. Although the Government of Chile has always consulted the relevant employers' and workers' organizations (as stipulated by Convention No. 131, ratified by Chile in 1999), the participation of the players has been very uneven. As regards workers, the Single Central Organization of Chilean Workers (CUT) has always been interested in discussing the adjustment of the minimum wage. As far as employers are concerned, their attitude appears to have been more passive, based on their belief that this was a governmental policy on which they would have very little influence.

In some ways, the lack of an established framework for monitoring and discussing changes in the minimum wage resulted in a lack of discussion on the imbalance that was occurring. Although various technical reports were submitted during consultations with the players, no monitoring indicators were established by consensus between the parties to monitor the application of the policy. Lastly, it would appear obvious that employers should be more actively involved in this policy.