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El efecto de la identidad y los valores emancipativos de las mujeres en la participación laboral femenina: una comparación entre América Latina y países de la OCDE

The effect of women's identity and emancipative values in female labor force participation: a comparison between Latin American and OECD countries.

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Resumen

Desde finales de 1990 y principios del 2000, la región de América Latina experimentó el mayor crecimiento de participación laboral femenina en el mundo. Literatura reciente (Camou, 2015; Chioda, 2016; Gasparini & Marchionni, 2015; Klasen, 2018; Serrano, Gasparini, Marchionni, & Gluzmann, 2018) han concluido que las tendencias en el matrimonio y la fertilidad, crecimiento económico y la educación son determinantes importantes, pero concuerdan en la necesidad de analizar las preferencias de las mujeres y factores sociales elementos que contribuyen, también. Este estudio aporta a la literatura al estudiar estos dos factores en la región, desde el punto de vista de la Teoría Económica de la Identidad de Akerlof & Kranton (2000), y la Teoría de los Valores Emancipativos de Welzel's (2013b). Mediante la explotación de datos del World Values Survey y del European Values Study, esta investigación desarrolló un modelo de regresión probabilística en dónde las preferencias de las mujeres hacia una visión igualitaria como mujer que trabaja, es analizada como *Identidad de las Mujeres*, y las restricciones sociales sobre la igualdad de género se analizan integrando un indicador de *Valores Emancipativos de las Mujeres*. Este trabajo también compara los resultados de los países de Latinoamericanos con países de la OCDE para identificar las diferencias entre los grupos. Concluimos que la identidad de la mujer y el valor emancipativo de las mujeres son fuertes determinantes positivos y estadísticamente significativos de la participación laboral femenina. En la comparación con países de la OCDE, también concluimos que las mujeres en los dos grupos de países comparten opiniones similares de sí mismas como mujer trabajadora, pero América Latina tiene aún limitaciones sociales en juego que limitan su participación en el mercado laboral en la región.

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Abstract

From the end of the 1990's and the beginning of the 2000's, Latin American region experienced the largest female labor force participation growth in the world. Recent literature (Camou, 2015; Chioda, 2016; Gasparini & Marchionni, 2015; Klasen, 2018; Serrano *et al*., 2018) conclude that marriage and fertility trends, economic growth and education as important determinants, but agree to the need to analyze women preferences and social factors also as contributing elements. This study contributes to the literature by studying these two factors in the region, from the viewpoint of Akerlof & Kranton's (2000) Identity Economic Theory, and Welzel's (2013b) Emancipative Values Theory. Exploiting World Values Survey data and European Values Study, this investigation developed a probabilistic regression model where women's preference towards egalitarian views as workingwoman is analyzed as *Women's Identity*, and social constraints upon gender equality is analyzed integrating a *Women's Emancipative Values* indicator. This work also compares Latin American countries results with OECD countries to note differences between the groups. We conclude that *Women's Identity* and *Women's Emancipative Value* are strong positive statistically significant determinants of FLFP. When compared with OECD countries, we also conclude that women in the two groups of countries share similar self-views as workingwoman, but Latin America still has social constraints at play that are limiting FLFP in the region.

Introduction

Female Labor Force Participation (FLFP) is a large and complex phenomenon that still needs further investigation due to its key importance to social and economic development. As the literature concurs (e.g., Chioda, 2016; Klasen, 2018; Novta & Wong, 2017), in the last 25 years the Latin American region experienced the largest FLFP growth than any other region in the world, nevertheless, the studies on its determinants are still incipient with many opportunities for contribution.

In the last hundred years, the increase of female labor participation rate (FLFP) took place first in industrialized countries in the decades following World War II, rising up to 60% (Acemoglu, Autor, & Lyle, 2004; Fogli & Veldkamp, 2011; Goldin, 1991). As for Latin-American & Caribbean (LAC) countries, FLFP experienced a strong increase starting at the end

of the Twentieth Century, growing from a 36.6% in 1990 up to 51.4% in 2014, adding 63.3 million women to the labor market (The World Bank, 2018). Novta (2017, p. 2) claims that the additions in FLFP in the region where the largest in the world in the period referred before, and "was driven by improvements beyond development levels" (2017, p. 9).

In the last two decades LAC started to shine in the world economic arena. As of 2014 LAC countries' GDP represented 8.01%[1] of the World's GDP; Mexico, Argentina, and Brazil were members of the G-20; and Mexico, Colombia, and Chile had become adherents of the OECD. This economic growth in the region had an impact on FLFP. Against the expected U-shape pattern (Goldin, 1994; Mammen & Paxson, 2000; Olivetti, 2013; Pampel & Tanaka, 1986; Psacharopoulos & Tzannatos, 1989; Tansel, 2002) between FLFP and economic growth proxied using GDP per cápita, studies concur (Camou, 2015; Demirhan & Demirhan, 2017; Klasen, 2018) that Latin American countries do not follow a U-shape.

Authors (Camou, 2015; Chioda, 2016; Gasparini & Marchionni, 2015; Klasen, 2018; Serrano *et al*., 2018) agree that economic development, education, lower fertility rates, and economic policies such as childcare support, to be determinants of FLFP in LAC as U-shape theory studies found, but they do not consider them to be sufficient explanation for the countries in the region. Studies (Camou, 2015; Chioda, 2016; Gasparini, Marchionni, Badaracco, & Serrano, 2015; Klasen, 2018) coincide in the need of further investigation of the determinants of FLFP in LAC, and point to women preferences and social factors as opportunities of research.

Serrano *et al*. (2018) caution FLFP in LAC is reaching a ceiling that may result from women preferences and policy factors, as women delay their decision to participate in the labor market given the higher earnings of their spouses or the protection of new social programs.

Women's role preferences and identity develop during their adolescence years (Burt & Scott, 2002; Vella, 1995) influenced by their family structure (Kiecolt & Acock, 1988; Vincent, Peplau, & Hill, 1998), the transmission of family values (Crespi, 2004), and education and religious beliefs (Filler & Jennings, 2015). Then, in adulthood, women´s labor outcomes are impacted by their choices according to the identity they recognize with: traditional – housewife, or modern working woman (Hayo & Caris, 2013).

Gerson (1985) claims that although women preferences may be forged during adolescent years, these can change during adulthood as result of new social forces and dynamics in their

[1] Calculated using GDP constant 2010 US$ (The World Bank, 2018).

social milieu which may provide a new set of possibilities, resulting in different paths that two women may follow under similar circumstances. Also, Cunningham (2008) concluded that social and economic factors in adulthood may influence women's decision to participate in the labor market, despite traditional values upbringing.

According to Inglehart & Welzel (2005), socioeconomic development and the emergence of a knowledge society act as a force upon culture changing traditional values and beliefs, giving rise not only to more democratic institutions but also rising gender equality. As the authors assert, as result of shaping emancipative values, the orientation of gender roles changes, promoting "female empowerment and egalitarian democracy" (2005, p. 284).

In this sense, recent studies concluded that women's identity (Fortin, 2009; Hayo & Caris, 2013), emancipative values (Brieger, Francoeur, Welzel, & Ben-Amar, 2017; Inglehart & Welzel, 2005) and gender egalitarianism (Cunningham, 2008) affect FLFP.

Akerlof & Kranton's (2000) proposed the Identity Economic Theory (IET), where identity is defined as "a sense of self", and claim that the choice of identity an individual makes is the most important economic decision. The IET incorporates a person´s identity, prescribed social norms, and social categories into an economic utility function that the individual seeks to maximize taking these factors into account (2000, p. 719). As a society eases the association of tasks to gender roles, we should expect an increase of FLFP, reducing the gap with men's job rates (2000, p. 735).

Changes in prescribed social norms acting as constraints around expected gender roles, are captured through the Theory of Emancipative Values formulated by Welzel(2013b). The theory states that as external constraints over the individual recede, emancipative values arise as a motivational source of human empowerment, emphasizing freedom of choice and equality of opportunities. A value is a belief that serves as a goal, orients behavior, and helps to evaluate situations, people, and events (Schwartz, 1994, p. 20).

Since women preferences and social factors constitute opportunities of research for the Latin America region, this work seeks to contribute to the literature by analyzing the effect of identity, as a measure of women's preferences, and emancipative values, as a reflection of social factors, upon FLFP. This investigation hypothesizes that these two explicative variables have been two strong drivers for women's labor market participation over demographics and country economics.

Also, this study explores the effect of these explicative variables on OECD countries, as this group encompasses some of the most advanced and democratic economies in the world, and compares them with the LAC region, foreseeing a road of opportunity ahead in the region from which we may expect FLFP will continue to rise in the future, as result, mainly, from the augmentation of emancipative values.

This investigation is supported on the theoretical frameworks of the IET (G. Akerlof & Kranton, 2000) and the Emancipative Values Theory (Welzel, 2013b). Employs pooled data from waves 3 to 6 (1994-1998 to 2010-2014) of the World Values Survey (WVS), applying a Probit regression; controlling for individual's demographics, countries' economic indicators proxied by GDP per cápita and male unemployment rate, country code, and survey wave.

This work is organized as follows. Section 2 presents an overview on the literature of the determinants of FLFP and the most recent studies of the subject in the LAC region. Section 3 describes the empirical strategy. Section 4 presents the empirical results and the analysis of the effect of the explicative variables on FLFP outcomes, contrasting the LAC region with OECD countries. Section 5 discusses the findings and states the final conclusion and suggestions for future researches.

Literature Review

Neoclassical theory states that supply and demand are forces at play in any given market (Marshall, 1890). In the labor market, demand is in function of business/industry structure requiring skill dependent labor force at certain cost payable as wage; supply, is in function of labor force availability, where individuals, upon a utility curve, rationally decide to trade their leisure time in exchange of monetary pay (Boyer & Smith, 2000, pp. 200–201). However, research has concluded that women's job engagement is more complex than men's because it is impacted by more factors as much at the micro as at the macro level.

For almost 60 years, since Mincer's (1962) seminal work on FLFP and Becker's (1965) Time Assignation Theory, studies on determinants on women's' job market participation from the supply perspective sprouted along three major categories: neoclassical labor economics; economic development; and social economics.

Theory states that unlike men who only have to choose their time between work and leisure, married women considers family chores as a third element of time usage, and their

economic decision to trade their time is inelastic in function of family income, and elastic in respect to their child-caring duties (Mincer, 1962). Families behave as a decision units, therefore women's entrance into the labor market is pondered in the domestic nucleus—basically between wife and husband— choosing how to distribute the time of its members, so that those who are more efficient in market activities spend less time on consumer activities such as domestic tasks (Becker, 1965).

Becker (1974) conceptualizes marriage as an economic decision between a man and a woman to unite their lives as a couple, where the main gain is the breeding of their own children, and in order to maximize the outcome—raising healthy offspring—both cooperate allocating their time into market and non-market activities according to their best competencies. This result in women working less time, or not at all, in the labor market as long as the potential wage she could earn is less than their husband's. Furthermore, Becker (1991, pp. 30–51) states that within the family, human capital investment is allocated according to sex biological advantages where market returns are more profitable; and since a woman is considered to be biologically best suited for household chores, a family rationally allocate more resources to boys schooling than girls, since men need to be better prepared for market production.

Likewise, since child rearing and domestic chores are much more energy demanding, women choose partial time and less effort intensive jobs, hence dedicating less time to human capital formation which results in a lesser income; while husbands dedicate their energy into full time jobs to maximize household income (Becker, 1985).

Departing from these theoretical grounds, and from Western developed countries experience, scientists developed micro level economic models to understand the impact on the elasticity on women's decisions, their family situations, fertility, education, technology advances, experience, wages, and public policies; having as central premise that domestic tasks are women's role (Blundell & MaCurdy, 1998; Killingsworth & Heckman, 1986).

From these models, researchers conceived empirical studies that have led to parsimonious explanations and understanding on the determinants that impact FLFP. For example, factors that have been linked as facilitators of women's labor participation are: the contraceptive pill (Bailey, 2006), home appliances (Cavalcanti & Tavares, 2008; Greenwood, Seshadri, & Yorukoglu, 2005), and public policies such as family income taxes and childcare support (Attanasio, Low, & Sánchez-Marcos, 2008; Bick, 2011; Bishop, Heim, & Mihaly, 2009; Haan & Wrohlich, 2009;

Jaumotte, 2003). Life cycle and the number and age children point to be a strong factor (Bloom, Canning, Fink, & Finlay, 2009; Hotz & Miller, 1988; Mishra & Smyth, 2010), although some studies don't seem to agree to be a strong enough determinant (Agüero & Marks, 2008; Givord & Marbot, 2014).

Taking a macro stand point of view, a stream of research grouped under economic development the structural and socio-economic changes that takes place in a country and impact FLFP, being Esther Boserup's (1970) theory as the go-to reference in FLFP literature. Boserup (1970) claims that females' job market involvement is impacted by a society's[2] economic and technological advances. In an agricultural/pre-industrial low-income economy, women actively work to help on household income; in an industrial and technology advanced market, with better pays, men takes the bread-winner role and women assumes domestic duties; as economy further develops, women education expands, and re-enter the labor market that demands clerical and white-collar jobs as the service industry grows.

Based on Boserup's (1970) theory, Pampel & Tanaka (1986) retake the U-shape theory, first postulated by Sinha (1965), which states that income effect rules on low economic developed countries, and a substitution effect takes places on higher incomes. Studies followed to confirm the U-shape theory (Belke, 2016; Demirhan & Demirhan, 2017; Goldin, 1994; Mammen & Paxson, 2000; Psacharopoulos & Tzannatos, 1989), although some have found that the theory doesn't necessarily apply to low income (Lechman & Kaur, 2015) and Latin American countries (Demirhan & Demirhan, 2017), or even that the theory has little empirical support (Gaddis & Klasen, 2013).

From the turn of the 21st Century, social economics has become a venue of study in FLFP. From this approach of investigation, researchers concluded that the transmission of values and beliefs (Farré & Vella, 2013; Fernández, 2007; Fernández, Fogli, & Olivetti, 2004), and attitudes (e.g., Campos-Vazquez & Velez, 2013; Carriles, Beltrán, & Mata, 2019; Fortin, 2005; Giavazzi, Schiantarelli, & Serafinelli, 2013) are strong and statistically significant determinants of women's participation in the labor market.

Within this last stream of research, identity and emancipative values are two new lines of study. Pioneering the analysis of the effect of identity on FLFP, Fortin (2009) investigated its evolution in the United States from year 1977 to 2000. The author studied "Career Woman" vs.

[2] A society can be a community, village, city, state, country or region in the world.

"Housewife" as competing identities of egalitarian and traditional gender roles, arguing that decisions such as fertility and labor market participation can be connected to them. Fortin (2009, p. 31) concluded that a preference of an egalitarian identity explained the increase of FLFP in the late 70's and 80's; and a rise of a preference of a "housewife" identity as result of societal and work environment factors, accounted for a decline in women's labor participation by the end of the 20th Century and the beginning of the 21st.

Hayo & Caris (2013) investigated the effect of identity in the Middle East and North Africa (MENA) region using WVS waves from years 2000 and 2005. From the analysis the authors concluded that women with a traditional role identity participate less in the labor market in the region, despite being Muslim or not, confirming that identity is a stronger determinant than religion.

Both investigations theoretical framework are supported on Akerlof & Kranton's (2000) IET, focusing on two possible choices: traditional-housewife or egalitarian-working woman, where its choice is constrained by social expectations of the gender role.

Welzel (2013b) claims that as social constraints decline in the human development process within a society, emancipative values rise as a motivational force of human empowerment to freely choose the path to develop her potential, and seek and demand equality of opportunities as any other human being. Supported on the Emancipative Values Theory (Welzel, 2013b) as theoretical framework, Brieger et. al. (2017) investigated country-level on how emancipative forces motivated women to take leadership roles on corporate boards in 6390 firms in 30 countries. The authors determined in the cross-country comparison that emancipative forces to be positively and significantly linked to female taking leadership roles on company boards.

In the Latin American region, recent FLFP investigations have been approached from a neo-classical labor economics and economic growth perspectives. Camou (2015) investigated the incorporation of women to labor markets for eight Latin American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Peru, México and Venezuela) in the 20th Century, using a Gender Development Index and GDP as explicative variables. The author concluded that although there is a relationship between education, FLFP, and economic growth, there is no linear trend between the variables, and these are not enough to explain the variations between countries.

Novta (2017) analyzed FLFP in Latin American countries for the period of 1990-2014. The author asserts the expansion of FLFP was the largest in comparison to any other region of

the world; nevertheless, gender gaps are still persistent and unequal across the countries of Latin America. Comparing periods from 1990 to 2014, Novta (2017, p. 8) illustrates that Latin American countries follow a U-shape, locating them at the bottom of the U. and claims that despite this situation, improvements in FLFP "was driven by improvements beyond development levels", like women education and legal improvements, although policies on childcare services, promoting women higher education and laws against discrimination are still necessary for further improvements.

Gasparini *et al*. (2015) studied FLFP growth in the region during the period of 1992-2012 using as explaining variables education, marriage, number of children, age, and area of residence, concluding that this factors favored women's engagement in the labor market. However, the authors warn of a deceleration in FLFP due to better economic conditions in Latin America. Moreover, the authors suggest of further research opportunities on FLPF in the region as they considered their investigation as "imperfect and incomplete" (2015, p. 151).

Serrano *et al*. (2018), going deeper into Gasparini et. al. (2015) findings, studied the effect of GDP growth and conditional cash transfer (CCT) programs implemented through public policies on FLFP of the region for the period 1992-2014, in order to explain women's labor participation deceleration after year 2000. The researchers concluded that better economic conditions and CCT had a decelerating effect on FLFP, mainly on women with lower education and from low income families or rural living, since better economic conditions lowers the pressure to seek low quality jobs.

Chioda (2016) provides a complete assessment of the effect of family structure and dynamics with the household in Latin America. The author points to strong social norms still at play in the region, where woman attachment to household chores are associated to the beliefs that children may suffer if the mother works. However, the report also finds interesting that younger cohorts in the region display more attachment to the labor market in contrast to older women, which may reflect women's preference for an identity of working-woman.

This study seeks to contribute to the literature in the following ways. First, by going beyond exogenous factors, as economic development or simply demographics, and incorporating women's preferences in the model. Second, by integrating the social norms component through emancipative values as a reflection of social development and reduction of social norms

constraints in the region. Third, by comparing these determinants with those of OECD countries to foresee the gap with advanced economies.

Data and Methodology

Data Source

This investigation exploits data from the WVS (2015) and European Values Study (GESIS Data Archive, 2015), regarded as the largest non-commercial survey in the planet (Inglehart & Baker, 2000, p. 23; Ludeke & Larsen, 2017, p. 103), focused on the analysis and evolution of values, attitudes, and beliefs through time along the countries in the world.

The data used is from the waves corresponding to the periods of 1995-1999, 2000-2004, 2005-2009, 2010-2014, since these periods comprehends the FLFP growth that took place in the region, and considers a major number of Latin American countries surveyed. Table 1 presents the countries and number of subjects surveyed in each wave.

Table 1. Latin American countries sample

	1995-1999		2000-2004		2005-2009		2010-2014		Total
Country	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	
Argentina	397	470	492	557	370	449	483	532	**3,750**
Brazil					500	745	437	776	**2,458**
Chile	389	485	473	610	345	498	374	441	**3,615**
Colombia	2,733	1,406			1,373	1,486	657	739	**8,394**
Dominican Rep.	129	210							**339**
Ecuador							496	606	**1,102**
El Salvador	484	639							**1,123**
Guatemala					435	492			**927**
Mexico	988	1,064	642	735	687	758	878	977	**6,729**
Peru	486	557	581	720	602	714	481	549	**4,690**
Puerto Rico	258	611	170	356					**1,395**
Uruguay	276	441			340	410	371	392	**2,230**
Venezuela	521	574	530	567					**2,192**
Total	**6,661**	**6,457**	**2,888**	**3,545**	**4,652**	**5,552**	**4,177**	**5,012**	**38,944**

Source: Self elaboration from WVS (2015)

Table 2 presents the OECD group of countries that are considered for comparison.

Table 2. OECD countries sample

	1995-1999		2000-2004		2005-2009		2010-2014		Total
Country	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	
Australia	685	835			439	558	436	572	3,525
Canada			574	884	611	924			2,993
Czech Rep.	343	382							725
Estonia	379	415					459	601	1,854
Finland	330	381			307	386			1,404
France					319	404			723
Germany	640	842			522	768	667	732	4,171
Hungary	196	208			332	374			1,110
Italy					370	377			747
Japan	445	439	485	488	377	461	879	811	4,385
South Korea	532	630	527	582	483	594	493	588	4,429
Latvia	411	492							903
Lithuania	359	361							720
Netherlands					363	456	527	629	1,975
New Zealand	416	479			316	380	262	345	2,198
Norway	446	486			382	403			1,717
Poland	527	584			330	288	296	325	2,350
Slovakia	412	360							772
Slovenia	322	384			339	355	284	379	2,063
Spain	377	524	402	543	407	499	417	498	3,667
Sweden	387	404			374	373	514	583	2,635
Switzerland	464				378	487			1,329
Turkey	744	858	1,327	1,582	503	634	572	767	6,987
Great Britain	348				361	394			1,103
United States	555	589	417	600	488	515	775	908	4,847
Total	**9,318**	**9,653**	**3,732**	**4,679**	**8,001**	**9,630**	**6,581**	**7,738**	**59,332**

Source: Self elaboration from WVS (2015) and EVS (GESIS Data Archive, 2015)

Methodology

This study considered the following regression lineal probabilistic model, where the dependent variable assumes a value of 1 if the individual in the survey participates in the labor market, and 0 otherwise.

$$P(Y = 1|X) = Y_{ict} = \beta_0 + \beta_1 X_{1ict} + \beta_2 X_{2ict} + \sum_{j=3}^{n} \beta_j X_{jict} + \sum_{k=1}^{n} \beta_3 X_{kct} + a_c + t + \varepsilon_{ct}$$

Where

Y_{ict}: Is the labor participation of individual *i* in country *c* in period *t*, where 1 = participates, 0 = does not participates

X_{1ict}: Is individual's *i* identity in country *c* in period *t*

X_{2ict}: Is individual's *i* emancipative values in country *c* in period *t*

X_{jict}: Are individual's *i, j* control variables of the country *c* in the period *t*

X_{kct}: Are the *k* control variables of country *c* in period *t*

ε: represents the non-observed economic variables

***a*:** Are the constant factors not observed along time

t: period of time

c: country

Dependent Variable

As in Carriles, Beltrán & Mata (2019) the dependent variable takes the value of 1 if the individual reports participating in the labor market, and 0 if not.

WVS (2015) asks the subjects to selects employment status from the following options: Full time; Part time; Self-employed; Retired; Housewife; Students; unemployed; Other. Since labor force participation considers individuals in working age who engage in the labor market either by working or searching for work (Sodergen *et al*., 2016), this study considered for analysis individuals who responded "full time", "part time", "self-employed", and "unemployed" as participating in the labor market; and respondents who answered "housewife" as not participating.

Independent Variables

Identity

Having as theoretical framework Akerlof & Kranton (2000) IET, to study women's identity as "housewife" or "working women" this work follows Hayo & Caris (2013) who from the WVS measured the variable through the question "Being a housewife is just as fulfilling as working for pay". Since this work is interested on the determinants that forwarded FLFP in the Latin American region, a value of 0 is assigned to the answers of "Strongly agree" and "Agree", and 1 to "Disagree" and "Strongly disagree". Answers "Don't know" and "No answer" where not considered.

Women's Emancipative Values

To measure Women's Emancipative Values variable, this study relies on the Emancipative Values Theory (Welzel, 2013b) that embodies freedom of choice and equality of opportunities, and is constructed based upon the emancipative values indicator (Welzel, 2013b, Chapter 2) composed of four sub-indexes, two to measure freedom orientation, and two for equality of

opportunities orientation. The emancipative values indicator is a multipoint index normalized with values from 0 to 1, as follows (Welzel, 2013a, pp. 20–21).

Freedom Orientation is integrated by Autonomy and Choice sub-indexes. The Autonomy sub index is calculated by using the question "*Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Independence, Imagination, Obedience,* when mentioned is coded as 1 and not mentioned as 2. Recoding the answers to integrate the sub-index, declaring 'independence' or 'imagination' are both coded as 1, and 0 if not; 'obedience' is coded 0, and 1 otherwise. The autonomy sub-index recoded scores are averaged over the three items.

The Choice sub index utilizes the question "*Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between using this card (10-point scale)*. *Homosexuality, Abortion, Divorce* are coded from 1 to 10, where 1 is never justifiable and 10 is always justifiable. To rescale from 0 to 1 the author subtracts 1 from the respondent's score and divides the result by 9. The sub-index results from averaging the three items.

Equality of opportunities is measured by Equality and Voice. The Equality sub-index employees the next questions:

- "*Do you agree, disagree or neither agree nor disagree with the following statements? When jobs are scarce, men should have more right to a job than women*."
- *"For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree?*

  - A university education is more important for a boy than for a girl.

  - On the whole, men make better political leaders than women do."

For the first question agree is coded 0, neither nor is coded .5 and disagree is coded 1. For the next two, 'strongly agree' is coded 0, 'agree' is coded .25, 'disagree' is coded .75 and 'strongly disagree' is coded 1. As the other sub-indexes, Equality sub-index is calculated averaging the recoded three items.

The Voice sub-index uses the question "*People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? (...) And second most important?"* Within the possible choices are:

- *"Giving people more say in important government decisions*
- *Protecting freedom of speech*
- *Seeing that people have more say about how things are done at their jobs and in their communities."*

A value of 0 is assigned if the item was not chosen as important, .5 for second most important, and 1 as most important. The recoded scores are averaged over the three items. Finally, the Emancipative Values Index results from the average of the four sub-indexes.

To build the Women's Emancipative Values indicator, this study follows the previous procedure to construct the Emancipative Values Index at the female individual level and we also consider the effect of the country's average emancipative values upon the subject working as a social norm. Social norms act as constraints that people follow (Levy-Paluck, Ball, Poynton, & Sieloff, 2010, p. 9) to avoid disapproval (Elster, 1989, p. 103), and their observance provide an utility to the individual (G. A. Akerlof, 1980). Social norms have shown to affect FLFP either limiting (Contreras & Plaza, 2010; Fortin, 2005) or promoting FLFP (Hall & Zoega, 2014). To reflect the shock of the country's average emancipative values, this is averaged with the individual's emancipative value.

The following equation presents how Women's Emancipative Values (WEV) is estimated:

$$WEV_{ict} = \frac{FEV_{ict} + CAEV_{ct}}{2}$$

Where:

WEV_{ict} Is Woman´s Emancipative Values of individual *i*, in country *c*, at time *t*
FEV_{ict} Is the individual's *i* emancipative value, in country *c*, at time *t*
$CAEV_{ct}$ Is the country's average emancipative value in country *c*, at time *t*

The Country's Average Emancipative Values is calculated as follows:

$$CAEV_{ct} = \frac{\sum_1^{n_{ct}} FEV_{ict} + \sum_1^{m_{ct}} MEV_{ict}}{n_{ct} + m_{ct}}$$

Where:

$CAEV_{ct}$	Is the country's average emancipative value in country *c*, at time *t*
FEV_{ict}	Is female's *i* emancipative values, in country *c*, at time *t*
MEV_{ict}	Is male's *i* emancipative values, in country *c*, at time *t*
n_{ct}	Is the number of female subjects, in country *c*, at time *t*
m_{ct}	Is the number of male subjects, in country *c*, at time *t*

Control Variables

The model controls for: women's demographics, country economics, country fixed effects, and wave survey period. As for women's demographics, marriage status, education, number of children, and household income, come from the WVS (2015) and EVS (2015). Marriage status considers whether the individual is *married* or *living in together as married*. Education ponders *middle*, and *upper* schooling. Household income is classified as low, medium or high.

Country's economic controls are proxied by GDP per cápita, and country's male unemployment come from World Bank (2018), considering Serrano *et al.* (2018) concluded GDP growth and male's unemployment affected FLFP in Latin American countries.

Country's fixed effects are included as country's code number, and period is wave number from WVS (2015) and EVS (2015).

Empirical results

To measure and compare the impact and significance of the independent variables upon female's labor force participation decision, this study first analyzed the variables by types, and then grouping them up in a stepping up process until getting to the full model, as presented in Table 3.

Table 3. Variable analysis stepping process

MODEL/ VARIABLES	1	2	3	4	5	6	7	8	9
Country	X	X	X	X	X	X	X	X	X
Wave	X	X	X	X	X	X	X	X	X
Number of Children		X	X				X	X	X
Married or living in couple		X	X				X	X	X
Medium Education		X	X				X	X	X
Higher Education		X	X				X	X	X
Low Household Income		X	X				X	X	X
High Household Income		X	X				X	X	X
GDP per Cápita			X				X	X	X
Men Unemployment Rate			X				X	X	X
Identity				X		X	X		X
Emancipative Values					X	X		X	X

Source: Self elaboration

Each of these analyses are referred as models 1 to 9, beginning with Model 1 trying the fixed effect *country* variable, and time effect variable identifying the World Values Survey *wave* number. Model 2, comprehends women's demographic data, and incorporates Model 1 variables. Model 3, adds country's exogenous variables *GDP per cápita*, and *men's unemployment rate* to evaluate the effect of economic environment. Model 4, studies the effect of the *Identity* variable together with basic *country* and *wave* variables. Model 5 analyzes the effect of the *Emancipative Values* to contrast the size of its effect with Model 4. Model 6, experiments together with *Identity* and *Emancipative Values* which will serve to compare with Model 2. Model 7 and 8 evaluate *Identity* and *Emancipative Values* variables, respectively, in conjunction with variables considered in Model 3 to compare between these three models. Finally, Model 9 is the full model proposed by this research, to analyze the effect of all the determinants operating systemically upon the dependent variable.

Following, we first test the goodness of fit for each of the models. Then, we examine the effect of the explicative variables in the FLFP in Latin American countries. Third, we compare the results with those resulting from the analysis in OECD countries.

Test of Goodness of Fit for the Model

The tests of goodness of fit is a set of statistical methods (Veall & Zimmermann, 1996) that helps the scientists to evaluate the effectiveness of an empirical model to produce the values expected in comparison to the values observed on a sample, yet there is no universally accepted goodness of fit measure for binary dependent variable models (Kennedy, 2008, p. 249; Maddala & Lahiri, 2009, sec. 8.9). The goodness of fit tests estimates a pseudo-R^2 similar to the R^2 coefficient of determination obtained from an OLS regression. However, since values of *y* are 0 and 1, and the

predicted values of $\hat{Y}$ are probabilities, there is not an exact relationship as in a linear regression, consequently the pseudo-R^2 is underestimated and are not comparable to the R^2 in a multivariate linear regression model.

This study employed the *fitstat* function from Stata (see Long & Freese, 2001) to estimate and compare the goodness of fit for each of the nine models for the Latin American and OECD countries, as reported in Tables 4 and 5, respectively. The function estimates McFadden's (1974), Cragg & Uhler's (1970), Efron's (1978), McKelvey & Zavoina's (1975), and the proportion of correct predictions identified as Count- R^2 and Adjusted Count- R^2; also estimates for Akaike's (1998) information criteria, identified as AIC, where the small AIC is considered the better fitting model. The Bayesian information criteria (Kass & Raftery, 1995) is identified as BIC, where the more negative the BIC the better fit of the model

As result, the goodness of fit estimations led to conclude the following about the model used in this research. First, the estimated pseudo-R^2s for each of the nine models are appropriate indices of effect size for a Probit regression, since they are characteristically underestimated in comparison to the R^2 from a linear regression. Second, in contrast to the reduced model, Model 1, the stepped inclusion of predicting variables consistently improved the goodness of fit. Third, the regression models containing the *country* and *wave* variables plus *Identity, Emancipative Values*, and both variables, Models 4 to 6, revealed a significantly better fit to the data; furthermore, the inclusion of either *Identity* or *Emancipative Values* variables, as in Model 7 and 8, respectively, yield to an enhanced goodness of fit model than without these variables as compared to Model 3. Fourth, the tests coincide that Model 9, which is the full model, got the highest pseudo-R^2s, the lowest AIC, the most negative BIC, and the highest proportion of correct predictions –Count- R^2 and Adjusted Count- R^2 –, for both of the studied groups, the Latin American and OECD countries. Consequently, the full model is the most fitted of the nine models analyzed.

As the goodness of fit tests have shown, *Identity* and *Emancipative Values* are two powerful predictor variables of FLFP that provide a significantly better fitted model for the analysis of the phenomenon. Also, although there is no universally accepted goodness of fit measure for binary dependent variable models, all the pseudo-R^2s that according to the literature (Kennedy, 2008; Long & Freese, 2001; Maddala & Lahiri, 2009; Veall & Zimmermann, 1996) help to select the best fitted model, which were estimated using *fitstat*, consistently coincided that the proposed full model, Model 9, is the best fitted, as expected in this research.

Table 4. Goodness of fit for Latin American countries' model

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Log-Lik Intercept Only:	-6285.28	-6285.28	-6285.28	-6285.28	-6285.28	-6285.28	-6285.28	-6285.28	-6285.28
D (N-parameters):	D (9158): 12557.681	D (9151): 11576.989	D (9149): 11519.781	D (9157): 12463.5	D (9157): 12448.792	D (9156): 12375.711	D (9148): 11467.582	D (9148): 11499.029	D(9147): 11452.768
McFadden's R2:	0.001	0.079	0.084	0.009	0.01	0.016	0.088	0.085	0.089
Maximum Likelihood R2:	0.001	0.103	0.108	0.012	0.013	0.021	0.113	0.11	0.115
McKelvey and Zavoina's	0.002	0.163	0.171	0.018	0.021	0.033	0.179	0.174	0.181
Variance of y*:	1.002	1.194	1.207	1.019	1.021	1.035	1.218	1.211	1.222
Count R2:	0.559	0.651	0.643	0.551	0.565	0.572	0.651	0.645	0.655
AIC:	1.371	1.266	1.26	1.361	1.36	1.352	1.255	1.258	1.253
BIC:	-70988.103	-71904.936	-71943.899	-71073.162	-71087.869	-71151.828	-71986.975	-71955.528	-71992.666
Log-Lik Full Model:	-6278.84	-5788.495	-5759.89	-6231.75	-6224.396	-6187.855	-5733.791	-5749.515	-5726.384
LR (degrees freedom):	LR (2): 12.88	LR (9): 993.571	LR (11): 1050.779	LR (3): 107.06	LR (3): 121.768	LR (4): 194.849	LR (12): 1102.978	LR (12): 1071.531	LR (13): 1117.792
Prob > LR:	0.002	0	0	0	0	0	0	0	0
McFadden's Adj R2:	0.001	0.077	0.082	0.008	0.009	0.015	0.086	0.083	0.087
Cragg & Uhler's R2:	0.002	0.138	0.145	0.016	0.018	0.028	0.152	0.148	0.154
Efron's R2:	0.001	0.105	0.111	0.012	0.013	0.021	0.116	0.113	0.118
Variance of error:	1	1	1	1	1	1	1	1	1
Adj Count R2:	0	0.207	0.189	-0.02	0.013	0.028	0.208	0.194	0.218
AIC*n:	12563.681	11596.989	11543.781	12471.5	12456.792	12385.711	11493.582	11525.029	11480.768
BIC':	5.366	-911.467	-950.43	-79.692	-94.4	-158.359	-993.506	-962.058	-999.197

Source: Self elaboration

Table 5. Goodness of fit for OECD countries' model

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Log-Lik Intercept Only:	-9294.098	-9294.098	-9294.098	-9294.098	-9294.098	-9294.098	-9294.098	-9294.098	-9294.098
D (observations):	D (16059): 18447.255	D (16052): 17287.412	D (16050): 16792.511	D (16058): 18204.803	D (16058): 17296.513	D (16057): 17188.821	D (16049): 16657.522	D (16049): 16501.04	D (16048): 16412.235
McFadden's R2:	0.008	0.07	0.097	0.021	0.069	0.075	0.104	0.112	0.117
Maximum Likelihood R2:	0.009	0.078	0.106	0.024	0.077	0.083	0.113	0.122	0.127
McKelvey and Zavoina's	0.016	0.141	0.185	0.043	0.131	0.143	0.198	0.209	0.218
Variance of y*:	1.016	1.164	1.227	1.045	1.15	1.166	1.247	1.264	1.278
Count R2:	0.735	0.745	0.756	0.735	0.755	0.756	0.757	0.763	0.763
AIC:	1.149	1.078	1.047	1.134	1.077	1.071	1.039	1.029	1.024
BIC:	-137071.498	-138163.551	-138639.083	-137304.265	-138212.556	-138310.563	-138764.389	-138920.871	-138999.992
Log-Lik Full Model:	-9223.627	-8643.706	-8396.256	-9102.402	-8648.256	-8594.411	-8328.761	-8250.52	-8206.117
LR (degrees freedom):	LR(2): 140.942	LR(9): 1300.784	LR(11): 1795.685	LR(3): 383.393	LR(3): 1291.683	LR(4): 1399.375	LR(12): 1930.674	LR(12): 2087.157	LR(13): 2175.962
Prob > LR:	0	0	0	0	0	0	0	0	0
McFadden's Adj R2:	0.007	0.069	0.095	0.02	0.069	0.075	0.102	0.111	0.116
Cragg & Uhler's R2:	0.013	0.113	0.154	0.034	0.113	0.122	0.165	0.178	0.185
Efron's R2:	0.008	0.083	0.117	0.023	0.087	0.093	0.125	0.137	0.143
Variance of error:	1	1	1	1	1	1	1	1	1
Adj Count R2:	0	0.038	0.082	0	0.079	0.082	0.086	0.109	0.107
AIC*n:	18453.255	17307.412	16816.511	18212.803	17304.513	17198.821	16683.522	16527.04	16440.235
BIC':	-121.573	-1213.626	-1689.159	-354.34	-1262.631	-1360.638	-1814.464	-1970.946	-2050.067

Source: Self elaboration

Latin American countries

In this section we analyze the effect of the predicting variables using models 1 to 9 to sense the size of the effect on FLFP in the Latin American countries, where Table 6 presents the resulting coefficients from the Probit regression, and Table 7 the marginal effects of the regression. As the tables show, the signs of the control variables, demographics and country economics, and the *Identity* and *Emancipative Values* variables have the expected sign, and are consistent across the stepping analysis.

Analyzing first the effect of the control variables, consistent with the literature (Busso & Fonseca, 2015; Chioda, 2016; Gasparini *et al*., 2015), the presence of children, and marriage or living as a couple, are two strong deterrents of FLFP in the region, where each child can reduce an estimated 2.2% probability of women's labor participation, and marriage an 19.2% as reported in Table 7, Models 2 and 3. Higher education is a salient determinant of FLFP as other researches have confirmed (e.g., Demirhan & Demirhan, 2017; Novta & Wong, 2017); and concurring with Gasparini's (2015) findings, women with a higher household income participate more in the labor market than women with lower household income.

Furthermore, coinciding with Serrano *et al*. (2018), the countries' economic factors are at play, reflecting an income effect as expected in developing countries at the bottom of the U-shape (Goldin, 1994). On one hand, better economic conditions reduce the probability of participation in 2.7%, letting women withdraw from the labor market. On the other, under male's unemployment the Added Worker Effect (Lundberg, 1981) takes place, adding a 3.2% of probability to bring women back into the labor market to help sustain household income.

Reviewing the effect of the explicative variables proposed in this research, *Women's Identity and Women's Emancipative Value,* both signs are positive as anticipated in the hypothesis, and the effects are statistically significant. *Women's Identity* shows to be a relevant determinant as other studies have concluded (e.g., G. Akerlof & Kranton, 2000; Fortin, 2009), mostly when compared with demographic and economic factors. However, *Women's Emancipative Values* displays a more empowering effect as claimed by Welzel (2013a), strongly aiding to counter the adverse effect of fertility, marriage, and the income effect from the macroeconomic situation.

Model 9 in Table 7 presents the marginal effects of the full Probit regression model. As expected, *Women's Emancipative Values* and *Women's Identity* confirm to be positively strong

and statistically significant drivers of FLFP in the Latin American region, together with higher education. Therefore, it can be concluded that *Women's Emancipative Values* and *Women's Identity* are two key drivers of FLFP in the Latin American region that contribute to explain an important increase in the region beyond economic factors; putting women on the driver seat of the decision more than a mere mechanical consequence.

Table 6. Latin American countries Probit regression

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Country	0.0002	0.0002	0.0003	0.0002	0.0001	0.0002	0.0003	0.0003	0.0003
z	3.37	4.27	5.4	4.18	2.85	3.61	5.98	5.22	5.79
P > |z|	0.0007	0	0	0	0.0043	0.0003	0	0	0
Wave	-0.0059	0.0155	0.1129	-0.012	-0.0346	-0.0374	0.1097	0.1017	0.1004
z	-0.54	1.36	6.54	-1.09	-3.07	-3.3	6.34	5.84	5.75
P > |z|	0.5908	0.1736	0	0.2736	0.0021	0.001	0	0	0
Number of Children		-0.0624	-0.0611				-0.0586	-0.0579	-0.056
z		-6.88	-6.72				-6.44	-6.35	-6.14
P > |z|		0	0				0	0	0
Married or living in couple		-0.5332	-0.5334				-0.5249	-0.5273	-0.5201
z		-16.99	-16.97				-16.66	-16.75	-16.49
P > |z|		0	0				0	0	0
Medium Education		0.1467	0.1587				0.1492	0.1486	0.1412
z		4.65	5.01				4.7	4.68	4.44
P > |z|		0	0				0	0	0
Higher Education		0.6574	0.6796				0.6692	0.6632	0.6559
z		16.16	16.49				16.19	16.02	15.81
P > |z|		0	0				0	0	0
Low Household Income		0.1971	0.1809				0.1848	0.1829	0.1862
z		3.07	2.8				2.86	2.83	2.88
P > |z|		0.0022	0.0051				0.0042	0.0046	0.004
Medium Household Income		0.308	0.2806				0.2825	0.2626	0.2669
z		4.2	3.81				3.83	3.56	3.62
P > |z|		0	0.0001				0.0001	0.0004	0.0003
High Household Income		0.3537	0.3315				0.3273	0.3	0.3007
z		3.57	3.34				3.29	3.01	3.01
P > |z|		0.0004	0.0008				0.001	0.0026	0.0026
GDP per Cápita			-0.027				-0.0276	-0.0299	-0.0301
z			-6.6				-6.76	-7.23	-7.28
P > |z|			0				0	0	0
Men Unemploymen Rate			0.0312				0.032	0.0291	0.0302
z			6.42				6.57	5.95	6.16
P > |z|			0				0	0	0
Identity				0.2642		0.2349	0.2047		0.1938
z				9.68		8.53	7.22		6.8
P > |z|				0		0	0		0
Emancipative Values					1.5536	1.4082		0.746	0.6348
z					10.38	9.33		4.55	3.84
P > |z|					0	0		0	0.0001
Constant	0.1117	0.1065	-0.2557	0.0205	-0.4836	-0.509	-0.341	-0.507	-0.5503
z	1.96	1.18	-2.37	0.35	-5.97	-6.28	-3.14	-4.19	-4.53
P > |z|	0.0505	0.2381	0.0177	0.7241	0	0	0.0017	0	0
Sample size	9161	9161	9161	9161	9161	9161	9161	9161	9161
Pseudo R2	0.001	0.079	0.0836	0.0085	0.0097	0.0155	0.0877	0.0852	0.0889
Chi2	13.0574	860.6318	907.1433	106.3334	121.6258	193.3207	944.8646	926.5291	960.3528
p	0.0015	0	0	0	0	0	0	0	0
Log Likelihood	-6.28E+03	-5.79E+03	-5.76E+03	-6.23E+03	-6.22E+03	-6.19E+03	-5.73E+03	-5.75E+03	-5.73E+03

Source: Self elaboration

Table 7. Latin American countries Probit regression marginal effects

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Country	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
z	3.38	4.28	5.43	4.19	2.86	3.62	6.02	5.25	5.83
P > |z|	0.0007	0	0	0	0.0043	0.0003	0	0	0
Wave	-0.0023	0.0056	0.0406	-0.0047	-0.0135	-0.0145	0.0393	0.0365	0.0359
z	-0.54	1.36	6.58	-1.1	-3.08	-3.31	6.38	5.87	5.78
P > |z|	0.5908	0.1734	0	0.2735	0.0021	0.0009	0	0	0
Number of Children		-0.0226	-0.022				-0.021	-0.0208	-0.02
z		-6.94	-6.78				-6.49	-6.39	-6.18
P > |z|		0	0				0	0	0
Married or living in couple		-0.1928	-0.1918				-0.1878	-0.1892	-0.1859
z		-17.89	-17.86				-17.51	-17.6	-17.31
P > |z|		0	0				0	0	0
Medium Education		0.053	0.0571				0.0534	0.0533	0.0505
z		4.67	5.03				4.72	4.69	4.45
P > |z|		0	0				0	0	0
Higher Education		0.2377	0.2444				0.2395	0.238	0.2344
z		16.93	17.3				16.96	16.76	16.52
P > |z|		0	0				0	0	0
Low Household Income		0.0713	0.065				0.0661	0.0656	0.0665
z		3.07	2.81				2.87	2.84	2.89
P > |z|		0.0021	0.005				0.0042	0.0046	0.0039
Medium Household Income		0.1113	0.1009				0.1011	0.0943	0.0954
z		4.21	3.82				3.84	3.57	3.62
P > |z|		0	0.0001				0.0001	0.0004	0.0003
High Household Income		0.1279	0.1192				0.1171	0.1077	0.1075
z		3.58	3.34				3.29	3.02	3.02
P > |z|		0.0003	0.0008				0.001	0.0025	0.0026
GDP per Cápita			-0.0097				-0.0099	-0.0107	-0.0107
z			-6.65				-6.81	-7.29	-7.33
P > |z|			0				0	0	0
Men Unemploymen Rate			0.0112				0.0115	0.0104	0.0108
z			6.47				6.62	5.98	6.2
P > |z|			0				0	0	0
Identity				0.1033		0.0911	0.0733		0.0692
z				9.84		8.64	7.29		6.85
P > |z|				0		0	0		0
Emancipative Values					0.6065	0.5462		0.2677	0.2269
z					10.57	9.47		4.57	3.85
P > |z|					0	0		0	0.0001
Sample Size	9161	9161	9161	9161	9161	9161	9161	9161	9161

Source: Self elaboration

Comparison with OECD countries

Following, first we present an analysis of the variables in OECD countries, in order to later compare the effect of *Women's Emancipative Values,* and *Women's Identity* between Latin American and the OECD group. Table 8 displays the Probit regression coefficients, and Table 9 reports the marginal effects in OECD countries.

Table 8. OECD countries Probit regression

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Country	-0.0005	-0.0004	-0.0004	-0.0005	-0.0003	-0.0003	-0.0004	-0.0003	-0.0003
z	-11.5	-9.24	-8.6	-12.07	-6.16	-6.83	-8.98	-6.17	-6.64
P > |z|	0	0	0	0	0	0	0	0	0
Wave	0.044	0.0351	-0.1461	0.043	0.0051	0.0064	-0.1419	-0.063	-0.0659
z	4.81	3.66	-11.48	4.63	0.54	0.67	-11.1	-4.65	-4.86
P > |z|	0	0.0003	0	0	0.5916	0.5014	0	0	0
Number of Children		-0.1127	-0.1207				-0.1149	-0.105	-0.1013
z		-12.74	-13.23				-12.54	-11.41	-10.98
P > |z|		0	0				0	0	0
Married or living in couple		-0.5135	-0.4856				-0.4781	-0.4561	-0.452
z		-18.05	-16.85				-16.46	-15.66	-15.43
P > |z|		0	0				0	0	0
Medium Education		0.2933	0.3004				0.2983	0.2541	0.2559
z		10.51	10.53				10.43	8.82	8.86
P > |z|		0	0				0	0	0
Higher Education		0.4158	0.376				0.364	0.2926	0.2895
z		13.18	11.63				11.21	8.88	8.76
P > |z|		0	0				0	0	0
Low Household Income		-0.0815	0.0092				0.0301	0.022	0.0385
z		-1.87	0.21				0.68	0.49	0.86
P > |z|		0.0617	0.835				0.4979	0.6221	0.3889
Medium Household Income		0.2035	0.2916				0.3129	0.285	0.3034
z		4.25	6.01				6.42	5.84	6.19
P > |z|		0	0				0	0	0
High Household Income		0.4364	0.4672				0.4753	0.3937	0.4054
z		5.83	6.17				6.26	5.18	5.32
P > |z|		0	0				0	0	0
GDP per Cápita			0.0295				0.0288	0.0119	0.0127
z			21.8				21.26	7.26	7.71
P > |z|			0				0	0	0
Men Unemploymen Rate			0.0296				0.0258	0.0174	0.0152
z			9.63				8.36	5.58	4.86
P > |z|			0				0	0	0
Identity				0.3511		0.2433	0.2758		0.2273
z				15.41		10.32	11.55		9.38
P > |z|				0		0	0		0
Emancipative Values					2.874	2.7414		1.9272	1.7864
z					33.01	31.07		17.07	15.68
P > |z|					0	0		0	0
Constant	0.6594	0.9844	0.7104	0.5546	-0.9034	-0.9042	0.6218	-0.2634	-0.266
z	14.45	14.43	9.65	11.92	-13.96	-13.91	8.41	-2.87	-2.89
P > |z|	0	0	0	0	0	0	0	0.0041	0.0038
Sample size	16062	16062	16062	16062	16062	16062	16062	16062	16062
Pseudo R2	0.0076	0.07	0.0966	0.0206	0.0695	0.0753	0.1039	0.1123	0.1171
Chi2	146.0508	1144.9533	1592.3653	377.3395	1193.1334	1278.5235	1664.4049	1818.6344	1853.9438
p	0	0	0	0	0	0	0	0	0
Log Likelihood	-9.22E+03	-8.64E+03	-8.40E+03	-9.10E+03	-8.65E+03	-8.59E+03	-8.33E+03	-8.25E+03	-8.21E+03

Source: Self elaboration

From the Probit regression, the signs of the demographic, country economics, and the studied predicting variables have the expected signs, and are consistent across the models. Demographics variables show that having children and marriage status negatively affect in a statistically significant way FLFP in more than 3%, while marriage or living as a couple affects less than 16%. A higher education proves to be the most relevant positive driver. *Women's Identity* and

Women's Emancipative Values are positively robust and statistically significant factors on their own, as analyzed in models 4 and 5, but the latter variable shows to be by farther the strongest of all determinants, even when incorporating all the variables as in Model 9, which well reflects the social values of more egalitarian societies as claimed by Inglehart & Welzel (2005).

Table 9. OECD countries Probit regression marginal effects

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8	MODEL 9
Country	-0.0002	-0.0001	-0.0001	-0.0002	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
z	-11.61	-9.31	-8.63	-12.21	-6.19	-6.87	-9.06	-6.2	-6.67
P > |z|	0	0	0	0	0	0	0	0	0
Wave	0.0143	0.0107	-0.0431	0.0138	0.0015	0.0019	-0.0416	-0.0183	-0.019
z	4.81	3.66	-11.63	4.63	0.54	0.67	-11.23	-4.66	-4.87
P > |z|	0	0.0003	0	0	0.5917	0.5015	0	0	0
Number of Children		-0.0343	-0.0356				-0.0337	-0.0305	-0.0292
z		-12.92	-13.42				-12.71	-11.54	-11.1
P > |z|		0	0				0	0	0
Married or living in couple		-0.1563	-0.1434				-0.1401	-0.1324	-0.1305
z		-18.57	-17.26				-16.88	-16.01	-15.78
P > |z|		0	0				0	0	0
Medium Education		0.0893	0.0887				0.0874	0.0738	0.0739
z		10.61	10.64				10.53	8.88	8.92
P > |z|		0	0				0	0	0
Higher Education		0.1265	0.1111				0.1067	0.0849	0.0836
z		13.39	11.78				11.35	8.94	8.82
P > |z|		0	0				0	0	0
Low Household Income		-0.0248	0.0027				0.0088	0.0064	0.0111
z		-1.87	0.21				0.68	0.49	0.86
P > |z|		0.0616	0.835				0.4979	0.6221	0.3889
Medium Household Income		0.0619	0.0861				0.0917	0.0827	0.0876
z		4.25	6.03				6.44	5.85	6.2
P > |z|		0	0				0	0	0
High Household Income		0.1328	0.138				0.1393	0.1143	0.117
z		5.85	6.2				6.28	5.19	5.33
P > |z|		0	0				0	0	0
GDP per Cápita			0.0087				0.0084	0.0035	0.0037
z			22.79				22.15	7.29	7.75
P > |z|			0				0	0	0
Men Unemploymen Rate			0.0087				0.0076	0.005	0.0044
z			9.72				8.42	5.6	4.87
P > |z|			0				0	0	0
Identity				0.1126		0.0736	0.0808		0.0656
z				15.71		10.4	11.69		9.46
P > |z|				0		0	0		0
Emancipative Values					0.8752	0.8294		0.5593	0.5157
z					36.72	34.16		17.56	16.06
P > |z|					0	0		0	0
Sample Size	16062	16062	16062	16062	16062	16062	16062	16062	16062

Source: Self elaboration

Comparing the marginal effects of Latin American countries with OECD countries in Table 10 based on the full model, the two most salient demographic variables are marriage status, and the impact of higher education in FLFP. Marriage status has greater negative impact in Latin

America than OECD countries, which may reflect a persistence of a more traditional view towards the role of women in matrimony concurring with Chioda (2016). Also, the link between education and FLFP is stronger in Latin American than OECD countries, so that for women schooling may be regarded more as a threshold towards the labor market.

As for the economic factors, different signs in GDP per Cápita in Latin America vs. OECD countries reflect different positions at the U-shape. While in Latin America, better economic conditions may drive women out of the labor market; in OECD countries enhanced economic conditions motivate women to participate.

Table 10. Latin American countries vs. OECD countries

	Latin American	OECD
Country	0.0001	-0.0001
z	5.83	-6.67
P > |z|	0	0
Wave	0.0359	-0.019
z	5.78	-4.87
P > |z|	0	0
Number of Children	-0.02	-0.0292
z	-6.18	-11.1
P > |z|	0	0
Married or living in couple	-0.1859	-0.1305
z	-17.31	-15.78
P > |z|	0	0
Medium Education	0.0505	0.0739
z	4.45	8.92
P > |z|	0	0
Higher Education	0.2344	0.0836
z	16.52	8.82
P > |z|	0	0
Low Household Income	0.0665	0.0111
z	2.89	0.86
P > |z|	0.0039	0.3889
Medium Household Income	0.0954	0.0876
z	3.62	6.2
P > |z|	0.0003	0
High Household Income	0.1075	0.117
z	3.02	5.33
P > |z|	0.0026	0
GDP per Cápita	-0.0107	0.0037
z	-7.33	7.75
P > |z|	0	0
Men Unemploymen Rate	0.0108	0.0044
z	6.2	4.87
P > |z|	0	0
Identity	0.0692	0.0656
z	6.85	9.46
P > |z|	0	0
Emancipative Values	0.2269	0.5157
z	3.85	16.06
P > |z|	0.0001	0
Sample Size	9161	16062

Source: Self elaboration

Regarding *Women's Identity,* results indicate that women from both groups are very similarly attracted to a self-view of workingwoman, which seems to be permeating around the world, as a matter of preference. Yet the major striking difference comes at comparing *Women's Emancipative Values*, which reflects how strong women in each group feels empowered to develop and engage her capacities relative to the social constraints in her environment. As Latin American results show, women emancipative values have been a strong driver for FLFP for 20 years, which reflect a major improvement towards an egalitarian society in the region. As OECD countries results indicate, *Women's Emancipative Values* constitute a fundamental driver of female LFP, even above higher education. So then, when comparing one group of countries with another, we may conclude that Latin American still has a long way to go but, at the same time, is possible to infer that it is moving forward on the right track. Nevertheless, policies still have to be put in place to reinforce a gender egalitarian society as Novta (2017) and Chioda (2016) suggest.

Conclusions

In the last 25 years the Latin American region experienced the fastest FLFP growth in the world. This study sought to contribute to the literature by analyzing the effects of *Women's Identity* and *Emancipative Values*, as proxies to women's preferences, and social factors, as determinants; and to identify the differences of this predictors with OECD countries, which represent the most advanced economies in the world. For this purpose, framed on the Identity Economic Theory and Emancipative Values Theory, we developed a probabilistic linear regression model, and exploited WVS and EVS data comprehending a 20-year period.

Women's identity is formed during their youth; however, this may be adjusted later in life as result of personal experiences, social and economic shocks. As this study has shown, the role to which a woman identifies herself, housewife or working-woman, has economic ripple effects that goes from the person up to the aggregate economic level.

Emancipative values, as an empowerment force, is also at play on women's labor participation. Welzel (2013b) suggested that as social constraints decline, emancipative values arise, serving as a motivation force of human empowerment to freely choose the path to full human potential. Within this perspective, this research analyzed the effect of *Women's Emancipative Values* on FLFP, and as results have shown, it is effectively a powerful determinant for women's engagement in the labor market.

Having analyzed the Latin American countries, the Probit regression marginal effects confirm that fertility, marriage, and income effect from country's favorable economic situation, are disincentives to FLFP. However, as the analysis from the data of the last two decades show, Latin American women are starting to embrace the identity of working-woman that, together with the empowerment of emancipative values, and education, can counter the forces of traditional views.

Consequently, the results from this investigation lead to conclude that *Women's' Identity* and *Women's Emancipative Values* are strong and significant determinants of FLFP. A self-view as a working-woman, and an ease of social constraints in the Latin American region have been key to motivate women into the labor market beyond simple mechanics from demographics and economic growth. Concurring with previous studies, higher education is also a key determinant to FLFP.

From comparison with OECD countries, *Women's' Identity* share similar views in both groups of countries, while *Women's Emancipative Values* are three-fold greater in more advanced economies than in the Latin American region. Therefore, although there have been important social advances in the region, from the perspective of the Emancipative Values Theory is possible to infer that social constraining forces are still at play that are limiting gender equality. Future studies would need to identify and analyze the strength of the conservative values that are still at play in Latin America, that may be holding back FLFP growth in the region.

From a policies standpoint, actions are being fruitful and going into the right path, but as the comparison with OECD countries show, these are still incipient and efforts need to continue. To enroot gender equality societal values, these have to be promoted and taught at schools as part of the curricula, and egalitarian laws must be enforced in order to make permanent changes in the generations to come.

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