Types of cohabitation in Latin America

Maira Covre-Sussai*, Bart Meuleman°, Koen Matthijs*& Sarah Botterman*

*University of Leuven, Family and Population Studies (FaPOS)

°University of Leuven, Center for Survey Methodology (CSM)

Paper presented at the European Population Conference,
Stockholm, 13-16 June 2012.

DRAFT – WORK IN PROGRESS

Please do not cite without the authors' permission

Corresponding author: Maira.Covre@student.kuleuven.be

Abstract

The coexistence of marriages and consensual unions is a historical feature of nuptiality in Latin America, but with different meanings from those observed in developed countries. Traditionally cohabitation in Latin America is common in the less developed and rural regions, and among the lower and less educated social classes. Nowadays, the incidence of cohabitation is increasing and more precisely in those social groups and countries where cohabitation never became current. The features and meanings of these consensual unions for the most developed regions and upper social classes in Latin American remain quite unclear. Nonetheless, there is evidence that these unions connote a more 'innovative' type of cohabitation, closer to the type one can observe in developed countries. This latter type denotes a trial period before marriage or an alternative to singlehood. This study uses Demographic and Health Survey (DHS) data for eight countries to differentiate the types of cohabitation in Latin America. Patterns of union formation and dissolution, childbearing and religiosity are explored through Latent Class Analysis. Two different types of consensual unions are found. One is labeled 'traditional', as it refers to cohabitation by younger women with more children at a younger age and who are more likely to have children before cohabitation. Another is labeled 'innovative', as it refers to cohabitation by older women with fewer children at a higher age and who are less likely to have children before starting to cohabit.

Keywords

Nuptiality, cohabitation, marriage, social class, Latin America, Demographic and Health Survey, Latent Class Analysis

1. Introduction

Patterns of family formation have changed noticeably over the past decades in the West. Economic, technological, social and ideational changes have led to significant transformations in family life, such as union formation, union stability and gender relations. In developed countries new living arrangements, especially unmarried cohabitations, are interpreted as outcomes of the modernization process, the female economic independence and the rising symmetry in gender roles (van de Kaa, 1993). Although the rise in consensual unions is present in both developed countries as in Latin American countries, the meaning of these increases can differ.

Cohabitation in developed countries represents a more modern type of union formation and is usually considered as a less stable type of union when compared to marriage. This is not necessarily the case when looking at cohabitation within Latin America. The coexistence of marriage and cohabitation is a historical feature of nuptiality in this region (United Nations, 1990). Nowadays, the choice for cohabiting instead of getting married is assumed to be related to either tradition or innovation. This choice depends on the social group under study (Castro-Martin, 2002). Cohabitation has always been prevalent in rural regions among the lower and less educated social classes (Arriagada, 2002). This type of consensual union is generally associated with a high fertility level, a low level of female independence and a high employment rate for women in unskilled or domestic jobs (Parrado and Tienda, 1997). In this way, this type of cohabitation is not considered a 'choice', but a constraint imposed upon women with relatively little bargaining power compared to men (Parrado and Tienda, 1997). This type can be considered as an alternative to marriage, a strategy for women to cope with poverty and avoid single (and adolescent) motherhood. Simultaneously, there are indicators that another type of consensual union is mushrooming. Already characterized as a more modern or innovative type of union formation, this type of cohabitation is more popular among younger and higher educated cohorts in Latin America (Rodríguez, 2004). However, its interpretation remains unclear (Rodríguez, 2004), though indications exists that this type of cohabitation is closely linked to the consensual union formation we find in the more developed Western countries. In that case, it would denote a

trial period before marriage or an alternative to singlehood (Parrado and Tienda, 1997[1]; Cabella et al, 2004[2]).

While several studies have explored different types of cohabitation, none of these were able to completely differentiate a more traditional type of cohabitation from a more innovative one in an empirical way for Latin America. This research gap drives the main research question of this study: *What are the main differentiating factors of diverse types of cohabitation in Latin America?* More precisely, we question (1) how many types are present in Latin America; (2) whether they differ in their patterns of union formation, childbearing, union dissolution and religiosity; and (3) if these types are comparable among different Latin American societies? In what follows, we discuss the Second Demographic Transition theory that is often used to explain the rise in cohabitation in developed countries and its potential for the Latin American context.

2. The different latent types of cohabitation in Latin America

The wave of changes in norms and attitudes that have occurred in most western developed countries since the 1960s is commonly explained by the Second Demographic Transition (SDT) theory. Since the first study on the SDT (Lesthaeghe and van de Kaa, 1987), the spread of innovative forms of living arrangements are considered an expression of not only changing socioeconomic circumstances or expanding female employment, but also as outcomes of secular and anti-authoritarian sentiments of young and better educated cohorts (Surkyn and Lesthaeghe, 2004).

Also in Latin America, recent studies highlight a significant increase in cohabitation since the1970s, especially visible among higher social classes and higher educated women in countries where this type of union was never commonplace (Rodriguez, 2004; Arriagada, 2002). This more 'innovative' type of cohabitation has been related to women's increasing autonomy in countries and regions where economic development is in a more advanced stage in comparison to other Latin American countries (Cabella et al., 2004; Parrado and Tienda, 1997).This is the case in for instance Argentina, Uruguay (Cabella et al, 2004) and the South

[1]Results for Caracas, Venezuela.
[2]Results for Buenos Aires (Argentina) and Montevideo (Uruguay).

of Brazil (Covre-Sussai and Matthijs, 2010). Nevertheless, cohabitation has always been commonplace in some parts of Latin America, while not in others.

This leads us to the assumption that we should find two empirical types of cohabitation. Although some studies suggest that the 'innovative' type of cohabitation is different from the 'traditional' type in form and meaning (Cabella et al, 2004; Parrado and Tienda, 1997), a complete differentiation between the 'traditional' type and the 'innovative' type of cohabitation is lacking.

The more 'traditional' type of cohabitation is considered a continuity of the old type of consensual unions in Latin America. We expect this type to be related to women who cohabit at very young ages, with a higher incidence of getting pregnant before cohabiting, having children born at a younger age, as well as having more children; and it further relates to more stable relationships. We expect the more 'innovative' type of cohabitation to be related to women who cohabit at later ages, with a lower incidence of getting pregnant before cohabiting, having children born at older ages as well as having fewer children; and it further relates to less stable relationships. This type of cohabitation is assumed to be a signal of the SDT. Additionally, in line with the SDT theory, we expect that more secular couples with no religious orientation and low religious attendance choose more often for the innovative type of cohabitation. Although marriage is the form of union stimulated by every denomination, the traditional type of consensual union is not a choice for women with their own secular choices. Consequently, the more traditional type of cohabitation is expected to be chosen by the more religious couples.

3. Data and Method

3.1. Demographic and Health Surveys

The research questions will be addressed by means of the Demographic and Health Surveys (DHS) data. The DHSs are nationally representative surveys that collect comparable data on demographic and health issues in developing countries. Table 1 shows the Latin American countries and the waves of DHS used in this study.

Table 1. Latin American countries and waves of DHS

	DHS IV	DHS V	DHS VI
Bolivia (N=4,125)		2008	
Brazil (N=3,584)		2006	
Colombia (N=17,626)			2010
Dominican Republic (N=6,988)		2007	
Guyana (N=3,773)		2009	
Honduras (N=6,326)		2005-06	
Nicaragua (N=1,081)	2001		
Peru (N=5,573)		2008	

The samples focus on women in their reproductive ages (15-49 years old). Consistent data on the time and type of first unions, as well as complete childbearing histories are available. We select women whose first union formation was a consensual union[3].

3.2. Observed variables

To answer our research question, we explore the observed variables that may indicate different types of cohabitation in Latin America. These are first of all the age at the start of cohabitation, the number of children and the age when giving birth. We further use information about women's relationship status (single, married, cohabiting, widowed, divorced or separated) to create the dichotomous variable 'relationship stability'. Women who were cohabiting were coded one, while women who were separated at the moment of the survey were coded zero. As mentioned before, all other statuses were excluded from the analysis. Combining information from age at cohabitation and age at first birth we classified women who had 'pre-cohabitation pregnancy'.

The DHS also provides information on religious denomination and religious attendance. We create a categorical variable indicating religious denomination (Catholic, Evangelic, other religion or no religion) and an ordinal variable specifying religious attendance (never, less than once a month, once to three times a month, once a week, and more than once a week).The main limitation is the absence of couples' personal opinion about their relationships as well as their personal value orientations. The inclusion of religion and religiosity is expected to minimize this lack of data.

[3]It was only possible to attest for the type of union for women who had no more than one relationship.

Descriptive figures of all observed variables are shown in the Appendix.

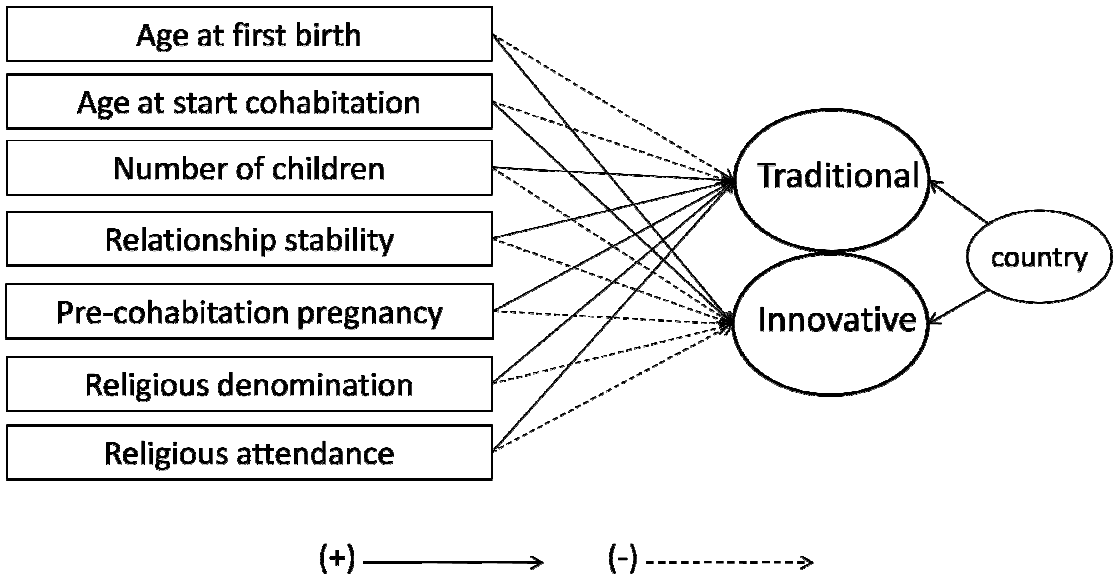
3.3. Method of Latent Class Analysis

We conduct multiple group latent class analysis (MGLCA). MGLCA is the most indicated method, since we explore types of cohabitation that cannot be observed directly. These types are considered latent concepts, identified through observed indicators. The observed indicators are believed to be "caused" by these latent and covariation among them is expected. Their patterns of interrelationships are studied in order to understand and characterize the types of cohabitations (McCutcheon, 1987).We give preference to MGLCA instead of Factor Analysis.

The reason for this is because MGLCA reduces the observed variables into discrete variables, while Factor Analysis transforms them into continuous variables (McCutcheon, 1987). In this study, the result of a Factor Analysis would be meaningless. With the application of MGLCA, it will be possible to verify if the concepts of traditional and innovative cohabitations are similar across the Latin American regions under study.

Figure 1 illustrates the path diagram of the MGLCA study.

Figure 1.MGLCA: Cohabitation in Latin America - path diagram



4. Results

In this draft version, we only present the results of a latent class analysis for Brazil. Comparative results for Latin America will be available upon request.

Every country in the DHS has the choice to conduct the full questionnaire or only a selection of questions. Therefore, we start by exploring one country (i.e. Brazil) in which a full questionnaire was conducted, to verify how well every observed indicator relates to the latent concept. This exploratory analysis will help us decide whether or not to exclude countries from the analyses when they lack certain variables.

Since the expectation is to find two types of cohabitation, we contrast the goodness of fit of a model with two latent classes to the models with more latent classes. The results for Brazil are presented in Table 2.

Table 2.Goodness of fit measurements for Latent Class Analysis of Brazil (model 1)

	AIC	BIC	Entropy	VLMR LL	p-value	N		N		
						C1	C2	C1	C2	C3
2 Classes	67300.41	67492.12	0.99	1837.34	0.000	764	2820			
3 Classes	65880.20	66164.68	0.96	1425.33	1.000			735	228	2621

VLMR LL = Vuong-Lo-Mendell-Rubin LL

The goodness of fit measurements point to different results. The information criteria (i.e. AIC and BIC) indicate a better model when three latent classes are detected. At the same time, the entropy measure (i.e. the preciseness of the class classification) and VLMR LL test – which tests for two classes (H_0) versus three classes (H_1) – point to a solution of two latent classes. The VLMR LL test is the most indicated measurement for choosing the number of classes Therefore, we choose the option of two latent classes.

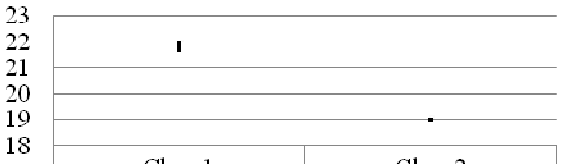
In order to better visualize the between classes differences, the observed indicators per type of cohabitation are shown in Figure 2. The types of cohabitation differ by age at first cohabitation, age at first birth, pre-cohabitation pregnancy and number of children. The first group of women starts to cohabit at a later age, doesn't have many children and has a low probability of getting pregnant before cohabitation. The second group of women starts to cohabit a lower age, gives birth to several children and has a high chance to have children before cohabiting. The comparison of the confidence intervals (CI -1 and CI +1) attests that the between classes differences are significant for all these indicators.

With reference to relationship stability, religious denomination and religious attendance, we cannot attest the same. There is no significant difference regarding relationship stability between the two types of cohabitation and negligible differences with respect to religious denomination and attendance. These latter results suggest that there is no gain in excluding countries from the analysis due to lack of information on these three variables.

Therefore, figure 3 illustrates the latent classes for the model without these variables and table 3 presents this later model goodness of fit in comparison with the same model with 3 classes of cohabitation.

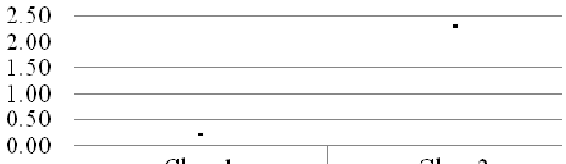
Figure 2. Observed variables within latent classes of cohabitation – model 1(Brazil)

Age at first cohabitation



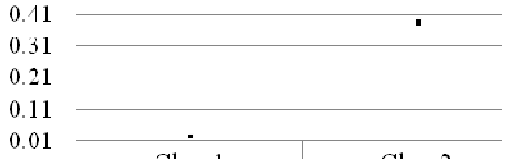
	Class 1	Class 2
Mean	21.83	19.03
CI-1	21.59	18.95
CI+1	22.06	19.11

Number of children



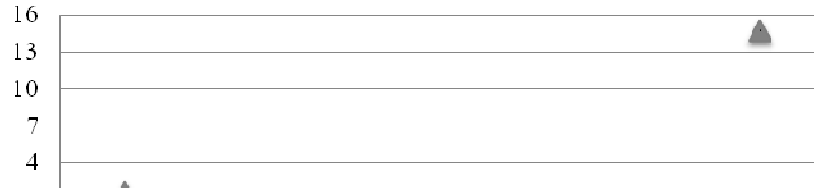
	Class 1	Class 2
Mean	0.21	2.30
CI-1	0.20	2.27
CI+1	0.23	2.33

Pre-cohabitantion pregnancy



	Class 1	Class 2
Probability	0.02	0.38
CI-1	0.02	0.38
CI+1	0.03	0.39

Age at first child (ref.: older than 30)

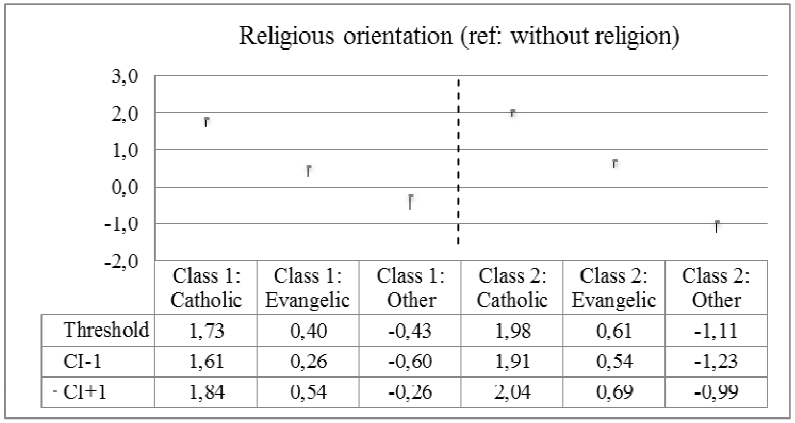


	Class 1: No child	Class 1: < 20	Class 1: => 20 and < 30	Class 2: No child	Class 2: < 20	Class 2: => 20 and < 30
Threshold	1.59	0.00	0.00	0.00	0.00	14.73
CI-1	1.49	0.00	0.00	0.00	0.00	14.69
▲CI+1	1.69	0.00	0.00	0.00	0.00	14.77

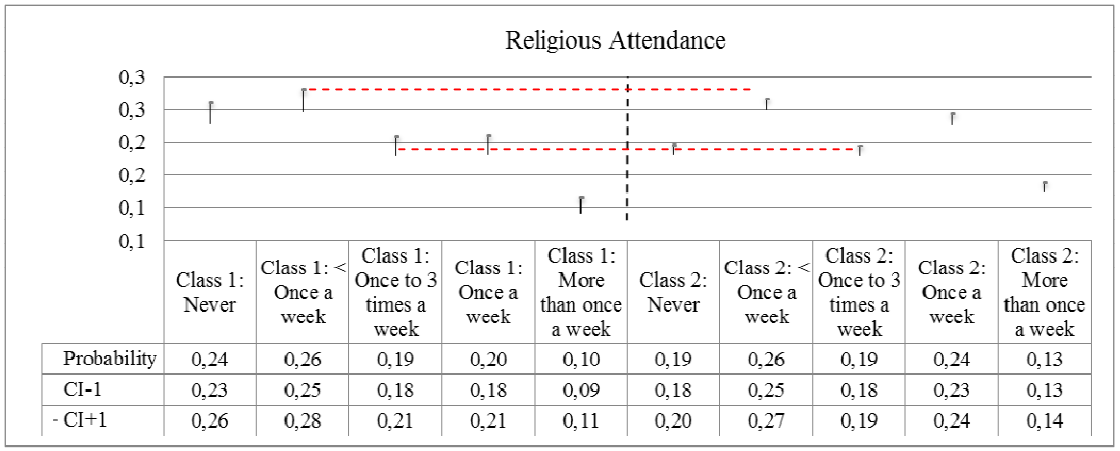
Relationship stability

	Class 1	Class 2
Probability	0.20	0.19
CI-1	0.19	0.18
CI+1	0.22	0.20

(Figure 2.Continued)



	Class 1: Catholic	Class 1: Evangelic	Class 1: Other	Class 2: Catholic	Class 2: Evangelic	Class 2: Other
Threshold	1,73	0,40	-0,43	1,98	0,61	-1,11
CI-1	1,61	0,26	-0,60	1,91	0,54	-1,23
- CI+1	1,84	0,54	-0,26	2,04	0,69	-0,99



	Class 1: Never	Class 1: < Once a week	Class 1: Once to 3 times a week	Class 1: Once a week	Class 1: More than once a week	Class 2: Never	Class 2: < Once a week	Class 2: Once to 3 times a week	Class 2: Once a week	Class 2: More than once a week
Probability	0,24	0,26	0,19	0,20	0,10	0,19	0,26	0,19	0,24	0,13
CI-1	0,23	0,25	0,18	0,18	0,09	0,18	0,25	0,18	0,23	0,13
- CI+1	0,26	0,28	0,21	0,21	0,11	0,20	0,27	0,19	0,24	0,14

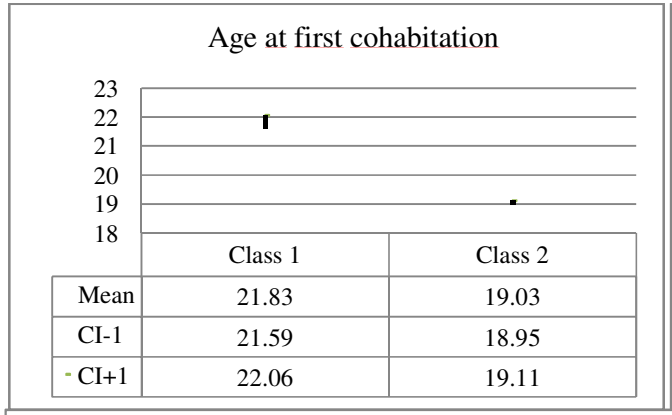
We re-estimate our model for Brazil, excluding the non-significant observed indicators. Again, the goodness of fit measurements confirm that two classes fit the data better than three or more classes. The results of the Latent Class Analysis point to the existence of two types of cohabitation in Brazil. The 'innovative' type of cohabitation includes women who start to cohabit at a later age, don't have many children and have a low probability of getting pregnant before cohabitation. This group retains only 21% of the Brazilian sample. The 'traditional' type of cohabitation, which is characterized by the opposite trends, is experienced by the majority of cohabitants in Brazil (79%). These women start to cohabit at a lower age, give birth to more than two children and have a high probability to have children before cohabiting. The comparison of the confidence intervals (CI -1 and CI +1) attest that the between classes differences are all significant.

Table 3.Goodness of fit measurements for Latent Class Analysis of Brazil (model 2)

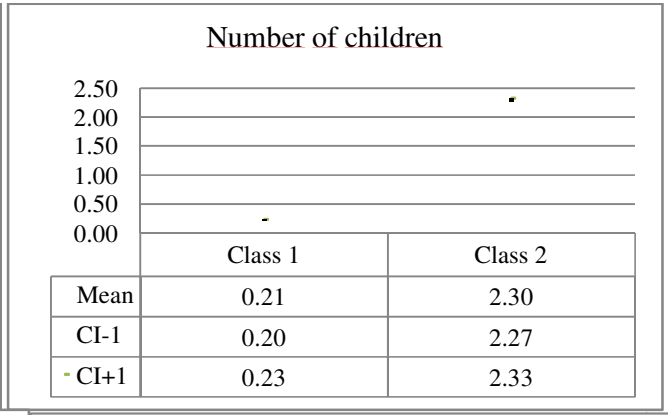
	AIC	BIC	Entropy	VLMR LL	p-value	N		N		
						C1	C2	C1	C2	C3
2 Classes	67300.41	67492.12	0.99	1837.34	0.000	764	2820			
3 Classes	65880.20	66164.68	0.96	1425.33	1.000			735	228	2621

VLMR LL = Vuong-Lo-Mendell-Rubin LL

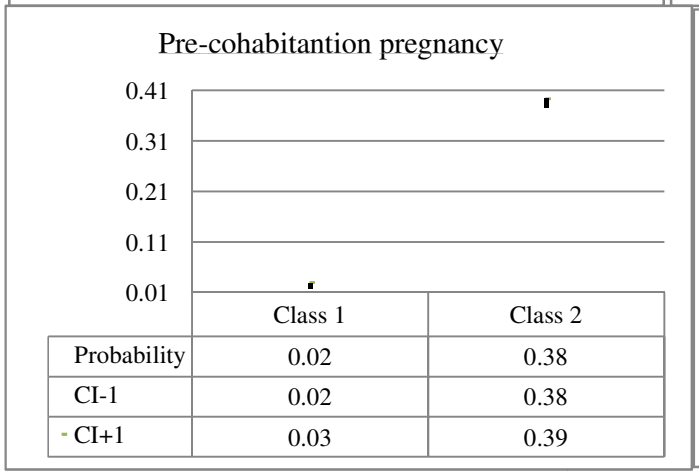
Figure 3. Observed variables within latent classes of cohabitation – model 2 (Brazil)



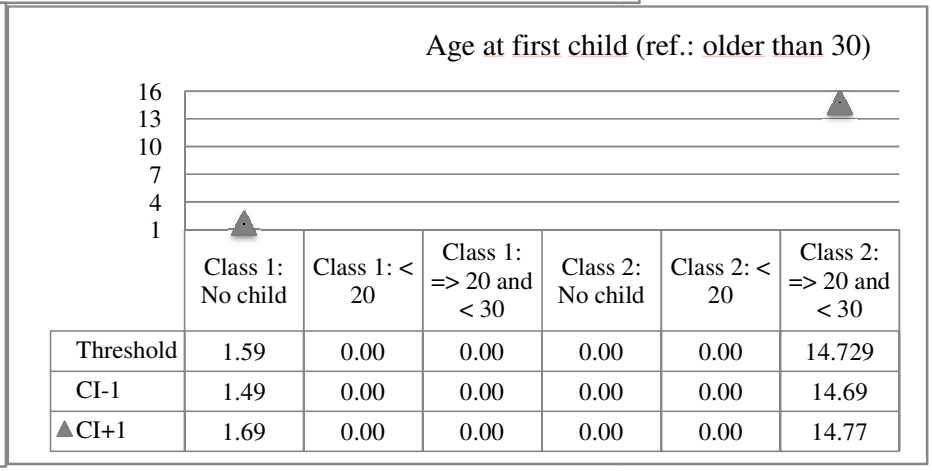
	Class 1	Class 2
Mean	21.83	19.03
CI-1	21.59	18.95
CI+1	22.06	19.11



	Class 1	Class 2
Mean	0.21	2.30
CI-1	0.20	2.27
CI+1	0.23	2.33



	Class 1	Class 2
Probability	0.02	0.38
CI-1	0.02	0.38
CI+1	0.03	0.39



	Class 1: No child	Class 1: < 20	Class 1: => 20 and < 30	Class 2: No child	Class 2: < 20	Class 2: => 20 and < 30
Threshold	1.59	0.00	0.00	0.00	0.00	14.729
CI-1	1.49	0.00	0.00	0.00	0.00	14.69
CI+1	1.69	0.00	0.00	0.00	0.00	14.77

5. Concluding Remarks

Changes in family formation patterns, mainly the increasing incidence of unmarried cohabitation, have attracted attention in the sociological and demographic literature during the past decades (Bumpass et al., 1991; Smock, 2000; Jose et al., 2010). Most studies have focused on Western developed countries and considered cohabitation as a product of modernization processes. Nonetheless, consensual unions are not restricted to the developed world and have long been marked as a peculiar characteristic of nuptiality in Latin America (Camisa, 1978; De Vos, 1987; Castro-Martin, 2002). Historical, socio-economic and cultural roots make consensual unions in Latin America distinctive from cohabitation observed in the developed world. It is suggested that modernity, combined with recent economic development and remaining social inequalities lead to the coexistence of two different types of consensual unions in this region: one traditional and another innovative or modern (Castro-Martin, 2002).

This study uses data from the Demographic and Heath Surveys to differentiate these different types of cohabitation in Brazil. Our results point to the persistence of the traditional type of cohabitation. It refers to the absolute majority of women in our sample, that are characterized by a younger age, a high fertility and a high change of presenting single pregnancy or motherhood. At the same time, we identify the existence of an innovative type of cohabitation. This innovative type is similar to those observed in developed countries and can be explained by the SDT theory. In other words, this innovative type groups mainly childless women, who start to cohabit later on in their life course.

The identification of two types of consensual unions is needed for the elaboration of efficient public policies aiming to protect partners and children. The institutional protection required by couples living in different forms of consensual union is probably not the same. Certainly, couples driven to cohabitation by poverty or adolescent motherhood need greater protection than couples cohabiting as a trial period before marriage or an alternative to singlehood.

In what follows, we will verify if the results hold for the remaining Latin American countries, by using Multiple Group Latent Class Analysis.

References

Arriagada, I. (2002). Changes and inequalities in Latin American families. *CEPAL Review*77: 135-153.

Cabella, W., Peri, A., Street, M. C. (2004).¿Dos orillas y una transición? La segunda transición demográfica en Buenos Aires y Montevideo en perspectiva biográfica. Trabajo presentado en el I Congreso de la Asociación Latinoamericana de Población, ALAP, realizado emCaxambú –MG -Brasil, del 18 al 20 de Septiembre de 2004.

Castro Martin, T. (2002). Consensual unions in Latin America: persistence of a dual nuptiality system. *Journal of Comparative Family Studies* 33(1): 35-55.

Greene, M. and Rao, V. (1992).A compressão do mercado matrimonial e o aumento das uniões consensuais no Brasil. Revista Brasileira de Estudos Populacionais, Campinas, 9, 2:168-204.

McCutcheon, A. L. (1987).Latent class analysis.Sage University Paper series on Quantitative Applications in the Social Sciences.no. 07-064. Newbury Park.CA: Sage.

Parrado, E. A. and Tienda, M. (1997). Women's roles and family formation in Venezuela: New forms of consensual unions? Biodemography and Social Biology, 44:1,1-24

Rodríguez, J. (2004). Tendencias recientes de las uniones consensuales en América Latina. In Arriagada, I. y Aranda, V. (compiladoras). Cambio de las familias en el marco de las transformaciones globales: necesidad de políticas públicas eficaces. CEPAL, Satiago de Chile. Publicación de las Naciones Unidas.

Rutstein, S. O. and Rojas, G. (2006).Guide to DHS Statistics.Demographic and Health Surveys.ORC Macro. Calverton, Maryland.

Van de Kaa (1993). Europe's Second Demographic Transition. Population Bulletin, 42:1 September 1993 reprint.

United Nations (1990). Patterns of First Marriage: Timing and Prevalence. New York: United Nations. (ST/ESA/SER.R/111).

Appendix. Observed Variables: Descriptive figures (Brazil)

Categorical variables:

Variable	Categories	Frequency	Percent
Relationship Stability	Cohabiting	2816	81.0
	Separated	659	19.0
Pre-cohabitation pregnancy	No	2425	69.8
	Yes	1006	28.9
Religious denomination	Catholic	2236	64.3
	Evangelic	693	19.9
	Other	159	4.6
	No religion	387	11.1
Religious attendance	Never	772	22.2
	Less than once a month	958	27.5
	Once to three times a month	614	17.7
	Once a week	671	19.3
	More than once a week	443	12.7
Birth cohort	< 26 years old	1445	41.6
	>=26 and <36 years old	1209	34.8
	>=36 years old	822	23.7

Continuous variables:

Variable	Mean	Minumum	Maximum
Age at first cohabitation	26.99	11	47
Number of children	1.85	0	15