

# **Attitudes towards gender roles.**

Institutions, culture or/and individual factors shaping the  
attitudes towards gender roles?

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# Introduction

## 1. Thematic Introduction

We have come a long way since the early years of the twentieth century, when a woman walking alone on the streets was not considered safe or appropriate in most of the world's countries. Women and men sharing both public and private space has become a crucial element of most countries' ambition towards modernization (Munson, 2002). While a great deal of focus has been placed on granting women civil and economic opportunities, similar attention has been paid to cultural and lifestyle aspects of women entering the public space.

Modernization, especially in Western societies, saw the creation of special public spaces and positions for women, trying to generate equality; however, some feminists and intellectuals supported the integration of women into already existing public structures (Munson, 2002). These individuals argued that the gendering of space led to 'a fragmentation of civic culture on a symbolic level' (Munson, 2002, p. 70). Ultimately, these trials brought social change, shaping and reflecting a new identity and behaviour for men and women in the public and private space.

The increased presence of women in the labour market and the emergence of feminist ideas have brought about a growing emphasis on gender equality (Inglehart et al., 2002) in all major aspects of social and personal life. Meanwhile, gender equality has been linked with changes in various areas, such as family structure, politics and education. In my understanding, gender equality has two interdependent dimensions. The first dimension involves an objective translation of the concept into equal opportunities for men and women in the labour market, educational process and political system. This dimension also refers to activities in the private sphere, such as an equal share of household, childcare and financial responsibilities. The second dimension represents the subjective valences of gender equality in terms of the values and attitudes people display towards these aspects. Although more subjective, this dimension is equally important as it affects people's decision-making, behaviour and wellbeing.

This thesis focuses on the subjective dimension of gender equality, as translated into attitudes towards gender roles in the private and

public spheres of life. Studying and understanding attitudes towards gender roles is relevant due to their broader implications for democratization, political participation, leadership, fertility, educational achievements, gender roles and division of labour (Inglehart et al., 2002). Attitudes about gender roles have interconnections with several other social phenomena; therefore, this dissertation integrates theoretical perspectives from various academic fields: sociology, social policy, social psychology and research methodology. Based on the assumption that attitudes towards gender roles can impact important social phenomena, this dissertation aims to investigate the institutional, cultural and individual factors that lead to attitudinal gender equality. In other words, it considers what shapes these attitudes as well as how and why they change. These general questions are formulated in a cross-national or longitudinal context.

In the last half century, research into values and attitudes, in general, and attitudes towards gender roles, in particular, has been successful in explaining the connection between some socio-economic factors and individual-level values. More recently, research has been extended to a broader approach, with scholars attempting to explain value differences between cultures and/or countries. Although numerous studies have been published, interest in how different cultural and economic contexts embed varying values remains high, creating a need for more detailed research in cross-national diversity. Moreover, as the available data has allowed for more complex research designs, longitudinal studies also have been conducted. This type of research has seldom been undertaken on attitudes towards gender roles, mostly due to the scarcity of data sources; as a result, numerous questions have yet to be answered. In an attempt to address research gaps found in both the cross-national and longitudinal literature, three specific research questions are addressed in the papers constituting this dissertation: Are attitudes towards gender roles – with their different dimensions – comparable across cultures? Are attitudes about gender roles shaped by different social institutions, namely family-work reconciliation policies across European countries, or are all factors influencing attitudes individual-level characteristics? Are attitudes towards gender roles affected by changes in personal circumstances, such as couples' employment status?

My interest in these questions stems from largely academic and public debates over different aspects of gender equality. Meanwhile, these research questions are relevant from both an academic and a practical, societal point of view. From an academic perspective, these questions help fill knowledge gaps in terms of understanding how attitudes towards gender roles, with their multiple facets, are connected to specific societal and individual characteristics. Second, as mentioned above, practical relevance emerges from the wide social implications of gender equality.

In the academic sphere, the availability of large, cross-national data sets has brought about many research opportunities and complex methodological problems. Researchers seeking to perform cross-cultural studies have encountered numerous difficulties, including the problematic nature of finding a comparable scale that can represent the same type of information across different cultures and societies. Necessary for meaningful analyses, this issue has been the object of research for several studies (Ariely and Davidov, 2012; Kankaras and Moors, 2012; Ciecuch et al., 2014; Davidov et al., 2015). However, none of them have dealt with scales measuring attitudes towards gender roles found in two of the most popular international surveys, namely the International Social Survey Programme and the World Values Survey. As these two surveys are repeatedly used for cross-national research on attitudes towards gender roles, the need for a thorough examination of the scales' comparability across countries is mandatory, thus representing the focus of my first paper. My contribution is not limited to testing the cross-national invariance of these two survey scales measuring attitudes towards gender roles; it also consists of defining and understanding the theoretical dimensions of the attitudes and how well they are measured through the two most commonly-used scales.

The second paper considers the emergence of new family policies, such as paternal leave, by which governments have tried to reach a higher degree of gender equality. Such policies have introduced new debates over the role and efficiency of welfare states, family structure and gender roles. Significant policy diversity and individual variations still exist among European countries. In this context, the question of whether these new family policies influence attitudes towards gender roles arises. In other words, do these policies positively affect people's subjective gender equality? This

paper contributes to the larger debate by simultaneously testing the relationship between attitudes and all four major family-work reconciliation policies (paternal leave, maternity leave, elderly care and childcare), in a large sample of countries, using data collected through the International Social Survey Programme.

The third paper considers one of the main objectives of family-work reconciliation policies – namely enabling women’s employment across the entire life span. We have witnessed public discourse praising the idea of equal opportunities in the labour market for men and women. Although still lower than men’s<sup>1</sup>, women’s participation rate has increased; among other factors, competition in the labour market has determined the emergence of new types of couples in terms of employment status. Traditionally, couples included an employed husband and a stay-at-home wife. As increasingly more women have paid jobs, the incidence of other types of couples (partners employed, woman-only breadwinner, etc.) has also increased. Previous studies have indicated a connection between an individual’s employment status and his or her attitudes towards gender roles. Thus, the question arises as to whether or not the combination of partners’ employment statuses in these new types of couples affects their attitudes towards gender roles. If so, how are their attitudes affected? My contribution here consists of looking at the combined effect of partners’ employment status in a longitudinal framework covering more than 10 years.

Overall, the three papers answer two general questions: a) Can attitudes towards gender roles be compared across cultures in a meaningful manner? b) If so, what are the factors shaping attitudes towards gender roles, and are these factors institutional or individual-level characteristics? The papers provide mixed evidence concerning the factors increasing subjective gender equality. The first paper shows that the concept of attitudes towards gender roles is multi-dimensional and only partially covered by the two most popular scales; nonetheless, the items can be employed, with some restrictions, in order to obtain meaningful research results in a cross-cultural framework. The second paper shows that institutions, namely the four family-work reconciliation policies, are strongly

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<sup>1</sup> 2012, International Labour Organization, Key Indicators of the Labour Market database, World Bank  
<http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>

associated with gender equality, but not always in the expected direction. While some policy measures, such as childcare facilities, encourage a higher level of gender equality, others have a more complex and potentially negative effect. Finally, the third paper shows mixed effects for the two dimensions of attitudes towards gender roles. Nevertheless, the study demonstrates that individual-level factors also impact attitudes, and the combined effect of employment statuses differs from the individual employment effects shown in previous studies.

The remainder of this introduction is structured as follows. In section 2, I offer an outline of the theoretical framework of this dissertation and provide definitions for its key concepts. Section 3 provides a summary of the three papers. In section 4, the dissertation is integrated into scholarly disciplines as well as different research perspectives and academic discourses. Section 5 provides the conclusions of this dissertation.

## **2. Definitions and Theoretical Framework**

As a primary objective, this dissertation aims to understand, in a comparative framework, how specific institutional factors and individual characteristics are interconnected with ideological gender equality, namely attitudes towards gender roles. First, I look at whether attitudes towards gender roles measures are suitable for comparative studies, namely cross-cultural equivalent. Second, I claim that higher institutional support for factual gender equality in the form of government family-work reconciliation policies (paternal leave, maternity leave, elderly care, and childcare) can bring about higher subjective gender equality, as measured by more egalitarian attitudes towards gender roles. Third, I explore and test the question of whether or not the combination of the partners' employment statuses affects attitudes towards gender roles and their different dimensions, as well as differences in effects for men and women. Attitudes towards gender roles are the central concept of this dissertation. Consistent over the three papers, these attitudes are always treated as a dependent variable, with only minor differences in terms of item formulation and survey.

As shown above, the three papers make use of a large number of different concepts and explanatory mechanisms. For this reason, in

the following section, I will first define the objects of interest and then explain the theoretical framework linking these concepts to attitudes about gender roles.

## 2.1. Definitions of the Research Concepts

Gender equality is the umbrella concept encompassing all three research papers in the present dissertation. Gender equality is a broad concept, highly debated within academic and political contexts. This dissension has led to the articulation of various visions of gender. The first vision emphasizes the idea of *sameness*, which conceptualizes gender equality as equal opportunities for men and women. Equality as *sameness* refers to the idea that each individual, irrespective of gender, should have access to the same rights and opportunities; in addition, individuals should be treated according to the same principles, norms and standards (Squires, 1999; Walby, 2005). By comparison, the vision of *difference* or *reversal* argues that gender-neutrality only reinforces dominant male perspectives, and that differences between women and men have to be recognized and valorised (Verloo and Lombardo, 2007). Finally, the *transformation* or *displacement* vision questions the idea of “gender” altogether, claiming that it simplifies a complex concept into a fixed dichotomy that only generates further inequalities; supporters of this vision propose a politics of diversity as an alternative to previous visions (Squires, 2005). The vision adopted by this dissertation is one that combines the principles of the first two conceptualizations described above. In my vision, gender equality refers to both similarity in the structure of opportunity and acceptance of diversity. In an egalitarian society, individuals, irrespective of gender, are treated according to the same principles while respecting and embracing their particularities and differences. Gender equality is achieved when men and women enjoy the same rights and opportunities across all sectors of society, including economic participation and political participation, decision-making, educational achievement, and private sphere responsibilities; meanwhile, the differing behaviours, aspirations and needs of women and men must be equally valued and favoured.

Gender equality is further measured by looking at representations of men and women in a range of roles, which points to the second concept used in this dissertation, namely that of gender roles. More

generally, a social role is defined as a mediator between the individual and society (Krais, 2006). According to this paradigm, society imposes specific, pre-existing norms upon individuals. Individuals adopt these norms, values and roles as their 'normative gender identity' (Butler, 1999). A second valence of the social role refers to a specific context of social interaction, emphasizing that individuals undertake numerous social roles, acting them out according to the social situation (Krais, 2006). Similarly, the gender role - the role of the woman and the role of the man - also refers to a specific context of interaction that becomes relevant in public or family relationships (Lopata and Thorne, 1978; Krais, 2006).

Two interconnected concepts often mentioned in the current dissertation are those of value and attitude. Values are defined as 'enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence' (Rokeach, 1973, p. 5). Unlike values, attitudes always have an object of reference and are 'usually pro or con, favourable or unfavourable' (Allport, 1961, p. 347) towards the reference object. In other words, a value refers to a series of beliefs and has a more general and enduring character than attitudes (Bergh, 2006).

Particularizing from the concepts of equality and gender roles, I narrow down the main object of study for this dissertation: attitudes towards gender roles. Considered to be the ideological valence of gender equality, attitudes towards gender roles appear in the literature under several labels, such as gender beliefs, gender attitudes, and, in a more subjective form, as sexist beliefs. They have also been defined in various ways. Generally, attitudes are seen as normative preferences for a certain distribution of roles among men and women (Schutz, Lee, Tufis and Alwin, 2010), 'in both home and family as well as in the more public sphere of employment and political leadership' (Kane, 2000, p.423). These preferences are expressed in beliefs regarding women's suitability for political leadership, men's active participation in housework and childcare, women's most important fulfilment being motherhood, and maternal employment's effects on children.

An attitude is considered egalitarian when it favours an equal or fair distribution of roles among women and men. Depending on the aspect of gender relations being considered, however, definitions

can be divided in three types: attitudes regarding the division of labour within a family, attitudes related to roles in the public sphere and general attitudes irrespective of the sphere where the roles are manifested. Bergh describes these attitudes as ‘normative beliefs about what gender relations in society should be like, or the extent to which a person supports the norm of gender equality’ (2006, p. 6). Pfau-Effinger (2004) also defines gender-role attitudes as societal assumptions regarding people’s views about what constitutes a correct gender relation or a fair division of tasks between women and men. In this dissertation, attitudes are defined as beliefs that individuals express regarding appropriate roles for men and women in a given institutional and cultural environment.

In addition to the primary concept studied here – attitudes towards gender roles – the present dissertation includes several other concepts, specific to each of the three papers.

Paper 1 focuses on the cross-cultural equivalence of survey measurements. This concept has become more popular with increased availability of cross-cultural or over-time data sets. As Horn (1991, p. 119) states, ‘Without evidence of measurement invariance, the conclusions of a study must be weak’. According to Horn and McArdle (1992, p. 117), measurement invariance is ‘whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute’. When invariance cannot be shown, a researcher’s conclusions are ambiguous at best and erroneous at worst (Arieli and Davidov, 2011; Houghton et al., 2014).

Paper 2 considers family-work reconciliation policies, also described in the literature as family policies (Gauthier, 1998) or gender policies (Neyer, 2006). The stated goal of family-work reconciliation policies is to enable both women and men to combine jobs with parenthood and family life. For example, Sweden’s Equal Opportunities Act of 1992 states that it is each employer’s obligation to make it easier for both male and female employees to combine work and parenthood (Oláh and Bernhardt, 2008). It has been argued that family policy in Sweden has been successful in promoting a gender-equal society, in maintaining a relatively high birth rate, and in providing support for families and children (Oláh and Bernhardt, 2008).

Finally, paper 3 concentrates on the relationship between couples' employment status and attitudes towards gender roles. Although the economic definition of employment status is rather straightforward – work under contractual arrangements involving material rewards (Jahoda, 1982) – the sociologic valence of employment is more complex. In the present thesis, employment status refers to the position on the labour market and distinguishes between those that are in paid employment and those that are not. Moreover, employment status is understood as a structural characteristic of partners in a couple that includes a set of more or less modern values. Being active in the labour market is a proxy for the presence of men and women in the public sphere. The employment status comes along with a public type of socialization and exposure, and informs about the source of income provision.

## 2.2. Theoretical Framework

The present dissertation has roots in two different but interconnected types of theoretical frameworks. First, there is the methodology-related framework on which paper 1 is based; this framework considers the technical difficulties encountered when analysing attitudes from a comparative perspective. Second, there is the theoretical framework grounding papers 2 and 3. By using the instruments evaluated in the first paper, these two papers represent a step forward, substantively studying attitudes from a cross-national and over-time perspective. In the following paragraphs, I will provide a short overview of the theories typically engaged when studying attitudes about gender roles before discussing how these theoretical orientations are incorporated into the three papers of the dissertation.

Researchers generally employ two main approaches in order to explain differences in values and attitudes among countries or changes within individuals: modernization theory and structural-functional theory. Modernization theory assumes that nations can be classified as more or less modern and can be ordered on a scale measuring their emphasis on traditional or modern values. The origins of modernization theory come from two theoretical perspectives that offer different explanations for variations in gender

attitudes across individuals and countries, as well as variations within individuals. The first is a structural explanation (Wilensky, 2002), while the second is a values explanation (Inglehart, 1997).

Structural-functionalist theory emphasizes that modernization translates into a lack of social cohesion, into individualism and value fragmentation. Here, modernization implies a unidirectional change towards an increased civilization, humanity and economic growth (Gundelach, 1994). It also examines changes in values by looking at the relevant factors for individual social integration. Among these factors, the most predominant are religion, family and integrity. Modernization implies that these traditional conditions for social integration lose their relevance. Moreover, modernization comes with a separation of life spheres and, implicitly, of values. This separation translates into secularization, a lowering of religious moral standards and an increased expectation of self-development at work and at home (Ester et al, 1993).

This also results in less traditional values and attitudes related to gender. More specifically, the structural explanation assumes that people's social background – education, employment and position in society – shapes their attitudes towards gender roles (Bergh, 2006). At the national level, the structural explanation assumes that the level of economic development leads to more liberal views. As Wilensky (2002) points out, individual-level structural variables provide the mechanism for attitude formation or change. In practice, more often than not, the modernization process has been associated with industrialization (Moore, 1963), which leads to changes in the employment structure, replacing unskilled manual occupations with less physical, more skilled and professional ones. In this process, the economic benefits of having numerous children disappear, while the costs increase. In consequence, women benefit more from entering the paid labour force than from staying at home. Now sharing the labour market and the educational system, both men and women become more liberal and egalitarian in their gender views (Wilensky, 2002).

Inglehart (1997) extends this view on the effects of development, but assumes that the mechanism of change is represented by people's values. Inglehart's research (1977) is one of the most dominant studies using this approach, concluding that the economic development of a country is one of the main factors contributing to

the level of post-materialism. This explanation is based on the assumption that industrial societies continue to change their values on a continuum from materialist to post-materialist (Inglehart, 1977, 1990, 1997) through a process of generational replacement, resulting from material well-being in individuals' formative years. Furthermore, the predominant set of values facilitates people's acceptance of women's equality with men (Inglehart, 1997). At the individual level, general states of wellbeing with higher income and better education lead to more modern attitudes about gender roles. Bergh's research (2006) shows that Inglehart's values explanation accounts best for cross-national differences, while Wilensky's structural theory more accurately explains individual-level variation. Although widely used, modernization theory has also been criticized. Scholars who have tried to use modernization theory (Estes et al., 1993) admit that this approach does not offer a complete explanation for complex changes and differences, even when the countries or individuals are similar. The approach contains cultural bias and assumes uni-directionality in social change (So, 1990).

The second theoretical framework is the social institutions theory. This vision is based on the idea that countries are characterized by different institutional environments that impact the values and attitudes of the population (Gundelach, 1994). This theory suggests that institutional factors may account for the observed variation of values among countries. Here, values are also understood as being part of an institutional environment, not only as a cultural identity. Scientists apply the term "social institution" to a vast array of phenomena. According to Hughes (1971, p. 5), 'the only idea common to all usages of the term institution is that of some sort of establishment of relative permanence of a distinctly social sort'. As such, the most common characteristic attributed to institutions is endurance. Others imply that institutions should be 'harmonious and benevolent' (Searle, 1969), and some claim that institutions have a moral or ethical quality (Bellah et al., 1991). Most describe institutions as controlling, obligating, or inhibiting, but also facilitating and empowering (Giddens, 1984). More recently, sociologists have included ideas, values, norms or beliefs on the list of social institutions. Contemporary scholars also focus on rules, customs, procedures and routines, March and Olsen (1989, p. 24) describing institutions as 'sets of rules and routines that are contrasted around clusters of appropriate activities and procedures'.

Williams (2000, p.142) defines social institutions as ‘a definite set of interrelated norms, beliefs, and values centred on important and recurrent social needs and activities’. Institutions are not detached from or external to people, but “internalized” by the individuals who constitute them (Giddens, 1984). Although social institutions are fundamental for sociological studies, this approach has been used less in cross-national research due to the more difficult process of establishing data describing social institutions. In the present dissertation, I treat social policies, namely family-work reconciliation policies, as social institutions, because they are a set of rules and procedures centred on important and recurrent social needs and activities.

From these broad perspectives, this dissertation makes use of elements from both modernization and institution theories. Although methodological in nature, the first paper is also based on theoretical assumptions suggesting that the lack of measurement invariance across time or countries results from a technical incapacity to identically formulate survey items in multiple languages. As attitudes are socially constructed (McInnes, 1998; Zvonkovic et al., 1996), differences in measurement can also result from a different understanding of the same question. These differences in understanding occur because of variations in cultural perceptions across countries. Economic and political factors, as well as different ideological and institutional structures, influence and shape people’s attitudes and perceptions of social reality (Panayatova and Brayfeld, 1997). Therefore, social contexts contribute not only to different degrees of gender equality but also to different conceptualizations and definitions of gender roles (and attitudes towards these roles). By considering explanations for the lack of measurement invariance, it becomes clear that elements of both modernization and institutions theories must be included in the first paper’s theoretical framework.

As mentioned previously, the second paper is grounded in institutions theory, assuming that the institutional environment created by family-work reconciliation policies comes with a certain set of attitudes towards gender roles. Although the methodological design of this study is not based on causal assumption, previous studies support the idea of policies shaping attitudes (Sjöberg, 2004; Bernhardt, 2005; Hoem, 2005; Vespa, 2009). Policy measures can be seen as factors that shape the opportunity structure of individuals

(Sjöberg, 2004); they change perceptions of the rewards and costs associated with the traditional versus the modern distribution of roles among men and women (Manson et al., 1976; Norris, 1987). Reconciliation policies are also regarded as factors directly contributing to the social construction of people's attitudes and values. In consequence, policy orientations can be seen as normative actions that influence people's views regarding the "proper role" of women and men in society (Sjöberg, 2004, p.112; Rothstein, 1998; Vespa, 2009). If we consider social policies as manifestations of national values regarding family, Inglehart's values explanation is also foundational to this paper's approach.

The third paper is predominantly developed using a modernization framework, especially in terms of its structural explanation. This theoretical orientation assumes that industrialization brings about structural changes: more jobs for women, fewer benefits to having a large family and increased income needs. These changes, in turn, influence attitudes towards gender roles (Wilensky, 2002; Bergh, 2006). Industrialization leads to women and men sharing the labour market; thus, the third paper makes use of this theoretical explanation to research how couples' employment status shapes attitudes towards gender roles.

### 3. Extended summaries of each paper

This section consists in the extended summaries of each paper. Table 1 offers an overview of the three papers such as the research questions, data sets, and the applied methods.

**Table 1: Key features of the three papers**

	Paper 1	Paper 2	Paper 3
Title	Attitudes towards gender roles in cross-cultural surveys: Content validity and cross-cultural measurement	Shaping attitudes towards gender roles: how leave and care policies relate with	Couple's status on the labour market and attitudes towards gender roles: a longitudinal

	invariance	individuals' attitudes in 21 European countries	analysis
Co-authorship	Paper 1 was written in co-authorship with Dr. Malina Voicu. My contribution to this paper consists in writing the theory section, analysing the data together with my co-author, writing the content validity analysis section and half of the conclusions section.	Paper 2 is a single author paper.	Paper 3 was written in co-authorship with Dr. Malina Voicu. My contribution to this paper consists in data management, data analysis, writing results and conclusions sections. I have also contributed to finalising the theory section.
Status of publication	Published in <i>Social Indicators Research</i> , 2014	Under review for <i>International Sociology</i>	Under review for <i>European Sociological Review</i>
Conferences	Social justice and democratization - The Second International Sociological Association Forum of Sociology. Buenos Aires, 01-04 August, 2012.	2nd SOCLIFE Winter Workshop, Cologne, 19-22 March 2013.	The Third International Laboratory for Comparative Social Research Workshop, Higher School of

	ESWF - Kolloquium für Examens- und Forschungsarbeiten  im Wintersemester 2012/13	Fifth International Community, Work and Family, 17-19 July 2013, The University of Sydney, Sydney, Australia	Economics, St Petersburg, 25-30 April 2013 (an early version of this study has been presented at this conference)
Research question	Are attitudes towards gender roles comparable across cultures? Assessing the content validity and cross-cultural measurement invariance of the two most popular scales.	Does support given by governments through work-family reconciliation policies come together with more egalitarian attitudes towards gender roles among individuals, or otherwise?	How both partners' position in the labour market shapes their attitudes towards two different dimensions of gender roles?
Data	World Values Survey 2005, International Social Survey Programme 2002	International Social Survey Programme 2002	British Household Panel Survey 1991-2009
Technique of data analysis	Qualitative content validity assessment  Multigroup Confirmatory	Multilevel linear regression	Fixed effects regression models for panel data

	Factor Analysis		
Country	46 countries in World Values Survey and 32 countries in International Social Survey Programme from all over the world	21 European countries	Great Britain
Object of analysis	individuals	individuals	individuals

### 3.1. Paper 1: Validity and cross-country measurement invariance of gender attitudes

As different cultures of the world have become more and more accessible for social sciences studies, various research instruments have been developed and applied in cross-national surveys. One of the major problems encountered by survey developers and researcher is the comparability of complex concepts, measured through scales in different languages and cultures. This is also a concern when it comes to studying attitudes towards gender roles in a comparative framework (Braun, 2006; Scott and Braun, 2009). In this paper, we address two major issues related to measuring attitudes towards gender roles. First, we look at whether the items included in two of the most popular scales are properly covering all theoretical aspects of the attitudes towards gender roles, by theoretically assessing the content validity. Second, we test for the cross-cultural measurement invariance for these two scales by Multigroup Confirmatory Factor Analysis, in order to understand whether these scales are suitable for cross-culturally framed studies. This paper consists of three parts: first part is dedicated to defining and operationalizing of attitudes towards gender roles; second part refers to measurement equivalence in cross-cultural survey; and third part presents the main conclusion and some recommendations for further research.

Attitudes towards gender roles are a multidimensional concept (Larsen and Long, 1988), which includes two different dimensions: power balance between women and men (equality versus inequality) and the area where these roles become manifested (private versus public). Consequently, the operationalization of this concept is a complex process. Most of the scales included in cross-comparative surveys tap some aspects, yet do not cover the full definition of the concept. Although attitudes toward gender roles are measured through several survey scales, by now, to our best knowledge, there is no attempt in literature to evaluate which aspects of attitudes towards gender roles are covered by these scales and which are left out. These scales integrate items that capture respondent's level of agreement/disagreement towards different aspects like: women having a job or not, the effects of mother's employment on their family, women's economic independency, men undertaking family care activities, and women and men relationship with the labour market, business, politics or high education. We focus our analyses on two scales used in large scale surveys: the International Social Survey Programme (ISSP) 2002 and the World Values Survey (WVS) 2005. We chose to assess these two scales for several reasons. First, they incorporate most of the items used in cross-national research in this field. Second, they complement each other in measuring the complex concept of attitudes towards gender roles: ISSP includes items referring specifically to men's role in household work and childcare are available, while WVS uses items referring to private gender roles with items measuring attitudes towards equal involvement of men and women in the public sphere—namely in education, employment, and politics. Third, we compare these two scales also because they cover an extensive number of countries and provide us with the opportunity to better test for cross-cultural invariance in a truly diverse sample.

Attitudes towards gender roles are generally defined by literature as “beliefs regarding the appropriate roles for men and women” (Schutz Lee, Tufis, Alwin, 2010). Depending on the aspect of gender relations that is taken into account, however, one can divide these definitions into three different categories: attitudes regarding the division of labor within a family; both attitudes regarding gender roles in the public private area and non-private area; or definitions which generally refer to gender relations in society at large. From these definitions we retain the idea that attitudes can refer to roles in private or public sphere. Jelen (1988) makes the distinction between

inferiority and complementarity in these attitudes. According to this distinction, on the one hand women can be either equal or inferior to men, while on the second hand the gender division of labor is complementary, and the idea of inferiority is not necessarily involved. By crossing Jelen's typology of attitudes towards gender roles with the public versus private dimension, we get three intersecting dimensions: inferiority, complementarity, and public versus private. This scheme helps understand how well all aspects of attitudes towards gender roles are represented in the two studied scales.

The results show that these scales are only partially valid in measuring the complex concept of attitudes towards gender roles. Items covering the private sphere mostly measure the preference for a specialized or a modern distribution of gender roles, omitting the traditional views. The scale tapping the public sphere has a strong, traditional approach—measuring respondents' preference for a traditional distribution of roles and lacking measures for the specialized and androgynous attitudes. Discussions of the public dimension should refrain from referring to egalitarian attitudes towards gender roles and instead refer only to levels of traditionalism in the attitudes towards such roles. Possible validity deficiencies can also arise as a result of the uncovered aspects of gender roles in the two spheres of life. Among these unmeasured sub-domains, we have mentioned elderly care in the private sphere dimension and the roles of women in the public arena.

The second part of this paper tests the cross-cultural invariance of the same two scales. There are three types of measurement equivalence: configural equivalence refers to the degree to which the instrument measures the same concept in all cultural groups; metric invariance, which assumes that the unit of measurement is the same in all groups (Vijver, 1998; Poortinga, 1989; Steenkamp and Baumgartner, 1998) and is mandatory in order for the loadings of the latent variable on the observed items to be compared; and the scalar invariance is where the origins (intercepts of the loadings) are also assumed to be equal (Hui and Triandis, 1985; Van de Vijver and Leung, 1996; Van de Vijver and Poortinga, 1982). If this last type of invariance is lacking, the differences observed between cultures might be due to true variation or to some systematic biases found in the way individuals understand and respond to the questions (Steenkamp and Baumgartner, 1998). Vijver (1998)

mentions three sources of cross-cultural validity problems: construct bias, method bias (sampling procedures, characteristics of the instrument, administration), and item bias (e.g. poor translation).

The results indicate that items used in both WVS 2005 and ISSP 2002 belonged to scales that are partially cross-culturally invariant over the whole sample of countries included. The WVS scale is configural and metric invariant in all 45 countries included in our analysis and is suitable for testing relations between attitudes toward gender roles and other theoretically relevant concepts, but it is not useful for comparing the level of support for gender equality across countries. ISSP 2002 scale is configural and metric invariant, being suitable for the same types of cross-country comparisons as the scale from the WVS. The results are in line with our expectation: Both scales are metric invariant, yet there are not scalar invariant.

### **3.2. Paper 2: Attitudes towards gender roles and care policies**

The last few decades have come along with a continuous process of modernization and industrialization, translated, among others, in a new structure of both labour market and family. In consequence, governments and societies have undertaken different steps to adapt to the new needs of people. One of these measures consists in social policies, namely family-work reconciliation policies which were meant, as their name says, to reconcile the family life with the new dynamics of the labour market, now increasingly shared between women and men. This new reality has led to the traditional gender roles being highly contested and renegotiated. Hence, the question that arises is how gender roles are now split and what are people's views on their new roles?

This paper only focuses on the second aspect of the question above, looking at whether the specific support given by the governments, through special policies meant to bring more gender equality, comes together with more egalitarian attitudes towards gender roles. Three main research questions were addressed here. First, is the externalization of unpaid work – child and elderly care -, which in most societies is done by women in the family, associated with more egalitarian attitudes towards gender roles? Second, is the availability

of maternity leave associated with a higher acceptance of both women and men working in the paid labor market, or the maternity leave rather reinforces the perception of women as primary care givers? Finally, looks at whether the availability of paternal leave is connected with a more egalitarian belief of how men and women should share roles inside and outside the household.

Previous studies emphasize three main mechanisms that link the attitudes towards gender roles to family-work reconciliation policies. First, we can look at policy measures as factors that shape the opportunity structure of individuals (Sjöberg, 2004). A second way of looking at the relationship is to consider these policies factors enabling women to fructify the modern world's opportunities, like their higher educational achievements (Sjöberg, 2004; Beagan et al., 2008; Willemsen et al., 2001). The third perspective regards these policies as factors directly contributing to the social construction of people's preferences and values (Sjöberg, 2004, p.112; Rothstein, 1998; Vespa, 2009).

Five hypotheses have been formulated:

H1: When the public childcare provision is more generous, people tend to agree more with the idea of women working in the labour market and men being more involved in the household care due to the fact that their children can be taken care of through childcare services.

H2: When the institutional opportunity for spending time with their children is given to fathers via paternity leave, people also develop more egalitarian gender attitudes as a result of the renegotiation of the time and share of chores between partners. In consequence, when the paternal leave is more generous, the more people will develop egalitarian attitudes towards gender roles.

H3: The more generous the maternity leave is the more egalitarian people's attitudes towards gender roles will be as a result of the opportunity women have to easily combine their careers with motherhood.-Consequently, the perception that a woman's job has a negative effect on their family life is attenuated.

H4: People living in countries with an available public elderly care system develop more egalitarian attitudes towards gender roles as a

result of women, the traditional primary care-givers for older people, having better opportunities to work in a paid job instead.

H4.1 The higher the level of education, the stronger and positive the relationship between the availability of elderly care facilities and people's attitudes towards gender roles.

H5: A different effect of gender on people's attitudes is expected, depending on the origin country, since differences between men's and women's attitudes have developed according to various cultural and institutional paths, which are not always constant across countries.

Data used is the ISSP 2002 and shows a partial support for these hypotheses. The results confirm the first hypothesis, revealing a positive and statistically significant positive relationship between individuals' attitudes towards gender roles and the childcare facilities. Analyses also show that the availability of elderly care facilities is positively associated only with highly educated individuals' attitudes, but data used here did not support the hypothesis of an expected positive relationship between the paternal leave available in each country and individuals' attitudes. An interesting effect was found regarding the third hypothesis, showing that people in countries with longer maternity leave periods tend to express less egalitarian attitudes. Finally, the data confirmed that even when controlling for various individual-level and country-level characteristics, being a man or woman has different effects on people's attitudes, in the different countries included in this study.

### **3.3. Paper 3: Couple's status on the labour market and attitudes towards gender roles: a longitudinal analysis**

The societal changes have also brought a higher presence of women on the labour market and, also, a diversification in the types of couples, in terms of the partners' employment status. Starting from the assumption that gender roles are shaped by interaction between a woman and a man living as a couple, derived from the symbolic interactionism approach (Blumer, 1969; Herman and Reynolds, 2013), in the third paper we investigate how both partners' position

in the labour market shapes their attitudes towards two different dimensions of gender roles.

This paper comprises three sections. The first section covers existing literature on the relation between gender equality and female employment as well as the factors influencing attitudes towards gender roles. The second section introduces the indicators and the strategy used for analysis, while the third section includes the data analysis. The discussion and conclusion are found in the final section.

Previous studies on the effect of employment on attitudes towards gender roles analysed the impact of individual employment status on these attitudes (Banaszak and Leichley 1991).

Female participation in paid employment is known to have a strong impact on attitudes towards gender roles among both women and men (Banaszak and Leichley 1991). Several different models are used to explain this fact: interest-based explanations, exposure-based explanations (Bolzendahl and Myers 2004), control models (Kroska and Elman 2009), and doing gender models. *Interest-based explanations* show that individuals share egalitarian attitudes when they can benefit from gender equality (Bolzendahl and Myers 2004). *Exposure-based models* assume that changes in gender attitudes and beliefs occur when the individual is exposed to egalitarian ideas or to situations promoting increased support for gender equality (Bolzendahl and Myers 2004). *Control models* show that individuals seek to maintain meanings and ‘they adjust their attitudes to match their behaviour’ (Kroska and Elman 2009: 379). Finally, ‘doing gender’ approach (West and Zimmerman, 1987) assumes that women and men behave according to socially accepted expectations regarding their gender roles, which in most Western societies is represented by the male-breadwinner/female-homemaker role division (Taylor, Tucker and Mitchell-Kernan, 1999).

However, gender relations and gender roles are socially constructed (McInnes, 1998) and built on social interaction with others (West and Zimmerman, 1987). Therefore, both one’s own status in the labour market, as well as the employment status of the partner are relevant for explaining attitudes shared by people living as couples. This paper tries to fill this gap by analysing the effect of the combined labour market status of people living as couples on their attitudes towards gender roles. Based on all these theories, using

data collected in British Household Panel Survey 1991-2009, we tested the three hypotheses for two different dimensions of attitudes: *attitudes towards complementary gender roles in private sphere* and *attitudes towards women employment*.

In case of people of living in couple, attitudes towards gender roles are shaped by the labour market position of both partners. Compared to the traditional type of couple - male-breadwinner/female-inactive couples – we expect that:

(H1) Attitudes towards gender roles are less traditional in dual-earner couples.

(H2) Attitudes towards gender roles do not differ in dual-inactive couples.

(H3) Attitudes towards gender roles are more traditional when the female partner is employed and the male partner is inactive.

Our results point out that, for people living in a couple, the combination between partners' status on labour market is important in shaping their attitudes towards gender roles and this combination of statuses operates differently according to the aspects of gender roles we are focusing on. People are willing to give up the complementary of gender roles in the private area when they switch from the traditional couple male breadwinner-female homemaker to other types of couples, but they 'do gender' and emphasize the attitudes towards traditional gender division on the labour market to avoid an identity crisis.

## **4. Integration into the Literature**

This section positions the dissertation in the literature. I begin by describing each paper's affiliation with social science disciplines before offering an overview of the existing perspectives concerning the determinants and effects of attitudes towards gender roles. This section concludes by integrating the papers into the main scholarly discourses.

### **4.1. Integration into Disciplines**

Attitudes towards gender roles are directly or indirectly connected to virtually every aspect of people's lives, both in the public and private sphere. These attitudes have implications for how people

structure their families, approach paid work and participate in political processes. They are also connected with business leadership, religious practices, educational systems and fertility decisions. The variation that occurs at the individual level alone offers infinite research opportunities investigating gender roles in a single country; meanwhile, at the international level, gender role division is extremely diverse across the world's societies (Alesina et al., 2011). For these reasons, numerous scientific disciplines find it relevant to study the relationship between attitudes and other macro or micro characteristics. This dissertation is affiliated primarily with sociology, psychology, research methodology and social policy.

As a central concept, all three papers focus on attitudes towards gender roles; therefore, the main discipline integrating this dissertation is sociology. Nonetheless, in cultural research, attitudes and values have also been considered as being triggered by psychological (Allport, 1935) and biological (Morris, 1956) factors, allowing multi-disciplinary analysis of attitudes towards gender roles. This dissertation integrates aspects related to sociology and psychology.

The concept of attitude originates in psychology. In this discipline, attitudes are defined as expressions of favour or disfavour towards the attitude object, which could be another person, a place, thing or event. Eagly and Chaiken (1993, p. 1) provide a simple and intuitive definition: an attitude is 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour'. These tendencies can be shaped during the entire life span (Allport, 1935). Key topics in the study of attitudes include attitude measurement, attitude change, and attitude-behaviour relationships. I will further elaborate on these topics in Section 4.2.

This dissertation also employs a sociological concept derived from the theory of social roles for the attitude object, namely gender roles. Gender roles are defined and exercised through interactions between individuals (West and Zimmerman, 1987). Kraus (2006, p. 125) states that the most influential social construct allowing us to understand the individual as being socialized is the concept of 'social role'. Seen as a mediator between the individual and society, the social role transforms the concrete individual into the *homo sociologicus*, the social actor. Furthermore, Bourdieu defines gender as a 'construct that differentiates according to both antagonistic and

complementary principles, and operates as a highly complex, differentiated and vital symbolic order' (Krais, 2006, p. 120).

Because the concept of attitude originates in psychology, while gender roles are a sociological concept, I can clearly state that attitudes towards gender roles are closely embedded in both disciplines; this integrated field is known in the academic world as social psychology.

Taking each paper separately, there are several other objects of study included in this dissertation that make it relevant to other disciplines. Paper 1 integrates a methodological approach. Measuring attitudes towards gender roles once again makes this paper cross-disciplinary. Testing instrument validity and cross-national invariance is often seen in both psychology and sociology, as well as in other disciplines that work with similar methodologies. Although psychologists were aware of several facets of validity before World War II (Angoff, 1988), since then, efforts to establish validity have only resulted in conceptualizing a myriad of validity types, such as intrinsic validity, face validity, logical validity, empirical validity, and so on. (Cronbach, 1955). Until the middle of the 20<sup>th</sup> century, there were only a few recognized methods for validating psychological experiments. Today, validity is generally considered one of the most important aspects in psychological and educational testing (Popham, 2008) because it impacts the meaning of test results. The first paper focuses on content validity, one of the recognized forms of validity. In psychometrics, content validity (also known as logical validity) represents the extent to which a measure covers all facets of a given social construct. Furthermore, paper 1 is relevant to any discipline that engages in cross-cultural comparisons. In fields like anthropology, sociology or economics, it is important to have an instrument that can correctly measure the same concept across cultures. In the literature, measurement invariance is defined as 'whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute' (Horn and McArdle. 1992, p. 117). In essence, the first paper is closely related to psychology and sociology, and by extension, to any discipline that makes use of this type of methodological approach.

In addition to being sociologically oriented, paper 2 includes elements of social policy. Social policy refers to guidelines,

principles, legislation and activities that affect the living conditions conducive to human wellbeing. Social policies involve society's responses to social needs, focusing on aspects of the economy, society and policy that are necessary for individual wellbeing (Titmuss, 1974). The earliest example of government intervention dates back to the 6th century, when Islamic communities used government resources to establish pensions, income support, child benefits, and various stipends for people in the non-Muslim community (Ahmed, 2001). In the 21st century, social policies encompass numerous areas of human life. Family-work reconciliation policies are one example of such social initiatives. These policies include compensation for the additional cost for having children through family allowances, maternity and paternity benefits, day care subsidies and elderly care subsidies. These policies attempt to balance participation in the workforce with family needs. The second paper includes measures of these policies and analyses them in relation to attitudes about gender roles. From this perspective, this paper employs sociological institution theory (Gundelach, 1994), placing it at the frontier of three different disciplines: sociology, psychology and social policy.

The third paper adds another concept – employment or labour force participation – which generally has both sociological and economic valences. This paper deals only with the sociological understanding of employment. Functionalism theory, originating in Emile Durkheim's work, describes employment as an instrument that serves several functions for individuals: providing an income, offering self-fulfilment and forming an identity. The workplace serves as a form of socialization, shaping people's values and beliefs (Lester, 2008; Banaszak and Leighley, 1991). This paper studies employment status in relation to attitudes towards gender roles, drawing from social psychology to explain how employment or lack of employment influences attitudes. Such theories include interest-based explanations, exposure-based explanations (Bolzendahl and Myers, 2004), control models (Kroska and Elman, 2009) and gender models (West and Zimmerman, 1987). All of these theories are largely explained in paper three and refer to psychological processes that form individuals' attitudes; hence, paper three is closely affiliated with social psychology.

## 4.2. Research Perspectives on Attitudes towards Gender Roles and Contributions of the Dissertation

This section consists of an overview of the different perspectives from which research has considered attitudes towards gender roles previously; it also shows how the three papers in this dissertation contribute to these perspectives.

Analyses of attitudes towards gender roles cover a vast array of topics. This diversity comes from the varying determinants and implications of attitudes on other social phenomena. First, looking at determinants of attitudes, we find two main categories: individual-level determinants and macro-level determinants. Studies investigating individual-level determinants have found that gender, age, education, religious denomination, level of religiosity, marital status, children, ethnicity and employment status are all factors shaping attitudes towards gender roles (Manson et al, 1976; Neve, 1995; Brewster and Padavic, 2000; Lee et al., 2007). Women tend to express more egalitarian attitudes than men; older people are more traditional in their views of gender than young people (Fan and Mooney Marini, 2000); higher education also coincides with more egalitarian views (Cunningham et al., 2005; Brewster and Padavic, 2000; Banaszak and Plutzer, 1993). More religious people, as well as Orthodox and Catholic individuals, tend to be more conservative, while Protestants are more egalitarian (Wilcox and Jelen, 1991; Thornton, Alwin and Comburn, 1983; Sherkat, 2000; Hertel and Hughes, 1987; Brewster and Padavic, 2000; Inglehart and Norris, 2003). Married people with children have more traditional gender views (Banaszak and Plutzer, 1993), as do Hispanics and African Americans (Kane, 2000). Finally, research shows that being employed and having a higher income leads to more egalitarian attitudes towards gender roles (Banaszak and Leighley, 1991).

Paper 3 develops this approach by looking at an individual characteristic – employment status – as a determinant of attitudes, only this time in a symbolic interactionism framework. This paper contributes to the scholarly discourse regarding the relationship between employment and attitudes towards gender roles in several ways. First, it goes a step further than previous studies that have primarily looked at women's attitudes by simultaneously studying the effect of employment status on both women and men's views. Second, it not only assesses the relationship between an individual's employment and attitudes, but it also considers the complex effect

of couples' combined position in the labour market. To the best of my knowledge, this approach has not been used before. Finally, paper 3 contributes by offering robust and meaningful results based on longitudinal data comprised of observations collected over almost 20 years, following the same individuals and changes in their employment and attitudes.

Furthermore, looking at the macro-level determinants of attitudes towards gender roles, we find several additional topics. Previous studies have focused on macro-determinants, such as socio-economic development level, cultural aspects, social policies and institutions (Inglehart and Baker, 2000; Heinen and Wator, 2006). Research has proven that the socio-economic development of a country accounts for its level of gender equality, with individuals living in more developed countries expressing more egalitarian views (Viterna et al., 2008; Wilensky, 2002). When it comes to cultural aspects, post-modernization has been consecrated as the determinant of attitudes towards gender roles, with Inglehart (1997) showing that individuals living in post-modern countries express more egalitarian gender attitudes (Inglehart and Norris, 2005; Inglehart and Welzel, 2007). Social policies also have been shown to influence attitudes towards gender roles (Sjöberg, 2004, 2010). Paper 2 contributes to this macro-determinant approach in two ways. First, the analyses focus on 21 different societies, drawing conclusions that describe not only individual-level variation but also cross-cultural variation in terms of the interaction between family-work reconciliation policies and attitudes. Unlike previous studies, paper 2 simultaneously analyses the relationship between four main family policies: maternity leave, childcare facilities, elderly care and paternal leave. To the best of my knowledge, these last two factors have not been included in previous research.

Previous studies show a strong relationship between support for gender equality in politics, and a society's level of political rights and civil liberties. Inglehart et al. (2003) explain that it is only logical that having equal roles for women and men leads to a higher level of democracy because women constitute more than half of the world's population. Attitudes towards gender roles have also been linked with another important social aspect, fertility. Previous evidence shows that people's fertility decisions are closely related to attitudes about gender roles, such as the ability to maintain a household and the distribution of household and care work (Neyer et al., 2013; Miettinen et al., 2011; Mason 1987, 2001; Sathar et al., 2000; Abbasi-Shvazi et al., 2009). Paper 2 assists in understanding

how governments could intervene more efficiently with policy measures that support individuals' fertility decisions through an indirect mechanism, namely increasing ideological gender equality. The present dissertation also contributes to the methodological discourse in which cross-national measurement instruments have been debated. It is generally agreed that subjective concepts, such as values and attitudes, are difficult to measure in a valid and comparable manner across cultures. Nevertheless, paper 1 shows that, although not perfect, survey instruments can be safely used for certain and, unfortunately, limited types of cross-national analyses. This finding informs scholarly discourse by offering a comprehensive and inclusive view of what the survey scales actually measure and how these measures can be used in studies of gender role attitudes with a cross-cultural framework.

## 5. Conclusions from this Dissertation

This dissertation provides evidence that attitudes towards values can and should be studied in a cross-national and longitudinal perspective, as the insights gained are valuable for both academic and the practical knowledge. Two main questions have been addressed. First, given the instruments available, is it possible to conduct meaningful and accurate research of attitudes towards gender roles using a cross-national and longitudinal comparative framework? Second, how do specific institutions and individual characteristics shape attitudes? More specifically, how do family-work policies and labour market participation influence individuals' attitudes towards gender roles?

Paper 1 aimed to determine whether or not attitudes towards gender roles, as measured in two of the most popular surveys, are comparable across cultures. Keeping in mind the theoretical definition of attitudes towards gender roles, it also sought to reach meaningful conclusions regarding the aspects of these attitudes that are actually measured through the scales and what dimensions are missing. Results show that these scales only partially cover the complex concept of attitudes towards gender roles. Items referring to the private sphere primarily measure the preference for a specialized or modern distribution of gender roles, omitting traditional views. Meanwhile the scale for the public sphere uses a

strong, traditional approach, lacking measures for specialized and androgynous attitudes. In practical terms, the private dimension is suitable for approaches related to egalitarian attitudes towards gender roles inside the household; however, items measuring the public sphere fail to legitimate conclusions drawn about the level of egalitarian attitudes towards gender roles in the public arena. The validity of these scales could be improved by integrating additional items that cover the missing aspects of these two areas of life, while also offering a larger range of attitudinal statements. These additions would provide individuals the opportunity to clearly and complexly express traditional, specialized and modern valences in their attitudes. Furthermore, the study indicated that items used in both the WVS and ISSP 2002 belonged to scales that are partially cross-culturally invariant over the entire sample of included countries. The WVS scale taps into gender equality in the public arena; it is also configural and metric invariant in all 45 countries included in the analysis. This scale can be used for testing relationships between attitudes toward gender roles and other theoretically-relevant concepts, but it is not useful for comparing the level of support for gender equality across countries. ISSP 2002 items are configural and metric invariant, suitable for the same types of cross-country comparisons as the WVS scale. Returning to the initial research question, these two scales can be used in cross-national comparisons, but with some limitations. These limitations relate first to the partial coverage of the available survey scales regarding the complex concept of attitudes towards gender roles. Second, there is a limitation resulting from the lack of scalar invariance in the items, which could lead to false conclusions if not treated with care.

The more theoretically substantial research questions in papers 2 and 3 led to mixed evidence. Paper 2 shows that institutions do play a role in shaping attitudes towards gender roles, but not always as intended or expected. This paper investigated whether or not specific government support to bring women into the paid labour market and to encourage men to be more present in the family unit would lead to more egalitarian attitudes. Data reveals a positive relationship between individuals' attitudes towards gender roles and childcare facilities, confirming that individuals living in countries where childcare services are more generous tend to agree more with a modern distribution of roles between women and men. Furthermore, the results show that the availability of elderly care facilities is positively associated only with highly-educated individuals' attitudes. For people with a low or medium level of

education, the availability of public elderly care has a negative relationship with their attitudes. This finding shows that policies can have a selective effect, although they are meant to be universal.

Expectations related to the paternal leave were not supported by the data, as the effect was not significant. Still, as the theoretical assumptions regarding this link are clear, further research with more recent data is needed in order to better explain the relationship between the availability of paternal leave and attitudes. Finally, the relationship between the length of maternity leave and gender-role attitudes has also proven different than expected. Results indicate that people in countries with longer maternity leave periods tend to express less egalitarian attitudes. Various non-linear effects have been estimated for the maternity leave indicator, but none of these were significant, showing that the relationship between attitudes and maternity leave is a linear and negative one. Additionally, the study confirmed that being a man or woman has different effects in the different countries included in this study. This finding implies that gender egalitarianism remains very diverse across countries, with the differences between women's and men's attitudes towards gender roles varying from country to country.

All in all, the second paper shows that work-family reconciliation policies have a strong relationship with attitudes towards gender roles. Still, it is important to mention that according to the same results, it is not enough to simply have a generous care or leave provision; it is also necessary to carefully develop these policies in order to avoid the side effects resulting from an overly-long maternity leave, or a paternity leave that is not economically attractive.

The last paper of this dissertation shows that, generally, individual characteristics also shape attitudes towards gender roles. These characteristics play a different role when viewed from an interactionism perspective. This paper focused on the effect of couples' employment status on attitudes towards gender roles, paying special attention to how interaction between the partners' status in the labour market shapes attitudes towards women's employment and towards complementary gender roles in the private sphere. Significant conclusions arose from this analysis. First, we found that the combination of the respondent's and partner's statuses in the labour market significantly influenced attitudes towards gender roles, but in different directions depending on the aspects of gender roles under investigation. Any change from the

traditional breadwinner-homemaker couple brings less specialization in the private arena while simultaneously leading to less support for women's employment, irrespective of the respondent's gender. People are willing to give up the complementarity of gender roles in the private area when they switch from the traditional male breadwinner/female homemaker model to another form, but they 'do gender' and emphasize attitudes towards traditional gender divisions in the labour market to avoid an identity crisis.

Returning to the general question of whether institutions, cultures or individual characteristics shape attitudes, we can say that through different mechanisms, all of these factors have a (sometimes surprising) connection to attitudes.

Taken together, there remain many unanswered questions concerning the relationship between attitudes towards gender roles and other social phenomena. First, the lack of data constrains the generalization of the present conclusions to certain countries, especially less-developed ones. Second, there is always a causal direction debate regarding the link between attitudes and other macro or individual factors. Although several studies have attempted to shed light on this matter (Brooks and Manza, 2006), the causal link between institutions (e.g., policies) or individual characteristics (e.g., employment) is still not universally defined and recognized. Further research should investigate whether or not, and how, measurement invariance and construct validity change over time, including new waves of ISSP and WVS. This dynamic directly impacts the validity of longitudinal comparisons. Forthcoming studies should also try to establish a clear causal direction for the relationship between attitudes towards gender and family-work reconciliation policies by employing panel data from different cultures or a similar research design permitting causal findings. Further research could also concentrate on longer-term changes in attitudes after each type of employment status change, investigating the stability of these changes. Finally, more comprehensive and qualitative information would be helpful in more accurately explaining individuals' reactions to change.

## References

Abbasi-Shavazi, MJ. McDonald, P. and M. Hosseini-Chavoshi (2009). "Women autonomy and Fertility behavior" in *The Fertility Transition in Iran: Revolution and Reproduction*, Springer Dordrecht Heidelberg London New York.

Ahmed, Nazeer, Islam in Global History: From the Death of Prophet Muhammad to the First World War, American Institute of Islamic History and Cul, 2001, p. 34.

Allport, Gordon. (1935). "Attitudes," in *A Handbook of Social Psychology*, ed. C. Murchison. Worcester, MA: Clark University Press, 789–844.

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999) *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

Angoff, W. H. (1988). Validity: An evolving concept. In H. Wainer & H. Braun (Eds.), *Test Validity*, pp. 19-32. Hillsdale, NJ: Lawrence Erlbaum.

Ariely, Gal and Davidov, Eldad (2012). Assessment of measurement equivalence with cross-national and longitudinal surveys in political science. *European Political Science*, Volume 11, No. 3, 363-377.

Banaji, Mahzarin R., Heiphetz, Larisa (2010). *Handbook of Social Psychology*. John Wiley & Sons, Ltd.

Banaszak, Lee Ann and Leighley, Jan E. (1991). How employment affects women's gender attitudes. The workplace as a locus of contextual effects. *Political Geography Quarterly*, Volume 10, No.2, 174-185.

Bellah, Robert N., Richard Marsden, William M. Sullivan, Ann Swidler, and Steven M. Tipton (1991). *The Good Society*. Vintage Books.

- Blumer, H. (1969) *Symbolic Interactionism; Perspective and Method*. Englewood Cliffs, NJ: Prentice-Hall
- Brewster, Karin L. and Padavic, Irene (2000). Change in Gender-Ideology, 1977–1996: The Contributions of Intracohort Change and Population Turnover. *Journal of Marriage and the Family*, No. 62, 477–487.
- Brooks, Clem and Manza, Jeff (2006). Social Policy Responsiveness in Developed Democracies. *AMERICAN SOCIOLOGICAL REVIEW*, VOL. 7, 474–494.
- Cieciuch, J., Davidov, E., Vecchione, M., & Schwartz, S. H. (2014). A hierarchical structure of basic human values in a third-order confirmatory factor analysis. *Swiss Journal of Psychology*, 3.
- Cronbach, L. J.; Meehl, P.E. (1955). Construct Validity in Psychological Tests. *Psychological Bulletin* 5, Volume 2, No. 4, 281–302.
- Davidov, Eldad, Cieciuch, Jan, Schmidt, Peter, Meuleman, Bart and Algesheimer, Rene (in press). The comparability of measurements of attitudes toward immigration in the European Social Survey: Exact versus approximate measurement equivalence. *Public Opinion Quarterly*, January 2015.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Orlando, FL: Harcourt Brace Jovanovich College Publishers.
- Ester, Peter, Halman, Loek, de Moor, Ruud (1993). Values Shift in Western Societies. In Easter Peter, Loek Halman, Ruud de Moor (eds.) – *The Individualizing Society: Values Change in Europe and North America*, Tilburg University Press, Tilburg, pp. 1-21.
- Gauthier, Anne Helene (1998). *The State and the Family: A Comparative Analysis of Family Policies in Industrialized Countries*. Oxford University Press.
- Giddens, Anthony (1984). *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press.

Gundelach, Peter (1994). National value differences: modernization or institutionalization?. *International Journal of Comparative Sociology*. Volume 35, No. 1-2, 37-58.

Heinen, Jacqueline and Wator, Monika (2006). Child Care in Poland before, during, and after the Transition: Still a Women's Business. *Oxford University Press*, 189-216.

Herman-Kinney Nancy J., Reynolds, Larry T. (2003). *Handbook of Symbolic Interactionism*. New York: AltaMira.

Horn, J.L and McArdle, J.J. (1992). A Practical and Theoretical Guide to Measurement Invariance in Aging Research. *Experimental Aging Research*, 18, 117-144.

Houghton, Jeffery D, Carnes, Andrew, Ellison, Christopher N.(2014). A Cross-Cultural Examination of Self-Leadership: Testing for Measurement Invariance Across Four Cultures. *Journal of Leadership & Organizational Studies*, Volume 21, No.4, 414-430.

Hughes, Everett C. (1971). The Ecological Aspect of Institutions. In *The Sociological Eye: Selected Papers*, edited by Everett C. Hughes, Aldine-Atherton, pp. 5-13.

Inglehart, Ronald and Baker, Wayne E. (2000). Modernization, Cultural Change, and the Persistence of Traditional Values. *American Sociological Review*, Volume 65, No., 1 19-51

Inglehart, R. (1977): *The Silent Revolution*. Princeton: Princeton University Press.

Inglehart, R. (1990): *Culture shift in advanced industrial society*. Princeton: Princeton University

Press. Inglehart, R. (1997): *Modernization and postmodernization: cultural, economic, and political change in 43 societies*. Princeton (New Jersey), Chichester: Princeton University Press.

Inglehart, R., and Welzel, C. (2007): *Modernization, cultural change, and democracy: the*

*human development sequence*. New York: Cambridge University Press.

Inglehart, R., in Norris, P. (2005): *Rising tide: gender equality and cultural change around the world*. New York. Cambridge University Press.

Inglehart, R., Norris, P., and Welzel, C. (2003): Gender Equality and Democracy. In T.

Lumumba-Kasongo, R. Patterson, in M. Sasaki (Ed.): *Human Values and Social Change*. New York: Cambridge University Press, pp. 91–116.

Inglehart, Ronald, Pippa Norris, and Christian Welzel (2002). Gender equality and democracy. *Comparative Sociology*, Volume 1, Issue 3-4, 321-345.

Jahoda, Marie (1982). *Employment and Unemployment: A Social-Psychological Analysis*. University Press, Cambridge.

Kane, Emily W. (2000). Racial and Ethnic Variations in Gender-Related Attitudes. *Annual Reviews Sociology*, Volume 26, 419-439.

Kankaraš, M. and Moors, G. (2012). Cross-national and cross-ethnic differences in attitudes: A case of Luxembourg. *Cross-Cultural Research*, Volume 46, 224–254.

Krais, Beate (2006). Gender, Sociological Theory and Bourdieu's Sociology of Practice. *Theory, Culture & Society*, Volume 23, No. 6, 119-134.

Lee, Kristen S., Alwin, Duane F. and Tufis, Paula A. (2007). Beliefs about Women's Labour in the Reunified Germany, 1991–2004. *European Sociological Review*, Volume 23, No. 4, 487–503.

Lester, Jaime (2008). Performing Gender in the Workplace Gender Socialization, Power, and Identity among Women Faculty Members. *Community College Review*, Vol. 35, No. 4, 277-305.

Lu, Yu Hsia (1993). Sex-role Attitudes and the Employment of Married Women – A Detroit Area Study. *Journal of Women and Gender Studies*, No.4, 137-174.

Manson, Karen O., Czajka, John L. and Arber, Sara (1976). Change in U.S. Women's Sex-Role Attitudes, 1964-1974. *American Sociological Review*, Volume 41, No.4, 573-596.

March, James G . and Olsen, Johan P. (1989). *Rediscovering Institutions: The Organizational Basis of Politics*. Free Press.

Mason, K. (1987). "The impact of women's social positions on fertility in developing countries", *Sociological Forum*, 2:718-745.

Mason, K. (2001). "Gender and family Systems in the fertility transition", *Population and Development Review*, 27: 160-176.

Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. *American Psychologist*, 50, 741-749.

Miettinen, Anneli, Basten, Stuart and Rotkirch, Anna (2011). Gender equality and fertility intentions revisited: Evidence from Finland. *Demographic Research*, Volume 24, Article 20, 469-496.

Morris, Charles , (1956). *Varieties of human value.* , (pp. 113-143). Chicago, IL, US: University of Chicago Press, xv, 209 pp.

Munson, Elizabeth (2002). Walking on the Periphery: Gender and the Discourse of Modernization. *Journal of Social History*, Volume 36, No.1, 63-75.

Neve, Rudie J. M. (1995). Changes in Attitudes toward Women's Emancipation in the Netherlands over Two Decades: Unraveling a Trend. *Social Science Research*, Volume 24, 167-187.

Neyer, Gerda, Lappegard, Trude and Vignoli, Daniele (2013). Gender equality and fertility: which equality matters? *European Journal of Population*, No. 29, 245-272.

Neyer, Gerda R.(2006). Family policies and fertility in Europe: fertility policies at the intersection of gender policies, employment policies and care policies. *MPIDR Working Papers* WP-2006-010,

Max Planck Institute for Demographic Research, Rostock, Germany.

Oláh, Livia Sz. and Bernhardt, Eva M. (2008). Sweden: Combining childbearing and gender equality. *DEMOGRAPHIC RESEARCH*, Volume 19, Issue 28, 1105-1144.

Popham, W. J. (2008). All About Assessment / A Misunderstood Grail. *Educational Leadership*, 66(1), 82-83.

Sathar, Z., C. Callum and S. Jejeebhoy (2001). "Gender, region, religion and reproductive

Behavior in India and Pakistan", IUSSP, XXIV General Population Conference, Salvador, Brazil, 18-24 August 2001.

Schutz Lee, K, Tufis, P., & Alwin, D. (2010). Separate Sphere or Increasing Equality? Changing gender Beliefs in Postwar Japan. *Journal of Marriage and Family* 72 (1), 184-201.

Searle, John (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge University Press.

Sjöberg, O. (2010). 'Ambivalent Attitudes, Contradictory Institutions: Ambivalence in Gender-Role Attitudes in Comparative Perspective', *International Journal of Comparative Sociology* 51(1-2): 33-57.

Sjöberg, O. (2004). 'The Role of Family Policy Institutions in Explaining Gender-Role Attitudes: A Comparative Multilevel Analysis of Thirteen Industrialized Countries', *Journal of European Social Policy* 14(2): 107-123.

Squires, Judith (1999). *Gender in Political Theory*. Cambridge/Oxford: Polity Press.

Squires, Judith (2005). "Is Mainstreaming Transformative? Theorising Mainstreaming in the Context of Diversity and Deliberation." *Social Politics* 12 (3 Fall): 366-388.

Titmuss, Richard M. (1974). *Social policy*. London: Allen & Unwin.

Verloo, Mieke and Lombardo, Emanuela (2007). Contested Gender Equality and Policy Variety in Europe: Introducing a Critical Frame Analysis Approach. In *Multiple Meanings of Gender Equality. A Critical Frame Analysis of Gender Policies in Europe*, Ed. Mieke Verloo, pp.21-51.

Viterna, Jocelyn, Fallon, Kathleen M. and Beckfield, Jason (2008). How Development Matters: A Research Note on the Relationship between Development, Democracy and Women's Political Representation. *International Journal of Comparative Sociology*, Volume 49, No.6, 455-479.

Walby, Sylvia (2005). "Gender Mainstreaming: Productive Tensions in Theory and Practice." *Social Politics*. 12 (3 Fall): 321–343.

Williams, Robin M. Jr (2000). *American Society*. Pp. 1:140-48 in *Encyclopedia of Sociology*, 2nd, edited by Edgar F. Borgotta and Rhonda J .V . Montgomery. Macmillan

## **Paper 1: Validity and cross-country measurement invariance of gender attitudes**

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*Measuring attitudes towards gender roles in comparative research is a challenging task. This paper aims at assessing the content validity and cross-cultural measurement invariance of the scales measuring attitudes towards gender roles in two large-scale comparative surveys, the International Social Survey Program (ISSP) 2002 and the World Values Survey (WVS) 2005. The two scales are widely used in cross-cultural studies, they complement each other in measuring the complex concept of attitudes towards gender roles, and they cover an extensive number of European and non-European countries, allowing for the assessment of measurement invariance in different cultural settings. We assess the content by confronting the items included in the two surveys with the theoretical definitions employed by the literature, and we test for the cross-cultural measurement invariance by Multigroup Confirmatory Factor Analysis (MGCFA). According to our results, these scales are only partially valid in measuring the complex concept of attitudes towards gender roles. Moreover, the two scales are configural and metric invariant in all countries included in our analysis, but they are not scalar invariant. The two scales are suitable for testing relations between attitudes towards gender roles and other theoretically relevant concepts, but they are not useful for comparing the level of support for gender equality across countries.*

Keywords: gender roles; social attitudes; content validity; Multigroup Confirmatory Factor Analysis, International Social Survey Program (ISSP), World Values Survey (WVS)

### **1. Introduction**

In the last few decades, the number of publications dealing with cross-cultural differences has drastically increased (e.g. Davidov, 2010; Sjöberg, 2010). This is also true for studies addressing the variations within different types of attitudes or values, such as attitudes towards gender roles. Along with the increased interest in these fields, concerns about the quality of cross-cultural

measurement instruments have been raised. Measuring attitudes towards gender roles in comparative research is a challenging task, and previous studies have pointed out the difficulties in finding a cross-national invariant indicator (Braun, 2006; Scott and Braun, 2009). In recent decades, however, several cross-national survey studies—in addition to some national and local surveys—have collected data on attitudes towards gender roles in various countries, measuring this data with different scales (Halman, Sieben and van Zundert, 2011; Inglehart and Norris, 2003).

Attitudes towards gender roles are a complex, multidimensional concept (Larsen and Long, 1988), crosscutting at least two different dimensions: power balance between women and men (equality versus inequality) and the area where these roles become manifested (private versus public). Consequently, the operationalization of this concept is difficult. Most of the scales included in cross-comparative surveys tap only some aspects, yet do not cover the full definition of the concept. Although attitudes toward gender roles are tapped by different scales used in various surveys (see Table 1), by now there is no attempt in literature to see which aspects of attitudes towards gender roles are covered by these scales and which are not. These scales integrate items that capture respondent's level of agreement/disagreement towards different aspects like: women having a job or not, the effects of mother's employment on their family, women's economic independency, men undertaking family care activities, and women and men relationship with the labour market, business, politics or high education.

Moreover, relations between genders differ in time and space, depending on the way in which social processes produce patriarchy work (Duncan, 1994). Attitudes refer to different social realities in different cultural contexts. Although some of these scales have been used for comparing attitudes towards gender roles in a cross-cultural context (see Sjöberg, 2004; Baxter and Kane, 1995; Kalmijn, 2005), previous research has not paid special attention to the quality of measurement or the comparability of these scales.

Table 1. Scales measuring Attitudes towards gender roles used in international cross-sectional surveys with abbreviation for the items used in current analysis

<b><i>World Values Survey</i></b>	‘Being a housewife is just as fulfilling as working for pay’ (v60)	<i>housewife</i>
	‘On the whole, men make better political leaders than women do’ (v61)	<i>menlead</i>
	‘A university education is more important for a boy than for a girl’ (v62)	<i>boyeduc</i>
	‘On the whole, men make better business executives than women do’ (v63)	<i>menexec</i>
	Original coding: 1-strongly agree - 4-strongly disagree	
<b><i>International Social Survey Program</i></b>	‘A pre-school child is likely to suffer if his or her mother works’ (v5)	<i>childsuffers</i>
	‘All in all, family life suffers when the woman has a full-time job’ (v6)	<i>familysuffers</i>
	‘A job is all right, but what most women really want is a home and children’ (v7)	<i>home&amp;child</i>
	‘Being a housewife is just as fulfilling as working for pay’ (v8)	<i>housewife</i>
	‘Having a job is the best way for a woman to be an independent person’ (v9)	<i>jobindep</i>

‘Both the man and woman should contribute to the household income’ (v10)

*bothincome*

‘A man's job is to earn money; a woman's job is to look after the home and family’(v11)

*money&hh*

‘Men ought to do a larger share of household work than they do now’ (v12)

*menhh*

‘Men ought to do a larger share of childcare than they do now’ (v13)

*menchild*

Original coding: 1-strongly agree – 5-strongly disagree

***European Social  
Survey***

‘Women should be prepared to cut down on paid work for sake of family’;

‘Men should have more right to job than women when jobs are scarce’.

Coding: 1-agree strongly – 5-disagree strongly

***European Values  
Study***

‘Working mother warm relationship with children’;

‘Pre-school child suffers with working mother’ ;  
‘Women really want home and children ‘;  
‘Being housewife as fulfilling as paid job’;  
‘Job best way for independence women’ ;  
‘Husband+wife contribute to household income’ ;  
‘Fathers as well suited to look after children as mothers’;  
‘Men should take the same responsibility for home and children’.

Coding: 1-agree strongly – 4-disagree strongly

***Eurobarometer***

‘It is normal that women work less than men’;  
‘Women who do not work are isolated from the world’;  
‘In a family, if the father’s pay is lower than that of the mother, he is the one who  
‘should give up work to look after the children’;

‘In many cases, childcare facilities cost almost as much as the mother earns from  
‘working’;

‘A mother must put looking after her young child ahead of her career’;

‘It is indispensable for a woman to have her own pay’;

‘Men should work more in child care sectors, such as day nurseries’;

‘It is normal that men participate less than women in household tasks’;

‘And are you in favor of or opposed to men mainly looking after the children and  
the home?’ .

Coding: 1-totally agree – 4-totally disagree

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This paper aims at filling in the gaps related to measurement of attitudes towards gender roles in international studies. The research has two specific goals: to assess the content validity and to test the measurement equivalence of scales used in cross-national surveys. We focus our analyses on two scales used in large scale surveys: the International Social Survey Programme (ISSP) 2002 and the World Values Survey (WVS) 2005 (see Table 1). Although these are two of the most widely used scales in cross-cultural gender studies (e.g. Sjöberg, 2004, 2010; Inglehart, Norris and Welzel, 2002; Motiejunaite and Kravchenko, 2008; Yuchtman-Yaar and Alkalay, 2006; Baxter et al, 2004; Alwin et al, 1994; Alesina et al, 2011), each has its negative and positive points. The International Survey Programme is a survey held annually in about 40 countries all over the world and is structured in different modules on topics of social research such as family and gender, social inequality, religion, health, environment, government and work. The modules are repeated periodically. In the family and gender module we find a generous set of items, measured mostly on European or developed countries, which offer a cultural and economic homogeneous sample, easier to manage in a cross-cultural study<sup>2</sup>. A negative point is that the gender module is measured only once in eight-ten years, which is relatively rare, given the dynamics of social research today. Also, ISSP scale lacks measurements of gender roles in public sphere like politics and business, these aspects being highly relevant for nowadays societies. On the other hand, World Values Survey is a worldwide longitudinal study that looks at people's values and attitudes on a range of topic such as: politics, religion, civic norms, work, trust, family values, etc<sup>3</sup>. Given the higher number of countries from all over the world, WVS is attractive for cross-cultural studies, but it also implies disadvantages related to the sample heterogeneity and possible lack of comparability, as the countries included are culturally and economically highly diverse. A positive point for gender studies is that WVS includes measurements related to gender roles in public sphere, complementing the ISSP scale. Unfortunately, it does not include the items measured in ISSP, which could have provided a rich understanding of gender roles attitudes in a worldwide perspective. Both surveys also have the advantage of similar measurements over time, being theoretically suitable for longitudinal analysis, overtime

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<sup>2</sup> <http://www.issp.org>

<sup>3</sup> <http://www.worldvaluessurvey.org>

comparisons and cross-cultural studies. In practice though, the overtime and cross-cultural comparability has to be assessed.

These positive and negative points make these scales challenging and suitable for our present research. We assess the content validity by confronting the items used in the two surveys with the theoretical definitions employed by the literature. We test for cross-cultural measurement equivalence with Multigroup Confirmatory Factor Analysis (MGCFA), aiming to identify an invariant measure of attitudes towards gender roles across countries.

We chose to assess these two scales for several reasons. First, they incorporate most of the items used in cross-national research in this field. Second, they complement each other in measuring the complex concept of attitudes towards gender roles. The items included in ISSP 2002 combine the four-item scale used previously in ISSP 1987 and 1994 and in the European Values Study 1990 and 1999, with several items tapping support for non-traditional housework division. Additionally, some items referring specifically to men's role in household work and childcare are available. WVS 2005 uses different items for tapping attitudes towards gender roles, combining one item that refers to private gender roles with items measuring attitudes towards equal involvement of men and women in the public sphere—namely in education, employment, and politics. We compare these two scales also because they cover an extensive number of countries and provide us with the opportunity to better test for cross-cultural invariance in a truly diverse sample. This includes non-European countries. These databases are publicly available, unlike most of the other national or regional surveys collecting data on attitudes towards gender roles. Although WVS has run a new wave in 2011 – 2014 and ISSP collected new data on Family and Changing Gender Roles in 2012 at the moment when these analyses were carried out, the new releases were not yet available for public use.

This paper consists of three parts: The first part is dedicated to defining and operationalizing of attitudes towards gender roles. This part presents the main definitions used by literature for defining the concept plus an assessment of content validity of the two scales used by WVS 2005 and ISSP 2002. The second part refers to measurement equivalence in cross-cultural survey. This part explains why measuring attitudes towards gender roles may raise

issue of measurement invariance and assess using empirical data the measurement equivalence of the scales used by WVS 2005 and ISSP 2002. The third part presents the main conclusion and some recommendations for further research.

## **2. Attitudes towards gender roles: definition and content validity**

Attitudes towards gender roles are generally defined by literature as “beliefs regarding the appropriate roles for men and women” (Schutz Lee, Tufis, Alwin, 2010). Depending on the aspect of gender relations that is taken into account, however, one can divide these definitions into three different groups. A first group refers to attitudes regarding the division of labor within a family. Some of them specifically focus on attitudes towards the traditional family model: male breadwinner – women homemaker (Cunningham et al, 2005; Kroska, Elman, 2009). Other definitions tap both attitudes regarding gender roles in the public private area and non-private area, such as education, labor market, or politics (Baxter, Kane, 1995; Jakobsson, Kotsadam, 2010). A third group of definitions does not mention a specific context and generally refers to gender relations in society at large. Therefore, Bergh describes these attitudes as “normative beliefs about what gender relations in society should be like, or the extent to which a person supports the norm of gender equality” (2006, p.6). Pfau-Effinger (2004) also defines gender-role attitudes as the societal assumptions regarding people’s views about what constitutes a correct gender relation or a fair division of tasks between women and men. Since we are interested in assessing how well these attitudes are measured by the scales included in comparative surveys, we have decided to use a comprehensive definition. Therefore, we define attitudes towards gender roles as beliefs individuals express regarding the role of men and women perceived as appropriate, in a given institutional environment.

Attitudes towards gender roles are difficult to measure because they are complex and multidimensional (Larsen and Long, 1988). Multidimensionality is related with two different aspects: the first has to do with the social context where gender roles become manifest (private versus public area), while the second refers to gender power balance (equality, inequality, and specialization).

Therefore, taking into account the social context, one can make the distinction between attitudes towards gender roles in the private versus public space. According to Wilcox and Jelen (1991), the public dimension refers to women's engagement in roles and activities outside the home, whereas the private dimension refers to their involvement in domestic roles and activities. Therefore, the first dimension taps women's involvement in non-domestic domains such as education, the labor market, politics, and business. The second dimension is related to the private arena and activities belonging to this area, such as housework (cooking, cleaning, buying food, or ironing) and caring for children and elderly individuals.

The second aspect—related with the operationalization of attitudes towards gender roles—refers to the balance of gender roles. Jelen (1988) makes the distinction between inferiority and complementarity in these attitudes. Whereas the inferiority assumes that women are inferior to men and unfit to participate in activities traditionally reserved for men, complementarity discusses a gender specialization in performing different roles, such as nurturing, mothering, or supporting (pp.353-354). According to the first dimension, women can be either equal or inferior to men. According to the second dimension, the gender division of labor is complementary, and the idea of inferiority is not necessarily involved.

By crossing these two dimensions, Jelen (1988) describes four different types of attitudes towards gender roles: the *traditionalist attitude* considers that women are different from men and inferior, the *specialist attitudes* considers that women are equal to men but socialized in different tasks, the *androgynist attitude* rejects both inferiority and role specialization, and the *chauvinist attitude* assumes an inferiority status of women but rejects role specialization. The last type is rarely found in real life. Therefore, there is not just a simple opposition between gender equality versus inequality, or between traditional and modern gender roles. Consequently, measuring the preference for traditional gender roles does not indicate the level of preference for gender equality (Behr et al., 2013).

By crossing Jelen's typology of attitudes towards gender roles with the public versus private dimension, we get three intersecting dimensions: inferiority, complementarity, and public versus private. A comprehensive definition of attitudes towards gender roles should tap the potential intersection of these three dimensions. Because

Jelen (1988) builds a typology out of the two dimensions that he identifies, one should consider assessing content validity by intersecting the four types with the private versus public dimension. Because the chauvinist type is more a theoretical construct than a real, observable attitude, we assess the content validity of attitudes towards gender roles by taking into account the intersection of three types—traditional, specialized, and androgynist—with the public versus private dimension.

Content validity is a distinctly qualitative and evaluates the accuracy with which measures reflect their targeted theoretical concepts. Previous research has emphasized that this type of validity is important because a “non-representative sample of measures can distort our understanding of a concept” (Bollen, 1989, p. 186). On the other hand, this type of validity is highly dependent on the way the theoretical concept has been defined by the researcher (Bollen, 1989, p.184). According to Bollen (1989), with respect to multidimensional concepts, at least one measure for each dimension of the concept is needed to achieve content validity. Therefore, the first step in our analysis resides in investigating the content validity of the scales used in the two surveys (WVS 2005 and ISSP 2002) for tapping attitudes towards gender roles, based on the definition and operationalization scheme employed by this paper.

A theoretical analysis is employed to assess content validity by comparing the different dimensions of the concept described in the definition of the attitudes towards gender roles with the items measured in the cross-national surveys in order to emphasize the gaps in the measurement instrument and to understand what each item actually measures from a theoretical perspective. We build an operationalization scheme based on the definition of attitudes towards gender roles. We assess how well all the dimensions included in the operationalization scheme are covered by the items used in the two surveys. The purpose of this analysis is to enable us to identify the already measured aspects of these attitudes and to spot the missing sections. This in order to understand what is lacking in the concept’s measurement and what the surveys could add to achieve content validity for these instruments. In Table 2, the two broad spheres—private and public—in which gender roles are manifested and the sub-domains appear in the rows, whereas the type of attitude—traditional, specialized, or androgynous—is designated in the columns.

Table 2. Item coverage for theoretical aspects of attitudes towards gender roles

<b>Dimension</b>	<b>Traditional type</b>	<b>Specialized type</b>	<b>Androgyn (modern) type</b>
<b>Private</b>	Housework	family suffers	men-hh
	Care (children, elderly individuals)	child suffers	men-child
	Breadwinner / housemaker	housewife home&child money&hh	both income job indep
<b>Public</b>	Education	boy educ	
	Labor market		
	Politics	men lead	
	Business	men exec	

According to the scheme presented in Table 2 items, tapping the gender roles in private spheres are unbalanced for various reasons. First, the measures emphasize aspects related to women’s roles, while attitudes towards men’s roles are underrepresented. Second, these items measure exclusively specialized and androgynist (or modern) attitudes, which—in our analysis—can give information about the degree to which respondents agree with the idea of a gender-segregation of roles, or even with a modern distribution of responsibilities between women and men. More exactly, the items collect data about the respondents’ views on the appropriateness of women having a job and on the appropriateness of men doing

housework and caring for children and elderly individuals. These items do not, however, offer a clear measure of the traditional aspects in respondents' attitudes. The traditional type is completely neglected. As Braun et al. (2012) explain, although respondents might express less agreement with specialized or modern attitudes, researchers cannot automatically assume the presence of traditional views, as these types of attitudes are not necessarily antonymous or mutually exclusive.

A third source of unbalanced coverage is the fact that the private dimension lacks items covering certain aspects of individuals' private lives like household work, which is not directly measured by any of the items found in these surveys. An item related to this aspect is *money & home (money & hh)*, although by disagreeing with this item, respondents could express either egalitarian views or only the preference for a different arrangement of roles. The same happens in the case of *men-household (men-hh)* and *men-child*, where, by disagreeing, individuals can express their traditional attitude or their belief that men already do enough. However, the interpretation of the answer is rather confusing and can go in both directions. Similar gaps are observed in the aspects related to childcare, elderly care, or family-care. The items already measured here do not allow the respondent to clearly express their egalitarian/non-egalitarian beliefs. Overall, items covering the private sphere of gender roles offer only a partial picture of people's views on how men and women should share their roles. These measures provide good coverage of the specialized and androgynous attitudes, but give little information about the traditional valences of respondents' attitudes and neglect some important aspects of private life.

Attitudes towards gender roles in the public sphere are tapped only in WVS and the measurement is unbalanced for various reasons. This scale has a traditional orientation; it is measured only through traditional or specialized type questions. The three items tap individuals' views on strongly traditional statements referring to men as better executives and political leaders, or on role specialization statements asserting that education is more important for boys than for girls. While agreeing with these items indicates a strong traditional view on gender roles in the public sphere, disagreement with them does not necessarily suggest gender egalitarianism or androgynist attitudes (Behr et al.2013). In

consequence, based on this scale, one can discuss only about the degree to which respondents express traditional views towards gender roles in the public arena, but cannot draw conclusions about how androgynous or modernist individuals' attitudes are towards gender roles in this sphere of life. Overall, the public dimension is not entirely content valid, as the items measuring it do not cover all three types of attitudes individuals might express or all aspects of gender roles in the public sphere. Hence, basing research on this dimension, without specifying its limitations, can lead to partially biased conclusions.

### **3. Attitudes towards gender roles: measurement equivalence in cross-cultural context**

Gender relations and gender roles are socially constructed, embedded in social context and different from one society to another (McInnes, 1998; Zvonkovic et. al, 1996). Principles of economic and political organization, or different ideological and institutional structures, influence the way in which individuals perceive social reality and shape people's attitudes (Panayatova, Brayfeld, 1997). Therefore, different social contexts conducted not only to different degrees of gender equality in different countries, but also different understandings and definitions of gender roles.

Gender division of labor varies across societies, having strong implications for the family model (Alesina, Giuliano, Nunn, 2011). In some societies, women are active on the labor market, where the common family model is dual breadwinner one. In others, the male breadwinner – female homemaker model is prevalent. These differences are deeply grounded in historical factors such as forms of agricultural practices (Alesina, Giuliano, Nunn, 2011), the particular historical moment when modernization took place (Pfau-Effinger, 1993), or family policies promoted by the state (Duncan, 1994). A scale, tapping attitudes towards a particular family model and gender roles in a particular family model, might not be suited for cross-cultural comparison, because it refers to a social reality that exists only in some societies. Female participation in paid work is considered usually a good indicator of gender equality. However, Walby (1994) shows that its emancipatory power depends on the context. In some contexts, paid employment relay brings equality—women being able to reach a similar status with men. In other

contexts, they earn too little to bring real emancipation. Participation in paid employment—and, consequently, attitudes towards female employment—do not have the same consequences and same meaning in different societies. That should not be used as a full equivalent measure.

Education is a bridge between the public world of employment and the private world of family (Wrigley, 2005). Education boosts the empowerment of women by increasing female employment and reshaping family patterns. Employment and family models, however, are sensitive to the social context. The connection between education and gender roles varies from society to society. Female political participation is a dimension that raises similar issues related to cross-cultural compatibility. Although political participation empowers women, the degree of empowerment varies depending on the country's political power structure (Walby, 1994).

Taking into account that various dimensions used to operationalize attitudes towards gender roles have different meanings in different cultural contexts, measurement invariance is an important issue in cross-comparative surveys. Measurement invariance is defined as “whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute” (Horn and McArdle 1992, p.117).

Vijver (1998) mentions three sources of cross-cultural validity problems. The first is construct bias, which means that the concept has different meanings, or covers different behaviors, across cultures. Second, validity problems occur when there is a method bias. Here, the sources of bias are multiple. One of them is related to the sampling procedures, which for practical reasons are not always identical, resulting in dissimilar or atypical samples. A popular approach to reducing this type of bias is to assess the influence of potentially confounding variables through covariance or hierarchical analysis (Poortinga and Van de Vijver, 1987). Another source of method bias comes from a characteristic of the instrument which, in some cases, allows respondents from different cultures to react very differently to the same question. This problem occurs often in personality and attitudinal studies (Vijver, 1998). Last, method bias comes from administration differences arising from communication problems or certain characteristics of the interviewer. Item bias, the

third type, concerns the poor translations or other problems that occur at the item level.

While biases induced by translation, sampling procedure and interviewers are common in all surveys and affect, equally, all types of scales included in the same questionnaire. We expect to find a construct bias across different cultures when measuring attitudes towards gender roles. This is due to the different way of defining gender roles in various cultural contexts. Our hypothesis is that scales measuring attitudes towards gender roles in comparative surveys are metric invariance, but full or partial scalar invariance is not achieved.

## 4. Data and Methods

### Data

This paper will make use of two data sets, WVS 2005 and ISSP 2002 (*Family and Changing Gender Roles Survey*), each of them including a different scale that measures attitudes towards gender roles. WVS 2005 collected data relevant to the current research in 46 countries (individual N = 57588). The list of countries included in the present analysis, together with the valid N by country, is provided in Table 3 in Appendix. WVS includes a battery of four items meant to tap attitudes regarding gender equality: “Being a housewife is just as fulfilling as working for pay” (v60); “On the whole, men make better political leaders than women do” (v61); “A university education is more important for a boy than for a girl” (v62); “On the whole, men make better business executives than women do” (v63). The answers are measured on a five-point scale, and we have recoded them so that the higher values indicate higher gender equality. Descriptive statistics of these variables point out that there are no significant deviations from the normal distribution (see Table A1 in Appendix).

ISSP 2002 (*Family and Changing Gender Roles Survey*) collected data relevant to our research in 32 countries (individual N= 40753). The list of countries included in the present analysis, together with the valid N by country, is provided in Table 3. ISSP includes a battery of nine items, tapping attitudes towards gender roles: “A pre-school child is likely to suffer if his or her mother works” (v5); “All in all, family life suffers when the woman has a full-time job” (v6);

“A job is all right, but what most women really want is a home and children” (v7); “Being a housewife is just as fulfilling as working for pay” (v8); “Having a job is the best way for a woman to be an independent person” (v9); “Both the man and woman should contribute to the household income” (v10); “A man's job is to earn money; a woman's job is to look after the home and family” (v11); “Men ought to do a larger share of household work than they do now” (v12); “Men ought to do a larger share of childcare than they do now” (v13). The last two items measure the second dimension. The answers are measured on a four-point scale, and we have recoded them so that the higher values indicate higher gender equality. According to the descriptive statistics shown in Tables A1 in Appendix, the distribution of these variables is approximately the normal one.

## **Methods**

We assess cross-cultural invariance by a series of tests that aim to show whether the scale taps the same dimensions in the same way in all surveyed countries. In order to assess configural equivalence, an exploratory factor analysis is usually employed in each culture, followed by a confirmatory factor analysis so that the stability of the parameters across cultures can be analyzed (Vijver, 1998; Steenkamp and Baumgartner, 1998). Two of the most popular techniques used in assessing measures' cross-cultural invariance are the Multiple Group Confirmatory Factor Analysis (MGCFA) and the more recently proposed Multigroup Latent Class Analysis (MLCA) (Kankaraš, Moors, and Vermunt, 2010). In this paper, we will employ the first, described by Joreskog (1971) as a theory-driven technique that was previously used successfully (Kankaraš, Moors, and Vermunt, 2010). Equivalence testing with MGCFA implies imposing a series of constraints, step by step, on the measurement models in order to assess whether certain measurement assumptions are true for different cultures.

In the first step, we have tested for configural invariance by running country-by-country exploratory factor analyses. For the exploratory factor analysis, we have used Maximum Likelihood as the method for extracting factors. We have employed pair-wise deletion of missing values. In the case of ISSP, we have rotated the two factors using the Varimax method that attempts to minimize the complexity

of factors and makes the contribution of items to the factorial score easy to interpret. We have tested for metric and scalar invariance by using Multiple Group Confirmatory Factor Analysis (MGCFA). Maximum Likelihood estimation method was employed when running MGCFA. For metric invariance, we have fully constrained the factor loadings. For scalar invariance, we have first fully constrained the intercepts and, in the next step, released the intercept for one variable in an attempt to fit the partially invariant model.

## 5. Results

There are three types of measurement equivalence. The first, configural equivalence, refers to the degree to which the instrument measures the same concept in all cultural groups. Another type of equivalence needed for cross-cultural comparisons is metric invariance, which assumes that the unit of measurement is the same in all groups, although the origins might differ (Vijver, 1998; Poortinga, 1989; Steenkamp and Baumgartner, 1998). When metric invariance is achieved, loadings of the latent variable on the observed items can be compared, but not the averages of the latent variables. To compare the averages of the latent variables, scalar invariance is needed. Here, the origins (intercepts of the loadings) are also assumed to be equal (Hui and Triandis, 1985; Van de Vijver and Leung, 1996; Van de Vijver and Poortinga, 1982). If this type of invariance is lacking, the differences observed between cultures might be due to true variation or to some systematic biases found in the way individuals understand and respond to the questions (Steenkamp and Baumgartner, 1998).

Exploratory factor analyses, run country by country on WVS data, indicate that the first item, *housewife*, does not belong to the same latent dimension as the other three, the mean of factor loading for this variable being of 0.189. The extracted factor explains on average 43% of the total variance, and the factor loadings for the remaining three variables have a mean above 0.637 (see Table A2 in Appendix). This is an expected outcome, insofar as it taps a different dimension than items measuring attitudes towards gender equality in the public sphere. We have excluded the item *housewife* and have worked only with the scale built from the other three

items. For these three items, configural invariance is achieved for all countries under investigation, according to the results of the exploratory factor analysis (available on request).

In the case of ISSP, the exploratory factor analyses, run country by country, indicate that the six items load on two latent variables: the items *child-suffers*, *family-suffers*, *home & child*, and *money & hh* load on one factor, whereas *men-hh* and *men-child* load on a different one. According to the exploratory factor analysis, the items *house-wife*, *job-in-dep*, and *both-income* are not related to either of the two dimensions and do not cluster together on a separate single dimension, having loadings on average below 0.3 (see Table A3 in Appendix). For the other six variables the mean of loadings is above 0.5. Our results indicate that configural invariance is achieved for all countries, except for Chile. In the case of this country, the loading of *men-child* on the second factor is weak and configural invariance is not achieved. Therefore, we have eliminated this country from further analyses.

The next step involves testing for configural, metric and scalar invariance by using MGCFA. The structure of the factorial model for WVS data with unstandardized loadings for the partial invariant model is shown in Figure 1. The fit indexes are shown in Table 4. Configural invariance is achieved for the countries included in the MGCFA, fit indexes indicating a good fit. The second line in Table 4 shows the fit of the metric invariant model, with constrained loadings. According to these results, metric invariance is achieved, the fit indexes indicating a good fit of the constrained model (RMSEA = .015, CFI= .972, PCLOSE = 1.000). The third line indicates the fit for the scalar invariant model. These indexes show that one should reject the scalar invariant model, because not all the indexes indicate a good fit. Whereas RMSEA and PLCOSE confirm a good fit, CFI has a low level, indicating a poor fit for the full constrained model. Moreover, if one compares the scalar invariant model with the metric one based on differences between fit indexes the full scalar invariance should be rejected ( $\Delta\text{RMSEA} \geq .01$  and  $\Delta\text{CFI} \geq .01$ ). We have decided to test for the partially invariant model and, therefore, have released the constraint on the intercept of *boy-educ*.

Figure 1. CFA of attitudes towards gender roles in WVS 2005 (with unstandardized coefficients for the partially constrained model)

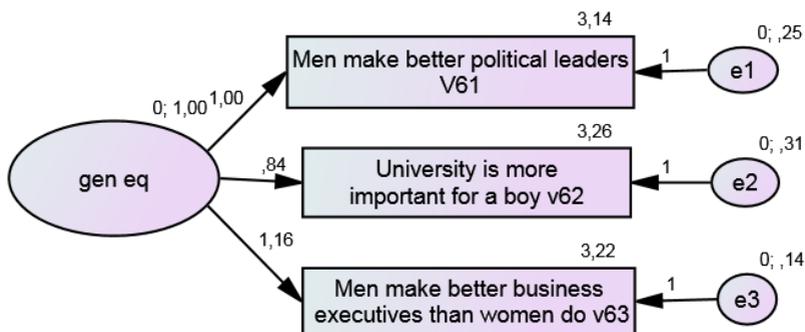


Table 4. MGCEFA: Fit measures of the invariance test WVS 2005

Model	CMIN	DF	PCLOSE	RMSEA	CFI	NFI	IFI
Configural invariance	152	1	1.000	.052	.996	.996	.996
Full metric invariance	1125	75	1.000	.015	.972	.971	.973
Partial scalar invariance	21075	149	1.000	.050	.452	.451	.453
Full scalar invariance	24551	186	1.000	.049	.360	.361	.362

The fit of the partial scalar invariant model is shown in the third row of Table 4. According to this data, partial scalar invariance is not achieved. Some of the indexes indicate a good fit (RMSEA = .050,

similar to those for the fully constrained model), whereas CFI still indicates a poor fit (CFI = .452). Differences between fit indexes of different models show that full metric invariant model does not differ of the configural one ( $\Delta\text{RMSEA} = .003$  and  $\Delta\text{CFI} = .013$ ), while the full scalar invariant model differ significantly of the metric invariant one ( $\Delta\text{RMSEA} \geq .01$  and  $\Delta\text{CFI} \geq .01$ ). Based on these results, we should reject the scalar invariance in the case of the scale included in WVS. The analysis confirms only the scalar invariance—which allows us to test for the correlation of the construct in all countries, but not the comparison of means of the construct across countries.

The structure of factors tapping attitudes towards gender roles in ISSP is shown in Figure 2. As mentioned before, the six items cluster in two latent factors, one that taps support for the traditional family model involving a male breadwinner and female homemaker (women housewives), and the other that taps support for the non-traditional male role as a domestic work provider (men involved). The model's fit is presented in Table 5. Configural invariance is confirmed by the MGCFA that indicates a good fit for the unconstrained model. The second line in the table indicates the fit of the metric invariant model. According to this data, metric invariance is achieved. All fit indexes indicate conformity. The fourth row refers to the fit of the scalar invariant model, when constraining all the intercepts to be equal among countries. As in the case of the WVS model, some indexes show a good fit (RMSEA = .032, PCLOSE = 1.000), whereas others indicate a poor fit (CFI = .723). Differences between fit indexes of different models show that full metric invariant model does not differ of the configural one ( $\Delta\text{RMSEA} = .003$  and  $\Delta\text{CFI} = .013$ ), while the full scalar invariant model differ significantly of the metric invariant one ( $\Delta\text{RMSEA} \geq .01$  and  $\Delta\text{CFI} \geq .01$ ). Therefore, we should reject the fully scalar invariant model. We will now test for partial scalar invariance.

Figure 2. CFA of attitudes towards gender roles in ISSP 2002 (with unstandardized coefficients for the partially constrained model)

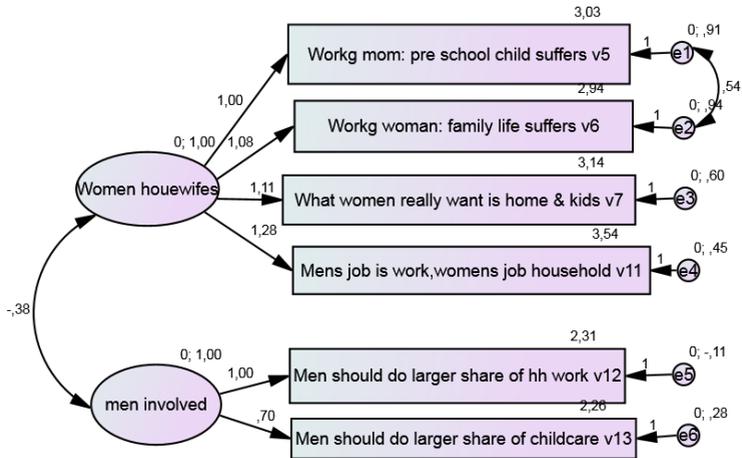


Table 5. MGCFAs: Fit measures of the invariance test ISSP 2002

Model	CMIN	DF	PCLOSE	RMSEA	CFI	NFI	IFI
Configural invariance	699	177	1.000	.009	.990	.987	.990
Full metric invariance	1475	273	1.000	.012	.977	.972	.977
Partial scalar invariance	8221	369	1.000	.025	.847	.842	.848
Full scalar invariance	14668	417	1.000	.032	.723	.717	.723

To estimate the partially invariant scalar model, we have released the constraints on the intercepts of the items *child-suffers* and

*family-suffers*, and we did not release constraints for the second construct, men's involvement in domestic work. This is due to the fact that only two items load on this construct, and, according to Steenkamp and Baumgartner (1998), for partial invariance, we should have at least two invariant indicators per latent variable. The fit of the partial scalar invariant model is shown on the third row of Table 5. As in the case of the WVS scale, some indexes indicate a good fit (RMSEA= .025, PCLOSE = 1.000), where others show a poor fit for the partially constrained model (CFI= .847).

## 6. Conclusions

This paper investigated the content validity and cross-national invariance of the scales measuring attitudes towards gender roles in large-scale comparative surveys. We assessed the two scales used in two different cross-sectional surveys, the International Social Survey Program 2002 and the World Values Survey 2005. These are two of the most widely used scales in cross-cultural studies. Our main goals were to determine whether these items properly define the concepts that they aim at measuring and whether the measurement model is the same in all countries included in each survey. We have used a critical-theoretical analysis of the two scales for testing concept validity. For testing measurement invariance, we have employed exploratory and confirmatory factor analyses.

After assessing the construct validity of the instruments found in the two surveys, we can conclude that these scales are only partially valid in measuring the complex concept of attitudes towards gender roles. Items covering the private sphere mostly measure the preference for a specialized or a modern distribution of gender roles, omitting the traditional views. The scale tapping the public sphere has a strong, traditional approach—measuring respondents' preference for a traditional distribution of roles and lacking measures for the specialized and androgyn attitudes. More specifically, the private dimension permits the study of egalitarian attitudes towards gender roles inside the household, while items measuring the public sphere do not allow researchers to draw any conclusions about the level of egalitarian attitudes towards gender roles in the public arena. Discussions of the public dimension should refrain from referring to egalitarian attitudes towards gender roles

and instead refer only to levels of traditionalism in the attitudes towards such roles. The two sets of items limit the respondents' ability to express complex attitudes and may induce content validity problems. Possible validity deficiencies can also arise as a result of the uncovered aspects of gender roles in the two spheres of life. Among these unmeasured sub-domains, we have mentioned elderly care in the private sphere dimension and the roles of women in the public arena.

In order to obtain a more valid measurement of the attitudes towards gender roles in both the private and public spheres, some additional items are needed. These items should cover the missing aspects of the two areas of life, while also offering a larger range of attitudinal statements to provide individuals with the option to clearly and complexly express traditional, specialized, and modern valences of their attitudes. It is recommended that future studies that address the two dimensions specify which aspects of the attitudes towards gender roles they are focused on and identify the limitations of these measures in tapping all three types of attitudes described by Jelen's typology.

Our analyses indicated that items used in both WVS and ISSP 2002 belonged to scales that are partially cross-culturally invariant over the whole sample of countries included. The WVS scale taps gender equality in the public arena, and our results show that this scale is configural and metric invariant in all 45 countries included in our analysis. This scale is suitable for testing relations between attitudes toward gender roles and other theoretically relevant concepts, but it is not useful for comparing the level of support for gender equality across countries. Moreover, this scale proved to be suitable for individual-level analyses in most of the 45 countries and achieved construct validity. ISSP 2002 items load on two different dimensions—one indicating preference for the traditional female role as homemaker and, the other, indicating preference for the non-standard male role as homemaker. According to our results, this scale is configural and metric invariant, being suitable for the same types of cross-country comparisons as the scale from the WVS. The results are in line with our expectation: Both scales are metric invariant, yet there are not scalar invariant. Although gender is socially constructed—and gender roles vary from one culture to another—items employed by these scales are suitable for conducting some comparative analyses.

Further research should investigate whether or not, and how, measurement invariance and construct validity changes over time, including new waves of ISSP and WVS. This kind of dynamic has a direct impact on the validity of longitudinal comparisons. Moreover, future research should identify groups of countries having common patterns regarding attitudes towards gender roles and should test the measurement invariance within these particular groups. In our estimation, they will most likely achieve at least partial scalar invariance. This would provide an opportunity for comparing levels of gender equality among countries found in the groups to achieve scalar invariance.

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### **References**

- Alesina, A., Giuliano, P., & Nunn, N. (2011). On the origins of gender Roles: Women and the Plough. *IZA Discussion Paper No. 5735*
- Alwin, D. (2005). Attitudes, Beliefs, and Childbearing. In Booth, A. & Crouter, A.C. (eds.) *The new population problem: Why families in developed countries are shrinking and what it means*. Mahwah, NJ: Erlbaum (pp. 115-126)
- Alwin, D., J. Scott, et al. (1994). Sex-Role Attitude Change in the United States, Britain, and Germany. World Congress of Sociology. Bielefeld, Germany.

Baxter, J., & Kane, Emily W. (1995). Dependence and Independence: A Cross-National Analysis of Gender Inequality and Gender Attitudes. *Gender and Society*, 9, 193-215.

Baxter, J., B. Hewitt, et al. (2004). Transitions Through the Life Course and Time Spent on Housework 99th Annual Meeting of the American Sociological Association. San Francisco.

Beere, C. A., King, D. W., Beere, D. B., & King, L. A. (1984). The sex-role egalitarianism scale: a measure of attitudes toward equality between the sexes. *Sex Roles*, 10, 563–576.

Behr, D., Braun, M., Kaczmirek, L., & Bandilla, W. (2013). Testing the validity of gender ideology items by implementing probing questions in web surveys. *Field Methods*, 25(2), 124-141.

Bergh, J. (2006). Gender attitudes and modernization processes. *International Journal of Public Opinion Research*, 19, 5-23.

Billiet, J., & Welkenhuysen-Gybels, J. (2004). Assessing cross-national construct equivalence in the ESS: the case of six immigration items. In C. V. Dijkum, J. Blasius, & C. Durand (Eds.), *Recent Developments and Applications in Social Research Methodology: Proceedings of the Sixth International Conference on Social Science Methodology* (p.19).

Bollen, K. A. (1989). *Structural Equations with Latent Variables*. New York: John Wiley & Sons

Braun, M. (2006). *Funktionale Äquivalenz in interkulturell vergleichenden Umfragen. Mythos und Realität*. Mannheim: ZUMA.

Brogan, D., & Kutner, N. G. (1976). Measuring sex-role orientation: a normative approach. *Journal of Marriage and the Family*, 38, 31–40.

Cunningham, M. et al. (2005). Reciprocal relationship between attitudes about gender and social context during young adulthood. *Social Science Research* 34 (4), 862-892.

- Davidov, E. (2010). Testing for comparability of human values across countries and time with the third round of the European Social Survey. *International Journal of Comparative Sociology*, 51(3), 171-191.
- Drasgow, F., & Kanfer, R. (1985). Equivalence of psychological measurement in heterogeneous populations. *Journal of Applied Psychology*, 70(4), 662-680.
- Duncan, S. (1994). Theorizing difference in patriarchy. *Environment and Planning A*, 26, 1177-1194
- Halman, L., Sieben, I., & van Zundert, M. (2011) *Atlas of European Values. Trends and Traditions at the turn of the Century*. Leiden: Brill
- Horn, J. L., & McArdle, J. J. (1992). A Practical and Theoretical Guide to Measurement Invariance in Aging Research. *Experimental Aging Research*, 18, 117-144.
- Hui, C.H., & Triandis, H.C. (1985). Measurement in cross-cultural psychology. A review and comparison of strategies. *Journal of cross-cultural Psychology*, 16, p.131-152.
- Inglehart, R. & Norris, P. (2003) *Rising Tide. Gender Equality and Cultural Change around the World*. Cambridge, New York: Cambridge University Press
- Inglehart, R., Norris, P., & Welzel, C. (2002). Gender Equality and Democracy. *Comparative Sociology*, 1(3-4), 321-345.
- Jacoby, W. (2001). *Multidimensional Scaling* (Course handout), Inter-University Consortium for Political and Social Research - Summer Program in Quantitative Methods of Social Research, Ann Arbor.
- Jakobsson, N., & Kotsadam, A. (2010). Do attitudes toward gender equality really differ between Norway and Sweden? *Journal of European Social Policy*, 20 (2), 142-159.
- Jelen, T. (1988). The Effect of Gender Role Stereotypes on Political Attitudes. *Social Science Journal*, 25 (3), 353-365.

Johnson, T. P. (1998). *Approaches to Equivalence in Cross-Cultural and Cross-National Survey Research*. ZUMA-Nachrichten Spezial.

Joreskog, K.G. (1971). Simultaneous factor analysis in several populations. *Psychometrika*, 36, 409-426.

Kankaraš, M., Moors, G., & Vermunt, J. (2010). Testing for Measurement Invariance with Latent Class Analysis. In E. Davidov, P. Schmidt, & J. Billiet (Eds.), *Cross-Cultural Analysis: Methods and Applications* (pp. 359-384). Routledge Academic.

King, L. A., & King, D. W. (1997). Sex-role egalitarianism scale. Development, psychometric properties, and recommendations for future research. *Psychology of Women Quarterly*, 21, 71– 87.

Kroska, A., & Elman, C. (2009). Change in attitudes about employed mothers: Exposure, interests, and gender ideology discrepancies, *Social Science Research* 38: 366-382.

Larsen, K. S., & Long, E. (1988). Attitudes toward sex-roles: traditional or egalitarian? *Sex Roles*, 19, 1–12.

Lu, Y. H. (1993). Sex-roles Attitudes and the Employment of Married Women – A Detroit Area Study. *Journal of Women and Gender Studies*, 4, 137-174.

McInnes, J. (1998). Analyzing patriarchy capitalism and women's employment in Europe. *Innovation: The European Journal of Social Science Research*, 11 (2): 227-248.

Motiejunaite, A., & Kravchenko, Z. (2008). Family policy, employment and gender-role attitudes: a comparative analysis of Russia and Sweden. *Journal of European Social Policy*, 18(1), 38-49.

Panayatova, E., & Brayfield, A. (1997). National context and gender ideology: Attitudes towards women's employment in Hungary and the United States. *Gender & Society* 11: 627-655.

Pfau-Effinger, B. (1993). Modernization, Culture Part-Time Employment: The Example of Finland and West Germany. *Work, Employment & Society* 7 (3), 383 – 410.

- Pfau-Effinger, B. (2004). *Development of Culture, Welfare States and Women's Employment in Europe*. Aldershot: Ashgate.
- Poortinga, Y.H. (1989). Equivalence of cross cultural data: an overview of basic issues. *International Journal of Psychology*, 24, 737–756.
- Poortinga, Y.H., & Vijver, F.J.R. van de (1987). Cultural bias and the interpretation of test scores. In C. Schwarzer & B. Seipp (Eds.), *Trends in European educational research* (pp. 13-21). Braunschweig: Blankenstein.
- Schutz Lee, K, Tufis, P., & Alwin, D. (2010). Separate Sphere or Increasing Equality? Changing gender Beliefs in Postwar Japan. *Journal of Marriage and Family* 72 (1), 184-201.
- Scott, J., & Braun, M. (2009). Changing Public Views of Gender Roles in seven nations: 1988-2002. in M. Haller, R. Jowell and T Smith (eds) *Charting the Globe. The International Social Survey Programme 1984-2009*, Routledge.
- Sjöberg, O. (2004). The Role of Family Policy Institutions in Explaining Gender-Role Attitudes: A Comparative Multilevel Analysis of Thirteen Industrialized Countries. *Journal of European Social Policy*, 14(2), 107-123.
- Sjöberg, O. (2010). Ambivalent Attitudes, Contradictory Institutions: Ambivalence in Gender-Role Attitudes in Comparative Perspective. *International Journal of Comparative Sociology*, 51(1-2), 33-57.
- Spence, J. T., & Helmreich, R. L. (1972). The attitudes toward women scale: an objective instrument to measure attitudes toward the rights and roles of women in contemporary society. *JSAS Catalog of Selected Documents in Psychology*, 2, 66–67.
- Steenkamp, J. E. M., & Baumgartner, H. (1998). Assessing Measurement Invariance in Cross-National Consumer Research. *Journal of Consumer Research*, 25(1), 78-107. doi:10.1086/209528.

Svallfors, S. (1997) Worlds of Welfare and Attitudes to Redistribution: A Comparison of Eight Western Nations. *European Sociological Review*, 13 (3), 283-304.

Van de Vijver, Fons J.R. (1998). *Towards a Theory of Bias and Equivalence*. ZUMA-Nachrichten Spezial.

Vijver, F.J.R. van de, & Poortinga, Y.H. (1982). Cross-cultural generalization and universality. *Journal of Cross-Cultural Psychology*, 13(4), 387-408.

Walby, S. (1994). Methodological and theoretical issues in the comparative analysis of gender relations in Western Europe. *Environment and Planning A*, 1339-1354.

Wilcox, C., & Jelen, T. (1991). The Effect of Employment and religion on Women's feminist Attitudes. *International Journal for the Psychology of Religion*, 1 (3), 161-171.

Wrigley, J. (2005) *Education and Gender Equality*. London: Taylor & Francis.

Yuchtman-Yaar, E., & Alkalay, Y. (2007). Religious Zones, Economic Development and Modern Value Orientations: Individual versus Contextual Effects. *Social Science Research*, 36, 789-807.

Zvonkovic, A.M, & al. (1996). The Martial Construction of Gender through Work and Family Decisions: A Qualitative Analysis. *Journal of Marriage and Family* 58 (1), 91-100.

## Appendix

Table 3. Countries and number of valid cases by country in WVS 2005 and ISSP 2002

Country	WVS 2005 (N)	ISSP 2002 (N)
Andorra	955	

Country	WVS 2005 (N)	ISSP 2002 (N)
Argentina	760	
Australia	1374	1286
Austria		1594
Belgium		1174
Brazil	1450	2000
Bulgaria	863	829
Burkina Faso	1315	
Canada	1957	
Chile	896	1505
China	1444	1480
Cyprus	1046	800
Czech Republic		1163
Denmark		1142
East Germany	937	1107
Egypt	3031	
Ethiopia	1439	
Finland	947	1353
France		1741
Georgia	1146	
Ghana	1454	
Hungary		950

Country	WVS 2005 (N)	ISSP 2002 (N)
India	1365	
Indonesia	1889	
Israel		1114
Italy	851	
Japan	547	1132
Jordan	1157	
Latvia		903
Malaysia	1189	
Mali	1380	
Mexico	1425	1413
Moldova	962	
Morocco	1102	
New Zealand		945
Norway	1011	1290
Peru	1347	
Phillipines		1200
Poland	737	1036
Portugal		1056
Romania	1413	
Russia		1614
Rwanda	1296	

Country	WVS 2005 (N)	ISSP 2002 (N)
Serbia	1088	
Slovakia		1056
Slovenia	892	1012
South Africa	2539	
Spain	1046	2471
Sweden	936	909
Switzerland	1138	800
Taiwan	1218	
Thailand	1515	
The Netherlands		1102
Trinidad & Tobago	917	
Turkey	1213	
Ukraine	837	
United Kingdom		1752
Uruguay	811	
USA	1214	1072
Vietnam	1402	
West Germany	806	752
Zambia	1331	

Table A1. Descriptive statistics for the items measuring attitudes towards gender roles in ISSP 2002 and WVS 2005

	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
<b>ISSP</b>						
Working mom: preschool child suffers ( <i>childsuffers</i> )	1	5	2.74	1.260	.294	-1.068
Working woman: family life suffers ( <i>familysuffers</i> )	1	5	2.82	1.282	.218	-1.133
What women really want is home & kids ( <i>home&amp;child</i> )	1	5	2.86	1.251	.173	-1.057
Household satisfies as much as paid job ( <i>housewife</i> )	1	5	2.86	1.241	.124	-1.079
Work is best for women's independence ( <i>jobindep</i> )	1	5	2.26	1.110	.755	-.216
Both should contribute to household income ( <i>bothincome</i> )	1	5	2.01	.994	.942	.405
Men's job is work, women's job household ( <i>money&amp;hh</i> )	1	5	3.31	1.322	-.294	-1.120
Men should do larger share of household work ( <i>menhh</i> )	1	5	2.33	1.026	.671	-.066
Men should do larger share of childcare ( <i>menchild</i> )	1	5	2.21	.954	.774	.352
<b>WVS</b>						

Being a housewife fulfilling ( <i>housewife</i> )	1	4	2.31	.904	.182	-.761
Men make better political leaders ( <i>menlead</i> )	1	4	2.66	.903	-.205	-.725
University is more important for a boy ( <i>boyeduc</i> )	1	4	3.08	.828	-.750	.153
Men make better business executives than women do ( <i>menexec</i> )	1	4	2.77	.911	-.340	-.673

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Table A2. Descriptive statistics of factor loadings of Exploratory Factor Analysis – WVS 2005

	<b>mean</b>	<b>st dev</b>	<b>max</b>	<b>min</b>
Being a housewife fulfilling ( <i>housewife</i> )	0.189	0.025	0.695	-0.208
Men make better political leaders ( <i>menlead</i> )	0.714	0.046	0.871	0.567
University is more important for a boy ( <i>boyeduc</i> )	0.637	0.1065	0.89	0.431
Men make better business executives than women do ( <i>menexec</i> )	0.833	0.013	0.938	0.675
Total variance explained	43	5.5	64	33

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Table A3. Descriptive statistics of factor loadings of Exploratory Factor Analysis – ISSP 2002

	Factor 1				Factor 2			
	mean	st dev	max	min	mean	st dev	max	min
Working mom: preschool child suffers ( <i>childsuffers</i> )	0.64	0.12	0.79	0.32	-0.01	0.07	0.14	-0.15
Working woman: family life suffers ( <i>familysuffers</i> )	0.69	0.10	0.84	0.39	-0.01	0.07	0.18	-0.11
What women really want is home & kids ( <i>home&amp;child</i> )	0.57	0.09	0.76	0.35	-0.05	0.08	0.08	-0.32
Household satisfies as much as paid job ( <i>housewife</i> )	0.39	0.16	0.68	-0.23	-0.09	0.07	0.03	-0.26
Work is best for women's independence ( <i>jobindep</i> )	-0.10	0.13	0.17	-0.54	0.23	0.06	0.40	0.07
Both should contribute to household income ( <i>bothincome</i> )	-0.19	0.13	0.13	-0.50	0.24	0.09	0.41	-0.03
Men's job is work, women's job household ( <i>money&amp;hh</i> )	0.60	0.10	0.71	0.41	-0.13	0.11	0.11	-0.40
Men should do larger share of household work ( <i>menhh</i> )	-0.03	0.08	0.15	-0.20	0.80	0.07	0.93	0.62
Men should do larger share of childcare ( <i>menchild</i> )	0.02	0.09	0.21	-0.22	0.79	0.07	0.88	0.58
Total variance explained	37	6	49	22				

## Paper 2: Attitudes towards gender roles and care policies

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### Abstract

Does support given by governments through work-family reconciliation policies come together with more egalitarian attitudes towards gender roles among individuals, or otherwise? The present paper analyzes simultaneously four main reconciliation policies, in 21 European countries in a multilevel framework. The empirical evidences show that the work-family reconciliation measures have a strong relationship with the attitudes towards gender roles, exposing people to different institutional frames and inducing different behavioral and attitudinal paths. Nevertheless, this relationship is complex and nuanced, depending, among other factors, on the type of policy and its generosity.

**Key words:** attitudes towards gender roles, paternal leave, maternity leave, elderly care, childcare

### 1. Introduction

In the last few decades, various social changes have led to the traditional social structure being contested. Among the characteristics questioned are the labor market structure, family structure and functions, as well as the gender roles distribution. Hence, the question that arises is how gender roles are split and what are people's views on their new roles?

The literature emphasizes that one of the biggest determinants of change related with traditional gender roles is the increasing participation of women in the labor market. Another important aspect is that, although women's aspirations regarding their career increased, they did not compromise on their plans of becoming mothers (Bieibly & Bieibly, 1984; Novack & Novack, 1996; Phillips & Imhoff, 1997). This means that women are often confronted with the dilemma of choosing between pursuing a professional career or becoming a mother (Sjöberg, 2010). A question that arises here, and that will be treated in this paper, refers to how this dilemma is translated in the attitudes towards gender roles.

Simultaneously with the changes mentioned above, most governments from industrialized countries developed family-work reconciliation policies that defined the actual men's and women's labor participation, but also the norms regarding the male and female roles on the labor market and inside their households. The new division of paid work brought, to varying degrees, also changes in the unpaid work share (Baxter, 2000; McFarlane et al., 2000; Beagan et al., 2008). This evolution has determined a re-evaluation of traditional beliefs and values related with the family and work. Although the acceptance of these new roles, particularly those of women, is documented in many studies, the degree to which this evolution took place differs among industrialized countries (Sjöberg, 2010). In consequence, we also expect to find that attitudes towards these roles have different orientations, assuming that people's beliefs are highly correlated with their behaviors (Kalmijn, 2005). Furthermore, the way these attitudes correlate with the new distribution of gender roles remains unclear and will be empirically explored in this study. Along with other factors, an important role in maintaining gender differences is played by various institutions, like family-work reconciliation policy measures, that are correlated with both behavior and attitudes towards gender roles. Still, how attitudes towards the modern roles of women and men, and family-work reconciliation policies are related and the precise nature of this relationship are questions that remain to be answered and which this paper will attempt to explore. More specifically, the aim of this paper is to see whether the specific support given by governments through special policy measures introduced to bring women into the paid labor market and to encourage men to be more present in their family comes together with more egalitarian attitudes towards gender roles, or otherwise.

Some research questions are due to be addressed here in order to cover the gaps found in the previous findings. First, is the externalization of housework - usually performed by women in the family - through children and elderly care services associated with a higher acceptance of women as equal players on the paid labor market? Do people who have the chance to externalize some of the children and elderly care activities think that their family would rather benefit than suffer because of women having a paid job? Second, is the availability of maternity leave associated with a higher acceptance of women and men working on the paid labor market or, more general, with more egalitarian attitudes towards gender roles? Thus, does the opportunity given by maternity leave

make it possible to combine the desire to rear children with a successful career or does it reinforce the perception of women as primary care givers and mothers? Moreover, this study seeks to address an issue rarely studied before in the literature, asking the question whether the availability of paternal leave encourages a more egalitarian perception on how roles should be shared between men and women. In other words, does the opportunity to take paternal leave encourage people to see men also as care givers for their family and women also as paid workers?

Although this paper assumes that policy measures influence attitudes, one must mention the large debate existent in this field of study, where important arguments were brought to support the idea that the relationship could also work in the opposite direction, meaning that the attitudes are defining the policies (Brooks and Manza, 2006). Thus, this paper will only consider the relationship as an association and not a causal mechanism. This causal relationship needs further exploration, but it is not the objective of this study.

This paper includes four main parts. Firstly, some theoretical clarifications are made regarding the definition of attitudes towards gender roles and their social and scientific importance, about the relationship between these attitudes and the four family-work reconciliation policies (maternity leave, paternity leave, childcare, elderly care), and regarding the individual-level predictors of these attitudes. The second part includes information about the hypotheses, data description and methods employed. The third part presents the results, while the last part includes the conclusions of the study and some suggestions for further research.

### **1.1. Attitudes towards gender roles and their importance**

The broad definition offered by Bergh (2006, p.6) describes attitudes towards gender roles as the “normative beliefs about what gender relations in society should be like, or to the extent to which a person supports the norm of gender equality”. Pfau-Effinger (2004) states that gender-roles attitudes can also be seen as the societal assumptions regarding what people understand by correct gender relations and by a fair division of tasks between women and men.

The author also emphasizes that the childhood, motherhood and fatherhood are cultural constructions that influence individuals’ decisions and attitudes. Moreover, Kremer (2007) argues that the

norms related to children and house caring are developed and structured in the social policies framework. In other words, the way men and women understand the natural the distribution of their roles depends on the character of the welfare regime they live in. This argument also highlights how attitudes toward gender roles are entrenched in the social policy context (Geisler & Kreyenfeld, 2011). In this paper I will use a similar approach to the attitudes towards gender roles, defining this family of attitudes as the evaluations made by individuals regarding the appropriate-perceived role of men and women inside and outside the household, in a given institutional environment.

## **2. Theoretical links between attitudes and policies**

Previous studies emphasize three main mechanisms that link the attitudes towards gender roles to family-work reconciliation policies. First, we can look at policy measures as factors that shape the opportunity structure of individuals (Sjöberg, 2004). We can explain the cross-cultural differences in attitudes towards gender roles in terms of perceptions of the rewards and costs associated with these new conditions by taking into consideration the increased chances of women to become a part of the paid labor market and the decreased level of perceived benefits coming from the traditional role (Manson et al., 1976; Norris, 1987). Following this logic, we expect to find more support for egalitarian distribution of gender roles in those societies where the available opportunities for women are broader (Morgan and Walker, 1983).

An important determinant of these opportunities is the educational attainment of people (Case, 2007; Kalmijn and Kraaykamp, 2007). The literature reveals that by reaching a higher level of education, individuals develop more liberal or modern gender role attitudes (Alwin et al., 1992; Bolzendahl and Myers, 2004; Brewster and Padavic, 2000), men are more willing to engage in housework (Presser, 1994; South and Spitze, 1994), and the rewards for women's participation in paid labor become higher (Willemsen et al., 2001; Case, 2007; Sjöberg, 2010). Also more highly educated people appear to be the first beneficiaries of the family-work reconciliation policies because they can profit from their higher human capital and earn more from having a paid job compared to

those who have a lower educational attainment. Consequently, higher educated individuals should be more open to the idea of externalizing some of the family and household chores (e.g. the elderly or children care activities) as a solution to the problems brought by the new roles (De Beer, 2007; Vandembroucke & Vlemminckx, 2011). This assumption will be further tested in this paper.

A second way of looking at the relationship between gender roles attitudes and social policies is to consider these policies as a mix of factors enabling women to fructify the modern world's opportunities, like their higher educational achievements (Sjöberg, 2004; Beagan et al., 2008; Willemsen et al., 2001) or otherwise. It is here where the institutional structure intervenes by reconciling paid work with unpaid household care. In countries where this reconciliation is weak, women might feel that their role as paid workers is incompatible with their traditional role of mothers, thus resulting in an ambivalent set of attitudes (Sjöberg, 2009). Also, in weakly reconciled systems, the pressure put on men as breadwinners is higher, reinforcing their traditional role and attitudes. Family policies can provide, to different degrees, solutions for this conflict of roles, easing the struggle between paid and unpaid work (Willemsen et al., 2001). Willems et al. (2001) found that, for example, leave arrangements and child-care services have a positive influence on the number of dual-income households and one-and-a-half-income households in the Netherlands. These policy measures are assumed to be beneficial for women's participation in the labor market, as well as for the egalitarian views of individuals regarding the gender roles distribution in that society. The effect of childcare services was considered to be stronger than the effect related with leave arrangements. Also, the impact was found to be stronger households with young children and with higher levels of education. Nonetheless, the impact on gender attitudes is seen as very weak among men, who are only willing to assume some of the housework if their partner is employed (Willemsen et al., 2001). Still, it remains unclear whether this relationship is similar in other countries or is specific only to the Netherlands. This gap will be addressed in the present paper.

The third way of understanding the relationship between attitudes and policies is by regarding these policies as factors directly contributing to the social construction of people's preferences and values. In consequence, policy orientations can be seen as normative actions that influence people's view on the "proper role" of women

and men in society (Sjöberg, 2004, p.112; Rothstein, 1998; Vespa, 2009). This theoretical position can be tested by empirically exploring whether those countries that have developed policies supporting a dual-earner model are also those countries where the norms linked with modernization of female and male roles are more egalitarian.

Overall, the literature points out that the attitudes towards women's and men's role in the labor market and inside the household may be significantly shaped by work-family reconciliation policies (Kremer, 2007; Geisler & Kreyenfeld, 2011). Combining these three mechanisms – policies as opportunities creators, policies as fructifying instruments for the opportunities and policies as norm shapers – it will be interesting to see if indeed there is a relationship in the expected direction between individuals' attitudes towards gender roles and some specific family-work reconciliation policies.

Taking into consideration the three mentioned mechanisms, some specific theoretical expectations can be formulated regarding the relationship between the reconciliation policies of interest for this paper and the attitudes towards gender roles. Firstly, looking at the childcare services available for each country, a positive relationship between the amount of this type of services and people's attitudes towards gender roles is expected, as a consequence of the opportunities and norms created by this reconciliation measure. More specifically, the availability of services that can substitute child care activities gives the opportunity to both mothers and fathers to have a paid job and to equally develop their careers (Burgess et al., 2008; Gornick et al., 1997; Geisler and Kreyenfeld, 2011). Also, the availability of good quality childcare services is expected to weaken traditional ideas, specifically the notions that a working mother has a less profound relationship with her children or makes her family suffer. In consequence, men and women would be perceived as equals in the labor market and inside the household, therefore individuals' attitudes towards gender roles becoming more egalitarian.

Other family tasks, usually carried out by women in the family, are elderly care activities (Wolf and Soldo, 1994; Viitanen, 2005). Previous studies show that informal elderly care decreases women's labor force participation, increases the risk of old-age poverty resulting from less attachment to the labour force and reinforces traditional gender roles (Viitanen, 2005; Bihl and Pfefferkorn, 2001; Méda, 2001). A solution to this problem is the promotion of domestic outsourcing, meaning that elderly care tasks can be

externalized by making use of specialized, usually public or state-subsidized, elderly care services (Bittmann et al., 1999). This would also result in more opportunities for younger members of the family, especially women, to develop long-term careers and to be considered equal players in the labor market instead of primary care givers for their families. Here, also the second mechanism intervenes by decreasing the perception that families suffer when women have a paid job and that only men should work for an income. As families usually want to have both children and a professional life (Sjöberg, 2009), these two aspects have to be reconciled also with giving parents the opportunity to spend time with their newborns. This is why two additional policy measures of interest for this paper are the paternal and maternity leave available in different countries and their relationship with individuals' attitudes towards gender roles. Looking at maternity leave, previous studies have shown different consequences of the length of maternity leave on women's careers (Burgess et al., 2008; Gornick et al., 1997; Dribe and Stanfors, 2009; Grunow et al., 2007; Schulz and Blossfeld, 2006). First, the existence of maternity leave is acknowledged as essential in order to give women the opportunity to become mothers while developing a career (Bihr and Pfefferkorn, 2001; Méda, 2001). The variation among previous results appears when the length of maternity leave is taken into consideration. Here, according to some studies, the length of the maternity leave has to be carefully assessed. If the leave is too short it does not satisfy the need of mothers to spend time with their newborns, with the child and family suffering as a result, while a prolonged maternity leave brings an undesired interruption in women's career, damaging their long-term professional and financial evolution (Gornick and Meyers, 2003). In both these extreme cases, traditional gender roles are expected to be reinforced, with women being perceived more as better mothers and wives, and less as equal players in the labor market.

On the other hand, for a better family equilibrium, men should be supported to enter the private sphere in the same way that women are supported in the labour market (Bernhardt et al., 2008). One measure developed in response to this problem is the paternity leave made available for fathers in most European countries. The relationship between paternity leave and the attitudes towards gender roles is rarely studied, with fathers' work patterns being less often the focus of social policy attention than mother's employment

(Gornick and Meyers, 2008). Still, it is expected that this reconciliation policy can interact with people's attitudes towards gender roles through both the opportunities and norm-defining mechanisms. First, it allows fathers to participate more in the children care activities thereby weakening the idea of men being bread-winners only. Second, individuals' beliefs relating to the mother being the only one to take care of the family would be reshaped, by clearly illustrating the importance of an active presence of fathers in their children's life.

Debate about the existing relationship between gender roles attitudes and family policies is far from being finalized. Unlike the aforementioned researchers, Motiejunaite and Kravchenko (2008) or Haller and Hoellinger (1994) argue that this relationship is questionable, as the encouragement of female employment does not necessarily encourage a more egalitarian gender roles division or attitudes. Also, the direction of this relationship is contested. Although, in this paper, I consider that these policies are influencing the attitudes towards gender roles, there are also views arguing the reverse with attitudes influencing policies (Brooks and Manza, 2006). Possible arguments for understanding the attitudes as the cause and not as the effect are the democratic principles, which require the inclusion of citizens' opinion in developing social policies.

### **3. Individual-level determinants of the attitudes towards gender roles**

In order to understand the within-country differences regarding people's attitudes towards gender roles, the literature specifies some possible influencing factors. The present analysis will include these factors as independent variables, controlling for possible composition effects. Besides individuals' educational attainment – especially that reached by women, but not only - it is argued that having children, religiosity, partnership, age, employment status and wealth are factors that can partially shape people's attitudes towards gender roles (Becker, 1981; Haas, 2005; Bernhardt, Noack, & Lyngstad, 2008). As previous studies specify, the arrival of the first child in the family reshapes partners' division of roles toward a more traditional version even where there has previously been a

fairly equal division of labor (Geisler & Kreyenfeld, 2011). Regarding the level of religiosity, studies show that there is a positive correlation between the affinity for more traditional gender roles attitudes and a higher level of religiosity. This relationship was explained through the connection between gender attitudes and the religious beliefs associated with most of the denominations promoting women as mothers and wives, and men as family protectors and breadwinners. With respect to the marital and employment status, their effects on individuals' attitudes are interconnected (Baxter & Kane, 1995). As Kane (1998) argues, single, employed people tend to be more gender-egalitarian as the competitive labor market is their only disputed territory. At the other extreme we find married, unemployed women, since their level of financial dependence is the highest. Nonetheless, the socio-economic status of individuals has its share in shaping their gender attitudes. Generally, a higher socio-economic status is expected to bring a more egalitarian attitude towards gender roles.

### *Hypothesis*

Starting from what previous studies and the literature have acknowledged, five main hypotheses have been formulated.

H1: When the public childcare provision is more generous, people tend to agree more with the idea of women working in the labour market and men being more involved in the household care due to the fact that their children can be taken care of through childcare services.

H2: When the institutional opportunity for spending time with their children is given to fathers via paternity leave, people also develop more egalitarian gender attitudes as a result of the renegotiation of the time and share of chores between partners. In consequence, when the paternal leave is more generous, the more people will develop egalitarian attitudes towards gender roles.

H3: The more generous the maternity leave is the more egalitarian people's attitudes towards gender roles will be as a result of the opportunity women have to easily combine their careers with motherhood.-Consequently, the perception that a woman's job has a negative effect on their family life is attenuated.

H4: People living in countries with an available public elderly care system develop more egalitarian attitudes towards gender roles as a result of women, the traditional primary care-givers for older people, having better opportunities to work in a paid job instead.

H4.1 The higher the level of education, the stronger and positive the relationship between the availability of elderly care facilities and people's attitudes towards gender roles.

H5: A different effect of gender on people's attitudes is expected, depending on the origin country, since differences between men's and women's attitudes have developed according to various cultural and institutional paths, which are not always constant across countries.

#### 4. Data and Method

This paper utilized data collected in 2002, through the *International Social Survey Programme* (ISSP), as part of the Family and Changing Gender Roles module. The countries included in this study are the European countries surveyed, except Slovenia, Switzerland and Northern Ireland because of the lack of, or their outlier values, on the country-level indicators. I chose to work with European countries because of their relative similar level of development which allows for a more meaningful comparison.

##### *Dependent variable*

The dependent variable in this analysis are four items measured on a five points scale, recoded so that 1 means highly un-egalitarian view and 5 represents highly egalitarian view. The items analyzed are:

1. Pre-school child suffers through working mother
2. Family life suffers through working mother
3. What women really want is home & kids
4. A man's job is to earn money, a woman's job is the household

After performing an exploratory factor analysis for the four items on each country separately, the results show that the items group on the same factor for all countries included in this study. The dependent variable taps the attitudes people express regarding the perceived roles of women and men inside and outside the household and the effects of mother's work on the family. The variable is

constructed as a summative score based on the four items, and in the following I will refer to this indicator as attitudes towards gender roles. Moreover, the Cronbach's Alpha tests run for the four items (see Table 3), in each country, has a minimum value of 0.6, usually being situated around 0.7-0.8.

### *Independent variables*

To control for compositional effects at the individual level I used: education, having children under six years old, religious services attendance, marital status coded as having a partner or not, age, having a paid job, the perceived-loading of domestic chores, income and subjective well-being.

Secondly, the analysis includes the country-level variables measuring the work-family reconciliation policies, which constitute the main focus of this paper. Here are to be found: the number of places in public (or publicly subsidized) childcare facilities as a share of the number of children aged 0 to 2 years, maximum number of days a father is entitled to take off for paternity leave, maximum length of standard maternity leave and an indicator taping the availability of provision for care services or subsidies to pay for elderly care (only those that do not imply needs testing). Here, the model also controls for the level of socio-economic development of the countries measured through the GDP 2002 (*The World Bank Indicators database*). The variables at the individual level are available in the ISSP 2002 data set, while the policy indicators have been collected from the *Multilinks Database on Intergenerational Policy Indicators*. As the country-level variables were not available for the year 2002, the values included in the analysis taping the policy measures are from 2004. As the social policies are relatively stable in time, I argue that including values for the reconciliation policies collected at a distance of two years from the moment when ISSP database was made, will not significantly affect the present results. Descriptive statistics for all the independent variables are available in the Appendix (see Table 1 and Table 2).

### *Method*

In order to test the above stated hypothesis, five multilevel linear regression models have been estimated using the HLM 7. The multilevel regression approach allows testing relationships both at the

individual and at the country level, also permitting to estimate cross-level interactions (Hox, 2010).

All models have been estimated using listwise deletion of missing values. Also, the individual-level cases have been weighted with the weight variable available in the ISSP 2002 dataset. Tests have been run to check for multi-collinearity problems for both individual and country-level variables, using Tolerance (estimated in SPSS 19). For all indicators the level of Tolerance was above 0.6 and VIF lower than 1.8.

## 5. Results

First, in order to test whether a multilevel approach is needed, an empty model has been estimated (see Table 4, Empty model). Looking at the inter-class correlation (0.15), it can be concluded that there is enough variation at the country-level. In other words, it shows that, in this case, the attitudes towards gender roles vary also across countries and not only across different individual-level characteristics. Moreover, several hierarchical models have been estimated showing generally stable effects. Model 1, which includes only individual-level variables, is followed by Model 2 including both the individual-level and country-level variables of interest. The third model includes all the policy variables of interest plus a cross-level interaction, controlling, at the same time, for GDP and for the individual-level indicators. The final model adds a random slope effect. Taking into consideration the fact that the literature suggested some potential cross-level interaction effects between the social policy indicators and the individuals' education, respectively gender, various additional models have been estimated including these interactions. The results showed no statistically significant interaction effect between any of the social policy indicators (except the one taping the elderly care facilities, already discussed in the paper) and the respondent's education or gender. This means that the relationship between the policies analyzed here and the attitudes towards gender roles is not moderated by gender or education, as the literature indicated it might. As none of these effects were statistically significant the decision was taken to not report the additional models. For further information, please contact the author.

Table 4. Regression results. Dependent variable: attitudes towards gender roles – summative score

	Empty model	Model 1	Model 2	Model 3	Model 4
<i>Country-level</i>					
Intercept			-3,736	-2,612	-1,600
Childcare facilities			0,025**	0,024**	0,024**
Days of paternity leave			0,013	0,010	0,012
Weeks of maternity leave			-0,052**	-0,053**	-0,047**
Elderly care facilities			-0,416	-1,210***	-1,249***
GDP			1,393**	1,326***	1,215***
<i>Individual-level</i>					
Male		-0,927***	-0,925***	-0,927***	-0,913***
Age		-0,040***	-0,040***	-0,041***	-0,041***
Active on labor market		0,662***	0,673***	0,679***	0,678***
Has a partner		-0,283***	-0,267***	-0,260***	-0,266***
Highest level of education		0,459***	0,462***	0,290***	0,291***
Has children under 6 years old		-0,155	-0,159	-0,178*	-0,176
Happiness		-0,004	-0,004	-0,004	-0,004
Not too many chores to do at home		0,199***	0,198***	0,198***	0,197***

Income	0,358***	0,321***	0,332***	0,331***
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*Cross-level interaction*

Highest level of education * Elderly care facilities			0,304***	0,304***
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*Random slope*

Male				0,232***
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R <sup>2</sup> level 1	0,22	0,27	0,28	0,27
R <sup>2</sup> level 2	0,42	0,82	0,82	0,80
ICC	0,15			

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\*p<0.10; \*\*p<0.05; \*\*\*p<0.01 (two-tailed test)

In order to explore the first hypothesis of this study, assuming that when the public childcare provision is more generous people tend to express more egalitarian attitudes, the complete model (see Table 4, Model 4) includes a country-level variable measuring the number of childcare facilities in each country. Here, it can be observed that the first hypothesis is confirmed as the relationship between individuals' attitudes towards gender roles and the childcare facilities is a positive and statistically significant one. In other words, in countries where for parents it is easier to put their children in a public childcare facility, people tend to agree more with the idea of women working in the labour market and men being more involved in the household care. This can be due to the fact that as soon as the child is taken care of by a competent and affordable system, individuals are more accepting of the idea of a working mother or of a more involved father in childcare. Moreover, when children are put into childcare facilities, women have the opportunity to work, being exposed to more egalitarian ideas, earning their own income. All these factors increase their power of bargain and expose their male partners to more modern gender views. In consequence, both women and men would develop more egalitarian attitudes towards gender roles when the public childcare facilities are more generous. Here, it has to be mentioned that an additional model has been estimated, including a cross-level interaction between the individual-level variable measuring whether the respondent has children or not, and the country-level indicator taping the generosity of childcare facilities. This interaction effect has been estimated starting from the theoretical assumption that people with children would benefit more from a generous public childcare system and, in consequence, their attitudes would be the most influenced. However, the results did not support this assumption, the cross-level interaction not being statistically significant.

In order to test the second hypothesis of this study, giving fathers the institutional opportunity of spending time with their children leads to more egalitarian attitudes towards gender roles, Model 4 has been estimated. Here the estimation (see Table 4, Model 4) also includes a country-level variable taping the length of paternity leave available in each country. Surprisingly, the relationship between paternity leave and people's attitudes is not statistically significant, although the direction of the relationship indicated by the coefficient

is the expected one. Various explanations are possible. One may be that the dependent variable employed in this study taps rather attitudes towards women's role and less men's role. Still, if this was the case, a higher contribution of men to the household and children care would rebalance the distribution of roles, so that also the opinion about women's contribution should be affected. In consequence, a statistically significant relationship would still be in place. Another possible explanation is the relative novelty of paternity leave in most of the countries studied here. Taking into consideration this aspect, we can expect to find just weak links between this policy measure and people's attitudes, which might not have had enough time to react to these new opportunities created by the availability of paternity leave. Overall, it can be observed that, at least on the data available so far, the second hypothesis of the present study is not confirmed, the relationship assumed between the availability of paternity leave and people's attitudes towards gender roles not being statistically significant.

The third hypothesis proposed by this paper assumes that the more generous the maternity leave is the more egalitarian people's attitudes towards gender roles are as a result of the opportunity women have to easily combine their careers with their motherhood, and, in consequence, to eliminate the perception that a woman's job has a negative effect on their family life. In order to test for this hypothesis, a country-level indicator has been included (see Table 4, Model 4). Here, an interesting effect appears showing that the relationship between the attitudes towards gender roles and the length of maternity leave works in the opposite direction than it was hypothesized. In other words, the results show that people in countries with longer maternity leave periods tend to express less egalitarian attitudes. An initial possible explanation is found in the socio-economic literature (Gornick and Meyers, 2003), where the effect of maternity leave is seen as a non-linear function of its length. More specifically, extending this theory, the maternity leave should have an increasing positive effect on individuals' attitudes until it reaches a peak, after which the effect should start decreasing, becoming negative. This might be due to the fact that a short or medium maternity leave is beneficial for children and family life, giving women the opportunity to keep their job and have children at the same time, while a prolonged leave affects women's careers and changes individuals' perceptions about their role in the labor market, being regarded more as mothers and wives and less as equal job co-

workers. In order to test for this theoretical explanation, various non-linear effects have been estimated for the maternity leave indicator. None of these were significant, showing that indeed the relationship between attitudes and maternity leave is a linear and negative one. In consequence, it can be stated that as maternity leave duration increases, people tend to strengthen their traditional gender beliefs, perceiving women as mothers and wives, rather than as labour market participants, while the men's role as paid workers and less as household care-givers is also enforced.

Moreover, it has been hypothesized that the higher the level of education, the stronger and positive the relationship between the availability of elderly care facilities and people's attitudes towards gender roles. To test this, the complete model (Table 4, Model 4) includes also a cross-level interaction term between education and the elderly care availability indicator. The results show that the existence of elderly care facilities positively relates only with highly educated individuals' attitudes. In other words, when it comes to people with low or medium educated, the availability of public elderly care has a negative relationship with their attitudes towards gender roles. This might be due to the fact that the additional income, brought by the females in their households by having a paid job instead of taking care of elder members of the family, would not be high enough to stimulate the development of more egalitarian views. Another explanation is that lower educated people have, generally, more traditional beliefs concerning the family. This would stop them from benefiting from the available elderly care system, preferring to take care of their older family members on their own. In this way, the effect of externalizing the care activities on individuals' attitudes does not take place. Moreover, when it comes to the highly educated individuals, the relationship between the availability of elderly care facilities and their attitudes is a positive one, showing that, in their case, putting the older family members in specialized services brings the opportunity for women in the family to play an equal role in the paid labor market and to develop, together with their male partners, more egalitarian attitudes towards gender roles.

Looking to test the last hypothesis of this study, which expects different effects of gender on people's attitudes depending on their country of origin, a random slope has been estimated for the variable measuring respondent's gender (see Table 4, Model 4). The results

show that the hypothesis is confirmed. More specifically, even after controlling for various individual-level and country-level characteristics, the analysis confirms the fact that being a man or a woman has different effects in the different countries included in this study. This implies that gender egalitarianism is still very diverse across countries, the differences between women's and men's attitudes varying from country to country.

Last, it has to be mentioned that all control variables have, in general, the expected effects, being in accordance with previously reported findings. More specifically, the results show that when controlling for contextual factors, men are less egalitarian than women, older people are less egalitarian than younger ones and individuals in couples are less egalitarian than those who are single. On the other hand, being active in the labor market, better educated, not having too many chores to do at home and earning a higher income makes individuals express more egalitarian attitudes towards gender roles. Finally, having children and level of perceived happiness does not influence people's attitudes. All these effects are constant over the four models.

## 6. Conclusions

The present paper focused on whether the specific support given by the governments through special policy measures in order to bring women into the paid labor market and to encourage men to be more present in their family comes together with more egalitarian attitudes towards gender roles. Three main research questions were addressed here. First, is the externalization of unpaid work, which in most societies is done by women in the family, associated with more egalitarian attitudes? More specifically, is the opportunity to put the children and the elderly in public care related with a higher acceptance of women as equal players on the paid labor market? Second, is the availability of maternity leave associated with a higher acceptance of both women and men working in the paid labor market, or, more generally, with more egalitarian attitudes towards gender roles, as a consequence of the opportunity given by leave to be mothers and successful career women simultaneously? Or the maternity leave rather reinforces the perception of women as primary care givers and mothers? Finally, this study also considers whether the availability and extent of paternal leave is connected with a more egalitarian belief in how men and women should share roles inside and outside the household. More exactly, is the

opportunity of taking paternal leave related with people looking at men also as care givers for their family and women also as paid workers?

The ISSP 2002 data shows a partial support for the hypotheses stated earlier in the paper providing additional information in this research field. The results confirm the first hypothesis, revealing a positive and statistically significant positive relationship between individuals' attitudes towards gender roles and the childcare facilities. More specifically, individuals living in countries where the childcare services are more generous tend to develop more egalitarian attitudes, agreeing with a more modern distribution of roles between women and men.

Moreover, another care responsibility, usually assumed by women, is the one for the older members of the family. At a first look, it seems the data does not support the hypothesis according to which people living in countries with an available public elderly care system also develop more egalitarian attitudes. Furthermore, the results show that the availability of elderly care facilities is positively associated only with highly educated individuals' attitudes. More specifically, in the case of people with low or medium education, the availability of public elderly care has a negative relationship with their attitudes towards gender roles, while in the case of highly educated people, the existence of elderly care services comes together with more egalitarian attitudes.

Looking at how the contribution of men in the household chores is encouraged through social policy measures, the data used here did not support the hypothesis of an expected positive relationship between the paternal leave available in each country and individuals' attitudes towards gender roles. Still, as the theoretical assumptions regarding this link are clear, further research on more recent data is needed in order to better explain the relationship between the availability of paternal leave and the attitudes towards gender roles.

This study also looked at the relationship between the length of maternity leave and the attitudes towards gender roles. Here, the data did not meet the theoretical expectations. An interesting effect was found, showing that people in countries with longer maternity leave periods tend to express less egalitarian attitudes. Various non-linear effects have been estimated for the maternity leave indicator, but none of these were significant, showing that the relationship between attitudes and maternity leave is a linear and negative one.

Finally, the data confirmed that even when controlling for various individual-level and country-level characteristics, being a man or woman has different effects in the different countries included in this study. This implies that gender egalitarianism is still very diverse across countries, with the differences between women's and men's attitudes varying from country to country.

All in all, the present paper shows that the work-family reconciliation policies have a strong relationship with the attitudes towards gender roles, exposing people to different institutional frames and inducing different behavioral and attitudinal paths. Moreover, the results showed that in order to reach highly egalitarian attitudes it is not enough to have a generous care or leave provision, but it is also necessary to carefully develop these policies in order to avoid the side effects of too long a maternity leave, or maybe a paternity leave that is not economically attractive.

Nonetheless, as stated before, the findings of this paper can be theoretically and empirically challenged. Although, this paper only assumes correlations, in order to better understand the connection between the attitudes towards gender roles and reconciliation policies, research must go further and look at causal relationships. The debate about the causal direction of the relationship between attitudes and policies must be kept in mind, as there are reasonable theoretical arguments for both directions. Unfortunately, the lack of cross-national panel data prevents us from looking more closely at this relationship, and, for now, we can only discuss in terms of correlations.

Further research should try to establish a causal direction for the relationship between the attitudes and family-work reconciliation policies by employing panel data from different cultures or a similar research design, that permit causal findings. Also, through a qualitative approach, researchers should have a closer look at some specific policy regimes and cultures in order to better understand how the policies should be designed so that these side effects can be avoided and the more egalitarian and modern attitudes towards gender roles can be encouraged.

## References

- Alwin, D.F., Braun, M. and Scott, J. (1992). 'The Separation of Work and the Family: Attitudes Towards Women's Labour-Force Participation in Germany, Great Britain, and the United States', *European Sociological Review* 8(1): 13–37.
- Baxter, J. (2000). 'The Joys and Justice of Housework', *Sociology* 34(4): 609–31.
- Baxter, Janeen and Kane, Emily W. (1995). 'Dependence and Independence: A Cross National Analysis of Gender Inequality and Gender Attitudes', *Gender and Society* 9: 193-215.
- Beagan, B., Chapman, G. E., D'Sylva, A. and Bassett, B. R. (2008). 'It's Just Easier for Me to Do It': Rationalizing the Family Division of Food-work', *Sociology* 42(4): 653-671.
- Becker, G. S. (1981). 'Division of Labor in Households and Families', in *A Treatise on the Family*, pp. 14–37. London and Cambridge, MA: Harvard University Press.
- Bergh, J. (2006). 'Gender Attitudes and Modernization Processes', *International Journal of Public Opinion Research* 19: 5-23.
- Bernhardt, E., Noack, T., and Lyngstad, T. H. (2008). 'Shared housework in Norway and Sweden: advancing the gender revolution', *Journal of European Social Policy* 18(3): 275-288.
- Bielby, D.D. and Bielby, W.T. (1984). 'Work commitment, sex-role attitudes, and women's employment', *American Sociological Review* 49: 234-247.
- Blossfeld, H.-P. and Drobnic, S. (2001). *Careers of Couples in Contemporary Societies: From Male Breadwinner to Dual Earner Families*. Oxford: Oxford University Press.
- Bolzendahl, Catherine I. and Myers, Daniel J. (2004). 'Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974-1998', *Social Forces* 83: 759-790.
- Brewster, Karin L. and Padavic, Irene (2000). 'Change in Gender-Ideology, 1977-1996: The Contribution of Intracohort Change and Population Turnover', *Journal of Marriage and the Family* 62: 477-487.
- Case, K. A. (2007). 'Raising male privilege awareness and reducing sexism: An evaluation of diversity courses', *Psychology of Women Quarterly* 31(4): 426-435.

- De Beer, Paul (2007). 'Why work is not a panacea: a decomposition analysis of EU-15 countries', *Journal of European Social Policy* 17(4): 375–388.
- Duncan, S. (1995). 'Theorizing European Gender Systems', *Journal of European Social Policy* 5(4): 263-284.
- Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*. Oxford: Polity Press.
- Esping-Andersen, G. (1999) *Social Foundations of Postindustrial Economies*. Oxford: Oxford University Press.
- Ferrarini, T. (2006). *Families, States and Labour Markets: Institutions, Causes and Consequences of Family Policy in Post-War Welfare States*. Cheltenham: Edward Elgar Publishing.
- Geisler, E., and Kreyenfeld, M. (2011). 'Against all odds: Fathers' use of parental leave in Germany', *Journal of European Social Policy* 21(1): 88-99.
- Hakim, C. (2003). 'Competing Family Models, Competing Social Policies', *Family Matters* 64(3): 51–61.
- Haas, B. (2005). 'The Work-Care Balance: Is it Possible to Identify Typologies for Cross-National Comparisons?', *Current Sociology* 53(3): 487-508.
- Haller, M. and Hoellinger, F. (1994). 'Female Employment and the Change of Gender Roles: The conflictual relationship between participation and attitudes in international comparison', *International Sociology* 9(1): 87-112.
- J.J. Hox (2010). *Multilevel analysis. Techniques and applications. 2nd Edition*. New York: Routledge.
- Inglehart, Ronald and Welzel, Christian (2005). *Modernization, Cultural Change and Democracy*. Cambridge University Press, New York.
- Kalmijn, M. (2005). 'Attitude alignment in marriage and cohabitation: The case of sex-role attitudes', *Personal Relationships* 12: 521-535.
- Kalmijn, M. and Kraaykamp, G. (2007). 'Social Stratification and Attitudes: A Comparative Analysis of the Effects of Class and Education in Europe', *British Journal of Sociology* 58(4): 547–76.
- Kane, E. W. (1998). 'Men's and Women's Beliefs About Gender Inequality: Family Ties, Dependence, and Agreement', *Sociological Forum* 13: 611-637.
- Korpi, W. (2000). 'Faces of Inequality: Gender, Class, and Patterns of Inequalities in Different Types of Welfare State', *Social Politics* 7 (2): 127–91.

- Kremer, Monique (2007). *How Welfare States Care: Culture, Gender and Parenting in Europe*. Amsterdam: Amsterdam University Press.
- Lewis, J. (1992). 'Gender and the Development of Welfare Regimes', *Journal of European Social Policy* 2(3): 159–73.
- Lewis, J. (2002). 'Gender and Welfare State Change', *European Societies* 4(4): 331–57.
- Mason, K. O., Czajka, J. L. and Arber, S. (1976). 'Change in U.S. Women's Sex Role Attitudes, 1964–1974', *American Sociological Review* 41 (4): 537–66.
- McFarlane, S., R. Beaujot and T. Haddad (2000). 'Time Constraints and Relative Resources as Determinants of the Sexual Division of Domestic Work', *Canadian Journal of Sociology* 25(1): 61–82.
- Morgan, C. S. and Walker, A. J. (1983). 'Predicting Sex-role Attitudes', *Social Psychology Quarterly* 46 (2): 148–51.
- Motiejunaite, A., and Kravchenko, Z. (2008). 'Family policy, employment and gender-role attitudes: a comparative analysis of Russia and Sweden', *Journal of European Social Policy* 18(1): 38–49.
- Norris, P. (1987). *Politics and Sexual Equality*. Boulder, CO: Rienner.
- Novack, L.L. and Novack, D.R. (1996). 'Being Female in the Eighties and Nineties: Conflicts Between New Opportunities and Traditional Expectations among White, Middle Class, Heterosexual College Women', *Sex Roles* 35: 57–77.
- Pfau-Effinger, B. (2004). *Development of Culture, Welfare States and Women's Employment in Europe*. Aldershot: Ashgate.
- Pfau-Effinger, B. (2000). *Kultur und Frauenerwerbstätigkeit in Europa. Theorie und Empirie des internationalen Vergleichs*. Opladen: Leske und Budrich.
- Phillips, S. and Imhoff, A. (1997). 'Women and Career Development: A Decade of Research', *Annual Review of Psychology* 48: 31–59.
- Presser, H.B. (1994). 'Employment Schedules Among Dual-Earner Spouses and the Division of Household Labor by Gender', *American Sociological Review* 59(3): 348–64.
- Rothstein, B. (1998). *Just Institutions Matter. The Moral and Political Logic of the Universal Welfare State*. Cambridge: Cambridge University Press.
- Sjöberg, O. (2010). 'Ambivalent Attitudes, Contradictory Institutions: Ambivalence in Gender-Role Attitudes in Comparative

Perspective', *International Journal of Comparative Sociology* 51(1-2): 33-57.

Sjöberg, O. (2004). 'The Role of Family Policy Institutions in Explaining Gender-Role Attitudes: A Comparative Multilevel Analysis of Thirteen Industrialized Countries', *Journal of European Social Policy* 14(2): 107-123.

South, S. J. and Spitze, G. (1994). 'Housework in Marital and Nonmarital Households', *American Sociological Review* 59(3): 377-47.

Vandenbroucke, F. and K. Vleminckx (2011). 'Disappointing poverty trends: is the social investment state to blame? An exercise in soul-searching for policy-makers', *CSB Working paper* No. 11/01.

Vespa, Jonathan (2009). 'Gender Ideology Construction: A Life Course and Intersectional Approach', *Gender & Society* 23 (3): 363-387.

Warren, T. (2000). 'Diverse Breadwinner Models: A Couple-Based Analysis of Gendered Working Time in Britain and Denmark', *Journal of European Social Policy* 10(4): 349-71.

Wernet, C. A. (2008). 'An Index of Pro-Woman Nation-States: A Comparative Analysis of 39 Countries', *International Journal of Comparative Sociology* (49): 60-80.

Willemsen, T. M., Jacobs, M. J. G., Vossen, A., and Frinking, G. A. B. (2001). 'An Impact Assessment of Policy Measures to Influence the Gender Division of Work', *Evaluation* (7): 369-386.

## Appendix

Table 1. Descriptive statistics - individual-level variables

	N	Missing	% Yes
Male	29045	2	43,4
Active on labor market	28723	324	55,8
Has a partner	28834	213	57
Has children under 6 years old	28662	385	12,6

	N	Missing	Mean	Std. Deviation	Min	Max
Age	28977	70	45,95	16,99	15,00	96,00
Highest level of education	28674	373	2,72	1,42	0,00	5,00
Happiness	28392	655	5,18	1,00	1,00	7,00
Not too many chores to do at home	26332	2715	2,85	1,22	1,00	5,00
Income	23427	5620	7,81	1,75	0,11	12,61

Table 2. Descriptive statistics - country-level variables

	N	Mean	Median	Std. Deviation	Minimum	Maximum
Childcare facilities	29047	21,881	17,700	14,1945	2,0	56,0
Days of paternity leave	29047	6,67	7,00	6,948	0	21
Weeks of maternity leave	29047	17,77	16,00	4,956	9	28
GDP	29047	9,9703	10,2231	,47734	8,93	10,52
Elderly care facilities	29047	% yes 60%				

Table 3. Cronbach's Alpha values for items used as dependent variable

<b>Country</b>	<b>Cronbach's Alpha</b>	<b>N of Items</b>
Austria	0,78	4
Bulgaria	0,69	4
Cyprus	0,74	4
Czech Republic	0,69	4
Denmark	0,79	4
Finland	0,77	4
Flanders	0,80	4
France	0,78	4
Great Britain	0,77	4
Hungary	0,70	4
Ireland	0,73	4
Latvia	0,63	4
Netherlands	0,75	4
Norway	0,80	4
Poland	0,79	4
Portugal	0,68	4
Russia	0,66	4
Slovak Republic	0,67	4
Spain	0,72	4
Sweden	0,82	4
West Germany	0,79	4

## **Paper 3: Couple's status on labour market and attitudes towards gender roles**

Authors: Andreea Constantin and Malina Voicu

*Starting from the assumption that gender roles are shaped by interaction between a woman and a man living as a couple, derived from the symbolic interactionism approach, the current analysis investigates how both partners' position in the labour market shapes their attitudes towards two different dimensions of gender roles. We test our hypotheses using data from nine waves of British Household Survey Panel, and we focus our analysis only on people living as couples. The results show that both women and men react differently to the transition from the traditional couple (men breadwinner/woman homemaker) to other type of couples depending on the dimension of gender roles we focus on.*

Keywords: attitudes towards gender roles, British Household Survey Panel, labour market

### **1. Introduction**

Attitudes towards gender roles significantly changed during the last decades in European societies under the impact of industrialization and modernization (Inglehart and Norris, 2003; Inglehart and Welzel, 2005). Among the factors associated to modernization increasing education for both genders (Wilensky, 2002) and women's labour force participation are important factors influencing beliefs and attitudes about the roles played by women and men (Banaszak and Leichley, 1991; Banaszak and Plutzer, 1993; Cunningham et al. 2005; Fan and Mooney Marini, 2000).

Previous studies on the effect of employment on attitudes towards gender roles analysed the impact of individual employment status on these attitudes (Banaszak and Leichley 1991). However, the effect of getting out of labour market on attitudes towards gender roles was not explicitly addressed in previous work. On the other hand, gender relations and gender roles are socially constructed (McInnes, 1998) and built on social interaction with others (West and Zimmerman, 1987). Therefore, one's own status in the labour market is a relevant factor in shaping attitudes towards gender roles, while the employment status of the partner is relevant too for explaining attitudes shared by people living as couples.

This paper tries to fill this gap by analysing the effect of the combined labour market status of people living as couples on their attitudes towards gender roles. Since we are interested on the effect of being or not in paid employment we consider employed people as being active on labour market and we oppose them to those people that are inactive on labour market including here people that are unemployed, retired, looking after family and home, in school or sick and disabled<sup>4</sup>. We test our research hypotheses using data from nine successive waves of the British Household Survey Panel. We restrict our analysis to people living as a couple and we test our hypotheses using fixed effects models for panel data.

The first section covers existing literature on the relation between gender equality and female employment as well as the factors influencing attitudes towards gender roles. The second section introduces the indicators and the strategy used for analysis, while the third section includes the data analysis. The discussion and conclusion are found in the final section.

## **2. Review of literature and hypotheses**

Attitudes towards gender roles are ‘normative beliefs about what gender relations in society should be like, or the extent to which a person supports the norm of gender equality’ (Bergh 2006: 6). Traditional gender roles assign the breadwinner role to the male partner and the homemaker role to the female (Cunningham et al, 2005). In modern and post-modern societies, women and men tend to assume similar roles regarding paid employment and housework division (Breen, Cook, 2005). Consequently, favourable attitudes towards traditional gender roles assign the homemaker role to women and the breadwinner role to men, while positive attitudes towards non-traditional gender roles assign similar tasks to both genders in what concerns housework sharing and labour market participation.

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<sup>4</sup> We do not follow here the traditional distinction between economically active versus inactive population as it is stated by International Labor Organization (<http://ilo.org/global/statistics-and-databases/statistics-overview-and-topics/lang--en/index.htm>). We strictly refer to the position on labor market and we distinguish between those that are in paid employment and those that are not.

Female participation in paid employment has a strong impact on attitudes towards gender roles among both women and men (Banaszak and Leichley 1991). Several different models are used to explain this fact. Such models include interest-based explanations, exposure-based explanations (Bolzendahl and Myers 2004) and control models (Kroska and Elman 2009).

*Interest-based explanations* show that individuals share egalitarian attitudes when they can benefit from gender equality (Bolzendahl and Myers 2004). These models explain why working women are in favour of female employment. Employment provides women with their own income and helps them become economically independent. A similar mechanism is used to explain why men hold non-traditional attitudes when their spouse is employed. An additional income provided by a wife's employment makes households better off financially, and the husband benefits from this as well. For the present study, this model would imply that individuals living in couples, where the female partner is active on the labour market, should express more egalitarian gender attitudes due to the additional financial benefits.

*Exposure-based models* assume that changes in gender attitudes and beliefs occur when the individual is exposed to egalitarian ideas or to situations promoting increased support for gender equality (Bolzendahl and Myers 2004). Work experience exposes women to discriminatory practices making them aware of inequality and feminist ideas due to contact with other women who share egalitarian ideas. Working also provides women with the opportunity to prove they are able to perform in the labour market (Banaszak and Plutzer 1993) and combine work and family life. Moreover, in case of men, having women as workmates changes their attitudes towards gender roles in a non-traditional direction because they are exposed to non-traditional gender roles. In consequence, according to this model, people living in couple, where female partners are engaging in non-traditional activities – paid work –, should also express less traditional attitudes towards gender roles.

*Control models* show that individuals seek to maintain meanings and 'they adjust their attitudes to match their behaviour' (Kroska and Elman 2009: 379). According to cognitive dissonance theory, when individual have to perform behaviours that go against their

attitudes or opinions, they either change their attitudes or they give up the respective behaviour (Festinger, 1957). By instance a woman that has to take a job because of money shortage of her family will change her attitudes towards gender roles in favour of non-traditional gender division of work, because she needs to adapt her attitudes to her behaviour. This mechanism occurs for men too, when their partners get into paid employment or when they have women as workmates. In both cases an adaptation of attitudes towards gender roles takes place to reduce the cognitive dissonance.

According to these three explanations, women's employment changes attitudes towards gender roles shared by women and their partners in a more non-traditional direction. Moreover, when the male partner is also employed, he is doubly exposed to non-traditional attitudes towards gender roles, at home and in the workplace. Consequently one can say that being employed exposes both gender to non-traditional gender roles and helps people to reshape their attitudes. Therefore, we expect that, in case of being inactive on labour market, the lack of exposure to non-traditional gender roles will make people to change their attitudes towards gender roles in a more traditional direction, no matter their gender. Also, in case of women, a control mechanism can occur and reshape their attitudes into a more traditional direction that is in line with their employment status.

On the other hand, gender is constituted and displayed through interaction (West and Zimmerman, 1987); consequently, gender roles and gender identities are created through social interaction. Moreover, living as a couple shapes gender roles and gender identities in different ways, thus making people behave more accordingly with traditional gender roles (Gough and Killewald, 2011; Gupta, 1999). Therefore, beginning with this approach, we expect that the employment status of both partners will be an important factor in shaping attitudes towards gender roles.

Another theoretical explanation for how attitudes are shaped is the 'doing gender' mechanism. According to the doing gender approach (West and Zimmerman, 1987), gender is also expressed in daily life because women and men behave according to socially accepted expectations regarding their gender roles. Since gender roles are embedded in social contexts and are different from one society to another (McInnes, 1998; Zvonkovic et al., 1996), doing gender can

have different meanings in different societies. Male-breadwinner/female-homemaker is the most widespread model of gender relations in Western societies (Taylor, Tucker and Mitchell-Kernan, 1999). Doing gender means performing according to the roles set forth by this model. Therefore, we expect that even in contexts where gender roles deviate from the traditional gender division, people will 'do gender' and will behave according to the traditional expectations regarding gender roles. Due to the control mechanism (Kroska and Elman 2009), traditional behaviour will shape attitudes towards gender roles in a more traditional direction.

### **2.1. Couple's status on labour market, gender identity and attitudes towards gender roles**

Transition from active to inactive status on labour market has consequences on family life, on dynamic of couple relationships and may have implications on attitudes towards gender roles. Unemployment and retirement can be such cases. Unemployment produces psychological stress, challenges gender roles and affects individuals' and family's well-being (Sen, 1997). Moreover, it may weaken the harmony within families and can produce an identity crisis (Sen, 1997). In cases involving the unemployment of one or both partners, maintaining gender identities serves as a mechanism for coping with substantial economic and family change (Legerski and Cornwall, 2010: 469). Similar mechanisms were described in case of couple transiting into retirement or from retirement to additional jobs (Moen, Kim, Hofmeister, 2001). Therefore, in such cases like unemployment or retirement, partners will begin to stress traditional gender roles and gender identity to cope with the new situation.

Traditional gender roles assign the caretaker role to females, who are traditionally seen as being in charge of housework provision. In cases of unemployment or retirement, they easily adapt to the traditional gender division of labour and take over the caretaker attributions (Forret, Sullivan and Mainiero, 2010; Gerstel, 2000; Kulik, 2000). Moreover, women are more likely to base their self-identity on multiple roles, such as mother, sister, daughter or employee (Forett, Sullivan and Mainiero, 2010). Therefore, in cases of transition to an inactive role they can easily switch to a different role and rely on it as a relevant component of their identity.

Male identity is more bound with the role of breadwinner (Hoang and Yeoh, 2011). In contrast with women, the breadwinner role is the most important one for building a man's own identity (Forett, Sullivan and Mainiero, 2010). Therefore, losing the breadwinner status significantly affects men's gender identity. While unemployment or retirement is seen for women as an opportunity to spend more time with their families and return to traditional gender roles, this situation challenges men's individual identities. In general, men are more active seekers in the labour market when they are outside it than women are (Jacob and Kleinert, 2010; Kulik, 2000). Previous studies show that in their private lives, unemployed or retired men still assume a traditional gender role (Moen, Kim, Hofmeister, 2001). Therefore, they do not increase the time spent on domestic work (Brines, 1994; Gupta, 1999), and sometimes they adopt aggressive behaviours that emphasize their dominant status (Macmillan and Gartner, 1999). A disruption in traditional gender roles makes partners reinforce traditional gender ideologies and 'perform a culturally appropriate gender script' (Schmalzbauer, 2011: 442).

Therefore, we assume that the way in which each partner copes with the identity crisis produced by getting out of labour market depends on the centrality of employment for gender identity. Thus, we can assume that couples in which the woman is unemployed are less egalitarian and share more traditional gender attitudes. When the woman is unemployed and the man is employed, the household roles are divided in a traditional way and both partners share traditional attitudes towards gender roles, which allocate different tasks for men and women. This is the most traditional arrangement, and we expect that couples will return to it when women are even temporarily out of the labour market.

When women and men are inactive, they have a similar status in the labour market; however, due to the identity reaction to own situation, we expect to find traditional attitudes towards gender roles in people living as such couples. We do not expect to find significant differences between the attitudes shared by couples in which both partners are inactive and people in couples with an inactive female partner and an active male partner. In the first type of couple, the male's being inactive strengthens gender inequality and the couple preserves the traditional gender order.

Couples with an active woman and an inactive man are characterized by 'deviant identities' (Legerski and Cornwall, 2010: 463) because the woman assumes the breadwinner role, which traditionally is a male role, while the man is outside the labour market and cannot provide for the household. Based on the interest-based and control models, one can assume that the male partner shares more egalitarian attitudes in this context because he benefits from his partner's income and the non-traditional behaviour forces him to adapt his attitudes.

However, previous studies note that men refuse to assume the caretaker role and do not become more involved in domestic work as a result of their decreased income and increased time availability (Brines, 1994; Gupta, 1999). Gupta (1999) shows that when the husband has difficulties performing the traditional gender role, both spouses demonstrate more traditional gender roles in order to avoid violating expected gender norms. We assume that in cases of deviant gender identities, when the roles played by the two partners violate traditional gender work divisions, both partners will strengthen their gender identities and will share more non-egalitarian attitudes towards gender roles to compensate for the deviant situation.

As long as gender is created through interaction (West and Zimmerman, 1987), one can expect that, in case of couples, changes in labour market status of one partner impacts on gender roles attitudes towards gender roles shared by both partners. It is not only own status on the labour market that shapes attitudes towards gender roles, as it is proved by previous researches (Banaszak and Leichley, 1991; Banaszak and Plutzer, 1993; Cunningham et al. 2005), but it is also the combination between the statuses of both parts that plays a role in transforming attitudes of both. Moreover, due to the strong specialization of gender roles, gender of the partner who changes their employment status has a decisive role in reshaping gender roles and attitude towards gender roles of both partners.

Therefore, one should focus on the change from one type of couple to other (by instance from the traditional male breadwinner – female homemaker to dual breadwinner couple) rather than on individual changes of individual employment status. Male breadwinner/female homemaker represents the traditional arrangement in Western Europe (Inglehart, Norris, 2003). Deviations from this type of

couple involve renegotiation of gender roles, and changes in employment status of one of the partners, as compared to this baseline situation, can lead to renegotiation of gender roles inside the couple and reshaping of attitudes towards gender roles accordingly, due to one or more of the four mechanisms: interest based model, exposure model, control model and 'doing gender' mechanism.

## **Hypotheses**

Based on the theoretical framework presented here, we can formulate the following hypotheses:

In case of people of living in couple, attitudes towards gender roles are shaped by the labour market position of both partners. Compared to the traditional type of couple - male-breadwinner/female-inactive couples – we expect that:

(H1) Attitudes towards gender roles are less traditional in dual-earner couples.

(H2) Attitudes towards gender roles do not differ in dual-inactive couples.

(H3) Attitudes towards gender roles are more traditional when the female partner is employed and the male partner is inactive.

## **Control variables**

Previous studies have used different factors to explain variations in attitudes towards gender roles. Education exerts a positive effect on gender attitudes for women and men (Banaszak and Plutzer 1993; Brewster and Padavic 2000; Cunningham et al. 2005). Educational institutions promote equality and gender equality (Kamlijin 2003), while education itself shapes gender beliefs by instilling values in students such as autonomy, merit-based achievements and the desirability of similar roles for both sexes (Cunningham et al., 2005). Having children makes people more inclined to share traditional gender beliefs (Baxter and Kane 1995; Thornton and Young DeMacro 2001) because the presence of children in the household increases domestic chores that are usually done by women. Also, getting older (age) makes people express more traditional attitudes towards gender roles.

### 3. Data and Methods

#### Data

The analysis makes use of British Household Panel Survey (BHPS) that is a study on British households collecting data since 1991. The current research uses data coming from nine waves of BHPS (1991-2009) that provide information on attitudes towards gender roles and on other time-variant relevant control variables. We have selected a sample including people living in couples during the entire period of interest. Analyses have been conducted using listwise deletion.

#### Method

The data modelling employed for this study has been made using the Two-way Fixed-Effects regression. Fixed Effects regression models change within individual over time by comparing the same individual with herself or himself at different points in time. The advantages of this method reside in reducing bias produced by omission of relevant control variables and by controlling correlated measurement errors across time (Andreß et al., 2013; Vespa, 2009). Due to long time span between the first data collection and the last one (18 years) controls for aging and period changes (period dummies) are needed (Brüderl, Volker, 2014). We run separate analyses segregated by sex, because sex is a time invariant within individual characteristic and its effect cannot be captured by Fixed Effects regression. In addition, we aim at capturing each gender's response to changes in own and their partner's position on the labour market.

For each dependent variable we run two different models segregated by sex. Each model looks at the effect of the interaction between various statuses of respondent and partner on labour market and controls for the effect of other relevant variables that are not time invariant and have significant effects on the target variables according to literature. These variables are restricted to age, education and parenthood, due to the limited relevant variables available in the data set or to large number of missing values.

#### *Dependent variables*

Attitudes towards gender roles are complex and multidimensional (Larsen and Long, 1988). Multidimensionality is due to two different aspects: they are connected to the context where gender

roles become manifest (private versus public area) and they refer to gender power balance (equality, inequality, and specialization) (Constantin, Voicu, 2014). Taking into account the first aspect, public dimension refers to women's engagement in roles and activities outside the home, whereas the private dimension refers to their involvement in domestic roles and activities (Wilcox and Jelen, 1991). Regarding the second aspect, Jelen (1988) makes the distinction between inferiority and complementarity. The inferiority assumes that women are inferior to men, while complementarity emphasises the gender specialization in performing different roles, such as nurturing, mothering, or supporting (pp.353-354).

British Household Panel survey includes a scale tapping two different aspects related to the measurement of attitudes towards gender roles (see Figure 1, Annex). These two aspects have been theoretically, as well as empirically identified as different. First dimension taps *attitudes towards women employment*. Three items tap this dimension and we have built a summative index out of them:

1. Husband and wife should both contribute to the household income
2. Full-time job makes woman independent
3. Woman and family are happier if she works

The second dimension refers to *attitudes towards complementary gender roles in private sphere*. Four items tap this dimension and we built a summative score based on the answers to these items:

4. Pre-school child suffers if mother works
5. Family suffers if mother works
6. Children need father as much as mother
7. Husband should earn, wife should stay at home

In case of the first index, the higher the value the more favorable respondents are towards the idea of women working outside home. For the second index, the higher the value the more respondents are in favor of similar gender roles in private area. The seven variables available in British Household Survey Panel have been assigned to one of the two summative scores based on the result of a Factor Analysis conducted on each wave and on theoretical grounds. Cross-wave measurement equivalence has been tested with

Multigroup Confirmatory Factor Analysis (MGCFA), aiming at checking the measurement equivalence of the two dimensions of attitudes towards gender roles across BHPS waves. According to the results, we can assume that the two dependent variables are scalar invariant and are suitable for cross-wave comparisons for both female and male samples (see Tables 4 and 5, Figure 1 Annex).

### *Independent variables*

The independent variables of interest for this study are four dummy variables, measuring the labour market status of partners in a couple. More exactly, we have built dummy variables which define the four possible types of couples according to their status on the labour market:

- Both active - a dummy variable with value 1 for couples where respondent & partner are active on labor market;
- Both inactive - dummy variable with value 1 for couples where both respondent & partner are not active on labor market;
- Partner active - dummy variable with value 1 for couples where the partner is active on labor market while respondent is not;
- Respondent inactive - dummy variable with value 1 for couples where respondent is active on labour market and partner being is not.

All the analysis have been done using as reference category the traditional type of couple – male breadwinner – women homemaker.

### *Control variables*

As part of the fixed-effects type of modelling, all the analyses include eight dummy variables, one for each time point/wave of the survey (first wave is the reference category). Education is measured as the highest educational qualification, where the higher the values, the less educated is the respondent. Parenthood is measured as the number of own children living in the household. Age is measured in years. Descriptive statistics for dependent and independent variables are provided in Table 1 (Annex).

#### 4. Results

According to the results in Table 2 and 3, the attitudes towards gender roles expressed by people living in couples are significantly influenced by the change in the couple's status on the labour market. Looking at the two different samples for women and men, data show similar patterns of response to change for both genders and differ for the two dependent variables.

First, we focus on the attitudes towards complementary gender roles in private sphere. As stated earlier, this indicator integrates information about individuals' opinions regarding children and family suffering if the mother works, regarding children needing their father as much as their mother, and towards husband as singular breadwinner. Compared to a traditional couple, where men used to be the only breadwinners, active men (Table 2 Model 1), who are in a couple with a female partner who is also active on the labour market, tend to express a less traditional view regarding the private dimension of gender roles. This reaction to change might be explained through the interest-based theory, which states that individuals will share egalitarian attitudes if they can benefit from it. In this specific situation, men express more egalitarian attitudes because they can benefit from their female partner's additional income. The interest-based theory can also explain the change in men's attitudes when they face a deviant situation in which they become inactive while their female partner is working. Contrary to our expectations, men express less traditional attitudes, reinforcing positive views on their role as fathers, and disagreeing with the idea of children and family suffering because of mother's work. A similar result is observed in the case of men who are part of a couple where both partners are inactive on the labour market. Compared to the traditional situation, in this case, men express less traditional views as well, trying to cope with their new status. In consequence, men emphasize the importance of their role in children's life and agree that women working would not harm the family. All these findings reveal a socially progressive situation regarding men's attitudes towards complementary gender roles in private sphere. Although, previous studies agreed that men do not renegotiate their household related responsibilities even when the public status (eg. employment status) of their partner becomes identical, the present results indicate that things are changing in a more egalitarian direction, confirming that the interest based mechanism is in place in explaining these attitudes.

Moreover, when we focus on women sample (Table 3 Model 1), results show a very similar picture. When women become active on the labor market, as compared to being part of a traditional male-breadwinner couple, they tend to express less traditional attitudes towards the complementary gender roles in private sphere. This happens as well when women are the only active partner in their couple. Their reaction to change is explained through several theories such as interest-based explanation or control models. While the interest-based theory suggests that women will become more gender egalitarian because of the benefit brought by their additional income, control models explain that women who are now active on the labour market will develop less traditional attitudes. In this specific case, women tend to disagree with the idea that children and family suffer because of their work and to emphasize the importance of fathers in parenting roles, so that they can justify their behaviour and bring balance in their new circumstances. Contrary to our expectations, even when the doing gender mechanism could have been in place and reinforce the traditional attitudes, own interest has a higher impact on their views, making their attitudes towards complementary roles in private sphere more egalitarian.

However, a very different reaction to change is observed when we focus on the attitudes towards women employment. These attitudes refer to people's views on the idea of both partners contributing to the household income and to a woman being more independent and making her family happier by working. When looking at men who are inactive, as compared to being in a traditional male-breadwinner situation, results show that they actually become less egalitarian in their views (Table 2 Model 1). Both when their partner is also inactive and when their female partner is active on the labour market, men tend to disagree with the idea of women working. Interestingly, unlike their attitudes towards complementary roles in private sphere, when it comes to views on women being more independent and making their family happier when she works, men tend to react in a less egalitarian direction, reinforcing the traditional idea of women as mothers and housewives. The same reaction to change is observed in the case of men living in a modern type of couple, where both partners are active on the labour market. Although unexpected, this can be explained through the 'doing gender' mechanism, which states that even in contexts where gender roles deviate from the male-breadwinner/female-homemaker model, people will reinforce traditional views in order to cope with their

new or deviant circumstances. These findings reveal a reluctance of men in accepting women as alternative breadwinners and equal partners on the labour market, although, as previously indicated, they might not refuse to renegotiate the private sphere responsibilities.

Moreover, in women's case data show similar results (Table 3 Model 2). When their male partner is inactive, women tend to cope with the new circumstances by expressing less favorable attitudes towards the idea of women working, disagreeing with women becoming more independent or making their family happier and contributing to the household income through a job. This can be explained through the 'doing gender' mechanism, women in these circumstances bringing comfort to their deviant type of couple by reinforcing more traditional gender views. Although surprising, a similar type of reaction to their situation is observed in the case of women who are now in a dual-earner couple, as compared to a traditional type of couple. Women in this type of situation tend to express less egalitarian views towards women working. This might be due to the time and childcare related challenges faced by a dual-earner couple, overwhelming and making women unable to perceive the possible advantages of their circumstances. We expect that this is only a short-term reaction to change and further research should be conducted in this direction.

Looking to the effect of control variables, this is generally in line with the results produced by previous researches. Increasing in education, although not statistically significant, indicates more egalitarian attitudes in most models. Parenthood has negative significant effect for both men and women on attitudes towards complementary gender roles in private sphere and positive effect on attitudes towards women employment. The period effects are positive and mostly significant for both men and women in the case of attitudes towards women employment showing that later in their life people tend to be more positive towards women employment. This could be due to various factors like less childcare responsibilities once their children are older. This also supports the already documented tendency for a greater support for gender equality during the last decades among general public in Western Europe (Inglehart, Norris, 2003). When looking at the attitudes towards complementary gender roles in private sphere, the effects are mostly non-significant, although opposite for men and women.

The effect sign indicate that women tend to become more egalitarian towards attitudes in private sphere, while men, as they grow older, tend to become more traditional in their views.

Table 2. Two Way Fixed Effects Regression – unstandardized regression coefficients for men sample

	Attitudes towards complementary gender roles in private sphere	Attitudes towards women employment
	Model 1	Model 2
Both active	0.356***	-0.418***
Partner active	0.367***	-0.301***
Both inactive	0.266***	-0.120*
Education	-0.008	0.020
Parenthood	-0.066**	0.175***
Age	0.039	-0.062*
t2	0.057	0.156*
t3	-0.095	0.453***
t4	-0.203	0.623**
t5	-0.235	0.734**
t6	-0.353	0.853**
t7	-0.354	0.974**
t8	-0.576	1.105*
t9	-0.665	1.235*
Intercept	10.884***	11.414***
R <sup>2</sup> within	0.006	0.020
R <sup>2</sup> between	0.201	0.020
sigma_u	2.819	1.854
sigma_e	1.597	1.364
N	19425	19390

\*\*\* p < .001; \*\* p < .01; \* p < .05

Table 3. Two Way Fixed Effects Regression – unstandardized regression coefficients for women sample

	Attitudes towards complementary gender roles in private sphere	Attitudes towards women employment
	Model 1	Model 2
Both active	0.178***	-0.323***
Respondent active	0.208*	-0.146*
Both inactive	0.180**	-0.112*
Education	0.024	0.007
Parenthood	-0.122***	0.186***
Age	-0.033	0.035
t2	0.211*	0.147*
t3	0.228	0.358**
t4	0.242	0.494**
t5	0.398	0.562*
t6	0.370	0.642*
t7	0.461	0.716*
t8	0.242	0.881*
t9	0.320	0.918
Intercept	15.066***	9.961***
R <sup>2</sup> within	0.007	0.020
R <sup>2</sup> between	0.185	0.040
sigma_u	2.293	1.656
sigma_e	1.686	1.366
N	21248	21200

\*\*\* p < .001; \*\* p < .01; \* p < .05

## 5. Conclusions

This paper focuses on the effect of couples' employment status on attitudes towards gender roles, paying special attention to how interaction between the partners' status on labour market shapes attitudes towards women employment and towards complementary gender roles in private sphere. Using data from nine successive waves of British Household Panel we investigate how change from the traditional couple male breadwinner/woman homemaker to other types of couple influences attitude towards gender roles of people living in a couple. Some significant conclusions arise from our analysis.

Our results point out that the interaction between respondent's own status on labour market and the partner's one significantly influences attitudes towards gender roles but in different directions for the two dimensions of attitudes towards gender roles. The empirical data partially support our hypotheses. A change in couple's employment status has different consequences on the two dimensions of attitudes towards gender roles. Any change from the traditional breadwinner-homemaker couple brings less specialization in the private area and, in the same time, less support for women employment. Both findings hold true no matter the respondent's gender.

Both interest based and control model can help understanding the first finding. In case of similar statuses on the labour market, either both active or both inactive, the two partners perform similar roles outside home and there is no complementary in public area. Couples transfer the lack of specialization from public area to private area and reshape their attitudes towards complementarity in the private area via control mechanism (attitudes should be in line with context and behaviour). On the other hand, if the woman is active on the labour market, her income will trigger the interest based mechanism, making partners reshape their views inside private sphere. Additionally, she would expose her partner to less gender specialization outside home (exposure based mechanism) and this will reshape specialization in private life.

On the other hand, compared to being in a traditional couple, being part of other types of couple has a significant and negative effect on attitudes towards women employment for both genders. The data shows that 'doing gender' mechanism is in place every time when a

couple experiences a change from the traditional male breadwinner-female homemaker couple to any other type of couple. In such cases the centrality of breadwinner role for male identity plays a key role. Couples are not willing to give up the idea that man should be the main breadwinner in the household due to the fact that male identity is built around this role, as we pointed out in the theoretical section. Consequently, every time when they have to adapt to a new situation that violates the traditional division of tasks inside couple, they will strengthen the traditional gender division regarding labour market to avoid an identity crisis.

Two main conclusions can be drawn from the current work. In case of people living in a couple, the combination between partners' status on labour market is important in shaping attitudes towards gender roles and this interaction operates differently according to the aspects of gender roles we are focusing on. People are willing to give up the complementary of gender roles in the private area when they switch from the traditional couple male breadwinner-female homemaker to other types of couples, but they 'do gender' and emphasize the attitudes towards traditional gender division on the labour market to avoid an identity crisis.

However, there are some limitations generated by the data used for testing current hypotheses. Some recommendations for further researches can be derived from these limitations. Further studies should concentrate on longer-term changes in attitudes after each type of transition and look for how stable these changes are. Also, more comprehensive, qualitative information would come at hand in explaining more accurately individuals' reaction to change. Current research investigates people living in a couple, but not couples themselves and how changes in attitudes shared by one partner influences the attitudes of the other one. Future researches may analyse couples and how transition and interaction reshapes their attitudes. On the other hand, the current research does not distinguish between unemployed, retired, housewifery and people still in education. This is due to the limited number of cases in some of these categories like unemployed or people in education. Since each of this situation involve a different type of transition in and outside labour market, forthcoming studies should consider them as different categories and analyse their effects in distinct way.

## References

- Andreß, Hans-Jürgen, Golsch, Katrin, Schmidt, Alexander W. (2013). *Applied Panel Data Analysis for Economic and Social Surveys*. Springer.
- Assave A., Fuochi G., Mencarini L (2014). Desperate Housework: relative resources, Time Availability, Economic Dependency, and Gender Ideology Across Europe. *Journal of Family Issues* 35 (2): 1000-1022
- Banaszak L A, Leichley J (1991). How employment affects women's gender attitudes. *Political Geography Quarterly* 10 (1): 174 – 185.
- Banaszak L A, Plutzer E (1993) Contextual determinants of feminist attitudes: National and subnational influences in Western Europe. *American Political Science Review* 87 (1): 145-157.
- Baxter J, Kane E (1995) Dependence and Independence: A Cross-National Analysis of Gender Inequality and Gender Attitudes. *Gender & Society* 9 (2): 193 – 215.
- Bergh J (2006) Gender attitudes and modernization processes. *International Journal of Public Opinion Research* 19 (1): 5-23.
- Bolzendahl C, Myers D (2004) Feminist attitudes and support for gender equality: Opinion change in women and men, 1974-1998. *Social Forces* 83 (2): 759-790.
- Breen R, Cooke L. P. (2005). The persistence of gender division of domestic labour, *European Sociological Review*, 21, 43–57
- Brewster K, Padavic I (2000) Change in gender ideology 1977-1996: The contribution of intracohort change and population turnover. *Journal of Marriage and Family* 62 (2): 477-487.
- Brines J (1994) Economic dependency, gender, and the division of labor at home. *American Journal of Sociology*, 100: 652-688.
- Brüderl J, Volker L. (2014) *Applied Panel Data Using STATA*. Course Material 43<sup>rd</sup> GESIS Spring Seminar.

Constantin A, Voicu M. (2014). Attitudes towards gender roles in cross-cultural surveys: Content validity and cross-cultural measurement invariance. *Social Indicators Research*. DOI: 10.1007/s11205-014-0758-8.

Cunningham, M (2008) Changing Attitudes toward the Male Breadwinner, Female Homemaker Family Model: Influences of Women's Employment and Education over the Lifecourse. *Social Forces* 87 (1): 299-323

Cunningham, M. et. al. (2005) Reciprocal relationship between attitudes about gender and social context during young adulthood. *Social Science Research* 34 (4): 862-892.

Fan P L, Mooney Marini M (2000) Influences on Gender-Role Attitudes during the Transition to Adulthood. *Social Science Research* 29 (2): 258-283.

Festinger L (1957) *A Theory of Cognitive Dissonance*, Stanford University Press

Forret M, Sullivan S, and Mainiero L (2010) Gender role differences in reactions to unemployment: Exploring psychological mobility and boundaryless careers. *Journal of Organizational Behavior* 31: 647-666.

Gerstel N (2000) The third shift: Gender and care work outside home. *Qualitative Sociology* 23: 467-483.

Gough M, Killewald A (2011) Unemployment in Families: The Case of Housework. *Journal of Marriage and Family* 73: 1085 - 1100

Gupta S (1999) The effect of transition in marital status on men's performances on housework. *Journal of Marriage and the Family* 61: 700-711.

Hertel B, Hughes M (1987) Religious Affiliation, Attendance and Support for "Pro-Family Issues" in the United States. *Social Forces* 65 (3): 858 – 882.

Hoang LA, Yeoh B (2011) Breadwinning Wives and „Left-Behind” Husbands: Men and Masculinities in the Vietnamese Transnational Family. *Gender and Society* 25: 717-739.

Hofstede G (1980) *Culture's Consequences: International Differences in Work Related Values*, Newbury Park: SAGE.

Hofstede G (1991) *Culture and Organization: Software of Mind*, London: McGraw Hill.

Inglehart R, Norris P (2003) *Rising Tide: Gender Equality and Cultural Change around the World*, New York: Cambridge University Press.

Inglehart R, Welzel C (2005) *Modernization, Cultural Change and Democracy*, Cambridge: Cambridge University Press.

Jacob M, Kleinert C (2010) Economic uncertainties in the family: Do unemployed men and women rely on their partner's resources?. *Equalsoc Working Paper* 1/2010.

Jelen, T. (1988) The Effect of Gender Role Stereotypes on Political Attitudes. *Social Science Journal*, 25 (3), 353-365.

Kalmijn M (2003) Country differences in sex-role attitudes: cultural and economic explanations. In Arts W, Hagenaars J, Halman L. (eds.) *The Cultural Diversity of European Unity. Findings, Explanations and Reflections from the European Values Study*. Leiden: Brill.

Kroska A, Elman C (2009) Change in attitudes about employed mothers: Exposure, interests, and gender ideology discrepancies. *Social Science Research* 38: 366-382.

Kulik L (2000) The Impact of Gender and Age on Attitudes and Reactions to Unemployment: The Israeli Case. *Sex Roles* 43: 85 – 104.

Larrain S (1999) Curbing Domestic Violence: Two Decades of Action. In Morrison A, Biehl M L (eds.) *Too Close to Home: Domestic Violence in Americas*, Washington: Inter-American Development Bank, 105-130.

- Larsen, K. S., & Long, E. (1988) Attitudes toward sex-roles: traditional or egalitarian? *Sex Roles*, 19, 1–12.
- Legerski EM, Cornwall M (2010) Working-Class Job Loss, Gender, and the Negotiations of Household Labor. *Gender and Society* 24: 447 – 472.
- Macmillan R, Gartner R (1999) When she brings home the bacon: Labor-force participation and the risk of spousal violence against women. *Journal of Marriage and the Family* 61: 947 – 958.
- McInnes J (1998) Analyzing patriarchy capitalism and women's employment in Europe. *Innovation: The European Journal of Social Science Research* 11 (2): 227-248.
- Schmalzbauer L (2011) 'Doing Gender', Ensuring Survival: Mexican Migration and Economic Crisis in the Rural Mountain West. *Rural Sociology* 76 (4): 441-460
- Seguino S (2007) PlusÇa Change? Evidence on global trends in gender norms and stereotypes. *Feminist Economics* 13: 1-28.
- Sen A (1997) Inequality, unemployment and contemporary Europe. *International Labor Review* 136: 157-170.
- Sherkat D (2000) That They Be Keepers of the Home”: The Effect of Conservative Religion on Early and Late Transition into Housewifery. *Review of Religious Research* 41 (3): 344 – 358.
- Taylor P, Tucker B, and Mitchell-Kernan C (1999) 'Ethnic Variations in Perceptions of Men's provider role' *Psychology of Women Quarterly* 23 (4): 471 – 461.
- Thornton A, Alwin D, and Comburn D (1983) Causes and Consequences of Sex-role Attitudes and Attitudes Change. *American Sociological Review* 48: 211-227.
- Vespa, J (2009) Gender ideology Construction: A Life Course and Intersectional Approach. *Gender & Society* 23 (3): 363-387
- West C, Zimmerman, D (1987) Doing Gender. *Gender & Society* 1 (2): 125-151.

Wilcox C, Jelen T, (1991) The Effects of Employment and Religion on Women's Feminist Attitudes. *International Journal for the Psychology of Religion* 1 (3): 161 – 171.

Wilensky HL (2002) *Rich democracies: Political economy, public policy and performance*. Berkeley CA: University of California Press.

Zvonkovic AM, et al. (1996) The Martial Construction of Gender through Work and Family Decisions: A Qualitative Analysis. *Journal of Marriage and Family* 58 (1): 91-100.

## Appendix

Table 1. Descriptive statistics for dependent and independent variables

<b>Men Sample</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Attitudes towards traditional gender roles	19521	12.922	2.707	0	20
Attitudes towards women employment	19486	8.643	1.975	1	15
Both active	34445	0.310	0.046	0	1
Both inactive	34445	0.124	0.330	0	1
Partner active	34445	0.044	0.205	0	1
Respondent active	34445	0.079	0.270	0	1
Education	19631	6.655	3.563	1	12
Parenthood	20664	0.663	1.019	0	8

<b>Women Sample</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Attitudes towards traditional gender roles	21316	13.618	2.758	0	20
Attitudes towards women employment	21268	8.654	1.993	1	15
Both active	36750	0.274	0.446	0	1
Both inactive	36750	0.113	0.316	0	1
Partner active	36750	0.101	0.301	0	1
Respondent active	36750	0.025	0.158	0	1
Education	21424	7.154	3.468	1	12
Parenthood	22392	0.682	1.019	0	9

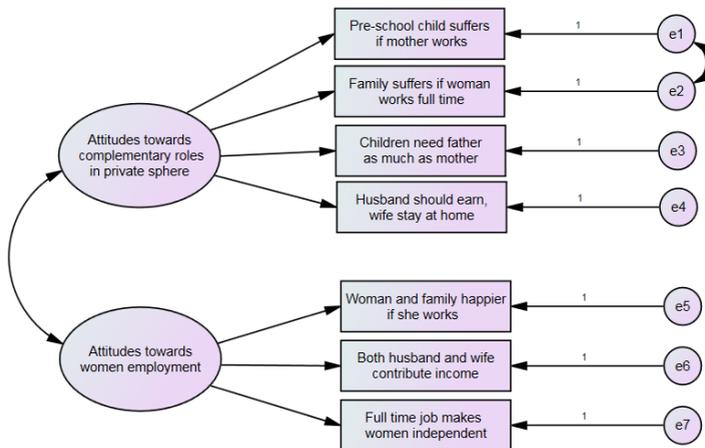
Table 4 - MGCFA: Fit measures of the invariance test – Men Sample

Model	CMIN	DF	PCLOSE	RMSEA	CFI	NFI	IFI
Configural invariance	2969	108	1.000	.025	.930	.928	.930
Metric invariance	2397	148	1.000	.019	.945	.942	.945
Partial scalar invariance	2996	204	1.000	.018	.932	.927	.932

Table 5 - MGCFA: Fit measures of the invariance test – Women Sample

Model	CMIN	DF	PCLOSE	RMSEA	CFI	NFI	IFI
Configural invariance	2072	108	1.000	.020	.961	.959	.961
Metric invariance	2220	148	1.000	.017	.959	.957	.931
Partial scalar invariance	3295	204	1.000	.018	.939	.935	.925

Figure 1. CFA of attitudes towards gender roles in BHPS



Ort und Datum:

**Eidesstattliche Erklärung nach § 6 der  
Promotionsordnung vom 16. Januar 2008**

" Hiermit erkläre ich an Eides statt, dass ich die vorgelegte Arbeit ohne Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die aus anderen Quellen direkt oder indirekt übernommenen Aussagen, Daten und Konzepte sind unter Angabe der Quelle gekennzeichnet. Bei der Auswahl und Auswertung folgenden Materials haben mir die nachstehend aufgeführten Personen in der jeweils beschriebenen Weise entgeltlich/ unentgeltlich geholfen:

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Unterschrift:



## **Curriculum Vitae**

### **Personal Information**

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### **Education**

2011-present            UNIVERSITY OF COLOGNE

*Research Training Group SOCLIFE, PhD*

2010-2011              KATHOLIEKE UNIVERSITEIT LEUVEN

*MSc, International Master in Social Policy Analysis  
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2008-2010              UNIVERSITY OF BUCHAREST, FACULTY OF  
SOCIOLOGY AND SOCIAL WORK

*MSc, Advanced Sociological Research*

2005-2008              UNIVERSITY OF BUCHAREST, FACULTY OF  
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*BA, Sociology*

### **Work Experience**

Jul 2014-present – research assistant for *Women and Work  
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Sep 2014- present – research assistant for the Business School,  
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Oct 2011-present – researcher in the *World Values Survey*  
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Feb 2009-Jul 2010 – teaching assistant for “Social statistics” at the  
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May 2008-Jun 2009 – consultant for World Vision Romania,  
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