Disentangling the different types of cohabitation in Latin America: Gender symmetry and contextual influences[1]

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Research has attested the existence of different types of cohabitation in Latin America. It is well documented that, along with a historic cohabitation, driven by poverty, modern consensual unions are booming in the region. These modern types can be explained by the framework of the Second Demographic Transition, which relates new forms of romantic relationships to socioeconomic development and changes in the ideational domain towards post materialistic values such as egalitarianism. Data from the DHS (N=65,765) of fifty Latin American regions from six countries are used to (i) explain different types of cohabitation in Latin America and (ii) to distinguish them from marriage in terms of gender symmetry and environmental influences. Multilevel linear probability regression is applied to describe previously identified types of cohabitation: traditional, innovative and blended (Covre-Sussai et al., 2014a). Following, these types of cohabitation are compared to marriage in a multilevel multinomial logistic analysis. The traditional cohabitation is related to female subordination and socioeconomic deprivation. The innovative and blended types of cohabitation show higher levels of gender symmetry, when compared to the traditional type and to marriage. In addition, these unions happen in places where cohabitation was never common before, such as among whites and Catholics.

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1. Introduction

The study of nuptiality in Latin America is historically challenged by the incidence of cohabitation in the region. Traditionally, cohabitation is related to social exclusion, rooted in the lower social classes, among less educated women and disadvantaged ethnic groups (Arriagada, 2002), such as indigenous populations and those of African descent. Conversely, the incidence of cohabitation is booming in this region, and in countries and among social groups in which it was never predominant. Recent studies have shown that this increase reflects the coexistence of traditional and modern types of cohabitation in the region, which is associated with the advent of the Second Demographic Transition (SDT, e.g. Castro-Martin 2002; Covre-Sussai & Matthijs 2010; Esteve et al., 2012a; Parrado & Tienda 1997). However, an empirical differentiation of Latin American types of cohabitation remained unclear until recently.

A recent study by Covre-Sussai and colleagues (2014a) differentiated the types of cohabitation in Latin America based on the relationship context at the beginning of cohabitation (age at start of cohabitation and existence of pre-cohabitation pregnancy or childbearing) and its outcomes in terms of childbearing (age [of the mother] at first child and number of children). The choice of the indicators was grounded on the argument that the timing and circumstances of union formation and childbearing as well as the number of children raised, have different meanings for traditional and modern types of cohabitations in Latin America. Multiple group latent class analysis was applied and three different types of Latin American cohabitations were found, the traditional and two modern types which were labeled as innovative and blended cohabitations. While the traditional type is practiced by women who started to cohabit at very young ages and have high fertility, the modern types group women who move in together with their partners during adulthood and have less children, later in life (Covre-Sussai et al., 2014a).

In this study we explored gender symmetry (in terms of couples' education and decision making power) of the three previously identified types of cohabitation in Latin America and compared them to marriage. Considering the heterogeneity found within the region (Guzmán et al., 2006), the cultural environment and contextual socioeconomic development where these relationships occur are also demonstrated.

Current socioeconomic indicators show increasing gender balance in Latin American countries, although with noteworthy dissimilarity over the region. Women's gross school

enrolment at the tertiary level rose from 22 to 39 percent between 1999 and 2007 and their participation in the labor force increased from approximately 20 percent in the 1950s to over 55 percent in 2008 (World Bank, 2011). The regional total fertility rate for 2010 is 2.1, but it ranges from 1.5 in Cuba to 3.7 in Guatemala (ECLAC, 2012). Esteve and colleagues even found that, since the 1990s, women are higher educated than men in several Latin American countries (i.e. Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Panama and Venezuela), but not in all of them, such as Bolivia, Peru and Mexico (Esteve et al., 2012b). Simultaneously, studies indicate that working women are still the main person responsible for household labor in their families and childcare (Arriagada, 2002; Soares, 2008; Sorj et al., 2007). This ambiguity drives the main research question of this study: *to what extent do Latin American relationships (cohabitations and marriage) differ with regards to gender symmetry?*

Meanwhile, economic development has not yet reached the majority of the Latin American population and social inequality is another dominant feature of the region. Recent data shows that while the proportion of poor or indigent people decreased from 44 percent in 2002 to 29.4 percent in 2012 (ECLAC, 2012), the region is still one of the most unequal in the world (Cavenaghi, 2009). With the exception of Haiti, the Human Development Index[2] (HDI) has increased in all Latin American countries. In 2010, while HDI of the majority of the countries was classified as high (i.e. 0.69 in Colombia to 0.78 in Chile and Argentina), some of them improved from a low to a medium level (i.e. 0.56 in Guatemala to 0.66 in Dominican Republic). At the same time, inequality is still one of the main features of the region where the GINI[3] coefficients range from a minimum of 0.43 in Guatemala to more than 0.59 in Haiti (World Bank, 2011). Accordingly, it is asked: *to what extent does the probability of a couple living in one of the three types of cohabitation or being married vary according to environmental socioeconomic development in Latin America?*

Comparable to the aforementioned socioeconomic heterogeneity, the cultural environment of Latin American countries also presents significant variations between and within countries, which can be illustrated in terms of religious orientation and ethnic

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[2] HDI is calculated by the mean of three sub-indexes relating to longevity, education and income (UNDP, 2010).

[3] GINI index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. Thus, a Gini index of 0 represents perfect equality, while an index of 1 implies perfect inequality (World Bank, 2011).

composition. Brazil is a typical example of this variety, where the ethnic composition largely differs from one region to another. For instance, the proportion of self-declared whites ranges from 78 percent in the South to 23.45 percent in the North of the country (IBGE, 2013). A strong relationship between ethnic composition and consensual unions has been reported in the literature. Besides the socioeconomic influence, differences in nuptiality patterns are found to be related to the prevalence of indigenous, mixed and afro-descendent populations (Covre-Sussai & Matthijs, 2010), as well as to the occurrence of interethnic marriage (De Vos, 2000). Differences in miscegenation processes lead to significant variation of family composition not only between countries, but also within them (Covre-Sussai & Matthijs, 2010; Heaton et al., 2002). Therefore, it is asked: *to what degree does the probability of a couple living in different types of cohabitation or being married vary according to contextual ethnic composition and religious denomination in Latin America?*

The research questions will be answered by means of the Demographic and Health Surveys (DHS) data for fifty Latin American regions from six countries (Brazil, Bolivia, Colombia, Dominican Republic, Honduras and Peru). The impact of gender symmetry indicators, as well as the cultural and socioeconomic environment on the conditional probabilities of living in the traditional, innovative and blended types of cohabitation is investigated through multilevel linear probability analysis. Following, the types of cohabitation are categorized and the same individual and contextual indicators are used to compare them to marriage by means of multilevel multinomial logistic regression analysis[4].

This article is structured as follows: Section two contextualizes the study of consensual unions in Latin America and gives more details about the typology of traditional and modern types of cohabitation in the region. Section three discusses the theoretical background and hypotheses, while section four presents the data and methods used. The results are described in section five and discussed in section six.

2. Cohabitation in Latin America

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[4] Considering the cross-sectional nature of our data, it is not possible to infer about causation. The results of our analyses are, instead, a rich description of different types of cohabitation at the moment of survey collection.

A distinguishing attribute of Latin American family formation pattern is the historical incidence of cohabitation as a socially accepted form of conjugal union. During the colonization period, Spanish and Portuguese colonizers used to cohabit (*amancebamiento*) as a way to sanction sexual relationships with indigenous women (Castro-Martin, 2002) and as a strategy to explore the land with the help of natives (Ribeiro, 1997). With the advent of slavery (from the middle of the 16th to the end of the 19th century), African slaves were massively introduced into the region coming from different parts of the African continent, some of them from polytheist societies. Slave masters used to restrict the legal marriage among slaves due to the impossibility of selling married slaves separately (Holt, 2005).

While consensual unions were common among the lower social strata and disadvantaged ethnic groups, such as the mestizo population, the institution of marriage was highly valorized by the upper classes in Latin American societies (Castro-Martin, 2002; De Vos, 2000; Samara & Costa, 1997). This traditional form of cohabitation, common among the lower social classes, used to be practiced by less educated couples who have more children earlier in life (Parrado and Tienda, 1997). It was established as a strategy to overcome poverty and single or adolescent motherhood and they commonly end up in separation or in marriage (Castro-Martin, 2002).

Contemporary evidence has shown that although cohabitation persists as a common form of union among lower social classes, from the second half of the 20th century on its popularity has increased among higher educated social groups and in countries where it was never common practice (Vignoli-Rodríguez, 2005). The literature on family formation and changes shows that these consensual unions differ considerably among Latin American countries and social classes. For the lower social strata cohabitation is traditionally an alternative to marriage, driven by economic constraints, ethnic and gender inequality (Parrado and Tienda, 1997; Arriagada, 2002). Meanwhile, for the upper social classes, cohabitation represents possible outcomes of the improved socioeconomic status of women (Vignoli-Rodríguez, 2005; Covre-Sussai and Matthijs, 2010; Binstock and Cabella, 2011), related to ideational changes towards post-materialistic values (Esteve et al., 2012a).

Parrado and Tienda (1997) showed the role played by women's increasing education and labor force participation on the spread of a modern type of cohabitation in Venezuela, among younger and higher educated women. Their results illustrate the coexistence of both the traditional and the modern types of cohabitation. While traditional cohabitants were common in rural areas, among unskilled or domestic workers and with high fertility, the

modern type of cohabitation was practiced by women with higher education, who worked in skilled jobs and had fewer or no children at all. In addition, Esteve and colleagues found similar patterns of educational homogamy when comparing Latin American cohabiting and married couples. They associated this result to the existence of a modern cohabitation in the region, similar to the one observed in fully developed countries (Esteve et al., 2009).

Following a similar reasoning, Covre-Sussai and Matthijs (2010) analyzed the socioeconomic and cultural correlates of living in cohabitation instead of being married in different Brazilian states. They pointed to significant social-class differences and noteworthy variance within country. The authors show that consensual unions are more likely to occur among the lower social classes. However, they also found evidence that this type of union is present in the upper social strata. For this social group, though, unmarried cohabitation is characterized as a childless union (Covre-Sussai & Matthijs, 2010).

As stated beforehand, a typology by Covre-Sussai and colleagues (2014a) identified the traditional and two modern types of cohabitation in the region through multiple group latent class analysis. These unions differ in terms of relationship context at the beginning of cohabitation (age at the beginning of cohabitation and existence of pre-cohabitation pregnancy and childbearing) and outcomes in terms of childbearing (age [of the mother] at first child and number of children). The traditional cohabitation groups women who start to cohabit during adolescence and have more children at younger ages. The first modern cohabitation was labeled 'innovative' and referred to cohabitation by women with fewer or no children born at a higher age and never as a single woman. The second modern cohabitation was called 'blended'. This type of cohabitation groups women who started to cohabit later in their life course, after being pregnant or having children. Women in the blended type started to cohabit at older ages and have more children than those in the innovative type, but fewer children than women in the traditional type of cohabitation (Covre-Sussai et al., 2014a).

The inclusion of education as a covariate in the latent class analysis shows that the types of cohabitation group women according to their dissimilar socioeconomic backgrounds. The traditional type groups lower educated women while the two modern types group higher educated ones. The educational profile of blended cohabiters indicates that this group of cohabiters could negotiate a marriage if they want, but they keep living in a consensual union (Covre-Sussai et al., 2014a).

3. Theoretical background and hypotheses

Norms and attitudes on family life have changed since the 1960s, both in Western developed countries and Latin America. According to the Second Demographic Transition (SDT) theory these changes are related to socioeconomic development and transformations in the ideational domain (Lesthaeghe, 2010). Since the first study on the SDT (Lesthaeghe and van de Kaa, 1986), the spread of innovative forms of living arrangements are considered an expression not only of changing socioeconomic circumstances or expanding female employment, but also as outcomes of egalitarian sentiments of younger and higher educated cohorts (Surkyn and Lesthaeghe, 2004, pp. 51–52).

The main changes in values and beliefs related to the SDT are: (i) secularization, characterized by the decline in religiosity and religious practice and the refusal of traditional religious beliefs; (ii) egalitarianism, with indicators of gender equality and denial of social class distinctions; (iii) enhanced importance given to individuality and self-fulfillment; and (iv) companionship and unconventional marital ethics, stressing the quality of a relationship, such as communication, tolerance and understanding, happy sexual relationship, over the conventional and institutional foundations of marriage and parenthood (Surkyn & Lesthaeghe 2002, pp.51-52).

As stated before, recent socioeconomic indicators show that gender roles in Latin America are changing toward some form of egalitarianism between women and men. Women's education is increasing and, in some Latin American countries women are even higher educated than men (Esteve et al., 2012). Women are also participating in public life and in the job market in skilled activities. The proportion of seats held by women in National Parliament has increased in Latin America from 13 to 23 percent between 2000 and 2012, even though it ranges from 4 percent in Haiti to 45 percent in Cuba. Also, the share of women in wage employment in the non-agricultural sector has also increased over the years, but varies from 35.5 percent in Chile to 46.6 percent in Colombia (ECLAC, 2012). Simultaneously, studies indicate that working women are still the main person responsible for household labor and childcare (Soares, 2008; Sorj et al., 2007; Arriagada, 2002).

This ambiguity can be explained by the idea of 'incomplete revolution', which distinguishes gender equity in terms of individual- and family-level institutions (Esping-Andersen, 2009; McDonald, 2000). According to McDonald (2000), the first part of the gender revolution is almost complete and has changed women's roles in individual-level

institutions, such as education, job market and public life. Conversely, the second part of this revolution is happening in family-level institutions but at a much slower pace, especially among lower educated groups. Family organization and decision making based on the single-breadwinner model still persists, even for two-income families (McDonald, 2000; Esping-Andersen, 2009).

Combining the SDT framework with the idea of incomplete revolution we state our hypotheses. The traditional type of cohabitation is known to be related to social exclusion and female subordination to man (Arriagada, 2002). *In comparison to the other types of cohabitation and to marriage, women in this type of cohabitation are expected to have lower educated partners and to be even lower educated than their partners[5]. They are also expected to have lower decision-making power than their partners*. In Latin America, the traditional type of cohabitation is historically practiced by people from the lower social classes and disadvantaged ethnic groups, such as indigenous populations and those of African descent (e.g. Castro-Martin, 2002; De Vos, 2000). Thus, *this type of cohabitation is expected to be found in regions with lower proportions of European descent (whites) and higher proportion of people evaluating their socioeconomic status as 'bad'*. Previous research has already revealed that the traditional type of cohabitation is not related to secularization (e.g. Covre-Sussai & Matthijs, 2010; Parrado & Tienda, 1997). Consequently, we would *expect to find traditional cohabiters in places with smaller incidence of secularized values, in comparison to the other types of cohabitation and to marriage*.

The two modern types of cohabitation are assumed to be a signal of the SDT in the region, marked by secularization, individualization, female economic independence and the rising symmetry in gender roles. Earlier work by Esteve and colleagues analyzed several census rounds from the time period of 1970 to 2000 and did not find significant differences in educational homogamy between Latin American cohabitant and married couples (Esteve et al., 2009). Keeping their results in mind, *we expect to find differences in terms of education among modern cohabitants and married couples, but, most of these differences are expected to be found in terms of effect sizes and not in the direction of the effect*. According to the SDT theory, cohabitation by higher educated women is a signal of more symmetric relationships. Consequently, compared to the traditional type of cohabitation and to marriage, *we expect*

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[5] Differences in terms of age and education are related to couples' power relations. Couples in which the woman is much younger or lower educated than the man are expected to have a similar imbalance in other aspects of life (Di Giulio and Pinnelli, 2007).

that couples in the modern types of cohabitation are more egalitarian in terms of decision-making, as well as to find some degree of women's empowerment in these relationships.

Both modern types of cohabitation are expected to be related to secularization. Therefore, they are *expected to be found in regions with lower proportions of religious people and less emphasis on religious values.* Socioeconomic development is another possible driving force for these types of cohabitation, thus *we expect to find them in places with a lower proportion of people who evaluate their socioeconomic status as 'bad'.*

4. Research Method

4.1 Data: Demographic and Heath Surveys

The individual-level research questions are addressed by means of the most recent data from the Demographic and Health Survey (DHS) collected for fifty regions from six Latin American countries: Bolivia (2008, n = 9,247), Brazil[6] (2006, n = 8,117), Colombia (2010, n = 20,973), Dominican Republic (2007, n =9,585), Honduras (2005/6, n =9,428) and Peru (2008, n =8,415)[7]. DHS are nationally representative surveys which collect comparable data on demographic and health issues in developing countries (Rutstein and Rojas, 2003). The surveys focus on women in their reproductive ages, from 15 to 49 years old. Consistent data on timing and type of first unions are available, as well as detailed information about the current union at the moment of the survey. However, there is no information on the transitions to second or higher order relationships. Considering this limitation, and that the inclusion of second or higher order relationships would increase the complexity of our results enormously (Brown, 2000), we kept the focus on first unions (of women), the same method adopted by Covre-Sussai and colleagues (Covre-Sussai et al., 2014a). Consequently, we selected women who had only one relationship, who were living with the same husband or partner at the moment of the survey.

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[6] The Brazilian DHS is called '*Pesquisa Nacional de Demografia e Saúde* (PNDS)' and can be found here: http://bvsms.saude.gov.br/bvs/pnds/index.php

[7] Additional information about the regional sample is provided in the Appendix 1.

The questions regarding contextual influences were computed based on information provided by Latinobarómetro, round 2007. Latinobarómetro is an annual public opinion survey conducted by Latinobarómetro Corporation, a non-profit NGO based in Santiago, Chile. Each survey uses representative samples of the adult population of each country. In all countries adulthood begins at 18 except in Brazil where it is 16. In total, it consists of approximately 19,000 interviews and represents over 400 inhabitants covering all Latin American countries (Giusto, 2009).

4.2   Variables

As stated previously, the information about types of cohabitation used as dependent variables in this study is extracted from a typology that differentiates the types of cohabitation in Latin America. These types of cohabitation were identified through multi-group latent class analysis (MGLCA), based on the relationship context at the beginning of cohabitation (age at which the woman started to cohabit and the existence of pre-cohabitation pregnancy or childbearing) and its outputs in terms of childbearing (age at which the woman had her first child and the number of children she had up to the moment of the survey). The comparability of these types of cohabitation over the countries was attested.

Besides identifying different classes of cohabitants, latent class analysis allows for the calculation of the conditional probabilities of a woman to live in one type of cohabitation instead of another (for detailed information see Covre-Sussai et al. 2014a). In order to improve our understanding about the three types of cohabitation in Latin America, we compared these cohabitations using these probabilities as dependent variables. Next, for the purpose of comparing the types of cohabitation to marriage we categorized this information based on the higher probability of living in one of the three types of cohabitation and included married couples as the reference category in the analysis.

The individual-level explanatory variable 'decision making' was also extracted from a MGLCA (Covre-Sussai et al. 2014b). The DHS questions used to compute this latent variable were: Who usually makes decisions about (i) health care for yourself; (ii) making major household purchases; (iii) making purchases for daily household needs; (iv) visits to your family or relatives; and (v) who usually decides how the money you earn will be used. The possible answers are: mainly you (the woman); mainly your husband/partner; you and

your husband/partner jointly; or someone else. Women who were not working at the moment of the survey are coded by DHS as missing in the variable 'who usually decides how the money you earn will be used'. In order to keep them in the analysis we created a new category by coding them as 'Responded not working'.

Three types of decision-making are found: (i) in the first type women make the household decisions alone; (ii) in the second type decisions are mostly made jointly – women with their husbands or partners; and (iii) the third type groups together women who affirm that the decisions in their household are made mostly by their husbands or partners (Covre-Sussai et al., 2014b). The probability of being in each type of decision-making couple is included in our analysis, as a proxy for decision-making power. As the probabilities of having one type of decision making instead of another sum up one, the category 'decisions mostly made by husband/partner' is used as reference.

The educational gap between woman and man is used as a proxy for gender symmetry. In this sense, information on years of education for men and women were contrasted in order to compute the variable 'education-gap'. This variable categorizes (1) couples with similar level of education (difference of up to one year); (2) couples in which the woman is higher educated than man; and (3) couples in which man is higher educated than woman.

In order to have more information about couple's educational profile the educational attainment of the man was also included in the analysis. 'Husband/partner's education' categorizes their educational attainment in (1) no education, (2) primary, (3) secondary or (4) higher levels of education.

In addition, the 'age difference' between the woman and her husband or partner is included as a control variable: The first category (1) specifies couples with less than two years difference in the ages of women and men; the second (2) indicates couples in which women were two or more years older than their husbands or partners; the third (3) categorizes couples in which the man was up to three years older than his wife or partner; the fourth (4) designates couples in which men were between three and eight years older than their wives or partners; and finally the fifth (5) groups couples in which the husband or partner is more than eight years older than his wife or partner.

The contextual variables used in this study were extracted from Latinobarómetro collected in 2007 (Giusto, 2009). The measures for cultural environment were secularization

and ethnic composition. Although Protestantism is flourishing in Latin America, recent evidence has shown that Catholic mass attendance is also rising by high proportions, attesting that Latin America is still a predominantly Roman Catholic region (Stark and Smith, 2012). Consequently, the proportion of self-declared Catholics was computed as proxy for secularization, as well as the proportion of people who affirm that abortion can be justifiable. The proportion of self-declared whites was computed as a measure of contextual ethnic composition. The contextual socioeconomic situation was measured by the proportion of people who consider their socioeconomic status as 'bad' or 'very bad'.

Listwise deletion was the method used for handling missing data. In our understanding the sample size of our data is large enough to not generate biased results due to the deletion of missing data. Descriptive statistics of all variables are included in appendix 2 and support this assumption.

The variables, categories and hypotheses of this study are summarized in Table 1. In Table 1 our hypotheses are presented in the form of '+' and '-' which represent the direction of expected effect of each explanatory variable (covariates) on the outcome variables (traditional, innovative and blended cohabitation, as well as marriage).

Table 1 Variables and Hypotheses

Covariates: Individual level	Traditional	Innovative	Blended	Marriage
Husband/partner's education				
No education	+	-	-	-
Primary	+	-	-	-
Secondary	-	+	+	+
Higher	-	+	+	+
Education gap				
Similar level of education	-	+	+	+
Woman higher educated than man	-	+	+	+
Man higher educated than woman	+	-	-	-
Decision-making				
Decisions mostly made jointly	-	+	+	+
Decisions mostly made by woman herself	-	+	+	+
Decisions mostly made by husbands/partners	+	-	-	-
Covariates: Contextual level				
Whites in the region	-	+	+	+
Catholics in the region	-	-	-	+
Abortion justifiable	-	+	+	-
Socioeconomic status: bad	+	-	-	-

4.3   Method

We use multilevel regressions to examine the differences of consensual unions in Latin America and to distinguish them from marriage. First, the three types of cohabitation are analyzed independently. As stated earlier, the outcome variables for these analyses are the probabilities of living in each type of Latin American cohabitation; consequently multilevel linear probability analysis is applied. Linear probability model is a type of generalized linear model with binomial random component and identity link function (Agresti, 2002, p. 120). For one explanatory variable (x) it can be written as

$$P(coh) = \alpha + \beta x \tag{1}$$

where P(coh) are the probabilities of living in one of the three types of cohabitation.

Next, we apply multilevel multinomial logistic regression analysis to differentiate the three types of cohabitation from marriage. In this analysis marriage is used as reference category and a set of three simultaneous equations is estimated. These equations contrast the response categories (traditional, innovative, blended) of each type of cohabitation with those of married couples, using the logit link function, which for one explanatory variable (x_1) can be written as

$$\log\left(\frac{\pi}{1-\pi}\right) = \beta_0 + \beta_1 x_1 \tag{2}$$

where $\pi/(1-\pi)$ is the odds of living in one of the three types of cohabitation instead of being married.

In multilevel modeling, the residual variance is subdivided into between-regions and within-regions variance. There is an individual-level micro-model which represents the within-region equation, and an environmental, macro-model in which the parameters of the within region model are the responses in the overall, between-regions model. This simultaneous specification accounts for the quantitative division of the individual from the contextual, the micro-model, from the macro-model (Duncan et al., 1998).

Our empirical question regarding the Latin American contextual influences on couples' nuptial behavior is whether the regional variation will be significant when other contextual variables are included in the overall model. For instance, if the regional variance is

related to cultural differences, it will disappear (or decrease significantly) when we include the proportion of self-declared whites or Catholics in the model.

5. Results

All models were fit stepwise. We started with the null model with the response variables and only a constant term in the model. Subsequently we test models with increasing complexity until reaching the model with better goodness-of-fit. Finally, models are selected based on their goodness-of-fit (deviance for the multilevel regression analyses and Wald-test for the multilevel multinomial analysis) as well as the amount of contextual variance explained by contextual level variables.

The models' goodness of fit and contextual variances for the linear probability regression analysis is presented in Table 2.

Table 2 Models predicting the chances living in different types of Cohabitation in Latin America - goodness of fit

	Traditional		Innovative		Blended	
	Contextual variance	Deviance	Contextual variance	Deviance	Contextual variance	Deviance
M0: Null model	0.014 (0.003)	44416.46	0.003 (0.001)	42087.11	0.012 (0.002)	31688.96
M1: Individual-level variables	0.006 (0.001)	31446.10	0.003 (0.001)	32585.75	0.008 (0.002)	24253.87
M2: Self-declared whites in the region	0.005 (0.001)	30956.62	0.003 (0.001)	32108.46	0.008 (0.002)	24076.08
M3: Catholics in the region	0.004 (0.001)	30945.74	0.002 (0.001)	32104.58	0.006 (0.001)	24059.73
M4: Socioeconomic status: bad	0.004 (0.001)	30944.44	0.002 (0.001)	32101.76	0.006 (0.001)	24059.70
M5: Abortion justifiable	0.004 (0.001)	30944.42	0.002 (0.001)	32098.30	0.006 (0.001)	24061.82

Note: Standard error between brackets

The question addressed in the null model (M0) is if there is a between regions difference in the probability to cohabit in one of the Latin American types of cohabitation. The intercepts for the null models (not shown) of the traditional, innovative and blended types of cohabitation are 0.5, 0.3 and 0.2, respectively. These are the probabilities of living in these types of cohabitation throughout Latin America, or for every couple, everywhere. However, Table 2 presents significant evidence that these probabilities vary over the region. The contextual variance between regions is estimated as 0.014 for the traditional, 0.003 for the

innovative and 0.012 for the blended types of cohabitation. Subsequently, the fitted line for a given region will differ from the Latin American average line in its intercept, by an amount of 0.014, 0.003 and 0.012 for the different types of cohabitation under analysis.

By analyzing the residuals, it is possible to verify the latent variable at the contextual level, or the regional effect as shown in Figure 1.

Figure 1 Regional effect of the chances of living in different types of cohabitation against the Latin American average
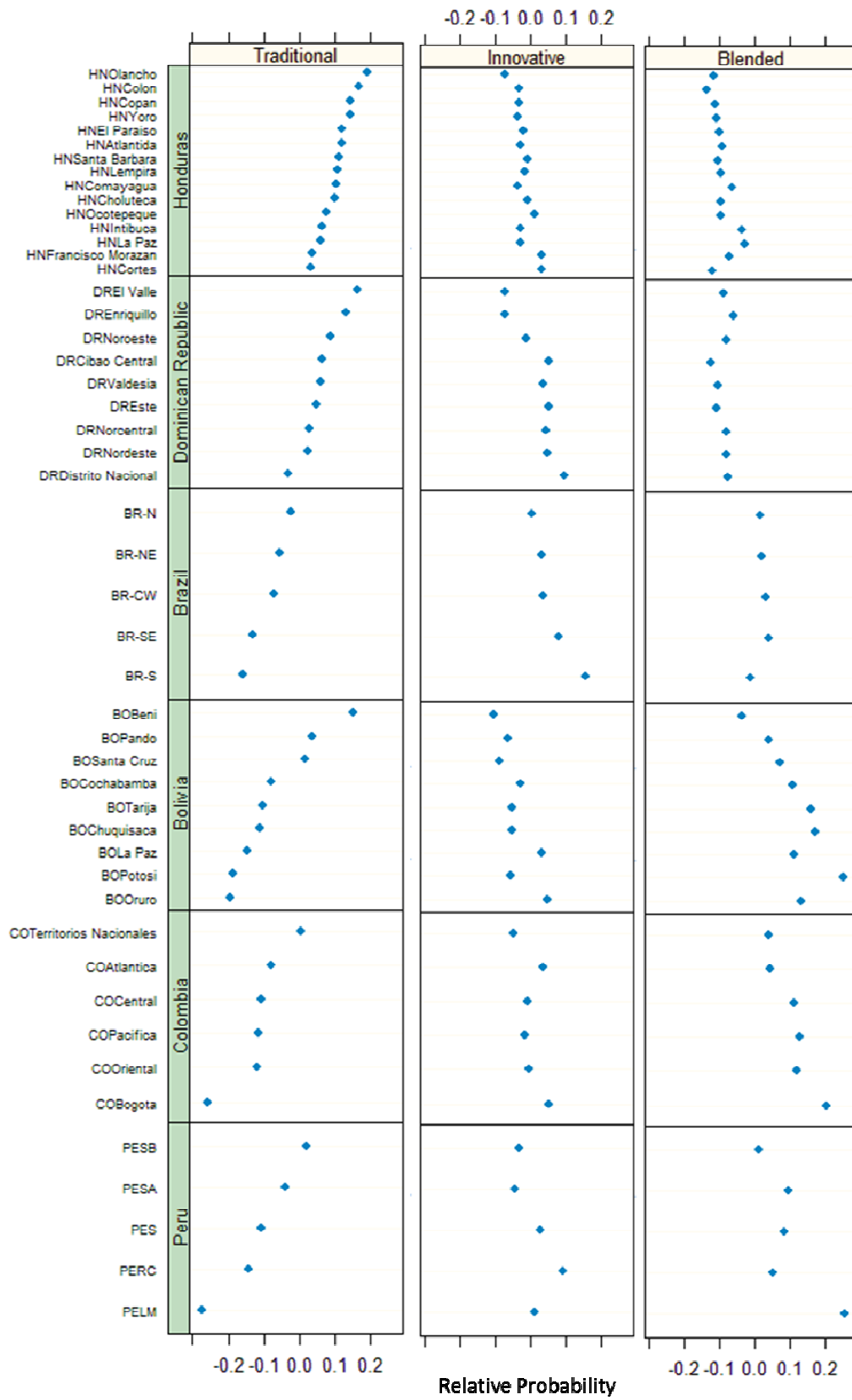
The X axis characterizes the contextual level regional relative probability of living in one of the three types of cohabitation. The zero point represents the mean probability of that type of cohabitation across Latin America. For the regions situated at point zero in Figure 1, the probability of cohabiting in one of the three types of cohabitation is very similar to the Latin American averages. On the left side are the regions in which a couple has a lesser chance to live in the referred type of cohabitation, while on the right, couples present the higher probability.

The first interesting result which emerges from Figure 1 is the overall negative correlation between the traditional and innovative types of cohabitation. Besides, comparing the graphs shown in Figure 1 we found South-American regions (from Brazil, Peru, Colombia and Bolivia) with lower incidence of the traditional type of cohabitation and higher incidence of the blended type of consensual union. This evidence is especially clear for the Metropolitan region of Lima in Peru (PELM). Couples in Lima have the highest chances of living in the blended type of cohabitation and the lowest to live in the traditional type. Central-American regions from the Dominican Republic and Honduras are found to have the opposite outcome: below the average for the blended type of cohabitation and above it for the traditional type. The Honduran province of Colon (HNColon) is a good example of this, being among the regions with lower incidence of blended cohabitation and among regions with higher incidence of the traditional type.

Countries are less homogeneous with regard to the innovative cohabitation. Couples from all Brazilian regions have higher chances of living in this type, but the remaining countries present significant regional variance. Apart from Brazil, Latin American countries present some regions with high and some with low incidence of the innovative type of consensual union. A good example of this is the Dominican Republic: While Distrito Nacional (DRDistrito Nacional) presents one of the highest chances of having couples living in the innovative type of cohabitation, El Valle (DRElValle) and Enriquillo (DREnriquillo) are among the regions with lowest incidence of this type of cohabitation.

Turning back to Table 2, the deviance statistic and the explained contextual variance show that model 4 (M4) best fits the data. In addition, the inclusion of the variable 'abortion justifiable' (M5) is not significant, does not explain the remaining contextual-level variance, nor does it improve the models' goodness-of-fit. Results for model 4 are presented in Table 3.

Our expectations about the traditional type of cohabitation were confirmed. In comparison to the other types of cohabitation, couples living in this traditional type achieved lower levels of education. Men have a 0.37 lower chance to have higher education rather than no education. They often have even lower educated partners. As expected, in the traditional cohabitation men tend to make decisions about household organization by themselves. Looking at the control variable we see that men also tend to be much older than their partners. Couples in the traditional consensual union live in places with lower frequency of self-declared whites as well as Catholics. The effect of both measures of socioeconomic environment (proportion of people who evaluate their socioeconomic status as bad and their future personal economic situation as worse) is not significant.

Most hypotheses regarding the modern types of cohabitation are not rejected. Men are more likely to have attained higher education rather than no education and, for the innovative cohabitation women are (slightly) higher educated than their partners. There is no significant difference in the probability of couples with similar or different levels of education to live in the blended type of cohabitation. Decisions about household organization are more likely to be made jointly or by women than by their partners alone in the blended cohabitation, but we do not find differences in terms of decision-making for the innovative type of cohabitation. Couples in these types of unions are likely to pertain to similar age groups or have women who are older than their partners.

With regard to environmental influences, the contextual variance of the probabilities of living in the innovative type of cohabitation is very low, although significant (see Table 2). This suggests that this type of cohabitation is driven by individual motivations instead of contextual ones. Yet, couples in the innovative cohabitation tend to live in places with higher proportions of self-declared whites. Surprisingly, the existence of Catholics in the region increases the chances of a couple to live in the blended cohabitation.

Table 3 Models predicting the chances living in different types of Cohabitation in Latin America

Individual level variables	Traditional		Innovative		Blended	
	β	Sig	β	Sig	β	Sig
Husband/partner's education: None (ref.)						
Primary	-0.037	***	0.020		0.017	
	(0.014)		(0.015)		(0.013)	
Secondary	-0.140	***	0.106	***	0.031	***
	(0.015)		(0.015)		(0.013)	
Higher	-0.359	***	0.261	***	0.094	***
	(0.017)		(0.017)		(0.015)	
Education Gap: Similar level of education (ref.)						
Woman higher educated than man	-0.017	***	0.014	**	0.003	
	(0.006)		(0.006)		(0.005)	
Man higher educated than woman	0.032	***	-0.030	***	-0.001	
	(0.009)		(0.009)		(0.008)	
Decision making: Decisions mostly made by husband/partner (ref.)						
Decisions mostly made jointly	-0.140	***	-0.140		-0.140	***
	(0.008)		(0.008)		(0.007)	
Decisions mostly made by women	-0.052	***	0.001		0.049	***
	(0.009)		(0.009)		(0.008)	
Age difference (*control*): About the same age (ref.)						
Woman two years older than man or more	-0.201	***	0.073	***	0.128	***
	(0.011)		(0.011)		(0.01)	
Man up to three years older than woman	0.172	***	-0.096	***	-0.075	***
	(0.009)		(0.009)		(0.008)	
Man between three and eight years older than woman	0.256	***	-0.142	***	-0.112	***
	(0.008)		(0.008)		(0.007)	
Man more than eight years older than woman	0.219	***	-0.128	***	-0.089	***
	(0.008)		(0.008)		(0.007)	
Contextual variables						
Self-declared whites in the region (proportion)	-0.200	***	0.154	***	0.034	
	(0.066)		(0.053)		(0.08)	
Catholics in the region (proportion)	-0.241	***	-0.088		0.333	***
	(0.067)		(0.054)		(0.08)	
Socioeconomic status: bad (proportion)	0.096		0.000		0.000	
	(0.085)		(0.068)		(0.103)	
Random Part						
Intercept	0.666	***	0.384	***	-0.047	
	(0.048)		(0.04)		(0.056)	
Contextual variance	0.004	***	0.002	***	0.006	***
	(0.002)		(0.002)		(0.001)	

Note: Standard error between brackets; *** coefficient significant at p<0.001, ** coefficient significant at p<0.05.

Comparing now the different types of cohabitation to marriage, we present the results of the multilevel multinomial logistic regression. First, the results of the model's selection procedure are presented in Table 4.

Table 4 Models predicting the chances living in different types of Cohabitation in Latin America instead of being married - Goodness of fit

	Contextual variance						Wald
	Traditional		Innovative		Blended		
M0: Null model	0.315	(0.066)	0.143	(0.031)	0.358	(0.076)	62.300
M1: Individual-level variables	0.246	(0.052)	0.152	(0.033)	0.335	(0.072)	6108.376
M2: Self-declared whites in the region	0.223	(0.047)	0.154	(0.033)	0.316	(0.068)	6176.364
M3: Catholics in the region	0.222	(0.047)	0.151	(0.033)	0.208	(0.046)	6643.752
M4: Socioeconomic status: bad	0.222	(0.047)	0.150	(0.033)	0.208	(0.046)	6721.524
M5: Abortion justifiable	0.219	(0.044)	0.150	(0.029)	0.21	(0.045)	6615.357

Note: Standard error between brackets

The null model (M0) shows between-regions variances in the likelihood of cohabiting instead of being married of 0.31, 0.14 and 0.35 for the traditional, innovative and blended cohabitations, respectively. The intercepts (not shown) are -0.673, -1.038 and -1.749. This means, in terms of odds ratios ($\exp(\beta_0)$), the odds of living in cohabitation instead of being married in Latin America are 0.51, 0.35 and 0.17 times smaller for traditional, innovative and blended cohabitants, respectively. However, considering the significant contextual variation, these chances differ from the Latin American average line in its intercept by 0.31, 0.14 and 0.35 for the traditional, innovative and blended types of cohabitation.

A significant part of this variance is explained by the inclusion of individual-level variables (M1) and the contextual-level variables indicating the proportion of whites (M2), Catholics (M3) and proportion of people who evaluate their socioeconomic situation as 'bad' in the region (M4). However, this is only true for the traditional and blended types of cohabitation. Again, the contextual variance of living in the innovative type of cohabitation was not explained by the inclusion of individual-level variables, or the contextual-level variables.

Again, the contextual variable 'abortion justifiable', included in model five (M5), is not significant (not shown), does not explain any contextual variance, nor does it improve the model's goodness-of-fit. Consequently, it was not included in the final model. The random

intercept model that better fits the data (M4) is shown in Table 5. The results of this multinomial logistic regression are interpreted in terms of odds ratios obtained by exp(β).

Our expectations about the traditional type of cohabitation were all confirmed. Traditional cohabitations are formed by people who are lower educated than married couples. From the odds ratios we can see that the probability of living in this traditional cohabitation decreases sharply as the husbands/partners' level of education increases. In addition, men in traditional cohabitation are 1.42 times more likely to be higher educated than their partners. Decision-making about household organization is also more probable to be made by men in the traditional cohabitation than in marriages. Looking at the control variable we see that women in the traditional cohabitation are much younger than men. For example, couples in which the man is more than eight years older than his partner have 2.18 times higher chances of living in the traditional cohabitation than being married.

The hypothesis regarding husbands/partners education and education gap between the spouses or partners were only partially confirmed. The results shown in Table 5 illustrate that, in comparison to couples with similar levels of education, cohabitants tend to have either women who are higher educated than their husbands/ partners, or men who are higher educated than their wives or partners. There is no difference in the probabilities of living in the innovative or blended types of cohabitation rather than in marriage for couples in which the husband/partner has attained secondary education or lower. However, contrary to our expectations, the chances of living in both types of cohabitation instead of being married decrease as husbands'/partners' education changes from secondary to higher education.

The results for the decision making hypothesis differ when we compare the likelihood of living in the innovative and in the blended cohabitations instead of in marriage. In agreement with our hypothesis, decisions about household organization are more likely to be made by women in the blended cohabitation than in marriage. However, contrary to our assumption, decision making is more likely to be made by men in the innovative cohabitation than in marriages.

Table 5 Models predicting the chances of living in different types of Cohabitation in Latin America instead of being married

Individual level variables	Traditional			Innovative			Blended		
	β	Sig	exp(β)	β	Sig	exp(β)	β	Sig	exp(β)
Husband/partner's education: None (ref.)									
Primary	-0.201 (0.057)	***	0.818	-0.050 (0.074)		0.951	-0.023 (0.101)		0.977
Secondary	-0.595 (0.06)	***	0.552	0.056 (0.076)		1.058	-0.088 (0.103)		0.916
Higher	-2.134 (0.073)	***	0.118	-0.409 (0.081)	***	0.664	-0.619 (0.11)	***	0.538
Education Gap: Similar education (ref.)									
Woman higher educated than man	0.001 (0.025)		1.001	0.073 (0.028)	***	1.076	0.036 (0.036)		1.037
Man higher educated than woman	0.348 (0.038)	***	1.416	0.280 (0.036)	***	1.323	0.310 (0.048)	***	1.363
Making decision: Decisions mostly made by husband/partner (ref.)									
Decisions mostly made jointly	-0.379 (0.031)	***	0.685	-0.234 (0.036)	***	0.791	-0.095 (0.049)		0.909
Decisions mostly made by women	-0.254 (0.037)	***	0.776	-0.153 (0.041)	***	0.858	0.174 (0.055)	***	1.190
Age difference (control): Same age (ref.)									
Woman two years older than man or more	-1.216 (0.079)	***	0.296	0.195 (0.042)	***	1.215	0.472 (0.049)	***	1.603
Man up to three years older than woman	0.424 (0.037)	***	1.528	-0.247 (0.036)	***	0.781	-0.380 (0.048)	***	0.684
Man between three and eight years older than woman	0.663 (0.033)	***	1.941	-0.316 (0.032)	***	0.729	-0.546 (0.043)	***	0.579
Man more than eight years older than woman	0.780 (0.035)	***	2.181	-0.056 (0.035)		0.946	-0.138 (0.046)	***	0.871
Contextual variables									
Self-declared whites in the region (proportion)	-1.198 (0.476)	***	0.302	-0.312 (0.407)		0.732	0.156 (0.485)		1.169
Catholics in the region (proportion)	-0.011 (0.472)		0.989	0.219 (0.409)		1.245	2.230 (0.505)	***	9.300
Socioeconomic status: bad (proportion)	1.535 (0.614)	***	4.641	0.771 (0.53)		2.162	1.452 (0.639)	***	4.272
Random Part									
Intercept	-0.508 (0.33)		0.602	-0.972 (0.291)	***	0.378	-3.382 (0.365)	***	0.034
Contextual variance	0.207 (0.044)	***		0.150 (0.033)	***		0.210 (0.047)	***	

Note: Standard error between brackets; *** coefficient significant at p<0.001, ** coefficient significant at p<0.05.

Couples in both modern types of cohabitation are more likely to be similar in age or have women who are older than their partners than married couples. The chances of living in the innovative and blended cohabitations instead of in marriage decrease substantially as men become older than women. Also, the odds ratios of a woman, who is older than her partner, to

live in the innovative or blended type of cohabitation instead of being married, are 1.21 and 1.60 times higher, respectively.

With regard to environmental influences, traditional cohabitations are less likely than marriage to occur in places with higher proportions of whites, but the presence of whites does not interfere with the probabilities of a couple to choose the innovative or the blended cohabitations rather than marriage. Socioeconomic constraints increase the chances of living in the traditional and blended cohabitations instead of being married by 2.16 and 4.27, respectively. Again, the most striking result to emerge from the data is the influence of the proportion of Catholics on the probability of living in the blended cohabitation. Couples living in places with higher proportions of Catholics have 9.3 times higher chances of living in this type of consensual union instead of in marriage.

6. Conclusion

This study set out to improve our understanding about the different types of cohabitation in Latin America with regard to gender symmetry and environmental influences. For this purpose, Demographic and Heath Survey data was used to differentiate these types of cohabitation and to compare them to marriage with regard to couples' homogamy in terms of education and decision-making. Taking into account the socioeconomic and cultural heterogeneity existent in Latin America, the socioeconomic and cultural environments where these relationships happen were also investigated.

Our hypotheses (and earlier evidence) of the continual subordination of women in the traditional cohabitation is confirmed. In comparison to the other types of cohabitation and to marriage, women in the traditional type of cohabitation are much younger and lower educated than their partners. The absence of women's empowerment is also observed in terms of decision-making: in the traditional cohabitation, decisions about household organization are mostly made by men.

We expected the modern cohabitations to be explained by the Second Demographic Transition (SDT) theory, by showing higher gender symmetry than traditional consensual union or even marriages. In several aspects, these are indeed more egalitarian relationships. Couples living in the innovative and blended cohabitations are more likely than traditional cohabiters and married couples to have similar ages or to have a woman who is older than her

partner. In comparison to married couples with similar levels of education, women in the innovative type of cohabitation are also higher educated than their partners.

Women in the so-called modern cohabitations also present higher levels of empowerment than their traditional counterparts. However, contrary to our expectations, only the women in the blended cohabitation showed higher decision-making power than married women. The innovative cohabitation is practiced by younger women with higher levels of education, possibly students (Covre-Sussai et al., 2014a). It can explain the fact that women in this cohabitation present lower decision-making power than their partners in comparison to married women, older women and those with more experience.

Blended cohabitations are found to be very common among Catholics. This evidence, combined to increased gender symmetry and empowerment of women in this type of cohabitation, reinforces the argument that these couples do not get married because they do not want to or do not see marriage as an important institution. Yet, while traditional cohabitations have lower chances of occurring in communities with high proportion self-declared whites, modern ones are more likely to be found among this ethnic group. The South of Brazil, with 78 percent of whites - mostly German and Italian descent, is a good example of this. This is the Latin American region with the highest probability of having innovative cohabiters (see Figure 1 – innovative graph). Cohabitation practiced by higher educated and egalitarian couples, and among Catholics or European descendants, is certainly evidence of changes in the ideational domain and an indication of the SDT in Latin America.

A number of important limitations need to be considered. First, the use of a cross-sectional design limits the type of research questions that can be addressed. In this case, the most important drawback is the impossibility to attest cause-effect relations: we cannot attest if the subordination of women leads them to the traditional type of cohabitation or if living in traditional cohabitation reduces the opportunities of empowerment for these women. Second, DHS samples are focused on women in their reproductive ages, from 15 to 49 years old, which does not allow for the verification of cohort change. Finally, what is perhaps the most important constraint is the absence of information on the meaning, quality and stability of these unions. We do not know if couples in one or the other types of cohabitation are happy or if they want to get married or separate in the near future.

Future research should therefore concentrate on the investigation of the meaning of the different types cohabitations in Latin America, as well as in the transitions related to them.

In this direction, additional work can be done to establish the factors related to the transition to one type of cohabitation or another. Further developments also need more investigation, such as the transition from different cohabitations to marriage or to separation. Finally, the meaning of the different types of cohabitation to couples living in these different arrangements should be analyzed in depth in future research.

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Appendix 1 Latin American regions

Country	Region	Abbreviation	Sample size	Whites	Catholics	SES: bad	Abortion
Brazil	North	BR-N	1286	0.24	0.69	0.26	0.08
	Northeast	BR-NE	1520	0.29	0.70	0.16	0.13
	Southeast	BR-SE	1724	0.50	0.60	0.11	0.08
	South	BR-S	1903	0.75	0.81	0.08	0.04
	Central West	BR-CW	1684	0.32	0.74	0.21	0.07
Bolivia	Chuquisaca	BOChuquisaca	825	0.04	0.93	0.16	0.03
	La Paz	BOLa Paz	1778	0.03	0.74	0.24	0.07
	Cochabamba	BOCochabamba	1259	0.09	0.80	0.24	0.04
	Oruro	BOOruro	824	0.00	0.78	0.16	0.07
	Potosi	BOPotosi	1032	0.00	0.81	0.21	0.12
	Tarija	BOTarija	909	0.00	0.87	0.18	0.13
	Santa Cruz	BOSanta Cruz	1640	0.06	0.79	0.18	0.05
	Beni	BOBeni	581	0.20	0.82	0.32	0.04
	Pando	BOPando	399	0.10	0.60	0.00	0.30
Colombia	Atlantica	COAtlantica	4635	0.15	0.78	0.10	0.02
	Oriental	COOriental	3434	0.44	0.87	0.17	0.04
	Central	COCentral	4884	0.31	0.86	0.11	0.09
	Pacifica	COPacifica	2814	0.28	0.86	0.18	0.01
	Bogota	COBogota	1415	0.46	0.73	0.05	0.07
	Territorios Nacionales	COTerritorios Nacionales	3791	0.10	0.80	0.46	0.00
Dominican Republic	Cibao Central	DRCibao Central	1004	0.13	0.80	0.12	0.02
	Distrito Nacional	DRDistrito Nacional	826	0.10	0.79	0.05	0.17
	El Valle	DREl Valle	869	0.21	0.79	0.46	0.05
	Enriquillo	DREnriquillo	1125	0.20	0.75	0.43	0.00
	Este	DREste	1190	0.09	0.74	0.18	0.04
	Norcentral	DRNorcentral	1111	0.10	0.81	0.17	0.00
	Nordeste	DRNordeste	1224	0.08	0.67	0.12	0.00
	Noroeste	DRNoroeste	1001	0.20	0.75	0.10	0.00
	Valdesia	DRValdesia	1235	0.06	0.75	0.20	0.06
Honduras	Atlantida	HNAtlantida	382	0.03	0.25	0.22	0.00
	Colon	HNColon	405	0.05	0.60	0.26	0.00
	Comayagua	HNComayagua	607	0.10	0.52	0.30	0.00
	Copan	HNCopan	584	0.13	0.50	0.04	0.08
	Cortes	HNCortes	918	0.15	0.47	0.12	0.02
	Choluteca	HNCholuteca	484	0.20	0.57	0.28	0.00
	El Paraiso	HNEl Paraiso	499	0.03	0.70	0.04	0.00
	Francisco Morazan	HNFrancisco Morazan	1063	0.11	0.39	0.08	0.06
	Intibuca	HNIntibuca	680	0.10	0.40	0.13	0.00
	Lempira	HNLempira	644	0.05	0.55	0.04	0.10
	Ocotepeque	HNOcotepeque	525	0.25	0.70	0.09	0.10
	Olancho	HNOlancho	578	0.09	0.50	0.04	0.04
	Santa Barbara	HNSanta Barbara	494	0.17	0.40	0.13	0.18
	Yoro	HNYoro	510	0.14	0.49	0.19	0.01
Peru	Lima Metropolitana	PELM	441	0.10	0.73	0.26	0.05
	Resto Costa	PERC	2742	0.08	0.73	0.31	0.07
	Sierra	PES	3129	0.07	0.75	0.05	0.08
	Selva Alta	PESA	227	0.06	0.74	0.40	0.03
	Selva Baja	PESB	1876	0.05	0.78	0.40	0.15

Appendix 2 Data description[8]

Husband/ Partner's Education by Country and Type of Union

Country	Husband/ Partner's Education	Marriage		Traditional		Innovative		Blended		Total	
		N	%	N	%	N	%	N	%	N	%
Brazil	No education	49	1.0	16	1.6	7	.6	2	.4	74	1.0
	Secondary	1402	28.1	223	21.8	356	32.6	133	26.5	2114	27.8
	Higher	506	10.2	15	1.5	109	10.0	17	3.4	647	8.5
	Total	4981	100.0	1025	100.0	1092	100.0	501	100.0	7599	100.0
Bolivia	No education	94	1.6	27	1.9	16	1.7	16	1.8	153	1.7
	Primary	2510	41.9	779	55.1	361	39.1	416	45.6	4066	44.0
	Secondary	1893	31.6	529	37.4	384	41.6	343	37.6	3149	34.1
	Higher	1493	24.9	79	5.6	162	17.6	137	15.0	1871	20.3
	Total	5990	100.0	1414	100.0	923	100.0	912	100.0	9239	100.0
Colombia	No education	198	2.4	290	5.8	129	3.1	95	2.9	712	3.4
	Primary	2797	33.6	2226	44.2	1189	28.4	1117	33.9	7329	35.2
	Secondary	3438	41.3	2257	44.8	2083	49.8	1556	47.3	9334	44.8
	Higher	1896	22.8	261	5.2	785	18.8	523	15.9	3465	16.6
	Total	8329	100.0	5034	100.0	4186	100.0	3291	100.0	20840	100.0
Dominican Republic	No education	66	2.4	332	9.4	123	5.2	36	6.1	557	6.0
	Primary	1018	36.7	2128	60.1	1097	46.2	302	51.2	4545	49.0
	Secondary	859	31.0	886	25.0	832	35.0	170	28.8	2747	29.6
	Higher	831	30.0	197	5.6	322	13.6	82	13.9	1432	15.4
	Total	2774	100.0	3543	100.0	2374	100.0	590	100.0	9281	100.0
Honduras	No education	474	10.1	301	11.0	127	8.1	49	11.6	951	10.1
	Primary	3005	64.0	2097	76.7	1066	67.7	276	65.6	6444	68.4
	Secondary	876	18.7	311	11.4	329	20.9	81	19.2	1597	16.9
	Higher	340	7.2	24	.9	52	3.3	15	3.6	431	4.6
	Total	4695	100.0	2733	100.0	1574	100.0	421	100.0	9423	100.0
Peru	No education	54	1.3	15	.9	12	.8	20	1.9	101	1.2
	Primary	1116	27.7	613	35.5	320	20.1	232	22.1	2281	27.2
	Secondary	1568	38.9	924	53.6	784	49.2	498	47.5	3774	44.9
	Higher	1296	32.1	173	10.0	477	29.9	299	28.5	2245	26.7
	Total	4034	100.0	1725	100.0	1593	100.0	1049	100.0	8401	100.0
Latin America	No education	935	3.0	981	6.3	414	3.5	218	3.2	2548	3.9
	Primary	13470	43.7	8614	55.7	4653	39.6	2692	39.8	29429	45.4
	Secondary	10036	32.6	5130	33.2	4768	40.6	2781	41.1	22715	35.1
	Higher	6362	20.7	749	4.8	1907	16.2	1073	15.9	10091	15.6
	Total	30803	100.0	15474	100.0	11742	100.0	6764	100.0	64783	100.0

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[8] Listwise deletion for missing values.

Education Gap by Country and Type of Union

Country	Education Gap	Marriage		Traditional		Innovative		Blended		Total	
		N	%	N	%	N	%	N	%	N	%
Brazil	Same level of education	2675	54.2	426	42.0	540	50.1	212	42.8	3853	51.2
	Woman higher educated than man	1308	26.5	319	31.5	326	30.2	158	31.9	2111	28.1
	Man higher educated than woman	950	19.3	269	26.5	212	19.7	125	25.3	1556	20.7
	Total	4933	100.0	1014	100.0	1078	100.0	495	100.0	7520	100.0
Bolivia	Same level of education	2874	51.6	468	34.2	422	47.5	397	46.5	4161	47.9
	Woman higher educated than man	1988	35.7	763	55.7	343	38.6	357	41.9	3451	39.8
	Man higher educated than woman	707	12.7	139	10.1	124	13.9	99	11.6	1069	12.3
	Total	5569	100.0	1370	100.0	889	100.0	853	100.0	8681	100.0
Colombia	Same level of education	3255	39.7	1943	39.8	1499	36.3	1169	36.0	7866	38.4
	Woman higher educated than man	4077	49.7	2498	51.2	2087	50.5	1702	52.4	10364	50.7
	Man higher educated than woman	870	10.6	439	9.0	548	13.3	374	11.5	2231	10.9
	Total	8202	100.0	4880	100.0	4134	100.0	3245	100.0	20461	100.0
Dominican Republic	Same level of education	1351	49.3	1094	32.1	949	40.0	223	39.8	3617	39.8
	Woman higher educated than man	899	32.8	1861	54.6	940	39.6	242	43.2	3942	43.4
	Man higher educated than woman	492	17.9	452	13.3	484	20.4	95	17.0	1523	16.8
	Total	2742	100.0	3407	100.0	2373	100.0	560	100.0	9082	100.0
Honduras	Same level of education	1257	29.2	634	25.8	382	26.3	106	28.3	2379	27.7
	Woman higher educated than man	2914	67.6	1779	72.3	1031	71.1	261	69.6	5985	69.6
	Man higher educated than woman	138	3.2	47	1.9	37	2.6	8	2.1	230	2.7
	Total	4309	100.0	2460	100.0	1450	100.0	375	100.0	8594	100.0
Peru	Same level of education	2119	55.5	755	45.9	845	54.6	532	53.5	4251	53.1
	Woman higher educated than man	1045	27.3	675	41.0	387	25.0	248	24.9	2355	29.4
	Man higher educated than woman	657	17.2	216	13.1	315	20.4	215	21.6	1403	17.5
	Total	3821	100.0	1646	100.0	1547	100.0	995	100.0	8009	100.0
Latin America	Same level of education	13531	45.7	5320	36.0	4637	40.4	2639	40.5	26127	41.9
	Woman higher educated than man	12231	41.4	7895	53.4	5114	44.6	2968	45.5	28208	45.2
	Man higher educated than woman	3814	12.9	1562	10.6	1720	15.0	916	14.0	8012	12.9
	Total	29576	100.0	14777	100.0	11471	100.0	6523	100.0	62347	100.0

Decision Making by Country and Type of Union (probability means)

Country	Decision Making	Marriage	Traditional	Innovative	Blended
Brazil	Joint	0.54	0.48	0.51	0.49
	Woman	0.23	0.27	0.25	0.30
	Husband/ Partner	0.23	0.25	0.24	0.21
Bolivia	Joint	0.52	0.51	0.53	0.51
	Woman	0.40	0.37	0.38	0.39
	Husband/ Partner	0.08	0.12	0.10	0.10
Colombia	Joint	0.56	0.45	0.49	0.49
	Woman	0.29	0.30	0.31	0.35
	Husband/ Partner	0.15	0.25	0.19	0.16
Dominican Republic	Joint	0.60	0.51	0.54	0.53
	Woman	0.27	0.27	0.27	0.27
	Husband/ Partner	0.14	0.23	0.19	0.20
Honduras	Joint	0.48	0.39	0.44	0.39
	Woman	0.26	0.27	0.26	0.28
	Husband/ Partner	0.26	0.34	0.29	0.33
Peru	Joint	0.59	0.52	0.57	0.56
	Woman	0.28	0.30	0.30	0.32
	Husband/ Partner	0.13	0.18	0.13	0.13
Latin America	Joint	0.54	0.47	0.51	0.50
	Woman	0.29	0.29	0.29	0.33
	Husband/ Partner	0.17	0.24	0.20	0.17

Age Difference by Country and Type of Union

Country	Age Difference	Marriage		Traditional		Innovative		Blended		Total	
		N	%	N	%	N	%	N	%	N	%
Brazil	Similar age	1012	19.4	143	12.8	258	22.7	125	23.1	1538	19.2
	Woman two years older than man or more	474	9.1	30	2.7	171	15.0	119	22.0	794	9.9
	Man up to three years older than woman	1002	19.2	213	19.1	194	17.1	76	14.1	1485	18.5
	Man between three and eight years older than woman	1899	36.4	460	41.3	267	23.5	101	18.7	2727	34.0
	Man more than eight years older than woman	837	16.0	267	24.0	247	21.7	119	22.0	1470	18.3
	Total	5224	100.0	1113	100.0	1137	100.0	540	100.0	8014	100.0
Bolivia	Similar age	1700	28.4	245	17.3	294	31.9	310	34.0	2549	27.6
	Woman two years older than man or more	641	10.7	27	1.9	120	13.0	163	17.9	951	10.3
	Man up to three years older than woman	1213	20.3	284	20.0	173	18.7	135	14.8	1805	19.5
	Man between three and eight years older than woman	1673	27.9	558	39.4	202	21.9	152	16.7	2585	28.0
	Man more than eight years older than woman	759	12.7	304	21.4	134	14.5	152	16.7	1349	14.6
	Total	5986	100.0	1418	100.0	923	100.0	912	100.0	9239	100.0
Colombia	Similar age	1790	21.4	617	12.1	974	23.1	806	24.3	4187	20.0
	Woman two years older than man or more	696	8.3	72	1.4	462	10.9	566	17.1	1796	8.6
	Man up to three years older than woman	1566	18.8	868	17.0	662	15.7	513	15.5	3609	17.2
	Man between three and eight years older than woman	2767	33.2	2033	39.9	1177	27.9	761	22.9	6738	32.1
	Man more than eight years older than woman	1527	18.3	1501	29.5	945	22.4	670	20.2	4643	22.1
	Total	8346	100.0	5091	100.0	4220	100.0	3316	100.0	20973	100.0

Dominican Republic	Similar age	464	16.6	268	7.3	435	17.7	141	23.4	1308	13.8
	Woman two years older than man or more	188	6.7	33	.9	207	8.4	61	10.1	489	5.1
	Man up to three years older than woman	471	16.8	558	15.3	400	16.3	97	16.1	1526	16.1
	Man between three and eight years older than woman	954	34.1	1537	42.1	766	31.3	174	28.9	3431	36.1
	Man more than eight years older than woman	723	25.8	1255	34.4	643	26.2	130	21.6	2751	28.9
	Total	2800	100.0	3651	100.0	2451	100.0	603	100.0	9505	100.0
Honduras	Similar age	950	20.2	380	13.9	420	26.7	104	24.7	1854	19.7
	Woman two years older than man or more	389	8.3	40	1.5	216	13.7	81	19.2	726	7.7
	Man up to three years older than woman	894	19.0	517	18.9	274	17.4	73	17.3	1758	18.7
	Man between three and eight years older than woman	1573	33.5	1113	40.7	418	26.5	88	20.9	3192	33.9
	Man more than eight years older than woman	888	18.9	683	25.0	247	15.7	75	17.8	1893	20.1
	Total	4694	100.0	2733	100.0	1575	100.0	421	100.0	9423	100.0
Peru	Similar age	1002	24.8	252	14.6	422	26.5	295	28.1	1971	23.4
	Woman two years older than man or more	314	7.8	25	1.4	182	11.4	162	15.4	683	8.1
	Man up to three years older than woman	807	20.0	331	19.1	288	18.1	166	15.8	1592	18.9
	Man between three and eight years older than woman	1267	31.3	719	41.6	443	27.8	238	22.7	2667	31.7
	Man more than eight years older than woman	652	16.1	402	23.3	259	16.2	188	17.9	1501	17.8
	Total	4042	100.0	1729	100.0	1594	100.0	1049	100.0	8414	100.0
Latin America	Similar age	6918	22.3	1905	12.1	2803	23.6	1781	26.0	13407	20.4
	Woman two years older than man or more	2702	8.7	227	1.4	1358	11.4	1152	16.8	5439	8.3
	Man up to three years older than woman	5953	19.1	2771	17.6	1991	16.7	1060	15.5	11775	18.0
	Man between three and eight years older than woman	10133	32.6	6420	40.8	3273	27.5	1514	22.1	21340	32.5
	Man more than eight years older than woman	5386	17.3	4412	28.0	2475	20.8	1334	19.5	13607	20.8
	Total	31092	100.0	15735	100.0	11900	100.0	6841	100.0	65568	100.0