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COMPARATIVE ANALYSIS OF POVERTY AND INEQUALITY IN TURKEY

Doktora Tezi

BURCU YAKUT ÇAKAR

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Danışmanı: Prof. Dr. Fatma Doğruel

İstanbul, 2010

Marmara Üniversitesi
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Abstract

Welfare regimes have been challenged in the last couple of decades and a set of policy reforms were introduced to overcome those risks. The welfare transformations taking place in this regard though varied in comparative contexts, took place in the realm of less mature component of the welfare regime, namely social assistance, in southern Europe where the prevalence of poverty and inequality were substantial-sharing common traits with Turkey. Against this background, this dissertation aims to provide a new framework for comparative discussion of poverty and inequality in Turkey by utilizing two levels of analysis, one at the quantitative and other at the qualitative level with a focus on the social assistance component. The quantitative analysis is based on constructing a national-tax benefit model for Turkey, TR-MOD while utilizing cross-country integrated model EUROMOD for the comparative analysis for southern Europe (Italy, Greece, Spain and Portugal). By focusing on the political economy of the recent policy transformations and debates taking place in the region, qualitative analysis aims to shed some light on the prospective policy agenda in social assistance in Turkey. Based on the 2004 Household Budget Survey Data and 2004 tax-benefit system, results from TR-MOD demonstrate the peculiarities of the tax and benefit systems in Turkey through the distribution of income across deciles of the population and those facing the risk of poverty seperately. In addition to that, debates on minimum schemes in Turkey reflect that parameters of reform are bounded by internal dynamics which dominate over impact of external actors.

Özet

Son 20 yıllık dönemde, refah rejimlerinin karşı karşıya kaldıkları yeni risklerle ile başa çıkmaya yönelik olarak bir dizi reform gerçekleştirilmektedir. Bu bağlamda karşılaştırmalı olarak bakıldığında, farklı nitelikler arz etmekle birlikte, dönüşümlerin yoksulluk ve gelir eşitsizliğinin ciddi boyutlarda yaşandığı güney Avrupa ülkelerinde refah rejimlerinin daha az gelişkin bileşeni olan sosyal yardım alanında olduğu görülmektedir. Bu arkaplan üzerinde tezin temel amacı bu ülkelerle refah rejimi açısından benzeşen Türkiye için yoksulluk ve gelir eşitsizliğinin karşılaştırmalı tartışması için iki düzeyli analizden oluşan yeni bir çerçeve sunmaktır. Kantitatif analiz gerçekleştirilen ilk düzeyde Türkiye için ulusal vergi-sosyal yardım modeli, TR-MOD kurulurken, güney Avrupa ülkeleri için mevcut ülkelerarası entegre EUROMOD kullanılarak karşılaştırmalı sonuçlar sunulmaktadır. Bölgede yakın zamanda gerçekleştirilen reformlar ve politika tartışmalarının politik ekonomisi üzerinden gerçekleştirilen kalitatif analiz ise Türkiye'de sosyal yardımlar ile ilgili siyasi gündemi irdelemeyi amaçlamaktadır. 2004 Hanehalkı Bütçe Anketi ile 2004 vergi ve sosyal yardım sistemleri üzerine kurulan TR-MOD'un sonuçları hem yoksulluk riski altındaki nüfus hem de nüfusun geneline ilişkin vergi ve sosyal yardım mekanizmalarının özgül niteliklerine işaret etmektedir. Buna ek olarak, son dönemlerde asgari gelir desteğine ilişkin politika tartışmaları reform süreçlerinin ve reformun parametrelerinin dış etmenlerden çok içsel dinamikler tarafından şekillendiğini göstermektedir.

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List of Abbreviations

AIM-AP	Accurate Income Measurement for the Assessment of Public Policies
AKP	Justice and Development Party
DIS	Direct Income Support
DRAE	Database Robustness Assessment Exercise
DRD	Data Requirement Document
ECHP	European Community Household Panel
EEC	European Economic Community
ES	Equivalence Scale
ES	Retirement Chest
ESSPROS	European System of Social Protection Statistics
EUROMOD	European Integrated Tax-Benefit Model
FGT	Foster-Greer-Thorbecke
FP4	4th Framework Programme
GDP	Gross Domestic Product
GMI	Guaranteed Minimum Income
HBS	Household Budget Survey
HDIx	Human Development Index
HPI-1	Human Poverty Index -1
HPI-2	Human Poverty Index-2
I-CUE	Improving Capacity and Usability of EUROMOD
ISER	Institute for Social and Economic Research
ISKUR	Employment Organization
LIS	Luxembourg Income Survey
MDG	Millenium Development Goals
MoLSS	Ministry of Labour and Social Security
NAP/SI	National Action Plan for Social Inclusion

NGO	Non-governmental Organization
OMC	Open Method of Coordination
PDI	Personal Disposable Income
PGI	Poverty Gap Index
PPP	Purchasing Power Parity
RMI	Revenue Minimum d'Insertion
SEE	State Economic Enterprise
SHCEK	General Directorate of Social Services and Child Protection
SIC	Social Insurance Contribution
SILC	Survey on Income and Living Conditions
SQL	Structured Query Language
SSDA	Social Sciences Data Analysis
SSK	Social Security Institution
SYDGM	General Directorate of Social Assistance and Solidarity
SYDTF	Social Assistance and Solidarity Fund
TAXMOD	Tax-Benefit Model for UK
TR-MOD	National Tax-Benefit Model for Turkey
TSER	Targeted Socio-Economic Research

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1. Introduction

> *"Being poor means living at the crossroads of need without receiving anything"*
>
> *"Poverty is a hard day's life"*
>
> *"If I had a decent income I would not be treated with scorn"*
>
> *"Poverty is when everyone, your family and society turns their back on you"*

Excerpts from Annual European Meetings of People Experiencing Poverty[1]

Comparative policy analysis has attracted considerable attention at both academic and policy levels in the last couple of decades. Notwithstanding the global challenges posed to welfare regimes worldwide in a neoliberal context, policies in general and social policies in particular, still matter as tools to overcome certain set of risks facing the regimes. It should also be noted that cross-country or multi-country comparisons still cater for exploring the limits as well as possibilities of adopting different policy approaches to national contexts.

Against this background, this dissertation aims to provide a new framework for comparative discussion of poverty and inequality in Turkey by utilizing two levels of analysis, one at the quantitative and other at the qualitative level with a focus on the social assistance component of the welfare regime. The comparative dimension primarily seeks to test whether the welfare regime in Turkey could be argued to be classified within the southern

[1] Since 2001, these meetings are held every year under the auspices of EU Presidency, bringing together more than hundreds of people experiencing poverty to make their voice heard, to exchange personal experiences and to establish a dialogue with policy- and decision-makers in the field of fight against poverty and social exclusion at the European level and at national levels (see EAPN website for more details, http://www.eapn.eu/content/view/600/34/lang,en/)

European cluster of Esping-Andersen's extended *three-worlds* typology through discussion of ongoing policy transformation in the realm of social assistance (Esping-Andersen, 1999; Ferrera, 1996; Gough, 1997). The framework developed could be regarded as innovative in relation to the peculiarities of the techniques implemented as well as the context of focused comparative policy analysis on minimum income schemes.

The distinctiveness of the southern European countries in terms of the perforated safety net (Yakut-Cakar, 2007) offering highly fragmented and mostly categorical, fiscally minor but socially important schemes in response to the risk of poverty provides an excellent open ground to test for possibility of institutionalizing certain policy scenarios both at the empirical and discourse levels. The empirical analysis is based on the assessment of a set of policy scenarios through modelling their implications for material well-being of individual households. More precisely, microsimulation models based on representative micro-level datasets are utilized both to calculate the effects of changes in policies in case of policy reforms and to present a disaggregation of the distribution of income across deciles of population, certain age groups and those at work. Analysis on the discourse level is primarily concerned with the political economy of the policy reforms taking place in the region since 1990s and aims to shed some light on the prospective agenda for the case of Turkey.

Within this broader context, the second chapter aims to provide some background about the poverty and inequality in Turkey. Putting forward initially the theoretical developments and different approaches in conceptualization and measurement of poverty, the chapter is structured upon a review of literature on poverty and inequality research in Turkey which forms the base to complete with the brief review of historical development of the welfare regime in the country. This final subsection not only serves to complement the extent

of the risks of poverty and domain of policy responses available but also provides historical background for the description of the tax-benefit system in Turkey.

As the backbone of the dissertation, micro-framework is introduced in the third chapter where bulk of the empirical analysis is developed and presented. The first sub-section launches the cross-country static integrated tax-benefit model, EUROMOD, which will be utilized for comparative southern European analysis. This part benefited very much from the training course taken in Summer 2006 on microsimulation methods at the University of Essex. Following this, using 2004 tax and benefit rules and 2004 Household Budget Survey micro data for individual and household datasets, national tax-benefit model for Turkey, TR-MOD is initially constructed and then validated with respect to the disaggregation of calculations across the population. Micro-framework is complemented by a detailed comparative analysis of certain minimum income policy scenarios with variations in the eligibility, means-testing and benefit calculation parameters implemented in EUROMOD for four countries of the region. Part of the model construction phase and comparative analysis was carried out at the Institute for Social and Economic Research at the University of Essex within a 3-months research fellowship awarded by the European Centre for Analysis in Social Sciences in the spring semester of 2007.

The fourth chapter introduces the recent transformations and contemporary debates in the realm of social assistance by paying specific attention to each country case in a political economy perspective. This is used both for exploring possibilities of new horizons in the prospective policy agenda in social assistance in Turkey and setting the constraints of the results obtained by implementing several (hypothetical) policy scenarios in the region.

The conclusion presents a combined assessment of three seemingly eclectic strands of research presented in the preceding chapters to claim that comparative policy analysis with

quantitative methods provide a good sense of direction in proposing both new policy scenarios and reforms. As the review of policy developments in the southern Europe revealed, it is very much the political economy of the policy processes that would determine the trajectory of the reforms as both domestic and external constraints interact.

2. Poverty and Inequality in Turkey

Poverty is a complex and dynamic phenomenon that ever existed in the history of mankind. The term, itself, refers to both the material deprivation, manifested with the shortage of income and maintaining basic needs such as food, dwelling, clothing, safe drinking water etc., and the lack of access to education, employment, heath care (definitions adopted from Wikipedia). The complexity mainly stems from the interrelations between these coexisting components, determines the severity, visibility and publicity of the issue and thus configures the policy debates in different societies in different times.

This chapter will outline the poverty and inequality in contemporary Turkey based upon a review of literature on conceptualization and measurement of poverty and inequality. Thus, rather than presenting merely a historical background, the discussion will be focused on methodological aspects. It will also serve to discuss the welfare regime of Turkey in comparison with the Southern Europe since both the quantitative analysis using EUROMOD, presented in Chapter 3 and the qualitative policy analysis in Chapter 4 constitute comparative analyses with the region. Here the main focus will be on constructing the theoretical framework for the policy analyses through discussing the similarities in terms of welfare regime typology.

2.1. Poverty: Conceptualization and Measurement

Social scientists have been trying to conceptualize poverty for more than 200 years, the commonality of which has been the locus of the definitions on primarily two

features: poverty as an inadequacy to meet basic needs and inadequacy of equal opportunity as a reflection of community perceptions. The former is referred to "indispensably necessary" by Smith, "minimum necessities" of Rowntree and "basic capabilities" of Sen, while the latter is reflected in Townsend's reference to "widely approved activities, conditions and amenities". Table 2.1 below compiles a selection of conceptual frameworks developed.

Table 2.1: Conceptualization of Poverty: a historical selection

A. Smith (1776)	"By necessaries, I understand not only the commodities which are indispensably necessary for the support of life but whatever the custom renders it indecent for creditable people, even of the lowest order, to be without."
S. Rowntree (1899)	"[A family is counted as poor if their] … total earnings are insufficient to obtain the minimum necessities of merely physical efficiency"
W. Beveridge (1942)	"In considering the minimum income needed by persons of working age for subsistence duringinterruption of earnings, it is sufficient to take into account food, clothing, fuel, light and household sundries, and rent, though some margin must be allowed for inefficiency in spending"
P. Townsend (1979)	"Individuals' families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved, in the societies to which they belong"
A. Sen (1992)	"Poverty [is] the failure of basic capabilities to reach certain minimally acceptable levels. The functionings relevant to this … can vary from such elementary physical ones as being well-nourished, being adequately clothed and sheltered, avoiding preventable morbidity, etc., to more complex social achievements such as taking part in the life of the community, being able to appear in public without shame, and so on"

Source: Compiled from Saunders (2004)

As Pinker (1999) puts it, measuring the forms of deprivation and unravelling the complex relationship between them are difficult tasks necessitating simple

explanations. Globalisation and subsequent internationalization of poverty as a social phenomenon and as a subject of social enquiry has attracted a much larger and more interdisciplinary scholar community around poverty research.

For many researchers, the scientific study of poverty is both an end in itself and a means to other normative ends like social reforms to improve the living conditions of the poor. Lister (2004) argues that justification for measurement of poverty not only stems from political as well as moral imperative for the necessity of action to eliminate it but also serves to seek for persuading evidence for the case for action.

Measurement of poverty inherently assumes a level of pre-determined standards, i.e. poverty lines, the attainment of which identifies poor and non-poor. As Lister (2004) puts it, measurement implies quantification and operationalization of definitions for policy purposes. Though there are numerous approaches for identifying those standards, as will be discussed below, the dichotomy of absolute and relative poverty illustrate how different perspectives prevail on the location of the poverty lines.

Absolute definitions of poverty, though varied considerably, often imply requirements for individuals' physiological efficiency. Ravallion (1992) assert that absolute poverty is "*...fixed in terms of the living standards indicator being used, and fixed over the entire domain of the poverty comparison....irrespective of the time and the place*" (Ravallion, 1992, p.25).

Absolute poverty was defined in the Copenhagen Declaration of the World Summit for Social Development in 1995 as:

> "*..a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services*" (UN, 1995, p.41)

The most common approach in setting an absolute poverty line has been through estimation of the cost of bundle of goods just to ensure that basic consumption needs are met. Apparently, such calculations could be dated back to the research of Rowntree at the turn of the century. Based on the nutritional content of various foods and their local prices, he concluded that fifteen shillings would provide the minimum budget for food for a family of six for a week. Also adding an allowance for shelter, clothing, fuel etc., he arrived at a poverty line of twenty-six shillings for a family of six, implying almost 10 percent poverty rate in city of York (Rowntree (1910), as cited in Kanbur and Squire, 1999).

The essence of this estimation lies in the determination of what constitutes basic needs. Basic needs were said to include two elements: (i) minimum requirements for a family for private consumption as adequate food, shelter and clothing; (ii) essential services provided by and for the community at large, such as safe drinking water, sanitation, health and education (ILO, 1977). As mentioned by Gordon and Spicker (1999), there had been considerable debates around the concept in terms of the definition of the items to be included as the needs of different populations and communities differ. Nevertheless, for the case of developing countries, Ravallion (1992) claims that it is often food expenditure, corresponding to the daily food energy intake, which is then augmented by an allowance of non-food items. The methodological variations within different measures of absolute poverty lines are reflected in budget standards and food-ratio poverty lines. The former, just as utilized in Rowntree's work, treats budgets as representative of any type of living standards to

be tailored to the different circumstances by variations in the prices/quantities/qualities of the items included in the fixed basket of goods and services which are believed to represent the necessities of subsistence (Callan and Nolan, 1991). The latter, primarily based on the Engel's observation that proportion of income spent on necessities tends to fall as incomes rise, is revealed in terms of the proportion of income spent on necessities where the threshold is determined by the multiplication of a pre-determined factor (regarded as Engel Coefficient in Gordon and Spicker, 1999:48) with the cost of the "subsistence diet" (Callan and Nolan, 1991; Gordon and Spicker, 1999).

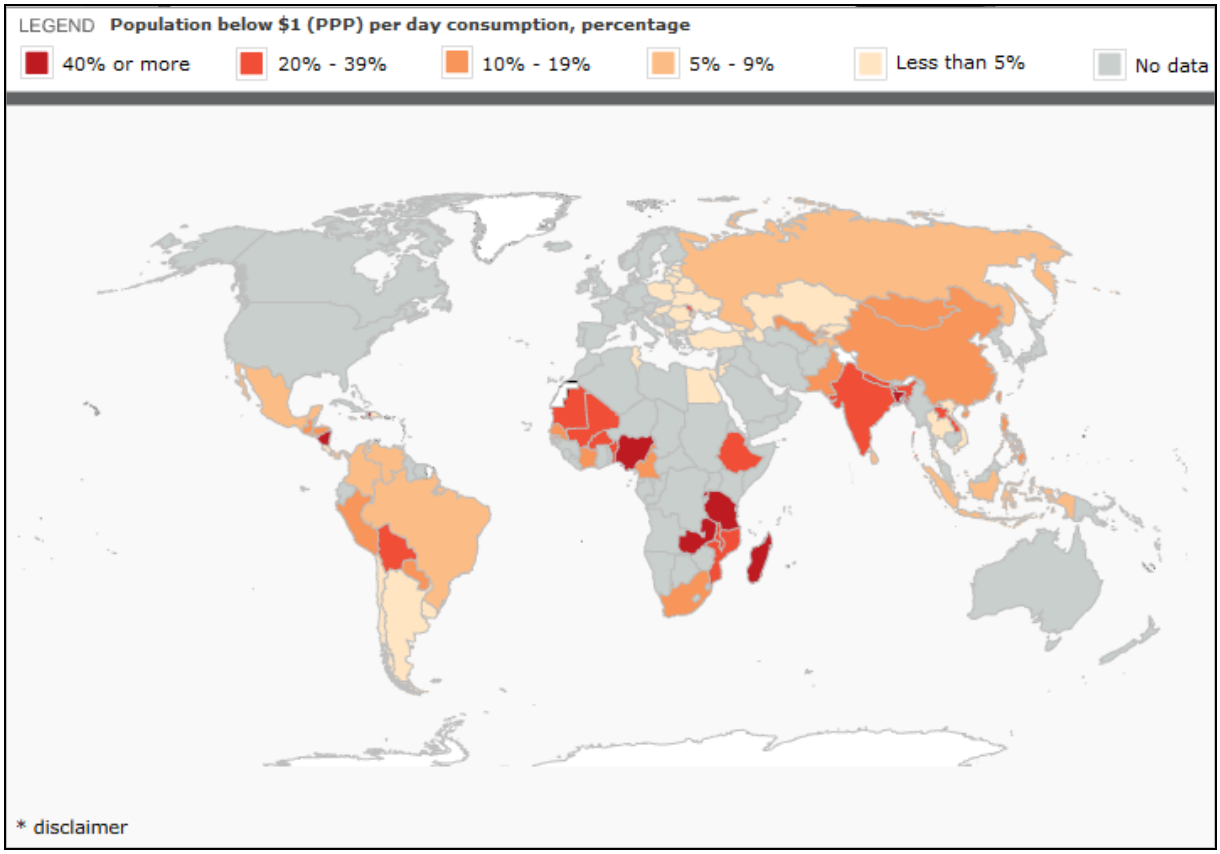
One commonly used absolute poverty line for cross-country comparisons is the 1$-a-day measure which was introduced in the 1990 World Development Report. World Bank justifies 1$-a-day poverty line through acquisition of absolute necessities of life to be interpreted as minimal nutrition, warmth and shelter (Gordon et. al., 2000). Since poverty is defined as "the inability to attain a minimal standard of living" (World Bank, 1990:26), the 1$-a-day line could be regarded as a "universal poverty line which is needed to permit cross-country comparison and aggregation" (World Bank, 1990: 27). This is argued to be comprised of two elements, expenditure to buy a minimum standard of nutrition and other basic necessities and cost of participating in the everyday life of the society, reflecting consumption based objectivity and subjectivity respectively (World Bank, 1990). Though the second component implied some sense of relative approach, it was set aside for being "far more subjective" (World Bank, 1990: 27) and no measurement had been developed from the Bank's side.

Though the standard is simple and allows for practical measurement, the weakness of World Bank's approach is that it does not constitute a global poverty line

at all as it is not applicable to countries other than the poorest. Gordon et. al. (2000) claim that this led to a form of an apartheid between industrialized and developing countries where the problem has been defined differently and thus the policy relevant comparisons were either avoided or confused. Other deficiencies of this measure, the discussion of which go beyond the framework of this chapter, are mentioned in Kanbur and Squire (1999) include lack of cost of living differential among countries, neglect of intra-household distribution and allocation of income/expenditure as well as differences in household size and composition.

As also claimed by Ravallion (1992), such notion of "absolute poverty" is more relevant for the case of low-income countries because when applied to high-income countries, this measure depicts considerably optimistic results that poverty is almost non-existent. Actually, this "negligible" percent of the population living under the dollar-a-day line could be regarded as extreme poor, who experience severe deprivation of not only subsistence but also basic social and human rights, thus necessitating use of different methods/approach for both measurement and consequent policy actions. The global lead in defining those was taken by UN through establishment of Millennium Development Goals by adopting UN Millennium Declaration in 2000, the first of which is elimination of hunger and extreme poverty – i.e. those living under 1$-a-day (UN, 2000). The cross-country unevenness in the progress towards achieving the goal, as depicted in the Figure 2.1 below, provides supporting evidence that absolute poverty measures are of less relevance for high-income countries.

Figure 2.1: Progress in MDG 1 – Eradicating Extreme Poverty and Hunger (2000-2004 data)



Source: MDG Monitor Website (www.mdgmonitor.org)

While the absolute definitions were often grounded upon individual's requirements for physiological efficiency, the following statement from Copenhagen Declaration advocates a more relative and consensual approach:

> "*Poverty has various manifestations, including lack of income and productive resources to ensure sustainable livelihoods; .....It is also characterized by a lack of participation in the decision making in civil, social and cultural life. It occurs in all countries: as mass poverty in many developing countries, pockets of poverty amid wealth in developed countries, loss of livelihoods as a result of economic recession, sudden poverty as a result of disaster or conflict, the poverty of low-wage workers and the utter destitution*

of people who fell outside family support systems, social institutions and safety nets" (UN, 1995, p.41).

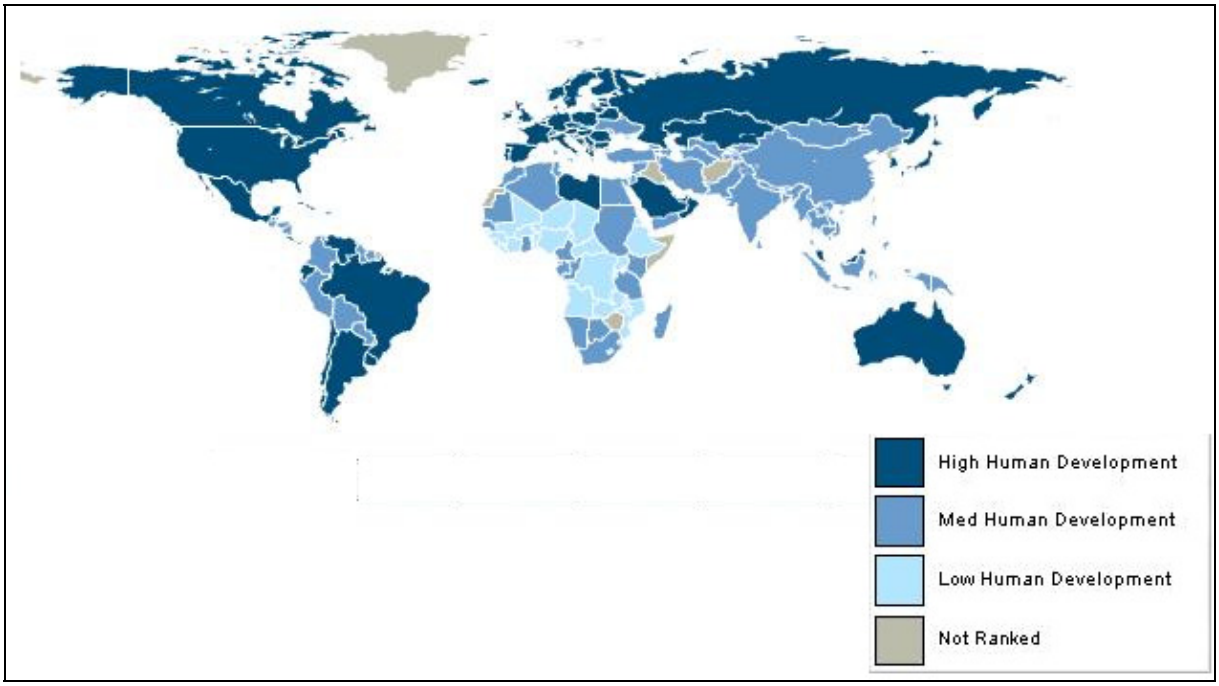
Relative poverty, primarily based on the premise that poverty is socially defined, identifies poverty in relation to the standards which exist elsewhere in the society (Gordon and Spicker, 1999). Callan and Nolan (1991) demonstrate the general rationale of setting the threshold as those falling more than a certain distance below the average or normal income level in the society would be unlikely to be able to participate fully in the community life. Though this marks a difference in terms of the focus of attention being diverted from income or expenditure to concepts like wellbeing, participation, it could be challenged as there is no direct linkage between income and wellbeing outcomes (educational attainment, health etc.) (Kanbur and Squire, 1999).

The most fundamental challenge is provided by Amartya Sen and his definition of poverty in terms of "capabilities" provide a quite complex but comprehensive framework. Sen defines capabilities as " *the substantive freedoms he or she enjoys to lead the kind of life he or she has reason to value*" (Sen, 1999: 87). Then, poverty could be seen as the deprivation of basic capabilities where low income is not the mere factor of capability deprivation while the impact of low income on capabilities vary between not only different communities but also different households and even individuals (Sen, 1999).

Against this theoretical background, introduction of human development concept and related indices by United Nations Development Programme in 1990 have contributed to the cross-country comparisons via multidimensional framework. Human Development Index (HDI), comprised of per capita GNP (PPP adjusted), life

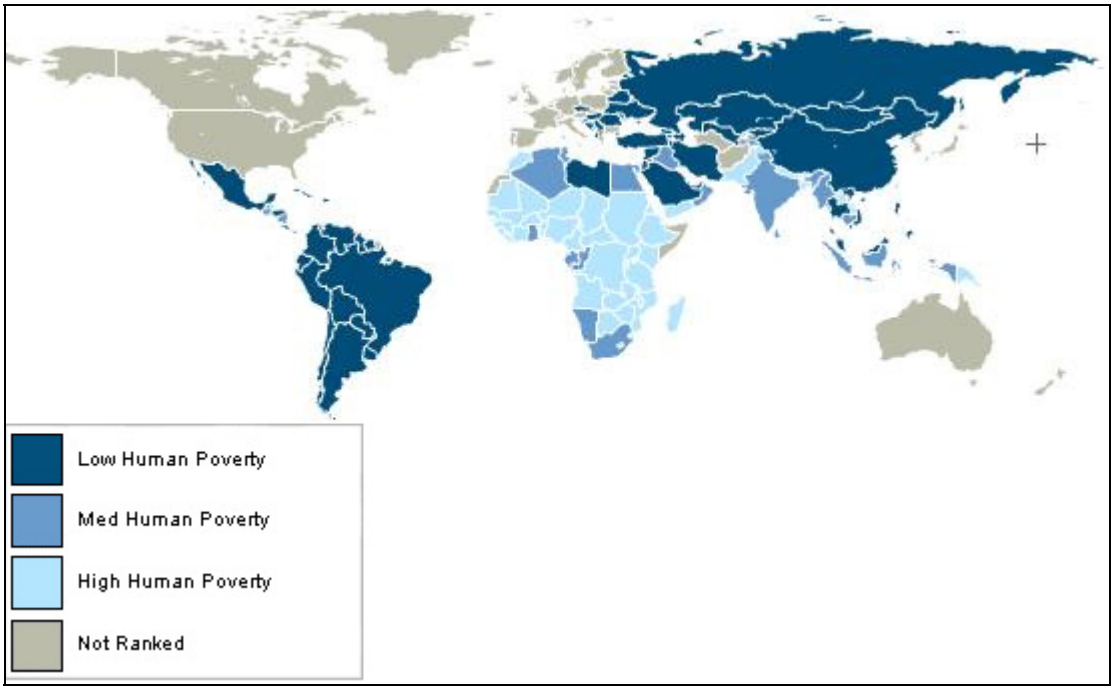
expectancy at birth as well as combined literacy and net enrolment rates, ranks the countries with respect to the level of capabilities manifested with the access to education, health, income etc. As HDI provides a more general outlook of the level of human development, two indices have also been developed by UNDP and introduced in 1997 Human Development Report to represent the extent of poverty: Human Poverty Index – 1 (HPI-1) and Human Poverty Index – 2 (HPI-2). The former is derived for developing countries and the latter for 19 high income OECD countries in order to better illustrate socio economic differences and different measures of deprivation. Based on the premise that poverty implies more than the lack of material well-being, HPI simply concentrates on the deprivation related with survival (i.e. probability of not surviving to ages 40 for HPI-1 and 60 for HPI-2), knowledge (i.e. percentage of adult illiteracy for HPI-1 and percentage of people lacking functional literacy skills for HPI-2) and a decent standard of living (i.e. the unweighted average of the percentage of the population without access to safe water and the percentage of underweight children for their age for HPI -1; percentage of the population below the income poverty line represented by 50 percent of median household disposable income for HPI- 2) (UNDP, 1998). Figures 2.2a and 2.2b below illustrate the worldwide dispersion of HDI and HPI-1, respectively.

Figure 2.1a: HD Index Rankings (2006 data)



Source: Human Development World Map
(http://hdr.undp.org/en/statistics/data/hd_map/hdi_trends/)

Figure 2.2b: HPI-1 Rankings (2006 data)



Source: Human Development World Map
(http://hdr.undp.org/en/statistics/data/hd_map/hpi/)

The peculiarity of the information provided by these indices is primarily due to the possibility of comparative inference by utilizing the combination of rankings of the countries for different indices. For instance, Turkey ranks among the medium human development category with HDI rank of 84 among 177 countries while the GDP per capita rank is considerably higher, 66 out of 177 (UNDP, 2008: 230). The difference between these two rankings implies certain discrepancy between the level of economic development and human development, the former of which has been unable to substantiate progress in the latter – as opposed to the more balanced levels for the case of Brasil with GDP rank quite similar to Turkey (67) but considerably higher HDI rank (70). Similar comparisons could be made by using HDI, HPI-1 and 1$-a-day rankings. HPI-2 index for high-income OECD countries incorporates a fourth dimension to capture for social exclusion, measured by long-term unemployment rate implying exclusion from participation in the labour market. Apparently, though HDI as a proxy for capability deprivation does not provide substantial differentials among those countries as they are all ranked among high human development cluster, HPI-2 rankings presented in Table 2.2 demonstrate the existence and relative severity of the human poverty problem.

Table 2.2: HPI-2 Rankings for 19 OECD countries

HPI-2		HDI
1	Sweden	6
2	Norway	2
3	Netherlands	9
4	Finland	11
5	Denmark	14
6	Germany	22
7	Switzerland	7
8	Canada	4
9	Luxembourg	18
10	Austria	15
11	France	10
12	Japan	8
13	Australia	3
14	Belgium	17
15	Spain	13
16	UK	16
17	US	12
18	Ireland	5
19	Italy	20

Source: UNDP (2008:230, 242)

In the European context, the dominant paradigm in the discussion of poverty has been in light of the concepts of social inclusion/exclusion. Social exclusion itself could be described as a multidimensional process whereby certain individuals are pushed to the edge of society and prevented from participating fully due to material deprivation, lack of basic competencies and lifelong learning opportunities, or as a result of discrimination. Room (1999) emphasizes that the concept itself includes not only income, but also many other indicators that define the standard of living. Also important is the spatial dimension whereby deprivation would not be solely due to the lack of financial resources at the individual or household level but also could possibly be aggravated by the lack of or low quality of public services provided at the locality of the household. In light of such complexity and multidimensionality of the concept, the measurement has long been debated both in academic circles and EU level policy circles. Despite increasing attention for the social dimension with preparation of drafts of Community Charter of Fundamental Social Rights since 1985, early 2000s mark a turning point in EU level policies with respect to the prioritization and further development of European social agenda with specific targets for combating poverty and social exclusion (Atkinson et.al., 2002: 5). Apparently, Social Protection Committee assumed the primary role to ensure the necessary coherence in the field of social inclusion. Sub-group established under the auspices of this Committee established a set of indicators built upon the 2000 Communication on Structural Indicators (European Commission, 2000). Approved by the Council meeting at Laeken, these indicators detailed in Table 2.3 aimed to capture the multidimensional nature of social exclusion in two levels:

(a) Primary indicators covering broader fields as most important elements in leading to social exclusion – including at-risk-of- poverty thresholds at 60 per cent of median income with particular breakdown due to gender, age, status at work, distribution of income, long-term unemployment rate, persistence of low income, regional cohesion, life expectancy at birth

(b) Secondary indicators covering dispersions around threshold, very long term unemployment rate, low educational attainment.

Table 2.3: Laeken Indicators as adopted by Social Protection Committee

Indicator	***Description***
Primary Indicators	
1a. Low income rate after transfers with breakdowns by age and gender	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. Age groups: 0-15, 16-24, 25-49, 50-64, 65+. Gender breakdown for all age groups + total
1b. Low income rate after transfers with breakdowns by most frequent activity status	Percentage of individuals aged 16+ living in households where the total equivalised household income is below 60% national equivalised median income. Most frequent activity status: employed, self- employed, unemployed, retired, inactives-other. Gender breakdown for all categories + total
1c. Low income rate after transfers with breakdowns by household type	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. 1. 1 person household, under 30 yrs old 2. 1 person household, 30-64 3. 1 person household, 65+ 4. 2 adults without dependent child; at least one person 65+ 5. 2 adults without dep. child; both under 65 6. other households without dep. Children 7. single parents, dependent child 1+ 8. 2 adults, 1 dependent child 9. 2 adults, 2 dependent children 10. 2 adults, 3+ dependent children 11. other households with dependent children 12. Total

Table 2.3: (continued)

1d. Low income rate after transfers with breakdowns by tenure status	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. Owner or rent free; Tenant; Total
1e. Low income threshold (illustrative values)	The value of the low income threshold (60% median national equivalised income) in PPS; EUR and national currency for: Single person household; Household with 2 adults, two children
2. Distribution of income	S80/S20: Ratio between the national equivalised income of the top 20% of the income distribution to the bottom 20%.
3. Persistence of low income	Persons living in households where the total equivalised household income was below 60% median national equivalised income in year n and (at least) two years of years n-1, n-2, n-3. Gender breakdown + total
4. Relative median low income gap	Difference between the median income of persons below the low income threshold and the low income threshold, expressed as a percentage of the low income threshold. Gender breakdown + total
5. Regional cohesion	Coefficient of variation of employment rates at NUTS 2 level.
6. Long term unemployment rate	Total long-term unemployed population (more than 12months; ILO definition) as proportion of total active population; Gender breakdown + total
7. Persons living in jobless households	Persons aged 0-65 (0-60) living in households where none is working out of the persons living in eligible households. Eligible households are all except those where everybody falls in one of these categories: (i) aged less than 18 years old; (ii) aged 18-24 in education and inactive; (iii) aged 65 (60) and over and not working
8. Early school leavers not in education or training	Share of total population of 18-24-year olds having achieved ISCED level 2 or less and not attending education or training. Gender breakdown + total
9. Life expectancy at birth	Number of years a person may be expected to live, starting at age 0, for Males and Females
10. Self defined health status by income level	Ratio of the proportions in the bottom and top quintile groups (by equivalised income) of the population aged 16 and over who classify themselves as in a bad or very bad state of health on the WHO definition Gender breakdown + total

Table 2.3: (continued)

Secondary Indicators	
11. Dispersion around the low income threshold	Persons living in households where the total equivalised household income was below 40, 50 and 70% median national equivalised income
12. Low income rate anchored at a moment in time	Base year ECHP 1995. 1. Relative low income rate in 1997 (=indicator 1) 2. Relative low income rate in 1995 multiplied by the inflation factor of 1994/96
13. Low income rate before transfers	Relative low income rate where income is calculated as follows: 1. Income excluding all social transfers 2. Income including retirement pensions and survivors pensions. 3. Income after all social transfers (= indicator 1) Gender breakdown + total
14. Gini Coefficient	
15. Persistence of low income (below 50% of median income)	Persons living in households where the total equivalised household income was below 50% median national equivalised income in year n and (at least) two years of years n-1, n-2, n-3. Gender breakdown + total
16. Long term unemployment share	Total long-term unemployed population (³12 months; ILO definition) as proportion of total unemployed population; Gender breakdown + total
17. Very long term unemployment rate	Total very long-term unemployed population (³24 months; ILO definition) as proportion of total active population; Gender breakdown + total
18. Persons with low educational attainment	Educational attainment rate of ISCED level 2 or less for adult education by age groups 25-34, 35-44, 45-54, 55-64 Gender breakdown + total

Source: Social Protection Committee (2001: 6-8)

For the sake of coherence of this chapter, different measurement methods for poverty need to be presented. Though there has been considerable debate on the measures (for instance see Atkinson, 1987; Sen, 1979, 1981 and 1999), the wide usage of these in the research on poverty in Turkey necessitate a brief introduction of the measures themselves so as to clarify the need for utilizing a more relative perspective. Apparently, the class of poverty measures are to be derived from Foster-Greer-Thorbecke (FGT) Index (Foster et.al. , 1984):

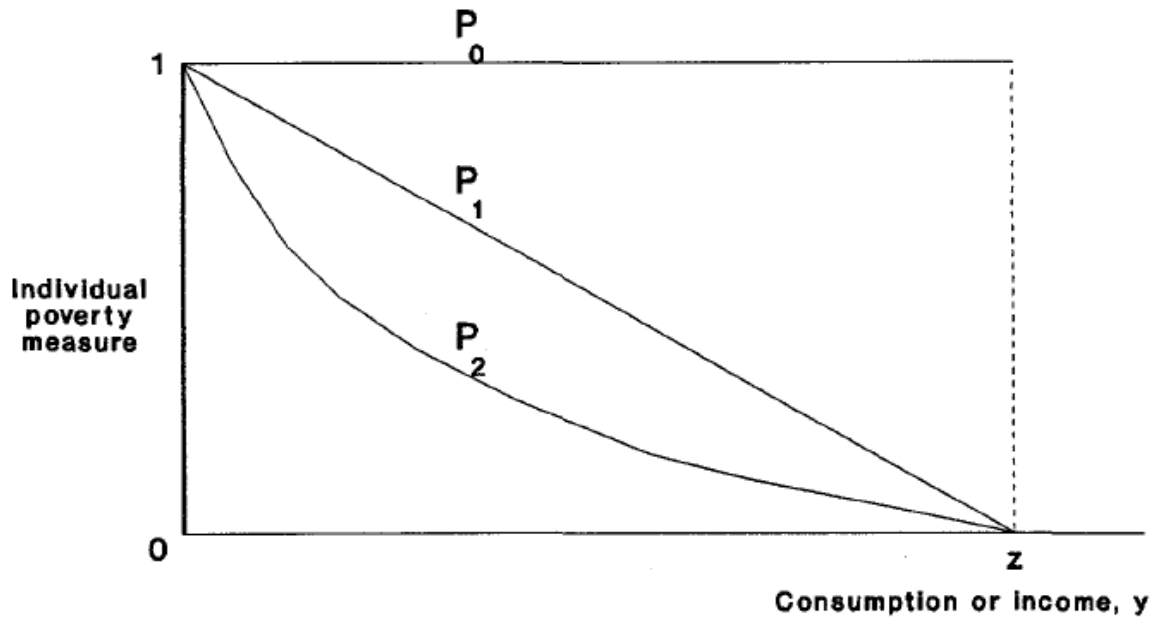
[2.1] $$P_\alpha = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right)^\alpha$$

where

P_α: level of poverty
n: population size
q: number of poor
z: poverty line
y_i: per capita household income (or consumption)

The index represents a class of measures as α is said to have a normative value to be set at different levels. Figure 2.3 presents degree of poverty according to various illustrative values of α, where, for instance, higher α gives more weight to the poorest therefore FGT approaches to the case of poverty almost completely determined by the income of the poorest.

Figure 2.3: Measures of Poverty with FGT Index



FGT becomes the most common measure of poverty, i.e. Headcount Ratio if $\alpha = 0$, providing information on the incidence of poverty and the distribution of poverty among the population with indicating the proportion of individuals, families or households below the poverty line (as represented by P_0 in Figure 2.3). Thus;

[2.2] $$H = \frac{q}{n} \qquad \text{where } 0 \leq H \leq 1$$

Despite the simplicity of the ratio and possibility of assessing overall progress of poverty reduction, it is criticized widely for its insensitivity to the depth or intensity of poverty, namely how far the poor fall below a given poverty line (for the main critiques, see Sen, 1981; Atkinson, 1987; Ravallion, 1992). Gordon and Spicker (1999) use the policy example that serves to raise the wellbeing of the poorest of the poor which is not captured by H if the new state of wellbeing is still below the threshold, while the policy aimed at those just below the threshold would act to decrease H.

When $\alpha = 1$, FGT becomes Poverty Gap Index, indicating the depth of poverty which depends on the distance of the poor below the threshold (as represented by P_1 in Figure 2.3). As it includes both the incidence (H) and depth (I) of poverty, it could be rewritten as:

[2.3] $$PGI = H * I \quad \text{where}$$

[2.4] $$I = \frac{z - \bar{y}}{z} \quad \text{is defined as income/poverty gap ratio}$$

with $\bar{y}$ denoting mean income/consumption of the poor.

PGI has commonly been interpreted as an indicator of the potential for eliminating poverty through targeting transfers to the poor (Ravallion, 1992; Gordon and Spicker, 1999) with paying each poor household the difference z-y_i[2]. Nevertheless, PGI is criticized on the grounds that it is insensitive to the inequality[3] among the poor and may not capture differences in the severity of poverty (as mentioned by Sen, 1979; Atkinson, 1987; Ravallion, 1992; Lipton and Ravallion, 1995).

Against the shortcomings of these, Sen Index (Sen, 1981) aims to incorporate also the income distribution among the poor as follows:

[2.5] $$S = H * [I + (1 - I) * G_p]$$

where G_p is the Gini coefficient corresponding to the income distribution among the poor.

Recalling that Lorenz Curve illustrates the concentration of incomes, plotted cumulatively as shares with respect to proportions of populations, Gini coefficient characterizing the distribution of incomes defines the area between the Lorenz curve and 45-degree line (i.e. the line of perfect equality indicating the case where all incomes are identical), as a ratio of the whole triangle. As illustrated in the Figure 2.4 below, it is

[2.5a] $$G = \frac{A}{A + B}$$

[2] The maximum and minimum costs to the government could easily be calculated in case of no targeting (i.e. unobserved y) and perfect targeting (i.e.all y are known) as $z * n$ and $\sum_{i=1}^{q} z - y_i$, respectively.

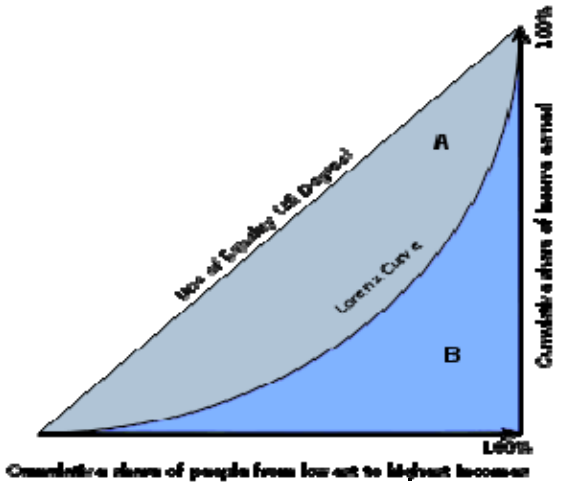
[3] Measurement of inequality is widely discussed in Morris and Preston (1986), OECD (1994).

and despite several formulas and expressions available, it can simply be represented as

[2.5b] $$G = \frac{2}{n^2 \overline{y}} \sum_{i=1}^{n} i * (y_i - \overline{y})$$

where $0 \leq G \leq 1$ and y_i are denoted in ascending order (Foerster, 1994).

Figure 2.4: Lorenz Curve and Gini Coefficient



Thus, the strength of Sen Index lies in its ability to combine all three dimensions of poverty into a single indicator: namely incidence (H), depth (I) and inequality among the poor (G_p). Foerster (1994) refers to the index as a weighted sum of the poverty gaps of the poor where in the case of perfect inequality (i.e. $G_p = 1$), S = H and in the case of perfect equality (i.e. $G_p = 0$), S = H*I. Though it is criticized for its discontinuity as well as lack of decomposability (Ravallion, 1992; Gordon and Spicker, 1999), the peculiarity of the index, as also illustrated by the cross-country

comparative analysis of Foerster (1994), also lies in its ability of illustrating the effects of transfers to low-income groups, which is neglected by the class of FGT indices.

When $\alpha > 1$, FGT is argued to be superior to Sen Index in both its continuity and decomposability, with respect to the weighted sum of sub-group (*j*) poverty levels (P_α^j)with corresponding weighted population shares (n_j/n):

[2.6] $$P_\alpha = \sum_{j=1}^{m} \frac{n_j}{n} P_\alpha^j$$

where m is the number of groups in the population.

Actually, once the poverty line, threshold and measure are determined, the reference income measure (disposable household/family income) needs to be adjusted in order to account for the differences across the composition as well as the size of the household. It could be assumed that due to economies of scale within the household, the resources necessary to maintain the same standard of living increases with the increase in the size of family but not proportionally. With the equivalence scale (ES) measures, each household income is relatively calculated via an assigned value determined on the basis of the composition so as to be equivalized to attain similar standard of living. Most commonly, the value is based on the size of the household and the age of the members (whether adults or children). Despite the wide range of ES measures reviewed in Atkinson et.al. (1995), assessment of which were based on statistical or expert evaluations (as discussed in Buhmann et. al. 1988 and Foerster 1994), most commonly used scales in cross-country comparisons are reviewed in the Table 2.4a and 2.4b below.

Table 2.4a: Most Commonly Used Equivalence Scales

Name	**Date - Origin**	**Equivalization**
"Old" OECD Scale (Oxford scale)	1982 – OECD	Assign 1 for the first adult, 0.7 for each additional adult, 0.5 for each child[4].
OECD-Modified Scale	1994 – Haagenars et.al.	Assign 1 for household head, 0.5 for each adult, 0.3 for each child
Square root Scale	2000s - OECD	Divide household income by the square root of the household size

Table 2.4b: Calculation of Equivalence Scales*

Household Size	Old OECD Scale	OECD Modified Scale	Square Root Scale	Household Income
1 adult	1	1	1	1
2 adults	1.7	1.5	1.4	1
1 adult, 1 child	1.5	1.3	1.4	1
2 adults, 1 child	2.2	1.8	1.7	1
2 adults, 2 children	2.7	2.1	2.0	1
2 adults, 3 children	3.2	2.4	2.2	1

* these sample calculations are based on the assumption that household income (as equal to 1 in last column) is fully shared among members

As demonstrated with sample calculations, the choice of a particular ES, depending on the judgements regarding the individual needs and assumptions about economies of scale, in turn, effects not only the resulting levels of relative incomes, but also the household composition of the poor as well as the position of the poverty line, thus the rates of poverty and inequality. For instance, poverty rate of the elderly will be lower (and that of children higher) when using scales that give greater weight to each additional household member. Some variations among countries with the choices of different ES were also shown both in Buhmann et. al. (1988) and Foerster (1994).

[4] Child definition is adopted as those less than 15 years of age.

2.2 Research on Poverty and Inequality in Turkey

Empirical research on poverty and inequality in Turkey has long been focusing on measurement of absolute poverty. Dated back to Celasun's (1986 and 1989) research where poverty rates for 1973, 1978 and 1983 were presented, these were initially mostly carried out by the experts both at the State Institute of Statistics of Turkey (now TURKSTAT) and State Planning Organization (SPO). In this section, based on the various methodological approaches utilized, the findings of these will be briefly presented. As will be seen, most of these empirical studies use the waves of Household Budget Survey (1987, 1994 and yearly from 2002 onwards) with the exception of Ozcan (2003) based on own representative household survey conducted in 2001.

To be considered as one of the earliest attempts to assess poverty and inequality in Turkey, Dagdemir (1992), by using 1968, 1973 and 1987 datasets to capture the structural transformation of the economy, presents considerable decline in two household poverty rates: absolute poverty rates from 51.5 percent in 1968 to 22.5 percent in 1987 and relative poverty defined as households earning less than mean income from 49.1 percent in 1968 to 34.2 percent in 1987. In terms of inequality, the analysis reveals deterioration in income inequality with increasing shares of S40 and S60 (Dagdemir, 1992).

By using Household Budget and Expenditure Survey, Erdogan (1996) utilizes 1994 data set to calculate the food poverty rates both at the national and regional level. The population under the threshold have been disaggregated into 5 sub categories (undernourished, very poor, lower level poor, upper level poor and relatively poor) via

different methodologies: undernourished and very poor categories are based on food poverty lines using minimum calorie intake thresholds while lower level and upper level poverty rates are calculated by basic needs and fixed share of food expenditure (taken as 40 percent) methods, relative poverty threshold is set at the half of the mean income (Erdogan, 1996). Though Erdogan presents detailed regional breakdown, household poverty rates calculated with different methodologies are summarized below in Table 2.5. Her analysis with the regional data reveals that the rates for Eastern and South-eastern regions are the highest in either methodology.

Table 2.5: Household Poverty Rates (% of total households) - Erdogan (1996)

	Turkey	Urban	Rural
Undernourished	55	54	55
Very Poor	11	7	15
Lower Level Poor	31	28	32
Upper Level Poor	43	26	63
Relatively Poor	33	35	28

Source: Erdogan (1996)

Extending the analysis in the previous research, Erdogan (1998) uses again 1994 HBS dataset to present the poverty profile in Turkey in relation to both socio-economic variables like age, education, employment as well as household related variables, including size of the dwelling and ownership status where the household and individual poverty rates are calculated by using minimum calorie intake (5.7 percent and 8.4 percent) and basic needs (19.3 percent and 24.3 percent) methodologies.

The SPO officer, E. Dansuk (1997), utilizes 1973 and 1987 HBS datasets to calculate household absolute poverty rates where the regional thresholds are set as

responsive to the price differentials among regions. Following this, Dagdemir (1999) have introduced Sen Index and poverty gap index by using minimum calorie intake and basic needs thresholds with 1987 and 1994 datasets to demonstrate deterioration in urban poverty and equality of income distribution.

As one of the most cited works, Gursel, Levent, Selim and Sarica (2000) not only recalculate distribution of income with 1987 and 1994 HBS datasets by applying old and modified OECD equivalence scale measures but also provide decomposition of inequality measures with respect to certain criteria including geographical region, rural-urban differences, educational attainment and composition of household. Also by using relative thresholds as 40 per cent, 50 per cent and 60 per cent of median personal disposable equivalized income, they present comparative poverty rates for 1987 an 1994 as summarized in Table 2.6. Taking this analysis further, they present EU comparison using S80/S20, Gini coefficient and before/after social transfers to demonstrate the impact of transfers and redistributive policies on poverty and inequality.

Table 2.6: Relative Poverty in Turkey – Gursel et.al (2000)

	50% of median	
modified OECD ES	**1987**	**1994**
Head Count Ratio (H)(%)	16,1	15,3
Poverty Gap Ratio (*100)	4,9	4,1
Sen Index (*100)	7,0	5,7
FGT (*100)	2,4	1,8

Source: Gursel et.al. (2000:102)

Using 1994 HBS data set, Alici (2002) presents rates of poverty in Turkey by making use of both absolute and relative measures as summarized in Table 2.7. Here, the peculiarity of the analysis lies in the simultaneous utilization of absolute and relative measures where former measures include both food poverty and complete poverty thresholds while equivalized relative income poverty lines are used for the latter. A detailed poverty profile is presented with respect to the regional differences, educational attainment, status at work for the head of the household and composition of the household.

Table 2.7: Poverty Rates in Turkey – Alici (2002)

Percentage of population below threshold	**1994**
Food Poverty	0,7
Food+Non Food Poverty	5,2
Disposable Personal Income	20,3
Disposable Equivalized* Income	0,9
Relative Poverty (50% of Median)	15,7

Source: Alici (2002:6)

* Modified OECD scale is used

Two studies point to the shortcomings of using 1994 HBS data for different reasons. Yukseler (2003) emphasizes methodological differences between 1994 HBS and 2002 HBS in terms of the sample size, definitions of income components and presents detailed comparison of 1994 and 2002 results with respect to distribution of both income and consumption. Even though this analysis does not provide any rate or profile of poverty in Turkey for the period 1994-2002, distribution of income between different groups and composition of income presented demonstrate that share of social transfers in HDI have increased while consumption patterns reveal considerable contractions in terms of expenditures on education and health for the lowest income

households (Yukseler, 2003: 8 and 18). On the other hand, Ozcan and Metin-Ozcan (2003) accentuate the impacts of 1994 and 2001 economic crises that bias the information collected via the HBS waves of 1994 and 2002 respectively. They rather use their own data collected through a nationwide survey on a representative sample of 4300 households drawn by SIS in 2001. Renaming the relative poverty measure of 50 per cent of median HDI as *low income measure* (Ozcan and Metin-Ozcan, 2003: 4), they calculate that 21.5 per cent of households in Turkey have incomes below this threshold albeit with significant dispersion across regions as well as rural and urban areas.

All these taken into consideration, World Bank and SIS have jointly produced an assessment report on poverty in 2005 where a new poverty line methodology is introduced. The methodology, though applied for 2002 HBS dataset, has become the primary instrument of official poverty rates announced by SIS by utilizing annual waves of HBS since then. This new methodology is based primarily on the calculation of disposable income based on consumption aggregates excluding durables but including imputed rent value for owner occupied housing and income aggregates, both indexed using price indices from the consumption dataset of the survey (World Bank/SIS, 2005: 116-7). Using this, two new sets of poverty rates are produced in addition to the absolute and relative poverty lines used. Absolute poverty rates used are dollar-a-day measures (i.e. PPP adjusted 1$, 2.15$ and 4.30$-a-day thresholds) while making use of 50 per cent of median consumption per capita as the relative threshold. Nevertheless, the new thresholds, i.e. food poverty and complete poverty

lines, are developed on the basis of consumption of a selected basket of food and non-food items[5]. Table 2.8 presents the poverty rates produced by this methodology.

Table 2.8: Official Poverty Statistics in Turkey based on 2002 HBS

	Food Poverty	Complete Poverty	Relative	Absolute		
			50% median	1$	2.15$	4.30$
Head Count Ratio (H)	1,35	26,96	14,74	0,02	4,11	34,14
Poverty Gap Ratio	0,26	6,88	3,13	0,00	0,83	9,73
FGT	0,08	2,53	1,04	0,00	0,27	3,84

Source: World Bank/SIS (2005: 127)

This methodology has been used to produce official poverty rates that are announced annually by SIS since 2005. The methodology, albeit being consistent in all theoretical aspects, has certain shortcomings with respect to its relative strength as the official measure, as will be discussed in the next section. The announcement of official poverty rates are indeed lagged in relation to the survey year they are based on. Table 2.9 presents the headcount ratio with absolute and relative measures announced until the end of 2009 – the differences between 2002 figures in Table 2.7 and those presented in Table 2.6 stem from the PPP adjustment utilized[6].

[5] The consumption leves are determined according to the actual quantities consumed by the third and fourth deciles of the population for the most popular 80 items estimated to constitute minimum daily calorie intake (WB/SIS, 2005:125). Besides, reference group for the complete poverty line, which is the sum of food and non-food consumptions, are set as those with level of total consumption above food poverty line to estimate the respective shares of food and non-food consumption.

[6] PPP adjusted poverty lines for 1$, 2.15$ and 4.30$-a-day thresholds in WB/SIS (2005) are 663,58 TL, 1426,67 TL and 2853,37 TL respectively while TUIK (2009) cites 618,21 TL, 1329,15 TL and 2658, 30 TL .

Table 2.9: Poverty Rates in Turkey (2002-2006)

Percentage of population below threshold	**2002**	**2003**	**2004**	**2005**	**2006**	**2007***	**2008**
Food Poverty	1,35	1,29	1,29	0.87	0,74	0,48	0,54
Complete Poverty	26,96	28,12	25,60	20,50	17,81	17,79	17,11
1$-a-day	0,20	0,01	0,02	0,01	0,00	0,00	0,00
2.15$-a-day	3,04	2,39	2,49	1,55	1,41	0,52	0,47
4.30$-a-day	30,30	23,75	20,89	16,36	13,33	8,41	6,83
Relative Poverty (50% of Median)	14,74	15,51	14,18	16,16	14,50	14,70	15,06

Source: TUIK (2009)
*Revised with the new population estimates.

To be attributed to the policy developments towards harmonization of statistical indicators with EU in the process of accession, TUIK implemented EUROSTAT guidelines for compliance of HBS in terms of questionnaire, survey methodology, concept, coverage and definitions. Also in this context, Leaken Indicators has been provided to EUROSTAT based on 2002 and 2003 HBS. Table 2.10 below presents selection of main indicators available as of 2009.

Table 2.10: Leaken Monetary Indicators

		2002	2003
Risk-of-poverty rate by gender and age	*Total*	25	26
	M	25	25
	F	25	26
	0-15	32	34
	16-64	22	22
	65+	23	21
Risk-of-poverty rate by most frequent activity and gender	*Total*	22	22
	M	21	21
	F	23	22
	At work	23	23
	M	21	21
	F	25	26
	Salary/wage employees	21	19
	M	21	19
	F	19	15
	Self-employed	24	27
	M	22	24
	F	28	32
	Not at work	21	21
	M	21	21
	F	22	21
	Unemployed	32	31
	M	38	36
	F	23	23
	Retired	7	7
	M	9	8
	F	1	1
	Other inactive	23	22
	M	24	27
	F	22	22
Risk-of-poverty rate by household type	*All hh no dep. childr*	12	11
	1 person hh	20	15
	2 adults no dep. childr. (both < 65)	11	8
	2 adults no dep. childr (at least one 65+)	18	13
	Other hh no dep. childr.	10	12
	All hh with dep. childr	27	28
	Single parent (at least 1 child)	45	40
	2 adults 1 dep. child	12	10
	2 adults 2 dep. childr.	17	16
	2 adults 3+ dep. childr.	36	42
	Other hh with dep. childr.	31	31

Table 2.10: (continued)

Risk-of-poverty rate before and after transfers by age and gender	*Total*	30	30
	M	28	29
	F	31	31
(a) before all transfers	*0-15*	29	30
	16-64	28	28
	65+	48	53
(b) including pensions	*Total*	26	27
	M	25	26
	F	27	28
	0-15	32	34
	16-64	23	23
	65+	29	29
S80/S20 quintile share ratio		10,8	9,9
Gini coefficient		46	45

Source: EUROSTAT (2009) - online database on Population and Social Conditions

Within in the context of statistical harmonization, TUIK also made commitment to the regular implementation of the panel survey on Income and Living Conditions (SILC). The survey, adopted from EU-SILC, has indeed been conducted since 2005 but results have yet to be officially announced, since the controversy surrounding the determination of official poverty rates is ongoing. The specific income and benefit modules of SILC allows for more coherent and realistic calculations of poverty rates in line with EU Leaken Indicators, including the at-risk-of-poverty rate set as 60 percent of median income, as well as the potential impact assessment of benefit schemes via calculation of poverty rates before and after social transfers. Any EU-comparable figures submitted to and available from EUROSTAT at this moment are based on the 2003 HBS; thus the outdated nature of the data on income and living conditions would also be resolved as soon as SILC-based poverty indicators are launched.

2.3 Turkish Welfare Regime: How to Strike Balance?

Welfare state, in a simple textbook definition sense, implies state responsibility for securing some basic modicum of welfare for its citizens (Esping-Andersen, 1990:19) or "*state measures for the provision of key welfare services*" (Pierson, 1991:7). More broadly, the term describes a particular form of state, a distinctive form of policy and a specific type of society. Actually, the narrow definition sees the welfare state in terms of traditional terrains of social reformation, i.e. income transfers and social services whereas a broader definition entails the state's role in managing and organizing the economy. Considering that the term 'regime' refers to a set of explicit or implicit principles, norms, rules and decision making procedures around which an individual's expectations converge in an given social area (Krasner, 1983; Gough, 1999), welfare regime could be regarded as the *"combined, interdependent way in which welfare is produced and allocated between market, state and family*" (Esping-Andersen, 1999, p.34-5). The different welfare regimes are shaped by different class coalitions within a context of inherited institutions, so the regime characterizations are determined by different state, market and household forms of social provision, by different welfare and stratification outcomes (Esping-Andersen, 1999). One could hardly disagree with T.H. Marshall's (1950) proposition that the perception of welfare as a citizenship right has become the core idea of the welfare state and Esping-Andersen (1990) re-specified the concept of social citizenship to involve not only the granting of social rights but also configuration of social stratification bounded by the interlocked relationship between state, market and family. The substantive loosening of pure commodity status of the individual, to be

referred to as decommodification, implies maintaining the living with certain services provided as a matter of right and simply without reliance on the market. One could claim that provisions to the citizens in this context minimally imply that they would freely opt out of work without potential loss of job, income or general welfare. Being a highly contested issue, decommodified rights themselves differentially developed across welfare regimes ranging from social assistance dominated Anglo-Saxon regimes with demonstrable needs to compulsory state social insurance with strong contributory entitlements, in the end not fully decommodifying citizens at all.

With this background, the clustering of the welfare regimes according to the configuration of state, market and family as well as the degree and extent of decommodification and locus and mode of solidarity sheds some light on the peculiarities of the welfare regime in Turkey. The welfare regime in Turkey can be considered to share similar characteristics with its southern European counterparts (Gough, 1996; Andreotti et. al., 2001; Saraceno, 2002). Discussed widely in the comparative welfare regimes literature as a distinct group (Leibfried, 1993; Ferrera, 1996; Symeonidou, 1996; Gough, 1996; Esping-Andersen, 1999; Trifiletti, 1999; Ferrera, 2000; Andreotti et. al., 2001; Ferrera, 2005a; Moreno 2006), the following typical characteristics of the southern European regime cluster, also hold true for the Turkish welfare regime:

1) Highly protective employment regimes for core sectors gradually serving to segment the labour market into 'insiders' as a hyper-protected, core workforce, 'periphery' in terms of those in between, and 'outsiders' or workers in the informal economy, young people and the long-term unemployed or marginalized workers typically employed in small enterprises without job security (Ferrera, 1996 and 2005a; Moreno 2000).

2) The co-evolution of social insurance programmes with this segmented labour market based on occupational status with distinct schemes for private employees, civil servants and the self-employed. Such fragmentation is coupled with different regulations in terms of contributions and benefit determination (Ferrera, 1996).
3) Heightened protection of the risk of old-age and marginal, sometimes non-existent, family benefits.
4) Patchy and ineffective safety nets evolving slowly in a fragmented and categorical fashion with disparate rules and differentiated benefit levels (Saraceno, 2002; Ferrera 2005a).

When analysed in detail, social policy developments in Turkey tend to resemble the peculiarities of what Seekings (2004) calls *inegalitarian corporatist* regimes. This typically refers to the corporatist element where claims are highly dependent on membership of occupationally-defined corporate groups with a fundamentally inegalitarian character as regards the exclusion of the poor from formal employment and hence membership of these corporate groups.

Up to the Second World War, under a single party regime, social policies in Turkey were mostly concerned with protecting civil servants as regards to their pension and health service entitlements while at the same time being motivated by traditional paternalistic considerations. As far as the "statism" as the mode of economic development in the 1930s is concerned, the priority given to industrialization had been realized via expanding state economic enterprises (SEEs) as the dominant mode of production. These considerations were manifested not only in

responding to the rural and urban challenges of social disintegration due to long wars and population exchanges but also in terms of measures aimed at protecting employees within the work place and creating an attractive social environment around and within SEEs (Boratav and Ozugurlu, 2006).

The elections of 1950 marked a shift towards a multiparty democracy in the political sphere but also a liberal free-market regime in the economic sphere. The aftermath of WWII witnessed the establishment of the Ministry of Labour as well as the Workers' Insurance Institution in 1945, renamed the Social Insurance Institution (SSK) in 1965, which aimed at protecting private sector employees and blue collar public workers in the manufacturing and service sectors against a broad range of risks such as old-age, disability, health, and so on, to be co-funded by employer and employee contributions. Though the history of social insurance or social security for public sector employees can be traced back to the Ottoman period when soldiers, the *ulema* and civil service classes formed *Tekaüd* (Pension) Chests under the treasury (Ozbek, 2002), the legacy of Bismarckian social insurance system was institutionalized in the post-WWII period with the establishment of the Retirement Chest (ES) in 1949 for public sector employees covering both active and retired civil servants.

Prepared right after the military takeover of May 1960, the 1961 Constitution marks the specification of the social component of the state by emphasizing the granting of constitutional rights for all citizens to have access to education, health and employment - rights which have never been fully achieved as will be shown in the following sections. The development strategy of this period based on import-substituting industrialization achieved some kind of a class-alliance where all

employees and employers benefited from high wages, high profits, and the expansion of domestic demand and the domestic market. In the early 1970s, the establishment of Bag-Kur (BK) to cover craftsmen, artisans, merchants and other self-employed has completed the formation of the social security system in Turkey. As will be discussed in the modelling of tax-benefit system, BK and SSK extended their coverage in 1983 to include agricultural workers and the self employed.

With the shift towards an export-oriented mode of industrialization in the 1980s, such segmentation within the social security system offering differential protection schemes of pensions or health in terms of eligibility criteria and benefit determination for different occupational groups was coupled with a more severe segmentation in the labour market in terms of formally and informally employed groups of workers. This can be traced both through intensified privatization significantly decreasing the number of previously well paid, socially secure workers who were employed either in over-staffed SEEs or private companies and the informalisation of production processes where subcontracting relations became the dominant mode for cost cutting strategies to enhance 'competitiveness' in the global market. It can be argued that the coexistence of this segmented social security system with a peculiar labour market structure where self-employment, unpaid family labour and informal employment have predominantly been evident, hampers the possibility of the system providing an adequate level of protection for all.

Main components of a patchy social assistance framework for those not covered by the corporatist social security system are marked by the establishment of a minimum pension scheme for the elderly and disabled who lacked social security coverage in 1976 and the establishment of the *Fund for the Establishment of Social*

Assistance and Solidarity (SYDTF) in 1986 to provide emergency relief (either in cash or in kind)

> *"to help citizens in the state of poverty and destitution, or, when necessary, to help non-citizens who are in Turkey legally or otherwise, to take measures that will enforce social justice by ensuring the fair distribution of income, to encourage social support and cooperation"* (Article 1, Law No. 3294)

In terms of financing, the former has been financed from the general state budget and managed by ES while the latter operates through an extra-budgetary public fund. Inherent in the establishment of the former is the central role attached to the family or kinship ties as an essential pillar of the welfare regime. As for entitlement, Article 1 of Law 2022 on minimum pensions for the elderly and the disabled states the following:

> *"the elderly or disabled who are not covered by any social security institution, do not own any property or any other source of revenue and do not have anyone legally responsible for caring for them [their own family or close relatives]"*

Just as is the case in southern European countries, it is assumed that "the family" is a proxy for welfare institutions for individuals who fall outside the coverage of formal social security schemes, assuming reliance on either their family, some extended forms of kinship or other social networks such as neighbours (Mingione, 2001; Saraceno, 2002). In other words, social assistance mechanisms are regarded as a residual last resort to cater for those that even lack support from informal safety nets, i.e. family. Actually, implicit in the introduction of emergency relief through the SYDTF was the understanding that the family can no longer bear the care burden it had traditionally assumed. However, the formation as well as the functioning of the

Fund failed to provide rule-based, systematic, transparent and universal social assistance that would counterbalance all the risks which families fail to meet. That is to say, the Fund, acting as a sheltering institution for 931 local foundations managed by various level of local government was marked by a certain lack of clarity concerning criteria as regards entitlement, duration, extent, amount and form of benefit. This has tended to limit the anti-poverty function of the Fund and has not achieved its aim of "*reinforcing the trust towards the state by making the citizens feel that the state is there to support them*"[7].

Apparently, the inegalitarian corporatist structure of the welfare regime in Turkey resulted in the formation of a patchy social safety net which is far from granting universal, adequate and systematic provision of benefits to all citizens. The regime faces certain contemporary challenges underpinning reform debates and the involvement of international actors. First and foremost, current labour market realities do not match with the corporatist setting of the formal social security system which was designed at a time when it was possible for the urban population to be formally employed and for the rural population to rely on traditional subsistence production. Processes of de-ruralization and rapid urbanization that started in the late 1970s and accelerated in the 1980s marked a transformation in the labour market, increasing the share of informally employed, either in the form of unpaid family workers in rural areas or self-employed in both rural and urban settings and lacking the access to formal social security coverage. It is quite common for the family to act as a social clearing house where one member attached to formal employment can provide access

[7] This quotation is the combined version of expressions of two officials in charge of the Fund (one local, one central) used in our interviews conducted in 2002 during the field work of the project "New Poverty and Changing Welfare Regime of Turkey", published by UNDP in 2003. The views were also cited in Bugra and Keyder (2003).

to health services for informally employed members of the family as dependants, a fact supported by high coverage figures. On the other hand, declining employment and labour force participation rates for both men and women point to the fact that migration from rural to urban areas forces them either to drop out from the labour market or to be unable to find a job, leading to high unemployment and lower participation rates in urban settings. As mentioned above, the peculiarity of the post-1980 period lies in the significant decline in formal employment opportunities with the transformation from an inward-looking, protectionist, state subsidized and public employment strategy into one of outward-looking and market oriented where deregulation, subcontracting and privatization of SEEs has seriously affected access to stable and formal employment (Şenses, 1994). The sectoral distribution of employment reveals the significance of the agricultural sector, composed of small peasant holdings relying mostly on unpaid family labour. In this setting, migration from rural to urban settlements had previously allowed for the possibility of family support from the rural hinterland (i.e. those who remained in the village) in the form of in kind or sometimes income supplements. However, the withdrawal of state support programmes in the form of input subsidy or output price support as well as the changing characteristic of rural-urban migration from "pull factors" in the city to "push factors" due to war conditions throughout 1990s for the case of migrants of eastern and southeastern origin has weakened the sustainability of informal mechanisms of support.

Within the setting of an inegalitarian corporatist welfare regime, in Turkey, the rate of growth of population has begun to slow down in the 1980s to reach 1.5 in 2003 (World Bank/SIS, 2005). However, given the nature of past demographic trends, both

the share in total population and the rate of growth of working age people still remain high. The employment opportunities for this group remained highly limited in as regards the changes in the structure of employment. Declining share of agricultural employment, not coupled with compensating employment creation in industry and services failed to absorb the new entrants in the labour market. The picture gets complicated when the EUROSTAT compatible at-risk-of poverty rates, provided above in Table 2.8, are considered. In terms of a general overview of poverty, in Turkey the population at risk of poverty, as 26 percent of total population, is significantly higher than those prevailing in EU countries. Notwithstanding the fact that poverty and unemployment are surely related, the peculiarity of in-work poverty in Turkey, as 23 per cent of those at work, lies in the striking feature of informal employment which is estimated to be around half of total employment and about one third of urban employment. Apparently, one cannot even talk about commodification for those in the labour market, putting aside those outside. As far as the regional aspects of socio-economic development are concerned, the eastern and southeastern provinces of Turkey have historically been more disadvantaged than the other regions of the country. The average GNP per capita is about one-third of the country average in this region whose population is 15 percent of the total population of Turkey, a trend which has deteriorated in the course of 1990s (TESEV, 2006). As regional breakdown of poverty rates are not available, comprehensive picture of some aspects of regional disparities can be addressed by reference to the regional data on basic Human Development indicators of GDP per capita at PPP, life expectancy, adult literacy and combined school enrolment ratios where the gap between the most developed regions in the West and the least developed regions in the East are indeed very high. Out of the

20 least developed provinces, 18 are located in eastern and southeastern Turkey (UNDP, 2005: 64-67).

Against this background, it could be argued that the configuration of and the challenges facing the welfare regime in Turkey could be analysed by utilizing a different framework. Unfortunately, as discussed in the preceding sections, there are quite a few research on measurement of poverty and inequality in Turkey where the methods utilized have only slightly differed from each other. From another point of view, these also lacked the coherent perspective whereby the welfare regime and the issues of poverty and inequality could be discussed together. Computation of distribution of disposable income across deciles with relative poverty measures would be carried out by designing and running the national tax benefit model may feed in this area as will be demonstrated in the following chapter.

3. Micro Framework

For quantitative policy analysis, microsimulation models are used to estimate the effects of taxes and benefits on the disposable income of households, or individuals within a statistically representative micro-level dataset which is usually derived from household surveys. In other words, using microsimulation allows for assessment of policies by modeling the policy implications for individual households. Apparently, output from microsimulation exercises can be used to calculate aggregates like the effect of a reform (hypothetical or actual) on the government budget, to produce poverty and income inequality indicators, to estimate the number of "winners" and "losers" of implementing the reform or a particular policy, to disaggregate the results into gender, age or regional subgroups. Microsimulation models are restricted to a partial equilibrium framework. In this regard, they are not suitable to estimate the macroeconomic or long-run impacts of reforms.

Though there are many types of microsimulation models and the construction of models is highly conditional on the objectives pursued by the researcher, they can be classified according to coverage, time horizon and behaviour. In terms of the scope of the policies that models analyse, specific models simulate only one policy whereas integrated models not only serve to simulate reforms that affect more than one policy but also take into account the interactions between taxes and benefits and asses the whole effect of the fiscal system. As regards the time horizon, simulations with static models predict "morning after" impact of reforms for a constant population while more complex dynamic model simulations helps forecast how a policy would affect the individuals in the future. It has been argued that static models are suitable and widely used to estimate the immediate distributional impact of

fiscal reforms while dynamic models are used to assess the impact of policies in the long-run or the distribution of income along the lifecycle (Levy, 2003). Non-behavioural models do not capture or predict any change as regards to the individual behaviour as response to policy change, assuming that individuals do not change their behaviour regardless of the type or the intensity of the fiscal reform. Sufficient to analyse short-term impact of "non-radical reforms", Atkinson and Sutherland (1988) argue that they are relatively fast to run and use the results are clear, robust and easy to interpret as they do not require the estimation of behavioural functions. On the other hand, behavioural models serve to capture the behaviour altering objectives by estimating individual responses to tax-benefit reform mostly focusing on labour supply effects. Mostly restricted to one dimension of individual behaviour as labour supply, other behavioural dimension are ignored in these models and partial equilibrium framework utilized also limits aggregate impact estimation such as effect of the reform on employment.

In sum, microsimulation is used to assess the effects of tax-benefit reforms or some policy elements that affect inequality, poverty, labour supply or government revenues. As they provide detailed and representative results at the household and individual level, one can claim that they are suitable for analysis of distributive incidence of a policy and may cater to provide the data for measurement of poverty and inequality.

Following the path-breaking work of Atkinson et. al .(1988) where welfare effects of introducing British tax-benefit system in France, microsimulation began to be used to produce international tax-benefit comparisons (Callan and Sutherland, 1997; De Lathouver, 1996; O'Donoghue and Sutherland, 1998 and 1999). As a particular form of microsimulation modeling, tax-benefit modeling helps to calculate the effects of specific policies on the overall budget, income distribution- poverty rates and work incentives simultaneously while potential

impact of a new policy proposal can be demonstrated in advance and compared with some other proposals. For the analysis of actual policy reforms, national tax-benefit models are widely used in UK as well as other OECD countries. The "national" characteristic of the models in terms of being based on different set of priorities, hard-wired assumptions about the structure and definition of target families for benefits makes international comparison almost impossible. To make consistent and accurate cross-national comparisons of broad indicators, to loosen the varied effects of different policy regimes in different countries within a common and consistent framework, EUROMOD has been developed in late 1990s as a multi-country static and non-behavioural tax-benefit model for the EU countries by a research team involving researchers from 18 institutions in 15 EU countries coordinated by the Microsimulation Unit now based at Essex University[8] with the successive grants from European Commission.

The innovation lies in the construction of a flexible framework where tax-benefit systems of many and highly different countries are simulated in a consistent and integrated way. Micro-level databases representative of each country (mostly EHCP, but national panel studies associated with EHCP or national household budget surveys) are also used and harmonized with introducing common names and definitions for variables. Similarly, tax-benefit polices are structured by using common functions and modules. These two together help to make more detailed comparisons between policy regimes usually by introducing hypothetical policy transfers, i.e. by showing what would happen if one policy of country A were transferred to country B and vice versa. Also, distributional implications of potential changes in tax-benefit policies can be comparatively analysed in a way to demonstrate the

[8] At the initial stage, the Unit was based at Cambridge University. With appointment of Prof. Holly Sutherland as a research professor at Essex, the unit has moved to ISER (Institute for Economic and Social Research) at Essex University.

extent to which the effects differ by the population characteristics and existing tax-benefit systems.

Apparently, in addition to being used for national tax-benefit modeling, EUROMOD has provided impetus for the construction of associated national models in some countries where they did not exist before while many of other national models are run in parallel with the involvement in EUROMOD. The model has been expanded to cover 10 New Member States of EU and is being redesigned and upgraded in light of both enlargement and lessons learned from using the initial version.

3.1 EUROMOD

EUROMOD is the acronym for an integrated multi-country tax-benefit microsimulation model that covers all 15 Member states of European Union prior to the eastern enlargement of 2004. It is an analytical tool that enables research about the assessment of impact of policy reforms concerning tax-benefit systems on incomes, poverty, inequality and social exclusion. The uniqueness of EUROMOD lies in its relevance both at the national level and at comparative analysis within an integrated European framework. This section will first explore the background of the construction of the model, and then followed by the peculiarities and limitations surrounding EUROMOD. Finally, the structure of the multi-county tax-benefit simulation will be presented.

3.1.1. Origins and Background of a European Tax-Benefit Microsimulation Model

As mentioned in the introductory part of this chapter, tax-benefit microsimulations have been developed in parallel to the widely use of computerized techniques of analysis in late 1980s. The detailed and representative results at the household and individual level produced by the simulations not only enable users to investigate distributive incidence of a policy but also cater to provide the data for measurement of poverty and inequality. As presented in Bourguignon and Spadaro (2006), the potential use and users of the model has been ranging from simplistic models for teaching purposes to the detailed, multi-task models designed to support decision making of relevant government policy departments.

The use of tax-benefit models can be dated back to 1960s and 1970s, as cited in an earlier survey by Merz (1991). Sutherland's later survey (Sutherland, 1995) describes the existence and usage of several static national models in EU countries. Among such early developments of national tax-benefit models, TAXMOD of UK and SYSIFF of France constitute primary examples[9] (Atkinson and Sutherland, 1988). Despite the growing availability of such tools and their consequent updating and development, the use of the national models for comparative cross-country analysis continued to remain as a challenging task. This was due to not only the endogenous constraints of the national models concerning definitions quality about the data but also the lack of availability of consistent comparable sets of data. Lietz and Mantovani (2007) claim that the only comparative attempt concerning cross-country tax-benefit systems has been OECD's periodical research entitled "Benefits

[9] For details, see Atkinson et al. (1983) and Bourguignon et al. (1988) respectively.

and Wages"[10] where the impact of tax and benefit systems on household income of average production worker has been analysed for different types of families (i.e. single earner, dual earner etc.). Though the research and methodology utilized produced multi-country information, the use of average production worker as the primary unit of analysis acted to constrain any further analysis with respect to either a representative sample or the population as a whole. For instance, one cannot produce inequality or poverty related indicators by solely using OECD methodology. However, the model/hypothetical family approach of this technique would be replicated with and adopted to the microsimulation models in order to get these types of outputs (for an exercise, see Berger et. al 2001). Within the course of 1990s, two developments regarding data sets contributed to the cross-country comparative policy analysis. One is the multi-country dataset made available by Luxembourg Income Study (LIS) deriving from nationally collected micro data through a reclassification of detailed components of income to maintain a harmonized dataset with consistent income definitions. The LIS database, currently hosting 30 national datasets, has been used for comparative research purposes, especially across OECD countries, since then (initially Atkinson et.al, 1995; then Vleminckx and Smeeding, 2001; Atkinson, 2004, Foerster and Vleminckx, 2004)[11]. Other is the establishment of European Community Household Panel (ECHP) that is conducted yearly at EU countries based on a standardized questionnaire and common technical and implementation procedures[12]. ECHP, initiated in 1994, can be regarded as a unique source of information with respect to the simultaneous coverage of multi-dimensional topics through a common blue-print questionnaire serving as the basis of

[10] For more information see OECD - Benefits and Wages website http://www.oecd.org/document/30/0,3343,en_2649_34637_39717906_1_1_1_1,00.html
[11] For more information on the LIS, see http://www.lisproject.org.
[12] For more information on ECHP, see http://circa.europa.eu/irc/dsis/echpanel/info/data/information.html.

national survey waves and common sampling requirements as well as standards. Availability of consistent multi-country databases by the LIS and ECHP meant that cross-country comparisons via tax-benefit microsimulation could be possible. Of course, prior to the release of these two sets of data, it was also possible to use national data and national tax-benefit systems for policy analysis. However, in addition to the existing sets of tax and benefit policies, the use of tax-benefit microsimulation over such a multi-country database allows also for the study of the impact of a wide range of policy reforms and hypothetical policy approaches. In this respect, the findings of Callan and Sutherland (1996 and 1997) on the differential impacts of Basic Income Schemes using separate national tax-benefit models for are illustrative because they demonstrate the limitations and constraints of both data and model in both producing and discussing comparative results as well as designing realistic and consistent Basic Income Scheme to be modeled and simulated. Supporting this evidence, it should also be noted that in 1990s, the variations and differences among the national models could not allow for a consistent, coherent cross-country comparison. This is to say that in some countries development of the national model would be either at infancy or non-existent yet while in others, the model construction as well as usage would be carried out within certain government departments and even might not have been made public. Thus, the sole way of conducting consistent comparative analysis using tax-benefit microsimulation seemed to construct an integrated multi-country tax-benefit model that would also serve for national policy analysis purposes.

It is against this background that the fourth of European Commission's Framework Programmes (FP4) aiming to extend and enhance national research and

technological developments coincided. The launch of Targeted Socio-Economic Research (TSER) program under FP4 primarily aimed at building up not only knowledge base but also research networks to produce *"policy relevant, comparative European socio-economic research both at the national and Community level"* (European Commission, 1999, p.5). This objective fit quite well with the knowledge accumulated and needs assessed via research aiming to make cross-country comparative policy analysis using tax-benefit microsimulation. Under the research theme of "social exclusion and social integration", TSER provided funding for a preparatory study to provide assessment for the technical and operational feasibility of constructing an integrated European tax-benefit microsimulation model, findings of which are presented in detail in Sutherland (1997). This constituted the kick-off for an ongoing collaborative work that created a lively research network around EUROMOD, constantly being updated and considerably improved since the initial version contributing to the European Research Area as successively funded by Community Framework Programmes as well as Commission's Improving Human Potential Programme. Here, two projects are worth mentioning[13]: I-CUE and AIM-AP. I-CUE (Improving Capacity and Usability of EUROMOD) mainly aimed to start the process of expanding EUROMOD to cover the 10 New Member States (NMS) of 2004 and to make EUROMOD easier to use, especially when it is dealing with 25 systems and datasets. Achieving these tasks, the project, completed in 2008, also involved a User Group consisting of a group of researchers from the consortium that constructed the first version of EUROMOD plus some new and prospective users. To ensure that the work in I-CUE was executed in line with the needs/demands of

[13] For detailed information, see http://www.iser.essex.ac.uk/research/euromod

researchers using the model, all Design Study tasks were open to the scrutiny of, and advice from, this User Group. This process involved for some Group members to volunteer to test some of the new model components and to actively participate in the Study (Sutherland, 2008). AIM-AP (Accurate Income Measurements for the Assessment of Public Policies), on the other hand, primarily focus on improving the comparability, scope and applicability of tools, methods and data for the measurement of income and the analysis of the effects of policies on inequality, poverty and social inclusion within a cross-national perspective. Specifically, the emphasis given to the accurate income measurement (and thus implementation within EUROMOD) consists of incorporation of non-cash incomes, targeting errors and tax evasion as well as redistributive impacts of indirect taxes.

3.1.2 EUROMOD: Peculiarities and Limitations

The primary uniqueness of EUROMOD lies in its being the only multi-country tax-benefit model. This necessitates a great deal of cooperation among researchers and policy makers both at national and European level. The cooperation enhanced in the initial model construction process has been extensively utilized so that a committed international research community is created and then maintained around the theme.

The construction of the model was carried out by a flexible division of labour among the national expert teams of "country respondents" from 15 countries, coordinated by Prof. Holly Sutherland and her team at University of Cambridge (now based at Institute for Socio-Economic Research (ISER) at University of Essex).

While national teams were responsible from providing data and information on the tax and benefit rules necessary to model their national system, core team, in addition to the coordination, was responsible from programming the core part of the integrated model and designing common features. As documented and widely discussed in Sutherland (1997), the variation among the quality of data provided by both European level ECHP and national surveys led to the consultation with the national teams through a questionnaire called "Database Robustness Assessment Exercise (DRAE)" for selection of the most appropriate and suitable micro-data for tax-benefit modelling. For some countries, ECHP was chosen for the ease of comparability and homogeneity whereas some national datasets are utilized as of their good quality and larger sample size. Table 3.1 reports the sources of micro-data used in EUROMOD.

Table 3.1: EUROMOD Micro-Data

Country	Base Dataset	Type
Austria	European Community Household Panel	ECHP
Belgium	Panel Survey on Belgian Households	National Panel
Denmark	European Community Household Panel	ECHP
Finland	Income Distribution Survey	Register+survey
France	Budget de Familie	Household Budget Survey
Germany	German Socio-Economic Panel	National Panel
Greece	European Community Household Panel	ECHP
Ireland	Living in Ireland Survey	National Panel
Italy	Survey of Households Income and Wealth	Income Survey
Luxembourg	PSELL-2	National Panel
Netherlands	Sociaal-Economisch Panelonderzoek	National Panel
Portugal	European Community Household Panel	ECHP
Spain	European Community Household Panel	ECHP
Sweden	Income Distribution Survey	Register+survey
UK	Family Expenditure Survey	Household Budget Survey

Source: Sutherland (2001)

Due to the variety among the national sets of data with respect to the level of detail of the variables, the modeling of tax and benefit rules was made possible by the creation of "common variables" that are available in all 15 micro-data sets and necessary for the simulation of the national systems. Where necessary, country specific variables are also added to the databases so as to maintain the simulation of the national tax-benefit system. All these variables were defined in the Data Requirement Documents (DRDs) by each of national teams providing the information on source data and the transformation of source variables to EUROMOD variables (both common and country specific, if any). Two related documents were crucial in this model construction phase: feasibility studies and country reports. Feasibility studies provided information on the elements of the tax and benefit systems and their simulation possibilities as well as discussion on the advantages and disadvantages of datasets and issues that could be relevant to the microsimulation modelling including tax evasion, non-take-up of benefits and net-to-gross conversions of data on income. Country reports, on the other hand, helped to document the way in which each country's tax-benefit system is modelled, containing an overview of the system, description of the modelled tax and benefit instruments as well as the micro-database and adjustments to the original dataset. Thus, in practice, core team concentrated on finding common features across countries throughout the process by identifying common structural characteristics of the national policies, common data requirements and then parameterising and generalizing as many components of the model as possible.

It should be noted that the quality of the data in such a comparative context need to be seriously considered at least in a relative sense, as also done by Atkinson

et.al (1995) for LIS datasets for OECD countries. What makes such quality particularly essential for EUROMOD is because the data set should be representative and of high quality by *source* of income. Among main issues of quality and comparability are definition of "household", exclusions from samples and under-reported income and aggregate comparisons. About "household" definition that captures living under one roof and sharing some expenses, the differences among national datasets are relatively small so that the DRAE exercises helped unifying the definition. Sample exclusions typically refer to either the regionally inaccessible population, homeless, institutional population (those in hospitals, nursing and children's homes, prisons etc.) or the illegal immigrants. The possibility of the receipt/payment of any of the tax-benefit instruments by these excluded groups may complicate the income distribution as well as the simulated policies; therefore cross-country variation was taken into account with respect to the size of these groups mentioned. For the under-reported and aggregate comparisons, Sutherland (2001) reports the compiled information from DRAE and national/administrative aggregates that while the extent of under-reporting varies considerably across countries, self-employment income and income from financial capital are mostly reported less than the actual levels. The core team decided that national teams should decide on the adjustment needs for the data, and apply accordingly where necessary – only 3 country respondents, i.e. Finland, France and Italy, undertook certain adjustments with respect to self employment and capital incomes (Sutherland, 2001).

As the primary objective of model construction is to produce a measure of household disposable income (HDI), the policy issues that could be addressed by the integrated model were practically defined with respect to the sub-components of this.

In this respect, depending on the availability of the data and the significance and relative importance of the policy at the national as well as European level derived from the information documented in the country reports, the components were classified in three levels: those covered by the model, modified in the model and fully simulated by the model.

In a nutshell, EUROMOD computes HDI by making use of information from a micro dataset on the characteristics and pre-tax/benefit incomes of the members of the households in order to simulate the components of tax and benefit system for each household. It allows the user to get a measure of change in income after a real or hypothetical change in tax and/or benefit policy. Using the sample weights, the changes at the household level can be aggregated for a national revenue cost for the policy change and compared with other countries. Some examples of the outputs will be presented at the end of the next section.

3.1.3 Structure and Fundamentals of the Model

The background describing the stage-by-stage construction of EUROMOD seems slightly different that what is described in previously mentioned preparatory study (Sutherland, 1997) for building an integrated multi-country tax-benefit model. Particularly, the study involved an exercise to build-up a prototype model for three countries (France, UK and Italy), named as *Eur3*. As explained in detail in Bourguignon et.al (1998), this prototype involved a set of parallel national models integrated at the output stage. Prior to this preparatory research, cross-country tax-benefit comparisons and common policy reform simulations were mainly carried out

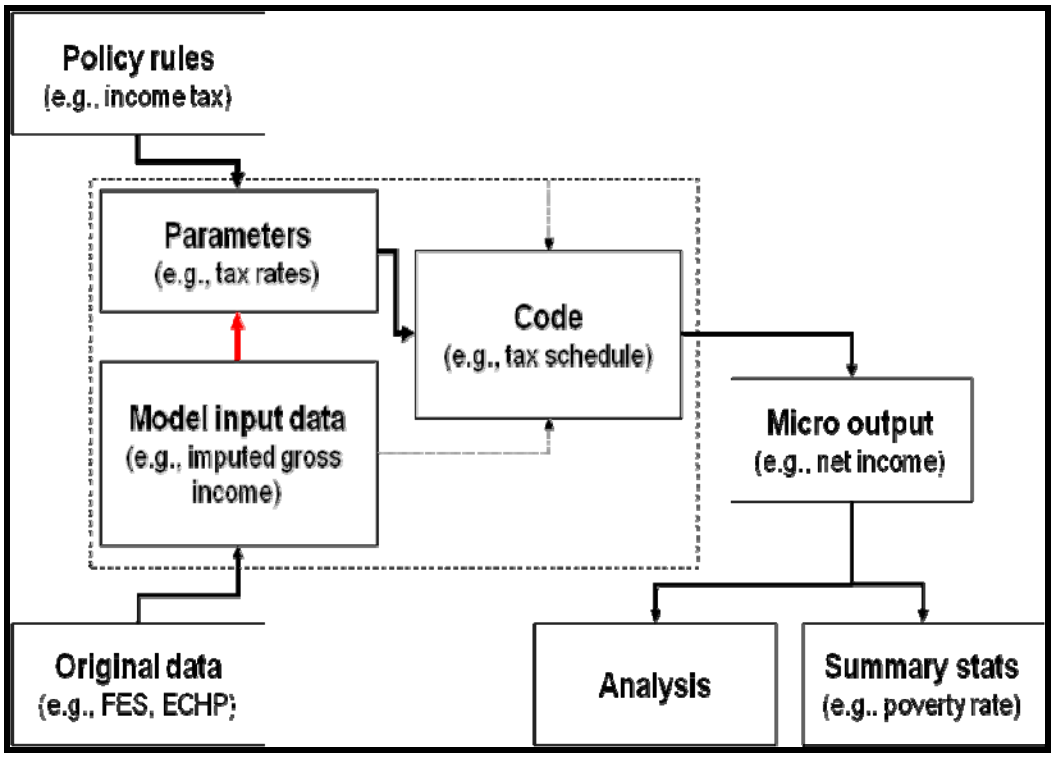
via using existing national models. To name a few, Atkinson et.al. (1998) and De Lathouwer (1996) used national tax-benefit models simulated with/on other country's population (UK system on French population and Dutch system on Belgian population respectively); Callan and Sutherland (1996) modelled a common Basic Income reform in UK and Ireland, which is then extended to cover five EU countries (Callan and Sutherland, 1997); Evans and O'Donoghue (1998) modelled policy reforms regarding social assistance schemes using national models of Germany, Ireland and UK.

Taking this stock of knowledge generated in cross-country comparative tax-benefit microsimulation via comparisons using either single country or different national models and acknowledging the comparability, data and definitional problems arising from national models being used for comparative purposes, the construction of EUROMOD challenged the conventional perspective against a valid, comparative, consistent modelling framework. The model construction process, as it involved identifications of common structural policy characteristics, common data requirements (and modification of available data sets accordingly) and generalization as well as parameterization of certain components, ended up in a flexible as well as comparable but coherent framework. For example, certain level of generalizations were maintained by common definitions of the income bases, the unit of assessment and entitlements for each tax and benefit, equivalence scales for benefit payments and output income measures.

Based on these, the architecture of EUROMOD can be regarded as that of a hierarchical structure where the conceptualized features of national tax-benefit systems are operationalized. As illustrated in Figure 3.1, it involves individual

policies like income taxes, social insurance contributions, social assistance benefits that constitute national systems These are structured within a sequential process in the tax-benefit system, called "policy spine". Apparently they are individually decomposed into building blocks of the system, called "modules", which contain actual tax/benefit rules and thus perform the calculation of a certain part of the tax/benefit on each fiscal unit.

Figure 3.1: Basic Architecture of EUROMOD



Source: Essex Summer School SSDA 3U Course Notes (2006).

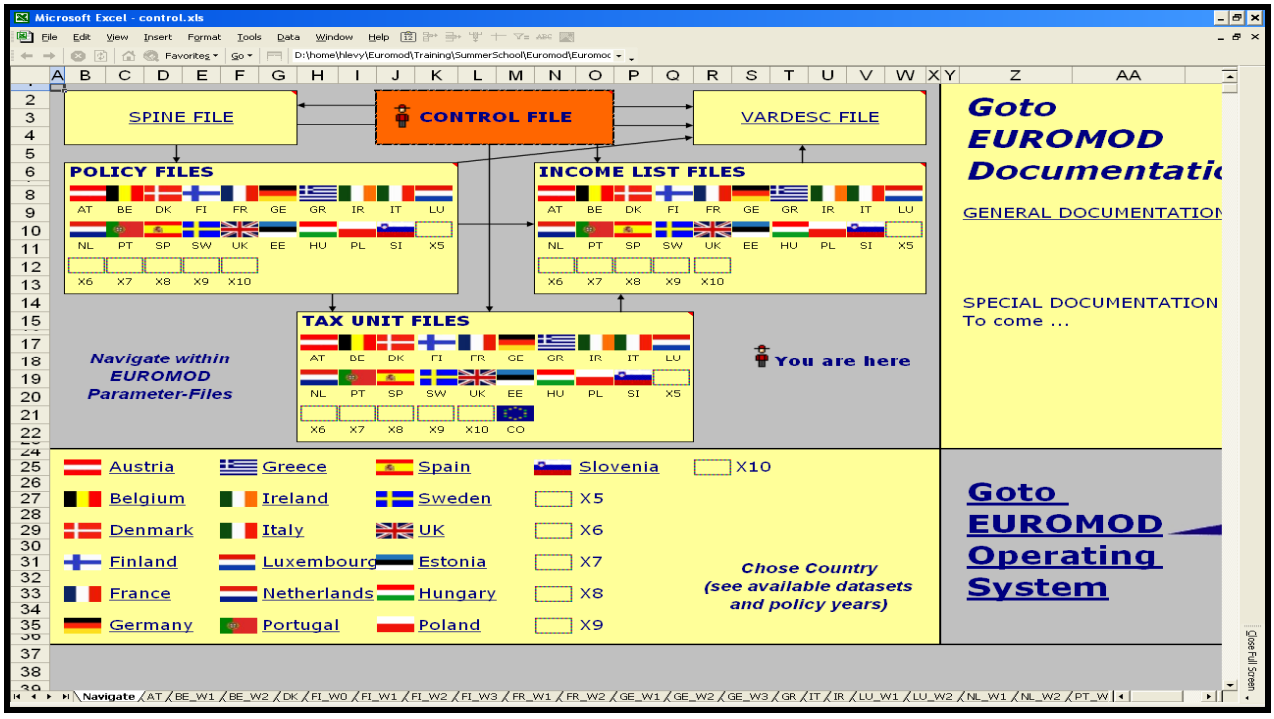
The operation of the model follows the logic and sequence of the policies through the input file, i.e. policy spine that controls the flow of computations taking

place within the model with regard to the sequence they are also computed in the tax-benefit system itself. For instance, if the level of a social assistance benefit depends on after tax income, then the social assistance policy must appear after income tax policy in the policy spine. The implementation of the policy itself is carried out by the modules, structured as distinct elementary building blocks. Modules can be regarded as parameterized operations of policies computing the components of the tax/benefit. To exemplify, a child benefit policy might have two conditions for eligibility, one relating to the means-testing and certain threshold for the age and/or number of children. In this case the policy is composed of three modules: one for means testing, one for the eligibility with respect to age/number of children and one for the actual computation of the entitled benefit amount. The peculiarity of the EUROMOD's architecture is that all policies are decomposed into as many modules as possible and all inputs of any of the modules are parameterized so that any alteration in the policy (e.g. increase in the age threshold of the child) could be integrated into the model without any reprogramming but with simple recoding for the change in the relevant module (e.g. changing the parameter code in eligibility module regarding the age threshold). Such decomposition also implies that there exists an extensive collection of nationally specific tax and benefit instruments where newer ones can be incorporated easily thanks to the availability of this module "library". This collection also contains a set of general instruments, called common modules that provide a general structure to decompose policies into sub-components. One example is benefit calculator consisting of the set of procedures for simulating social benefits so that different types of benefits could be implemented. Lietz and Mantovani (2007) further claim that, from the users' perspective, the use of common

modules could facilitate not only the mutual understanding of different countries' policies, but also the detection of similarities as well as differences between them.

Therefore, the system as a whole could be regarded to be composed of parameter files configured based on Figure 3.1. Taken from the Navigation Pane, Figure 3.2 depicts the interrelations between these upon the basic architecture.

Figure 3.2: Navigation within EUROMOD



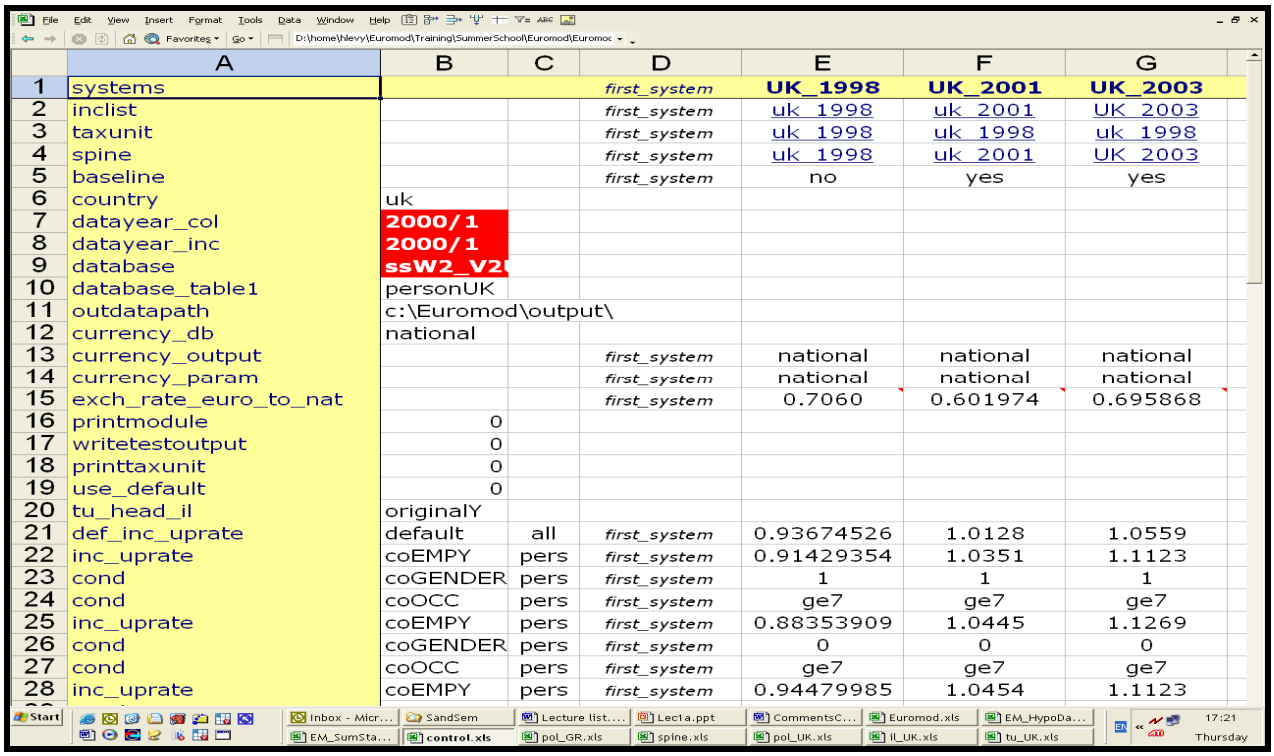
Source: EUROMOD software

All input parameters of EUROMOD are stored as spreadsheets while input data sets are stored in Microsoft Access databases. As seen from the figure on Navigation, the system mainly has 6 interrelated parameter files. Control file contains information on the available datasets and the tax-benefits systems to be

simulated with each dataset, as to be navigated through the spreadsheets. Each sheet of the Control file contains information on one data set and the systems that can be simulated in combination with this set. Figure 3.3 exemplifies the control file sheet for UK 2000 data. The names of the control parameters are in Column A and the corresponding parameter values are in Columns B,E and F. Each of columns E, F, G represents tax-benefits systems for a particular year that can be simulated with this 2000 data. Here it should be noted that in EUROMOD uprating factors are specified for each monetary variable when necessary to take account of changes in incomes and prices over the period. The factors are derived separately and thus provided by country teams, the methodology of which can be found in Country Reports. *inc_uprate* denotes the uprating factor of the variable specified in Column B, the values of which are in Columns E,F and G for the systems 1998, 2001 and 2003 respectively. for each monetary variable that is not assigned a specific uprating factor, default factors given by the parameter *def_inc_uprate* is used. Also, for the countries where data, parameters and/or output are not in the same currency[14], currency conversion is maintained by the *exch_rate_euro_to_nat* in the form of one Euro equals x units of national currency.

[14] As indicated by the parameters *currency_db*, *currency_param* and *currency_output* for each system year respectively.

Figure 3.3: Control File for UK 2000 – sheet named UK_W2

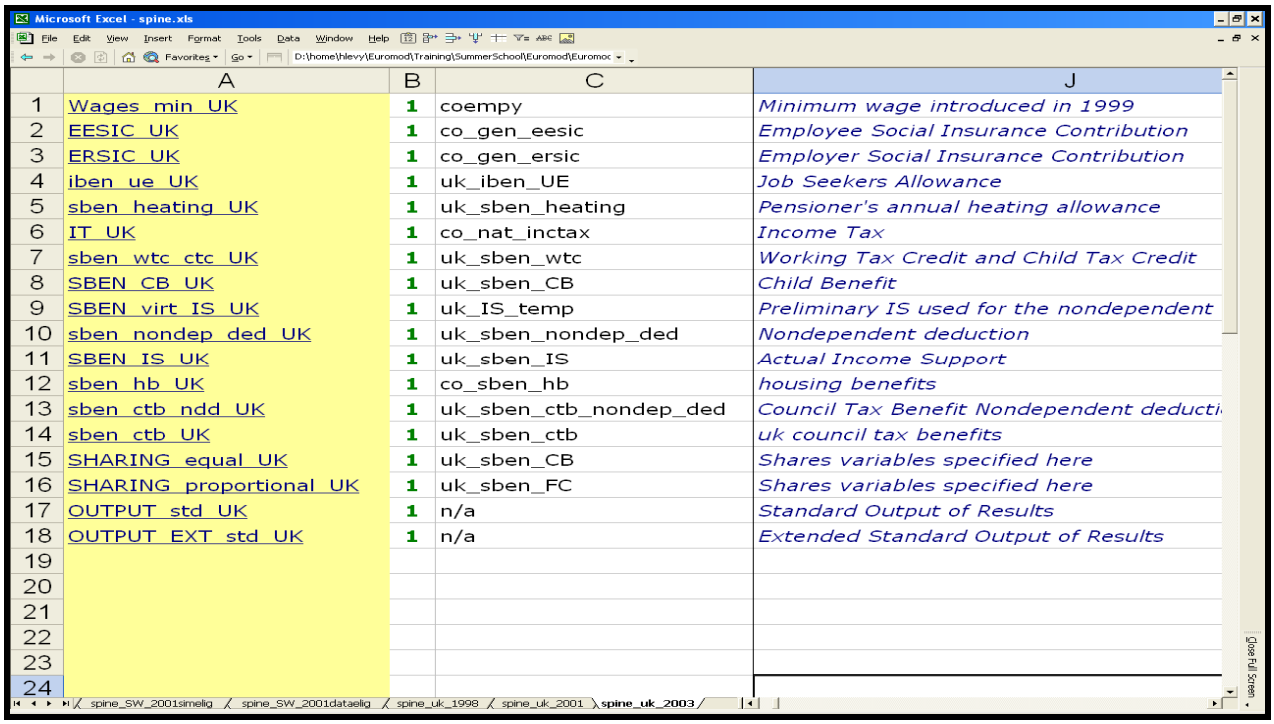


	A	B	C	D	E	F	G
1	systems			first_system	UK_1998	UK_2001	UK_2003
2	inclist			first_system	uk_1998	uk_2001	UK_2003
3	taxunit			first_system	uk_1998	uk_1998	uk_1998
4	spine			first_system	uk_1998	uk_2001	UK_2003
5	baseline			first_system	no	yes	yes
6	country	uk					
7	datayear_col	2000/1					
8	datayear_inc	2000/1					
9	database	ssW2_V2					
10	database_table1	personUK					
11	outdatapath	c:\Euromod\output\					
12	currency_db	national					
13	currency_output			first_system	national	national	national
14	currency_param			first_system	national	national	national
15	exch_rate_euro_to_nat			first_system	0.7060	0.601974	0.695868
16	printmodule	0					
17	writetestoutput	0					
18	printtaxunit	0					
19	use_default	0					
20	tu_head_il	originalY					
21	def_inc_uprate	default	all	first_system	0.93674526	1.0128	1.0559
22	inc_uprate	coEMPY	pers	first_system	0.91429354	1.0351	1.1123
23	cond	coGENDER	pers	first_system	1	1	1
24	cond	coOCC	pers	first_system	ge7	ge7	ge7
25	inc_uprate	coEMPY	pers	first_system	0.88353909	1.0445	1.1269
26	cond	coGENDER	pers	first_system	0	0	0
27	cond	coOCC	pers	first_system	ge7	ge7	ge7
28	inc_uprate	coEMPY	pers	first_system	0.94479985	1.0454	1.1123

Source: EUROMOD Software

Policy Spine file, as mentioned before, depicts the taxes and benefits to be simulated and set out the order in which they are applied. Each sheet in the file represents the tax-benefit order of calculation of a specific system. Figure 3.4 present spine of UK 2003 system where the values of column B determine whether the policy is simulated or not (i.e, 1 or 0 respectively).

Figure 3.4: Policy Spine (UK)



Microsoft Excel - spine.xls

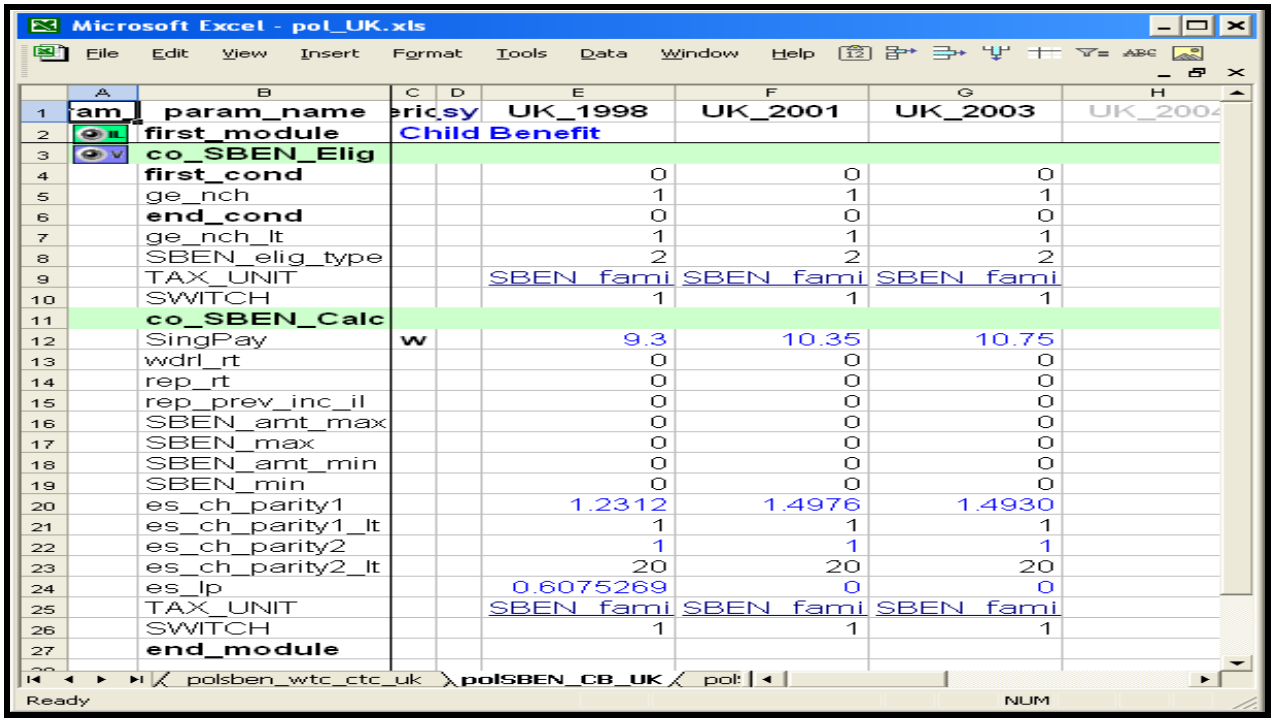
	A	B	C	J
1	Wages_min_UK	1	coempy	*Minimum wage introduced in 1999*
2	EESIC_UK	1	co_gen_eesic	*Employee Social Insurance Contribution*
3	ERSIC_UK	1	co_gen_ersic	*Employer Social Insurance Contribution*
4	iben_ue_UK	1	uk_iben_UE	*Job Seekers Allowance*
5	sben_heating_UK	1	uk_sben_heating	*Pensioner's annual heating allowance*
6	IT_UK	1	co_nat_inctax	*Income Tax*
7	sben_wtc_ctc_UK	1	uk_sben_wtc	*Working Tax Credit and Child Tax Credit*
8	SBEN_CB_UK	1	uk_sben_CB	*Child Benefit*
9	SBEN_virt_IS_UK	1	uk_IS_temp	*Preliminary IS used for the nondependent*
10	sben_nondep_ded_UK	1	uk_sben_nondep_ded	*Nondependent deduction*
11	SBEN_IS_UK	1	uk_sben_IS	*Actual Income Support*
12	sben_hb_UK	1	co_sben_hb	*housing benefits*
13	sben_ctb_ndd_UK	1	uk_sben_ctb_nondep_ded	*Council Tax Benefit Nondependent deducti*
14	sben_ctb_UK	1	uk_sben_ctb	*uk council tax benefits*
15	SHARING_equal_UK	1	uk_sben_CB	*Shares variables specified here*
16	SHARING_proportional_UK	1	uk_sben_FC	*Shares variables specified here*
17	OUTPUT_std_UK	1	n/a	*Standard Output of Results*
18	OUTPUT_EXT_std_UK	1	n/a	*Extended Standard Output of Results*
19				
20				
21				
22				
23				
24				

Source: EUROMOD Software

The policies listed on the spine are stored in the parameter file called Policy which is composed of respective sheets for each policy. As mentioned before, the policies are broken down into Modules that represent a particular component of the policy. One can distinguish between the common and country specific modules by the first two characters where modules starting with *co* imply common modules as opposed to the country acronym initiated modules. For instance, in Figure 3.4, *co_nat_inctax* represents the calculation of income tax in a general way but *uk_sben_wtc* implies working tax credit policy is unique for UK. Two most frequently used modules in EUROMOD are eligibility and calculation modules, the former determining eligibility/liability for benefits/taxes and the latter executes

calculation of the benefit/tax. Figure 3.5 exemplifies UK Child benefit policy *(uk_sben_CB)* for three systems. Every family with children under the age of 15 (i.e. dependent children) are eligible to benefit from this non means-tested policy. Eligibility module, then, only checks for the existence of the dependent children at the household while calculation module sets out that there is a weekly (indicated by **w** in column C) flat rate per child (indicated by *SingPay*) with an addition solely for the first or the only child (indicated by *es_ch_parity1* and *es_ch_parity1_lt*). One can depict the reforms undertaken with respect to this policy that 1998 system involved an extra payment to lone parents (*es_lp*) but 2001 onwards it has been abolished.

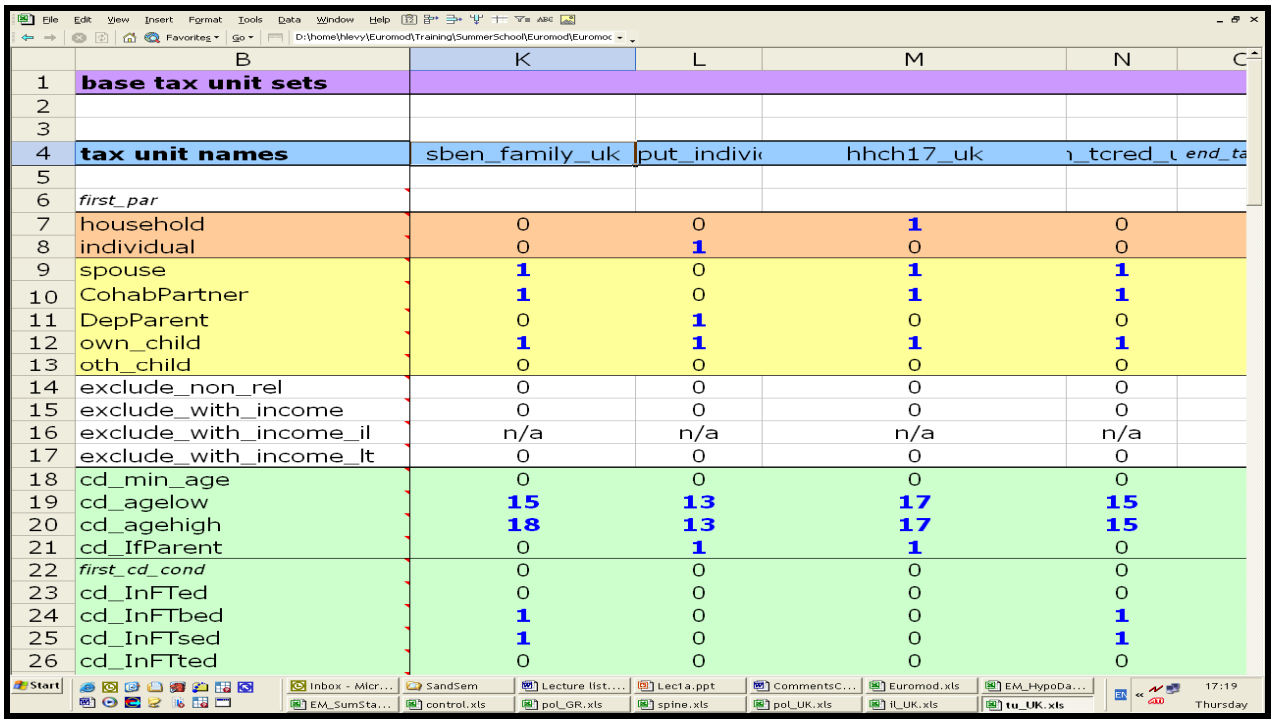
Figure 3.5: Policy Example - UK Child Benefit



Source: EUROMOD Software

The implementation of the policy via modules is valid only when the tax units related with the policy are defined properly. Tax Unit refers to the assessment units of taxes and benefits in EUROMOD and for each country, tax unit file is composed of sheets for the sets of unit for each system. Figure 3.6 exemplifies tax unit file of UK. It should be noted that if the tax/benefit rules defining the units are not varying among different system years, Tax unit file is composed of only one sheet, as in the case of UK where definitions have not changed since 1998. Tax Units primarily define the composition of the unit, either individual, whole household or else, and also constitute the conditions under which a person is considered as a child, dependent or a lone parent etc. The columns present the tax unit the composition of which has to be read horizontally. For instance, *sben_family_UK* is composed of spouse or cohabiting partner living together with their own dependent child, the dependency age limit varies between 15 and 18 for different policies. Though the sheet presented below might seem complicated, the Taxunit Views tool of EUROMOD provides descriptive view to complement the tax unit file.

Figure 3.6: Tax Unit file of UK



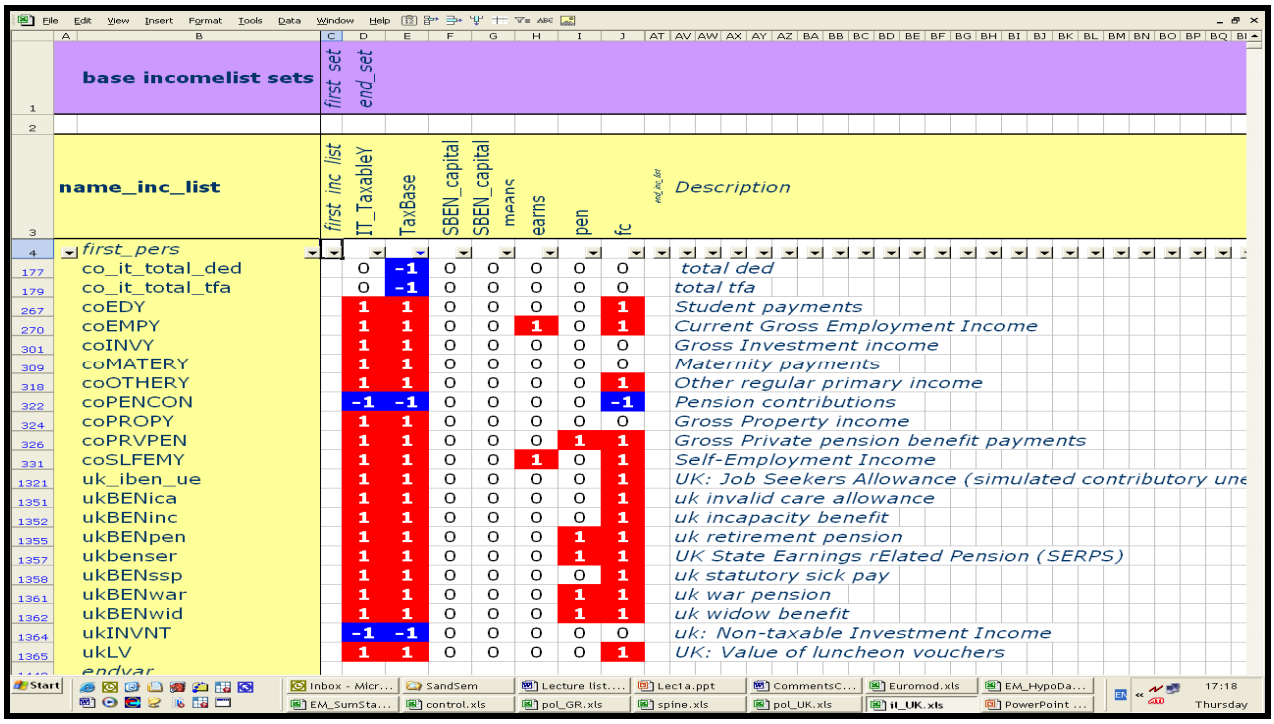
	B	K	L	M	N	C
1	**base tax unit sets**					
2						
3						
4	**tax unit names**	sben_family_uk	put_indivi	hhch17_uk	ı_tcred_ı	end_ta
5						
6	*first_par*					
7	household	0	0	**1**	0	
8	individual	0	**1**	0	0	
9	spouse	**1**	0	**1**	**1**	
10	CohabPartner	**1**	0	**1**	**1**	
11	DepParent	0	**1**	0	0	
12	own_child	**1**	**1**	**1**	**1**	
13	oth_child	0	0	0	0	
14	exclude_non_rel	0	0	0	0	
15	exclude_with_income	0	0	0	0	
16	exclude_with_income_il	n/a	n/a	n/a	n/a	
17	exclude_with_income_lt	0	0	0	0	
18	cd_min_age	0	0	0	0	
19	cd_agelow	**15**	**13**	**17**	**15**	
20	cd_agehigh	**18**	**13**	**17**	**15**	
21	cd_IfParent	0	**1**	**1**	0	
22	*first_cd_cond*	0	0	0	0	
23	cd_InFTed	0	0	0	0	
24	cd_InFTbed	**1**	0	0	**1**	
25	cd_InFTsed	**1**	0	0	**1**	
26	cd_InFTted	0	0	0	0	

Source: EUROMOD Software

Income lists file, on the other hand, provide descriptions of income concepts very similar to the Tax Unit file with separate sheets for the different systems for each country file. Figure 3.7 depicts the set of income list for UK where column B contains all the variables used in EUROMOD, the third row contains the names of the income lists used in the UK system. Highlighted cells refer to the variables used, the entry 1 implies that the value of the variable is added to the income concept and -1 implies that it is deducted. The sheet, in one sense, decomposes the income concept in the column into sub-components of other variables. For instance, pension income (*pen*) consist of the sum of Gross private pension benefits (*coPRVPEN*), UK retirement pension (*ukBENpen*), UK State Earnings Related Pension (*ukbenser*), UK war pension (*ukBENwar*) and UK widow benefit (*ukBENwid*). It should be noted that

one peculiarity of EUROMOD is the standardization of the income concept as standard disposable income for each country and system to be composed of original income plus benefits minus direct taxes minus social insurance contributions. So Income List file is essential in determining and calculating the components of the incomes, benefits, taxes and social insurance contributions.

Figure 3.7: Income Lists for UK 1998 system

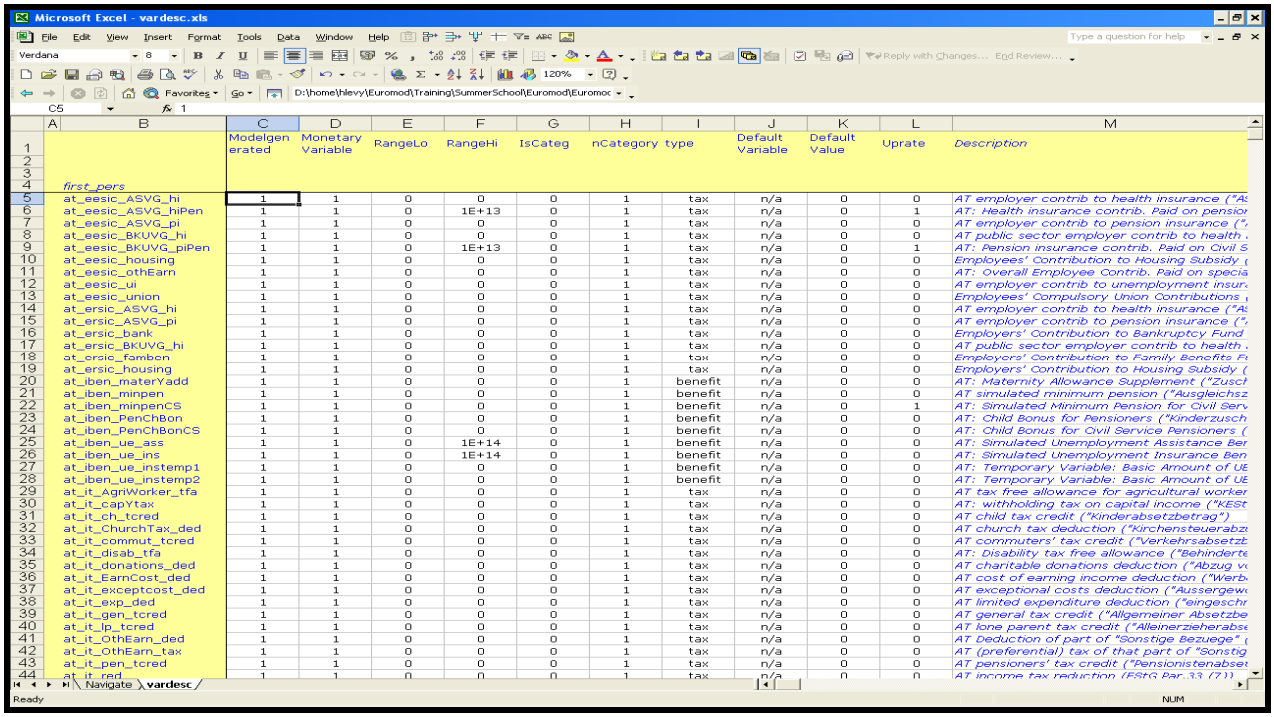


Source: EUROMOD Software

The last parameter file in the navigation pane is Vardesc File that contains the descriptions of all the variables available in the model. As can be seen from Figure 3.8 below, column B and column M contain the names and the short descriptions of the variables, respectively, as used in EUROMOD. The columns in between describe

the properties of the variable with respect to the type, range, uprating, monetary and being model generated or not. The Vardesc file also distinguishes between individual and household level variables as those are listed separately.

Figure 3.8: Descriptions of the variables in the model



	Modelgenerated	Monetary Variable	RangeLo	RangeHi	IsCateg	nCategory	type	Default Variable	Default Value	Uprate	Description
first_pers											
at_eesic_ASVG_hi	1	1	0	0	0	1	tax	n/a	0	0	AT employer contrib to health insurance ("A
at_eesic_ASVG_hiPen	1	1	0	1E+13	0	1	tax	n/a	0	1	AT: Health insurance contrib. Paid on pensio
at_eesic_ASVG_pi	1	1	0	0	0	1	tax	n/a	0	0	AT employer contrib to pension insurance ("
at_eesic_BKUVG_hi	1	1	0	0	0	1	tax	n/a	0	0	AT public sector employer contrib to health
at_eesic_BKUVG_piPen	1	1	0	1E+13	0	1	tax	n/a	0	1	AT: Pension insurance contrib. Paid on Civil S
at_eesic_housing	1	1	0	0	0	1	tax	n/a	0	0	Employees' Contribution to Housing Subsidy (
at_eesic_othEarn	1	1	0	0	0	1	tax	n/a	0	0	AT: Overall Employee Contrib. Paid on specia
at_eesic_ui	1	1	0	0	0	1	tax	n/a	0	0	AT employer contrib to unemployment insur
at_eesic_union	1	1	0	0	0	1	tax	n/a	0	0	Employees' Compulsory Union Contributions (
at_ersic_ASVG_hi	1	1	0	0	0	1	tax	n/a	0	0	AT employer contrib to health insurance ("A
at_ersic_ASVG_pi	1	1	0	0	0	1	tax	n/a	0	0	AT employer contrib to pension insurance ("
at_ersic_bank	1	1	0	0	0	1	tax	n/a	0	0	Employers' Contribution to Bankruptcy Fund
at_ersic_BKUVG_hi	1	1	0	0	0	1	tax	n/a	0	0	AT public sector employer contrib to health
at_ersic_fambon	1	1	0	0	0	1	tax	n/a	0	0	Employers' Contribution to Family Benefits Fu
at_ersic_housing	1	1	0	0	0	1	tax	n/a	0	0	Employers' Contribution to Housing Subsidy (
at_iben_materYadd	1	1	0	0	0	1	benefit	n/a	0	0	AT: Maternity Allowance Supplement ("Zusch
at_iben_minpen	1	1	0	0	0	1	benefit	n/a	0	0	AT simulated minimum pension ("Ausgleichsz
at_iben_minpenCS	1	1	0	0	0	1	benefit	n/a	0	1	AT: Simulated Minimum Pension for Civil Serv
at_iben_PenChBon	1	1	0	0	0	1	benefit	n/a	0	0	AT: Child Bonus for Pensioners ("Kinderzusch
at_iben_PenChBonCS	1	1	0	0	0	1	benefit	n/a	0	0	AT: Child Bonus for Civil Service Pensioners (
at_iben_ue_ass	1	1	0	1E+14	0	1	benefit	n/a	0	0	AT: Simulated Unemployment Assistance Ben
at_iben_ue_ins	1	1	0	1E+14	0	1	benefit	n/a	0	0	AT: Simulated Unemployment Insurance Ben
at_iben_ue_instemp1	1	1	0	0	0	1	benefit	n/a	0	0	AT: Temporary Variable: Basic Amount of UE
at_iben_ue_instemp2	1	1	0	0	0	1	benefit	n/a	0	0	AT: Temporary Variable: Basic Amount of UE
at_it_AgriWorker_tfa	1	1	0	0	0	1	tax	n/a	0	0	AT tax free allowance for agricultural worker
at_it_capYtax	1	1	0	0	0	1	tax	n/a	0	0	AT: withholding tax on capital income ("KESt
at_it_ch_tcred	1	1	0	0	0	1	tax	n/a	0	0	AT child tax credit ("Kinderabsetzbetrag")
at_it_ChurchTax_ded	1	1	0	0	0	1	tax	n/a	0	0	AT church tax deduction ("Kirchensteuerabz
at_it_commut_tcred	1	1	0	0	0	1	tax	n/a	0	0	AT commuters' tax credit ("Verkehrsabsetzb
at_it_disab_tfa	1	1	0	0	0	1	tax	n/a	0	0	AT: Disability tax free allowance ("Behinderte
at_it_donations_ded	1	1	0	0	0	1	tax	n/a	0	0	AT charitable donations deduction ("Abzug v
at_it_EarnCost_ded	1	1	0	0	0	1	tax	n/a	0	0	AT cost of earning income deduction ("Werb
at_it_exceptcost_ded	1	1	0	0	0	1	tax	n/a	0	0	AT exceptional costs deduction ("Aussergew
at_it_exp_ded	1	1	0	0	0	1	tax	n/a	0	0	AT limited expenditure deduction ("eingeschr
at_it_gen_tcred	1	1	0	0	0	1	tax	n/a	0	0	AT general tax credit ("Allgemeiner Absetzbe
at_it_lp_tcred	1	1	0	0	0	1	tax	n/a	0	0	AT lone parent tax credit ("Alleinerzieherabs
at_it_OthEarn_ded	1	1	0	0	0	1	tax	n/a	0	0	AT Deduction of part of "Sonstige Bezuege" (
at_it_OthEarn_tax	1	1	0	0	0	1	tax	n/a	0	0	AT (preferential) tax of that part of "Sonstig
at_it_pen_tcred	1	1	0	0	0	1	tax	n/a	0	0	AT pensioners' tax credit ("Pensionistenabse
at_it_red	1	1	0	0	0	1	tax	n/a	0	0	AT income tax reduction (ESTG Par.33 (7))

Source: EUROMOD Software

All these sources of information stored in the parameter files described above, taxes and benefits are calculated or simulated in the model. The calculations are carried out for each household in the dataset and the result is written out to a micro-output file. As mentioned before, the main output of the model, i.e. disposable income for each household in the dataset, is a combined outcome of the components taken from survey data and taxes and benefits simulated by the model. When Run command is executed, EUROMOD produces two default output text files: standard

output and extended output. Standard output aims to produce a homogeneous and basic outcomes across countries, containing variables like employment status of the person (coEMSPT), monthly original income (ORIGINALY), monthly disposable income (STD_DISPY), sum of all benefits included in STD_DISPY (OUT_BEN), sum of all taxes included in STD_DISPY (OUT_TAX), employer and employee social insurance contributions (OUT_EESIC and OUT_ERSIC) etc. Extended output, on the other hand, covers variables already in the standard output file plus some additional variables including all variables comprising disposable income as well as all variables produced by the model. These micro output files are then used to produce summary statistics whereby a range of commonly used indicators and statistics for different countries and for different scenarios. To name a few, headcount ratio, Gini coefficients and concentration coefficients for components of income, national distributions of household income and the tax-benefit components of these incomes and the percentage of taxes and benefits simulated by EUROMOD by decile group for each country can be presented. Figure 3.9 presents a compilation of examples of summary statistics from EUROMOD software.

Figure 3.9: Selected Summary Statistics for UK 2001 system

Table 1. Basic poverty and inequality indices

Poverty	Headcount	
Population	12.8%	
Children	15.9%	
Working Age (WA)	11.4%	
WA Econ. Act.	2.6%	
Elderly	13.3%	
Inequality and Redistribution	**Gini**	**Concentration index**
Disposable income	0.2924	0.2924
Original Income		0.5135
Earnings		0.5318
All Benefits (incl.Pub.Pen.)		-0.2189
All Taxes		0.4935
Social Ins. Contrib.		0.5501

Table 4. Share of Income and Income-Components received/paid by each Decile Group

Decile Group	Disposable Income	Original Income	of which Cur. Earned Inc.	All Benefits incl.Pub.Pen.	All Taxes	Social Ins. Contrib.
1	3.9%	1.0%	0.8%	12.1%	2.3%	0.4%
2	4.6%	1.1%	1.1%	14.2%	2.0%	0.6%
3	5.9%	2.7%	2.5%	13.8%	2.9%	1.8%
4	7.0%	3.6%	3.3%	15.5%	3.7%	3.0%
5	7.3%	5.6%	5.5%	11.3%	4.8%	5.3%
6	9.6%	9.2%	8.8%	10.0%	8.3%	8.9%
7	10.2%	9.9%	9.6%	10.2%	8.3%	9.8%
8	12.7%	14.6%	14.5%	7.0%	12.9%	15.2%
9	15.4%	20.1%	21.3%	2.9%	18.8%	22.8%
10	23.4%	32.3%	32.7%	3.0%	36.1%	32.1%
Poor*	5.3%	1.3%	1.1%	16.3%	2.9%	0.6%

Table 7. Percentile and poverty cut offs

Decile Group	Cut offs
1	425
2	498
3	578
4	672
5	767
6	915
7	1,042
8	1,247
9	1,563
Poverty line	460

Against this technical background, one can argue that the use of EUROMOD for policy reforms imply simply altering parameter files. Such reforms may include changes in the eligibility criteria, changes in the means-testing procedures for existing policies or even introduction of a new policy. In each case, EUROMOD provides sufficient flexibility and creativity to the user to assess the impacts of implementing a variety of policy reforms. This is primarily thanks to the modular structure of policy modelling in the framework where all policies are built upon smaller modules.

3.2 National Model: TR-MOD

Tax-benefit models basically serve to calculate the effects of specific policies on the overall budget, income distribution-poverty rates and work incentives simultaneously while potential impact of a new policy proposal can be demonstrated in advance and compared with some other proposals. The main ingredients of the models, as also identified by Bourguignon and Spadaro (2006:79), could be summarized as:

> *(a) information on the distribution of income and other characteristics in the household proportion, drawn from household surveys, income tax records and other sources;*
> *(b) information on the rules governing tax and benefit systems, accompanied by information from administrative and other sources about the differences between the theory and practice of the rules;*
> *(c) estimates of the behavioural responses to changes in tax and benefit parameters... (Atkinson and Bourguignon, 1991, 216)*

To predict the consequences of changes in policy parameters, these models apply to each household in the sample the official calculation rules for the various tax and benefits that household can be entitled to and show the resulting changes of these rules by deriving the after-policy change net incomes and their distribution as well as gains-losses of households and change in total receipts of taxes. Here, it should be noted that there may be discrepancies between the legislation and practical implementation of policies. This is especially relevant when, for instance, tax evasion and avoidance is prevalent, or benefit programs have geographical limitations and/or certain level of discretion is evident for benefit entitlements. Considering that not all of these are captured through household survey data, the models could make use of other outside information. This process, to be referred to as *validation* henceforth, aims to ensure the consistency of the results obtained from the model; in case of

considerable discrepancies, certain explanation should thus be provided as well. Typically, validation is carried out via reconciliation with national accounts (see for instance EUROMOD Country Reports[15]).

The models are classified according to inclusion of the time dimension as static or dynamic. Considering different uses of both type of models, Mitton et. al. (2000) claim that the choice of model depends on the policy questions to be addressed. Moreover, Bourguignon and Spadero (2006) propose that behavioural changes could be assumed insignificant for static models that are, in most cases, sufficient for evaluation of individual and social welfare changes in response to policy changes. The focus of this chapter, as mentioned before, will be on the creation of a static model. This is simply because the impact of any change in policy may be in fact either slowly reflected or the new policy may alter the inherent dynamics of the economy which is not straightforward to be estimated and incorporated. Also it is well-known that the results from a dynamic model are sensitive to the robustness of the model of behavioural response used (Wilkinson, 2009). Thus, the ultimate aim to introduce a preliminary static tax-benefit model for Turkey using both 2004 - Household Budget Survey data and 2004 tax and benefit systems, the building of which is intended to be compatible with EUROMOD framework described in the preceding section so as to provide background for comparative analysis. It is almost impossible to develop reliable behavioural response models with cross-sectional datasets, and in Turkey, no official longitudinal survey has been made available yet[16] from which one could

[15] Available from website: http://www.iser.essex.ac.uk/research/euromod/documentation/country-reports

[16] State Institute of Statistics in Turkey (TURKSTAT) have been conducting the national Survey on Income and Living Conditions which is a panel – longitudinal - survey since 2004 but the dataset have not been made public during the period this dissertation is written. With the release of the data, the model could be reconstructed for purposes of different analyses.

develop reliable models of behavioural response and provide estimates for labour supply decisions, family compositions or household saving/investment decisions. Aside from these considerations, the functionality of the model is mainly needed to serve for testing different policy scenarios in light of the recent welfare reform debates going on in the southern Europe in general and in Turkey in particular. Thus the model could be referred to as being purely arithmetical in Atkinson and Sutherland's (1988:48) terms in the sense that it does not attempt to predict behavioural changes but rather calculates disposable incomes via taxes and benefits, which in part are simulated under certain assumptions.

As Turkey lacks an official tax-benefit model, the model building process is mainly inspired by the construction process of EUROMOD. During the 3-months-research fellowship in 2007 awarded by European Centre for Analysis of Social Sciences in Institute for Social and Economic Research at University of Essex, the national model is compiled by drafting the necessary documentation and relevant recoding of the data accordingly, as will be described in detail. Following Atkinson and Bourguignon's (1991) emphasis on the limited use of unmodified application tax-benefit models of developed countries to developing countries through illustrative examples of UK and Brazil, the construction of the national model for Turkey (to be referred TR-MOD henceforth) via adaptation of EUROMOD framework necessitated a refined technique and sometimes oversimplifying assumptions as regards the limitations of the information provided by the survey data in certain areas.

This section is organized following the outline of the country reports of EUROMOD. First, the tax-benefit system of 2004 is explained. The tax and benefit policy components are described in detail with respect to the eligibility, means-testing

(if exists) and calculation. The third sub-section deals with the data issues including both descriptive statistics and adjustments applied such as net-to-gross conversions, splitting up of benefits in the dataset. Finally, validation with respect to the policy instruments and poverty indicators are presented.

3.2.1 The Tax-Benefit System in 2004

3.2.1.1 Social Benefits

Social benefits mainly refer to the

> *"current transfers received by households intended to provide for the needs that arise from certain events or circumstances, for example, sickness, unemployment, retirement, housing, education or family circumstances" (definition from United Nations System of National Accounts 1993 Glossary, paragraph 8.7.*[17]*).*
>
> *"transfers to households in cash or in-kind to address certain risks and needs, such as disability, sickness/health care, old age, survivors, family/children, unemployment, housing and social exclusion" (definition from European System of Integrated Social Protection Statistics (ESSPROS), EUROSTAT, 2008,7).*

As explicitly stated, UN/OECD and ESSPROS definitions cover both cash and non-cash transfers and benefits. Following these, in construction of the model, policy spine and consequent calculation of the disposable income in TR-MOD cash and non-cash benefits are taken into account. As will be explained in detail in the section 3.2.2, some are directly read-off from the data set while others are simulated.

Social benefits are by and large comprised of contributory and non-contributory benefits. Contributory benefits are mainly related with

[17] Available also online from: http://data.un.org/Glossary.aspx. Also in use by OECD Glossary of Statistic Terms: http://stats.oecd.org/glossary/detail.asp?ID=2480

employment and the financing of the benefit is carried out through employer and employee contributions while the eligibility or access to the benefit is generally conditional on claimants' contribution history and existence of a specified contingency, i.e. retirement, unemployment, or being survivors and benefit levels are indexed to the previous earnings. In Turkey, following a Bismarckian type social insurance system, the provision of contributory schemes, except for unemployment insurance, are enhanced through three separate social insurance institutions, Social Security Institution (SSK), Bag-Kur (BK) and Emekli Sandigi (ES) catering for private sector employees, self-employed and government employees, respectively. Non-contributory benefits, on the other hand, are funded (directly or indirectly) out of general taxation; all are means-tested and can be classified under categorical and general schemes. Though not conditional upon contributory history, both types of schemes are run through means-testing for claimants' income and wealth while categorical benefits cater for specific groups on the basis of a specified contingency, in this case elderly, disabled or children. It should be noted that all contributory benefits are non-means tested while all non-contributory ones are means-tested. Therefore for the 2004 system, Turkey lacks any universal social benefit scheme to be implemented regardless of the level of the income. Table 3.2 below illustrates the expenditure share of total contributory and non-contributory benefits in total social expenditures and in GDP as of year 2004[18].

[18] The social expenditure calculation presented here is based on ESSPROS methodology, see EUROSTAT

Table 3.2: Social Benefit Expenditures (2004)

	Share in Social Expenditures* (%)	Share in GDP (%)
Contributory	96,2	12,2
Non-contributory	3,8	0,5

Source: Own calculations using data collected from social insurance institutions and benefit agencies.

*Social expenditures here refer to total social protection expenditures excluding administrative expenses of the institutions covered. Thus, the figures presented here slightly differ from the tables in Bugra and Adar (2007).

Based on the same data sources of Table 3.2, Table 3.3 presents the categorical composition of the social benefits both as a percentage of total social protection expenditures and as a percentage of GDP in Turkey – illustrating the pension bias of the social protection of the welfare regime.

Table 3.3: Categorical Composition of Social Benefits (2004)

	Share in Social Expenditures	**Share in GDP**
Retirement Benefits – Pensions	54,75	6,95
Survivors/Invalidity Benefits	0,59	0,07
Unemployment Benefits	0,36	0,05
Health Benefits	40,41	5,13
Elderly Pension (Law No.2022)	1,44	0,18
Child Benefits (SHCEK)	0,49	0,06
Social Assistance Benefits	1,89	0,24
All Social Benefits	**100**	**12,7**

Source: Same as Table 3.2.

(2008).

Retirement Benefits – Pensions

Retirement benefits or pensions constitute the backbone of the social protection system in Turkey, accounting for 6,7 percent of GDP and 54,8 percent of total social protection expenditures, as seen from Table 3.3 above. For the year 2004, pensions are provided mainly by three social insurance agencies, operating on earnings related pay-as-you-go schemes. The agencies (and schemes) cater for private sector employees and blue-collar public employees, civil servants and self-employed respectively, where the schemes were extended in the 1980s to cover for the agricultural workers (see Box 1). The breakdown of pension beneficiaries is presented in Table 3.4 below.

Box 1. Agricultural Employment at a Glance

The expansion of the coverage for the agricultural workers and self-employed should be considered in light of the relatively considerable role of agriculture in employment as well as policies of agricultural subsidies and support, mainly referring to state purchases through producers' cooperatives. Despite declining trend over the last two decades, data from Census of Agriculture reveal that economically active population in agriculture constituted 60 per cent of total population in 1980 and 48,4 per cent in 2000 (TURKSTAT 2007: 185).

For the year 2004, according to Labour Force Statistics, 33,7 percent of total employment is in agriculture (own calculations from TURKSTAT 2007: 165) where almost half of those (50,8 per cent) are unpaid family workers, 41,1 per cent are own account workers and only 6,7 per cent are casual/regular employees. Social security coverage in the sector is quite low, comprising only 10 per cent of those employed. 98,4 per cent of unpaid family workers, 80,3 per cent of own-account workers and 88,6 per cent of causal and regular employees are uncovered, respectively (own calculations using Labour Force Statistics Database of TURKSTAT).

Table 3.4: Pensioners: Breakdown by Scheme (2004)

Scheme	Number of Pensioners	Share of Pension payments in GDP (%)
ES	1.006.595	2,19
SSK	2.838.422	3,44
BK	899.832	1,39

Source: TUIK (2007:149)
*calculated by dividing the total annual pension payments to the number of beneficiaries, and then monthly amount is defined as one-twelfth of this annual per beneficiary payment.

All pension expenditures presented here are contributory schemes. The elderly pension, which will be discussed in detail, is the only non-contributory scheme, run by the ES. For the sake of coherence in the description of the system, the number of beneficiaries as well as total amount of expenditures is not included under ES in this section.

As of 2004, the pension system is far from offering a coherent and equitable pension benefits. Despite a set of reforms enacted in 2000 as the initial step towards harmonizing the system (Yakut-Cakar, 2005), the differences between the schemes are reflected not only in the average levels presented in Table 3.4 but in the flat and ceiling levels of pension benefits listed in Table 3.5.

Table 3.5: Monthly Pension Payments (TL) - (2004)

Scheme	Lowest	Highest	Average
ES	512,9	2.806,1*	653,0
SSK	400,8	989,1	451,2
BK	299,7	961,7	415,4**

Source: SGK (2008)

* ES pensioners also include the highest level of public officials (MPs, prime minister and such) whose pension benefit would constitute the ceiling. The highest amount cited here refers to the pension payment for the undersecretary to the Prime Minister.

** Calculated by dividing the total annual pension payments to the number of beneficiaries, and then monthly amount is defined as one-twelfth of this annual per beneficiary payment.

Sickness/Survivors Benefits

The benefits provided as of 2004 can be classified in two groups: Survivors benefits for the dependants of the deceased and incapacity related benefits that cover occupational injury and disease as well as sickness benefits. Here it should be noted that not all benefits are provided by all three social insurance institutions, where SSK seems to be the most comprehensive scheme with all below provided and BK does not have any maternity and occupational health and work injury related benefit schemes with relatively limited coverage for disability and survivors pensions

As being both contribution based, the former takes the form of pension benefit if the deceased was a pensioner or have met the eligibility criteria (i.e. 5 years of insurance, 1800 days with premiums paid or annual average of 180 days with premiums paid), to be paid to

the spouse and children under the age of 18[19] (and in some cases to the dependant parents, unmarried, divorced or widowed daughter). The amount of the benefit is calculated on the basis of the average monthly earnings as constituting 60 percent plus 2 percent for each 360-day period of contribution between 8100 and 9000 days, plus 1,5 percent for the same period beyond 9000 days.

Incapacity related benefits, on the other hand, comprise of disability pensions related to the loss of working capacity and sickness/maternity benefits paid in cash. Eligibility conditions for the disability pensions are same with the survivors' pension with the medical proof of loss of working capacity. In case of work injury, depending on the severity of the accident/illness, benefits are paid either temporarily as comprising two-thirds of the daily earnings or permanently as a minimum of 75 percent of monthly earnings if the disability ratio is above 25 percent. For those having assessed between 10 percent and 25 percent degree of disability, the benefit is paid as a lump-sum amount. Sickness and maternity benefits in cash necessitate 120 days of contribution history where the benefit levels are based on the level of earnings with the exception of lump-sum payments for pregnancy, childbirth and nursing.

Both groups of benefit amounts are indexed periodically to the monthly consumer price index. Table 3.5 below illustrates the number of beneficiaries and total amounts of benefit payments for the schemes.

[19] The age limits are 20 if children are in pre-university education and 25 if in university.

Table 3.6: Survivors/Sickness Benefits: Breakdown by Scheme (2004)

Scheme	Number of Beneficiaries	Share of benefit payments in GDP (%)
ES/Survivors	496.082	0,47
ES/Incapacity	31.899	0,05
SSK/Survivors	1.154.975	0,07
SSK/Incapacity	127.469	0,06
BK/Survivors	602.843	0,33
BK/Incapacity	16.515	0,02

Source: own calculations using TUIK (2007: 149-153)

Unemployment Benefits

Unemployment benefits in Turkey were introduced in 1999, as a part of the pension reform package but payments have been put into force in 2002 primarily because of the need to accumulate the contributions as a Fund out of which payments would be made. The number of beneficiaries and the total amount of benefits paid as of year 2004 as presented in Table 3.6 and the low share of unemployment benefit expenditures in total social protection expenditures as in Table 3.3 above reveal the marginal role of the scheme.

Table 3.7: Unemployment Benefits (2004)

Year	Number of Beneficiaries*	Total Unemployment Benefit Expenditures (billion TL)	Share of Benefit Expenditures in GDP (%)	Total Number of Unemployed
2002	41.953	46.986.537	0,02	2.464.000
2003	52.965	128.472.719	0,04	2.493.000
2004	73.752	197.523.990	0,05	2.499.000

Sources: Employment Organization (ISKUR) for benefits, TUIK HLFS Database

*as of end of the year stated.

The contributions, constituting a total of 4 percent of gross wage where 1 percent, 1 percent and 2 percent are paid by state, employee and employer respectively, are mandatory for all employees excluding civil servants. The so called low coverage of the benefit scheme is primarily due to the strict eligibility criteria which necessitates minimum of 120 days with premiums paid in the last three years (Article 50, Law No. 4447). The duration of the benefit is conditional on the contribution history but restricted to a maximum of 10 months and the amount of the benefit, also restricted to official minimum wage as the upper threshold, is calculated on the basis of recent daily earnings.

Elderly Pensions (Law No.2022)

The scheme, introduced in 1976 with Law No. 2022, involves cash benefits to the elderly over the age of 65 and disabled who lack social security coverage and is funded directly from the public budget. This non-contributory categorical benefit scheme involves means-testing for the elderly and medical proof for the disabled demonstrating the degree of disability to be clustered as those having 40 – 69 per cent ability loss and above 70 per cent. The benefit amount is indexed to public employees' wages provided in the supplementary annexes of the annual budget laws. Also, an elderly couple where both partners are eligible are prone to a certain equivalence scale and receive less.

Table 3.8: Elderly Pensions (2004)

	Number of Beneficiaries	Monthly benefit (TL)
Elderly (65+)	792.046	57,92*
Disabled (40-69%)	220.600	115,83
Disabled (70%+)	79.811	173,75

Source: SGK (2009)
*as mentioned above the corresponding total amount for an elderly couple is 86,87TL.

Child Benefits

Child benefits mainly refer to the benefit scheme under Social Services and Child Protection Agency (SHCEK) targeting children in need of state protection or those at risk. The scheme is designed to provide cash or in-kind support to parents or relatives of children in need of protection, so as to enable them to care for these children at home – rather than prioritizing institutional care. The entitlement to benefits is determined by the means-testing procedure carried out at the local level with the involvement of social workers. The amount of benefit is per child is set at 73,36 TL for 2004, renewable each year via repeated means-testing (up to a total period of 3,5 years – 6 months/1 year/2 years) and indexed to 20 per cent of highest public official's wage. The number of beneficiaries of the scheme and the extremely low level of benefit expenditures in 2004 coupled with the approximately 25 percent child poverty rate in Turkey (OECD, 2008) reveal that this SHCEK scheme is painfully inadequate.

Social Assistance

Social assistance system in Turkey could be regarded as a network of unintegrated schemes (Yakut-Cakar and Yilmaz, 2009) with lack of a national safety net. Nevertheless, the non-contributory and means-tested benefit schemes under the auspices of General Directorate for Social Assistance and Solidarity (SYDGM) should be mentioned. Indeed, SYDGM is the state institution solely established to coordinate and implement nationwide assistance schemes which is organized as a DG in the capital connected to a network of 973 state foundations organized all over the country. The unique institutional structure of SYDGM shape the way the schemes are implemented: the semi-autonomous local foundations, institutionalization of which could be dated back to 1986, mainly constitute the basis of the patchy schemes revealing a good deal of local discretion and, also in most cases, irregularity.

The main financial resource of the SYDGM is an off-budgetary fund, namely Social Assistance and Solidarity Fund (SYDTF), mainly composed of a predefined share of both income and corporate tax revenues and half of total motoring fines. As TR-MOD is based on the 2004 system, it should here be noted that institutionalization via DG has only been realized in 2005 (just after the legislation Law. No. 5263 passed on 01.12.2005), conditional cash transfer payments in 2004 are financed by World Bank loan agreement and all data presented about

social assistance activities of SYDGM mainly refer to the implementation by the local foundations.

Table 3.9: Social Assistance Expenditures by category, SYDTF (2004)

	Share in SYDTF Assistance Expenditures (%)
Periodical Transfers to Local Foundations	11,8
Education Assistance (transfers included)	37,3
Health Assistance (transfers included)	30,6
In-kind Food Assistance	4,1
Other Assistance (housing etc.)	0,6
Education Assistance (transfers excluded)	3,8
Health Assistance (transfers excluded)	19,1

Source: own calculations using SYDGM (2007: 95).

Table 3.8 illustrates the categorical breakdown of the social assistance expenditures of the Fund in 2004. Periodical transfers imply the total amount transferred to the local foundations out the Fund to cater for both cash and in-kind ad-hoc transfers to the poor. The amount is spent upon the decision of the local board of trustees on the basis of the applications by those in need and consequent means-testing reported. Thus, due to the high level of discretion involved here, it is almost impossible to outline the type (cash or in-kind), amount and duration of the benefit as well as eligibility criteria applied. The sole common criteria for accepting the application is the lack of social security coverage while means-testing and decision upon this becomes highly discretionary across the local foundations. Both education and

health assistance activities involve transfers to the Ministry of National Education and Ministry of Health respectively for funding of specific programs, like free school books, out-patient expenses of Green Card[20] holders etc. Therefore, the latter part of the Table 3.9, illustrates the breakdown excluding these transfers. This implies, for instance, scholarships provided directly to university students, stationary provided to primary school children etc.

3.1.2.2 Agricultural Support - Direct Income Transfer Scheme (DIS)

The direct income transfer policy has been initiated in 1999 as a part of the Agricultural Reform Implementation Program of World Bank. The Program mainly aimed at transformation of the agriculture sector while at the same time introducing a unified, simple national program of direct income support for all farmers in an incentive-neutral manner (World Bank, 2001). The payments, effectively started in 2001, were made universally to the farmers[21] on the basis of National Registry of Farmers through a uniform per hectare payment. This non-contributory scheme has initially been funded out of World Bank loan, especially in the preparatory phase of developing a national registry and making of 2001 year payments. Nevertheless, soon after, it started to be paid out of general budget, substituting for the removal of input subsidies and price support mechanisms (Lundell et. al. 2004). The scheme grants an annual

[20] Health care service provision in Turkey has been a part of the contributory social insurance system. Green Card is the means-tested social assistance mechanism that provides free health care services for those outside the formal social security coverage since 1992. As the model developed here is merely involved in general and categorical assistance schemes, Green Card scheme is not included as it provides access to health care (referred to as tied assistance in Eardley et.al. (1996) and Gough (1996)). The financing of the Green Card scheme has been through general budget but cofinancing has been maintained by SYDTF for the out-patient expenses of the Green Card holders including prescribed medicine up to the end of 2006.

[21] Here, the term farmer does not refer to the person cultivating the land, but rather refers to the land owner or the tenant.

lump-sum payment made in two instalments, i.e. 160 million TL per hectare (up to 50 hectares), to the farmer registered for the ownership or the tenancy of the land in question. As of 2004, a total of approximately 2.5 billion TL has been paid to 2.75 million farmers formally in National Registry (General Directorate of Public Accounts, 2005; Undersecretariat of Treasury, 2007).

3.1.2.3 Taxes and Contributions

The revenue side of the tax-benefit system is comprised of direct and indirect taxes as well as social insurance contributions. OECD (2004) reports that Turkey has one of the lowest shares for direct and one of the highest share for indirect tax revenues in GDP among OECD countries. Social contributions are defined as the costs incurred by employers on behalf of their employees or by protected persons to secure entitlement to social benefits (EUROSTAT, 2007: 8). Envisaging a broad definition of government revenues, OECD Tax Revenue classification attributes social security funds as a separate sub-sector of general government that includes:

> *special kinds of institutional units which may be found at any level of government – central, state or local..... Social security schemes are social insurance schemes covering the community as whole or large sections of the community that are imposed and controlled by government units. They generally involve compulsory contributions by employees or employers or both, and the terms on which benefits are paid to recipients are determined by government units.... The social security funds sub-sector (of general government) consists of the social security funds operating at all levels of government. Such funds are social insurance schemes covering the community as a whole or large sections of the community that are imposed and controlled by government units (OECD System of National Accounts, 1993: Sections 4.111 and 4.130)*

In Turkey, while the direct and indirect taxes are collected and can be easily traced through general/consolidated budget, social insurance contribution revenues are a bit complicated. That is to say, social insurance contributions for public sector employees are paid out of general budget and recorded as an expenditure item. SSK and BK, on the other hand, accumulate contributions from employers and employees, to be traced in their income statements as revenues. All three social insurance institutions also receive transfers from general budget to cover their deficits resulting from mismatch between their revenues and expenses[22]. Nevertheless, Table 3.10 presents an overview of the taxes and social contributions in Turkey as of 2004.

Table 3.10: Taxes and social contributions: a brief overview (2004)

	Amount (Thousands TL)	Share in Total (%)	Share in GDP (%)
Direct Taxes	26.558.833	24,3	6,5
Indirect Taxes	55.382.729	50,6	13,7
Social Contributions	27.423.675	25,1	6,8

Sources: Own calculations from Ministry of Finance and SGK (2008)

Direct taxes

As a source of public finance, direct taxation in Turkey is not so much significant, constituting 31 percent of total tax revenues, 5 percent of GDP. Table 3.11 below reports the breakdown of government tax

[22] The transfers were prioritized especially in the pension reform debates in late 1990s and subsequent reform packages introduced in 2000s, mainly guided by World Bank (backed by IMF) emphasizing the fiscal imbalances of the schemes (Yakut-Cakar, 2005).

revenues from direct taxes where personal income tax dominates the revenues retrieved from direct taxation.

Table 3.11: Receipts from Direct Taxation (2004)

	Share in Tax Revenues	Share in GDP
Personal Income Tax	19,8	4,2
Corporate Income Tax	9,7	2,0
Property Tax	1,6	0,3

Source: own calculations from Ministry of Finance.

As will be elaborated in detail in the next section, the bulk of personal income taxes come from withholding tax, majority of which is levied on those earning wage and salary income.

Indirect taxes

Indirect taxation in Turkey comprise a significant source of public finance as almost 69 percent of total tax revenues and 11 percent of GDP in 2004, and quite contrary to the trends in OECD and EU-15, its share among the total tax revenues have accelerated from approx. 35 percent in 1990 to 68 percent in 2003 (OECD, 2006). The receipts from different types of indirect taxes are presented in Table 3.12 below where special consumption tax dominates. This includes special consumption tax levied on oil and petroleum products, alcohol and tobacco, durable goods as well as communication tax levied on the use

of mobile phones. Zenginobuz et.al. (2006) report that these rates, as being the highest when compared to OECD and EU, have not only unequal incidence among different deciles of the population but also detrimental indirect effects on the overall economy through increasing the cost of inputs.

Table 3.12: Receipts from Indirect Taxation (2004)

	Share in Tax Revenues	**Share in GDP**
Value Added Tax	13,0	2,7
Excise Duties	18,8	4,0
Special Consumption Tax	28,9	6,1
All other indirect taxes	4,1	0,9

Source: own calculations from Ministry of Finance.

Social contributions

Given the weight of social insurance in the configuration of the welfare regime in Turkey, which is basically shaped in occupational lines, social contributions account for a considerable proportion of government revenue when defined broadly in OECD / EUROSTAT terms discussed above. Table 3.13a below reports the aggregate breakdown of the social contributions in 2004. The breakdown is merely institutional as it is not available according to the employers and employees contributions. Table 3.13b, on the other hand, provides information on social insurance affiliation of the contributors, including voluntarily insured as well.

Table 3.13a: Receipts from social contributions (2004)

	Amount (Thousand TL)	Share in GDP
ES	6.440.000	4,0
SSK	16.967.483	0,9
BK	4.016.675	1,5

Source: Own calculations using SGK (2008)

Table 3.13b – Social Insurance Affiliation of contributors – 2004

	Number of Active Contributors
ES	2.404.091
SSK	6.952.848
BK – Non-Agriculture	2.438.614
BK – Agriculture	1.009.935
Civilian Population (15+)	49.906.000

Source: Own calculations using SGK (2008)

The data reveal considerable amount of labour market informality aggravated by the employer and employee social contribution rates which add up to more than 30 percent of the gross wage. The employee SIC, as 15 percent, is composed of 9 percent for pensions, 5 percent for sickness and 1 percent for unemployment benefits. Employer SIC at 21.5 percent, on the other hand, includes pensions (11 percent), sickness (6 percent) and unemployment (2 percent) as well as work-injury (1.5 percent) and maternity (1 percent) (OECD, 2004).

Apparently social insurance is compulsory for government and private sector employees as covered by ES and SSK, respectively. The contributions by the self-employed and employers, on the other hand,

are stated as compulsory in as much they are first and foremost working on own account and outside coverage of other social insurance schemes or for the case of agriculture, those (over the age of 22) working on agricultural land independently as the owner or the tenant of the land (as introduced by Law No. 2926 in 1983). The complexity of the system stems from the fact that BK has voluntary schemes both for agriculture and for non-agriculture (primarily targeting housewives and people outside the compulsory coverage of any of the three schemes). Also, the insurance contributions for BK could be made within a range of 24 "insurance classes (*basamak*)" bounded by certain levels of monthly incomes declared between 295,67 TL and 1363,55 TL in 2004 for compulsory scheme of self-employed and "indicative thresholds (*gosterge*)" for the agriculture scheme. The wage earners in the agriculture, on the other hand, are covered by a voluntary contributory scheme under SSK where the contribution is calculated for 15 working days each month on the basis of monthly minimum wage at a flat rate of 30 per cent (Law No. 2925). Notwithstanding the complexity surrounding the separate schemes with different indexation, eligibility and entitlement rules as well as differential replacement rates, the coverage still remains low both in the agriculture and in the overall economy where almost 50 per cent of employment is not covered at all (TUIK, 2008).

3.2.2 Benefits and Taxes/Contributions in TR-MOD

3.2.2.1 Assumptions of TR-MOD

The construction of TR-MOD based on the 2004 tax and benefit systems using 2004 Household Budget Survey Data Set necessitated a set of assumptions and pre-calculations to be carried out before running the model itself. The adjustments to the data are described in detail in Section 3.2.2.3. Nevertheless, the underlying assumptions are as follows:

- All income is declared to the authorities and only the monthly and annual income variables in cash provided in the data set are taken as the net total income.

- Income is assumed to be received at the same rate throughout the year. That is, when the annual income data is used for monthly calculations, it is simply divided by 12.

- The monthly and annual income variables in kind provided in the data set mainly refer to the monetary valuation of the respondent for the services provided by the employer (like transportation, lunch, nursery etc.), if wage earner; self-consumption of the products of his enterprise, if self-employed or working on own account. These are treated as a kind of benefit, which is non-taxed, both in the calculation of disposable incomes and policy spine itself. Also, the data is directly read-off from the data set.

- For wage earners, the annual amount of bonus payments, though not evenly distributed within the course of the year, are recorded as separately in the

dataset. In calculation of the disposable income, these are also treated as non-taxed benefits and read-off directly.

- The income from agriculture is assumed to be non-taxed (discussed in detail in section 3.2.3.3).

- The income from additional jobs held by the individual is assumed to be non-taxed. In calculation of disposable income, it is treated as a benefit read-off directly from the dataset.

- All sources of cash income, other than wage/salary and self employment income are aggregated in two groups – property income and investment income. They are not included in the net-to-gross conversions of income as the calculations were mainly targeting income from employment; following the policy spine, they are regarded as one component of the tax base for calculation of personal income tax.

- As all social benefits simulated in the model are means-tested, benefit entitlement is calculated on the basis of net monthly cash income. This is complemented by the social security registration data and real-estate/farm ownership information provided in the HBS dataset.

- Benefits, which are directly read-off from the data set such as pension, unemployment insurance, are also assumed to be non-taxed thus not included in the taxable income/income tax base.

- As the information on the receipt of social benefits in the data set is a combination of a group of schemes including elderly pensions, agricultural

DIS, social assistance by SYDTF, benefits are split up as described in section on data adjustment.

- For DIS scheme, it is assumed that all land owners have registered to the National Registry and all those eligible indeed were entitled to the benefit payment, i.e. 100 per cent take-up.

- TR-MOD, in its present form, assumes 100 per cent take-up for the simulated benefit schemes where all eligible individuals receive the benefit

- As social insurance contributions are determined with respect to not only affiliation, but also being the primary contributors *(hak sahibi*) for the case of wage earners and self-employed. Thus, though declared as affiliated, the contributions are not calculated for dependants of these primary contributors.

- Though the survey collects data on consumption, TR-MOD uses only individual and household data sets while consumption data set is not utilized. This implies that not all components of government budget (taxes as revenues and social benefits as expenditures) are covered. As indirect taxes are excluded, it cannot be used in its present form for analysing effects in policy changes regarding, for instance, VAT reductions or else related with the data provided through consumption.

- Disregarding intra-household distribution of wealth where no proper inference is provided with the survey information, any data on property ownership from household data set is taken to belong to the individual who reports him/herself as the head of the household. Related to this, any

benefit entitlement calculations for this individual in TR-MOD takes into account these assets, if any.

- Household dataset of HBS includes variable *FAKTOR* that assigns particular weight/multiplication factors to each household for the calculations from sample to population. As calculations in TR-MOD are carried out through individual dataset, these household *factors* are simply imputed to each member of the household.

- As will be explained in detail in section 3.2.3., HBS uses moving reference period method where incomes recorded for each household/individual are transmitted to their end-of-year values via *INDEKS* variable provided in the household dataset. This indexing variable, imputed to each member of the household, is used in TR-MOD not for separate components of the HDI but for HDI itself calculated within the model.

Throughout this chapter, the variable names taken from the original data set are denoted by upper case letters whereas transformed/newly created variables based on those are in lower case. Moreover, any underscore used in these lower case variables indicate that the variable is calculated by the model, while missing underscore implies that the data is directly read-off. For the sake of coherence with EUROMOD, TR-MOD uses similar abbreviations even for the variables which are not transformed. For instance, income from employment is treated as a common variable in EUROMOD and denoted by *coEMPY* in EUROMOD. Similarly, TR-MOD reads the *UCRN_AY* variable from the original data set as the wage income earned but renames it into a new variable *empY*. Variable description sheet (similar to VARDESC file of

EUROMOD) contains all variables used in TR-MOD described in detail in terms of the level (individual or household), being read-off or model generated, type (tax, benefit or social insurance contribution) and explanation.

3.3.2.2 Social Benefits

The main motive behind construction of TR-MOD is to enhance comparative analysis with the southern European countries included in the integrated cross-country model of EUROMOD. In this regard, since the priority is attached to construct a coherent model that would run in parallel to EUROMOD, the choice of simulations for the taxes and benefits in EUROMOD are also taken into consideration. Table 3.14 below summarizes how TR-MOD treats social benefits described in the first section of this chapter in light of the assumptions.

Table 3.14 – Treatment of cash-benefits in TR-MOD (2004 system)

Benefit	***Type***	***Treatment***	***Variable Name***
Retirement Benefits	Contributory	Read-off	retpenB
Sickness/Survivors Benefits	Contributory	Read-off	surpenB
Unemployment Benefits	Contributory	Read-off	unempB
Elderly Pensions	Non-contributory	Simulated	sben_socpen
Child Benefits	Non-contributory	Read-off	childB
Social Assistance by SYDTF	Non-contributory	Read-off	socassB
Agricultural Support - DIS	Non-contributory	Simulated	sben_DIS

As TR-MOD is a static model and HBS does not contain any information on the individuals' contribution history, it is not possible to simulate cash benefits that depend on a contributory record for eligibility, such

as pension payments or unemployment benefits. As mentioned above, benefits and other income components in-kind are not classified under benefit schemes in the TR-MOD because of the lack of clarity regarding the eligibility and entitlement rules surrounding these. They are directly read-off from the data set in calculation of personal disposable income, thus not included in Table 3.13.

On the other hand, despite the certain level of discretion involved in the benefit entitlement process, it has been possible to simulate few of the non-contributory means-tested benefits, namely elderly pensions and DIS, on the basis of available data from the HBS 2004 under certain set of assumptions, some of which are listed.

Elderly Pension

This is a non-contributory benefit, awarded to the elderly over the age of 65 who lack formal social security coverage and do not receive any income support from their children if not cohabiting. In case of cohabitation with the "adult" children, the monthly income per capita should be less than the threshold (set as the monthly benefit amount – approx. 58 TL for 2004).

As Figure 3.10 depicts the simulation procedure for the benefit, the module is composed of two interrelated processes – eligibility and benefit calculation. The module first selects the individuals older than 65 years of age. Then, those either not covered or covered by Green Card are selected through the HBS variable *SAGLIKS* being equal to 4

or 5, respectively. Simultaneously, the qualifying individuals are checked for any other pension kind of income; those with retirement benefits from any of the social security institutions are dropped using the *EMEKLI_YL* variable of HBS denoting retirement benefits, if any. The possibility of being dependant is checked: if there is any person (i.e. adult children of the elderly) in the household formally covered by a scheme, this disqualifies the elderly from benefiting this scheme as he/she could be covered as dependant. Using the common variable of *BULTEN* as the identifier of the household, the elderly with any other member of the household with compulsory or voluntary formal health insurance (i.e. *SAGLIKS* being equal to 1, 2 or 3) are dropped. Apparently, ownership of any property disqualifies the elderly in case of positive property earnings; therefore those without any cash income from property are selected on the basis of the HBS variable *GMKN_YL*. Simultaneously, the receipt of any formal survivors' and widows' benefits as another source of cash income is checked through the HBS variables *GAZI_YL* and *DUL_YL* respectively. These simultaneous qualification checks reveal that eligibility and means-testing procedures go hand in hand in the simulation of elderly pensions where eligibility conditions themselves necessitate certain level of asset/wealth/means-tests regarding the individual. The income test is applied on the monthly value of total cash income of the individual (calculated by dividing *TOPGN_YL* recorded in HBS dataset by 12) where benefit is granted if the monthly total amount do not exceed the threshold set as the amount of monthly benefit. Before assigning the amount of benefit

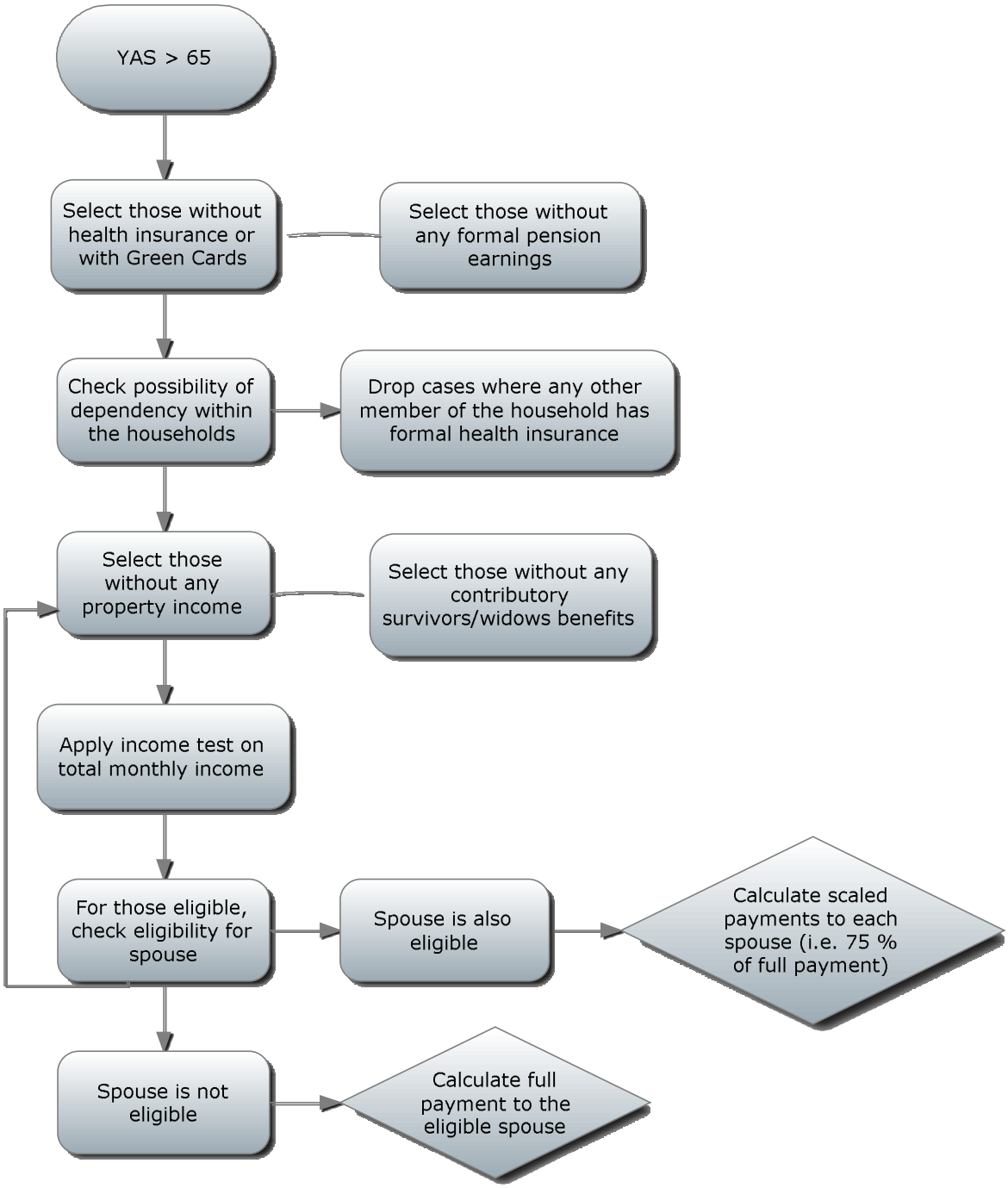
to the eligible individual, the module checks whether spouse is also eligible or not. The spouse is determined by first cross-checking the gender variable for individuals in the same household, then eliminating those younger than 65 years of age where same income test procedure is applied to the spouse. If spouse turns out to be fulfil eligibility conditions, then the couple receives a 75 percent discounted benefit paid to both of them separately. Otherwise, the eligible individual receives the full payment of the monthly benefit as 57,92 TL. HBS variables utilized in this module are summarized in Table 3.15 below.

Apparently, TR-MOD operates slightly different from the actual implementation of the benefit scheme in relation to the frequency of the payments. Elderly pension benefit payments are made in quarterly instalments throughout the year while TR-MOD operates on a monthly basis.

Table 3.15: HBS Variables used in Elderly Pension Module

Name in HBS	Short Explanation	Source	Frequency	Treatment	Used For
YAS	Age of the individual	Individual		Read-off	Eligibility
SAGLIKS	Health insurance	Individual		Read-off	Eligibility
EMEKLI_YL	Retirement income	Individual	Annual	Read-off	Eligibility
BULTEN	ID for household	Common		Read-off	Eligibility + Benefit Calculation
GMKN_YL	Income from property	Individual	Annual	Read-off	Eligibility
GAZI_YL	Survivors' Benefits	Individual	Annual	Read-off	Eligibility
DUL_YL	Survivors' Benefits	Individual	Annual	Read-off	Eligibility
TOPGN_YL	Total Cash Income	Individual	Annual	Read-off	Eligibility
CINSIYET	Gender	Individual		Read-off	Eligibility + Benefit Calculation
sben_socpen	Elderly Pension Benefit	Individual	Monthly	Simulated	- -

Figure 3.10: Elderly Pension Module



Direct Income Support (DIS) Scheme

This is an agricultural support provided in cash to those having less than 500 *donums* of land, paid lump-sum in a year per *donum* in two instalments. TR-MOD assumes 100 per cent take up rate for this benefit that all farmers eligible to this scheme are actually receiving it. The eligibility criteria of this module are primarily based on the agricultural property ownership regardless of the primal economic activity carried out by the owner. As the information regarding property ownership is provided in the household data set, eligibility is first assigned through checking the actual amounts of agricultural property owned. Agricultural property recorded in HBS dataset takes three forms: land, orchard and greenhouse. Here, binary *TARLA*, *BAG* and *SERA* variables denote ownership of agricultural property (taking value 1 for ownership), *TARMIK*, *BAGMIK* and *SERAMIK* variables report the amount of land owned and the amount of property rented out are reported by *TARKIRA*, *BAGKIRA* and *SERAKIRA* variables. Since individual eligibility and benefit calculation are based on the amount of land actually commanded, actual amounts of agricultural property, namely *ACT_TAR*, *ACT_BAG* and *ACT_SERA* are generated by subtracting rented amounts from original amounts. In case of multiple holdings of different property types, the totals are calculated per household. On the basis of the actual amounts of property commanded, eligibility is determined by the threshold of 500 *donums*. Contrary to elderly pension benefit, there is no income/means/assets test for this benefit as it is provided regardless of the socio-economic conditions

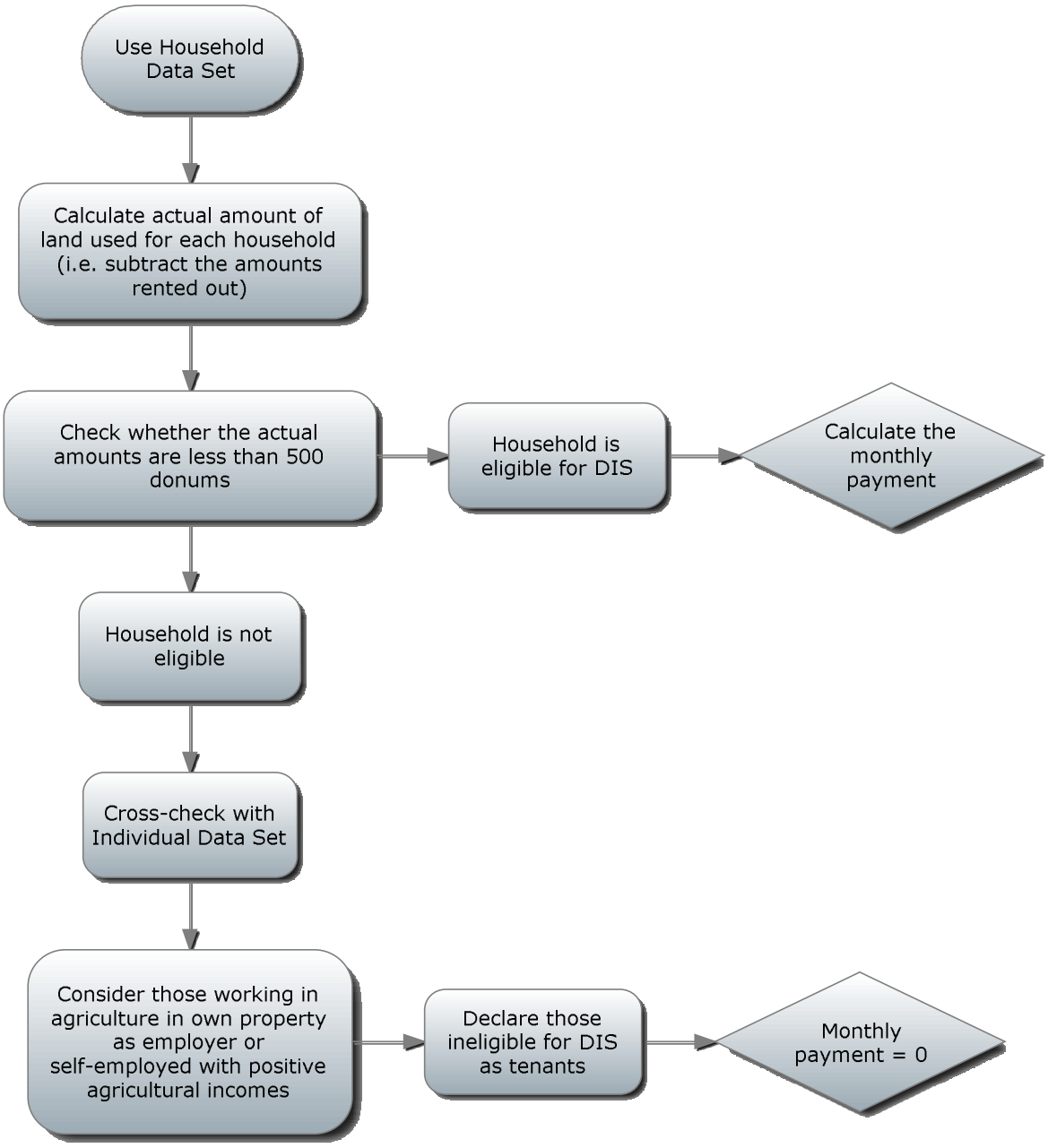
surrounding the individual. If TR-MOD denotes the household as eligible for the benefit, then the amount of benefit is imposed individually on the household head of this particular household and calculated per *donum* annual base amount as 16 TL, divided by 12 for monthly payments.

In case of ineligibility, a cross-check procedure is implemented through individual dataset for denoting tenant farmers who are, in principal entitled to receive the benefit conditional upon documenting formal rental contract, but as suggested by several field research, do not actually receive DIS benefits (see Islamoglu, 2008; Akder, 2009f). For this reason, TR-MOD reviews individual data set for those reported as working on own account or as employer at as personal property establishment in agriculture through the variables providing information about employment. Namely, these individuals who also report positive earnings from agriculture are then referred to as tenants who cannot qualify for DIS payments. The policy module is presented in Figure 3.11 with variable specifications provided in Table 3.16

Table 3.16: HBS Variables used in Direct Income Support Module

Name in HBS	Short Explanation	Source	Frequency	Treatment	Used For
TARLA	Ownership of land	Household		Read-off	Eligibility
BAG	Ownership of orchard	Household		Read-off	Eligibility
SERA	Ownership of greenhouse	Household		Read-off	Eligibility
TARMIK	Amount of land	Household		Read-off	Eligibility
BAGMIK	Amount of orchard	Household		Read-off	Eligibility
SERAMIK	Amount of greenhouse	Household		Read-off	Eligibility
TARKIRA	Amount of land rented out	Household		Read-off	Eligibility
BAGKIRA	Amount of orchard rented out	Household		Read-off	Eligibility
SERAKIRA	Amount of greenhouse rented out	Household		Read-off	Eligibility
ACT_TAR	Actual amount of land used	Household		Calculated	Eligibility + Benefit Calculation
ACT_BAG	Actual amount of land used	Household		Calculated	Eligibility + Benefit Calculation
ACT_SERA	Actual amount of land used	Household		Calculated	Eligibility + Benefit Calculation
BULTEN	ID for household	Common		Read-off	Eligibility + Benefit Calculation
SEKKOD	Sector of employment	Individual		Read-off	Eligibility
HUKDUR	Property ownership of the enterprise	Individual		Read-off	Eligibility
ISDUR	Status at work	Individual		Read-off	Eligibility
TARG_AY	Income from agricultural activity	Individual	Monthly	Read-off	Eligibility
sben_DIS	Direct Income Support	Individual	Monthly	Simulated	- -

Figure 3.11: Direct Income Support Scheme Module



3.2.2.3 Personal Income Tax

The main tax simulated in TR-MOD is personal income tax (*it_PIT*). As mentioned earlier, personal income taxes in 2004 system comprise 19.8 percent of total tax revenues – in narrow terms, excluding SICs. Revenue Administration of Ministry of Finance describe income as comprising of net amounts of profits and earnings accrued in one calendar year elements of which are stated as income from commercial activities, income from agriculture, income from professionals, wages and salaries, income from capital investment (interest and dividends), income from immovable assets and rights, other income and earnings (Revenue Administration, 2006: 17). The personal income tax is collected via withholding and lump sum methods where withholding taxes amount to almost 90 percent of total personal income tax revenues (own calculations from Ministry of Finance data). The main element of withholdings is wage and salary income, which corresponds to almost half of the total personal income tax revenues (Turkish Court of Auditors, 1999; Şahan, 2005; Kızılot et. al., 2006). Combined with labour market data in 2004, this corresponds to 7.3 million wage earners, of which 2.9 million are in the public sector (own calculations using TUIK Household Labour Force Survey Database).

Tax Unit

Personal income tax is individual while spouses are taxed separately; their incomes in TR-MOD are treated as separate and individually taxed. Tax allowances are valid for the case of disability. So, both for the sake of coherence of the model and due to the unavailability

of reading disability data from the HBS 2004, it is assumed that the system does not have any tax allowance schemes.

Tax Base

The tax base is defined as the taxable income net of exemptions. Since there is no tax exemption scheme applied in TR-MOD, the tax schedule is applied to the taxable income only.

Taxable income includes all sources of income except the social benefits and social insurance contributions which are, by default, non-taxed. More specifically;

[3.1] $$TAXABLE_Y = GROSS_Y - SIC + INVGEL_YL + PROPGEL_YL$$

As HBS provides income data net of taxes, gross incomes from employment or work are calculated on the basis of net-to-gross conversion procedure described in section 3.2.3.3. Social insurance contributions, calculated as described in section 3.2.2.4., are deduced while all other sources of income, as referred in legislation, are added to get the tax base. Two types of all other income are included: income from property and income from investment. Income from property, denoted by *PROPGEL_YL*, includes cash income from immovable assets, real estate and agricultural land and reported in the HBS by *GMKN_YL*, *MULKN_AY* and *TOPRN_YL* variables respectively. Income from investment, denoted by *INVGEL_YL*, is composed of interests and profits earned from savings and investments in cash, as reported in HBS by *BANKA_YL*, *DOVIZ_YL*, *NEMA_YL*, *TEMET_YL*

and *KAR_YL* respectively. Table 3.17 below summarizes the HBS variables used in personal income tax module in TR-MOD.

Tax Schedule

Income taxation in Turkey has a progressive nature that higher marginal tax rates apply to higher income brackets. The tax schedule applied separately for wage and salary incomes and self-employment incomes in 2004 include 6 brackets as indicated in Table 3.17 below.

Table 3.17: Income Tax Schedule – 2004 system

Taxable income (TL)	Tax on lower threshold (TL)	Tax rate on excess above lower threshold (%) – Wage and Salaries	Tax rate on excess above lower threshold (%) – Self-Employment
Up to 6000	0	15	20
6000 - 14000	900	20	25
14000 - 28000	2500	25	30
28000 - 70000	6000	30	35
70000 – 140000	18600	35	40
140000 +	43100	40	45

Source: Law No. 193

There is also stamp tax levied on gross earnings (that is net of social insurance and unemployment insurance contributions) as 0.6 percent which is solely used during net-to-gross conversions.

Figure 3.12: Personal Income Tax Module

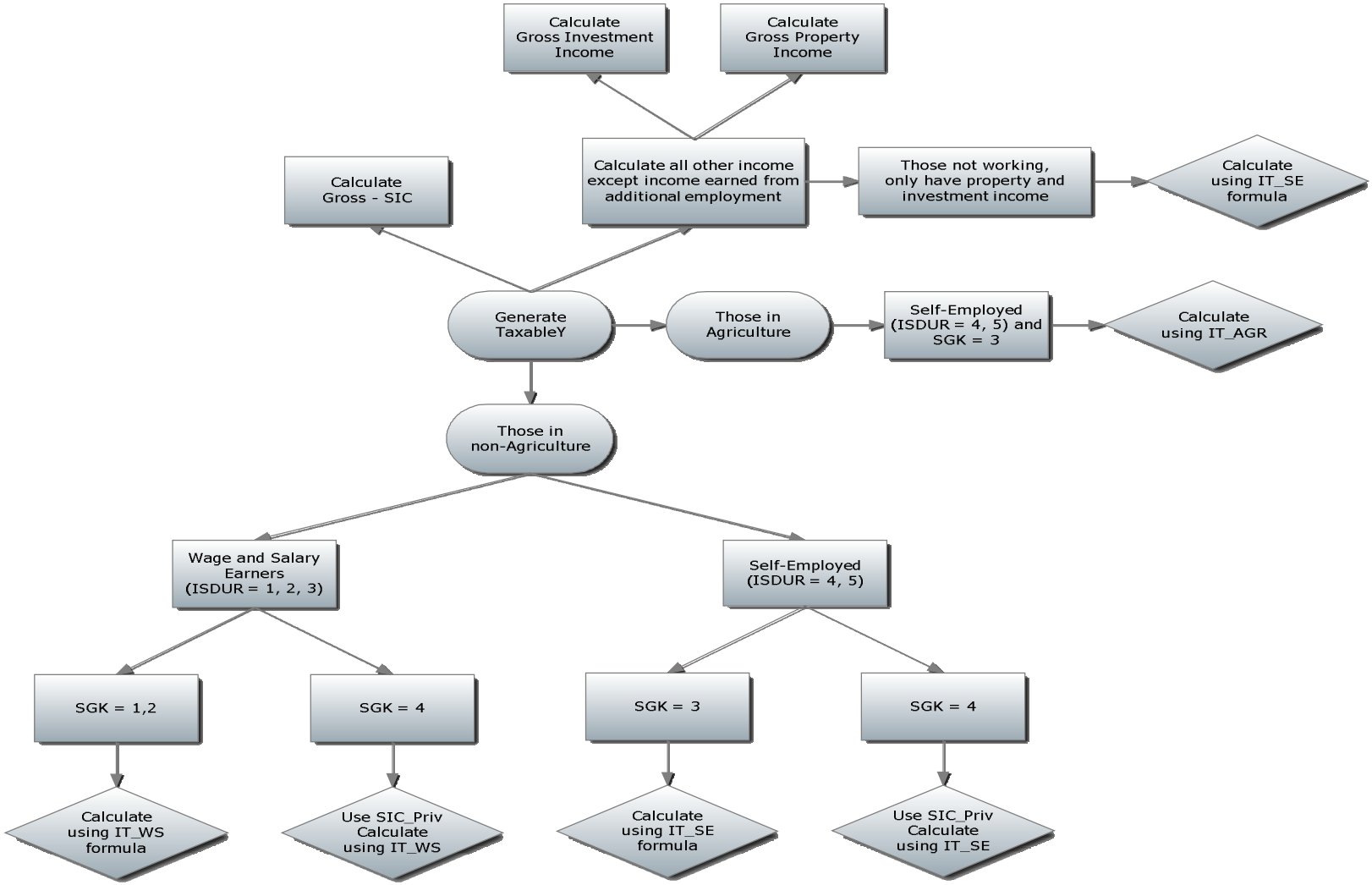


Table 3.18: HBS Variables used in Income Tax Module

Name in HBS	Short Explanation	Source	Frequency	Treatment	Used For
GROSS_Y	Gross incomes from wage employment, self-employment and agricultural activity	Individual		Simulated	Tax Base Calculation
SIC	Social Insurance Contribution	Individual		Simulated	Tax Base Calculation
BANKA_YL	Annual interest earned from bank deposits	Individual	Annual	Read-off	Tax Base Calculation
DOVIZ_YL	Annual interest earned from deposits in foreign currency	Individual	Annual	Read-off	Tax Base Calculation
NEMA_YL	Annual interest earned from bonds	Individual	Annual	Read-off	Tax Base Calculation
TEMET_YL	Annual dividends earned from partnerships	Individual	Annual	Read-off	Tax Base Calculation
KAR_YL	Annual profit shares earned from private financial instruments	Individual	Annual	Read-off	Tax Base Calculation
GMKN_YL	Cash income from immovable assets	Individual	Annual	Read-off	Tax Base Calculation
MULKN_AY	Cash income from real estate	Individual	Monthly	Read-off	Tax Base Calculation
TOPRN_YL	Cash income from agricultural land	Individual	Annual	Read-off	Tax Base Calculation
INVGEL_YL	Total investment income	Individual	Annual	Calculated	Tax Base Calculation
PROPGEL_YL	Total property income	Individual	Annual	Calculated	Tax Base Calculation
TAXABLE_Y	Tax Base for Personal Income Tax	Individual		Calculated	Tax Calculation
it_PIT	Personal income tax	Individual	Monthly	Simulated	- -
IT_WS	Personal income tax levied on wage and salary earners	Individual	Annual	- -	Formulation
IT_SE	Personal income tax levied on self-employed	Individual	Annual	- -	Formulation
IT_AGR	Personal income tax levied on agricultural incomes	Individual	Annual	- -	Formulation

Here it must be noted that there is a special tax credit system for wage and salary earners. Some proportion of the annual amount of specific expenditures of the taxpayer and family is calculated according to certain rates and thresholds[23] and is either credited from the next year's personal income tax or refunded by the employer the following year. In general, rather than crediting, refunding is more widespread. HBS database contains this as an annual transfer item by variable *VIADE_YL*; thus in construction of taxable income in TR-MOD, it is not included but simply taken as a lump-sum non-taxed benefit for the calculation of disposable income.

As illustrated in Figure 3.12, the module operates on the gross income calculated by net-to-gross conversions (as explained in section 3.2.3.3). For those working in non-agricultural sectors (*SEKTOR <>1*), personal income tax is calculated on the tax base – retrieved by equation 3.1, on the basis of status at work. For wage and salary earners *(ISDUR = 1, 2, 3)* who are registered to SSK or ES (*SGK = 1 or 2*), the annual income tax *(IT_WS)* is calculated using the incremental brackets and tax rates provided in 1st and 3rd columns of Table 3.16. For wage and salary earners registered to private social insurance *(SGK = 4)*, all the rest of the calculations remaining the same, only *SIC* calculated is recorded as *SIC_Priv*. For self-employed and working on own account *(ISDUR = 4 or 5)* who are registered to BK (*SGK = 3*), the annual income tax *(IT_SE)* is calculated using the incremental brackets and tax

[23] Tax credit rate is 8 percent of total expenditures up to 3300 TL, 6 percent for 3300-6600 TL and 4 percent for 6600 and over.

rates provided in 1st and 4th columns of Table 3.16. For any self-employed in non-agricultural sectors registered to private social insurance *(SGK = 4)*, all the rest of the calculations remaining the same, *SIC* calculated is recorded as *SIC_Priv*. Indeed, separate recording of private insurance is not fully utilized in calculation of the disposable income but saved only for the sake of detailed breakdown of social expenditures with respect to public and private schemes.

Recalling that there are some individuals who do not have income from employment but report property and investment income, following Article 70 of Law no. 193 on Income Taxation, annual income tax is calculated using the *IT_SE* formulation on tax base composed of only all other income.

In Turkish Tax system, income from agriculture is generally taxed by withholding. Actually, if the size of the establishment is above a certain threshold, which is stated by the law for different plantations (Law on Income Taxation, no. 193, Article 54), then the farmer is subject to annual taxation. Considering the fact that agriculture in Turkey is mostly based on small scale (mostly subsistence) farming or *ortakcilik* and the thresholds are set relatively high, for most of the cases it's reasonable to assume that the taxes (if levied) are withheld. The withholding is carried out at either at 2 percent if sold on the commodity exchange or 4 percent of the sales revenue for different kinds of agricultural products sold (Law No. 193, Article 94). In HBS, information on the agricultural establishment is collected with a

separate module on Agriculture, the database of which is not provided in the data set utilized. Rather, annual and monthly income from agriculture variables (*TARG_YL* and *TARG_AY* respectively), as a compilation of the income information from the module, is provided while it is almost impossible to get inference about the establishment size etc. that, in fact, determine the withholding tax schedule. It is assumed that any individual in the data set with positive agriculture income is cross-checked with the status at work where only self-employed and employers (*ISDUR = 4 and 5*) are considered. Put differently, for the wage and salary earners (*ISDUR = 1, 2 and 3*), tax schedule on agricultural incomes are not applied. The household data set, on the other hand, provides information with respect to the ownership and size of the agricultural land. Islamoglu et. al. (2008) report that approximately 60 per cent of the agricultural establishments (as opposed to the 2001 Census of Agriculture reporting 83 per cent[24]) are small and medium sized, i.e. having less than 100 hectares of land. The production of these farmers are mostly for subsistence and marketed only on a small scale, implying that they make less use of commodity exchange sales, thus the sales revenues – reported as income from agriculture - are assumed not to be withheld. Actually, the selling of the products at the commodity exchange or not is a primarily demand side issue which varies among the products according to the degree of openness of the product market as well as state agricultural

[24] Own calculations using TUIK (2004: 34).

policies concerning the product itself. For instance, as noted in the chapter on sunflower in Islamoglu et.al. (2008), the ultimate decision for sunflower producers to sell on the commodity exchange is solely determined by the price levels given by all other purchasers. Also, the decision with respect to selling in the commodity exchange also requires a certain level of transportation (and storage costs) to be borne by the producers as the forward transactions are not fully developed in each and every commodity exchange. Islamoglu et. al. (2008) demonstrate that small and medium sized producers with less than 100 hectares have less propensity to invest and capital accumulation level is considerably lower when compared to the larger producers commanding lands above 100 hectares. As they are more vulnerable to the possibility of additional costs in the market, the traders in the commodity exchange is assumed to be composed of producers with more than 100 hectares of land. Therefore, in relation to the tax schedule concerning agricultural incomes, the withholding tax of 2 per cent *(IT_AGR)* is applied to all larger producers. One caveat remains with respect to the intra household patterns of accumulation with respect to the ownership status of the land in question. TR-MOD is based on the assumption that the land ownership information from the household data set belongs to the household head - *FERTNO* taking the value 1 in the individual data set. It should also be noted that in calculation of the tax base for agricultural income earners, *IT_AGR* is implemented only on the income from agriculture while all other income is taxed on the basis of *IT_SE* formulation.

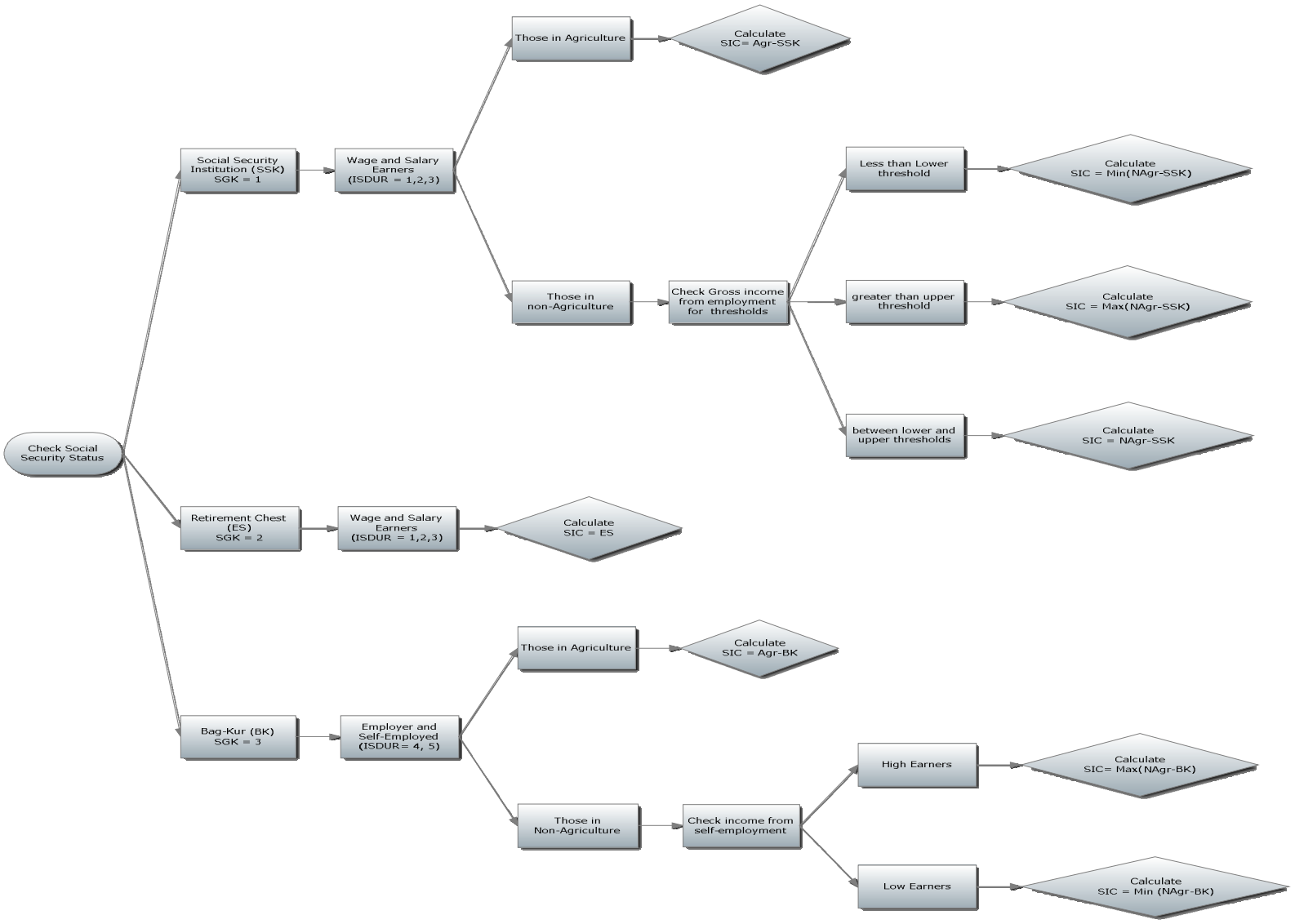
3.2.2.4 Social Contributions

Social contributions are assumed to be paid to the social insurance organization depending on the affiliation. It should be noted that those uncovered and those receiving retirement benefits are exempt from social contribution payments. TR-MOD calculates SICs of those who report themselves as actively working through the variable SGK denoting the affiliation, if any. Table 3.19 reports the variables used in SIC module and Figure 3.13 presents the policy module.

Table 3.19 HBS Variables Used in Social Contributions Module

Name in HBS	Short Explanation	Source	Frequency	Treatment	Used For
SGK	Social security affiliation	Individual		Read-off	Contribution Base Calculation
ISDUR	Status at work	Individual		Read-off	Contribution Base Calculation
SEKKOD	Sector of Employment	Individual		Read-off	Contribution Base Calculation
GROSS_Y	Gross incomes from wage employment, self-employment and agricultural activity	Individual	Monthly	Simulated	Contribution Base Calculation
UCRN_AY	Wage and Salary Income	Individual	Monthly	Read-off	
MUTSN_AY	Income from self-employment	Individual	Monthly	Read-off	Contribution Base Calculation
TARG_AY	Income from agricultural activity	Individual	Monthly	Read-off	
SIC_Agr_SSK	Social Contribution for agricultural wages and salaries	Individual	Monthly	Simulated	
SIC_NAgr_SSK	Social Contribution for non-agricultural wages and salaries	Individual	Monthly	Simulated	
SIC_Agr_BK	Social Contribution for agricultural self-employment income	Individual	Monthly	Simulated	
SIC_NAgr_BK	Social contribution for non-agricultural self-employment income	Individual	Monthly	Simulated	
MinWage	Official Minimum Wage for 2004	Individual	Monthly	Calculation	
SIC_ES	Social contribution for civil servants	Individual	Monthly	Simulated	
SIC	Social Insurance Contribution	Individual	Monthly	Simulated	Social Contribution

Figure 3.13 Social Contribution Module



As Figure 3.13 demonstrates, three sets of calculations for separate schemes are made to simulate for the *SIC* variable associated with those reporting income from employment. First is related with the civil servants, reported as wage and salary earners (*ISDUR = 1, 2, 3*) affiliated with ES scheme (*SGK = 2*), pay social contributions at a flat rate of 16 per cent (*SIC_ES = 0.16*) of gross earnings (*GROSS_Y*) simulated by net-to-gross conversion procedures.

Second calculation covers wage and salary earners (*ISDUR = 1, 2, 3*) affiliated with SSK (*SGK = 1*). For agricultural wage and salary earners, the contribution is calculated as shown in equation 3.2 at a fixed amount:

[3.2] $$SIC_Agr_SSK = 1/2 * MinWage * 0{,}30$$

where *MinWage* is simply the weighted average of official minimum wage implemented for the first half and second half periods of the calendar year[25]. For non-agricultural wage and salary earners, social contribution is calculated at a fixed rate of 15 per cent of gross earnings from employment (*GROSS_Y*) within a range bounded by upper and lower thresholds, as in equation 3.3[26]. So, calculation of SIC for any gross income below or above these thresholds is bound to these as the base and results in fixed amounts of contribution as denoted by *Max (SIC_NAgr_SSK)* and *Min (SIC_NAgr_SSK)* respectively.

[3.3]

$$SIC_NAgr_SSK = \begin{cases} Min(SIC_NAgr_SSK) \text{ if } GROSS_Y < 496{,}89 \\ GROSS_Y * 0{,}15 \text{ if } 496{,}98 \le GROSS_Y \le 2817{,}56 \\ Max(SIC_NAgr_SSK) \text{ if } GROSS_Y > 2817{,}56 \end{cases}$$

[25] The periods refer to January-June 2004 and July-December 2004 with the amounts of 423 TL and 444,15 TL respectively (Retrieved from http://www.alomaliye.com/asgari_ucr_tespit_kom_karari.htm, http://www.alomaliye.com/asgari_ucr_tespit_kom_karari_2004_1.htm,).

[26] Set as 2817,56 TL and 496,89 TL respectively .

Contributions under BK scheme (*SGK = 3*) mainly covering self-employed and working on own account (*ISDUR = 4 or 5*) are paid at a flat rate of 20 per cent of the insurance class determined according to the declared earnings. Since those in agriculture have the option to choose "*the class*" (Article 34, Law No.2926), it would be impossible to determine the base level for the social contribution calculation from the available information. It is known that, in 2004, 88,6 per cent of active contributors of BK scheme for agriculture pay contributions at 6th class or less, almost half of which are concentrated at 6th class only (SGK, 2008). Table 3.19 demonstrates the breakdown of contributors and levels of insurance classes in 2004.

Table 3.20: Contributors and Insurance Classes by BK (2004)

	Self Employed/Employers – Non-Agriculture		Self-Employed/Employers – Agriculture	
Class	Income Threshold	Share of Contributors	Indicative Threshold	Share of Contributors
1	295,667	4,20	118,54	10,27
2	314,64	3,46	134,59	7,05
3	333,61	3,42	150,65	4,46
4	352,59	3,31	166,70	5,66
5	371,56	7,05	182,75	6,40
6	393,06	4,53	198,80	54,72
7	414,57	4,36	214,86	3,45
8	436,07	4,35	230,91	2,04
9	457,57	4,12	246,96	1,41
10	479,08	4,54	263,01	1,40
11	500,58	4,97	279,06	1,14
12	522,08	47,24	295,12	1,74
13	598,29	3,11	326,81	0,16
14	667,86	0,72	357,68	0,05
15	737,43	0,20	388,55	0,03
16	806,00	0,10	419,42	0,01
17	876,57	0,07	450,29	0,01
18	946,14	0,06	481,16	0,00
19	1.015,71	0,05	512,03	0,00
20	1.085,28	0,04	542,90	0,00
21	1.154,84	0,03	573,77	0,00
22	1.224,41	0,03	604,64	0,00
23	1.293,98	0,03	635,51	0,00
24	1.363,55	0,01	666,38	0,00

Source: Own calculations using SGK (2008).

As it is not possible to identify the insurance class also for the self-employed not in agriculture, using the information in Table 3.19 as respective weights, the base level is calculated by the weighted average of the income levels and indicative thresholds for the 24 levels that reveal two types of base levels in equations 3.4a and 3.4b:

[3.4a] $$SIC_Agr_BK = \begin{cases} 0,20 * Max(WA_Agr_BK) \text{ if MUTSN_AY} \geq 600 \\ 0,20 * Min(WA_Agr_BK) \text{ if MUTSN_AY<600} \end{cases}$$

[3.4b] $$SIC_NAgr_BK = 0,20 * (WA_NAgr_BK)$$

where non-agricultural incomes from self-employment are clustered in high and low income groups with respect to the threshold of 600,00 TL (approximated level of 13th class). As denoted in Table 3.21, two separate bases are applied: for those reporting monthly income less than this threshold, weighted average for insurance class less than 12th class is used while higher income earners are assumed to contribute at 12th bracket only.

Table 3.21: Contribution Bases used for BK

Non-Agriculture		Agriculture	
WA_NAgr_BK_Low	192,96	WA_Agr_BK	186,81
NAgr_BK_High	522,08		

For those registered to a private insurance scheme (*SGK=4*), the calculation of social contributions are mainly carried out with respect to the status at work. That is to say, for wage and salary earners, the contribution calculation is carried out by using the parameters of SSK scheme and SIC calculated is recorded as private contribution. For self employed and employers, it is reported that monthly contributions of 53 per cent of privately insured are less than 100 TL (Sigorta Denetleme Kurulu, 2005: 47). When the preference of individuals towards these voluntary private plans could be regarded as a matter of choice for saving instrument, it is reasonable to assume that those with higher earnings would consider paying more than what they are supposed to in BK scheme. In this regard, TR-MOD assumes that the private contribution bases in non-agricultural sectors are assumed to be twice the bases in Table 3.20 with the threshold also doubled to 1200 TL. Those reporting private contribution in agriculture, however, have reported relatively lower monthly incomes (all less than 900 TL) than non-agricultural counterparts. So, the contributions are assumed to be based on the BK scheme for agricultural incomes.

3.2.3 Data Issues

3.2.3.1. General Description

The database used for construction of TR-MOD is the 2004 wave of Household Budget Survey, designed and compiled by State Institute of Statistics (TUIK). Household Budget Surveys contain modular information for

the income and consumption for the households except those in institutional residence (like prison, elderly home, nursery home etc.).

The information available in the dataset is drawn from a representative sample using stratified two-stage cluster sampling method, changing every month during the year. Data is retrieved by interviews and self-registration: each household is visited 8 times on the average 8 times. During the survey month, expenditures are registered and data on income and employment is retrieved at the last interview made at the end of the month. The 2004 dataset includes information regarding a total of 8600 representative households and approximately 35400 individuals. Since households change each month, the survey is implemented on the average 720 households per month.

Three types of dataset are available for 2004 Survey:

1) household: including socio-economic information about the household

2) individual: including information about the demographic characteristics as well as employment and income information

3) expenditures: detailed information about the household expenditures classified according to the product type.

The baseline information used to construct TR-MOD has been derived from the household and individual datasets. Income, employment and benefit information as well as basic demographics are taken from individual data set. On the other hand, household characteristics, property ownership and residential information are provided by the household data set. The common variable to bridge two sets of data is *BULTEN* denoting the unique number

given to the household the members of which are separately recorded but under the same number in the individual data set. For incomes reported, the annual income refers to the sum of income accrued in the last 12 months, so a monthly index is provided for each income data as they refer to a different time period (i.e. moving reference period is used). In this regard, as seasonality of the data is filtered out, monthly amounts were simply calculated as dividing the annual amount by 12.

3.2.3.2. Sample Issues

The dataset contains approximately 8600 households and 35400 individuals where corresponding weights are attached. Tables 3.22a and 3.22b report the weighted and unweighted dispersion of the types of the households, respectively while Table 3.23 presents the household types.

Table 3.22a: Households in 2004 HBS (weighted)

Hanehalki Tipi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1754046	10.3	10.3	10.3
	2	1103566	6.5	6.5	16.7
	3	2790212	16.3	16.3	33.0
	4	1237936	7.2	7.2	40.3
	5	1905076	11.1	11.1	51.4
	6	1397958	8.2	8.2	59.6
	7	2236649	13.1	13.1	72.7
	8	333795	2.0	2.0	74.6
	9	1506285	8.8	8.8	83.4
	10	1274495	7.5	7.5	90.9
	11	672439	3.9	3.9	94.8
	12	189156	1.1	1.1	95.9
	13	553557	3.2	3.2	99.2
	14	28486	.2	.2	99.3
	15	112880	.7	.7	100.0
	Total	17096537	100.0	100.0	

Table 3.22b: Households in 2004 HBS (unweighted)

Hanehalki Tipi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	879	10.3	10.3	10.3
	2	533	6.2	6.2	16.5
	3	1388	16.2	16.2	32.8
	4	634	7.4	7.4	40.2
	5	986	11.5	11.5	51.7
	6	717	8.4	8.4	60.1
	7	1090	12.8	12.8	72.9
	8	163	1.9	1.9	74.8
	9	741	8.7	8.7	83.5
	10	609	7.1	7.1	90.6
	11	344	4.0	4.0	94.6
	12	107	1.3	1.3	95.9
	13	276	3.2	3.2	99.1
	14	18	.2	.2	99.3
	15	59	.7	.7	100.0
	Total	8544	100.0	100.0	

Table 3.23: Types of households in 2004 HBS

No	Description
1	2 adults 1 child – child less than 18 years of age
2	2 adults 1 child – child more than 18 years of age
3	2 adults 2 children – all children less than 18 years of age
4	2 adults 2 children – at least one child more than 18 years of age
5	2 adults, 3 or more children - all children less than 18 years of age
6	2 adults, 3 or more children– at least one child more than 18 years of age
7	2 adults, no children
8	Extended family, no children
9	Extended family with children - all children less than 18 years of age
10	Extended family with children – at least one child more than 18 years of age
11	1 adult, no children
12	1 adult with children - all children less than 18 years of age
13	1 adult with children – at least one child more than 18 years of age
14	Cohabiting people (i.e. students ,workers, etc.)
15	Cohabiting siblings

Source: HBS 2004

As descriptive statistics in Table 3.22a and Table 3.22b reveal, the most common types of households are 2 adult 2 young children (no.3) and 2 adults no children (no.7) comprising almost one-third of the total households.

TR-MOD operates simply on the income variables; individual data set is checked if there is any reporting of zero income. Considering the existence of individuals, like children, elderly who are not involved in any kind of income generating activities but might be receiving social assistance in cash or in-kind, the variable *YILKULGEL* denoting annual disposable household income recorded in the household data set is checked but no truncation is needed as *YILKULGEL* turned out to be non-negative for all, i.e. 8544, households in the sample.

3.2.3.3 Adjustments

Data in HBS is primarily collected for calculating the weights of the certain consumption items in the baskets of price indexation so the information on income and benefits need to be adjusted for suitable for the purposes of TR-MOD. Also, the dataset lacks information regarding tax system especially for the incomes and property where certain assumptions were made, as will be elaborated below.

Net-to-gross conversion

The information available in the survey about income from employment is net of income tax withholdings and social insurance contributions. In order to obtain gross figures, both Levy and Mercader-

Prats (1999) and Immervoll and O'Donohgue (2001) recommend using a numerical iterative method where a hypothetical net-to-gross factor is iterated via tax-benefit rules implemented in the model until the value of net income created by the factor is sufficiently close to the original net income given in the data set. This method necessitates separate factors for different components of income, but in this case the solution becomes impossible as there would be more than 1 unknown but one equation. Considering these kind of shortcomings of iterative methods, TR-MOD involves policy inversion where simple backward calculation has been applied to the monthly income from employment comprising of wage and salary (*UCRN_AY*), self-employment income (*MUTSN_AY*) and income from agricultural activity (*TARG_AY*) to get gross incomes from employment (*GROSS_Y*). The initial backward calculation is performed by using Microsoft SQL scripts while the rest of the calculations are performed in Microsoft Excel. The variables used in net-to-gross conversion are listed in Table 3.43.

Table 3.24: Variables used in Net-to-Gross Conversion Module

Name in HBS	Short Explanation	Source	Frequency	Treatment
SGK	Social Security Affiliation	Individual		Read-off
ISDUR	Status at work	Individual		Read-off
SEKKOD	Sector of Employment	Individual		Read-off
UCRN_AY	Wage and Salary Income	Individual	Monthly	Read-off
MUTSN_AY	Self-Employment Income	Individual	Monthly	Read-off
TARG_AY	Income from Agricultural Activity	Individual	Monthly	Read-off
IT_WS	Income Tax on wage and Salaries	Individual	Monthly	Simulated
IT_SE	Income Tax on wage and Salaries	Individual	Monthly	Simulated
SIC_Agr_SSK	Social Contribution for agricultural wages and salaries	Individual	Monthly	Simulated
SIC_NAgr_SSK	Social Contribution for non-agricultural wages and salaries	Individual	Monthly	Simulated
SIC_Agr_BK	Social Contribution for agricultural self-employment income	Individual	Monthly	Simulated
SIC_NAgr_BK	Social Contribution for non-agricultural self-employment income	Individual	Monthly	Simulated
SIC_Agr_SSK	Social Contribution for agricultural wages and salaries	Individual	Monthly	Simulated
GROSS_Y_Agr_WS	Gross income from agricultural wage and salaries	Individual	Monthly	Simulated
GROSS_Y_Agr_SE	Gross self employment income in agriculture	Individual	Monthly	Simulated
GROSS_Y_NAgr_WS	Gross income from non-agricultural wage and salaries	Individual	Monthly	Simulated
GROSS_Y_NAgr_SE	Gross self employment income in non-agriculture	Individual	Monthly	Simulated
GROSS_Y	Gross incomes from wage employment, self-employment and agricultural activity	Individual	Monthly	Simulated

As denoted in the Table 3.24, outputs from SIC module are imputed in the backward net-to-gross calculation. Figure 3.14 below demonstrates the conversion procedure.

It should be noted that regardless of the sector of employment and status at work, for those reporting no social security coverage (*SGK = 5*), TR-MOD assigns the gross income from employment as net income, thus there is no IT as well as SIC payments simulated (i.e. *it_PIT* and *SIC* are both equal to 0).

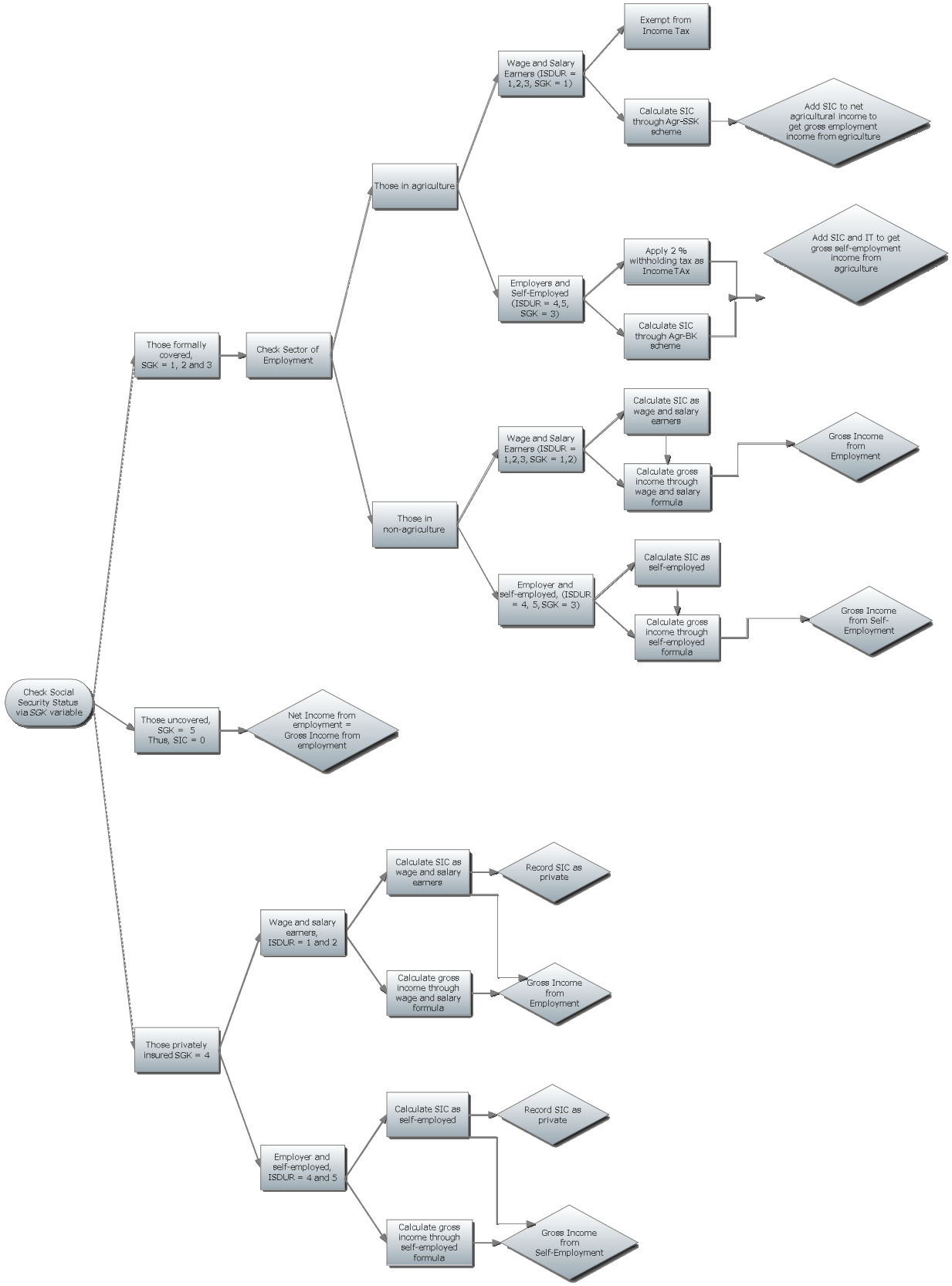
Taking into account legislative framework concerning tax system of 2004, as described in 3.2.1.3, for those formally covered by one of the public schemes (*SGK = 1, 2 or 3*), TR-MOD differentiates between agriculture and non-agriculture. As explained in section 3.2.2.3 on personal income tax, wage and salary earners covered by SSK in agriculture are exempt from income tax. Therefore gross income for agricultural workers covered by SSK is simulated as in equation 3.5:

[3.5] $$GROSS_Y_Agr_WS = UCRN_AY + SIC_Agr_SSK$$

Incomes of self employed in agriculture covered by BK are taxed by withholding methods at a flat rate of 2 percent and gross income is simulated using equation 3.5:

[3.6] $$GROSS_Y_Agr_SE = 1{,}02 * TARG_AY + SIC_Agr_BK$$

Figure 3.14: Net-To-Gross Conversion Module



Wage and salary incomes with public social insurance coverage (*SGK = 1 or 2*) from non-agricultural employment are taxed on the basis of the marginal tax rates (t_w) reported in Table 3.16. Apparently, equation 3.6 summarizes the monthly calculation of net wage and salary incomes:

[3.7]
$$UCRN_AY = \left(GROSS_Y_NAgr_WS - SIC_NAgr_SSK\right) - IT_WS - StampTax$$

where

[3.7a] $$StampTax = GROSS_Y_NAgr_WS * 0{,}006$$

[3.7b] $$IT_WS = (GROSS_Y_NAgr_WS - SIC_NAgr_WS) * t_w$$

[3.7c] $$SIC_NAgr_WS = GROSS_Y_NAgr_WS * 0{,}15$$

Here net income (*UCRN_AY*) is known while tax rate (t_w) and gross income (*GROSS_Y_NAgr_WS*) is unknown. As explained in section 3.2.2.3, tax rate (t_w) depends on the annual accrual of tax base denoted by $(GROSS_Y_NAgr_WS - SIC_NAgr_WS)$.

Setting (*GROSS_Y_NAgr_WS)*= *x* and *UCRN_AY* = *y* in equation 3.7, monthly gross wage and annual income tax (IT_WS_a) are denoted as in equations 3.8 and 3.9 respectively:

[3.8] $$x = y / \left[0{,}85 * (1 - t_w) - 0{,}006\right]$$

[3.9] $$IT_WS_a = (12 * 0{,}85 * x) * t_w = (10{,}2 * y / [0{,}85 * (1 - t_w) - 0{,}006]) * t_w$$

As y is known, the using a script written in SQL, iterations are made by inserting the marginal tax rates given in Table 3.16 for wage and salary earners to get annual amount of corresponding gross incomes. In other words, the script calculates annual accrual of gross wages for each marginal tax rate and checks for the consistency in terms of determining the correct income bracket for the marginal tax rate applied. Here, it should be noted that for the sake of simplicity with respect to the number of equations and number of unknowns, the incremental tax schedule is not utilized. Rather, the accrued gross income is taxed by a single tax rate.

A similar backward calculation is applied for non-agricultural income from self employment where

- marginal tax rate for wage and salaries (t_w) is replaced by corresponding rate for self-employment income (t_s) reported in Table 3.16;

- net income from wage and salaries *(UCRN_AY)* is replaced by self-employment income *(MUTSN_AY);*

- social contribution rate is assumed to constitute 20 percent of gross income from self-employment.

Therefore, equations for calculation of gross income from self employment are as follows:

[3.10]

$$MUTSN_AY = \left(GROSS_Y_NAgr_SE - SIC_NAgr_BK\right) - IT_SE - StampTax$$

where

[3.10a] $$StampTax = GROSS_Y_NAgr_SE * 0{,}006$$

[3.10b] $$IT_SE = (GROSS_Y_NAgr_SE - SIC_NAgr_SE) * t_s$$

[3.10c] $$SIC_NAgr_SE = GROSS_Y_NAgr_SE * 0{,}20$$

Again, setting (*GROSS_Y_NAgr_SE)= x* and *MUTSN_AY= y* in equation 3.10, monthly gross earnings and annual income tax (IT_SE_a) are denoted as in equations 3.11 and 3.12 respectively:

[3.11] $$x = y / \left[0{,}80 * (1 - t_s) - 0{,}006\right]$$

[3.12] $$IT_SE_a = (12 * 0{,}80 * x) * t_s = (9{,}6 * y / [0{,}80 * (1 - t_s) - 0{,}006]) * t_s$$

For those privately insured, net-to-gross calculations are processed with respect to their status at work – i.e. wage and salary earner or self-employed. For privately insured self employed in agriculture (*ISDUR=4* or 5, *SGK=4* and *SEKKOD=1*), TR-MOD assigns the gross income from employment as net income while social contribution mainly refers to contributions for agricultural self-employment income. Nevertheless, as mentioned before, social contributions calculated are recorded as private.

Splitting benefits

As HBS is not designed to reflect the detailed composition of income in general and social benefit system in particular, some variables regarding social benefits correspond to more than one scheme. Though inevitable in relation to the aim of the survey, this aggregation may be regarded as a potential limitation for the purposes of simulating any particular benefit in detail. The contributory social benefits are read-off from the dataset and included in the calculation of income. Among non-contributory benefits, in-kind benefits are read off from the dataset as variable on annual in-kind benefits. Variable on elderly pensions, namely *YASLI_YL*, at first instance seems to refer to the elderly pensions and could also be read off. However, examination of the variable glossary reveals that it also captures both direct income support to farmers and social assistance provided by SYDGM. The three schemes involved in one variable are separated on the basis of the following criteria:

- Demographic information on the individual (age)
- Income information (from agriculture or not)
- Property ownership information (combined with the household data set)
- Information on the status of employment and social security coverage

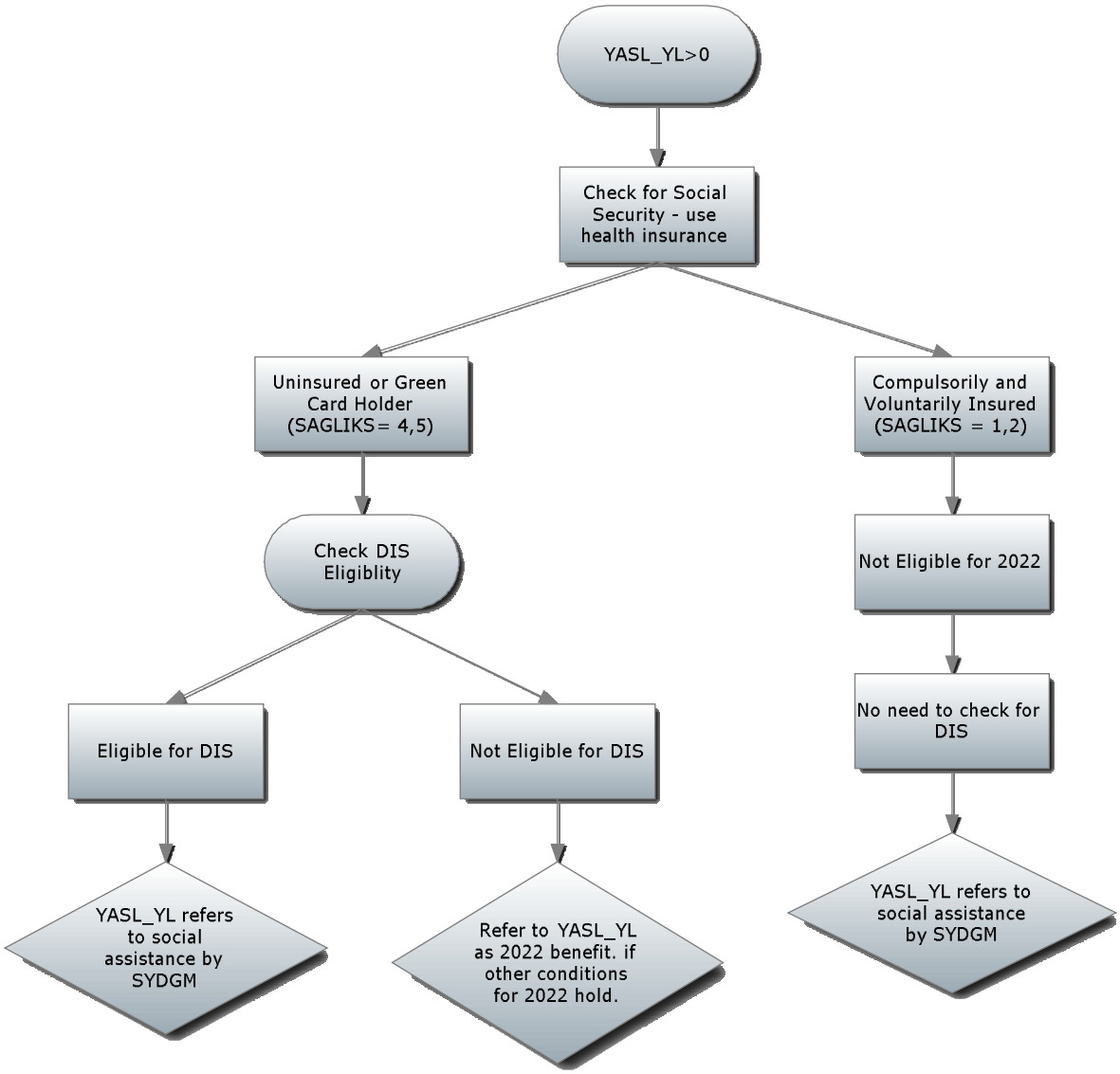
The benefits to be simulated and to be read-off are determined according to the splitting procedure. As mentioned in section on social benefits in TR-MOD, elderly pensions are simulated while DIS and

social assistance by SYDGM are read-off from the dataset. To do so, the initial priority is given to distinguishing between the former and the latter. Figure 3.15 demonstrates the splitting procedure for *YASLI_YL* variable.

Table 3.25: Variables used in Splitting *YASLI_YL* Benefit

Name in HBS	Short Explanation	Source	Frequency	Treatment
SAGLIKS	Health insurance	Individual		Read-off
ISDUR	Status at work	Individual		Read-off
SEKKOD	Sector of Employment	Individual		Read-off
HUKDUR	Property ownership of the enterprise	Individual		Read-off
ACT_TAR	Actual amount of land used	Household		Calculated
ACT_BAG	Actual amount of land used	Household		Calculated
ACT_SERA	Actual amount of land used	Household		Calculated
BULTEN	ID for household	Common		Read-off
YASLI_YL	Social Assistance Benefits	Individual	Annual	Read-off
socassB	Social Assistance by SYDTF	Individual		- -

Figure 3.15: Splitting Benefits I – Module for *YASLI_YL*



To identify the type of benefit encountered for those individuals with non-negative *YASLI_YL* variable, it seemed rational to track through the *SGK* variable that denotes the social insurance coverage and affiliation, if any. This is simply because of the eligibility criteria surrounding the benefits in question: as described in the first section of this chapter, those outside the social security coverage are in the target group of the elderly pensions and SYDGM schemes, while DIS scheme

is primarily based on property ownership. The original dataset, however, does assign missing values to *SGK* for those who report themselves as not working/not looking for work (*IS_ARAMA = 2*) due to, for instance, being housewife, elderly (age 60 and over) or seasonally employed (*IS_NEDEN* = 3, 6 or 10 respectively). Therefore, it becomes necessary to track through the variable *SAGLIKS*, identifying the health insurance coverage, as a proxy for *SGK*. *SAGLIKS* variable itself identifies clearly those having Green Cards and those having no health insurance, namely those out of the social security coverage. But, at the same time, those coded as compulsorily insured imply an aggregated sum for those covered with any of the three public social insurance schemes regardless of the affiliation.

Eligibility for DIS is based on the land ownership, regardless of the other socio-economic characteristics of the individual and household. The information on the ownership of the agricultural land is reported both in the household and individual data sets: household data set provides information on the land ownership and amount of the land owned while individual data set involves the information on the establishment from which agricultural income is earned. It is rather straightforward to proceed with the household information assigned to the household head. It is also known that beneficiaries of DIS need not to be involved in agricultural activities (for instance see Akder and Dudu, forthcoming). Therefore, simultaneously, the individual sub-data set with non-negative *YASLI_YL* values is checked for the land ownership,

whether economic activity taking place and occupational status are reported as agriculture (*SEKKOD* = 1 and *MESLEK* = 6, respectively), ownership of the enterprise as personal property (*HUKDUR* = 1). The ownership information is cross-checked with the household data set where the amount of land is also reported. Those reported as working at personal property agricultural enterprise but as unpaid family workers are assumed to be exempt from DIS scheme which is received solely by the owner of the enterprise – namely the head of the household. Therefore, the DIS is also calculated on the basis of this combined information on the land. If *SAGLIKS* variable denotes that the same individual is outside social security coverage, then the amount reported for *YASLI_YL* is read-off as social assistance benefit from SYDGM and recorded as *socassB* since the elderly pensions would be simulated according to the eligibility modules created.

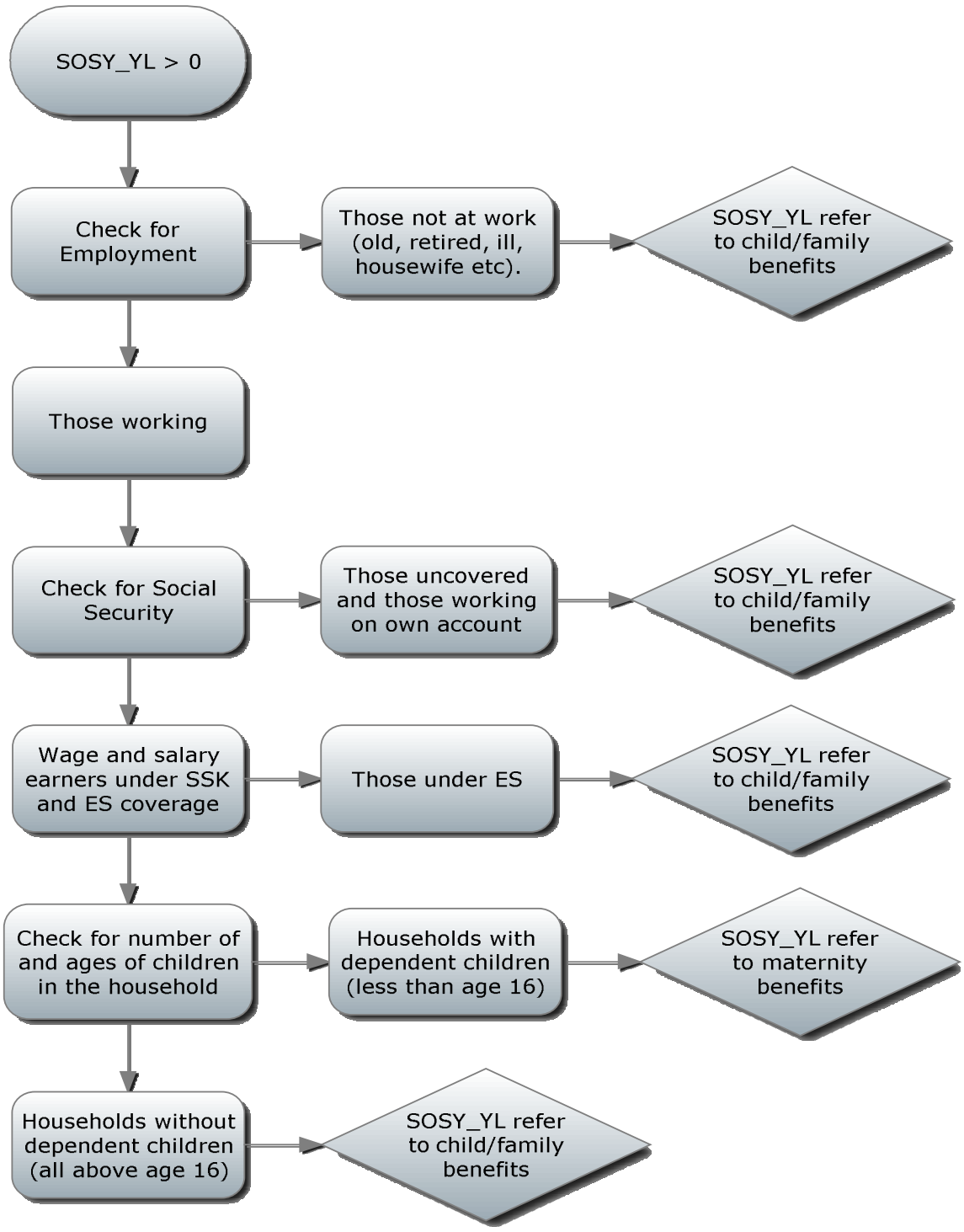
The other aggregated social benefit variable in HBS 2004 dataset, *SOSY_YL*, contains annual total value of social assistance and family benefits. As there is no explanation provided in the variable glossary regarding this variable, it is assumed to be composed of child benefits only since there is no scheme catering for family benefits in general. It may also be the case that it refers to the lump-sum maternity payments. So for the cases where this variable is different than 0, gender, social insurance variable as well as composition of the household (i.e. ages of the children, especially whether there is any child less than 1 years of age) is checked for the possibility of contributory maternity

payments. Table 3.26 lists the variables used in the module while Figure 3.16 presents the benefit split procedure.

Table 3.26: Variables used in Splitting *SOSY_YL* Benefit

Name in HBS	Short Explanation	Source	Frequency	Treatment
SGK	Social Security Affiliation	Individual		Read-off
ISNEDEN	Reason for not looking for work	Individual		Read-off
AGE	Age of the individual	Individual		Read-off
SOSY_YL	Social Assistance and Family Benefits	Individual		- -
maternityB	Maternity Benefits	Individual		- -
childB	Child / Family Benefits	Individual		- -

Figure 3.16: Splitting Benefits II – Module for *SOSY_YL*



Contribution issues

As explained throughout this chapter, in Turkey benefit entitlements individuals depend considerably on the existence of social insurance affiliation, while their social contributions are primarily determined by the affiliation. The original dataset of HBS does not contain specific information on the amounts of the social contributions but rather provides the affiliation. With respect to the employment structure and social insurance affiliation in agriculture as in Table 3.27 below, social contributions related to those in agriculture sector is not straightforward.

Table 3.27: Status at Work and Social security Affiliation (2004)

	Agricultural Employment	No social security
Wage/Salary Earner	1,5	49,2
Daily Waged	5,7	98,4
Employer	1,1	73,5
Self-Employed	38,9	79,4
Unpaid Family Worker	52,9	98,4
Total	100	90,1

Source: TURKSTAT Household Labour Force Survey Database

The following assumptions, then, were constructed:

(i) Those having status of unpaid family worker and daily waged are simply assumed to be out of social security coverage, regardless of the information in the dataset, thus no SIC envisaged.

(ii) For the case of wage and salary earners, the social security information from the dataset is checked

(iii) For employers and self-employed, SIC are calculated on the basis of the information from the data set on both social security affiliation (BK) and sector of economic activity (agriculture/non-agriculture)

For the rest in the dataset, the SIC amounts are calculated with respect to their declared social insurance affiliation based on the rates, as explained in section 3.2.2.4.

3.2.4 Validation

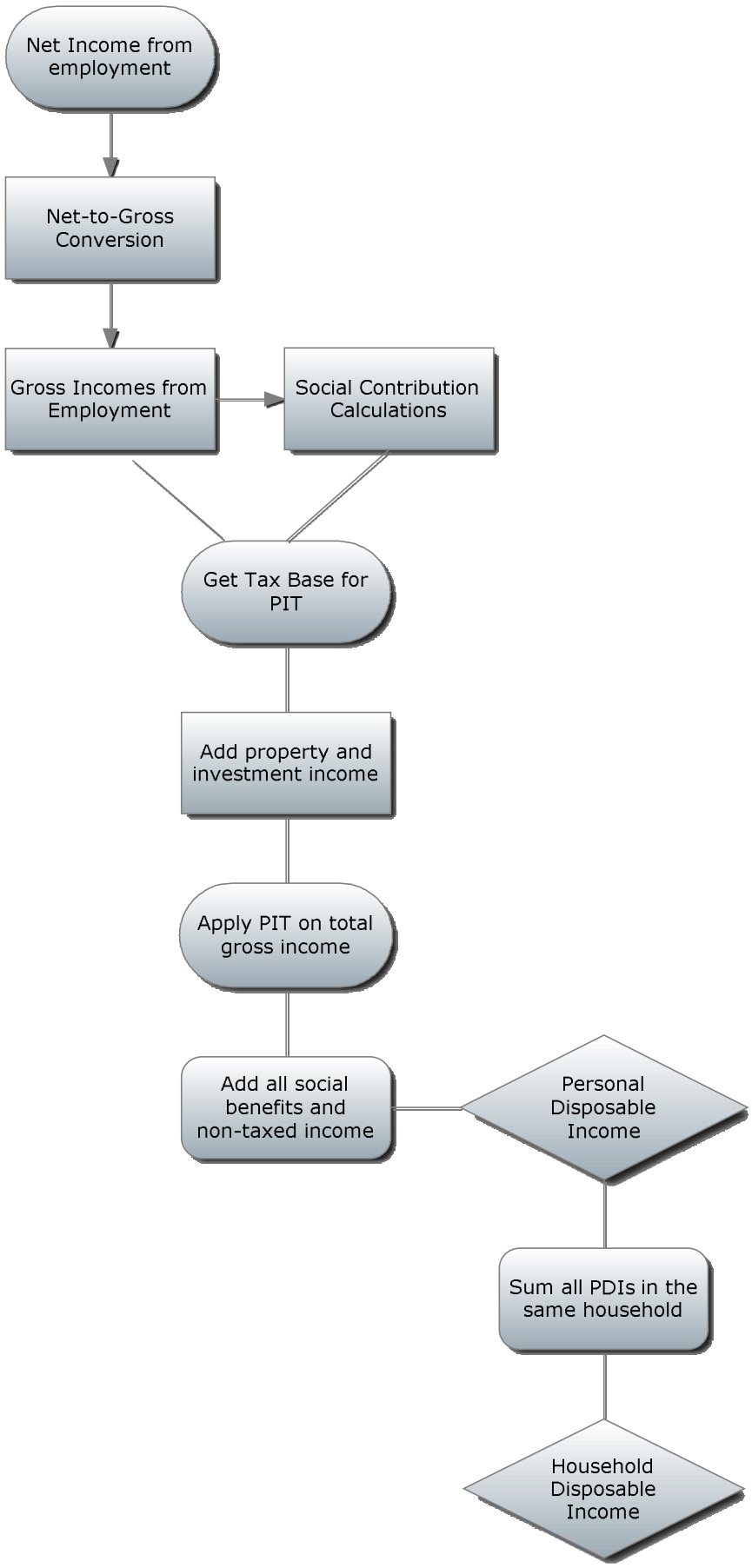
TR-MOD calculates personal and household disposable income through the policy modules described in the preceding sections (see Appendix 2 for some technicalities of the operation of the model). The ultimate aims are first to produce certain set of indicators based on the information generated by TR-MOD and then compare it with the official figures produced based on the HBS dataset. As discussed before, the peculiarity of the TR-MOD lies in its unique architecture based on tax and benefit schemes within a coherent tax-benefit model. The construction of the model necessitated certain simplifying assumptions and modifications as not all necessary information is provided by the HBS dataset. The assumptions were made with respect to tax schedules, benefit rules and social contribution calculations while modifications included backward iterated calculations for construction of gross incomes from employment as well as splitting of benefits recorded as combined sums and thematic aggregation of separately recorded income items. The policy

spine upon which TR-MOD operates is depicted in Figure 3.17. Starting with the net incomes from employment, with an iterative backward calculation for gross incomes from employment for those at work, the model initially reaches the tax base for income from employment by deducting public and private social contributions calculated via SIC module. Then, investment income and property income in cash as aggregates from detailed data provided in HBS are added to get taxable income on which PIT module is implemented. The resulting net cash income denotes personal net income from employment, property ownership and investment. The PIT and SIC calculated by policy modules are recorded separately for different status at work and public/private schemes for the sake of different types of analysis that could be conducted using TR-MOD. Notwithstanding the static nature of the model, it could constitute a base for any longitudinal analysis via importing of different waves of HBS conducted while sustaining the consistency by taking into account any possible modifications with respect to the tax schedules, benefit rules or social contribution calculations for corresponding years. To get personal disposable income, all other non-taxed cash income components including cash income from additional jobs held, social benefits simulated and read-off from the dataset as well as sum of all benefits in kind received are added to the personal net cash income from employment. The recording of these cash and in-kind benefits other than formal mechanisms (here formal refers to state provided social benefits, contributory benefits and in-kind benefits like nursery, lunch etc. as complements of employment) are aggregated to demonstrate a comparative incidence along different income groups. Table 3.28 reviews the components of PDI calculated in TR-MOD.

Table 3.28: Components of Personal Disposable Income

	Variable	***Short Description***
Cash Income From Employment	*UCRN_AY*	Wage and Salary Income
	MUTSN_AY	Self-Employment Income
	TARG_AY	Income from Agricultural Activity
Other Taxable Income	*INVGEL_YL*	Total investment income
	PROPGEL_YL	Total property income
Non-Taxable Income	*addempY*	Income from additional jobs held
	taxrefund	Lump-sum tax refund
	remitY	Cash remittances from abroad
	infsupportY	Informal support in cash
Benefits in Cash	*sben_DIS*	Agricultural direct income support
	sben_socpen	Elderly pension benefit
	socassB	Social Assistance by SYDTF
	maternityB	Maternity benefits
	childB	Child/family benefits
	retpenB	Retirement benefits
	unempB	Unemployment benefits
	surpenB	Sickness/survivors benefits
	edusupportB	Support for students
	privpenB	Private pension receipts
Benefits in Kind	*govinkindB*	State provided in kind assistance
	emplinkindB	In kind benefits from employment
	infinkindB	Informal support in kind

Figure 3.17: Policy Spine for TR-MOD



This preliminary version of TR-MOD allows for calculation some set of indicators using the HDI information generated within the model. Not as comprehensive to become a full validation of the tax-benefit model created, some general observations concerning the tax-benefit system in Turkey (as it is modelled in 2004 form) and more focused introductory analyses for the poor population might be useful to pave the way for more sophisticated policy analysis.

To construct a snap-shot view using TR-MOD, first, the poverty threshold as 60 percent of the median equivalized household disposable income is defined. Using the modified OECD scale (EFB) and household size (HHB) given in the dataset, the main output of the model, i.e. HDI, is equivalized to get:

[3.13] $EQUI_HDI = (HDI / EFB) * HHB$,

where the TR-MOD calculates this annual threshold as 9.808,59 TL in 2004.

All the households are then ranked in ascending order with respect to equivalized incomes and 10 percent decile groups are constructed. Those with equivalized HDI values less than the threshold are defined as the sub-sample of households at risk of poverty and similar indicators are separately calculated and presented for this group further below. Using HBS 2004 dataset, TR-MOD calculates the size of this sub-sample as 2359 out of 8455 households, implying 15.669.034 out of 70.273.647 individuals have equivalized disposable incomes below the 60 per cent median threshold as of year 2004. 7.230.397 of these individuals are in urban areas while 8.438.638 report to reside in rural areas.

Despite numerous combinations of outputs that can be calculated in TR-MOD, Tables 3.28, 3.29, 3.31 and 3.32 below present the general distribution of HDI and

tax-benefit components of these incomes. For each decile, the means of income and income components in absolute terms are presented. Original income refers to the sum of gross cash earnings from employment and other taxable income composed of investment and property incomes. Earned income, on the other hand, refers to the gross amount of only earnings from employment. All benefits refer to the annual sum of cash and in-kind benefits both read-off from the data and simulated. Actually, simulated benefits in TR-MOD, i.e. elderly pensions and direct agricultural income support, exhibit considerably stringent means/asset tests which is confirmed by the amount of beneficiaries in the Model Data Sheet where only 216 beneficiaries qualify for the former and 1171 beneficiaries qualify for the latter out of 35.389 individuals in the data set, so the incidence of these are not shown separately. Taking into consideration the simulations of PIT and social insurance contributions within TR-MOD under a set of assumptions discussed in detail, the annual amounts presented reflect less of the reality but much of a "desirable" case.

The peculiarity of mentioning two types of income together is for comparing the degree of commodification across the income deciles inherent in the welfare regime in Turkey. Earned income here connotes the component of income related with labour market engagements while original income adds "wealth" component to it by including income from investment and property ownership. The breakdown given in Table 3.29 with the means of each decile imply that more than half of the household income is derived from income from employment for all deciles expect the lower two where the total amount of benefits received dominate the household income, as expected.

Table 3.29: Means of Income and Income Components per Decile Group (TL)

Decile	HDI	EQUI_HDI	Original Income	Earned Income	All Benefits	All Taxes	Social Insurance Contributions
1	2.466,13	3.413,29	902,48	806,14	1.323,78	29,50	26,44
2	4.427,86	6.792,44	2.020,92	1.851,07	2.285,04	99,93	101,76
3	5.612,87	9.175,62	3.142,55	2.901,19	2.396,21	158,22	185,17
4	7.181,18	11.807,14	4.518,75	4.267,31	2.766,10	208,86	312,74
5	8.830,60	14.843,60	6.141,71	5.771,01	3.146,14	308,17	547,39
6	10.744,57	18.270,23	8.255,61	7.736,13	3.367,01	491,09	856,21
7	13.349,28	22.747,31	11.195,49	10.504,20	3.759,38	946,30	1.246,63
8	16.507,95	28.611,56	14.448,45	13.302,33	4.489,09	1.519,18	1.590,43
9	22.360,43	38.763,02	19.698,61	17.973,02	6.313,51	2.371,39	2.166,15
10	54.087,23	94.365,95	45.403,31	42.509,94	19.826,33	9.931,19	9.824,19
All	***14.540,08***	***24.849,37***	***11.557,90***	***10.748,30***	***4.961,77***	***1.603,36***	***1.682,68***
Poor	***3.993,40***	***6.134,74***	***1.890,46***	***1.727,70***	***1.943,06***	***89,02***	***94,74***

Source: Own simulations using TR-MOD

As TR-MOD is the first effort to integrate tax and benefit systems in Turkey with full simulations of the tax scheme and social insurance contributions and partial simulations of the benefit schemes, the information provided about these income components in the last three columns of the tables are the model's contribution to the analysis of inequality. While most of the benefit and all of the earned/original income values produced in the model are based on actual/reported values provided by the data set, taxes and social contributions simulated may diverge from the actual values. This is primarily because of the assumptions surrounding the tax and social contribution modules that take all income values as fully reported and apply accordingly the policy rules in a very strict sense. For this reason the last two column of Table 3.30 should be treated as being "modal".

Table 3.30: Share of Income and Income Components Received/Paid by Each Decile Group

Decile	HDI	EQUI_HDI	Original Income	Earned Income	All Benefits	All Taxes	Social Insurance Contributions
1	1,7	1,4	0,8	0,8	2,7	0,2	0,2
2	3,1	2,8	2,8	1,7	1,8	4,6	0,6
3	3,9	3,7	2,7	2,7	4,8	1,0	1,1
4	4,9	4,7	3,9	4,0	5,6	1,3	1,9
5	6,1	6,0	5,3	5,4	6,3	1,9	3,3
6	7,4	7,3	7,1	7,2	6,8	3,1	5,1
7	9,2	9,1	9,7	9,8	7,6	5,9	7,4
8	11,3	11,5	12,5	12,4	9,0	9,5	9,4
9	15,4	15,6	17,0	16,7	12,7	14,8	12,9
10	37,1	37,9	39,2	39,4	39,8	61,8	58,2
All	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***
Poor	***7,6***	***6,8***	***4,5***	***4,4***	***10,8***	***1,5***	***1,6***

Source: Own simulations using TR-MOD

Indeed Table 3.29 could also be read to reflect the redistributive nature of the tax-benefit system based upon per decile shares of all taxes and benefits paid and received in the model. In its present form, tax system of TR-MOD exhibits a progressive nature where the uppermost two deciles pay three quarters of the total income tax revenues. Interestingly, households in the second decile seem to contribute almost as much as the households in the seventh decile which could be explained by the high incidence of wage employment in the former relative to the other lower decile groups. On the other hand, the redistributive nature of the system is hampered by the sharing of benefits among the deciles where almost half of the total benefits in the system are received by the uppermost two deciles as well. This might very well be related with the composition of the item all benefits where cash

and in kind benefits, state provided, informally provided benefits and those provided with employment are all aggregated.

Table 3.31: Household Composition – Average Numbers per Decile Group

Decile	Household Size	Number of Children	Working Age Population	Elderly	Economically Active	Economically Active (%)
1	3,18	1,02	1,18	0,47	0,39	11,35
2	3,47	1,01	1,44	0,40	0,57	16,14
3	4,08	1,31	1,67	0,26	0,72	19,72
4	4,00	1,25	1,72	0,28	0,91	24,70
5	4,25	1,31	1,81	0,21	1,00	25,98
6	4,34	1,36	1,78	0,19	1,11	27,78
7	4,38	1,35	1,84	0,17	1,14	28,78
8	4,53	1,48	1,81	0,15	1,26	30,56
9	4,56	1,37	1,84	0,15	1,43	34,46
10	4,64	1,46	1,77	0,13	1,38	33,28
All	***4,14***	***1,29***	***1,68***	***0,24***	***0,99***	***25,26***
Poor	***3,53***	***1,10***	***1,41***	***0,38***	***0,54***	***15,24***

Source: Own simulations using TR-MOD

Tables 3.31 and 3.34 provide snapshots of the average households in each decile group in the total sample and in sample for households at risk of poverty respectively. Contrary to the argument favouring the relation between size of the household, number of children in the household and risk of poverty, TR-MOD presents a more homogeneous distribution with respect to the average number of household size and number of children. Here, child definition refers to those under the age of 16, working age population in the household refer to adults between ages 16 and 64, elderly denotes are those above age 65. Data in table 3.31 confirm the observation that households in upper deciles tend to be no longer extended while cohabiting with elderly is much prevalent for the lower deciles which could also be

regarded as a coping strategy with pooling of resources across generations within one household. The relation of household income with the composition is investigated through the existence of economically active working age populations in the households in deciles, defined as individuals who report positive income from employment. The discrepancy between average number of economically active working age population with the average number of working age population in the households within and across deciles could be read as an indicator of unemployment for the lower deciles and educational attainment of the young people for the upper deciles. The percentage of economically active working age population in the household presented in the last column further support these arguments.

As mentioned above, similar tables are constructed via using TR-MOD for the subsample composed of households at risk of poverty with equivalized incomes less than 60 percent of median income. Here, the subsample is ranked and five deciles are constructed while the subsample is divided according to the residence of the households in rural and urban areas. Reading the information in Tables 3.32 and 3.33 together, those facing the extreme risk of poverty, i.e. in the lowest decile of the sub-sample rely on benefits rather than income from employment though the households in the upper deciles receive much more of the total benefits. In redistributive sense, urban household facing the risk of poverty pay much of the taxes and social contributions primarily because of the peculiarity of the tax scheme hosting exemptions and lower rates concerning those with agricultural incomes and voluntary nature of the social insurance affiliation in a setting where most of those in agriculture work as unpaid family workers.

Table 3.32: Households-at-risk-of-Poverty - Means of Income and Income Components per Decile Group (TL)

Decile	HDI	EQUI_HDI	Original Income	Earned Income	All Benefits	All Taxes	Social Insurance Contributions
1	1.723,12	2.281,23	576,53	490,54	938,75	20,80	15,89
2	3.484,41	4.970,02	1.344,45	1.216,28	1.877,33	45,31	43,37
3	4.256,89	6.491,61	1.883,93	1.746,72	2.248,44	87,55	92,79
4	4.968,10	7.834,68	2.478,20	2.246,73	2.424,10	143,15	148,55
5	5.537,76	9.102,42	3.171,90	2.940,79	2.227,28	148,39	173,27
Poor	***3.993,40***	***6.134,74***	***1.890,46***	***1.727,70***	***1.943,06***	***89,02***	***94,74***
Rural	***3.712,08***	***5.966,39***	***2.229,15***	***2.128,05***	***1.346,58***	***50,79***	***69,24***
Urban	***4.193,68***	***6.254,58***	***1.649,35***	***1.442,68***	***2.367,69***	***116,23***	***112,90***

Source: Own simulations using TR-MOD

Table 3.33: Households-at-risk-of-Poverty - Share of Income and Income Components Received/Paid by Each Decile Group

Decile	HDI	EQUI_HDI	Original Income	Earned Income	All Benefits	All Taxes	Social Insurance Contributions
1	8,6	7,4	6,1	5,7	9,7	4,7	3,4
2	17,5	16,2	14,2	14,1	19,3	10,2	9,2
3	21,3	21,2	19,9	20,2	23,2	19,7	19,6
4	24,9	25,6	26,2	26,0	25,0	32,2	31,4
5	27,7	29,6	33,5	34,0	22,9	33,3	36,5
Poor	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***	***100,0***
Rural	***38,7***	***40,4***	***49,0***	***51,2***	***28,8***	***23,7***	***30,4***
Urban	***61,3***	***59,6***	***51,0***	***48,8***	***71,2***	***76,3***	***69,6***

Source: Own simulations using TR-MOD

Table 3.34: Household Composition – Average Numbers per Decile Group

Decile	Household Size	Number of Children	Working Age Population	Elderly	Economically Active	Economically Active (%)
1	3,15	1,08	1,13	0,49	0,30	9,11
2	3,17	0,92	1,23	0,46	0,50	14,22
3	3,41	0,94	1,45	0,41	0,56	15,86
4	3,74	1,17	1,50	0,34	0,63	17,76
5	4,15	1,39	1,75	0,23	0,72	19,26
Poor	***3,53***	***1,10***	***1,41***	***0,38***	***0,54***	***15,24***
Rural	***3,99***	***1,31***	***1,53***	***0,42***	***0,72***	***19,74***
Urban	***3,20***	***0,95***	***1,32***	***0,36***	***0,42***	***12,04***

Source: Own simulations using TR-MOD

The composition of the household in the subsample of households facing the risk of poverty is similar to the patterns observed for the total sample. Here, the variation and discrepancy between the working age population and economically active working age population in the households within and across deciles seems to be smoother than that is observed in the total sample while the lowest decile remains as the outlier representing risk of extreme poverty. The difference between the share of economically active population in the households between the rural and urban areas also confirm the existence of economic activity as unpaid family worker in the rural areas and relative inactivity in the urban areas.

3.3 Comparative Analysis – On the Possibility of Introducing Minimum Income Schemes in Southern Europe

The distinctiveness of the Southern Europe has been highlighted with respect to diverse perspectives in the social science literature. Not only the nations have followed a specific path to modernization (Ferrera, 2005), but they also share common traits in cultural backgrounds and political economies. Thus, the notion of "southern Europe" has both geographical and substantive, politico-economical connotation.

The region is distinct as regards social policy, especially with respect to the welfare regime. This is most evident in the realm of social assistance and fight against poverty. The safety net in southern Europe have evolved along the lines of a network of schemes, which are highly fragmented and mainly categorical, with disparate rules and differentiated benefit amounts (Ferrera, 1996; Eardley et. al., 1997; Gough, 1997; Ferrera, 2000 and 2005; Saraceno, 2002).

Though will be discussed in detail in the Chapter 4, it should be mentioned here that the new interest in the 1990s in the issues of poverty and social exclusion in Europe are primarily reflected in the launch of new policy initiatives in the field of social assistance, particularly the introduction of minimum income schemes. The French RMI (Revenu Minimum d'Insertion) experience of late 1980s led to the adoption of similar schemes in Southern Europe. 1988 onwards, some variations of RMI have been introduced by local governments in some regions of Spain. Portugal adopted a nationwide scheme in 1997 while Italy had an experimental scheme between 1998 and 2000 (Matsaganis et. al., 2003; Ferrera, 2005; Arriba and Moreno, 2002;

Mingione, 2004). Still, Greece remains as the only country in the region without any minimum income scheme experience (Matsaganis et. al., 2003; Matsaganis, 2005; Pereirinha, 2006; Busilacchi, 2008).

The idea of minimum income incorporates an income support component to maintain the minimum endowment of resources necessary to satisfy the basic needs. In most cases, the trend is towards linking the payments with labour market with employment supports and activation measures. Nevertheless, the analysis here refers only to the cash transfers for income guarantee both because the simulation of activation measures are impossible within static models and the peculiarities of the southern European labour markets point to coexistence of hyper-protected core insiders and precarious peripheral outsiders (Ferrera 1996 and 2005; Moreno 2000).

This chapter primarily deals with the quantitative analysis of policy reforms in relation to the establishment of minimum income schemes in southern Europe (namely Greece, Italy, Spain and Portugal) using EUROMOD framework introduced in the first section of this chapter. The first section will briefly introduce the technicalities of the comparative analysis in EUROMOD including the details of policy scenarios to be tested. Based on policy simulations carried out with EUROMOD version F2.9[27], second section will present the results for each scenario with respect to the baseline – i.e. original situation without any minimum income scheme except for Portugal. The third section will further discuss each scenario separately for each country on the basis of summary statistics produced by EUROMOD, considering 100 per cent take-up of the benefits introduced.

[27] Though EUROMOD F2.9 could be regarded as the new version, the countries used in the analysis were not fully integrated into the new interface of EUROMOD and basics of the analysis carried out remain unchanged with the C10 version.

3.3.1. Preliminaries of Comparative Analysis using EUROMOD

Portugal is the only country in southern Europe with a minimum income scheme which is included in the policy files of Portugal in EUROMOD. *Rendimento Minimo Guarantido (GMI)* is a means-tested social benefit scheme applying to all citizens legally resident in Portugal regardless of the nationality. Beneficiaries must be over the age of 18 but the scheme excludes pregnant women, young people with dependent children and dependent people with disabilities as the eligibility also requires availability for employment, occupational training and integration activities. The amount of benefit provided by GMI is not uniform. That is to say, the monthly benefit payment by GMI corresponds to the difference between total earnings of the household and the level of minimum income guarantee. The calculation of the household income incorporates overall income in the household but excludes family allowances, student grants and 20 percent of net income from training grants. The amount of the benefit, paid monthly for 12 months (also automatically renewable), is tied to the amount of the social pension, which is updated annually with respect to the consumer price index. The size (and composition) of the household is taken into account via the equivalence scale entitling 100 per cent of social pension for the first two adults, 70 per cent for each adult from the third and 50 per cent for each minor (Bruto de Costa, 2003, Capucho et. al. 2005, Rodrigues et. al., 2006).

The scheme is fully simulated in EUROMOD, based on the characteristics of the household, household disposable income and value of

social pension. The policy module (*polSBEN_MI_PT*) includes mainly three sub modules; eligibility, means-testing and benefit calculation. Figure 3.34 outlines the policy module in detail. Here PT_2003 system is utilized based on PT_2001 income list and policy spine files; and PT_2003 tax unit files.

Figure 3.18: GMI Policy Module in EUROMOD

param_name	period	PT_2003
first_module		Minimum Income
co_SBEN_Elig		makes every household eligible (in principle)
first_cond		0
ge_Age1		1
end_cond		0
ge_Age1_lt		0
SBEN_elig_type		2
TAX_UNIT		mi_family_pt
SWITCH		1
co_SBEN_Means		income means to be used in benefit calculations
Means_inc_il		mi_inc
TAX_UNIT		mi_family_pt
SWITCH		1
co_SBEN_Calc		calculate benefit
SingPay	m	145,6
wdrl_rt		1
es_htu		1
es_depad_num1		1
es_depad_num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0,5
es_ch_parity1_lt		99
es_ch_parity2		0
es_ch_parity2_lt		99
TAX_UNIT		mi_family_pt
SWITCH		1
co_SBEN_Elig		make families receiving benefit eligible (to apply lowe
first_cond		0
benelig		1
end_cond		0
benelig_name		cosim_polout
SBEN_elig_type		2
TAX_UNIT		mi_family_pt
SWITCH		0
co_limit		apply lower limit
must_be_elig		1
lo_limit	m	7,592
TAX_UNIT		mi_family_pt
SWITCH		0
end_module		

For this policy module, tax unit (*mi_family_pt*) is defined as the whole household (comprising of spouse or cohabiting partner and own children or lone parents divorced or separated with dependent child in household) where children are defined as those under the age of 18. Income means to be used in the calculation of the total household income corresponds to the income list (*mi_inc*) calculated as shown in Figure 3.19, where the amount is the vertical sum of the income components parameterized in the first column weighted by the amounts in the second column.

Reading Figure 3.18, eligibility module (*co_SBEN_elig* in use – i.e. *SWITCH=1*) indicates that at least one member in the tax unit must be eligible (*SBEN_elig_type=2*). Benefit calculation module (*co_SBEN_calc*) outlines equivalence scales to both the household head (*es_htu=1*) and the other members of the household (adults indicated by *es_depad*, dependent children indicated with *es_ch*). Thus the calculation of the benefit as the difference between the social pension scaled to the size/composition of the household and total household income is read straightforward as

[3.13] $$polSBEN_MI_PT = (SingPay * ES) - (co_SBEN_Means * wdrl_rt)$$

where *wdrl_rt = 1* for the head of the tax unit.

Figure 3.19: Components of Household Income in *polSBEN_MI_PT*

name_inc_list	mi_inc	Description
coEDY	0	*Student payments*
coEMPY	**0,8**	*Current Gross Employment Income*
coLUMPY	**1**	*Lump sum income*
coHB	0	*Housing benefits*
coINVY	**1**	*Gross Investment income*
coIRREGY	0	*Other irregular lump sum benefits*
coLOCTAX	0	*Sub-national (local or regional) taxes*
coMAINTY	**1**	*Maintenance payments received*
coMATERY	0	*Maternity payments*
coOTHERY	**1**	*Other regular primary income*
coOTHTAX	0	*Other personal taxes and contributions*
coPROPY	**1**	*Gross Property income*
coPRVPEN	**1**	*Gross Private pension benefit payments*
coPRVTRN	**1**	*Other private transfers received*
coREGY	**1**	*Other regular cash payments*
coSLFEMY	**0,8**	*Self-Employment Income*
coWTAX	0	*Wealth or national property taxes*
pt_cap_it	0	*PT: Capital Income Taxes*
pt_eesic	0	*PT: Employee Social Insurance Contributions*
pt_ersic	0	*PT: Employer Social Insurance Contributions*
pt_it	0	*PT: Income Tax*
pt_it_ded_hs_debt	0	*PT: Housing Debt, Income Tax Deduction*
pt_it_emp_ded	0	*PT: Employment Income, Income Tax Deduction*
pt_it_pen_ded	0	*PT: Income tax pension income deduction*
pt_it_slfemp_ded	0	*PT: Self-Employment Income Tax Deduction*
pt_sben_cb	0	*PT: Child Benefits*
pt_sben_mi	0	*PT: Income Supplement to ensure Minimum Income*
pt_sben_socpen	**1**	*PT: old-age social pension*
pt_SESIC	0	*PT: Self-Employed Social Insurance Contributions*
PTBEN01	**1**	*PT: unemployment related benefits*
PTBEN01A	0	*PT: Unemployment related benefits*
PTBEN02	**1**	*PT: old-age insurance*
PTBEN02A	0	*PT: Old-age Insurance (RGSS)*
PTBEN02B	0	*PT: Old-age Agric.Insurance (RESSA)*
PTBEN03A	0	*PT: Survivors related Benefits*
PTBEN04	**1**	*PT: survivors related benefits*
PTBEN04A	0	*PT: Sickness/invalidity Benefits*
PTBEN05	**1**	*PT: sickness benefits*
PTBEN05B	0	*PT: Family Benefits*
PTBEN06	**1**	*PT: invalidity pension*
PTBEN07A	0	*PT: Social Assistance*
PTBEN08	**1**	*PT: family benefits*
PTBEN10	-	*PT: social assistence*

This policy module would constitute the basis of the comparative policy analysis in EUROMOD via introducing several scenarios as modifications. The policy transfers from one country to another by implementing one country's benefits in another and vice versa, called as "benefit swapping", have been utilized by using EUROMOD especially in the realm of policies targeting child poverty. The examples of such exercises could be found in Immervoll et. al. (2000), Sutherland (2001), Levy (2003), Levy et. al. (2005), Matsaganis et.al. (2007) and Salanaskauite (2009). All these studies have relied on replacement of all benefits related with children with the new "swapped" scheme. For our analysis, here, as the Portuguese minimum income scheme policy is designed as to serve as the last resort (Capucha et. al., 2005; Rodrigues et. al., 2006), the policy module has been introduced into the systems of Italy, Spain and Greece without replacing any existing policy in the system. Also, some studies have aimed to test for "budget neutral" policy reforms with instituting scaling for the monetary parameters of the borrowed policies (for instance see Levy et. al., 2005 and Matsaganis et.al., 2007). Given that the exercises introduced here also aim to discuss the costs and the budgetary burden of different scenarios, budget neutrality has not also been implemented. Table 3.34 outlines the systems utilized in the comparative analysis retrieved from EUROMOD.

Table 3.34: Basic Components for Country Systems

Country	System	Income Lists	Tax Unit	Policy Spine
Portugal	PT_2003	PT_2001	PT_2003	PT_2001
Greece	GR_2003	GR_2003	GR_2001	GR_2003
Italy	IT_2001	IT_2001	IT_1998	IT_2001
Spain	SP_2003	SP_2003	SP_2003	SP_2003

***Case 1:* Swapping polSBEN_MI_PT to other countries – Simple Swap**

In this case the policy module in Figure 3.18 is not changed with respect to the means testing procedures, eligibility criteria and benefit calculation. The income lists are modified in relation to the existing benefits in the country systems. That is to say, the income parameters and weights assigned are kept the same while the inclusion of the benefit incomes for the calculation of income is tailored for each country[28]. For the sake of coherence, the implementation will be described to illustrate for one country example, i.e. Greece, while the similar steps are carried out separately for the other countries and for each policy scenario. Box 3.2 contains an extended version of EUROMOD Recipes by Lietz (2006) and Lietz and Levy (2006) and describes how the policy swaps have been carried out in EUROMOD.

Figure 3.20: Case 1 – Simple Swap

param_name	period	GR_MinInc1
first_module		Minimum Income - Case 1
co_SBEN_Elig		
first_cond		0
ge Age1		1
end_cond		0
ge Age1 lt		0
SBEN elig type		2
TAX UNIT		mi_family_gr
SWITCH		1
co_SBEN_Means	income means to be used in benefit c	
Means_inc_il		mi_inc
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_Calc	calculate benefit	
SingPay	m	165,0315
wdrl rt		1
es htu		1
es depad num1		1
es depad num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0,5
es ch parity1 lt		99
es ch parity2		0
es ch parity2 lt		99
TAX UNIT		mi_family_gr
SWITCH		1

[28] As in the Figure 3.19, weights are kept constant across common income variables while relevent benefits (i.e. unemployment,survivors/sickness etc.) are selected among the set of all benefits given for each country.

Box 3.2: Implementation of GMI in EUROMOD for different cases

Step 1 – Changes to the policy files and control file

A new system for the minimum income scheme is added in all of the policy files as a new column by copying the 2003 system renamed as *GR_MinInc1*. Then, the income list, tax unit and spine parameters are renamed as *GR_MinInc1*.

Step 2 – Changes to the spine file

A new spine is added as a new sheet by copying the spine for 2003 system renamed as *spine_GR_MinInc1*. As the spine ends with *output_std_gr* and *output_ext_std_gr,* minimum income policy should be inserted as the last policy just above those two because the calculation of the income necessitates the computation of the disposable income. So, *mininc1_gr* is inserted in the policy spine, switched on and assigned the variable *co_temp1* with description added.

Step 3 – Changes to the income list file

A new income list is added as a new sheet named as *il_GR_MinInc1* by copying *il_GR_2003*. Here, the base set is then changed from *il_GR_2001* to *il_GR_2003.* Disposable income and output benefit income lists are added by inserting three columns on the base set, *mi_inc*, *std_dispy* and *std_dispy_old ~ std_dispy*. The variable *co_temp1* is switched on (1) for *std_dispy* and off (0) for *std_dispy_old ~ std_dispy.*

Step 4 – Changes to the tax unit file

Though tax unit definitions are the same, for the sake of coherence, a new tax unit sheet in the GR tax unit file is created by copying *tu_GR_2001* and renamed as *tu_GR_MinInc1*. Portuguese tax unit *mi_family_pt* is inserted and named as *mi_family_gr.*

Step 5 - Changes to the policy file

A new system is added to each policy by copying 2003 system renamed as *GR_MinInc.* Then Portuguese minimum income policy (*polSBEN_MI_PT*) is copied to the Greek policy file *pol_GR.xls* and named as *polmininc1_gr*. All necessary changes were implemented – renaming the tax units, income lists etc. Besides the minimum income guarantee, *SingPay,* is taken as the amount corresponding to the Greek social pension, set as 165.0315, while leaving the rest of the benefit calculation module same.

Step 6 – Rerunning the model with modifications

***Case 2a*: Swapping polSBEN_MI_PT to other countries – Extended Swap 1**

This case modifies the original policy module in Figure 3.18, while also swapping to other countries with the ultimate aim of extending the number of eligible households. Considering the bias of the southern European tax-benefit systems towards contributory benefits and pensions, the calculation of the household income is changed by excluding all the benefits accounted for in the total household income. The means-testing procedures, eligibility module and benefit calculation modules remained the same as in Case 1. As the calculations are based on Case 1 system, only income list files have been altered (*mi_inc_exc_ben*) to exclude the benefits by setting their value equal to 0 in the new income list file generated with the suffix *MinInc2a* in all country systems.

Figure 3.21: Case 2a – Extended Swap 1

param_name	period	GR_MinInc2a
first_module		Minimum Income - Case 2a
co_SBEN_Elig		
first_cond		0
ge Age1		1
end_cond		0
ge Age1 lt		0
SBEN elig type		2
TAX UNIT		mi_family_gr
SWITCH		1
co_SBEN_I	income means to be used in benefit	
Means_inc_il		mi_inc_exc_ben
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_C	calculate benefit	
SingPay	m	165,0315
wdrl rt		1
es htu		1
es depad num1		1
es depad num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0,5
es ch parity1 lt		99
es ch parity2		0
es ch parity2 lt		99
TAX UNIT		mi_family_gr
SWITCH		1

***Case 2b:* Swapping polSBEN_MI_PT to other countries – Extended Swap 2**

This case modifies the original policy module while also swapping to other countries. The ultimate aim is to identify the relative importance (if any) of the pensions and other old age benefits. This time, in line with the reasoning in Case 2a, calculation of the household income is altered by excluding only pension and old-age benefits. The means-testing procedures, eligibility module and benefit calculation modules remained the same as in Case 1. Again, solely income list files have been altered (*mi_inc_exc_pen*) to exclude these pension and old-age benefits by setting their value equal to 0 in the new income list file generated with the suffix *MinInc2b* in all country systems.

Figure 3.22: Case 2b – Extended Swap 2

param_name	period	GR_MinInc2b
first_module		Minimum Income - Case 2b
co_SBEN_Elig		
first_cond		0
ge Age1		1
end_cond		0
ge Age1 lt		0
SBEN elig type		2
TAX UNIT		mi_family_gr
SWITCH		1
co_SBEN_I		income means to be used in benefit ca
Means_inc_il		mi_inc_exc_pen
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_C		calculate benefit
SingPay	m	165,0315
wdrl rt		1
es htu		1
es depad num1		1
es depad num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0,5
es ch parity1 lt		99
es ch parity2		0
es ch parity2 lt		99
TAX UNIT		mi_family_gr
SWITCH		1

<u>Case 3a:</u> Swapping polSBEN_MI_PT to other countries – Selective/variable Universality

The peculiarity of this case lies in the notion of universality injected to the policy module. Though still means-tested, this hypothetical policy assumes a universal benefit payment, which is equal to the threshold itself, rather than paying the difference between the income and the threshold. Means-testing, income list, tax unit definitions remaining the same as in Case 1, the benefit calculation module – still based on Case 1 - is modified (*co_SBEN_Calc*), with only setting *wdrl_rt =0*, so that amount of the benefit is calculated solely by scaling the threshold value according to the size and composition of the household, assigning different amounts of benefits to different households (*MinInc3a*). Thus, the scheme is selective in utilizing means-test while the universality in the level of benefits is sensitive to the household, thus determined in a varying manner along the eligible households.

Figure 3.23: Case 3a – Selective/Variable Universality

param_name	period	GR_MinInc3a
first_module		Minimum Income - Case 3a
co_SBEN_Elig		
first_cond		0
ge_Age1		1
end_cond		0
ge_Age1_lt		0
SBEN_elig_type		2
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_Means	income means to be used in benefit ca	
Means_inc_il		mi_inc
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_Calc	calculate benefit	
SingPay	m	165,0315
wdrl_rt		0
es_htu		1
es_depad_num1		1
es_depad_num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0,5
es_ch_parity1_lt		99
es_ch_parity2		0
es_ch_parity2_lt		99
TAX_UNIT		mi_family_gr
SWITCH		1

***Case 3b:* Swapping polSBEN_MI_PT to other countries – Selective Universality**

This case modifies Case 3a by establishing universality in terms of the benefit amount. Following the universal benefit payment in *MinInc3a,* this hypothetical policy intends to pay each and every household the same amount of benefit that is equal to the threshold itself. Therefore, all equivalence scale variables, except the one for the head of the tax unit (*es_htu*) in the benefit calculation module are set equal to 0. Therefore, regardless of the size and composition of the household, this scheme (*MinInc3b*) institutionalizes selective universality by granting all eligible households the same amount of benefit.

Figure 3.24: Case 3b – Selective Universality

param_name	period	GR_MinInc3b
first_module		Minimum Income - Case 3b
co_SBEN_Elig		
first_cond		0
ge_Age1		1
end_cond		0
ge_Age1_lt		0
SBEN_elig_type		2
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_I		income means to be used in benefit ca
Means_inc_il		mi_inc
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_C		calculate benefit
SingPay	m	165,0315
wdrl_rt		0
es_htu		1
es_depad_num1		1
es_depad_num2		0
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		0
es_ch_parity1_lt		99
es_ch_parity2		0
es_ch_parity2_lt		99
TAX_UNIT		mi_family_gr
SWITCH		1

Case 4a: Swapping polSBEN_MI_PT to other countries – Proxy child benefit

This case introduces a policy bias towards the families with children by the increasing threshold amount by 20 per cent. The amount of the benefit is calculated as in Case 1 where the difference between the threshold and total household income. However, the equivalence scale variables for children (*es_ch_parity1*) are set to 1.2 even if there is one child in the household (*es_ch_parity1_lt = 1)*. Keeping the eligibility and means testing modules the same, the ultimate aim is to give incrementally more to the households with children. In case of countries without any benefit scheme targeting children, this could be regarded as a proxy child benefit (*MinInc4a*). An extended version might include replacement of other child benefits in the systems of countries but it is out of the scope of this comparative analysis as mentioned above.

Figure 3.25: Case 4a – Proxy Child Benefit

param_name	period	GR_MinInc4a
first_module		Minimum Income - Case 4a
co_SBEN_Elig		
first_cond		0
ge Age1		1
end_cond		0
ge Age1 lt		0
SBEN elig type		2
TAX UNIT		mi_family_gr
SWITCH		1
co_SBEN_Means	income means to be used in benefit ca	
Means_inc_il		mi_inc
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_Calc	calculate benefit	
SingPay	m	165,0315
wdrl rt		1
es htu		1
es depad num1		1
es depad num2		0,7
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		1,2
es ch parity1 lt		1
es ch parity2		0
es ch parity2 lt		99
TAX UNIT		mi_family_gr
SWITCH		1

***Case 4b:* Swapping polSBEN_MI_PT to other countries – Proxy Selective Semi-Universal Child Benefit**

This case modifies Case 4a by establishing universal benefit amount as in Case 3b. Following proxy child benefit payments in *MinInc4a,* this hypothetical policy differentiates between households with and without children in terms of benefit amounts. But it also aims to pay each and every household in one group the same amount of benefit that is equal to the threshold itself (which is 20 percent more for households with children). Therefore, with setting *wdrl_rt = 0*, the amount of the benefit is calculated solely by scaling the threshold value according to the composition of the household, assigning different but uniform amounts of benefits to households with and without children.

Figure 3.26: Case 4b – Proxy Selective Semi-Universal Child Benefit

param_name	period	GR_MinInc4b
first_module		Minimum Income - Case 4b
co_SBEN_Elig		
first_cond		0
ge_Age1		1
end_cond		0
ge_Age1_lt		0
SBEN_elig_type		2
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_M		income means to be used in benefit ca
Means_inc_il		mi_inc
TAX_UNIT		mi_family_gr
SWITCH		1
co_SBEN_C		calculate benefit
SingPay	m	165,0315
wdrl_rt		0
es_htu		1
es_depad_num1		1
es_depad_num2		0
es_depad_num1_lt		1
es_depad_num2_lt		99
es_ch_parity1		1,2
es_ch_parity1_lt		1
es_ch_parity2		0
es_ch_parity2_lt		99
TAX_UNIT		mi_family_gr
SWITCH		1

3.3.2. Results

Using EUROMOD, the cross country comparative analysis is carried out for a set of policy instruments. Table 3.35 below reviews set of policies implemented in a compact outfit.

Table 3.35: Policy Swaps for Minimum Income Schemes

	Name	**Altered Parameter**	**Alteration**
Case 1	Simple Swap	None	None
Case 2a	Extended Swap I	Household Income	Exclude all other benefits in calculating income lists
Case 2b	Extended Swap II	Household Income	Exclude only pension and old-age benefits in calculating income lists
Case 3a	Selective/Variable Universal Benefit	Amount of the benefit through scaling parameter	Means-test applied but (universal) benefit payment scaled for household size using ES.
Case 3b	Selective Universal Benefit	Amount of benefit	All eligible households are granted the universal amount of benefit
Case 4a	Proxy Child Benefit	Amount of benefit for households with children	Apply the baseline but pay 20% more to households with children
Case 4b	Proxy Selective Semi-Universal Child Benefit	Amount of benefit for households with children	Benefit amount set fixed but differentiating between households with and without children (as in Case 4a)

The discrepancies between the policies inherit the differences in the tax-benefit systems of the individual countries. Indeed, the making of income lists for the policy scenarios necessitated a brief review of the policies in country reports of EUROMOD and selection of the relevant policies within the national policies in the country systems. In broad terms, one needs to identify the components of income corresponding to the categories of income utilized in *polSBEN_MI_PT*. Table 3.36 below reviews the income list components used in the minimum income scheme swapped and modified in the seven types of cases implemented.

Table 3.36: Components of Income List *mi_inc* in Country Systems

Type of Income	**Portugal**	**Greece**	**Italy**	**Spain**
Old Age Social Pension*	*pt_sben_socpen*	*gr_sben_socpen* *gr_sben_oga_farmer*	*itBENsoc*	*spBEN005*
Unemployment Related Benefits	*PTBEN01*	*grben_un*	*itBENCIG* *itBENCOM*	*spBE001A* *spBE001B*
Old Age Insurance	*PTBEN02*	*grben_oa*	*itPEN1*	*spBE002a* *spBE002b* *spBE002c* *spBE002d*
Survivors Related Benefits	*PTBEN04*	*grben_su*	*itPEN3*	*spBE003a* *spBE003b*
Sickness Benefits	*PTBEN05*			
Invalidity Pension	*PTBEN06*	*grben_si*	*itPEN2*	*spBEN004*
Family Benefits	*PTBEN08*	*gr_sben_cb_large_family* *gr_sben_cb_unprotected* *gr_sben_cs_cb* *gr_sben_cb*	*it_sben_FAL1p0kIT* *it_sben_FAL1pkIT* *it_sben_FAL2p0kIT* *it_sben_FAL2pkIT*	*spBENFAM*

*refers to regional minimum income scheme in Spain
Source: Own compilation using EUROMOD version F2.9

While implementing the policies, the amount of the threshold value which is set as the social pension in *polSBEN_MI_PT* (i.e. 145,60 EUR) is modified according to the levels indicated in the country reports of Spain, Italy and Greece[29] as 223,09 EUR, 180,17 EUR and 165,03 EUR respectively.

Using EUROMOD, Tables 3.37a below presents the rates of poverty under different policy scenarios for the southern European countries while Tables 3.37b and 3.37c provide the child poverty rates and in-work poverty respectively in comparative context.

Table 3.37a: Percentage of Population at-risk-of-poverty

Country	Baseline	Case 1	Case 2a	Case 2b	Case 3a	Case 3b	Case 4a	Case 4b
Portugal	20,9	20,9	15,4	17,1	11,7	15,2	20,9	13,6
Greece	20,1	20,1	15,3	16,3	11,7	13,7	20,1	12,9
Italy	20,6	20,1	19,2	19,7	17,2	18,1	20,1	17,3
Spain	18,9	18,9	12,3	16,1	9,5	10,5	18,9	9,0

Table 3.37b: Children at-risk-of-poverty

Country	Baseline	Case 1	Case 2a	Case 2b	Case 3a	Case 3b	Case 4a	Case 4b
Portugal	27,5	27,5	26,1	27,2	15,3	24,1	27,5	18,7
Greece	18,3	18,3	18,5	19,4	10,2	14,0	18,3	10,5
Italy	26,7	26,8	26,9	27,1	22,7	24,8	26,8	22,4
Spain	25,5	25,5	22,8	25,7	11,8	18,1	25,5	12,2

Table 3.37c: In-work Poverty

Country	Baseline	Case 1	Case 2a	Case 2b	Case 3a	Case 3b	Case 4a	Case 4b
Portugal	10,3	10,3	9,8	10,3	4,9	7,7	10,3	6,6
Greece	11,5	11,5	12,2	12,4	6,3	8,3	11,5	7,3
Italy	11,2	11,3	11,4	11,4	9,1	10,0	11,3	9,3
Spain	9,8	9,8	9,2	10,2	4,3	6,0	9,8	4,7

[29] For Spain, as mentioned in the note below Table 3.36, the amount of social pension is calculated as the average amount of minimum income guarantee. It is simply the total annual amount of MIG expenditure in 2001 divided by the number of claimants and then averaged for the monthly value.

For Portugal and Greece, Case 3a where the scheme grants universal amount of benefits but scaled to the household size seems to be more effective among the other cases implemented. For Italy, while the same policy scores out as the most effective case compared to the baseline, the impact is relatively lower. For Spain, Case 4b introducing semi-universal proxy child benefit seems to be more effective in reducing the amount of population under the risk of poverty.

The hypothetical policies created in this comparative analysis are not mainly aimed at dealing with child poverty but the design of the policies inherently leaves some room to test for this kind of impact as well. As documented in the baseline column of Table 3.37b, the percentage of children at risk of poverty is significantly higher than the percentage of total population at risk of poverty except for Greece. This peculiarity could be explained by the existence of several child benefit schemes in Greek system which is marked by the increases in the amount of benefit payments exponentially with the number of children (Matsaganis and Tsakloglou, 2004).

The hypothetical policies also indirectly affected the risk of poverty for those at work in varying magnitudes and amounts across countries and scenarios. Table 3.37c demonstrates that with respect to the baseline, Case 3a have decreased the risk of poverty for those at work almost by half, with less impact for Italy. In-work poverty, by definition, connotes for low levels of earnings despite being economically active (either wage earner or self-employed). The level of cash income injected to the households in with hypothetical policy scenarios created affects the risk of poverty for those at work through altering the household disposable income. The variation of the

impact across the cases could be discussed in relation to the nature of the policies inserted. That is to say, cases 3a, 3b and 4b inherently assume universality in benefit amounts while benefit amount is calculated as the difference between the threshold and income base calculated (i.e. income list *min_inc*) for the rest of the cases. In this regard, as the calculation income base includes of 80 per cent of income from employment, non-universal benefit cases are less likely to create significant impact for the poor households with economically active working population despite the low levels of earnings. Indeed, for Italy and Greece, in Case 2a where income lists are calculated on the basis of income from employment with exclusion of all benefits, the risk of poverty for those at work increases.

As a general indicator of distribution of income across the population Gini coefficients calculated by using disposable income simulated in the model are presented in comparative context across the policy simulations in Table 3.38.

Table 3.38: Inequality across policy simulations - Gini based on HDI

Country	Baseline	Case 1	Case 2a	Case 2b	Case 3a	Case 3b	Case 4a	Case 4b
Portugal	0,361	0,361	0,340	0,348	0,294	0,320	0,362	0,307
Greece	0,334	0,325	0,297	0,302	0,256	0,274	0,323	0,264
Italy	0,349	0,346	0,340	0,343	0,316	0,326	0,346	0,320
Spain	0,310	0,303	0,275	0,289	0,236	0,258	0,302	0,244

The improvements in Gini coefficient for all countries are significantly higher for Case 3a and Case 4b. These two cases share in common the notion of universality of the amount of the benefit granted and paying more to the large households and households with children, respectively. It could be argued that the relative significance of the large families (especially those comprising of more adults than children) and households with children in the overall population is manifested in the smoothed distribution of income in the aftermath of introduction of the policy scenarios while universality of the benefit amount have also improved the distribution across deciles. Indeed, when the composition of households across deciles in the baseline scenarios are considered, in the lowest three deciles, the amount of child population are higher in Italy and Portugal (partly in Spain) and the elderly population are significantly higher in all four countries with the share of economically active working age population in the households considerably lower (almost one third of the share in the highest deciles).

As mentioned before, policy scenarios tested here do not assume budget neutrality or do not replace similar policies in the country systems, if any. Therefore, the impacts on certain indicators should be treated as morning-after results of the reforms which may counterbalance or counteract against any other benefits in the country systems. So, the results presented could be regarded as preliminary analyses for variations of minimum income policies that necessitate further calibration to find out the optimal policy mix.

3.3.3. Reflections on the "Possibility": Leaning against the wind?

Quantitative cross-country comparisons in policy analyses prove to be helpful in demonstrating the similarities between countries while also showing-off the divergent trajectories mostly based on certain specificities of the countries involved. In this regard they have the potential to give some hints or clues in arguing for or objecting to any changes in the policies on the basis of the scientific information generated. In the previous section, key findings of cross-country variations across different policy scenarios are presented. This section will focus on the distributional impacts of the policy scenarios separately in country cases so as to shed some light on the discussion on the trajectory of the reforms in chapter 4.

Tables 3.39 to 3.42 below review the distributional impact of the policy scenarios for country cases. For these tables, means of income and income components given are PPP adjusted while at risk of poverty are defined as households with income less than 60 per cent of median equivalized disposable income. The logic of ranking to form deciles replicates that of section 3.2.

Table 3.39: Policy Reforms – Italy

	Baseline	Case 1	Case 2a	Case2b	Case 3a	Case 3b	Case 4a	Case 4b
Mean of Disposable Income – All Population	2.408	2.272	2.290	2.282	2.494	2.435	2.272	2.471
Mean of Disposable Income – Poor	844	812	849	829	957	929	812	948
Mean of All Benefits incl. Pensions – All population	701	660	660	660	660	660	660	660
Mean of All Benefits incl. Pensions - Poor	412	367	327	344	367	361	367	371
Share of Disposable Income – Poor	7,0	6,9	6,6	6,7	6,5	6,4	6,9	6,3
Share of All Benefits – Poor	11,7	10,7	8,9	9,6	9,4	9,2	10,7	9,3
Share of Economically Active Working Age - Poor	24,7	25,6	27,8	26,9	23,8	25,2	25,6	24,1
Share of Economically Active Working Age – All households	45,4	45,4	45,4	45,4	45,4	45,4	45,4	45,4
Poverty Line	602	603	607	606	677	656	603	669
Number of deciles under the poverty line	2	2	1	1	1	1	2	1

Table 3.40: Policy Reforms – Spain

	Baseline	Case 1	Case 2a	Case2b	Case 3a	Case 3b	Case 4a	Case 4b
Mean of Disposable Income – All Population	2.200	1.906	2.010	1.968	2.496	2.304	1.908	2.400
Mean of Disposable Income – Poor	769	711	908	783	1.027	1.048	722	1.117
Mean of All Benefits incl. Pensions – All population	530	457	457	457	457	457	457	457
Mean of All Benefits incl. Pensions - Poor	389	335	86	250	313	236	335	295
Share of Disposable Income – Poor	7,2	7,7	4,6	6,3	4,6	4,0	7,8	3,7
Share of All Benefits – Poor	15,2	15,2	1,9	8,7	7,6	4,5	15,2	5,2
Share of Economically Active Working Age - Poor	25,2	25,9	48,7	34,7	21,9	35,6	25,9	27,3
Share of Economically Active Working Age – All households	51,4	51,4	51,4	51,4	51,4	51,4	51,4	51,4
Poverty Line	486	486	508	503	667	595	486	632
Number of deciles under the poverty line	1	1	1	1	0	1	1	0

Table 3.41: Policy Reforms – Portugal

	Baseline	Case 1	Case 2a	Case2b	Case 3a	Case 3b	Case 4a	Case 4b
Mean of Disposable Income – All Population	1.804	1.804	1.560	1.543	1.890	1.768	1.506	1.838
Mean of Disposable Income – Poor	508	508	659	605	694	692	505	719
Mean of All Benefits incl. Pensions – All population	391	391	380	363	710	588	326	658
Mean of All Benefits incl. Pensions - Poor	339	339	263	273	556	444	280	521
Share of Disposable Income – Poor	7,6	7,6	5,3	5,9	4,9	5,6	7,5	5,4
Share of All Benefits – Poor	19,4	19,4	8,8	11,3	10,5	10,8	19,3	11,0
Share of Economically Active Working Age – Poor	30,8	30,8	50,6	45,0	25,1	35,4	30,8	28,9
Share of Economically Active Working Age – All households	59,7	59,7	59,7	59,7	59,7	59,7	59,7	59,7
Poverty Line	347	347	358	355	464	428	347	452
Number of deciles under the poverty line	2	2	1	1	1	1	2	1

Table 3.42: Policy Reforms – Greece

	Baseline	Case 1	Case 2a	Case2b	Case 3a	Case 3b	Case 4a	Case 4b
Mean of Disposable Income – All Population	1.655	1.303	1.377	1.363	1.691	1.593	1.304	1.664
Mean of Disposable Income – Poor	535	458	540	526	646	638	466	663
Mean of All Benefits incl. Pensions – All population	399	312	312	312	312	312	312	312
Mean of All Benefits incl. Pensions – Poor	264	206	85	116	172	161	206	176
Share of Disposable Income – Poor	7,2	7,8	5,9	6,4	5,4	5,8	7,9	5,8
Share of All Benefits – Poor	14,7	14,6	4,1	6,1	7,8	7,4	14,6	8,3
Share of Economically Active Working Age – Poor	23,3	23,4	35,6	33,2	21,3	25,0	23,4	21,6
Share of Economically Active Working Age – All households	43,4	43,4	43,4	43,4	43,4	43,4	43,4	43,4
Poverty Line	362	362	384	380	494	457	362	486
Number of deciles under the poverty line	2	2	1	1	1	1	2	1

Table 3.43: Basic Demographic Data

Country	Reference Year	Population	Households
Italy	2001 TB System	56.996.000	19.909.000
Spain	2003 TB System	44.878.945	14.000.000
Portugal	2003 TB System	10.023.590	3.145.700
Greece	2003 TB System	10.542.100	3.720.085

Source: EUROMOD Country Reports

The information provided in the country tables above provides information to understand the magnitude of the impact of policy reforms in relation to the baseline systems. In Italy, introduction of a minimum income policy with a simple swap of Portuguese scheme has less substantial but relative impact on poverty and inequality. When analysed in detail across different scenarios, the policy reforms that inhibit universal payment of benefits (cases 3a, 3b and 4b) significantly increase the mean income across both the total population and poor households, while also pushing the poverty line up. Indeed, using headcount index and population information provided in 3.37a and 3.43 respectively, the number of people that are taken out of poverty by these universalizing policy reforms range approximately between 1.4 million and 1.9 million. As the number of poor decreased in these scenarios, the overall distributional impact with respect to the shares of disposable income and benefits respectively show decreases in the amounts received by the poor households. The policy reforms concerned with means testing where the calculation of reference income excludes all benefits and only pension benefits respectively, namely cases 2a and 2b, exhibit increasing shares of economically active working age population within the households at risk of

poverty. The minimum income schemes implemented in these two scenarios, thus, assign entitlement to the households with high share of pension and all other benefit incomes. Because the exclusion of these components of income implied substantial decrease in the level of household income, falling far behind the threshold, which is to be complemented by the amount of minimum income benefit up to the level of threshold. Apparently the households with elderly who might have pension benefit incomes and with children are more likely to be included in the share of population that are taken up above the poverty line by implementing cases 2a and 2b. Therefore, the households at risk of poverty in Italy under both Case 2a and Case 2b have substantially higher number of economically active working age members to be considered among the working poor as the incomes earned do not suffice to overcome the risk of poverty.

The introduction of a national minimum income scheme in Spain using the parametrics of Portuguese scheme at first instance did not seem to have any substantial impact on the level of poverty and inequality as compared to the baseline. While increasing the share of disposable income of the poor households, the decrease in the mean values of disposable income for all households and for households at risk of poverty implies that this policy scenario (Case 1) has primarily targeted the extreme poor. The universal payment scenarios (Cases 3a, 3b and 4b) have considerable impact on reducing the number of people at risk of poverty between 3.7 million (Case 3b) and 4.4 million (Case 4), substantially decreasing the poverty and inequality. Though the mean income across the population has increased by approximately 10 per

cent, the levels of both mean income among the poor and the poverty line have increased by almost 50 per cent and 30 per cent respectively. The substantial impact of the policy scenario with proxy child benefit (Case 4b) in Spain could be attributed to the lack of cash transfers targeting the families with children. This is supported by the relatively high share of economically active working age population under Case 4a and Case 3b with respect to the baseline and lower share under Case 3a where the amount of benefit is scaled for the size of the household. The decreases in the share of benefits received by the poor households under these policy scenarios in Spain are more significant than in Italy. In relation to the pension bias of the southern European regimes, the differential impacts of the policy reforms dealing with the alteration of reference income considered in means testing refer to the importance of pension and old-age benefits for the population at risk of poverty in Spain. Indeed, the share of benefits received by the poor under Case 2a, as barely 2 per cent and considerably high share of economically active working age population in the households at risk of poverty, both imply that any policy reform like Case 2a has the potential to remove the risk of poverty for the households with elderly and pension benefit incomes while aggravating the situation for households with younger adults with earned incomes. The modification of reference income towards excluding the pension and old age benefits in Case 2b also confirms the observation that the share of all other benefits received by the households at risk of poverty remain considerably higher while the levels of these benefits would not be regarded to be adequate to overcome the risk of poverty.

Despite being the only country with a mature minimum income scheme in the region, the baseline (and Case 1 which is the same as baseline) in Portugal demonstrates that the policy did not fully address the issues of poverty and inequality as of 2003 with rates of poverty almost the same as those in the countries lacking the scheme. Thus, the hypothetical scenarios presented here, thus, may serve as the potential reform proposals for Portugal. In this regard, certain observations could be made: First, the universality injected in Portuguese tax-benefit system with cases 3a, 3b and 4b prove that it substantially matters for both increasing the levels of income of the population, reducing the risk of poverty and decreasing inequality of income across deciles. Indeed, such design of the policies helps to remove the risk of poverty for more than half a million people. Testing the impact of increasing the amount of benefit for households with children with Case 4a demonstrate that only few households facing the risk of poverty were made better off with slight declines of levels in means of disposable income and benefits among the poor households while the share of benefits received by these group almost stagnates when compared to the baseline. The scheme in Portugal is also known for the significance of the work insertion component. In this respect, the relative decline in the headcount indices of poverty as well as share of benefits received by the households at risk of poverty across all policy scenarios imply that these types of parametric reforms matter. Nevertheless, the substantial increase in the share of economically active working age population when reference income for means testing is altered (Case 2a and Case 2b) is not coupled with similar decreases in the share of all benefits for the households at risk of poverty, the number of which have indeed declined substantially. Thus,

it could be argued that the activation component also needs to be worked out with respect to the level of earnings, duration of the contract etc. in parallel to the parametrical changes to be introduced via policy reforms.

The case of Greece is illustrative in its potential to demonstrate the possibility of introducing a minimum income scheme coexisting with all other plethora of micro-schemes catering for different segments of population. While introducing a new policy to such a setup, one should take into account the potential impacts with respect to the distribution of income both the within and across deciles. Most of the benefit schemes in the Greek system are of contributory nature along the occupational segmentation of the population which does not fully correspond to the ranking and distribution across 10 per cent deciles. In this respect, the distribution of the benefits received across deciles in the baseline scenario demonstrates that one-fifth of the benefits are received by the 3rd and 4th deciles and 6th and 7th deciles respectively. Table 3.44 below reviews the distribution of all benefits received across deciles for all policy scenarios. The introduction of the minimum income scheme via swapping Portuguese scheme in Case 1 does not change this at all as also supported by evidence from poverty and inequality indices presented in comparative tables of section 3.3.2.

Table 3.44: Share of All Benefits Received by Each Decile Group – Greece (%)

Decile	Baseline	Case 1	Case 2a	Case 2b	Case 3a	Case 3b	Case 4a	Case 4b
1	6,0	6,1	2,3	2,6	6,2	4,6	6,5	6,2
2	8,6	8,4	4,3	5,7	9,2	7,1	8,1	8,6
3	10,0	10,0	7,2	8,5	11,7	9,4	10,0	11,0
4	11,2	11,2	8,5	9,2	10,0	12,0	11,2	10,8
5	9,3	9,3	10,7	9,7	9,0	9,1	9,3	10,2
6	10,8	10,7	12,9	11,5	10,3	11,0	10,7	11,1
7	11,6	11,7	14,5	14,3	11,7	13,2	11,7	10,4
8	9,9	9,9	14,1	13,6	10,0	10,6	9,9	10,1
9	11,1	11,1	11,7	11,6	10,6	11,3	11,1	10,5
10	11,5	11,5	13,8	13,3	11,4	11,7	11,5	11,1
Poor	*14,7*	*14,6*	*4,1*	*6,1*	*7,8*	*7,4*	*14,6*	*8,3*

The alterations made in the reference income for means testing in cases 2a and 2b seem to have benefited those in the upper deciles who receive more than half of all the benefit amounts in the system. The poverty reducing impact of the cases 3a, 4b and 3b where universal amount of benefit is granted to the households in varying amounts with respect to the size of the household as well as the existence of children within the household does not substantially alter the share of benefits received by deciles in comparison with the baseline while decreasing the share of benefits received by the poor households substantially by moving more than half a million people out of risk of poverty.

The discussion made here could be extended by testing the budgetary impact of each scenario while at the same time offering certain policy combinations. These combinations might take the form of either substituting existing policies while introducing a new one with a similar purpose, complementing existing policies with the newly introduced scheme targeting

specific groups within the household, like elderly or children, or offer variations of reforms for policies in the benefit systems of the countries to tailor for the intended impact. The development of policy scenarios and arguments based on the summary of results could be seen as preliminaries of comparative policy analysis using EUROMOD and has the potential to be taken further by focusing on the country systems while considering the political economy of the welfare transformation taking place. The analysis presented here could help advocating for any reform debated in the country contexts as will be presented in the next chapter.

4. Policy Discussion

The comparative literature on welfare regimes has long been highlighting southern European regimes as distinct from conservative corporatist model (Leibfried, 1993; Ferrera, 1996; Symeonidou, 1996; Gough, 1997; Esping-Andersen, 1999; Trifiletti, 1999; Ferrera, 2000; Andreotti et. al., 2001; Ferrera, 2005a; Moreno, 2006). Including Leibfried (1993), these regard the welfare states of Portugal, Spain, South Italy and Greece to be characterized as "rudimentary" in terms of social provision. This view has attracted a number of criticisms on the grounds that some welfare programmes in Southern Europe, especially pensions, are far from being rudimentary since the benefit levels are quite generous in comparison with the other country examples (Ferrera, 1996). Besides, the notion of 'Southern Europe' has been used not only to refer to a geographical implication but also a political-economical connotation as the countries share a number of common traits in their contemporary political economies (Ferrera, 2000 and 2005a). In a nutshell, distinctiveness of the southern European regimes lies in the following observations:

- ✓ Highly protective employment regimes for the core sectors gradually serving to segment the labour market into 'insiders' as hyper-protected, core workforce, 'peripheral' as in between gainfully employed and 'outsiders' as workers in the informal economy, young and long term unemployed or precarious left-outs and junk laborers typically working in small enterprises without job security (Ferrera, 1996 and 2005a; Moreno 2000).
- ✓ Co-evolvement of social insurance programs with this segmented labour market based on occupational status with distinct schemes for private employees, civil servants and

self-employed. Such a fragmentation is coupled with different regulations in terms of contributions and benefit determination (Ferrera 1996).

- ✓ Overprotection of the risk of old-age and marginal family benefits.
- ✓ Patchy and ineffective safety nets which evolved slowly in a fragmented and categorical fashion with disparate rules and differentiated benefit amounts (Saraceno, 2002; Ferrera 2005a).

As regards the scope of this thesis, the marginal role attributed to the social assistance in southern Europe is argued to be strongly related with the familialistic nature of the welfare regimes, incidence of informal economy and low level of administrative capacities (Ferrera, 1996, 2000 and 2005a; Saraceno, 2002). Southern European families have functioned as an effective safety net actively covering policy ranges such as child care, unemployment assistance, care for elderly and disabled, which has heavily relied on unpaid female work. The lack of a structured network of basic services by the state in Southern Europe has left a large part of the responsibility to the family in welfare services. As a matter of fact, due to the existence of a "perforated" social safety net, the family is mostly regarded as a social clearing house where one member attached to the "guarantismo" sector is crucial for the rest of the family. So, the risks that the welfare system has to bear are left to be tackled within the family and kinship network, putting family as a proxy for welfare institutions (Mingione, 2001). Coupled with this, informal economy[30] estimated to account for 15-30 percent of GDP (Schneider and Enste, 2000; European Commission, 2004) has provided jobs with no formal link with welfare regime in terms of social protection. Apparently, peculiarity of the southern

[30] Here the term informal economy should not be understood as to cover illegal/illicit activities. Acknowledging the complexity in conceptualization and definition of informality, here it is used very similar to the undeclared work definition of the European Commission where the activity itself by nature would be lawful but not be declared to the public authorities (as explained in the Commission Communication, COM(98) 219 Final).

informality lies in the sectoral and territorial concentration of the informal activities mostly manifested in the small sized agricultural own account and family establishments, home based subcontracted work, proliferation of small and medium enterprises etc. with some blurring boundaries between the formal and informal economies (Ferrera, 2000 and 2005a). Also, low level of institutional autonomy of the administrative system has led to emergence of 'patronage machines' for the distribution of means-tested cash benefits and in this respect, Ferrera (1996) argues for the existence of a more active state with the presence of articulated patron-client networks in a particularistic political culture. As exemplified for Italy and Greece in Ferrera (2005a), the limited scope of targeted schemes except for those based on relatively straightforward categorical criteria (like old age or physical disability) has been politically justified by the fears of aggravating "welfare patronage". To illustrate the perforated safety nets in the southern European countries with the relative neglect of income maintenance or social assistance schemes in with respect of the pension bias, Table 4.1 below presents the poverty rates for household incomes before and after social transfers in 1994 and 2001.

Table 4.1: Poverty* and social transfers in southern Europe

	1994				2001			
	Before social Transfers	**After social transfers – before pensions**	**After pensions – before other transfers**	**After all social transfers**	**Before social Transfers**	**After social transfers – before pensions**	**After pensions – before other transfers**	**After all social transfers**
Italy	48.7	45.5	23.6	19.8	50.2	47.6	21.9	19.1
Greece	45.2	43.7	26.5	24.9	47.5	46.1	23.6	21.8
Spain	47.6	40.4	26.6	18.6	43.5	38.5	22.0	17.2
Portugal	43.0	38.4	29.1	23.6	42.5	39.1	25.9	20.8

*Poverty lines are determined as 60 per cent of median equivalent disposable income

Source: Papatheodorou and Petmesidou (2006:65)

The relevance of the above mentioned peculiarities of the southern European regime for this thesis lies in the emergence of the sequential but gradual reforms to tackle with those structural problems which clearly manifested themselves in the poverty indicators in early 1990s as showing the highest rates in EU (EUROSTAT, 2005). Regarded as "recalibration" (first introduced by Ferrera et. al. 2000 and then widely used within the literature), these institutional reforms mainly

> *"aimed at shifting the weight and emphasis among the various instruments and objectives of social policy, with a view to better responding to new risks and to adequately the most vulnerable social groups, while scaling down the most generous benefits for insider groups"* (Ferrera, 2005b:32).

In other words, they involved both modification of existing programs and provisioning of new and specific initiatives in response to new social risks assuming a set of institutional reconfiguration and re-balancing (Ferrera and Hemerijck, 2003:89). The peculiarity of the recalibration process, as differentiating it from other policy reforms that either aim for restructuring or modernization of the social policy programs or are taken as cost-containment measures to reduce the budgetary deficit, lies in the coexistence of constraints on policy choices as a result of domestic and external challenges with shifts of weights and emphasis along policy instruments and policy objectives (Ferrera and Hemerijck, 2003). In this regard, recalibrating policy reforms may deal with rebalancing the existing functions of social protection in response to new social risks or against current configuration of social groups. In this regard, the reform agenda in southern Europe has concentrated on the following issues:

- ✓ attenuation of generous guarantees for historically privileged occupational groups, accompanied by an improvement of minimum or "social" benefits;
- ✓ introduction and consolidation of the so-called safety net, especially through means-tested minimum income schemes;

- ✓ the expansion and amelioration of family benefits and social services –with explicit attention to gender equality and equity issues;
- ✓ measures against the black economy and tax evasion;
- ✓ reform of labour market legislation with a view to promoting de-segmentation and modification of unemployment insurance benefits (compiled from Guillen and Matsaganis, 2000a; Ferrera, 2005a and 2005b).

This chapter will mainly focus on the debates and reforms regarding minimum income schemes in southern Europe with a view to shed some light on the prospective social policy agenda in Turkey. While looking at the recalibration process taking place in southern Europe, influence of EU as an external actor could be considered as a stimulating factor shaping the policy agendas in terms of financial convergence criteria within EMU that has been influential in reframing the policy discourses in 1990s (Guillen et. al., 2003; Guillen and Matsaganis, 2000a). Also, one should also be taken into account the indirect influence through "social inclusion process" initiated by Council Recommendation 92/441 and framed with the launch of Lisbon Strategy through Open Method of Coordination in 2000-2001 which institutionalized the preparation of National Action Plans for Inclusion. These plans so far are regarded to demonstrate genuine efforts towards outlining a precise agenda for reform (Ferrera et. al., 2002). Since each country has a different trajectory of reform despite exhibiting common characteristics, the first section outlines the country cases separately. The second section elaborates on the political economy of the welfare reform – especially in relation to the internal and external dynamics. The chapter concludes with a section where EU accession/negotiation process in relation to the documentation like screening documents, Joint

Inclusion Memorandum, Action Plans for the Chapter 19 on Social Policy and Employment, and progress so far would be evaluated with prospective social policy agenda for Turkey.

4.1. Contemporary Reform Debates

The emergence of the modern welfare state in Europe could be rooted back to the tradition of localized and discretionary poor relief, in most cases codified under series of poor laws. The consolidation and expansion of the social insurance eroded these ad hoc relief schemes in most countries up until the crisis of the so-called Golden Age. 1960s and 1970s witnessed their revival in a more modernized fashion mainly aiming to cater for those at the margins/outskirts of the social insurance programs and to establish a minimum subsistence guarantee for all the citizens. This new generation of non-contributional schemes were rights-based in principle but grounded upon selectivity and residuality (Ferrera, 2000 and 2005). As Eardley et. al. (1996) and Gough (1997) clearly map out, most countries established both means-tested categorical schemes (targeting poor elderly, disabled, widow and orphans, long term unemployed etc.) and generalized income support schemes resembling minimum income guarantee traits. These internal/national developments were coupled with the increasing dominance of the poverty and social exclusion on the policy agenda and policy discourses of European Union and European Commission. The Council Recommendation (COM 92/441) on "common criteria concerning sufficient resources and social assistance in social protection systems" (Official Journal, 245, 26.08.1992: 46-48) marked the official recognition at the EU level of prevalence of poverty and social exclusion where all member states are recommended:

> *to recognize the basic right of a person to sufficient resources and social assistance to live in a manner compatible with human dignity as part of a comprehensive and consistent drive to combat social exclusion, and to adapt their social protection systems, as necessary* (Official Journal, 1992, p. 47)

Coupled with the Amsterdam Treaty in 1997 where the fight against exclusion became an official objective, then followed by the launch of the Lisbon Strategy in 2000 stating for a social inclusion process, the institutional reputation of and priority attached to anti-poverty policies and especially minimum income schemes accelerated both at the national and EU level (Ferrera et.al., 2002). It should here be noted that the relative importance assigned by EU to the minimum income schemes underlines not solely the cash transfer component to maintain a basic standard of living but also the accompanying measures and conditionalities attached to the benefit for (re)integration and inclusion in the labour market.

Against this background, southern European experience seems interesting in relation to the active role played by Portugal during the EU Presidency in 2000 almost sequentially with domestic social concertation processes with strengthened public debates and negotiations on welfare reforms in Italy, Portugal and Spain while Greece lagged behind in terms of emergence of any social platforms to back radical policy reforms (Regini, 1998; Petmesidou, 2000; Guillen and Matsaganis, 2000a and 2000b; Papatheodorou and Petmesidou, 2006; Petmesidou and Mossialos, 2006). The relative neglect of income maintenance schemes as a part and parcel of social assistance policies up to 1980s has been gradually eliminated via reorientation in the political agenda with inauguration of new policy initiatives especially in the realm of social assistance. The launch of the French *Revenu Minimum d'Insertion* (RMI) in 1988 could be regarded as the milestone of the policy developments that took place in the

1990s throughout the southern Europe. Particularly, the variations of the French RMI were adopted on national and local scales. The earliest introduction has been in regions of Spain with Basque Country in 1988, Madrid and Catalonia in 1990 and all regions by the end of 1990s were engaged in regional schemes. Later but more systematic, Portugal initiated a pilot scheme in 1996 which then become fully-fledged operational nationwide in 1997. Beginning almost around the same times, the Italian experience could be regarded as that of a patchy nature with national launch in 1998, which was frozen by the end of 2003 and is still pending. Only Greece in the region lacks any policy experience with minimum income schemes but has introduced some new means-tested measures (Matsaganis et. al., 2003; Benassi and Mingione, 2003; Matsaganis, 2003; Ferrera, 2005a and 2005b; Arriba and Moreno, 2005; Matsaganis, 2005). Each of these reforms will be discussed below in a stylized fashion where the main features of the programs would be presented. Since the diversity of reform trajectories in the region could also be attributed to the complex background of several internal, external as well as institutional factors, including the divergent initial conditions (Guillen and Petmesidou, 2008: 56), the country cases would be separately be discussed in the following section with respect to the debates and evolution of policies. One should note here that the arguments and facts presented here assume only the minimum income schemes of cash benefits that target the poor generally on the basis of means-tests and are usually complemented with an insertion component. So, the concept discussed here is different from unconditional basic income granted to any member of a community to guarantee their material subsistence without any means test or work requirement (Van Parijs, 2000). Instead, minimum income scheme would be used interchangeably to refer to both the selective, means-tested, income support programs called guaranteed minimum income schemes and minimum

insertion income programs that entail labour market insertion components for the beneficiaries (see Busilacchi (2004) for the other variations of conceptualizations).

Being the earliest, Spanish experience with minimum income schemes (minimum income of insertion programs - *Rentas Minimas de Incercion*) is mainly undertaken by the local autonomous community governments (or mesogovernments as used by Moreno (2003); Arriba and Moreno (2005)) all of which have undertaken social assistance programmes for guaranteed income by the end of 1990s. Despite the internal variety of the programs with respect to the eligibility criteria, benefit duration and amounts, level of discretion involved etc., this mosaic of programs exhibit some common features like family being the unit of reference but individual being the beneficiary, means-test implemented related to a threshold of household income (particularly, 75 per cent of the official minimum wage as cited in Cabrero (2009:15)), fixed-term but renewable payments (generally 6 to 12 months).

Portugal has completed the transition to a full system of nationwide guaranteed minimum income scheme (*Rendimento Minimo Garantido*), recently known as Social Insertion Income, which could be regarded as the most mature scheme in the region. The scheme combines cash benefits with contract based insertion programs and implemented upon means-test for the equivalized household income with respect to the threshold set as the amount of the cash benefit. The benefit itself is intended to be a subsidiary measure to other social benefits which should have first been claimed if entitled to (Bruto de Costa, 2003; Capucha et. al., 2005; Baptista and Cabrita, 2009). The amount of the benefit varies as it complements the household income to the guaranteed income threshold (as explained in detail and applied in certain variants in comparative simulation analyses section of Chapter 3).

Italian case started as an "experiment" in 1998 in 39 southern municipalities under the name of Minimum Insertion Income, i.e. *Reddito Minimo di Inserimento* resembling the typical French RMI. Extended until 2002 to cover 309 municipalities, the scheme is then frozen with respect to the institutional and financial concerns as well as controversies around the pending constitutional revisions related to central and local governance dynamics (Ferrera, 2005a; Sacchi and Bastagli, 2005; Strati, 2009). Very much like Spanish local schemes, one observes variety of regional schemes, some of which were enforced very much before the national experimentation, but given the socio-economic differences between the regions, RMI acted as the only policy tool expected to solve all the problems (Benassi and Minigone, 2003; Sacchi and Bastagli, 2005). In terms of the cash and insertion components, the Italian RMI experiment was similar to the others mentioned but it differs with respect to the financing where 90 per cent of the cash transfers were financed from national budget and the remaining 10 per cent from the municipalities (Sacchi and Bastagli, 2005: 116).

Meanwhile, Greece continues to be the only member state among the old EU-15 that has not yet developed a scheme involving minimum guaranteed income. As will be discussed in detail below, the policy choice of the government in the second half of 1990s demonstrates a rejection of a gradual move towards a guaranteed minimum income while attempting to fill in the gaps in the social safety net by introducing new schemes targeting specific groups, such as unemployment assistance for older worker or supplementary payments for social pensioners (Matsaganis, 2003, 2005a and 2005b).

Table 4.2 below summarizes the main characteristics of the schemes described. Looking solely at this table, it is reasonable to claim that the new policy instruments of minimum income schemes, though slightly differed in terms of the extent and parametrical dimensions, have many common traits and exhibit more or less a uniform pattern. The trajectory of the policy reforms and the subsequent divergent state-of-art in the realm of social assistance policies of the countries in the southern Europe now call for a more detailed analysis of country cases. In the end, such analysis will help to identify the impact of different combinations of internal and external actors and constraints on the domestic policy configurations, particularly in the realm of social assistance.

Table 4.2: Taxonomy of minimum income schemes in southern Europe

	Spain	Portugal	Italy
Scheme	*Rentas Minimas de Incercion*	*Rendimento Minimo Garantido (RMG)*	*Reddito Minimo di Inserimento (RMI)*
Scope	Autonomous Community	National	Local (Municipalities)
Number of Beneficiaries	103.000 households[(1)]	320.000 individuals[(2)]	41.000 households[(3)]
Eligibility	-residence in the community - below 75 % of minimum wage	-residential condition -income of HH below the threshold	-residential condition - income of HH below the threshold
Duration	6-12 months	No limit; monthly renewed	12 months/renewable
Age Groups	25-64, in some cases 18+	25+[(4)]	None
Conditionality	Insertion contract or activity commitment	Insertion programme - contractual	Re-insertion or activation programme
Means-Test	YES	YES	YES
Benefit Calculation	Ranging between 285 EUR and 585 EUR[(5)]	Difference between the benefit amount (set as threshold) and actual HH income; indexed according to the size of the family	Difference between the threshold and actual HH income

[(1)] As of 2007 (Cabrero, 2009: 16)
[(2)] As of December 2007 (Baptista and Cabrita, 2009: 13)
[(3)] As of 2004 (Strati, 2009: 22)
[(4)] The 2003 Law restricted eligibility by increasing the minimum age from 18 to 25 (Hespanha, 2005)
[(5)] As of 2007 (Baptista and Cabrita, 2009: 11)
Source: Authors' own compilation.

4.2 Political Economy of the Welfare Reform

The policy reforms in the 1990s taking place in southern Europe has become increasingly investigated subject within the academic research where the main arguments were primarily based on the presence and prevalence of common characteristics of the countries (just to name a few, see Rhodes, 1997; Gough, 1997; Andreotti et. al., 2001). Apparently, the extensive growth of Bismarckian social insurance in the developmental phases of the welfare regimes while leaving social assistance as the weakest facade of the welfare development up to 1990s demonstrate that social protection in the southern Europe could be argued to exhibit an incomplete and immature character, still in the process of catch-up with other mature regimes of the continent and OECD while overloaded with a set of functional and distributional imbalances. This lagged development indeed could be read through the lens of democratization and stable modernization of the southern Europe only from 1970s onwards with the fall of authoritarian regimes (Diamandouros and Gunther, 2001; Castles, 2006; Diamandouros, Gunther Sotiropoulos and Malefakis, 2006; Garcia and Karakatsanis, 2006). Without going into detail about the politics of configuration of the welfare and giving a detailed record of the development of the social policy prior to the 1990s, here we argue that recalibration process taking place in each country could be discussed in light of the internal and external dynamics simultaneously shaping the trajectory of the policy reforms while acknowledging the variations in the initial conditions (Guillen and Petmesidou, 2008).

The imbalances inherent in the welfare regimes of the southern countries as of 1990s are both of functional and distributive nature. The former is very much related

with the old-age protection bias of the social protection via full-fledged contributory social insurance systems and categorical non-contributory social assistance schemes while the generosity of the schemes for the insiders vis-a-vis unprotected outsiders point to the problems with distributive aspect of the social protection. As a matter of fact, the simple policy choice to adjust for these imbalances could exhibit expansionary patterns with institutional and quantitative growth of the schemes. However, this easiest route to reform has been partially blocked by the external constraint imposed by the creation of the European Monetary Union. Indeed, the signing of Maastricht Treaty in 1993 externally bounded the domestic social policy interventions of the southern European countries with respect to the budgetary discipline to be imposed via strict public deficit targets to be fulfilled by the end of 1990s. Thus, the countries were, in a way, forced to act on the internal domain where distributional and functional imbalances were sought to be resolved via restructuring of the social protection systems as compliant with the budgetary constraints.

The concept of recalibration as an act of institutional reconfiguration and rebalancing, indeed, as introduced by Ferrera, Hemerijck and Rhodes (2000), fits well as an analytical frame to discuss the trajectory of the reforms taking place in the region since 1990s. Recalibration, *per se,* implies presence of constraints conditioning policy choices and developments that may stem from interaction between external and internal challenges and deliberate shifts of emphasis along the policy instruments and grand social policy objectives (Ferrera and Hemerijck, 2003:89-90). To analyse the political economy of the welfare reforms in the realm of social assistance in southern Europe, the sub-dimensions of the recalibration introduced by Ferrera and Hemerijck (2003) would be useful to articulate the country cases. Functional recalibration refers to the policy interventions to rebalance both within and across the functions of social

protection, mostly to address the challenges imposed by the new social risks (i.e. child poverty, demographic changes associated with fertility and ageing etc.) that are not dealt with the existing mechanisms. Distributive nature of the recalibration has to do with the social groups where the dichotomies, segmentations and generational conflicts are sought to be resolved via rebalancing of social protection across not the risks themselves but the groups in particular. On normative grounds, recalibration is embedded in the shift in the discourse from distributive justice and income maintenance to work related values which has also been voiced by the public opinion as well (Gallie and Paugam, 2002; among others see especially Hemerijck 1999; Ferrera and Hemerijck, 2003). Last but not the least, the political-institutional dimension of recalibration denotes the policy reforms that reconfigure the division of labour between the levels of government as well as influence of external actors in the provision and financing of social protection. It is reasonable to argue that given the initial conditions determined by the historical legacy of the social protection systems in the countries, it is the balance and configuration of these four sub-dimensions that shaped the recalibrating policy reforms in the realm of social assistance in southern Europe.

Recalling the review of the policies in the preceding section, the introduction of as well as varying trajectories and governance structures surrounding minimum income schemes in the countries implied a rather ambitious policy agenda. In a nutshell, the main "common" ingredients of the recalibrating policy reforms in the realm of social assistance were aimed at smoothing out the generosity of contributory benefits enjoyed by the insiders via parametrical indexation while levelling up the non-contributory social benefits while consolidating and strengthening the perforated safety net by introducing new programs like minimum income schemes.

4.2.1. Italy: Alternating between Universalism and Regionalism

The initial set-up surrounding the social assistance system in Italy by 1990s could be summarized as a system of categorical schemes patchily provided by public institutions at the local and national level as well as charities. As noted by Sacchi and Bastagli (2005:86-87), the responsibilities in the field of social assistance were devolved to regional and local authorities by the 1997 law while state retained authority over the contributory schemes. In the absence of a national law stating the standards and principles to guide the local social assistance systems, the outcome was co-existence of autonomous, locally differentiated and uncoordinated set of schemes where the citizens are entitled to benefits that vary significantly and depend on locality rather than the need. In this respect, as one of the schemes, local minimum income schemes that provide non-categorical means tested benefits (called *minimo vitale*) have also existed long before the RMI experiment[31]. The footprints of the recalibration in the social assistance could be found then in the political discourse shift with the approximation of EMU deadlines in mid-1990s (Ferrera and Gualmini, 2004). Immediately after a sequence of reforms concerning the pension system in 1992-1995, a comprehensive report has been prepared by an expert commission, *Onofri* Commission, elaborating an ambitious reform path that would entail not cost-containment measures but "to promote an incisive internal re-equilibration" (Ferrera and Gualmini, 2004: 114) primarily aiming at correcting distributional imbalances. Particularly for

[31] The practice, though, was not homogeneous across the country. Some municipalities introduced the scheme in early 1980s (Turin in 1978, Ancona in 1981, Milan in 1989) while it has never been introduced in the cities of Rome and Bari, for instance (Sacchi and Bastagli, 2005: 88).

social assistance, the reform proposed a selective-universalism for the benefits under a more systematic standardized uniform means-testing procedure while designing an organic social assistance system by introducing a general framework law and experimenting new schemes like RMI (Matsaganis et.al. 2003; Ferrera and Gualmini, 2004; Sacchi and Bastagli, 2005; Ferrera, 2005a; Strati, 2009). Though the framework law was enacted in 2000, the RMI experimentation was soon launched in 1998.

What is interesting for the case of Italy is that these policy developments in the social assistance field were taking place at a time of decentralization in public administration in the country in accordance with objectives of EU where central government reserved directive functions and left the planning to the regional and implementation of services to the local level. The manifestation of this trend in the social assistance was clear between the lines of the framework law setting a clear the division of labour between government, regions and municipalities, where former assumed the role of steering and coordination to maintain universal access across the country with central provision of financing from National Fund (established in 1998 for the RMI). This institutional remodelling that primarily serves to strengthen the regional and local governments seemed also to expand the range of policy areas for the local level. Considering the territorial disparities throughout the country manifested in the higher incidence of poverty in the South (Benassi and Mingione, 2003), one should be careful in assessing the impact of such decentralization with weak administrative capacities (Ferrera, 2005a).

Apparently, with the constitutional reform of 2001, social assistance has been declared to be subject to regional legislation jeopardizing the uniform structure embodied with the 2000 framework law. The 2001 reform, *per se*, deprived the national level from coordination and guidance functions while leaving the implementation on a voluntary basis for regional and local governments. Highly contradictory with the soul of the framework law, this rationale thus maintained the territorial disparities that framework law intended to eliminate. In this regard, the need for a nationwide minimum income scheme proved to be considerably important. The launch of the Lisbon strategy by EU against poverty and social exclusion and the implementation of Open Method of Coordination to encourage cooperation among member states and to prepare National Action Plans for Social Inclusion (NAP/SI), every two years, to outline the strategies for combating poverty and social exclusion (Ferrera et.al. 2002) blueprinted certain assessments regarding the policies in general and RMI in particular for Italy. Winking to EU for the generalization, RMI experiment in the first NAP/SI prepared in 2001 was cited as a good practice based on the evaluation report prepared by Commission of Inquiry on Social Exclusion (CIES – *Commissione d'Indagine sull'Esclusione Sociale*) (Benassi and Mingione, 2003; Sacchi and Bastagli, 2005; Ferrera, 2005a). Nevertheless, Berlusconi government, taking the office in 2001, left the continuation of the implementation to the discretion of the regions while also not committing any national resources or setting national standards (Ferrera, 2005a). The very same report of CIES was used by the Berlusconi government to get rid of the RMI experiment based on the problems facing the implementation of the program, namely weak institutional capacities of local authorities – especially small

municipalities and those in the south (Ferrera, 2005a; Sacchi and Bastagli, 2005) by declaring it as "impracticable" (Strati, 2009:5) while welcoming the launch of Income of the Last Resort (RUI – *Reddito di Ultima Istanza*) in 2003. Arguing for leaving aside the labour market insertion component, RUI was then identified as a social assistance measure to integrate income of the most vulnerable financed out of general state revenues (Strati, 2009). The institutional complexities surrounding the Italian welfare governance once more manifested itself in the constitutional court decision in 2004 about RUI as being unlawful since it represented a mere financial intervention of the state in the policy field of social assistance assigned to the competence of the regions, once more leaving a good deal of ambiguity in implementation (Strati, 2009).

All in all, the recalibration taking place in Italian experience since 1990s was initially triggered by the external constraint of EMU that force-pushed the domain of the reform towards internal reconfiguration and "re-equilibriation" (Ferrera and Gualmini, 2004:114). With the introduction of RMI experiment, this might indeed have implied a process laden with policy reforms counteracting against the functional and distributive imbalances of the social assistance system by introduction of new policy instruments, instituting a coherent set of policy framework with certain guidelines and assuring the universal access of the citizens. However, the politico-institutional recalibration dominated the process whereby the reconfiguration of the multilevel governance of the social assistance was sequentially hampered and counterattacked the inter- and intra-territorial disparities embedded. The influence of EU soft-policy through OMC, remains yet to be seen since implementation of coordinated strategies (such as minimum income schemes)

are highly contested with domestic processes and legal framework of decentralization in a quasi-federal manner.

4.2.2. Spain: Catching up Regionally?

Democratic consolidation in the aftermath of the authoritarian Franco regime in Spain in late 1970s implied initiation of a political and administrative decentralized setting with a central government and 17 autonomous governments, *Comunidades Autónomas.* Such setting has produced a fragmented and complex institutional agenda gradually regionalized in the last two decades. These regional governments shared the competencies with the central government in the field of social policy where social assistance has become an exclusive competence of the regions (Arriba and Moreno, 2005; Ferrera, 2005a; Gallego, Goma and Subirats 2005). Mostly during 1990s, regions decided to pursue their own minimum income schemes and the elaboration and implementation of these schemes took place between 1989 (Basque) and 1995 (Balaeric Islands). Being highly heterogeneous in nature, the scheme was defined as a right in some regions but others adopted a more cautious, discretionary approach (Arriba and Moreno, 2005; Aguilar et al., 1995 cited in Gallego et.al., 2005). In relation to the making of minimum income scheme policies, Arriba and Moreno (1999:10) sketch three strategies: (i) those established mainly on the initiative of the regional governments, and as a result of the combined action by both elected and appointed policymakers; (ii) those elaborated upon the pressure exerted by the opposition parties at the regional parliament; (iii) due to the mobilization of regional branches of trade unions as well as some significant NGOs, like Caritas.

Actually, the timing of such vast and substantial developments in the realm of social assistance coincides with the EU accession process and subsequently, joining of Community Programme of Fight against Poverty in 1987. Arriba and Moreno (2005:150) claim that the programme not only facilitated collaboration of various public and private institutions both at regional and national levels but also contributed to the growing concern about the issues of poverty within public debates. Indeed, EU recommendations (especially 92/441/EEC mentioned above) and other European experiences, such as the French RMI became the main line of argument for formulation of regional schemes. Apparently, multilevel governance and integration processes in EU have created formal and informal avenues for the regional governments to join networks, to exchange with other regions across the EU and to interact with policy making circles in the EU level (Llamazares and Marks, 2006). The demonstration effect of the minimum income scheme introduced by Basque Government facilitated proliferation of schemes in other regions while they circulated information about the various modalities and characteristics of the regional programmes and held ad hoc meetings to exchange views on certain aspects of the programmes (Arriba and Moreno, 1999: 11-12). It could be argued that at the horizontal level the regional governments have concurrently mobilized themselves so that none of them wanted to be left behind; while vertically, they managed to establish a differentiated policy field vis-a-vis central government. Despite the visible differences in the programmes implemented, the regions have achieved de facto policy equalization (Arriba and Moreno, 1999).

As manifested by the cross-regional variation in relation to the expenditure on minimum income schemes both in absolute and percentage terms[32], financing problems cast doubt upon the sustainability of this unintegrated network of schemes. That is to say, since early 2000s, the provision of the scheme has been prioritized by the regional governments but as mentioned by Ferrera (2005a:19), most programmes tend to suffer from underfunding. Related to this, the decentralized nature of the schemes, inherently embedding certain level of discretion, would also aggravate the regional disparities in terms of provision. In the end, as any harmonizing national effort would not work in such a decentralized autonomous regional setting, the response of these mesogovernments to these challenges might lead to cuts in provision of the schemes or resort to funding support from central government.

The recalibration experience exemplified through the proliferation of sub-national minimum income schemes in the autonomous regions of Spain demonstrate that it has only been the politico-institutional dimension embedded in the process. The reforms and introduction of new policies at the regional levels on the basis of clear division of labour between the levels of governance, have also taken advantage of the simultaneous EU integration process whereby direct and indirect influence diffused in the particular policy area. The preparation of NAP/SI, as the main national document that assesses the policies implemented, indeed advances the possibilities of intergovernmental coordination as national plan prioritizes to compile the targets, assessments and

[32] To illustrate the variation, in 2000 figures, absolute terms oscillate between 337 mio EUR and 53.238 EUR while percentage share is between 0.06 and 1.03 of total consolidated regional budget (Arriba and Ibarez, 2002: 11).

policy proposals drawn in the territorial action plans for social inclusion. From a different perspective, it is also possible to evaluate the regional schemes as functional recalibration efforts as they intended to respond to the risk of "social marginalization" by introducing new schemes (Arriba and Moreno, 1999: 11). It is of course reasonable to argue for the decentralization as it enhances grounds and means of experimenting new policy instruments at the regional level, perhaps much tailored for the needs and priorities of the local residents. But, it also runs the risk of disseminating and even strengthening territorial disparities. The Spanish experience, on balance, seems to lean towards the former but controversies remain with respect to the gaps and differences in financing and content of the schemes. It can thus be claimed that the diversity and complexity surrounding the safety net in Spain in general and regional minimum income scheme programs in particular, necessitate for an effort not to generalize or but to consolidate and enhance certain level of convergence among the regions to cater for territorial disparities.

4.2.3. Portugal: Pioneering the Maturity

Under the long phase of conservative dictatorship, poverty, affecting one third of the population[33], had not been a policy concern in Portugal. The democratic revolution of 1974 brought both consolidation of social rights and a rapid expansion in the social protection of a universalistic nature by formal institutional configuration of welfare regime with establishment of contributory and non-contributory schemes (Capucha et.al., 2005). Despite the successive increases in the levels of social expenditures, still-neglected poverty had

[33] Absolute poverty levels as mentioned in Pereinirha (2006:117) .

become the policy concern in Portugal was triggered by the EU accession, particularly with the participation of the European Poverty Programme in 1986 (Bruto de Costa, 2003; Ferrera, 2005b; Capucha et.al., 2005).

Recalibrating welfare reforms in Portugal could be discussed in two waves: the first wave, externally initiated with the abovementioned programme participation, was inherently aimed at "Europeanization" in terms of catching-up with the levels of social protection expenditures with other Member States (Guillen et. al., 2003; Capucha et.al. 2005) while fully absorbing the principles of multidimensionality, partnership and participation between different public and private actors within a welfare mix embedded in the Community Poverty programme of 1986 (Bruto de Costa, 2003; Pereirinha, 2006). Taking place since 1995, the second wave, on the other hand, introduced "promotion of inclusion" and marked with the introduction of guaranteed minimum income – as an electoral flagship of the socialists who returned to government by winning 1995 elections. The blueprints of the Council Recommendation of 1992 was clearly evident in the electoral campaign of the socialists as Portugal was cited as one of the three Member States (the rest are Greece and Italy) which had yet not followed the recommendation (Ferreira, 2003; Hespanha, 2005). Launched as a pilot programme in 1996, the scheme became fully operational at the national level in 1997 thanks to the success of the experimental programs in the pilot scheme and initial social consensus surrounding the scheme (Hespanha, 2005; Capucha et.al., 2005). Indeed, the success of the programme owed much to the first wave as it embarked on deepening of the welfare mix upon local partnerships for the participation of

the social actors in territorial policy making as well as implementation (Baptista and Cabrita, 2009).

In the aftermath of the fall of the socialist government in 2001, minimum income scheme was once more in the electoral debate and on the basis of growing criticisms[34] surrounding the scheme, right wing coalition announced for a deep reform of social protection in general and the scheme in particular. Nevertheless, the end result was only rebaptisation of the scheme in 2003 under the name of Social Insertion Income with minor amendments (i.e. increasing the age criteria for eligibility from 18 to 25). The debates since then were more focused on the efficient implementation of the scheme than alterations to the design of the scheme.

The peculiarity of the Portuguese minimum income scheme lies in its direct connection with the "recognition of the right to the citizenship" (Pedroso cited in Baptista and Cabrita, 2009:6). Defined as a citizenship right, the scheme provided significant leverage to the social protection which had been far below the high standard of social citizenship laden with a wide range of social rights as defined by the progressive democratic constitution (Hespanha, 2005). The recalibration in the Portuguese case successfully assimilated the EU discourse into domestic politics via several instruments including community programmes, council recommendations and structural funds,. In this regard, the politico-institutional dimension of the recalibration process with introduction of minimum income scheme brought about a national level policy whereby different policy actors were involved in at the territorial levels. However, the

[34] These range from claiming fraud, disincentives to work, welfare dependency to irregularities in the implementation (Hespanha, 2005)

trajectory of the scheme since 2003 point also to the normative dimension that shifted the discourse from "income maintenance" to activation by making it a "right with obligation" (Hespanha, 2005: 6) by reemphasizing the work insertion component.

It should also be remembered that Portuguese Presidency of EU in 2000 had introduced the social cohesion component to the integration process with the launch of the Lisbon process and OMC. Thus, the NAPs/SI prepared since then reinforced the maturity of minimum income scheme, paving the way for prioritizing advanced concerns like efficient implementation of the programme. As demonstrated by Rodrigues (2009), the scheme still suffers from non-take up where one out of four eligible individual do not actually receive the benefit and exhibits little impact on reduction of income inequality due to the low level of benefits – the issues which are out of concern for the other less mature schemes of the southern Europe. Yet, it remains unclear whether a third wave of recalibration embedding distributional concerns in response to these advanced challenges would take place.

4.2.4. Greece: Universality as an Illusion

Greece remains the only old EU member state without any experiment or experience with minimum income scheme. The peculiarity of the Greek case will be discussed here not in relation to the welfare reforms that took place since 1980s especially in pensions, health care but much less in social assistance. Rather, some observations will be presented as of immature development of the Greek social safety net.

Resembling the typical traits of southern European regime as depicted at the beginning of this chapter, social protection in Greece comprises of a plethora of micro-schemes catering for numerous occupational segments which marks a significant degree of fragmentation, serious imbalances across the schemes and incomplete coverage across the population while putting heavy emphasis on the contributory cash benefits[35] (Petmesidou, 1996; Matsaganis, 2000, 2003, 2005a and 2005b; Guillen and Matsaganis, 2000; Venieris, 2003 and 2006; Ferrera, 2005a and 2005b; Sotiropouolos, 2004; Tsarouhas, 2008).

When Greece became an EU member in 1980, it found itself as the poorest member of the Community with very recent democratic restoration. Indeed, 1980s in Greece could be marked as the period of welfare expansion pegged to the ultimate goal of catching-up with the other member states. Matsaganis (2005a:36) explains the expansionary motive as a popular response to the expectations of the large segments of population who suffered from the authoritarian rule over the past couple of decades. Indeed, the composition of social expenditures which tended to catch up with the European counterparts by the end of 1990s (EUROSTAT, 2003: 14), reveal a significant pension bias while social assistance only comprise of poorly integrated benefits. Thus, the initial expansion up to 1990s could be argued to fail to slow down or radically reverse the fragmented nature of the pension system but rather worsened.

The reform discourse in the 1990s embarked on the notion of selectivity but in a different connotation: while selectivity expands or improves the coverage for new social risks in the minimum income schemes in other

[35] There is a vast literature in English on the welfare regime of Greece and different dimensions of social policy developments in the country both as single case studies or in comparative analytical frameworks. For the sake of coherence, only some relevant publications will be cited.

countries, it implied strengthening of social protection through targeted intervention in Greek context which has always been ambiguously selective (Matsaganis, 2003 and 2005b). By the end of 1990s, this had been translated into introduction of several selective policies, targeted at even narrower categories (such as introduction of benefits to the families with dependent children) partly implemented and thus remains far from complementing the missing holes of the safety net (Venieris, 2003, Matsaganis, 2005b). The setting implied a crossroads for the government whereby the natural shift could be to a national targeted scheme of last resort following the recent developments in the Spain, Italy and Portugal by introducing a national minimum income scheme that would also enhance mainstreaming with the EU policies. Despite the efforts in instigating a domestic political debate, the concerns about budgetary costs and EMU convergence were alleged by the government. Though much debated both in parliament and wider public (including labour confederations), NAPs/SI prepared successively in 2000s clearly manifested that government had no intention of preparing the grounds for the implementation of minimum income scheme (Matsaganis, 2005a:71).

Greek case demonstrates that there has been a gradual reorientation of the discourse in social policy in general and in the realm of social assistance in particular but the reforms hardly ever assumed any recalibrating nature thus lagging much behind the southern counterparts while showing slow pace of institutional innovation (Ferrera, 2005b: 37). The explanation comes from the literature mainly in two intermingled strands: those attributing to the lack of suitable advocacy coalitions (Matsaganis, 2002a and 2005a; Petmesidou and Mossalios, 2005; Venieris, 2003 and 2006) as there has been a failure of

representation for socially excluded "outsiders" and those referring to the incapacity of the state or weak/soft state apparatus in implementation of the policies (Petmesidou, 1996; Matsaganis, 2005a; Featherstone, 2008). The combination of these two interrelated challenges with the reluctance of different segments of hyper-fragmented society to share the costs of any substantial reform in Greece proves that any recalibrating reform aiming for strengthening the safety net is bound to fail at all. The influence of EU, on the other hand, were mainly at the level of policy instruments and less so at the policy content level (Sotiropoulos, 2004; Ziomas, Bouzas and Spyropoulou; 2009).

4.3 Prospective Social Policy Agenda for Turkey

Reform of the social protection system has been ever-present on the political agenda over the last decade in Turkey. Beginning with the social security pillar (mostly in line with World Bank premises) in 1999, transformation of the social protection system has mostly been realized in the due course of Justice and Development Party (AKP) governments, and especially accelerated in the aftermath of 2003 elections. Although the reform was inspired primarily by financial concerns, it also aimed to improve administrative efficiency by institutionalising the Social Security Institution (namely SGK) under the auspices of MoLSS. Consequently, the administrative restructuring phase that accompanied reform proposals in 2004 targeted the harmonization of three pillars: pension reform, the establishment of universal health insurance, and the restructuring of social assistance and services.

The draft concerning pensions and universal health insurance has continually been contested since 2004 – including Constitutional Court decisions halting the process itself, its implementation postponed numerous times, et cetera – and only been put into effect very recently, in October 2008. However, the social assistance draft that was prepared is not even on the table, never once brought up in Parliamentary discussions. This is mainly because non-contributory social assistance has never been considered important in the Turkish welfare regime. As argued by Bugra (2007) and later by Bugra and Adar (2008), there is a strong resistance against income maintenance mechanisms, from both the political right and the left – the former emphasizing their negative impact on work incentives, and the latter underlining their "palliative" character and the support they provide to the continuation of capitalist relations of production with detrimental effects on the working population. Yet, this draft was very innovative in the way it introduced a coherent social assistance system with a rights-based approach, specifying benefits for the elderly, children and the disabled to be funded from the general budget and administered by a single institution, namely the Social Security Institution under the jurisdiction of MoLSS (Yakut-Cakar, 2007). Bugra and Adar (2008) further argue that what brought this draft on the policy agenda was not the articulation of sectional interests or the interests of politicians defined in response to popular demands, but rather a societal reflex in the direction of maintaining social cohesion. However, as mentioned above, views on the proper ways to maintain social cohesion hardly appealed to social citizenship rights of those living under threat of poverty.

Extensive media coverage shows that in early 2008, the SGK Unit responsible for the 2022 scheme initiated a new phase of proposal drafting, chiefly aiming to unify

social assistance schemes under their jurisdiction. Meanwhile, the SYDGM had simultaneously been working on developing a database that would form the basis of an "integrated social assistance system" (also supported by the State Planning Organization), so the SGK's move caused serious controversy and "a clash for jurisdiction" within the government, as two separate ministries are in charge of these two institutions, namely the State Ministry – Deputy PM and MoLSS, respectively. The quest for jurisdiction, indeed, led to intensified efforts by the SGK in finalizing the draft law on the social assistance system. The new draft not only proposed a new administrative structure for the governance of social assistance under SGK with local branches, but also introduced a set of schemes with a rights-based policy approach for social inclusion. These schemes included specific benefits for the elderly, the disabled, and children, which are the updated and extended versions of the 2004 proposal. But they also included benefits for income maintenance (cash benefits paid to the household, in the amount of twice the poverty line for a family of four) and housing (rent allowance or subsidized housing), which could be regarded as innovative. Naturally, when analyzed in detail, each scheme has some problematic aspects – for instance, the provision of subsidized housing as stated in the draft text is likely to engender spatial concentration and reproduce social exclusion, like ghettos. Nevertheless, the possibility of debating the draft within different state departments and in Parliament presents an opportunity to challenge the existing mentality and policy approach and design a formal system with clear and transparent rules for eligibility and conditions of service delivery, while removing the discretionary control currently exercised in the distribution of the substantial funds from the SYDGM.

The peculiarity of the social assistance system in Turkey lies not only in the fragmented institutional structure, but also the considerable extent of discretionary

practices. The relatively lower funds allocated to different non-contributory schemes compared to social protection expenditures in general, would seem to reflect the marginal role attributed to, and mentality inherent in income maintenance programs.

A recently released mimeo by TUIK presents the results of 2008 Household Life Satisfaction Survey, according to which a total of 14.6 percent of all households have received one kind of assistance or another (TUIK, 2009). This is rather a striking fact in the sense that 1 out of 7 households in Turkey depends on others. According to the results, 59.4 percent received help through their close circles (extended families, friends, etc), 29.8 percent through state funds, 21.4 percent through municipalities, 3.7 percent through NGOs, and 1.7 percent through other organisations, including local religious offices of muftis. Table 4.3 provides that this dependency reveals a transformed pattern with decreasing share of the informal support mechanisms vis-à-vis the formal mechanisms including state and municipal schemes.

Table 4.3: Sources of Assistance Received by Households, 2003-2008

Percentage of households	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Family, kinship, neighbours	66,5	52,4	65,2	61,7	51,8	59,4
SYDGM	16,2	25,5	22,6	24,3	29,1	29,8
Municipalities	8,8	14,4	15,3	13,1	20,3	21,4
NGOs	2,9	12,8	2,5	5,4	6,3	3,7
Other	5,7	3,8	2,4	--	2,5	1,7

Source: TUIK (2009).

Furthermore, various field studies reveal that it is mostly the combination of the benefits received by the households from different institutions that helps families survive (see Bugra and Keyder, 2003; Adaman and Keyder, 2006; Bugra and Keyder, 2008; SYDGM, 2008b). Incidentally, it may be argued that non-state actors (i.e.

municipalities and NGOs) have a potential role to play in removing the threat of hunger or at least aiding people who have nothing left to eat or no fuel to heat their home. Obviously, this should not lead to exaggerated expectations, such as ending precarious living conditions or the threat of social exclusion these groups may experience. As Table 4.4 shows, households are likely to receive more than one type of benefits.

Table 4.4: Type of benefits received, 2003-2008

	2003	**2004**	**2005**	**2006**	**2007**	**2008**
Cash	38,7	59,1	47,8	49,7	51,0	52,2
Food	30,4	36,1	35,1	39,1	32,8	33,1
Clothing	10,0	10,8	8,9	9,0	7,0	8,7
Coal	8,5	31,0	23,9	22,5	34,5	30,8
Rent Support	--	14,9	25,9	30,2	12,6	12,2
Other	12,4	7,1	4,4	5,8	3,9	3,8

Source: TUIK (2009).

Considering recent administrative reform attempts aiming to build an integrated database for both state and non-state institutions (only municipalities in the first phase) to overcome the so-called duplication of benefits to certain beneficiaries, a more rational policy choice under these circumstances might instead be to institute minimum income support mechanisms in order to maintain a certain level of survival for households.

Though not institutionalized as a policy, the possibility of introducing minimum income schemes in Turkey has been debated in both academic and policy circles. The academic debate, also influential in inspiring and initiating the political debate, dates back to the launch of the research report by Prof. Ayse Bugra and N. Tolga Sinmazdemir from Bogazici University Social Policy Forum, which illustrates

the budgetary costs of imposing a couple of guaranteed minimum income support scenarios to those under a certain poverty line (Bugra and Sinmazdemir, 2004).

Meanwhile, the political debate may be traced through two waves of draft laws on "citizenship income" that took place in 2006 and 2009, to institute a national policy and local programs, as cited in the programs of mayor candidates in two metropolises in the 2009 municipal elections. The former wave of draft laws in 2006 were proposed by an MP from ruling government party, namely AKP, who was the founding director of a national NGO known for introducing Grameen Bank type of microfinance programs in Diyarbakir. The wave constitutes a package of policy proposals with three complementary pillars separately prepared: draft laws on Citizenship Income; Amendments to Some Laws for the Introduction of Regional Minimum Wage; and Provision of Temporary Jobs to one Member of Each Poor Family.[36]

Though the draft proposals attracted considerable attention from the public and generated mass media coverage,[37] the lack of political support prevented any potential progress in Parliamentary debates. The proposals did include certain problematic aspects; for instance they only targeted individuals that were not beneficiaries of any microfinance programs; reinvented regional disparities by introducing a regional minimum wage below national rates; and offered temporary, formal jobs but without social security coverage, respectively. However, they were nonetheless effective in introducing concepts such as "minimum income support", "citizenship income" or "socially useful work" to public and policy discourses. One should naturally be

[36] Available in Turkish on the parliamentary website: http://www2.tbmm.gov.tr/d22/2/2-0734.pdf, http://www2.tbmm.gov.tr/d22/2/2-0735.pdf; and http://www2.tbmm.gov.tr/d22/2/2-0736.pdf respectively.

[37] Both in news and articles of columnists – for a few examples see Milliyet / Derya Sazak 17.06.2005, Sabah / Erdal Safak – 28.05.2005, Sabah / Okan Muderrisoglu – 17.06.2006.

cautious in assessing these drafts, since the primary message inherent is that public social assistance only aggravates poverty by reducing work incentives and creating welfare dependency.

The 2009 wave constitutes a draft law proposal given to the Parliament in February by the MP of the Democratic Society Party (DTP), a pro-Kurdish opposition party.[38] Surprisingly, the proposal was scarcely covered in the media, almost not debated at all; most probably because its timing corresponded with the intense pre-election period. The legislative intentions stated in the proposal differ from those proposed by the AKP MP in 2006, especially in its emphasis on the bond of citizenship in institutionalizing "the right to an income" to meet basic needs, and in primarily targeting the provinces ranked as lowest 20 in socio-economic status but stepwise extending the program nationwide to cover the whole country in four years time.

One striking observation common to both drafts is that the administration of this new scheme is proposed to be under the auspices of SGK of MoLSS and financed by a composite Fund which is exactly what the Social Solidarity and Assistance Fund has, and thus implicitly removes said Fund (and also explicitly the SYDGM in 2006 proposal). Optimistically, this has the potential to overcome the challenges and problems inherent in SYDGM-provided assistance, as argued in the preceding sections. Easing the operationalization, both proposals also define the income threshold as one third of the net minimum wage, identical to the means-test condition to determine eligibility for state-provided healthcare through the Green Card scheme.

[38] Available in Turkish on the parliamentary website: http://www2.tbmm.gov.tr/d23/2/2-0409.pdf.

Moreover, the minimum income or "fellow townsmen income (*hemsehrilik geliri*)" was a popular item among mayor candidates campaigning for the municipal elections of March 2009. Mayor candidates from the primary opposition party – the Republican People's Party, or CHP – for the metropolises of Istanbul and Ankara stated the minimum survival income for a 4 person household to be 600 TRY, and prioritized the provision of support to complement this monthly income (not all in cash, but a mixture of subsidized/free services; in-kind assistance and cash) to any household with an income below this threshold. Since neither candidate won the election, assessing the implementation of the proposed practice is currently not possible; however, their campaigns worked to reinforce the publicity of the concept in an environment where almost all social assistance provided by municipalities is seen as being corrupt, open-to-patronage and tainted by charity brokerage.

It should be noted that "citizenship income", "minimum income", "fellow townsmen income (*hemsehrilik geliri*)" are all concepts that were used interchangeably in these proposals to refer to a "guaranteed minimum income" that should be provided to meet the basic needs of households for survival via means-testing, and more importantly, through the consolidation of (minimum) citizenship rights. Hence, components such as "insertion" or "active inclusion" do not fully complement these schemes with work-related conditionality requirements; they were intended rather to "guarantee" basic income security (Standing, 2003 and 2007). Considering that Turkey ranks second highest in income inequality after Mexico (OECD, 2008), and the at-risk-of-poverty rate for those employed is around 23 percent (EUROSTAT, 2005), the provision of a "guaranteed minimum income" has

considerable potential to combat poverty, material deprivation and social exclusion for the time being, even without the activation component.

The impact of EU accession process in Turkey in its infancy has been viewed to provide possibilities to mobilize interest among both public and policy circles and to advocate for a new concern with policies directed at social exclusion with reforms in the realm of social assistance (Bugra and Keyder, 2006; Bugra and Adar, 2007). Indeed, the timing of the preparation of the draft law on social assistance in 2004 coincided with heated debates about EU accession. As a part and parcel of the candidacy, Turkey is engaged in preparation of Joint Inclusion Memorandum, very similar to the NAPs/SI of Member States, jointly with the European Commission which would constitute the main policy document on combating poverty and social exclusion setting out the current situation and challenges and specifying priorities in policy areas. The launch of the JIM process in the end of 2004 and the consequent drafting process of the document have indeed contributed to the social policy environment in bringing issues about poverty and social exclusion on the agenda while also fostering dialogue between government officials, NGOs and social partners. However, having the JIM document still not fully drafted, the current state of art reveals that the process has failed to sustain this dynamism both because of the stagnant period of accession negotiations with EU over the last 3 years and relative importance attached to the issues of poverty and social exclusion as manifested in the progress reports of Turkey prepared by EU.

5. Conclusion

Reducing poverty has been one of the main aims of welfare systems since their origins. Besides the mix of provisions through which the social policies of each country intend to achieve this outcome, the existence of a 'measure of last resort' with which to remedy indigence – by preventing citizens from falling below an economic threshold deemed the minimum level for a decent life – is an essential component of any modern welfare state.

In the absence of a basic income policy addressed to all citizens, for several years in almost all European countries the fight against poverty has been entrusted to minimum income policies, that is, selective transfers addressed only to poor people. Over recent decades, policies of this kind have greatly changed their features, moving from 'passive' transfer policies to 'active' instruments that seek to enable poor people to participate actively in society and the jobs market.

The impact of the several policies implemented on poverty and inequality could be tested and explored using several techniques. As demonstrated in the Micro Framework chapter, tax-benefit microsimulation is not the only way but is just one way of doing so. Adopting the cross-country integrated static model to the single country case, TR-MOD is created on the basis of micro-data from 2004 Household Data Set for the 2004 tax and benefit systems. One advantage of using EUROMOD is its flexible structure allowing for cross-country comparisons for the same or different sets of policy tools. It should be mentioned once more that the peculiarity of constructing a tax-benefit model is to create room for analysing the impact of tax and benefit policies on poverty and inequality. Though very simplistic, static and like "morning-after", tax-benefit models in some sense creates possibility for the researcher to design any particular policy that is thought to act for

counterbalancing any challenges facing the welfare regime itself. In its very simple form presented in the third chapter, the analysis of poverty and income inequality using national model TR-MOD shows the peculiarities of the tax benefit system in Turkey in relation to the pension bias of the benefit system where all other benefits than pensions are both less in amount and not fully directed to the lowest deciles of the population. As all taxes and social insurance contributions are simulated in the model, the high concentration of all taxes and social insurance contribution payments reflects the ideal case in a progressive system where all benefits targeting the poor segments of population are funded out of general government revenues accrued by taxing high levels of income. A closer look to the households at risk of poverty defined as having equivalized disposable income less than 60 per cent of median HDI demonstrate the incidence of extreme poverty at the lowest 20 per cent decile of this group who have more benefit income than income from employment while the total amount of benefits received remain much less than those closer to the poverty line. With respect to the household composition, the results of TR-MOD demonstrate the levels of economic activity of the working age population as well as average numbers of elderly and children across deciles. The findings point to the trajectories within the households at risk of poverty with significance of unpaid family labour in the rural context vis-a-vis inactivity and unemployment in the urban context.

These preliminary observations serve to confirm the validity and usability of TR-MOD for further analysis. The exercises carried out using EUROMOD for southern European countries are illustrative in this regard to show how policy simulations could be designed, modified and analysed. The existing minimum income scheme in Portugal is used to swap between other countries. Also the policy itself has been modified to test for variations with respect to the impact on poverty and inequality. The scenarios implemented here did not

assume budget neutrality but built on the basis of 100 per cent take up. The results of the comparative analysis show that reforms inhibiting universality prove to be more effective, though in varying degrees, in reducing poverty and inequality. Apparently the configuration of the tax-benefit system and the existence of similar benefits seemed to influence the relative impact of the policies, as demonstrated by separate country case analyses. While such cross country policy analysis might have been explanatory in terms of the potentialities and simple outputs of policy implementation, one should take into account the political economy of the welfare reform as shown in the divergent country trajectories in the last chapter.

The recent welfare transformation taking place in southern Europe is regarded as exploratory in many aspects. First and foremost, welfare regime in southern European countries are quite similar to Turkish case both in configuration of state, family and market and the corresponding safety net for those facing certain social risks. Related to this, the political economy of the reforms with respect to the final balance reflecting the influence of both internal and external dynamics and actors are regarded as important factors shaping the trajectory and parameters of the reforms. Accession process of Turkey to European Union is evaluated upon the basics of the southern experience. Thirdly, the parameters of the reforms themselves in terms of degree of universality, coverage, means testing procedures, are instrumental to highlight the limits and constraints of a prospective reform in social assistance system, if any.

The construction of TR-MOD in parallel to the framework of EUROMOD enhances further analysis of policy with respect to the Turkish case. The flexibility of EUROMOD is demonstrated via case studies of policy proposals. Apparently, comparative policy swaps and impositions of new policies with different aims in terms of universality, budget neutrality etc. provides certain set of possibilities and constraints to evaluate any policy reform with certain

parameters involved. In this regard, the exercise could be further replicated by using the national model, TR-MOD generated. The structure of TR-MOD allows for both reproduction of output by different household micro data (with certain modifications of course) and analysis of tax and benefit policies, either hypothetical or real. Further research using TR-MOD could include not only more detailed analysis of the poverty and inequality based on HBS 2004 data set encountering specific dimensions like gender, age groups, occupational groups etc. but also replication of the same programming with the survey data on Income and Living Conditions, which is anticipated to be open to public in the second half of 2010. Then the analysis of policy reforms including parametric modifications of existing policies or introduction of new policies to substitute for or to complement some set of policies of the system could be taken further to the comparative level. The analysis allows for calculation of budgetary impact as well as testing hypothetical scenarios of various levels of take-up as means-tested programs are seriously prone to non-take up of benefits. Such experiments have the potential to feed in the policy discussions taking place within the welfare bureaucracy in charge of administering certain schemes while acknowledging the dynamics of internal and external actors.

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Appendix: Some Technical Notes on the Operation of TR-MOD

TR-MOD operates mostly in MS Excel with interrelated data sheets. Indeed it follows the logic depicted in Figure 3.17. The input data are compiled by directly importing from HBS 2004 household and individual data sets, converting and simulating via using SQL and applying simple aggregations to the directly read-off data. Due to technical constraints, TR-MOD, for the time being, cannot operate on a single control file commanding a set of parameter and data files as it is in EUROMOD. However, with simultaneous working of the following MS Excel files and sheets, it is possible to calculate personal disposable income, household disposable income and the set of indicators presented in the validation section.

The data on net incomes from employment, read-off from HBS data set, are prone to net-to-gross conversion operation carried out in SQL. The gross monthly incomes generated are recorded as *GROSSSALARY*; on the basis of these gross values, monthly social insurance contributions are calculated and recorded as SIC. In order to be able to simulate personal income tax, annual taxable income (tax base) is calculated by adding up annual amount of gross incomes from employment (*GROSSSALARY* x 12) with aggregate annual investment income and property income values recorded as *INVGEL_Y* and *PROPGEL_Y* respectively, net of annual social insurance contributions (deducting *SIC* x 12). Concerning the different rules and tax rates surrounding the personal income tax scheme, personal income tax and social insurance are simulated in MS Excel on the basis of the policy module depicted in Figure 3.12 and 3.13 respectively. Income net of taxes and social insurance contributions is then recorded as *NET INCOME* (i.e. *ANNUAL TAXABLEY* net of *IT* simulated). Components of non-taxable income is aggregated by directly reading-off annual amounts of income from

additional jobs, tax-refund, cash remittances from abroad and informal support in cash from the HBS data set. Benefits are aggregated in two broad categories: cash and in-kind. In-kind benefits are recorded in HBS data set separately which are aggregated according to the source: to replicate welfare nexus of state, market and "family", the aggregation simply depicts the broad categories as sum of in-kind assistance provided by the government, sum of in-kind benefits provided through employment and informal support in kind. Benefits in cash, on the other hand, include simulated, split and read-off items. As described in section 3.2.2.2., agricultural direct income support and elderly pension benefits are simulated in TR-MOD. Simulation of elderly pensions was carried out in SQL while direct income support module is simulated in MS Excel. Due to the recording of more than one benefits under a single variable in HBS (as evident in *YASLI_YL* and *SOSY_YL* variables), following split procedures described in 3.2.3.3., social assistance by SYDGM, maternity benefits and child benefits are extracted and recorded separately as part of benefits in cash. The rest of the annual cash benefits listed in Table 3.27 are renamed and directly read-off from the HBS. All these are added per individual to get Personal Disposable Income (PDI). Using the common variable denoting the household - *BULTEN*, PDI with the same *BULTEN* are aggregated using MS Excel – Pivot Table, to get HDI per household and all related information concerning the household.

To have the simulations working, the following files must be simultaneously opened in MS Excel as they have cross connections: MODEL.xls, fertseti.xls, validation_new.xls. The worksheets in these files with the suffix *(–f)* imply the latest modified sheets but the reference sheets and files (such as GrossSalary-SIC.xls, DIS.xls, haneye_TO.xls where modules calculated both using SQL and MS Excel are all provided. This preliminary version of TR-MOD will be updated and restructured (most probably by using SQL) to maintain

control over a single platform. This will enable practicality with maintaining an implicit connection between the MS Excel files rather than opening all the files (most of which are substantially large due to the links and connections to one another) at one time.

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Grants and Scholarships

Publication Award for Social Sciences granted by TUBA (Turkish Academy of Sciences) (2008).

Visiting Fellowship by European Centre for Analysis of Social Sciences (ECASS) at Institute for Social and Economic Research (ISER) at University of Essex, Colchester, UK (a total of 9 weeks in Spring 2007).

Research Interests

Poverty and social exclusion; new patterns of work and informal employment; pension reforms in comparative perspective.

Conference Presentations and Invited Seminars

"On the Possibility of a Comparative Southern European Cluster: Using EUROMOD to argue for the right to a minimum income", paper presented at EUROMOD Research Workshop organized by ISER at University of Essex in Colchester, UK on June 25, 2009.

"Informal Employment: Critical Reflections on Definitions and Incentives" (with H. Akay), European Research Institute Seminar, University of Bath, UK on April 27, 2009 (invited seminar).

"Arguing for Citizenship Income in Turkey", invited lecture at NGO Training Programme at Bilgi University, Istanbul on March 26, 2009.

"Social Assistance in Turkey: On the Margins of Redistributive Justice?" (with V. Yilmaz) presented at Annual International Conference "Beyond Social Inclusion: Towards a More Equal Society?" organized by Centre for Research in Social Policy at Loughborough University held at Loughborough, UK on January 22-23, 2009.

"Structural Change, Welfare Regime Transformation and Female Employment: The Case of Turkey" (with A. Bugra) presented at Conference on Gender Studies in Turkey (Türkiye'de Toplumsal Cinsiyet Çalışmaları Konferansı) organized by Koç University held at Istanbul, Turkey on November 29-30, 2008.

"State Provided Social Assistance Policies in Turkey (Türkiye'de Merkezi Devlet Üzerinden Yürütülen Sosyal Yardım Politikaları)" (with V. Yilmaz) presented at Sixth Graduate Conference of Turkish Political Science Association" held at Istanbul Bilgi University, Turkey on November 1, 2008.

"Social Policy and Religion in the Middle East: A Comparative Analysis of Turkey, Lebanon, Egypt and Iran" (with R. Jawad) presented at Social Policy Association Annual Conference on "Challenging Boundaries" organized by School of Social and Political Studies, University of Edinburgh held at Edinburgh, Scotland on June 23-25, 2008.

"Comparative Analysis of Poverty and Inequality in Turkey" presented at I-CUE Final Conference on "Tax-Benefit Microsimulation in an Enlarged Union: Results from the I-CUE Project and Perspectives for the Future", organized by European Centre for Social Welfare Policy and Research held at Vienna, Austria on April 3-4, 2008.

"Welfare Implications of Skill-Biased Technical Change" (with H. Akay) presented at 4th Annual ESPAnet Conference 2006 on "Transformation of the Welfare State: Political Regulation and Social Inequality", jointly organized by ESPANet and Zentrum for Sozialpolitik at University of Bremen held at Bremen, Germany on September 21-23, 2006.

"Informal Employment and Transformation of EU Social Policy" (with H. Akay) presented at International Post-Graduate Conference on "Shaping European Systems of Work and Welfare", organized by Finnish National Graduate School on Work and Welfare Studies – LabourNet, held at Helsinki, Finland on September 7-9, 2006.

"Trade Unions and Welfare Reform: A Case Study on (Recent) Social Security Reforms in Turkey" presented at workshop on "Changing Values-Changing Welfare States: on the European Dimension of German and Turkish Social Policy", jointly organized by Graduate School of Social Sciences at Bremen University and Social Policy Forum at Bogazici University, held at Istanbul, Turkey on May 24-26, 2006.

"Informal Employment and Transformation of Social Policy in European Union" (with H. Akay) presented at Conference on Transformation of Social Policy in Europe organized by Middle East Technical University held at Ankara, Turkey on April 13-15, 2006.

"European Social Policy and Minimum Income Schemes in Europe" presented at 'Human Rights for All' Conference organized by Social Participation and Development Foundation held at Ankara, Turkey on April 2-3, 2005.

"International Actors and the Welfare Regime in Turkey" presented at Globalization and Social Policy Programme (GASPP) 6th GASPP Seminar on 'Globalization, Regionalization and the Making of Social Policy in South Eastern Europe' held at Thessaloniki, Greece on September 18-20, 2003.

Book Chapters

"Turkey" in B. Deacon and P. Stubbs (ed.) (2007) Social Policy and International Interventions In South East Europe, Edward Elgar.

Articles

"Religion and Social Policy in the Middle East: The (re)constitution of an Old-New Partnership" (co-authored with R. Jawad), *Social Policy and Administration* (under review)

"Structural Change, Social Policy Environment and Female Employment: The Case of Turkey" (co-authored with A. Bugra), *Development and Change* (under review).

"Türkiye'de Sosyal Yardım Mekanizmaları Üzerine", submitted to Toplum ve Demokrasi.

"Türkiye'de Merkezi Devlet Üzerinden Yürütülen Sosyal Yardımlar Üzerine (on the State Provided Social Assistance in Turkey) (co-authored with V. Yilmaz), Dayanisma, 1(1), pp. 78-85 (in Turkish) (2008).

"Dosya: Yoksulluk ve Sosyal Dışlanma (Special Issue on Poverty and Social Exclusion)" (co-edited by G. Atilgan), Tes-İş Dergi, June, pp. 67-106 (in Turkish) (2007).

"Sunus (Introduction)" (co-authored with G. Atilgan), Tes-İş Dergi, June, pp. 68-69 (in Turkish) (2007).

"Yoksulluk ve Sosyal Dışlanmaya Genel Bakış: Leaken Göstergeleri ile Avrupa Birliği'nde Durum (Brief Overview of Poverty and Social Exclusion in European Union using Leaken Indicators)", Tes-İş Dergi, June, pp.90-94 (in Turkish) (2007).

Translations

"Sosyal Politika Yazıları", A. Buğra and Ç. Keyder (ed.), Istanbul: İletişim Yayınları (2007).

Research and Teaching Experience

Country Consultant for University of Kent international research project granted by UK Economic and Social Research Council (ESRC) on "Religion and Social Policy in the Middle East: Beyond the Rentier State, Toward a New Ethic of Welfare", supervised by Dr. Rana Jawad, January 2010 - present

Research Associate of SPF project granted by state DG Social Assistance and Solidarity on "Cash Transfer Policies Targeting Single Mothers", supervised by Assoc. Prof. Şemsa Özar, May 2009 – present.

Research Associate of SPF project granted by TUBITAK "Labour Markets and Welfare Regimes as Gendered Institutions: A Study on Female Employment Patterns in Turkey" supervised by Prof. Ayşe Buğra, January 2009-present.

Principal Researcher of SPF project on "Restructuring Social Protection", May 2008-present.

Principal Researcher of SPF team participating "Monitoring Social Budget Platform" hosted by TESEV, May 2008 – December 2009.

Principal Researcher of EU project granted by DG Equal Opportunities, Employment and Social Affairs on "Combating Poverty and Social Exclusion: Non-Governmental Expert-Turkey", January 2007-February 2008.

Research Assistant of SPF project granted by TUBITAK "Employment Structure and Income Strategies in the Poorest Segments of Urban Population" supervised by Prof. Ayşe Buğra and Prof. Çağlar Keyder, January 2007-February 2008.

Research Assistant of EU project granted by DG Equal Opportunities, Employment and Social Affairs on "Combating Poverty and Social Exclusion: Non-Governmental Expert-Turkey" supervised by Prof. Ayşe Buğra , June 2005-December 2006.

Research Assistant of SPF project on "Contemporary World of Labour and Role of Labour Unions in Turkey" supervised by Prof. Ayşe Buğra, Prof. Ahmet İnsel and Prof. Fikret Adaman, March 2004-December 2005.

Research Assistant of the UNDP project on "New Poverty and Changing Welfare Regime of Turkey" supervised by Prof. Ayşe Buğra and Prof. Çağlar Keyder, January 2002- May 2003

Lecturer, graduate level (M.A.) International Political Economy, Department of International Trade, Bogazici University, September 2009 - present.

Teaching Assistant of Prof. Oya Köymen for introductory level Microeconomics and Macroeconomics courses, September 2000 – January 2003.

Organization Activities

"Workshop on Demographic Change in Turkey: How to jointly tackle the challenges to an ageing society?" directed by Social Policy Forum held at Boğaziçi University, Istanbul, February 28, 2009.

"Symposium on Social Policy and NGOs" co-directed by Social Policy Forum and Boğaziçi University Social Services Student Club, held at Boğaziçi University, Istanbul, June 23, 2007.

"2nd Graduate Student Workshop on Changing Values-Changing Welfare States: on the European Dimension of German and Turkish Social Policy" co-directed by Graduate School of Social Sciences at Bremen University and Social Policy Forum, held at Boğaziçi University, Istanbul, May 24-26, 2006.

"Workshop on Contemporary World of Labour and Changing Role of Unions" directed by Social Policy Forum held at Boğaziçi University, Istanbul, November 26-27, 2004.

"Workshop on New Poverty and Changing Welfare Regimes in EU/ NAFTA Accession Countries: Perspectives for Turkey's Poverty Assistance Schemes and Policies" directed by UNDP held at Boğaziçi University, Istanbul, October 17-19, 2002.

Other Professional Activities

Workshop Discussant – "Demographic Change in Turkey: How to Jointly Tackle the Challenges to an Ageing Society?", organized by Social Policy Forum at Bogazici University, held at Istanbul, Turkey on February 28, 2009.

Working Group Member – Expert Commission for Poverty, Migration and Social Exclusion, elaborating report for the Urbanization Conference of Ministry of Public Works and Settlement (November 2008 – February 2009).

Workshop Participant – Final Conference on "Rescaling of Welfare Policies: A Comparative Study on the Steps Towards Multi-Level Governance in Europe", jointly organized by European Centre of Vienna and Department of Social Work of Lucerne University, held at Luzern, Switzerland on November 13-14, 2008.

Workshop Discussant – "Impact Analysis of Social Assistance provided by SYDGM", organized by Social Assistance and Solidarity DG, held at Ankara, Turkey on July 23-24, 2008.

Visiting Researcher – Scholarship granted by European Centre for Analysis of Social Sciences (ECASS) at Institute for Social and Economic Research (ISER) of University of Essex, in Colchester, UK for a total of 9 weeks between March 11 and May 27, 2007.

Independent Expert – Peer Review on "Incentives for Indefinite Employment" under Mutual Learning Programme of European Employment Strategy, organized by European Commission DG Employment, Social Affairs and Equal Opportunities, in Madrid, Spain on November 16-17, 2006.

Summer School Participant – Course on "Multi-Country Tax-Benefit Microsimulation using EUROMOD" within Summer School on Social Science Data Analysis, organized by University of Essex, in Colchester, UK on August 14-18, 2006.

Participant – Fifth MENA Development Forum jointly organized by MENA Think Tanks, World Bank and UNDP on "Making Reforms Work in the MENA Region" held at Beirut, Lebanon on April 6-9, 2006.

Working Group Member (as representing Turkish Delegation to EU-Turkey Joint Consultative Committee) - "Report on Poverty in Euro-Mediterranean Countries" under the auspices of European Economic and Social Committee to be elaborated by the working group composed of members representing Portuguese, French, Italian, Tunisian Economic and Social Councils and EU-Turkey JCC *(April 2005 - November 2006; report published in November 2006)*

Workshop Discussant - "Changing Values-Changing Welfare States: on the European Dimension of German and Turkish Social Policy", jointly organized by Graduate School of Social Sciences at Bremen University and Social Policy Forum at Bogazici University, held at Bremen, Germany on October 26-28, 2005.

Participant – Mediterranean Seminar organized by ATD Fourth World on "Contribution of Very Poor Families to Cross-Cultural Dialogue in the Information Society" held at Aix-en-Provence, France on September 26-29, 2005.

Language Skills

English (advanced), German (intermediate), Greek (elementary)

Computer Skills

Microsoft Office Applications, E-views, STATAQUEST, SPSS.