

# Labour cost review in a transition model from state monopolistic company to open market company

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## ABSTRACT

This paper describes the problems in handling labour costs connected with the transition from state monopolistic companies to free market companies.

In the first case, the labour cost is a variable that is independent of the market and fundamentally based upon the balance of internal managing.

In the second case, the labour cost is a function of the operating revenues and cannot be independent of the market or of what may be effectively requested of the Client.

This evolution is rather complicated due to the fact that the current incidence of labour costs is not compatible with profitable company management, and, as it represents a significant percentage of the costs, it is not easily reduced within the present structure, either at an individual level or at a global level, for questions of employment and efficient provision of services.

The assessment and simulation model aims to resolve the question by dividing the existing personnel, who keep their previous net income level by means of a proposal for pay restructuring, from the new employees, whose pay levels are lower than the consolidated ones, but in line with the market conditions.

In fact, the focus is on the ways of restructuring payments and their application.

The simulation results are encouraging.

**Keywords:** Labour costs, competitiveness, free market, restructuring, managing, investment fund, productivity, monopoly, old and new employees

## 1. INTRODUCTION

The aim was to study a behavioural model designed to resolve the delicate question of adjusting the labour costs of one or more leading Italian companies that were changing over from a monopoly system, often that of the state, to a theoretically free market system. The basic considerations and assumptions were the following:

- The present labour costs are too high for the company's market possibilities, both at an individual and a global level, [1]
- the market will not accept an increase in the sales price for the service, previously fixed by state contributions, and, what is more, a rise in productivity is foreseen which will lead to a fall

in sales prices or a reduction in national and regional contributions, [2]

- The product market is just the Italian domestic market, with the result that production cannot be increased since it is practically already at saturation point for the infrastructure,
- the labour force cannot be easily reduced, except by negotiation between the company and workers' organisations, the latter being historically accustomed to playing a significant role,
- The technological characteristics of the means of production are changing and it is worth considering continuous training for employees most directly connected with the production,
- Retirement of employees is governed by laws that are being modified in favour of a higher retirement age,
- The tax and contribution system is markedly different for the work of employees, compared to the capital invested in funds and financial instruments, [3]
- It is essential that employees maintain the same net income levels, even if in a different form, to keep the same purchasing power,
- Preserving net income levels must also take into account the employee's working life and duration of retirement, and that of his family,
- Once the model is adopted, lower labour costs can be foreseen for new employees than for existing employees, whose net income will remain unchanged,
- The behavioural model is assessed in collective terms, but must be applied individually, as each worker has his own work experience and family,
- Implementation of the model is subject to the prior consent of the main shareholders, since there should be no opposition from the unions and workers' organisations, or even from individuals,
- Implementation of the model requires legal approval since it aims to transform disbursement items with high taxation rates into revenues with lower taxation rates,
- Before considering one proposal for the application, it is necessary to simulate several scenarios external to the company, such as the possible evolution of pension policies, of

turnover handling policies, the potential work productivity and salary negotiation policies.

## 2. LABOUR COST

The labour cost ( $L_c$ ) essentially consists of the following items: the remuneration itself (A), social welfare contributions (B) subdivided into the part payable by the worker ( $B_1$ ) and that payable by the company ( $B_2$ ) and by the severance indemnity (C), which is put aside every year and paid out at the end of the working relationship.

$$L_c = (A) + (B) + (C)$$

The remuneration frequently includes items that may or may not contribute to the severance indemnity and, similarly, items that may contribute or may not to the pension agreement. [ 4]

In reality, the situation is often highly variable, depending on the individual employee, the activity, the company seniority and the number of years in the company.

In brief, it can be asserted that the labour cost consists of the sum of the items (A) + (B) + (C) and that the (B) items are a fixed percentage (a) of (A) and that (C) is a value that is strictly linked to (A), representing a constant share of it (b), subject to a yearly reassessed calculation that follows a well-known rule.

$$L_c = (A) + a \times (A) + b \times (A)$$

Therefore, it is sufficient to analyse the remuneration (A) in order to evaluate the evolution of those aspects (B), equal to  $a \times (A)$  and (C) equal to  $b \times (A)$ .

Thus, it is possible to predict an evolution over time of the labour cost, due to handling and contractual considerations, which can influence the choice of the best strategy.

## 3. POTENTIAL SCENARIOS

There are essentially three possible scenarios:

1. conservative (S1), maintaining the current remuneration levels and with future increases based on a percentage (a) in line with the past,
2. conservative and restrictive (S2), maintaining the current remuneration levels, but with future increases based on the lowest possible percentage; equal to about 1/3 of the previous level ( $(a)/3$ ),
3. evolutionary (S3), with a reduction in current remuneration levels (for example  $R_T = 80\%$  (A)) and, in consequence, a possible increase in labour costs for the future by a market percentage (c), subject to the logic of open negotiation, greater or lower than (a) according to the prevailing conditions.

It is evident; therefore, that the different scenarios are characterised by different types of strategic policy.

Scenario S1 proceeds according to historically consolidated methods and is unlikely to enable the company to be competitive in an open market, since the high incidence of the labour costs has remained unchanged.

Scenario S2 tends to reduce the incidence of the labour costs by means of a restrictive policy in personnel management, often in a conflictual climate and probably with little collaboration between the company and the workers' organisations.

Scenario S3 foresees handling an initial sacrifice, with a reduction in the traditional remuneration (for example, the abovementioned 20%) and a subsequent management policy open to the logic of salary negotiation in a climate of participation.

In scenarios S1 and S2 it is neither easy to foresee nor acceptable that there should be a salary distinction between old employees (higher) and new ones (lower) in order to become competitive.

In scenario S3, however, it is reasonable to suppose a distinction between old employees and new, by means of payment of a specific remuneration item, which, expiring over the course of time, will enable the company to reach a certain competitiveness in its labour cost incidence.

The problem connected with scenario S3 regards the preparation of a model for the economic payout to old employees that enables them, out of fairness, to maintain the same net income levels as well as permit the company's recovery, as expressed in the introductory hypothesis.

Clearly, a comparison must be made between the three scenarios to establish the economic validity as well as the technical feasibility of each.

The time scale for the simulation and analysis must be significantly long and should include both the period of activity in the company as well as the employee's rest time; the variation in the remuneration may, in fact, reduce the pension payments for the whole period of the worker's life and perhaps also the reversibility.

## 4. THE EVALUATION MODEL

Figure 1 compares the trend of labour costs ( $L_c$ ) over time (t) for the three possible scenarios S1, S2, S3.

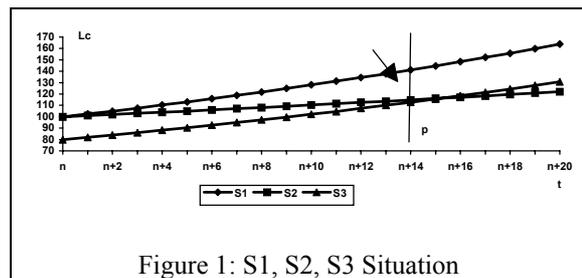


Figure 1: S1, S2, S3 Situation

S1	$Lc = 100 (1 + (a))^t$
S2	$Lc = 100 (1 + (a)/3)^t$
S3	$Lc = 80 (1 + (a))^t$

Scenario S1, with annual increases according to the historical average (a) is constantly higher, whilst the two alternatives, S2 with increases equal to 1/3 of the historical average (a) or variable and S3 with hypothesised market increases (roughly equal to (a) or variable in simulation), intersect after about "p" years to indicate a substantial breakeven point in the year  $n + p$ , shown in the figure by an arrow.

Therefore, we consider the breaking even time (n+p) between scenarios S2 and S3 to be important.

The conditions for comparing the different scenarios are based on finding the equivalence of the global income of each single employee, for the whole of his physical life, with the consequences on his/her family.

In general, the total calculated income for each employee is given by the sum of the following factors, grouped together in sub-chapters.

#### 4.1. Working life, remuneration income

The main elements are:

- Remuneration income for each year ( $R_n$ =remuneration first year ),
- number of working years before retirement (T-n),
- annual remuneration increase (a, 1/3a etc, indicated with j),
- life expectancy and probability of invalidity in the period from year n to retirement T ( $l_{n+t}/l_n$ ), as a function of the age and sex of the individual employee in year n,
- discount rate i.

The current remuneration value (VAR ) in the first year n of the total income for direct remuneration for the general employee from the current year (n) to the moment of retirement (T) is:

$$VAR_n = R_n \times \sum_t (l_{n+t}/l_n) \times [(1+j)/(1+i)]^t$$

in the period n - T

#### 4.2. Working life, deferred remuneration income for retirement (TFR)

The differed remuneration for retirement is a percentage share (about 1/13) of the remuneration, which is set aside year by year, revalued year by year and paid out at the end of the employee's working life in a lump sum.

The main sub-elements are:

- setting aside a sum each year, equal to 1/13 of the remuneration entitled to the TFR, normally equal to a percentage ( $\lambda$ ) of the remuneration  $R_t$ ,

- life expectancy and probability of invalidity, as defined above ( $l_{n+t}/l_n$ ),
- annual remuneration increase j, re-evaluation TFR  $j_{tfr}$  and discount rate i.

The current value (VATFR = current value of the deferred TFR remuneration) in the first year n of the total deferred remuneration income, received in a lump sum in year T, for the general employee is:

$$VATFR_n = (1/13) (\lambda) R_n \times \sum_t (l_{n+t}/l_n) \times [(1+j)^t \times (1+j_{tfr})^{T-t} / (1+i)^T]$$

#### 4.3. Retirement, pension income received directly

The general employee will retire in year T and will receive a pension that is a function of several factors, the most relevant being physical age, years in the company and contributions, the salary level, as well as government employment policies, and the longer working life, fiscal and financial factors.

In our case, the calculation of the economic impact of the pension can be schematised in three large categories, as follows [5]:

- remuneration category with a pension linked to a percentage of the average salary in the last working years (usually between 5 and 10) of the oldest employees,
- contributive category with a pension linked to the effective pension contributions and capitalised throughout the whole remunerative life, for younger employees still far off retirement age and for new employees
- mixed category with a pension partially linked to the contributions effectively made for capitalisation and to the effective remuneration of the working years, with a further breakdown according to years of service at a certain date in which the government law designed to regulate the transition from a remunerative system (A) to a contributory one is approved (B).

It is immediately apparent that an important legislative complication needs to be added to the pension calculation in question.

The question of calculating the average of the last salaries is further complicated by the introduction of a quota calculated over a certain period, which is a function of the contributory years of service and another quota which is a function of the physical age, with certain legislative limitations on the total value for the pension, which must be lower than a pre-determined percentage of the last salaries.

The result, therefore, is a veritable jungle of regulations, due to difficult negotiations between Government, Companies and Unions, with the intention of preserving acquired rights without excessively compromising future developments.

The analysis model investigates all foreseeable cases, with acceptable approximations.

In each case, we define with  $(P_T)$  the economic sum of the Pension in year T at the start of retirement.

The main sub-elements to evaluate are:

- the probability of reaching year T of the retirement  $(l_{n+T}/l_n)$ ,
- the probability of the employee's survival during retirement, with his consequent life expectancy  $(u)$ ,  $(l_{n+t+u}/l_{n+T})$ ,
- the annual rate of increase of the pension  $j_p$ ,
- the discount rate  $i$  from the year T to the end of the employee's life,
- discount rate  $i$ .

The current value ( $VAP_d$  = current value of direct pensions) at the first year  $n$  of the total pension incomes for the general employee from the current year  $(n)$  to the moment of retiring  $(T)$  and for physical survival  $(u)$  is:

$$VAP_{n,d} = (l_{n+T}/l_n) \times (P_T) \times \sum_t (l_{n+t+u}/l_{n+T}) \times [(1+j_p)/(1+i)]^{u-T} / (1+i)^T$$

in the period  $T-u$  actualised to  $n$

#### 4.4. Retirement, pension income received for reversibility

The employee may die, leaving his pension in reversibility to his family members, wife or husband, or children still under age, in which case it is necessary to calculate the potential income.

The main sub-elements to consider are:

- the probability of reaching year T of retirement  $(l_{n+T}/l_n)$ ,
- the death rate of employees in retirement, which is the complement to one of the survival probabilities  $(1-l_{n+t+u}/l_{n+T})$ ,
- the probability of survival of the family nucleus, equal to the remaining physical life of the eventual recipient of the reversibility  $(l_{n+t+u+w}/l_{n+T+u})$ ,
- probability of leaving a family nucleus  $(\phi)$  to receive reversibility,
- reversibility rate  $(\sigma)$ ,

The current value ( $VAP_r$  = current value of reversibility pensions) at the first year  $n$  of the total income for pension reversibility of the general employee from the current year  $(n)$  to the moment of retiring  $(T)$  and for the physical life  $(u)$  and for the life expectancy of the family nucleus  $(w)$  is:

$$VAP_{n,r} = (l_{n+T}/l_n) \times (\sigma)(P_T) \times \sum_t \{(\phi)(1-l_{n+t+u}/l_{n+T}) \times (l_{n+t+u+w}/l_{n+T+u}) \times [(1+j_p)/(1+i)]^{w-u} / (1+i)^{T+u}$$

in the period  $(w-u)$  actualised to  $n$

#### 4.5. Total income

In brief, the total income to be considered for the general employee is given by the sum of those factors indicated above:

$$VA_t = VAR_n + VATFR_n + VAP_{n,d} + VAP_{n,r}$$

Consequently, it is possible to consider comparing the current total value  $Va_t$  for every single employee in the different reference scenarios in Figure 1 (for example,  $VA_{ts1}$  compared to  $VA_{ts2}$  or compared to  $VA_{ts3}$ ).

The possible and potential damage  $(D)$  incurred by reducing the retribution of every single employee  $K$  is given by the difference between the present values of two scenarios, for example:

$$(D)_k = (VA_{ts2,k} - VA_{ts3,k})$$

The value  $(D)_k$  represents, therefore, the economic total to be distributed at the beginning of the question (year  $n$ ), under various forms, to the employee in order to redress the situation when a reduction in remuneration affects his working life up until his retirement in year  $T$ , his life in retirement up until year  $u$  and any reversibility up until year  $w$ .

The total damage incurred  $(D)$  is a function of numerous factors, which influence one another and which can lead to very different results.

For example, it is reasonable to sustain that the breakeven point  $(n+p)$  in figure 1 varies according to the choice of the rates of change  $(a)$  and the initial reduction rate in scenario 3 (for example, 75% against 80% or 85%).

Likewise, the damage may vary according to the discount rate  $i$  and, not least, to government policies affecting the possibility of reaching retirement age, as well as other factors.

Bearing in mind the difficulties in forecasting and the different opinions of the parties involved, a calculation model has been prepared that can simulate the potential cases, taking into account the different interpretations of the forecasts.

In any case, our problem is calculating the damage  $D$  for each individual employee.

In general, we show the net damage after tax compared to the gross damage before tax.

Consequently, it is necessary to calculate the income values after tax, with the introduction of the tax rates.

#### 5. THE EVALUATION MODEL AFTER TAX

Calculation of the potential damage to the individual employee and the corresponding lack of payment on the company's part during the working period is influenced by the effective cash flow and it is necessary to introduce a further element into the model, the State or, rather, the Legislator.

The State (Legislator) intervenes by means of the following two elements: taxation of the effective taxable income  $(T_{imp})$  and the pension and social welfare contribution  $(C_{a,p})$ .

In the Italian taxation system, the value ( $T_{imp}$ ) is a function of the progressive total of the remuneration, with higher rates according to the higher income brackets ( $\%T_{imp}$  in continuous evolution, for example from 20% to 40%).

Similarly, the value ( $C_{a,p}$ ) represents a percentage of the remuneration with a quota paid by the employee ( $\%C_{a,p,d}$  in continuous evolution, about 10%) and a quota paid by the company ( $\%C_{a,p,I}$  in continuous evolution, about 30%). [6]

The model, therefore, foresees the introduction of taxation into the calculation of the present values of the employee's income in order to arrive at the net value.

The net value of the calculation takes into account the prevailing norms, considering the taxation rates and the deductions foreseen both for the remuneration and for the severance indemnity and pensions.

In other terms, the present value becomes approximately:

$$VA_{tT} = VAR_n(1 - \%C_{a,p,d}) \times (1 - \%T_{imp}) + VATFR_n(1 - \%T_{imp}tfr) + VAP_{n,d}(1 - \%T_{imp}) + VAP_{n,r}(1 - \%T_{imp})$$

### 5.1. Calculating the net damage

As in paragraph 4.5 for the gross damage, the net damage can be defined as the difference between the values  $VA_{tT}$  calculated in the various scenarios S1, S2, S3 of figure 1.

It is interesting to break down the present net damage of each individual employee into different components and into the different scenarios, in particular:

- damage connected to remuneration ( $DR_n$ )
- damage connected to the severance indemnity ( $DTFR_n$ )
- damage connected to direct pensions and reversibility ( $DP_n$ ).

From the various scenarios, the Damage ( $D$ )<sub>kt</sub> to an general employee is given by:

$$(D)_{kt} = (DR_n)_{kt} + (DTFR_n)_{kt} + (DP_n)_{kt}$$

The damage value is a function of numerous factors presented in the model, but it is worth representing the trend of the damage graphically, according to the years still to retirement, the residual working life, for the general employee K.

### 5.2. Net damage and residual working life

The figures below present, by way of example, the total net damage as the difference between scenarios S2 and S3, according to the residual working life.

Data are calculated with reasonable values for the simulation parameters, on the basis of a comparison with a group of experts. [7] [8] [9]

They refer to a general employee K in a company making the transition from a monopolistic to a free market situation, with an initial reduction in retribution of 20%.

Figure 2 represents the salary damage, in ordinates, as a percentage of the previous net remuneration and, in abscissa, the residual working life, supposing retirement to be at 65 years.

The time scale is limited to the breakeven point in figure 1, where the remunerations of scenario S2 and scenario S3 are equal at the point of abscissa  $t=n+p$ .

In fact, it is assumed that such a damage point can be largely overlooked.

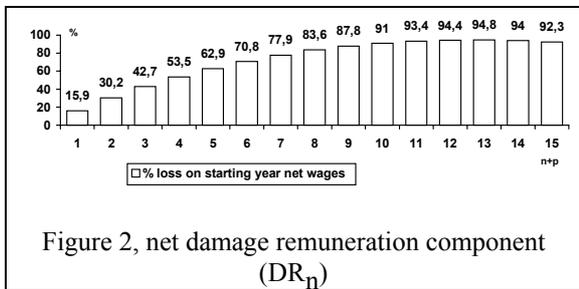


Figure 2, net damage remuneration component ( $DR_n$ )

Figure 2 is interpreted as follows: the abscissa is entered with the years left to retirement equal to the residual working life and the present value of the damage is found in ordinates.

Figure 3 exemplifies the method: the general employee K will retire in 5 years, his net remuneration damage ( $DR_n$ )<sub>kt</sub> is equal to 62,9 % of his last net salary during the year n-1.

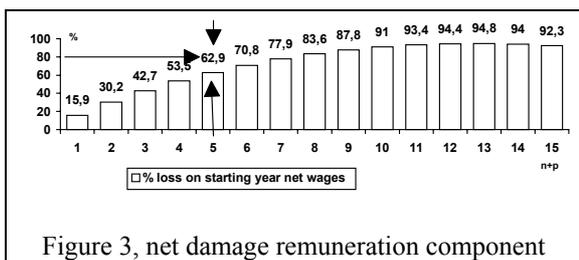


Figure 3, net damage remuneration component

The general employee K represents the average of the employees in the company in question and, therefore, is different from year to year, because the workers concerned also vary from year to year.

This variable average also explains the fact of a drop in the damage towards the breakeven point, since the values involved are changing.

A rapid growth can be seen in the first five years, equivalent to 2/3 of the total and then a fall off in the other ten years, to a 1/3 of the total.

Figure 4 shows the remunerative damage to the severance indemnity ( $DTFR_n$ ) in ordinates as

percentages of the previous net remuneration and in abscissa the individual's residual working life, supposing retirement to be at 65 years.

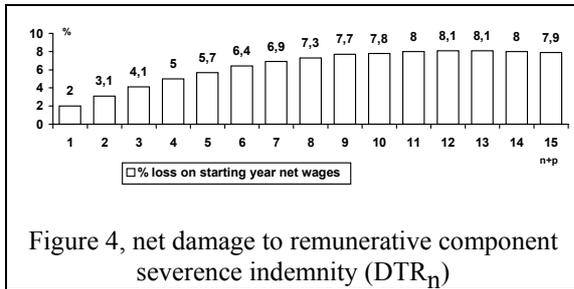


Figure 4, net damage to remunerative component severance indemnity (DTR<sub>n</sub>)

Figure 5 shows the damage connected to direct pensions and reversibility (DP<sub>n</sub>) for the category of workers A, in paragraph 4.3, in ordinates as percentages of the previous net remuneration and in abscissa the individual's residual working life, supposing retirement to be at 65 years of age.

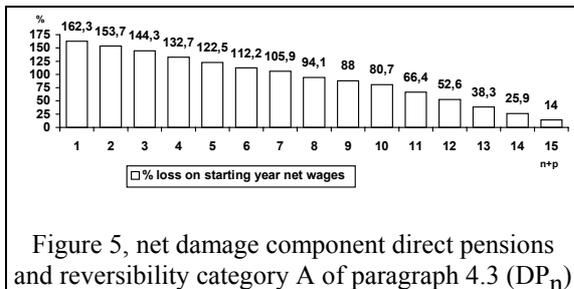


Figure 5, net damage component direct pensions and reversibility category A of paragraph 4.3 (DP<sub>n</sub>)

Category A, with the definition of paragraph 4.3, is far more numerous since it is composed of older employees.

Figure 6 shows the damage connected to direct pensions and reversibility (DP<sub>n</sub>) for the category of workers C in paragraph 4.3, in ordinates as percentages of the net previous remuneration and in abscissa the residual working life, supposing retirement to be at 65 years of age.

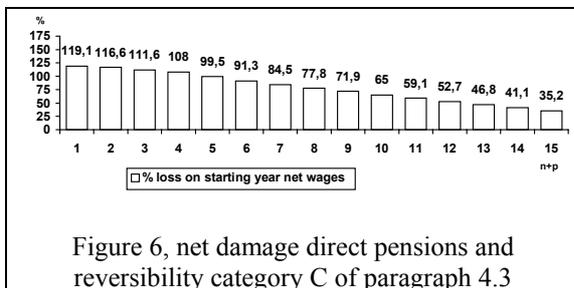


Figure 6, net damage direct pensions and reversibility category C of paragraph 4.3

Category C consists of employees affected by the transition phase of the pension policies and is numerically inferior to category A, which represents the real point of reference.

Category B is not affected by the valuation since retirement is foreseen beyond the breakeven point.

It should be noted that the damage for the remunerative and severance indemnity components increases over time, while the damage for the pension part decreases over time.

It is, therefore, useful to show in figure 7 the total damage for a general employee K in category A, which represents about 80% of the total of those involved.

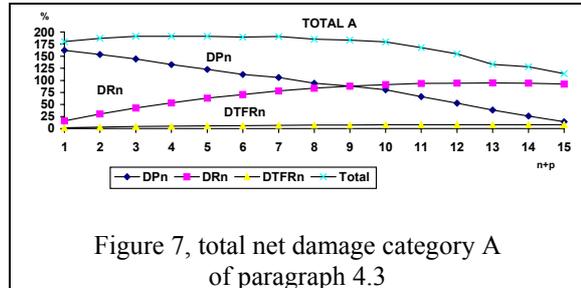


Figure 7, total net damage category A of paragraph 4.3

It is worth noting that the total value of the damage is practically constant over time, up to year 10 or 11, after which it drops.

Likewise, it is useful to show, in figure 8, the total damage for a general employee K in category C, which represents about 20% of the total of those involved.

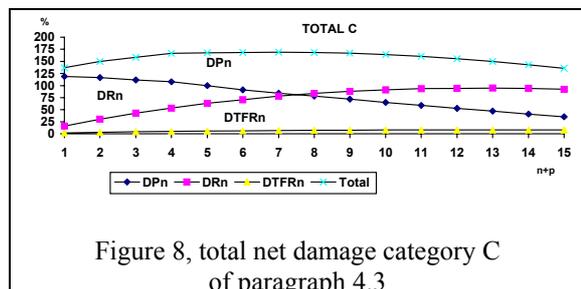


Figure 8, total net damage category C of paragraph 4.3

It is worth pointing out that the present total value for the employee's whole life is no greater than two net annual salaries of year n-1, both for category A and C.

In synthesis, the following statement has been verified for the complete remunerative and retirement life of the employee.

$$(D)_{kt} = (DR_n)_{kt} + (DTFR_n)_{kt} + (DP_n)_{kt} \leq 2Rn_{n-1}$$

### 5.3. Net damage and its adjustment

With reference to the methodology described above, it is possible to adjust the said individual damage with personal economic contributions.

Given the personal economic contributions, it is possible to consider reducing salaries that are not in line with market possibilities for all those employees, old and new, by means of specific contractual agreements.

In this way, older employees are not penalised and employment can be safeguarded for the new arrivals.

The question is how to pay the older entitled employees the economic damage in a way that is acceptable for the company balance sheet and for the workers, too.

In the time period considered (n+p) as breakeven between scenario S2 and S3, a significant number of employees will retire and be affected by adjustment payments, as a consequence of their age and legislative policies.

It is realistic to suppose, on the basis of simulation, that about 40÷55% of the workforce will be affected.

Bearing this in mind, the company should set aside and distribute in year n, the initial moment of remuneration variations, an economic payment equal to about one full year of net remuneration.

#### 5.4. Criteria for damage payment

The simplest method is to pay out an additional sum to the monthly remuneration over the years, which can be absorbed over time, until the breakeven point is reached by the older employees whose salary has been cut.

This sum, called Saa (sum from indemnity absorbable over time) is exactly equal to the difference between the previous remuneration  $R_{n-1}$  and that which is subject to reduction and gives a right to all differed and retirement remuneration components.

The Saa total is subject to the taxation indicated previously and to all the welfare contributions, which, between costs payable by the company and those payable by the employee, amounts to a further contribution of similar entity.

Given that the nature of the damage depends on the competitive conditions of the market and the proximity to life-annuity criteria, it could be interesting to investigate the possibility of innovative payments using special financial instruments.

In fact, the model foresees the possibility of using a system similar to the alternative social security, with the advantageous tax conditions that this implies.

The process is as follows:

1. the company sets aside the sums to be paid out  $(D)_{kt}$  according to the damage model above, with specific values for every employee effectively assigned to it,
2. the company draws up an agreement with leading private or state management companies, capable of handling such sums and giving the necessary guarantees,
3. the company pays out said sums to the management companies as a capitalisation fund,

with the quotas personalised for every single employee,

4. the general employee becomes the owner of the abovementioned shares against the fall in remuneration,
5. the general employee will be able to earn an income from his own shares and, later, withdraw the capital laid up, according to precise rules, which may vary, according to whether the part originates from the remuneration or from the retirement damage,
6. the company and the employees pay the taxes and contributions required by law for the financial income from pension funds and similar.

The advantage of this second hypothesis is, fundamentally, that of having much lower taxation and contributions both for the worker and the company.

It is clear that the hypothesis regarding the setting up of specific capitalisation funds, financed initially by the company and then to be paid out to employees according to their individual rights, needs to be carefully studied from a fiscal and contributory point of view.

The difficulty in interpreting the current legislation needs to be resolved by the legislator in a way that is clear and favourable for this method, at the most appropriate moment for the community at large.

This fact can be verified when transforming state enterprises into private companies that obey the market rules (for example public transport, energy, telecommunications, etc.), when transforming banks run by government-controlled foundations into banks with more transparent regulations, when transforming popular and cooperative banks into banks following market rules, and state-run enterprises in difficulty into competitive companies that are concentrated according to sector.

In other terms, the second method can be evaluated positively, either as an alternative or in parallel with the use of social benefits in order to manage the transition from “protected” and unsustainable situations to competitive free-market situations.

## 6. APPLICABILITY

This model is intended to give those companies interested in such a transition a series of instruments designed to be used with more traditional ones in resolving business problems in a constructive and personalised way.

A good solution would be to use all the available instruments, according to their collective applicability and their individual popularity.

In other words, it is possible to foresee that some employees will use the absorbable Saa integration

system, while others will prefer the payment of the damage by means of capitalisation funds on either the remunerative share, or the pension share, or on both these shares.

As a result, those workers already employed at the starting date of the application model will be guaranteed a fair system of economic continuity, whilst those who join the company later will be guaranteed a job and a market remuneration compatible with the services and products sold to customers.

Nor should it be overlooked that the company immediately has a competitive profit and loss account and that the debt towards the employees' funds is transferred to the balance sheet.

Another consideration could be that the shareholder prior to the transition pays the lump sum increase of the capital that is intended to cover the fund.

The complete applicability, however, is dependent upon specific clarification on the part of the national, possibly international, Legislator and on the acceptance first by the company and the union organisations involved and then by the individual employees singly.

Initial research shows that the enterprises interested by a possible application of the model account for a significant 10÷15% of the total employee workforce.

Operative simulations developed from the data of several major companies reveal data favourable for the technical applicability.

However, there is greater difficulty with regard to the political acceptance of the collective agreement.

## 7. CONCLUSIONS

The problem in question has topical characteristics that concern the transition of numerous companies from a monopolistic state-run situation to a free-market situation.

This model solution for labour costs enables individual situations to be adapted to meet a general framework.

This set-up aims to give the company the operative instruments needed to reduce the labour costs for new employees and to adjust the damage incurred by the older employees as a result of the innovative policies.

This model intends to resolve the complexity of calculating the economic damage due to cutting employee remuneration, mainly by using a financial instrument designed to transfer the impact of the greater burden from the profit and loss account to the balance sheet.

In this way, the current financial year can be faced competitively and use can be made of the more favourable tax rates of the financial

instruments, compared to the traditional remuneration.

The part of the model linked to the introduction draws freely on those models designed to handle alternative pensions [10] to those provided by the state.

In conclusion, the model is, to a great extent, technically and theoretically designed to pass from the simulation phase to the more delicate phase of real application, with all the necessary integration, operative checks and choice of the most appropriate and globally acceptable instruments.

The applicability to numerous and important companies justifies an in-depth operative study which involves all the different parties, namely, the company, the union organisations, the individual employees and the Legislator.

## 8. REFERENCES

1. Guerra F. - "Costo del lavoro e prestazioni economiche nelle principali imprese" - XXIX Convegno nazionale Animp, Sorrento, Ottobre 2002, pp 73-93;
2. Cheli - "Delibere Authority" - Il Sole24ore, 21 febbraio 2003, pp13-14;
3. Frizzera B - "Guida Pratica fiscale" - Il Sole24ore - Banco di Brescia, Volume I, 2000;
4. Colonnese - "Le nuove pensioni" - Buffetti, Roma 1999;
5. Russo - "Il calcolo delle pensioni, Manuale operativo" - Il Sole24ore, Milano 1999;
6. Il Sole24ore - "Il punto lavoro" - Il Sole24ore, dati e tabelle, Milano 2002;
7. IntesaBCI - "Scenario macroeconomico" - Studi ed analisi finanziaria, Milano 2002;
8. MedioBanca - "Indici e Dati" - Milano 2002;
9. ISTAT - "Annuario Statistico" - Roma, anni vari;
10. Modigliani, Ceprini, Muralidhar - "A solution to the social security crisis from MIT Team" - Sloan Working paper 4051, Mit 1999 and ISEO 1999.