

SOCIAL PROTECTION IN ISRAEL AND SIXTEEN EUROPEAN COUNTRIES:

COMPARATIVE ANALYSIS OF WAGE-REPLACING BENEFITS

by *

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ABSTRACT

Social protection in Israel and western countries does not only help maintain the economic well-being of the population, but also provides the social and political stability required for economic development in market oriented economies. Although social protection by income support has been criticized by economists as generating disincentives to work, this criticism is less relevant when supporting workers compelled to leave work temporarily. This paper measures the relative level of social protection ensured by temporary wage replacing benefits in Israel and in sixteen European countries. An index has independently been built for each one of the following benefits: unemployment, maternity and work injuries. Each index aggregates the most relevant characteristics of the benefit program in each country to a relative measure of social protection. Significant differences in social protection levels among countries and benefits have been found.

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INTRODUCTION

One of the primary aims of a social security system is to prevent a drastic impairment of the standard of living of individuals who have been forced temporarily to discontinue their work, by means of wage-replacing benefits, such as unemployment benefits, maternity allowances and work-injury benefits. These are short-term benefits, allowing the individual to receive, during a limited period of time in which he or she does not work, some form of payment, generally calculated as a percentage of his or her wage prior to stopping work. This payment is intended to enable the worker to go through this intermediate period while preserving to some degree the ability to satisfy his/her economic needs.

The present paper presents a comparative analysis of social protection accorded by the social security system in 16 Western European countries and in Israel ⁽¹⁾ with respect to wage-replacing benefits. While Israel is not a member of the European Union, it nevertheless aspires to the social and economic standards of the Western world. Hence there is interest in examining the level of social protection which Israel's social security system confers on its citizens, compared to that prevailing in other western countries, in order to evaluate its success in this area.⁽²⁾

A major challenge faced by the European Union is the coordination of social and economic policy as well as the adjustment of different systems to a mutually agreed-upon standard. Interest has therefore been expressed in recent years in formulating a method that will make it possible to compare the levels of protection accorded by the social security system of the different countries. This is by no means an easy task, owing to the variation in the attributes characterizing the systems which depends on the varying perceptions of the different countries and the economic and social reality prevailing in each. Thus, for example, a country advocating the insurance principle would tend to set the compensation rate of the benefits in proportion to the level of income prior to the benefit-entitling occurrence, so as to assure the individual of the standard of living to which he had been accustomed. In contrast, a country espousing the principle of universalism and solidarity in social security would tend to set a uniform level of benefits, independent of the level of income prior to the benefit-entitling occurrence. A country interested in absorbing emigrants would tend to set less rigid eligibility conditions than those established by a country that discourages immigration. A country interested in encouraging a high birthrate would be more generous in granting maternity benefits and allowances to large families. These are only some examples of different attributes that characterize different systems, which adjust themselves to the varying basic parameters guiding each system.

In general, different systems and benefits provide an answer for the needs of the population and society, based on three underlying principles of social security: economic want (what you lack), past contributions (what you have done), and demographic status (what you are). The first principle requires an income test as a condition for receiving a benefit, the second principle requires some sort of ratio between the amount of the benefit on the one hand and the social security contributions paid and the seniority within

the system on the other, and the third principle disregards the requirements deriving from the first two principles and takes into account only the worker's demographic status. A combination of the different principles in one system is common and sometimes the first two principles are even combined in a particular benefit.

To overcome the difficulties discussed above, as well as difficulties in a comparative analysis deriving from the lack of uniformity of the data and the handling of incomparable data, certain criteria must be set regarding the relevant attributes and tools used to compare the benefits provided by various countries. To obtain a correct evaluation of the level of social protection accorded by the social security system, by correctly combining its characteristic attributes, an aggregative index is required, which assigns an appropriate weight to each attribute that reflects the different emphasis attached by each country to any given attribute.

An aggregative index for evaluating the level of protection accorded by the social security system has been fitted by Guillaume, Meulders & Vanhuynegem (1995) for the purpose of comparing the level of protection insured by long-term benefits in different countries. The present paper suggests a similar index for comparing the level of social protection accorded by short-term wage-replacing benefits in Israel and European countries, establishing criteria for comparison relevant to social security systems of most countries.

THE AGGREGATIVE INDEX

Besides the methodological aspects which complicate the analysis, as stated above, it is worth looking at various technical aspects before obtaining a formal definition of the aggregative index used for the comparative analysis in the present study.

According to fundamental and practical criteria, relevant attributes may be chosen for the comparison which attest to the level of social protection accorded by the benefits of the social security system. Having identified units which enable us to measure these attributes and rate them in order of preference, we must standardize them so as to obtain uniform units of measurement for all the attributes. By combining the standardized units and weighting them so as to reflect the relative importance of each attribute, we will create a representative aggregative index for a particular benefit.

There is a historical debate as to the relative importance of the various attributes in aggregative indices of this nature. A solution frequently adopted in recent years is "neutral weighting". This is weighting based on the standard deviation calculated for each attribute. This approach is prevalent in aggregative indices for measuring the level of welfare, based on the principle of relative deprivation³ and we have elected to use it to calculate the aggregative index.

³ See Desai M, Shah A (1988) and Delhousse B, Luttgens A & Perelman S (1993)

The stages of formulating the comparative index of the levels of social protection accorded by different social security systems through various benefits were presented by Guillaume, Meulders & Vanhuynegem (1995), as follows:

The first stage: Choice of attributes attesting to the level of social protection. Each attribute is represented by a vector C_i , where i denotes a given attribute, out of n selected attributes.

The second stage: Processing the data, in order to rate each attribute in ascending order of the level of social protection. The values of each attribute in the various states must be comparable.

Each vector C_i has terms C_{ij} , where j denotes a given state, out of m selected states. These terms are expressed in identical units, so that $C_{ij} > C_{ik}$, where the characteristics of the attribute in state j are preferable, in terms of the level of social protection, to those in state k ; and $C_{ij} = C_{ik}$, where the characteristics of the attribute in state j are identical, in terms of the level of social protection, to those in state k .

At this stage, an average value may be calculated for each i attribute in all the states (expressed as MC_i) as follows:

$$MC_i = \sum_l^m P_j C_{ij}$$

where P_j is the weighting coefficient for the state j and

$$\sum_l^m P_j = 1.$$

The third stage: To combine values of various attributes which are not comparable, having been measured in different units, each vector C_i is converted into a new standardized vector N_i , as follows:

$$N_i = (100C_i)/MC_i$$

Each vector N_i has terms N_{ij} , an average of 100 and a standard deviation S_i , where:

$$S_i = \sqrt{1/m \sum_{j=1}^m (N_{ij} - 100)^2}$$

The fourth stage: The aggregative index is calculated for each state with respect to a particular benefit (IND_j) as a weighted sum of the standardized vector of attributes of the state (N_{ij}), where the weight given to the attribute in the index is the inverse of the standard deviation S_i . The aggregative index is defined as follows:

$$IND_j = \sum_l^m (N_{ij} / S_i)$$

The aggregative index may be calculated directly as the weighted combination of each of the attributes, or in two stages, firstly by combining a group of specific attributes in a sub-index which relates to a certain aspect of the benefit, and secondly, by combining the sub-indices (according to the method of inverse standard deviations) into one index. Needless to say, the two methods produce different results, in view of the additional collective weighting which each attribute receives when the calculation is done in two stages.

ATTRIBUTES USED FOR THE COMPARISON AND CRITERIA TO SELECT THEM

Three basic principles underpin the selection of the relevant attributes to compare the level of social protection accorded by the wage-replacing benefits examined (maternity allowances, work-injury benefits and unemployment benefits):

1. **Cover** - the larger the number of workers covered by a particular benefit, the higher the level of social protection.
2. **Eligibility Conditions** - the shorter the qualification period for eligibility and the more flexible the other eligibility conditions, the higher the level of social protection.
3. **Compensation** - the larger the sum and the longer the period of compensation, the higher the level of social protection.

Each principle may be viewed as a particular aspect of the benefit. We will select the attributes relevant to the comparison and collect those which conform to a given principle in one sub-index, as we explained in the description of the method of calculating the index. (To enable application, only measurable and comparable attributes will be taken into account when formulating the index.)

Cover

Type of Plan: The significance of this attribute is whether the insurance is an obligation required by law, or whether the decision to join the plan is the individual's own choice. Compulsory insurance means a higher level of social protection. In most states, insurance in the three insurance branches examined is indeed compulsory. Finland and Sweden are the only states where unemployment insurance is not compulsory. This attribute is therefore relevant to the comparison only in the unemployment insurance branches.

The following three attributes concern the types of persons insured and enable us to define population groups covered by the social security systems examined, according to various work statuses:

Insurance for Salaried Employees: All the states have an insurance plan for salaried employees, although some states do not cover all such employees. The attribute

examined is whether insurance exists at all, and if so, whether it covers all salaried employees or only some of them. All the states examined provide insurance cover for salaried employees, although some states only provide cover for part of this population. In Greece, for example, cover in the three specified insurance branches is partial; as is the case in Spain, in maternity and unemployment cover; and in Italy and Ireland, in work-injury benefits and unemployment. All the countries examined provide some form of wage-replacing benefits to salaried employees.

Insurance for the Self-Employed: Another attribute regarding the types of persons insured concerns the self-employed. This population is covered by the National Insurance system only in some of the states. Most of the states do not include the self-employed in the sphere of unemployment insurance, yet most do include self-employed females for maternity insurance cover.

Special Plans: Some states have special unemployment insurance plans for the various industrial sectors, granting preferential benefits. These states were awarded a credit point in the index.

Eligibility Conditions

Qualification Period: For maternity and unemployment cover, a period of qualification is required (a period of time for which social security contributions are paid)⁴ as a prerequisite for eligibility for benefits. Shorter qualification periods are better for the worker and have a positive effect on the level of social protection when calculating the values for the index.

Maximal Age: With regard to unemployment cover, a maximal age is determined for receiving unemployment benefits. Since this age differs for men and women, we elected to focus on the difference in the ages restricting men's right to payment.

Early Pension: About half the states enable the insured to take early retirement and grant old-age benefits to older, unemployed men. In some states, such as Belgium and Luxembourg, this older, unemployed population is transferred from the unemployment insurance system to the old-age insurance system, which guarantees fixed benefits for an unlimited period of time. In contrast, in countries which do not enable the insured to take early retirement, older unemployed men are denied the opportunity of finding work - once the period of unemployment benefits ends and they are left with neither work nor compensatory income. States which enable the insured to take early retirement were awarded a credit point in the index.

⁴ The attribute "Qualification Period" was calculated as follows: the number of days (weeks) for which social security was paid compared to the number of days preceding the date of record for the receipt of the benefit (calculated as an inverse so as to rate the states in descending order). This result is multiplied by the ratio between the number of days (weeks) for which social security was paid and the average number of these days (weeks) in the states. This calculation enables us to rate the states while taking two periods into account: the period in respect of which payment is required and the one required for the calculation of the Qualification Period.

Compensation

Level of Compensation: In the present paper, reference to the level of compensation⁵ takes into account the maximal period for receiving wage-replacing payment as well as the amount of the payment. In most states, the rate of the payment is a certain percentage of the employee's salary during the most recent period of work. A typical employee, chosen for the purpose of the comparison, is a single man, employed in the industrial sector, whose salary is equivalent to the average salary for that sector⁶. With respect to unemployment benefits, in certain states the period and rate of compensation vary from insured to insured, according to the period for which social security contributions have been paid. The level of compensation has therefore been divided into three categories: people who have paid social security contributions for two years; for five years; and for ten years. In some states, the rate of compensation in the three spheres of insurance varies during the period of eligibility. In these cases, the calculations of the level of compensation took these changes into account, according to the period of eligibility.

Taxation: To compare the levels of compensation, the question of the taxability of the compensation was examined. The systems in states which do not tax the payment were evaluated as preferable.

Supplement for Dependents: Some states add a supplement for dependents to unemployment benefits and work-injury benefits. These states were also evaluated as preferable.

Compensation Unlimited in Time: In Belgium, France, Italy, Portugal, Sweden and Switzerland, the period for receiving injury benefits is unlimited⁷. These states were awarded a credit point in the index.

To calculate the comparative index regarding maternity and work-injury benefits, neutral weight was given to all the (relevant) attributes specified above. To calculate the comparative index with respect to unemployment benefits, sub-indices were initially calculated, based on the neutral weight of each attribute, according to the following groups: 1) Cover; 2) Eligibility Conditions; 3) Compensation. The three sub-indices were weighted in order to obtain the aggregative index.

⁵ The level of compensation is calculated as the period of maximal compensation multiplied by the rate of compensation.

⁶ When the maximum sum for payment (the ceiling) is lower than the payment that would have been received by multiplying the rate of the payment (as a proportion of the salary) by the salary, the ceiling was calculated as a percentage of the salary and this is the actual rate for payment. In states where the payment is a fixed sum, the sum was calculated as a percentage of the salary of a typical employee.

⁷ For the purpose of the comparison, the compensation period attributed to these states was identical to that of the most generous country (the maximal period). For the attribute " Compensation Unlimited on Time", a value of 1 was awarded to these six states, while the other states were awarded 0.

SOURCE OF DATA

Our two main sources of reference with respect to social security systems in the various states in 1994 - 95 were:

- Social Security Programs Throughout the World - 1995
- Social Protection in the Member States of the European Union - 1995

A further source of reference, for information on Israel, was the National Insurance Law (Consolidated Version) - 1995.

The weighting coefficients for the states (P_j) are the proportion of the relevant population in each state, in all the states jointly. The relevant population is defined differently with respect to each benefit: the working population - for work-injury benefits; the total work force - for unemployment benefits; and employed women - for maternity benefits. The source for this data is I.L.O: Yearbook of Labour Statistics - 1995.

ANALYSIS OF FINDINGS

Maternity benefits

The index regarding maternity benefits is based on five attributes: cover for salaried employees; cover for the self-employed; required qualification period; level of compensation and taxation.

The table below shows the aggregative index for the level of social protection accorded by maternity benefits in the various states⁸ :

Greece	0.51
Spain	0.63
Belgium	0.78
Luxembourg	0.83
Ireland	0.84
England	0.88
Holland	0.90
Israel	0.92
Germany	1.02
Finland	1.11
Portugal	1.12
Austria	1.16
France	1.17
Italy	1.17
Sweden	1.18
Norway	1.19

⁸ In calculating this comparative index, Switzerland was excluded from the analysis.

Unlike all the other states, Greece and Spain provide insurance to only part of the population of female salaried employees and thus appear at the bottom of the scale. Their rating is also affected by the fact that they provide insurance to only part of the population of the female self-employed, as is the case with certain other countries.

Belgium, Luxembourg and Ireland, whose ratings are also relatively low, are characterized by a long qualification period for eligibility for benefits and only partial cover of the female self-employed. We also wish to note the low level of compensation provided by England and Ireland.

Sweden and Norway, characterized by a particularly high level of compensation, have the top rating. Their compensation periods are at least twice as long as the mean of all the states in the analysis and the rate of compensation is 100% of the woman's last salary prior to maternity leave, as is the case with Israel and Germany (up to a certain ceiling).

In the present comparison, Israel ranks eighth, which places it in the middle of the rating scale. It is worth noting the large variance in the extent of social protection accorded by maternity benefits to working women in Israel, depending on the various attributes characterizing the benefit: while the system is generous in terms of the rate of payment and percentage of cover, it is far less so when it comes to other aspects of eligibility conditions and the period of compensation. In other words, although the level of cover is maximal (both salaried employees and the self-employed are covered by the insurance plan) and the rate of compensation is 100% of the last salary, subject to Israeli taxation, the period of compensation is only 84 days, which is the shortest of all the states examined. The level of compensation therefore lies in the middle of scale. Furthermore, the required qualification period is relatively long.

Work-injury benefits

The index regarding work-injury benefits is based on seven attributes: cover for salaried employees; cover for the self-employed; cover for people injured on their way to work; level of compensation; taxation; supplement for the rate of compensation in respect of dependents; and time-limited or time-unlimited compensation.

The table below shows the aggregative index for the level of social protection accorded by work-injury benefits in the various states:

England	0.67
Italy	0.79
Holland	0.80
Greece	0.81
Spain	0.81
Finland	0.84
Luxembourg	0.90
Austria	0.91
Ireland	0.92
Norway	0.99
Israel	1.08
Belgium	1.11
Germany	1.20
Sweden	1.22
Switzerland	1.24
Portugal	1.37
France	1.40

England is conspicuously low on the scale, as the state which shows the least generosity to its workers. The compensation provided by England is exceptionally low, insurance cover is not provided for persons injured on their way to work and back (this benefit is provided by all the other states) and there is no cover for the self-employed.

Italy, Holland, Greece and Spain have similar, relatively low ratings. In Italy, insurance cover is provided for only part of the work force and, with respect to persons injured on their way to work and back, only in certain cases. The low rating of the other three countries arises from their lack of cover for the self-employed.

The level of social protection accorded by France, Portugal, Switzerland and Sweden is particularly high. These countries are generous to their workers, in terms of all the attributes examined relating to work-injury benefits (except for the taxation in Sweden and Switzerland). These states are almost the only ones to provide the notable attribute of compensation unlimited in time (see footnote⁵).

With respect to most of the attributes examined, Israel provides generous work-injury benefits. Nevertheless, in the present comparison, Israel lies in the middle of the rating scale, due to its low level of compensation.

Unemployment benefits

The index regarding unemployment benefits comprises three sub-indices: extent of cover, eligibility conditions and compensation.

The table below shows the aggregative index and the sub-indices for the level of social protection accorded by unemployment benefits in the various states:

	Extent cover	of Eligibility Conditions	Compensation	Aggregative Index
Ireland	0.65	1.05	0.72	0.81
Holland	0.95	1.03	0.55	0.85
England	0.95	1.06	0.56	0.87
Israel	0.95	0.98	0.70	0.88
Italy	1.17	0.93	0.55	0.90
Sweden	0.88	0.96	1.01	0.95
Greece	0.88	0.98	1.02	0.96
Switzerland	0.95	0.98	1.07	1.00
Finland	1.11	1.03	0.99	1.05
Spain	0.88	1.03	1.30	1.06
Austria	1.17	1.03	1.10	1.10
France	1.17	1.04	1.16	1.12
Portugal	0.95	1.03	1.51	1.15
Germany	0.95	1.03	1.56	1.17
Norway	1.17	1.09	1.25	1.17
Belgium	1.17	1.03	1.37	1.18
Luxembourg	1.23	1.03	1.4	1.21

The sub-index "Extent of Cover" is based on four attributes: type of plan, cover for salaried employees, cover for the self-employed and special plans.

Ireland, Greece, Spain and Sweden received the lowest ratings in this sub-index. The first three states only provide insurance cover to part of the population of salaried employees. While Sweden provides full cover, it is exceptional in that participation in the insurance plan is not compulsory (the same is true of Finland).

Luxembourg ranks first, as the state most generous to its workers, in terms of the various attributes of Extent of Cover, with the exception of special plans.

The sub-index "Eligibility Conditions" is based on three attributes: the option of taking early retirement, maximal age for benefits and qualification period.

Italy and Sweden both have low values in all three of the attributes comprising the sub-index; they consequently appear at the bottom of the scale. Israel, Switzerland and Greece rate slightly higher, since their "Maximal Age" value is relatively high.

In Norway, the maximal age is exceptionally high and no qualification period is required to receive benefits. This is why Norway is the highest-ranking state. England is also

exceptional in that it does not require a qualification period, and is therefore positioned immediately after Norway⁹.

Ireland and France, rated slightly below England, provide the option of taking early retirement. The qualification period required by France is short and the maximal age value in Ireland is high.

The sub-index "Compensation" is based on three attributes: the level of compensation for three different payment periods, a supplement for dependents and taxation.

In Holland, Italy, England, Israel and Ireland, the level of compensation was found to be low in all three of the payment periods examined. In contrast, in Germany, Portugal and Luxembourg, it was found to be high and long-term, in the same periods. This is why these two groups lie at opposite ends of the scale. Since Portugal and Austria do not tax the allowance, they were awarded credit points and reached a higher rating.

Aggregative Index for Unemployment Benefits

As we mentioned earlier, the three sub-indices were combined into one: the aggregative index for unemployment benefits.

Ireland, Holland, England and Israel, which have a low - medium extent of cover and a low compensation level, lie at the bottom of the scale. Although England and Ireland have relatively high ratings on the sub-index "Eligibility Conditions", this has little bearing on the aggregative index, since it is characterized by a relatively limited range of values, giving rise to a small variance. This is why England and Ireland received such low ratings on the aggregative index.

By virtue of their combination of medium and high values in all three sub-indices, Luxembourg, Belgium, Norway, Germany and Portugal lead the rating scale.

Israel provides a medium extent of cover for unemployment benefits, however, the level of compensation is low in the three periods examined, as a result of a relatively short period of compensation. This lowers Israel's rating on the aggregative index. The same negative effect, albeit to a lesser extent, is produced by the relative stringency of Israel's eligibility conditions for unemployment benefits, on account of the long qualification period required.

SUMMARY AND CONCLUSIONS

The present comparative analysis evaluating the level of social protection accorded by Israel and European states, by means of maternity allowances, work-injury benefits and

⁹ In Norway and England, the qualification period is subjunctive upon the amount of the average annual wage. The wage required for entitlement to the benefit is lower than the average wage for a salaried employee in the industrial sector, thus, for the purposes of our comparison, these states were deemed not to require a qualification period.

unemployment benefits, shows large differences between the various states and between the various benefits.

The aggregative indexes for maternity allowances and work-injury benefits show a large range of values. The value of the index in the state which displays the greatest generosity to its workers is more than twice that of the least generous state and the respective values in the other states are distributed throughout the range. The aggregative index of unemployment benefits has a smaller range of values, and the upper limit is approximately 50% higher than the lower limit.

The positions of the states on each index vary according to the different benefits. There is no clear trend with respect to the level of social protection accorded by each state in terms of its wage-replacing benefit system as a whole. We are therefore unable to draw conclusions regarding the overall level of social protection of the systems.

Guillaume, Meulders & Vanhuynegem (1995) examined the situation in twelve western European states¹⁰ regarding old-age, health and unemployment insurance¹¹ and obtained similar findings to those of the present paper with respect to the distribution of values and the absence of any particular trend. These researchers obtained a wider range of values for the unemployment insurance index than that found in the comparative analysis presented in this paper. Their findings tally with ours with regard to the top-ranking states of the aggregative index for unemployment insurance, but as far as the bottom-ranking states are concerned, the similarity between the findings is only partial. We also differ with respect to the positions of the middle-ranking states. These differences were predictable for various reasons: in each study, the number of states in the comparative analysis is different and the states and attributes examined are not identical. Furthermore, the data in the two studies relates to different years.

In the present paper, we examined one aspect of the social security system in Israel compared to Western European states: the level of social protection accorded by the wage-replacing benefit system, from the individual's perspective. Israel is not exceptional in its policy on benefits for workers who, temporarily forced to stop working, require social security benefits. Israel lies in the middle of scale with respect to maternity allowances and work-injury benefits, but ranks relatively low in terms of unemployment benefits.

¹⁰ With the exception of Denmark, all the states in their study are included in ours.

¹¹ Their comparative analysis related to the years 1984 and 1991.

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