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***THE DRIFT OF PUBLIC SPENDING TOWARDS  
THE ELDERLY: A GENERATIONAL ANALYSIS  
OF THE TREND IN SPAIN***

**GUILLEM LÓPEZ CASASNOVAS & ANA MOSTERÍN HÖPPING**

**Univ. Pompeu Fabra. Department of Economics and Business and CRES**

**SUMMARY:**

The tendency for public welfare spending to be increasingly aimed at the elderly has been pointed out for the US and other developed countries. While population ageing is a common trend, it is not obvious why the shift in spending exceeds the trend in ageing, or why per capita spending on the elderly increases.

We show that this is the case in Spain, identify the losers from this development, discuss the policies that underlie this trend, and propose adjustments based on Musgrave's fixed proportions rule as an inter-generationally fair distribution.

**Key words:** Intergenerational equity, Musgrave's rule, Spanish social policy and ageing.

**INTRODUCTION**

Pati et al. (op. cit.) and Newachek et al. (op. cit) in their seminal papers discussed already the relative changes in social expenditure by age during occurred in USA during the period 1980 – 2000. They focused primarily on the shift of public

expense on welfare for the elderly versus children, those being the two age groups that are net recipients of public funds. Their consensus is that under limited budgets, the observed public spending for older people is expected to threaten public commitments to other deserving groups, in particular children. This may be the case in European Union Countries too, for which the acceptance of the Maastricht Treaty and the Agreement for Stability and Convergence restrains further rises in public expenditure in an ageing society period (Figures 6 and 8 of Appendix offer some illustration of the problem at present in the European Union. See in general for the sustainability of the Welfare States under the new demographic Challenges: Lindbeck A. -CSIFO, 2006- and Dang, T-H et. al 2006 (op. cit).

In this paper, we analyze the trend in Spain over a similar time frame (ca. 1980 – 2000) by trying to replicate this result. However, we focus on general indicators of welfare and provision over time for all age groups, including those who are net contributors to the public system. Our results show that the older age group certainly has gained the most over this period of time, and has claimed a proportion of resources that has increased beyond what can be explained by population ageing alone. The losers seem to be individuals in diverse conditions of fragility across the population, and overall the age group that has lost out the most on average is the youngest working generation.

## **AGEING AND THE SPANISH SOCIAL SPENDING**

Like so many developed countries, Spain is experiencing strong population ageing and an increasing ratio of retired to working population. One might think that benefits to the elderly or retired might be diluted to a lesser or greater extent as their number increases. Surprisingly though, resources are eroded from other age groups to increase resources geared towards the elderly even on a per capita basis. The older working and retired cohorts claim the bulk of gains from productivity growth over the last decades, while young workers have barely improved their relative income.

In the following section we analyze the evolution of welfare for various age groups along various parameters for which data is available: poverty risk, income, housing, unemployment and healthcare. Since we do not have reliable data, we cannot frame our analysis following the intergenerational debt approach ('a la Kothlikoff'), but recently Patxot and Farre (op.cit) have opened this line of research too.

In the discussion we seek to avoid repeating some of the inconclusive and contentious interpretations of generational equity issues debated in the US in the 1980s and 90s. Instead we invoke Musgrave's Fixed Proportions rule as a working definition of inter-generational fairness, and compare Spanish social policy and the observed and expected outcomes to this theoretical prescription.

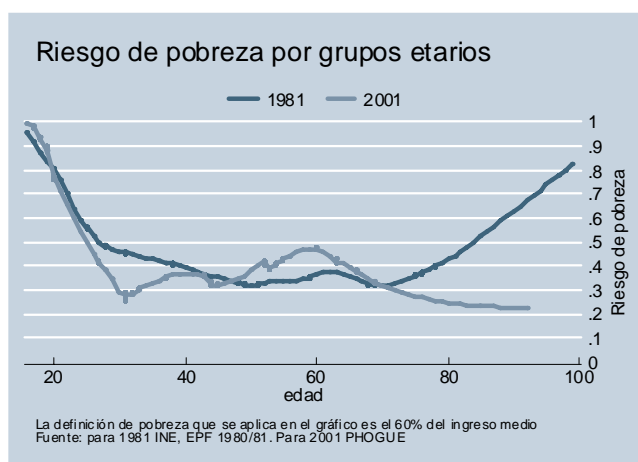
## POLICY ANALYSIS

**Poverty risk:** One summary measure of welfare experienced by a cohort might be its specific poverty risk. Poverty risk in this context is defined as the probability of income falling below 60% of the average overall personal income. We have analyzed poverty risk for all age groups over two decades to see what the relative changes over time have been.

Poverty risk diminishes over the given timeframe for individuals below 44 years of age, as well as for those above 70. In addition, by 2001, starting at retiring age the poverty risk not only doesn't increase but decreases steadily with age so that the oldest age groups suffer the smallest poverty risk of all age groups, in striking contrast to the 1981 scenario.

Curiously the age band between 50 and 65 years, the group that has experienced

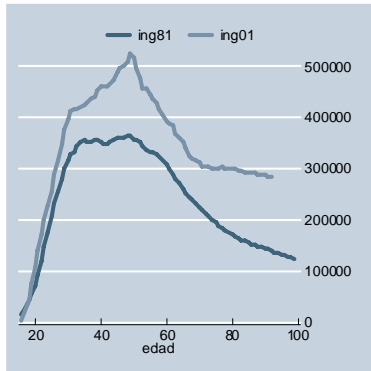
the strongest income rise (see below), has seen their poverty risk increase over



the time frame. This is most certainly due to rigidities in the labor market, which force an unusual amount of income variance onto this age group. Those individuals of this age who have been in continuous employment typically receive high salaries and enjoy labor privileges that accumulate over many years. The long-term unemployed in this age group don't find a way back into the labor market and are doomed until old age pensions end up "saving" them. Until that age the data displays great variance.

This reduction in poverty risk from pre- to post-retirement age is also due to the fact that anti-poverty transfers are channeled through the social security or public pension scheme, which in this case makes non-contributive payments to retirement age poor only, rather than through a general minimum income scheme that would redistribute within all age groups. The confusion of social security's role as a contributive as well as redistributive scheme leads to this pro-old bias.

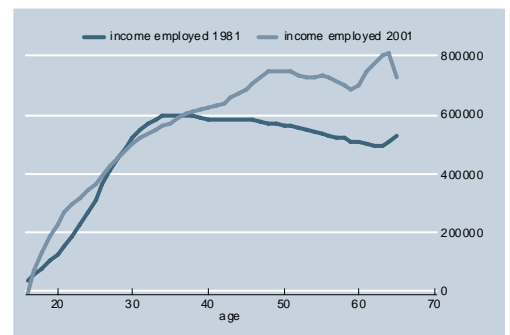
Income variance is smaller among the young, as labor market reform has concentrated on new entrants and young workers. So the risk of labor market exclusion is lower for the young, although their salaries are lower.



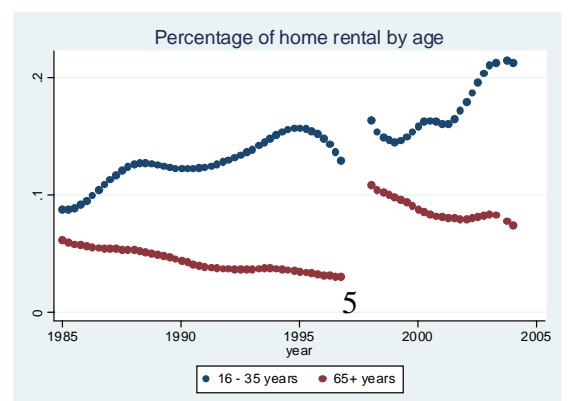
**Income:** Figure 2 shows the evolution of income by age group for 1981 and 2001. One fundamental difference shown is the way income formerly declined from the onset of retirement in 1981 whereas in 2001 it stays almost level from retirement onwards. And perhaps most noticeably, there is a stark increase in income for the group around 50 years of age.

In contrast there is relatively minor improvement in income for those in their 20s and 30s. In fact, as the figure below shows, the meager improvement in income is primarily due to an increase in the employment rate for that age group. So collectively this age group has higher relative income, but only in exchange for more hours of work.

In fact, looking only at the employed, there is an age range in the mid-30s, in which young workers earn less for their work in real terms in 2001 than in 1981, and it is only the population above 35 that benefits from the increase in productivity almost as an increasing function of age.



**Housing:** An incidental phenomenon that is unrelated to public policy, but that compounds the relative welfare advantage of older vs. younger adults is the Spanish real estate boom



that made property prices skyrocket lasting recent years. Mortgage payments reduce the net labor income of young owners by over 30% in many Spanish regions, while the older generation paid off their property in the decades before the boom.

Home ownership in Spain is high, encouraged by fiscal incentives and is traditionally coveted. The rule of thumb that if you can you own, is sufficiently entrenched that it is revealing to explore who doesn't own their home but rents. Unfortunately there is a gap in the "continuous survey" and a redefinition of tenancy categories in 1997, which leads to a discontinuity in the relative evolutions. In any case, it is evident that rental tenancy of the younger age group increases as that of the older age group decreases.

**Emancipation:** Another indication in the housing data of the straits faced by young adults is the reversion of the trend for early emancipation. In 2001 fewer young adults below 30 had left the parental home than in 1981. In 1981 37% of 25 year olds lived in their parents' home. By 2001 this proportion had increased to 53%. Fewer young adults are living alone or with a partner, and more are sharing a home with other relatives, friends and roommates. It is difficult to explain the delayed move from the parental home as an unrestricted preference. Instead, this phenomenon is symptomatic of the economic conditions of the current young cohorts.

**Health Care Expenditure:** Spanish public health care expenditure is principally composed of hospital and specialist services (54%), pharmaceuticals (21%), and primary health care services (15%)<sup>1</sup>. We analyzed the evolution of hospital expenditure by age group between 1987 and 2002 using the *Encuesta de Morbilidad Hospitalaria* of the National Statistical Institute. For each age we computed the number of hospital stays, the average length of stay in days, and the sum of days spent. 1981 the number of hospital stays peaks for the twenties and

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<sup>1</sup> Cuentas Satélite del Gasto Sanitario Público 1998. Ministerio de Sanidad y Consumo

early thirties due to child delivery stays. In 2002 however, the visits by the elderly exceed those of delivery stays.

We calculated the number of days spent in hospital as a proxy for health expenditure. The length of hospital stay has been reduced drastically between 1978 and 2002. The relative decrease is more pronounced for older age groups. Nonetheless, the strong increment in hospital visits by the elderly dominates this decrease. Hospital service measured in days of stay was fairly evenly distributed across adult age groups in 1978, while in contrast hospital use increases with age in 2002 such that the majority of service days are consumed by those above 60. In 1978 the number of hospital days consumed by people 60 and over is about half the number consumed by those below 60. By 2002, it is 123%.

The scarce tradition of palliative care and the limited prevalence of a good death culture contrary to run-away end of life therapeutic expenditure, cause medical expenditure to be highly concentrated towards the end of an individual's life cycle.

**Unemployment Expenditure:** Unemployment benefits have also shifted towards the later active years. In 1981 the number of unemployed young (16 – 30 years) is 5 time greater than the number of unemployed old (50 – 64 years). In 2003 it merely doubles it. The beneficiaries of public expenditure have changed in greater proportion than suggested by the raw unemployment figures as the young unemployed are often looking for their first job and therefore don't qualify for benefits.

**Returns to Public Pension Payments:** We also calculated the returns on social security or retirement payments for various cohorts by compounding all social security income deductions during standard working life and calculating or estimating the sum of pension payments in old age. We compared a few cohorts born around 1940 to a few cohorts born around 1970. The implicit returns that would result if these payments were obtained by capitation falls by 40%-50% for

the younger cohorts from 1940 compared to the cohorts that recently retired in the 1990s.

In a separate analysis we found that between 1980 and 2005 the ratio of average pension to average salary has increased from 38% to 43%.<sup>2</sup>

## **DISCUSSION**

We have analyzed wealth and welfare by age group over time along various major parameters for which there is available data. The distribution of wealth and welfare and social expenditure by age groups has significantly changed.

This effect is not by itself cause for concern. It may simply be the case that increased life expectation and improved health, along with other social and lifestyle developments of recent decades, has brought on a new valuation of well-being along the life cycle, and that the collective time discount factor has relaxed to allow for an extended period of reward at the end of a relatively more frugal working life (relative here refers simply to the proportions of resources allotted to the two life phases relative to one another). What would be wrong with that? After all, significant social change in the past decades such as changes in education and leisure, marriage patterns and family composition has coincided with biological changes such as height, life span, onset of menstruation etc. If developed democratic countries with fairly liberal social and financial systems simultaneously display this trend of welfare concentration towards old age, perhaps economists should just stand by and take note of collective revealed preference.

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<sup>2</sup> Data source: for average salaries until 2000: INE, Encuesta de Salarios en la Industria y los Servicios, from 2001 onwards: INE, Encuesta Trimestral de Coste Laboral (ETCL), salarios para obreros, ambas jornadas, todos los sectores. For average pensions: INSS, Memorias 2007, p. 277.



It is however worth exploring what the underlying reasons and consequences of such a development are, and to identify criteria of longitudinal distribution and efficiency that may shape overall inter-generational welfare in the same way that distributional and efficiency issues shape population welfare at any fixed point in time. By no means should this exercise detract from the need to improve welfare distribution within any age group, nor does it imply a denial of current “cross-sectional” welfare issues.

Throughout our research we have observed well-documented flaws in current distributional welfare policies in the form of pockets of social fragility across all age groups, in particular among single parents, immigrants and widows. There is in other words intra-generational inequality and excessive variance in welfare. Several demographic parameters point to collectives warranting separate study.

The most dramatic negative effect of the observed shift in social spending patterns is however of an inter-generational nature. This is not to be understood in terms of “young versus old” at this or any particular point in time. Rather, generational equity is to be understood dynamically through time; there aren’t two kinds of people but rather different ages in each individual’s life cycle. Just as there are valid principles to maximize an individual’s lifetime utility, such as consumption smoothing, or to enhance social welfare, such as a particular balance of equality and efficiency, there should be a practical way to measure the welfare effects of the pattern of inter-generational fluctuations.

One dynamic model of inter-generational fairness is Musgrave’s Fixed Proportions Rule recently re-discovered by Esping-Andersen and Myles. This model makes no normative prescription whatsoever about how welfare should be distributed through life cycle. Instead it provides a formula to insure inter-generational fairness or constancy. It proposes to define a desirable lifetime distribution of income or welfare consumption and stick to it over time. Whether retirement is to be relatively short and frugal or extended and relatively costly in proportion to earlier stages of life, the adopted proportion ought to be kept over

time and generations. Obviously the proportion cannot be exactly fixed because available funds fluctuate with demographic trends and productivity shocks. Musgrave's fixed proportions rule foresees these fluctuations and advocates splitting any surplus or deficit homogeneously among all age groups at every instance.

Our objection to the social policy sustaining the observed trends in Spain is based on Musgrave's principle. The problem is that policy doesn't naturally and flexibly adjust to circumstance, but often lags behind, particularly in cases of straits that require distributing a shortfall or per capita decline. The delay in the introduction of pension reforms is a universal example of this. A passive stance by politicians who allow a deficit to accumulate whose eventual effects are severe but diffuse faces less focused resistance than any reform with a defined target and date.

One pattern of reform adopted in Spain is the gradual phasing-out of an outdated entrenched status quo. For example, successive labor reforms change and liberalize employment rules for new entrants to the labor market who have never known any better, while older workers get to keep their privileges, protections and inefficient benefits intact. While it is useful reform, and eventually will apply to all, for some decades this pattern causes a flux of productivity gains from the younger to the older workers. On average, when an office worker retires she is replaced by a younger worker at half her salary.

Somewhere through the working population runs the fuzzy line that separates workers with different length histories in the work force and different conditions, and this line moves forward year by year, increasing the proportion of reformed jobs.

The pay-as-you-go pension scheme meanwhile grows unsustainable due to the gradual inversion of the population pyramid. Yet retirement benefits were defined and promised to today's pensioners decades ago, and so their claims are literally grandfathered in. (Due to reduced cohorts from the Spanish Civil War, Social

Security is actually experiencing a small transient surplus that is bound to grow into a substantial deficit over the next two decades). Again there will be a fuzzy line that separates the rigidly protected cohorts from subsequent cohorts who will at some point, somehow, and to some extent have to accept a reduction of the “deserved” pension after the standard contributions of a working life.

As it happens, it is likely that one generation (the baby boom generation) will be hit at several stages of its life cycle by various related and unrelated shocks that fail to compensate for one another. These may compound to impose an undue share of the demographic burden, whilst depriving it of an inter-generationally fair share of productivity gains. So the prolonged financial dependency in youth due to entrant specific labor market reform and real estate developments, the increased work load and the compromises in family planning that we observe today, can’t be expected to be compensated for by a golden retirement. By the time this generation reaches retirement age those privileges will be curtailed as well. Overall, this generation is not experiencing a reallocation of welfare during their life cycle, but an overall loss with respect to what is fair by Musgrave’s rule.

This total effect is not intentional in any political instance, and yet it arises. We identify three possible reasons for the observed shift, 1) vertically separated budget administration, 2) political power and voter composition, and 3) cash vs. kind defined benefits.

The first reason is the fragmentation of social fund allocation by administrative authority. Newachek et al. attribute changes in the proportion of US public expenditure on children vs. the elderly to a shift of competence from the central government to the states in the provision of services to children. They speculate that this has weakened children’s welfare compared to that of pensioners, whose administration remains in the hands of government. Similarly pensions and, (up until 2002) health services are centrally administered in Spain, while most other welfare services are provided sub-centrally on a weaker basis of transferred funds.

A distribution of the social budget into ministries and administrations allows a similar trend in Spain. For example, a policy discussion on the desirability of an exemption from co-payment on drugs for pensioners is conducted without taking into account the level or trend of pension payments. It is considered pertinent to the Health authority and unrelated to the Pensions system. Reallocations of funds therefore occur between cohorts and within an area of authority rather than cross-sectionally or intra-generationally. This type of encapsulation promotes inter-generational fluctuations by the mere possibility that such inter-generational redistributions will compound rather than compensate. Budgets are balanced within policy areas, but no checksums are computed on the mixed basket of services and benefits enjoyed by the cohorts at different stages of their life cycle.

Other reasons for life cycle shifts in public expense distribution are voter composition, and cash vs. kind definition of benefits. Benefits to the elderly tend to be acquired cash defined individual rights, whereas more general welfare benefits are discretionary given the means available at any point in time and therefore susceptible to reduction and dilution.

From an efficiency standpoint, there is a clear advantage to investment in children and education. There are however developments that tilt political power away from them. The age of the median voter in Spain is expected to rise drastically from 44 years in 2000 to 57 years by 2050, moving from the youngest among median voters in the group comprised by Germany, France, UK, Italy and the US to the oldest in the group.<sup>3</sup> At the same time the birth rate has come to an extreme low, which has recovered slightly (1.3 children per woman) thanks to the higher birth rates of young recent immigrants. 17% of children born in 2005 had at least one foreign parent. Children don't have a vote, and while children of most immigrant parents have universal access to education and health care, they are represented by fewer adults who can vote on their behalf or with their interests in

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<sup>3</sup> Galasso, 2007

mind. Immigration has reduced the number of young parents votes relative to votes of older cohorts not actively engaged in child rearing.

The public pension system is a defined-benefit system with expenditure specified in cash. Benefits aimed at younger cohorts tend to be rather loosely defined in kind, such as the provision of schooling, family support, and labor market insertion programs, which makes them much more susceptible to dilution in the face of overall expenditure declines.

If intergenerational fairness were to be adopted as an explicit policy aim, the means to achieve it would involve a clear understanding of the dynamic concept. The tools to achieve it include A) more gradual reform and adjustments to social expenditure or legislation that affects welfare distribution when a long-term trend requires adjustments, and B) a horizontal accounting system that analyses the welfare situation of specific target groups and age bands cutting across the vertical budget administrations and monitors check-sums of resources and effects obtained.

## **SUMMARY AND FINAL COMMENTS ON HEALTH CARE AND SOCIAL SPENDING**

In most of the developed countries, the demographic evolution calls today for precision and bounds to the total amount of social expenditure -and health care in particular- that can be transferred from the young and shrinking working population to the elderly. In Southern European Countries, the shift from extensive informal and end-of-life care by relatives to a professional socialized system of care provision helps to quantify this total amount and gain perspective on the intergenerational distribution issue that lies behind.

However, decisions about health expenditure, such as copayment on pharmaceuticals, is still often considered in isolation, without an attempt to establish the sum total of social care expenditure on this age group, by following a

normative principle such as the Musgrave's principle for an intergenerational equitable redistribution.

We have approached empirically this principle taking data from some European social public policies as example. We have emphasized the absence of an explicit trade-off between cash and service provision, e.g. the consideration of pension levels in copayment decisions, between formal and informal care, eg. health and social health care, and ultimately between public and private individuals' responsibilities. This tends to expand the total budget of social expenditure allocated to the senior age group in detriment of social beneficiaries at other stages of the life cycle.

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In this paper we show that this has indeed been the case in Spain and other European countries, in which the concentration of medical expenditure on the elderly has exceeded the demographic change, and in which social policy not only has failed to alleviate the demographic effect, but compounded on it.

To achieve a fair and efficient allocation of resources it is worth asking which expenditure can be considered social at each stage of the life cycle, how necessary it is, should it be socialized, and to what extent. In answering this question we propose to follow the intergenerational equity rule proposed by Musgrave's in 1984 of a fixed proportion ratio between benefits and burden of age cohorts, and its implications for health care. Once these bounds are established it is possible to make an informed judgement on the efficiency and on the intergenerational equity

of the reallocation between cash payments and various forms of service provision.

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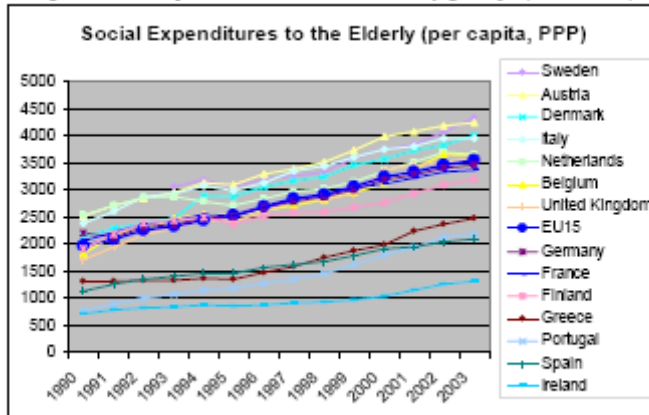


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APPENDIX 1

(EXTRACTED FROM BORSCH-SUPAN, THE LEVY ECONOMICS INSTITUTE WP-479, 2006)

Figure 6: Social Expenditures Dedicated to the Elderly (per capita, in Euro PPP)

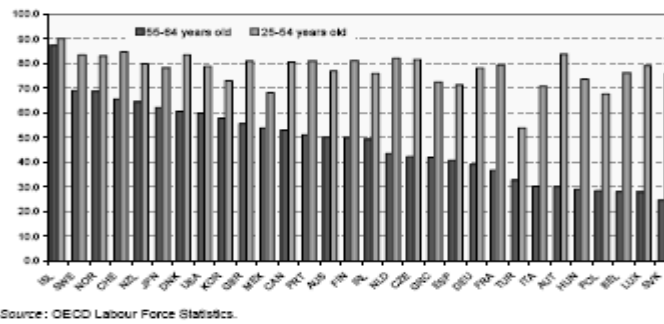


Source: Eurostat Data Archive 2005

(EXTRACTED FROM EUROSTAT DATA ARCHIVE, 2005)

Figure 7:

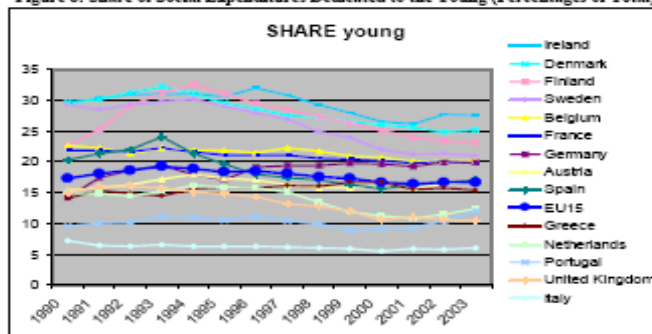
Figure 5.7. Employment ratios by age groups across OECD countries  
Latest available year (2003 or 2002)



Source: OECD Labour Force Statistics.

(EXTRACTED FROM BORSCH-SUPAN, THE LEVY ECONOMICS INSTITUTE WP-479, 2006)

Figure 8: Share of Social Expenditures Dedicated to the Young (Percentages of Total)



Source: Eurostat Data Archive 2005