Different worlds of welfare in a heterogeneous country: The Brazilian Case.

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1. Introduction

Brazilian inequality is higher than 95% of the world countries for which data are available. The income earned by the richest 1% population is equal to the income of the poorest 50% (Barros and Carvalho 2006). Household income differences are translated in different mix of public-private social service across the population. Despite the universal rights guaranteed by the 1988 Constitution, the extent in which individuals uses public health, education and cash transfers vary considerably in the population. An extensive public sector coexists with a high quality private system of social services in education, health and social security.

A recent study analyzed Brazil in social policies characteristics based on the three Esping-Andersen (1990) worlds of welfare (Kerstenetzky 2010). The author concluded that Brazil is a mix of the Andersen's three worlds. It is "Social-Democrat" due to the importance of the public provision to the population, "Conservatist" because of the Social Security conservatism of the society social stratification and "Liberal" due to the strong private sector restricted to high income individuals. In terms of labor market guarantees Filgueira (2007) highlight the expressive sum of workers in Latin America in general with no rights at all. Despite the existence of high quality labor law with social security, maternity leave and health insurance to formal workers, more than 50% of the workers are in the informal labor market and has no protection at all. This phenomenon is what Lindert, Skoufias e Shapiro (2006) call the "truncated" welfare state.

Considering this perspective, we have elaborated this case study of Brazil with the objective to identify the mix of public-private provision to individuals in traditional fields of state interventions (health, education, social security and welfare programs) by age, sex, level of total household consumption per capita and occupation and type of employment (formal or informal). We identify latent profiles in different individual life course stages based on a set of characteristics. The population was divided in five age groups (0-5, 6-17, 18-24: females and males, 25-59: females and males, 60+: females and males) based on life course theories and Federal laws, especially age related laws in education and retirement. To each age group we have obtained four latent profiles with the Grade of Membership (GOM) which allow fuzzy clustering and inform the predominant characteristic of each individual profile.

Three main variables theme were used based on Esping-Andersen (1990 and 1999). The first one refers to "decommodification" and it says in what extent individuals do not depend of the market. We use the following variables: public conditional cash transfer program, public retirement fund, public education and public health. The theme "commodification" is related to what extent the individual is a commodity and depends of the market. Variables used: type of employment (formal or informal), private health, education and social security. Finally, we use the "familization" concept and analyze in what extent the family has a traditional bread winner model measured by the family arrangement and women occupation. We have found that social coverage, the public and market divide, and income inequality interact with the individuals' life cycle to display a complex web of coverage (and lack of coverage) of the relevant social risks. The paper shows the relevance of Esping-Andersen's typology, but also the need to complement it with other measures well suited to a society that is highly unequal.

2. Data and Method

2.1 Data and Variables

The database used is the National Consumer Expenditure Survey of 2008-2009, from the National Institute of Statistics (IBGE). The total sample size is 190,159 individuals and 55,970 households. Table 1 contains the sample size of each sample used to estimate the latent profiles. This survey measures spending, income and savings of individuals. With this survey we could access detailed information of total household expenditures in education, health insurance, medicaments, medical consultations and hospitalizations, household and Social Security contributions and all income types (welfare transfer, pensions and labor income). We could access also the expenditures with domestic labor and detailed information about labor occupation and type of employment (formal or informal).

Table 1

Sample Size of the Samples Used to Estimate Latent Profiles

Age group	Sex	Sample Size
0 - 5	Female and Male	17,770
6 - 17	Female and Male	43,136
18-24	Female	11,848
	Male	11,704
25-59	Female	44,467
	Male	41,120
60 or more	Female	10,903
	Male	9,211
Total Sample		190,159

Source: Brazilian Consumer Expenditure Survey 2008-2009 - IBGE.

At the individual level the variables used to estimate the profiles are: age, education attendance, type of school (public or private), total years of schooling, employment status, type of employment contract (formal or informal), occupation and a dummy if the person has at least one surviving child. At the household level the variables used are: type of family arrangement (one person, one parent, couple one income with at

least one child, couple one income with no child, couple double income with at least one child, couple double income with no child and other), per capita household expenditure quintile, expenditure with education, domestic services, medicaments, health insurance, hospitalization and medical consultations, if the family receives public transfers from conditional cash transfer programs and from social security. In addition to individuals in the age group 0-5 and 6-17 their mother's information were merged in their individual file to generate the profile. The information used is mother's education, age, total years of schooling and type of employment contract.

The advantage of estimating profiles rather than regressions is that we don't have the multicolinearity problem in which the variables can be related to each other. The selection of variables are based on the "welfare triad" (Esping Andersen 1999, p.) that are the State, Family and Market. Therefore with those variables the goal is to measure in what extent individuals rely on the family in terms of care (mainly unpaid female care identified by family arrangement and female labor force participation) and income, market (health, education, private pensions and income) and in the state (health, education, private pensions and income).

In Figure 1 we shortly summarize the theoretical framework adopted in this paper. Figure 1, however, may give impression of a longitudinal analysis measuring causation. However, the goal of this paper is not to imply causation or understand transition modes from one life course stage to the other. The goal of this paper, on the contrary, is only descriptive and cross-sectional. The objective is to "take a picture" of Brazilian society in 2008-2009 in terms of individuals profiles regarding the public-private-family mix of social provision. Given the heterogeneity of the society we expect to find very different characteristics across individuals in selected age groups.

Finally, we will explain the selection of the age group boundaries and how they were selected since they are not the conventional boundaries used in demographic data analysis. The age group from 0 to 5 and 6 to 17 were differentiated due to basic need differences among the groups and due to a higher demand for a more

intensive care of the first group. The mandatory enrollment in Brazil during 2008-2009 started at age 6 (based on Law number 11,274 from 2/6/2006) and this is the main reason for the lower boundary of the second group. Other non-obvious distinction is the separation of the young adults (18 to 24 years old) from the adults (25-59). This division was based on the fact that young adults are mainly entering the labor force, in or finishing college, university and professional studies and usually starting a family from adult individuals usually more consolidated in the labor market and in their careers. This division was based, predominantly, in Steiber and Haas (2006) study of life course stages transitions and labor force. The age limit of the adult to old age population (60 year) is in common sense unreal; however it is based on the median retirement age of the Brazilian population and it is an average of the different retirement age rules of the Private Pensions System (RGPS).

Figure 1
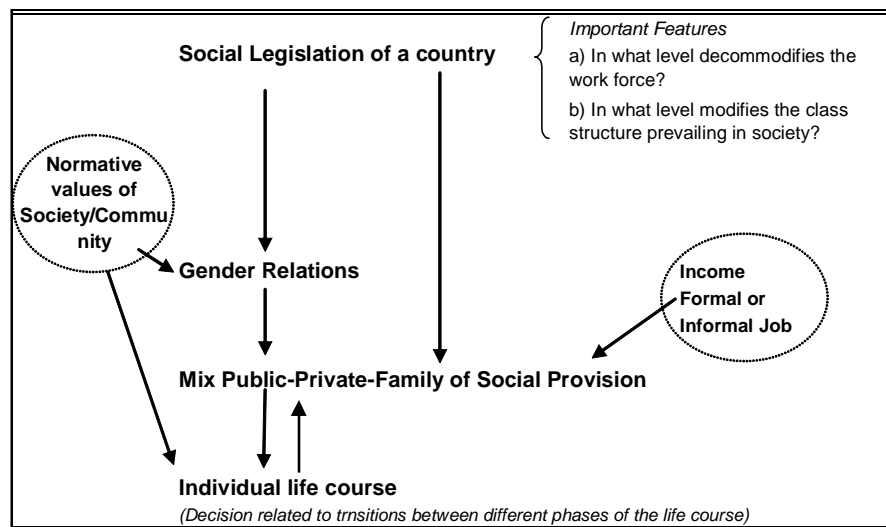
Source: Author elaboration from reviewed literature.

2.2 Method

The Grade of Membership Model is based on the fuzzy set theory (Manton, Woodbury e Tolley 1994) in which for each element i is attributed a grade of membership (g_{ik}) that presents the grade in which the individual i pertain to the k set. For each individual i the $\Sigma g_{ik} = 1$. If, for all the elements of a set $g_{ik} = 0$ or 1 the

set will be crispy. On the contrary it is considered a fuzzy set. So, with this technique, one individual can pertain to more than one fuzzy set varying he or she grades of membership. The advantage of using the Grade of Membership model to parameterize fuzzy sets over *Fuzzy K-Mean* (SPSS) and FANNY (R program) is that GOM gives the probabilities that a specific variable category will pertain to a set or not (Guedes et al 2010). Therefore, not only the grade of membership of each individual for set 1 is created, but also a probability distribution of each variable of the set. So, the latent characteristics of each profile can be easily identified.

The maximum-likelihood estimation (MLE) method is used to estimate the following equation:

$$Pr(Yijl = 1,0) = \prod_{i=1,0}^{I} \prod_{j=1,0}^{J} \prod_{l=1,0}^{Lj} \left(\sum_{k-1}^{K} g_{ik} * \lambda_{kjl} \right)^{yijl} \qquad (1)$$

It maximizes the probability of a discrete response (Yijl) to the category l, variable j, in the profile k for the individual i (Woodbury and Clive 1974). As we can observe from the formula above, this probability is given by the sum of multiplication of the grade of membership (g_{ik}) and the probabilities in each variable category (λ_{kjl}). The researcher selects the number of profiles. We have chosen four profiles because it had the smallest AIC (Akaike Information Criterion). Two, three, four and five profiles were tested for each dataset (Table 1).

After obtaining the values of g_{ik} and λ_{kjl} we estimate the Lambda (λ_{kjl}) Marginal Frequency Ratio (LMFR) for each category in order to identify the main characteristics of each profile.

$$LMFR = \frac{\lambda_{kjl}}{(N_{kjl})^{-Nkj}} \qquad (2)$$

N_{kjl}: number of observations in the category

N_{kj}: number of observations in the variable j

Finally we use the Boolean Expressions used in Sawyer, Leite and Alexandrino (2002) among others to define the conditions in each the individual will pertain to profile k (or set k). The individual will pertain to a profile k if $g_{ik} \geq 0,70$ with k = 1,2,3 or 4 or if:

$$(0,6 \leq g_{ik} < 0,7) \cap \begin{cases} g_{im} + g_{in} \leq 0,3 \\ g_{im} + g_{io} \leq 0,3 \\ g_{in} + g_{io} \leq 0,3 \end{cases} \text{with} \quad \begin{array}{l} k \neq m \neq n \neq o \\ \text{and} \\ k / m / n / o = 1,2,3,4 \end{array}$$

The mixed profiles are given by:

$0,60 \leq g_{ik} \leq 0,70 \cap 0,3 \leq g_{iz} \leq 0,4$ or

$0,40 \leq g_{ik} \leq 0,50 \cap 0,4 \leq g_{iz} \leq 0,5$

With $k \neq z$ e $k / z = 1, 2, 3, 4$

The mixed profiles are classified as "Other Profiles" which are only 19% of our population sample using the classification criteria above. In the next section the main results are explored.

3. Results

The profiles in each age group is characterized as "Family", "State", "Market" or "Vulnerable". Those titles indicate what "welfare triad" (family, state or market) characteristic is more relevant in each profile. It is important to mention also that the profiles characteristics are the ones that expressed higher probabilities to pertain to a variable category. But not necessarily all the individuals in the profile have the same characteristic in relation to the attribute of category "l".

The residual profile "Vulnerable" is attributed to profiles with no prominent characteristic of the previous ones. Usually it indicates small or no service in health, education, pensions or welfare. However, the absence of service is not always necessarily the case. For example, the "Vulnerable" group can receive conditional cash transfer program "Bolsa Família" from the State and not be in the "State" profile. This profile was largely characterized by the type of mother's employment (Age 0-5 and 6-17) or individual's employment (Age 18-24 and 25-59) which is in all cases informal labor agreement with no social guarantee of the labor law (no formal vacation, maternity leave, among others).

In the analysis of age group results we have a summary figure with the results and we emphasize first the characteristic of the residual profile "Vulnerable" and afterwards highlight general characteristics of other profiles if necessary. In Figure 2 we have summarized the result to the 0 to 5 years age group. The "Vulnerable" profile both parents work in the informal labor market, but individuals do not attend a private or public pre-school. They probably rely on informal care networks. This represents vulnerability for the children in the 0 to 5 age group.

Figure 2 – Grade of Membership Profiles of Age Group 0 to 5 years old in Brazil 2008-2009

Variables			Profiles			
			Family	Market	State	Vulnerable
State	Pensions: 1 Minimum Wage					
	Pensions: Other Values					
	Conditional Cash Transfer targeted on children (Bolsa Família)					
	Conditional Cash Transfer targeted on th elderly (BPC)					
	Education					
	Health					
Market	Private Pension Plan					
	Education		<40%		<40%	
	Health	Medicaments				
		Health Insurance				
		Hospitalization				
		Appointments				<20%
	Care					
Family	Care					
HH per capita Expenditure Quintile			2 and 3	3, 4 and 5	2	2
Individual Characteristic				Study	Study	Do no Study
Mother Employment Characteristic			Do not Work	Formal Work	Informal Work	Informal Work
Relative Frequency			39.60%	12.10%	13.10%	18.50%

Source: Authors elaboration.

This vulnerability bears long term consequences in view of the importance of the acquired cognitive knowledge in early childhood as stressed by the literature on early childhood development. Public Education appears as a characteristic of the vulnerable profile (18.5%) but it can be any member of the household using

public education. It is important to reemphasize that State, Market and Family characteristics are based on family overall use of these types of services.

We can observe also that the profile with higher percentage of individuals from 0 to 5 years old is "Family" profile (39.6%). It is characteristic of mothers that do not work. The "Market" profile, on the contrary, has the lower frequency of individuals (12.10%). It is characterized by individuals that go to preschool or childcare and that the mothers are working with a contract (formal worker) and have all the benefits of the Brazilian Labor Legislation (Maternity Leave, Vacations among others).

Figure 3 – Grade of Membership Profiles of Age Group 6 to 17 years old in Brazil 2008-2009

Variables		Profiles			
		State	Market	Family	Vulnerable
State	Pensions: 1 Minimum Wage				
	Pensions: Other Values				
	Conditional Cash Transfer targeted on children (Bolsa Família)				
	Conditional Cash Transfer targeted on th elderly (BPC)				
	Education				
	Health				
Market	Private Pension Plan				
	Education			<40%	<40%
	Health — Medicaments				
	Health — Health Insurance				
	Health — Hospitalization				
	Health — Appointments	<20%			<20%
	Care				
Family	Care				
HH per capita Expenditure Quintile		2 and 3	3, 4 and 5	2 and 3	2
Individual Characteristic		Study	Study	Study	Study
Mother Employment Characteristic		Formal Work	Formal Work	Do not Work	Informal Work
Relative Frequency		12.70%	11.80%	33.10%	24.00%

Source: Authors elaboration.

The next age group in Figure 3 (6 to 17) is highly covered by public education. The poor families have health related coverage problems, with a large

percentage of household income spent in medical and dental consultations and exams. The public health system stresses hospitalizations with underdeveloped primary care for this group, basically due to long waiting line to get public medical or dentist appointments.

The third age group analyzed was 18 to 24 years. This group marks the transition to adulthood, a crucial stage to define social mobility and subsequent life course quality. A group relies extensively on family resources to continue studies (Market Profile). Another profile relies in the market to the provision of health and of care, the individuals in this profile are head of households, and they work in low or middle position occupations. The Family profile is differentiated among men and women. Men and women do not work, but while the women already have children, men usually live with their parents. Finally, the most vulnerable families on this age group rely on conditional cash programs, work in the informal market, and they generally have children.

Figure 4 – Grade of Membership Profiles of Age Group 18 to 24 years old Females in Brazil 2008-2009

Variables			Profiles			
			Market	Family	Vulnerable	Market2*
State	Pensions: 1 Minimum Wage					
	Pensions: Other Values					
	Conditional Cash Transfer targeted on children (Bolsa Família)					
	Conditional Cash Transfer targeted on th elderly (BPC)					
	Education					
	Health					
Market	Private Pension Plan					
	Education					<40%
	Health	Medicaments				
		Health Insurance				<50%
		Hospitalization				<80%
		Appointments		<20%		
	Care					<70%
Family	Care					
HH per capita Expenditure Quintile			4 and 5	1 and 2	1 and 2	3 and 4
Individual Characteristic			College Enrolment	Do not Work	Informal	Formal
Relative Frequency			12.30%	38.60%	17.80%	14.20%

Source: Authors elaboration.

Figure 5 – Grade of Membership Profiles of Age Group 18 to 24 years old Males in Brazil 2008-2009

Variables			Profiles			
			Market2*	Family	Vulnerable	Market
State	Pensions: 1 Minimum Wage					
	Pensions: Other Values					
	Conditional Cash Transfer targeted on children (Bolsa Família)					
	Conditional Cash Transfer targeted on th elderly (BPC)					
	Education					
	Health					
Market	Private Pension Plan					
	Education		<40%	<40%		
	Health	Medicaments				
		Health Insurance				
		Hospitalization	<80%			
		Appointments				
	Care		<70%			
Family	Care					
HH per capita Expenditure Quintile			3 and 4	1 and 2	1 and 2	4 and 5
Individual Characteristic			Formal	Do not Work	Informal	College Enrolment
Relative Frequency			23.90%	22.90%	19.20%	12.20%

Source: Authors elaboration.

The fourth age group analyzed was 25 to 59 years old. The characteristics of family and social provision in this age group are highly related to the individual type of occupation, and whether the person is in the formal or informal sector. This link between social provision and working life is typical of this life cycle stage. The gender differentiation of the profiles was related to family arrangements. The majority of one parent families were headed by women.

The last age group is for individuals 60 years or more. The main characteristic of this age group is that the "Vulnerable" profile is highly "decommodified". Therefore the population receives conditional cash transfers (BPC and/or Bolsa Family) or the one minimum wage from pensions. Two profiles from males were characterized as workers (informal and formal) and one from female (informal or formal). This the summary for the GOM profiles obtained for this age group. More information can be observed in Figures 8 and 9.

Figure 6 – Grade of Membership Profiles of Age Group 25 to 59 years old Females in Brazil 2008-2009

Variables			Profiles			
			Vulnerable	Market	Family	State
State	Pensions: 1 Minimum Wage				▓	▓
	Pensions: Other Values				▓	▓
	Conditional Cash Transfer targeted on children (Bolsa Família)		▓			
	Conditional Cash Transfer targeted on th elderly (BPC)				▓	▓
	Education		▓	▓	▓	
	Health		▓			
Market	Private Pension Plan			▓		
	Education		<40%			
	Health	Medicaments		▓	▓	
		Health Insurance		▓		
		Hospitalization		▓		
		Appointments				<20%
	Care			▓		
Family	Care				▓	
HH per capita Expenditure Quintile			2, 3 and 4	4 and 5	1	2 and 3
Individual Characteristic			Informal	Formal	Do not work	Formal and Informal
Relative Frequency			21.50%	16.60%	35.00%	10.00%

Source: Authors elaboration.

Figure 7 – Grade of Membership Profiles of Age Group 25 to 59 years old Males in Brazil 2008-2009

Variables			Profiles			
			Family	Market	Vulnerable	State
State	Pensions: 1 Minimum Wage		▓			▓
	Pensions: Other Values		▓			▓
	Conditional Cash Transfer targeted on children (Bolsa Família)				▓	
	Conditional Cash Transfer targeted on th elderly (BPC)		▓		▓	
	Education		▓			
	Health		▓		▓	
Market	Private Pension Plan		▓			▓
	Education				<40%	
	Health	Medicaments		▓		
		Health Insurance		▓		
		Hospitalization		▓		
		Appointments	<20%		<20%	
	Care			▓		
Family	Care		▓			
HH per capita Expenditure Quintile			1, 2 and 3	5	2, 3 and 4	1, 2, 3 and 4
Individual Characteristic			Do not Work	Formal	Informal	Informal
Relative Frequency			10.80%	21.90%	26.80%	17.60%

Source: Authors elaboration.

Figure 8 – Grade of Membership Profiles of Age Group 60 years or more Females in Brazil 2008-2009

Variables		Profiles			
		Family	Vulnerable	Market	State
State	Pensions: 1 Minimum Wage				
	Pensions: Other Values				
	Conditional Cash Transfer targeted on children (Bolsa Família)				
	Conditional Cash Transfer targeted on th elderly (BPC)				
	Education				
	Health				
Market	Private Pension Plan				
	Education				<40%
	Health — Medicaments				<25%
	Health — Health Insurance				
	Health — Hospitalization				
	Health — Appointments				<20%
	Care				<70%
Family	Care	no expense	no expense		
HH per capita Expenditure Quintile			1, 2 and 3	4 and 5	2, 3 and 4
Individual Characteristic		Informal or Formal			
Relative Frequency		13.30%	18.50%	22.20%	27.70%

Source: Authors elaboration.

## Figure 9 – Grade of Membership Profiles of Age Group 60 years or more Males in Brazil 2008-2009

Variables		Profiles			
		Market	Vulnerable	Family	State
State	Pensions: 1 Minimum Wage				
	Pensions: Other Values				
	Conditional Cash Transfer targeted on children (Bolsa Família)				
	Conditional Cash Transfer targeted on th elderly (BPC)				
	Education				
	Health				
Market	Private Pension Plan				
	Education				<40%
	Health — Medicaments		<25%		
	Health — Health Insurance	<50%			<50%
	Health — Hospitalization				
	Health — Appointments				
	Care	<70%			<70%
Family	Care			no expense	
HH per capita Expenditure Quintile		4 and 5	1, 2 and 3	2, 3 and 4	4 and 5
Individual Characteristic		Informal or Formal	Do not Work	Informal	Do not Work
Relative Frequency		17.50%	24.90%	16.70%	24.00%

Source: Authors elaboration.

In Figure 10 we show the relative frequency of profiles by total population, household income per capita quintile, and age groups. As we can observe the "Market" profile is highly predominant in the last expenditure per capita quintile. The "Family" profile (pink) is clearly more predominant to individuals aged 25-59 in the right size of the graph (female headed households). The "Vulnerable" profile has been identified in all expenditures quintiles but the last quintile with higher per capita household expenditures.

Figure 10 – Relative Frequency of groups by age, sex, GoM profiles and Expenditure per capita quintile
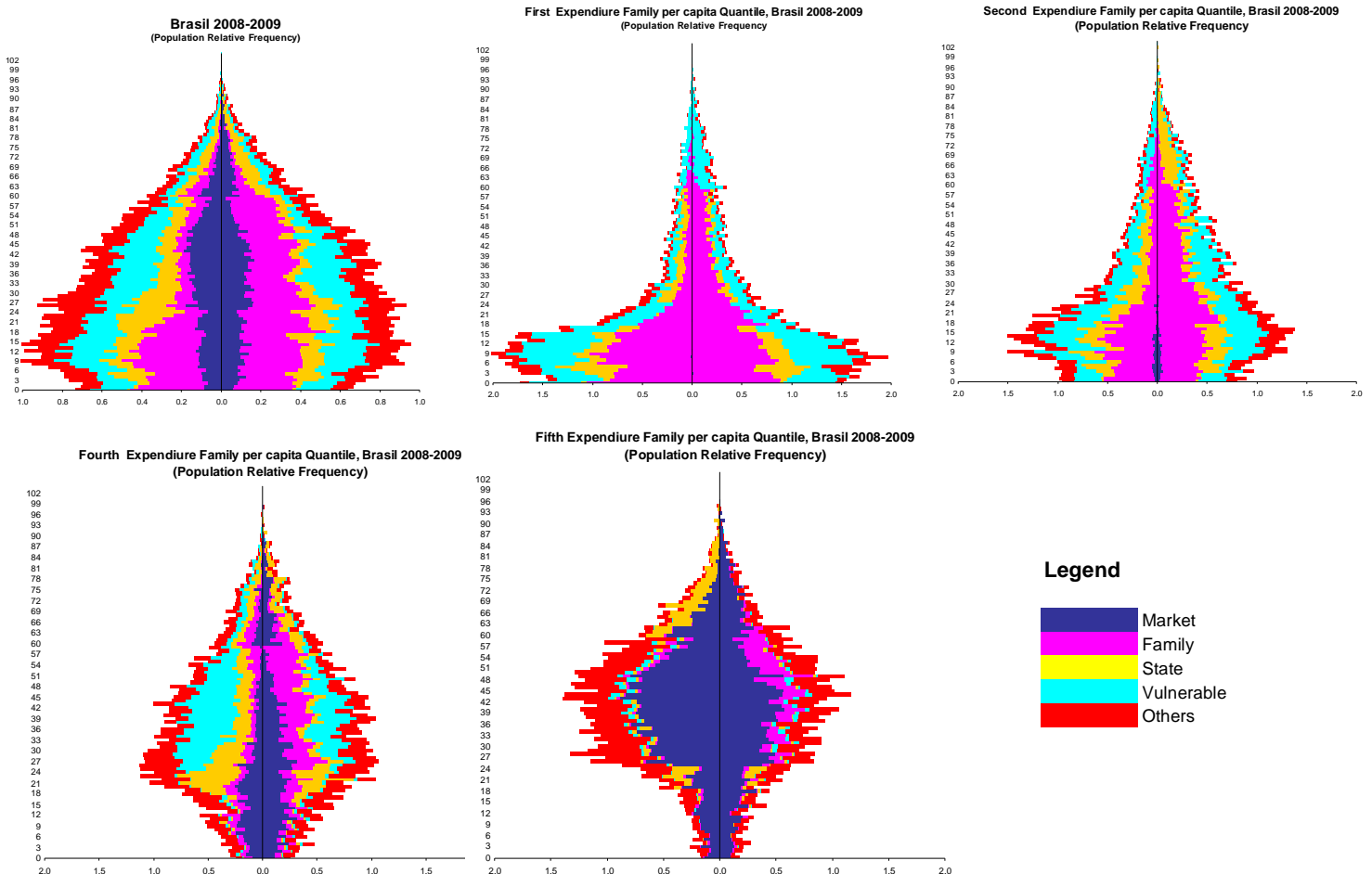
Source: Author's elaboration.

4. Conclusion

Brazilian society has multidimensional combinations of social provision. The profiles are transverse to expenditure quintiles. This can occur due to the high importance of the state in social provision as a whole. The result of this study was similar to that of Costa Rica, obtained by Martinez (2007). This reinforces the fact that Brazil actually be State-protectionist group classified by the author. Two main attributes were identified as closely related to the vulnerable profile. The first is the high labor informality (the 'truncated' welfare state). Second, the care function to age 0 from 5 is still precarious in Brazil in terms of the reliance on the State to childcare or preschools.

We identified characteristics of transition for the population 18-24 years in which a group lives with their parents and relies largely on the resources of the family to continue its studies ("Market" Profile) and another already has its family and is the reference person or spouse and work in the formal or informal market ("Market2" and "Vulnerable"). The "Market" profile was the only that has the College enrollment characteristic to the population 18-24 years. The "Family" profile in those ages for men features individuals who have not left home, do not work and are studying in primary or secondary public schools. The "Family" women profile also has these characteristics, but a higher percentage of women have left the parents' house and has started a new family.

The fact that the Brazilian Universal Welfare State coexists with the private provision of health and education makes the use of private services restricted to people who can pay for the service. The payment is often justified by the difference in services quality. It is important that universal services (due to the ample population reliance on those services) do not lose quality and, therefore, its role in equalizing opportunities in the life course.

REFERENCES:

BARROS, R. P. de, Carvalho, M. C. de. Sobre a Recente Queda da Desigualdade de Renda no Brasil (Nota Técnica). In: BARROS, R. P. de., FOGUEL, M. N., ULYSSEA, G. (Orgs.) **Desigualdade de Renda no Brasil: uma análise da queda recente.** Brasília: Ipea, 2006. 2v. 446p.

ESPING-ANDERSEN, Gøsta. **The Three Worlds of Welfare Capitalism.** Princeton: Princeton University Press, 1990.

ESPING-ANDERSEN, Gøsta. **Social Foundations of Postindustrial Economies.** New York: Oxford University Press, 1999.

ESPING-ADERSEN, Gøsta. **Why we need a new welfare state?** New York: Oxford University Press, 2002.

FILGUEIRA, Carlos H. **Sobre Revoluciones Ocultas:** la familia en el Uruguay. 1. ed. Montevideo: CEPAL, 1996.

FILGUEIRA, Carlos, PERI, Andrés. **América Latina**: los rostros de la pobreza y sus causas determinantes. Santiago de Chile: Proyecto Regional de Población del Centro Latinoamericano y Caribeño de Demografia (CELADE), Junio de 2004. (Serie Población y Desarrollo)

FILGUEIRA, F. **Welfare and Democracy in Latin America:** The Development, Crises and Aftermath of Universal, Dual and Exclusionary Social States. Prepared for the UNRISD Project on Social Policy and Democratization, 2005.

FILGUEIRA, F. **Cohesión, riesgo y arquitectura de protección social en América Latina.** Santiago de Chile: Cepal, División de Desarollo Social, Julio 2007. (Serie Políticas Sociales)

FILGUEIRA, F. , GUTIERREZ, M. , PAPADÓPULOS, J. **The coming of age of a mature welfare regime and the challenge of care:** Labour market transformations, second demographic transition and the future of social protection in Uruguay. Geneve: United Nations Research Institute for Social Development (UNRISD), June 2009.

GORNICK, Janet C., MEYERS, Marcia K. **Families that Work:** Policies for Reconciling Parenthood and Employment. Russel Sage Foundation, 2003.

GORNICK Janet C., MEYERS, Marcia K. **Welfare Regimes in Relation to Paid Work and Care:** a view from the United States on Social Protection in the European Countries**. RFAS.** n.1, p.167-188, 2006.

GORNICK Janet C., MEYERS, Marcia K. (Org.) **Gender Equality:** Transforming Family Division of Labor, in the Real Utopias Project. Verso, 2009

LINDERT, K., SKOUFIAS, E., SHAPIRO, J. **Redistributing Income to the Poor and the Rich:** Public Transfers in Latin America and the Caribbean. World Bank Institute: Promoting knowledge and learning for a better world, August 2006.

MANTON, K. G., WOODBURY, M. A., TOLLEY, H. D. **Statistical application using fuzzy sets.** Nova York: John Wiley & Sons, 1994. 312p.

SORJ, B., FONTES, A. MACHADO, D. C. As políticas e práticas de conciliação entre família e trabalho no Brasil. **Cadernos de Pesquisa.** v.37, n.132, p.573-594, set./dez. 2007.

STEIBER, N., HAAS, B. Employment patterns from a life course perspective in an enlarged Europe: Is it possible to identify national 'life course employment regimes'? In: HAAS, B., STEIBER, N., HARTEL, M., WALLACE, C. (Orgs.) The Relationship between Home and Work in an Enlarged Europe: a quantitative analysis. Viena: Institute for Advanced Studies, Nov. 2006, p. 45-65.