The division of household labour: a cross-national comparison

The role of the macro-level gender equality on the division of household labour in European countries

Aniek Julicher (3252760)

Bachelor thesis

Supervisor: Anja Abendroth

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Bachelor thesis: Aniek Julicher

Utrecht University

While most previous studies focused on the individual-level determinants of the division of household labour, the focus in this study is mainly on the (in)direct effects of the national context on couples' domestic work division. Since the national context is taken into account, it is possible to examine whether couples in European countries differ in their household division. In this study, three individual-level effects on couples' domestic work are examined. Moreover, the interplay between the macro-level force 'female empowerment' and the individual-level characteristics in influencing couples' housework division is investigated. The results show that couples in European countries differ significantly in their household division. Also much evidence has been found to support the individual-level effects on couples' housework division. In contrast, no evidence has been found to support the notion that the macro-level gender equality directly affects the household division. Additional analysis shows that there is only limited evidence to support the indirect effects of the macro-level gender equality on couples' division of household labour. These results are based on a multiple linear regression analysis, controlling for country clustering. In this analysis, data from 23 countries in the European Social Survey 2004, round 2 are used.

1.INTRODUCTION

The division of household labour is a widely studied phenomenon in most Western countries (Presser 1994; Van der Lippe & Siegers 1994; Shelton & John 1996; Bianchi et al. 2000; Fuwa 2004; Geist 2005; Hook 2006; Van der Lippe et al. 2007). While our grandfathers were male bread-winners and our grandmothers were housewives, today's families have been revolutionised in such a way that this is not the general pattern anymore (Esping-Andersen 1999). Due to the second demographic transition that started in the 1960s, transformations in the socio-economic domain discernable in all Western countries evoked a changing role of women and the rise of new household forms (Esping-Andersen 1999).

Liefbroer and Dijkstra (2000) argue that around the 1960s societies in most Western countries developed from an agrarian orientated society via an industrialised society into a service economy. These transformations led to an increased demand on higher educated labour force that in turn brought about the educational expansion. During this period the average educational level of both men and women was increased substantially. The result was the sudden immense labour force participation of women, because women tried to take advantage of their educational investments (Liefbroer & Dijkstra 2000).

Besides economic transformations, social and cultural evolutions have influenced the changing role of women in the society. In the 1960s the notion of the social liberalism emerged, which caused the shift of young people from a materialistic into a post-materialistic value orientation (McDonald 2006). Values such as autonomy, self-expression and self-development became more important (Liefbroer & Dijkstra 2000). These changes in value orientation are also indicated by the term 'individualism' (Liefbroer & Dijkstra 2000). As a consequence of these social and cultural changes young women were supported to extend their opportunities on the labour market through investments in their education (McDonald 2006). At the same time these extended opportunities for women in education and on the labour force participation had consequences for the division of household labour within couples (Shelton & John 1996; Brines 1994; Bianchi et al. 2000).

Bianchi et al. (2000) and Esping-Andersen (1999) denote for example that both women's education and women's employment are negatively correlated with time spent in household labour. According to Esping-Andersen (1999), this statistical relationship is almost perfectly linear. This implies that time in unpaid work declined for women with a certain education and degree of participation on the labour market (Bianchi et al. 2000). Does this mean that the male partners of these women generally spend more time on domestic labour? Gershuny and Robinson (1988) claim that the time in housework tasks spent by men has increased and as a consequence the gender differences have narrowed. In addition, Bianchi et al. (2000) mention that men's absolute time spent on domestic labour increased in the period from the 1960s to the 1990s, but this levelled off in the most recent period. Besides, Bianchi et al. (2000) state that the absolute time a women in the 1990s spent on domestic labour has decreased by almost half the hours a woman did in the 1960s. By examining men's relative proportion of unpaid work, it can be stated that the division of household labour looks more egalitarian in the last years (Bianchi et al. 2000). However, it has widely been investigated that although the gender gap in performing domestic work has diminshed, women still invest significantly more hours in household labour than men do (Gershuny & Robinson 1988; Hochschild 1989; Van der Lippe & Siegers 1994; Shelton & John 1996; Bianchi et al. 2000; Fuwa 2004; Geist 2005).

Although it is recognised that women still do the majority of domestic work, the amount of domestic work done by women and therefore the relative division of domestic work within couples varies in terms of national context (Fuwa 2004; Geist 2005; Van der Lippe et al. 2007; Knudsen & Wærness 2008). For instance it has been shown that husbands in Japan perform the least domestic labour and that husbands in Norway and in the United

States contribute to household tasks the most. Nevertheless, even in these most egalitarian countries wives still participate more in the domestic labour (Batalova & Cohen 2002, in Fuwa 2004). Apperently the national context contributes to a certain extent to the manner in which the division of household labour within couples is organised. Therefore, the aim in this study is to describe and explain cross-national differences in the division of household labour. In contrast to many previous cross-national studies about the division of household labour, the focus in this study is merely on European countries. Hence, the research question proposed in this research paper is:

> Do European countries differ in the division of household labour within couples and to what extent do differences in the country context, such as the macro-level gender equality within countries, explain the differences in the division of household labour within couples among different countries in Europe?

In order to answer the research question, it is important to notice that different approaches can be used. In the literature three different approaches to explain the division of household labour have been postulated.

A first approach that can be used is the macro approach. This approach is often applied to explain differences in the division of household labour among different countries (Sainsbury 1994, in Van der Lippe & Van Dijk 2002; Fuwa 2004) The macro approach studies the direct effect of country-level characteristics on the division of household labour within couples. Countries namely vary in societal context; institutions, regulations, laws, structures, and norms are different among countries (Van der Lippe & Van Dijk 2002). Research has developed many theories that clarify the influence of the country-context on the division of household labour. For example, a study of Kamo (1994, in Geist 2005) indicates the importance of using a macro approach in explainging the division of household labour. According to this study the focus on the macro-level determinants of the division of household labour is necessary, due to the fact that the same levels of predictors in a comparison between the USA and Japan led to different outcomes in the division of household labour. Kamo (1994, in Geist 2005) presumes that these variations in outcomes can be blamed to structural differences.

A second approach that can be used to explain the division of household labour within couples is the micro approach. This approach is often used to explain differences in the household division between partners within a specific country (Van der Lippe & Van Dijk 2002). The micro approach focuses on the individual-level determinants of the division of

household labour. In general, three well-known individual-level theories have been postulated, namely the theory of the relative recourses, the time availability theory and the theory about the individual gender ideology (Shelton & John 1996; Bianchi et al. 2000; Fuwa 2004; Geist 2005; Knudsen & Wærness 2008). One of the main limitations of using a micro approach is that through studying micro characteristics, it is not possible to consider country differences. This implies that a cross-national comparison is impossible by solely using this approach.

A third approach to explain the division of household labour within couples is a combination of the micro- and the macro-approach (Gornick et al. 1998, in Van der Lippe & Van Dijk 2002; Fuwa 2004; Geist 2005; Van der Lippe et al. 2007; Knudsen & Wærness 2008). With a combination of both approaches it is also possible to explain country differences in the division of household labour within couples. Increasingly, research is conducted in which aspects of the division of domestic labour are explained by both individual-level characteristics and country-level characteristics (Fuwa 2004; Geist 2005; Knudsen & Wærness 2008). Studies with a focus on the micro-macro approach included interaction effects between macro and micro determinants (Fuwa 2004; Geist 2005; Knudsen & Wærness 2008).

Central in this paper are country-level explanations of the division of household labour within couples as well as a combination of the country- and individual-level explanations. Only by using these approaches cross-national differences can be explained (Van der Lippe & Van Dijk 2002). To study the interplay between country-level factors and individual-level factors, it is required to initially get some insight into the most important micro-level theories. For that reason, in this research paper, micro determinants are also studied when they are a determinant in combination with institutional macro factors. This can be the case if macro-level determinants have a discount effect[1] on the different micro variables (Blumberg 1984, in Fuwa 2004). The main research question of this study is about whether European countries differ in the household division within couples and about whether the country context is able to explain the differences in the division of household labour within couples among different European countries. The country context might explain these difference in both a direct way and in an indirect way via the individual-level characteristics. For that reason the following sub-questions are central in this study:

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[1] A discount effect is an equivalent for weakened effect. Although the meaning of a weakened effect is much more clear than the meaning of a discount effect, it is important to understand the equivalent 'discount' because in the literature many researchers refer to this word.

(1) Do European countries differ in the division of household labour within couples?

(2) To what extent does the macro-level gender inequality (in)directly explain the division of household labour within couples among different European countries?

It has become clear that examining country differences in the division of housework within couples is relevant in a societal way, because there is an extensive linkage to one of the main topics in the sociology: inequality (Ultee et al. 2003). In spite of the fact that the division of household labour is regarded as becoming more equal, even in contemporary Western societies, inequality exists in the division of household labour; women still do the majority of domestic work (Shelton & John 1996). Some country contexts are more capable to assist in more equality in the division of household labour between men and women. For that reason it is interesting to contemplate certain aspects of the country contexts in order to find out whether those country characteristics affect the division of household labour.

Moreover, it turned out that this unequal division of household labour brings along some repercussions that are noteworthy to mention, although this study does not elaborate upon it. First, Shelton and John (1996) point to women's relatively low amount of human capital (in comparison with their partners) due to their greater share in domestic work. Women's greater share in domestic work reduces their energy to expand on paid work as well as their available time to participate on the labour market. Second, several studies ventilate the idea that the partner who contributes to a greater extent to the household labour, experiences more problems with his or her psychological well-being (Rosenfield 1992, in Shelton & John 1996; Ross et al. 1983, in Shelton & John 1996; Glass & Fuijimoto 1994, in Shelton & John 1996). As women still perform more in domestic work than their partners, these psychological problems have greater effects on women than on men. Third, there is some evidence for the positive association between women doing more housework and experiencing more marital dissatisfaction and more marital conflict (Shelton & John 1996). For example Robinson and Spitze (1992, in Shelton & John 1996) showed that when women feel that their husbands contribute to the domestic labour in a fair way, the marital satisfaction is higher. In other words this means that women who feel that their husbands do not contribute to domestic labour in a fair way are more dissatisfied about the marriage. Besides, Lye & Biblarz (1993, in Shelton & John 1996) found that a high amount of women's household labour time contributes to women's and men's reports of disagreements in the

marriage. Since women still share more in domestic labour than men, marital dissatisfaction and marital conflict are consequences that appear often.

Scientifically it is relevant to study the division of household labour across European countries, because most previous research on the domestic labour division focused on single countries, especially on the United States (USA) (Geist 2005). The few studies that did include various countries were lacking systematic macro-level relationships or these studies did not statistically test for macro-level effects (Geist 2005). Moreover, it might be relevant to study the division of household labour across European countries, because previous studies differed in the way how they operationalised their key variables, used different datasets, differed in (the number of) included countries and showed different outcomes. In addition, although a few studies already investigated macro-level factors and the interplay between macro-level and micro-level factors in couples' domestic labour division, I try to replenish in knowlegde when these macro and micro-macro analytical approaches are used by solely focusing on European countries. Almost all previous cross-national studies – partly – expanded their research to countries outside Europe.

This analysis focuses on whether the division of household labour is affected by a country-level variable, individual-level variables and by interactions between these country-level and individual-level variables. Some insight in well-known theories is provided and results from previous research are mentioned. Furthermore the methodological and analytical strategies are discussed, results are shown and interpreted, a conclusion is given and some discussion points are mentioned.

2. THEORIES AND HYPOTHESES

In the literature, several important macro-level factors that (in)directly explain cross-national differences in the division of household labour within couples are distinguished (Fuwa 2004; Knudsen & Wærness 2008). In this study, the focus is on one of the most important macro-level factors: the macro-level gender equality[2]. Moreover, relative resources, time availability and gender ideology are the individual-level determinants that are central in this study. Theories and hypotheses about these determinants are discussed here. In addition, important findings from previous studies related to these hypotheses are discussed.

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[2] The macro-level gender equality is also indicated by the term female empowerment (Knudsen & Wærness 2008). In this study these terms are used interchangeably.

2.1. Macro-level factor

The macro-level gender equality is widely seen as a major macro-level determinant of differences in the division of household labour within couples among countries (Fuwa 2004; Knudsen & Wærness 2008). In addition to the macro-level gender equality, various other macro-level determinants on the division of household labour have been distinguished. For example the welfare regime typology, the economic development in a country, country's culture and gender norms, women's national labour force participation, and the social policy within countries are well-known macro-level explanations as well (Fuwa 2004; Hook 2006; Van der Lippe et al. 2007; Knudsen & Wærness 2008). In this study the focus is on the macro-level gender equality as the macro-level explanation for country differences in the household division within couples, because of the large attention that has been paid in the literature to this determinant. According to Fuwa (2004), Hook (2006), Knudsen & Wærness (2008) it is necessary to focus on the macro-level gender inequality or female empowerment at the national level in order to explain country differences in the household division. One of greatest benefits of using the female empowerment as a macro-level determinant is that it considers countries seperately. The welfare regime typology for example, which is one of the other much-discussed macro-level explanations, is based on country clusters. This has one disadvantage that is worth mentioning: by using typologies, it is hard to differentatiate among countries (Eping-Andersen 1999). Therefore differences in the division of household labour within couples among countries can be better explained from a macro-level gender inequality perspective than by using the welfare regime typology.

Nonetheless, before I will turn to the theory about the macro-level gender equality, I first have to state that by assuming that the female empowerment might explain the country differences in the division of household labour, it is generally presumed that there are differences among countries *at all*. For that reason, I would first like to test whether countries actually do differ in the division of household labour within couples. Therefore, the first hypothesis is:

(i). European countries do differ in the division of household labour within couples.

Previous studies found that European countries differed in the division of household labour (Fuwa 2004; Geist 2005; Van der Lippe et al. 2007; Knudsen & Wærness 2008). The studies all came to quite consistent results regarding the division of household labour in different

European countries, although small differences among the outcomes of these studies exist. The overall pattern of these studies was that, on average, Nordic countries were European's most egalitarian countries in the relative division of household labour, while other countries, such as Austria and Italy were characterised as countries with the most traditional division of household labour. In these countries women shared much more in the housework than their partners. However, it turned out that even in the most egalitarian countries a tendency of women performing more housework than men could be noticed.

2.1.1. The macro-level gender equality

The national female empowerment or the macro-level gender equality is about the gender (in)equality in a country and mainly focuses on the country-level economic and political gender equality (Fuwa 2004; Hook 2006). D*e facto* the macro-level gender equality captures levels of women's participation in politics, professional opportunities, and their economic power (United Nations Development Program (UNDP) 2004, in Knudsen & Wærness 2008). Just as Fuwa (2004), Knudsen & Wærness (2008) prompt the conception that the macro-level gender equality "may involve a wider set of connected forces, reflected in women's wages, employment levels, career trajectories and political power, as well as in dominant gender ideologies." (p. 98). Concretely, a measurement of the macro-level gender inequality or the national female empowerment is mostly constructed from the combination of the percentage of parliamentary seats held by women, the percentage of female administrators and managers, the percentage of female professional and technical workers, and women's share of earned income compared to that of men (Fuwa 2004; Knudsen & Wærness 2008). When the female empowerment is measured in this way, then it is also referred to as the 'Gender Empowerment Measure' (GEM) (Fuwa 2004; Knudsen & Wærness 2008). In general, it is expected by Knudsen and Wærness (2008) that more gender equality in a country leads to less time spent by both men and women on household tasks. Actually, this does not state anything at all about relative changes in the time spent on houswork by men and women. However, Fuwa (2004) denotes that women in a less egalitarian country – read a country with less macro-level gender equality – have a more traditional division of household labour, which says something about the inequality in the household division. Built upon the theoretical frameworks of Fuwa (2004), Hook (2006) and Knudsen & Wærness (2008), it seems reasonable that in countries with high levels of female empowerment, a more equal division of domestic labour within their households exists. When the division of domestic labour is

more equal, then women have a low value of her share[3]. Therefore I would like to hypothesise that:

(ii). There is a negative country-level effect of countries that are characterised by more macro-level

gender equality on a woman's share in the household labour.

Previous studies found a positive relationship between the Gender Empowerment Measure, the most valid indicator for the macro-level gender equality, and the average division of household labour (Fuwa 2004; Knudsen & Wærness 2008). These findings illustrate that countries with higher Gender Empowerment Measures, have a more egalitarian division of household labour. Moreover, multi-level analyses using Hierarchical Linear Modelling (HLM) showed that after holding constant the individual characteristics, the countries with the highest level of female empowerment were characterised by a more egalitarian division of housework (Fuwa 2004; Knudsen & Wærness 2008). Thus, in these countries with high levels of female empowerment, women share less in the household labour than women in countries with lower levels of female empowerment.

2.2. Micro-level factors and micro-macro level factors

As it is expected in the previous part of the theory-section, the macro-level gender inequality has certain direct effects[4] on the division of household labour within couples. In this research paper, it is also endeavoured to examine the indirect or interaction effects of this major macro-level explanation on the three well-known individual explanations (relative recourses, time availability and gender ideology) of the division of household labour. Blumberg's

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[3] Her share is mostly measured in percentages where a percentage below 50% indicates that the man shares more in the housework, while a percentage above 50% means that the woman shares more in the housework. Actually it could not be stated that a more equal domestic share or a more equal division of household labour is always the same as a lower value of her share (less her share). For example a decrease in the value of her share might be from 80% to 60%, which indeed means that the division of household labour becomes more equal. But a decrease from 40% to 20% in her share does not imply a more equal division of household labour, as the man shares much more now. For arguing that her share is the same as an equal division of household labour, her share should tend to 50%. However, because one of the main outcomes of the previous literature on the division of household labour is that women still perform more domestic work than men (which means that her share never reaches a value below 50%), I assume that a decrease in her share (less her share) is the same as a more equal domestic share or a more equal division of household labour.

[4] Direct macro-effects imply macro-effects regardless of individual characteristics. Thus, no interaction occurs.

theory of macro-level gender inequality suggests "that individual women's power is "nested" in the gender power relationship of the macro-level", (Fuwa 2004, p 751). For example, "macro-level gender inequality might interact with individual factors on the division of housework" (Knudsen & Wærness 2008, p 99). Macro-level determinants, such as the macro-level equality might possibly modify the influence of micro-level assets on the housework division (Fuwa 2004; Geist 2005). Within this perspective the macro-level gender equality limits or increases the impact of different micro-level factors. (Fuwa 2004; Geist 2005). Before I extend on theories about these interaction-effects, it seems relevant to me to shortly mention the most important individual-level determinants that affect the division of household labour within couples.

2.2.1. Woman's relative resources

The relative resources perspective is one of the three most well-known individual-level perspectives that are used in the literature to explain the division of household labour within couples. This theory is based on the work of Blood and Wolfe (1960) and exposes the division of household labour as a power struggle between men and women. A bargaining process occurs between partners, by which negotiations in the form of a power contest determine the division of domestic labour: the partner who possesses the most resources (e.g. education, earnings and occupational prestige) uses these relative resources to reduce his or her share in the housework labour. This perspective assumes that household labour is perceived negatively by both men and women due to their motivation to reduce their participation in it (Presser 1994; Shelton & John 1996; Bianchi et al. 2000; Fuwa 2004; Geist 2005). The perspective of the relative resources is also indicated as the "exchange theory" (Van der Lippe & Siegers, 1994). As in the literature, I expect that women having more relative resources diminish their share in the housework. Therefore, it can be hypothesised that:

> (iii)   *There is a negative individual-level effect of a woman having more relative resources on her share in the household labour.*

Previous studies found that when the earning gap between partners was small, then the division of household labour was more equal (Kamo 1988, in Shelton & John 1996; Presser 1994). Moreover, most researchers showed that women's educational level is negatively

associated with their time spent on housework (Brines 1993, in Shelton & John 1996; South & Spitze 1994).

Furthermore, Fuwa (2004) argues that in a country context in which is less macro-level gender equality, women's individual assets, like their high relative resources, do not matter much in determining their small domestic share. To put it in other words: women in less egalitarian countries might experience a weakening or a 'discount' on the negative effect of relative resources on a woman's share in the housework (Knudsen & Wærness 2008). This reasoning requires an explanation: the sole individual-level theory of the relative resources was built upon the idea that the more relative resources (for example the more income a woman has in comparison to her partner) a women has, the less she shares in the domestic work. However, this positive individual-level effect of women having relative more resources on a more equal division of household labour, can be weakened or reinforced by the gender (in)equality in the country. If the country in which the woman lives is characterised by more macro-level gender equality, then the negative individual-level effect of women having more relative resources on her share in the household labour is reinforced. Vice versa this means that if the country in which a woman lives is characterised by less macro-level gender equality, then the negative individual-level effect of a woman having more relative resources on her share in the household labour is weakened. The following hypothesis[5] is built upon Fuwa's (2004) theory.

(iv)   *The negative individual level effect of a woman having more relative resources on her share in the household labour is weaker in countries with less macro-level gender equality.*

Preliminary research showed by using HLM models that women with more relative resources appear to be "more effective in attaining a more egalitarian division of housework in countries with higher gender equality" (Knudsen & Wærness 2008). This finding indicates that in countries with higher levels of female empowerment women with more relative resources were able to reduce their relative share in the domestic work. Vice versa this means that in countries with less macro-level equality the negative individual-level effect of a woman

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[5] Fuwa (2004) and Knudsen & Wærness (2008) only investigated the effect of relative income on the division of housework, by country gender empowerment level. This means that in the literature, there are no specific expectations or hypotheses about the other relative resources such as education or occupational prestige. Besides, this interaction-effect is solely based on the relative resources theory excluding the New Home Economic theory.

having more relative resources on her share in the household labour was weakened. Also Fuwa (2004) came to this outcome, although the outcome turned out not to be significant.

2.2.2. Woman's time availability

According to the time availability model, the division of household labour is rationally allocated consistent with the availability of partners to perform housework tasks and the amount of housework to be done (Hiller 1984, in Bianchi et al. 2000). This model presumes that men and women share in household tasks "to the extent that there are demands on them to do so and they have available time" (Shelton & John 1996, p 307). Usually, time availability depends on the employment status of the partners and on the presence and ages of children (Presser 1994). In general it is expected that the more domestic tasks demands (which is mostly defined by the presence and ages of children) a women has, and the greater the capacity to respond on them, especially in terms of available time, (which is mostly defined by non-employment status or part-time employment status) the greater woman's share in the domestic labour. Vice versa, this means that the less domestic task demands a woman has and the less available time she has to respond to these demands, the smaller is her relative share in domestic work. Therefore, I hypothesise that:

> (v)   There is a positive individual-level effect of less time availability of a woman on her share in the household labour.

Most preceding studies discovered that there is a negative association between woman's paid work hours and the time a woman spends on household labour (Acock & Demo 1994, in Shelton & John 1996; Bergen 1991, in Shelton & John 1996; Kamo 1991, in Shelton & John 1996). This implies that there is a positive effect of women having less time available on her share in the domestic work. But it was also indicated that irrespective of woman's paid work time, women still are responsible for the majority of domestic work (Kamo 1991, in Shelton & John 1996).

Moreover, as is noted previously, Fuwa argues that in a country context with less female empowerment, a woman's individual assets, like her small time availability to perform domestic work, do not matter much in determining woman's more equal domestic share. In other words this means that women in less egalitarian countries might experience a weakening or a discount on the effect of their individual asset time availability on her share in the housework (Knudsen & Wærness 2008). Again, the reasoning requires an explanation: the

individual-level theory of a woman's time availability indicated that the less time availability a woman has to perform domestic labour, the smaller her relative share in the domestic labour will be. Nonetheless, this positive individual-level effect of less time availability of a woman to perform domestic work on her share in the housework can be weakened or reinforced by the gender (in)equality in the country. If the country in which a woman lives is characterised by more macro-level equality, then the positive individual-level effect of less time availability of a woman to perform domestic work on her share in the household labour is reinforced. Vice versa this means that if the country in which a woman lives is characterised by less macro-level gender equality, then the positive individual-level effect of less time availability of a woman to perform domestic work on her share in the domestic work is weakened. The following hypothesis is built upon this reasoning:

(vi) *The positive individual-level effect of less time availability of a woman on her share in the household labour is weaker in countries with less macro-level gender equality.*

Fuwa (2004) and Knudsen and Wærness (2008) concluded in their studies that in countries with low levels of female empowerment, women profit less from their scarcity on available time to perform less domestic tasks than women who live in countries with high levels of female empowerment. These results imply that the positive effect of less time availability of a woman on her share in the household labour is weakened or discounted in countries with less macro-level equality.

2.2.3. Woman's gender ideology

The gender ideology is a third individual-level theory that can be used to explain the division of household labour within couples. Coverman (1985) notes that gender ideology is commonly referred to as sex role attitudes. These attitudes originated during socialisation and determine the division of household labour between men and women (Shelton & John 1996). Men and women are used to behave according to these socially constructed gender roles. Therefore it is generally expected that women with more traditional gender attitudes and therefore a more traditional gender ideology, will have a more traditional division of household labour. This means that a woman contributes a lot to the housework. On the contrary women with more egalitarian attitudes and with a more egalitarian gender ideology,

will have a more equal division of household labour (Shelton & John 1996). This implies that a woman does less in the household labour. Therefore, I hypothesise that:

> (vii)   *There is a negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour.*

Most previous studies found that if women's gender ideology is more traditional, women do more in the household labour than those women with less traditional gender role attitudes. The reverse was displayed for men (Brayfield 1992, in Shelton & John 1996; Huber & Spitze 1983, in Shelton & John 1996).

As was already mentioned, Fuwa (2004) argued that in a country context with less macro-level gender equality, women's individual assets, like her egalitarian gender ideology, do not matter much in determining women's more equal domestic share. According to Knudsen and Wærness (2008), this also means that women in less egalitarian countries might experience a weakening or a discount on the effect of their individual asset 'egalitarian gender ideology' on the housework division. Even here, this argument demands an explanation: the individual-level theory of women's gender ideology illustrated that the more egalitarian a woman's gender ideology is, the more equal the division of household labour will be. This implies that a woman's share in the household dimishes. Nevertheless, this negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour can be weakened or reinforced by the national female empowerment. If the country in which the woman lives is characterised by more macro-level gender equality, then the negative individual-level effect of the woman having a more egalitarian gender ideology on her share in the household labour is stronger. Vice versa this means that if the country in which the woman lives is characterised by less macro-level gender equality, then the negative individual-level effect of the woman having a more egalitarian gender ideology on her share in the household labour is weakened. The following hypothesis is built upon this line of thought:

> (viii)   *The negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour is weaker in countries with less macro-level gender equality.*

Forgoing research demonstrated that for women in the country with the most macro-level gender equality, the negative effect of women's egalitarian attitudes on her share in the

household labour is more than twice as strong as it is for women in the country with the least macro-level gender equality (Fuwa 2004). This outcome puts forward that women profit less from their individual asset 'gender ideology' in countries with less female empowerment than in countries with more female empowerment. Also Knudsen and Wærness (2008) showed that the negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour is weaker for women in countries with less macro-level gender equality.

3. DATA AND METHODS

This section of the research-paper covers a description of the dataset that is used, the sample that is drawn, the operationalisation of the key variables and the analytical strategy that is used.

3.1. Data

The data that are used in this article primarily stem from the European Social Survey (ESS), which is a biennial multi-country survey covering over 30 nations. The first round was fielded in 2002/2003, the fourth in 2008/2009. In this research paper, the ESS data of round 2 are used, which were fielded in 2004/2005. All rounds of the ESS questionnaires, on which the data are based, comprehend a core module and some rotating modules; in addition to the standard background items that return in each round, also modules for special research themes are included into the dataset. The ESS2-2004 is especially useful for the research topic 'the division of household labour', since one of the rotating modules in this dataset is about family, work and well-being. The ESS2-2004 data were gathered through 60 minutes face-to-face interviews using structured questionnaires. These questionnaires were translated into the national language that is applied to the participating countries. All of the samples are random (probability) samples with comparable estimates. This entails that the samples are representative for each country. The ESS2-2004 dataset was conducted in 26 countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switserland, Turkey, Ukraine, and the United Kingdom. Due to the fact that for Italy a split ballot design was used, all Italian cases were omitted from the international data file, which implies that they are excluded from my analysis as well. The fact is that for Italy not all respondents were asked the same questions. Some respondents had

to respond to different questions than other respondents. As a result, the questions about the division of the household labour were only asked to a few of these Italian respondents. In total 47,537 cases are included in the ESS2-2004 data. The number of cases per country varies considerably, from 579 cases of Iceland till 3026 cases of the Czech Republic.

3.2. Sample

This study includes female members of currently heterosexual partner-couples who are living in the same household as their partners and who (or their partners) spend time in performing housework, aged 18-65 years. Theoretically it can be argued that it is allowed to merely focus on female respondents, as my hypotheses are only about women. However, excluding the male respondents does not imply that reporting about males has become impossible; to wit, women also answered questions for their partners. This means that variables about the male partners are still included into the analysis. The only difference is that this information is provided by the female respondents instead of by the males themselves. In fact, it can be reasoned that it is even better not to have information included that is given by both partners separately, because discrepancy exists between men's and women's reports. Previous research has found that these gender differences especially occur for the relative division of homework (Kamo 2000, in Knudsen & Wærness 2008). For instance, a woman might report that she does three quarter of the housework in the household, while she reports that her partner does a quarter. On the same time, her partner might report that he and his wife share equally in household tasks.

Because in this study the focus is on the division of household labour of heterosexual couples only female respondents with a male partner are of importance. All female cases without male partners were excluded from the analysis, as to be sure that no females without partners and no homosexual couples are included[6]. It turned out that all cases that were left in the dataset were living together with their male partner[7].

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[6] Because there were 19 respondents who filled in that they had a partner relationship with both a female and a male, it was obscure to determine whether they were heterosexual oriented. Presumably, these respondents made a mistake in filling in these questions. As it is more plausible to assume that these respondents have relationships with males than with females – owing to the fact that more people are heterosexual oriented than homosexual oriented – these respondents are not omitted from the dataset.

[7] From now on, I will be merely talking about partners instead of male partners, since we now are sure that the partners are males. Besides, from this moment, the term respondents is used to indicate the female respondents, because we now are certain about the fact that the respondents are females.

Moreover, only respondents between 18 and 65 years are included into the analysis, because persons within this certain age range are important when the division of household labour between couples is investigated. It is reasonable to assume that from an age of 18 people are most likely to start having serious partner relationships in which both partners are living together in the same household. Besides, in previous studies it is argued that performing household labour is mainly affected by counter-component performing (paid)work. Since in many countries[8] 65 years is the retirement age, the upper boundary of age is 65 years in this study. People who are younger than 65 years old are more likely to behave accordingly the theories that are applied in this study (e.g. theories about work hours and living with young children) than people who are older than 65.

As this study is about the division of household labour between couples, a requirement for the cases that are included in the sample is that they or their partners spend time in performing housework during the weekend and/or weekdays. When during the weekend and/or the weekdays no housework is performed by the respondent or her partner, than these cases are excluded from the dataset.

In spite of the fact that in the ESS2-2004 data 25 countries were included, Luxembourg and the United Kingdom are excluded in this study. This is decided on account of lacking information about key variables, the 'Gender Empowerment Measure' (GEM) for Luxembourg and the 'highest level of education' for the United Kingdom.

After selecting the female respondents, who are living together with a male partner, who are heterosexual oriented and who are aged 18-65 years, the sample size includes 11,726 cases. After excluding cases with outliers and missing data on key variables, this study uses 9.429 cases, with final sample sizes varying from 119 (Iceland) to 653 (Germany). It is imperative to remove outliers from the dataset, since these cases distort the picture. The performance of outlier checks per key variable showed the existence of strange values on for instance the total hours spent on housework in a household during a typical weekday and during a typical weekend. The values of the variables 'total hours spent on housework in a household during a typical weekday and during a typical weekend' exceeded respectively 24 hours and 48 hours. Probably, this is caused by respondents making mistakes in filling in the questionnaire. In order to solve these problems a selection is made for these variables so that

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[8] Retirement age is defined differently by country. While many countries applied the standard of 65 years, some countries gradually apply a standard of 67 years (e.g. Germany) or 68 years (Belgium). Besides, gender differences and sector differences exist in retirement age in some countries. For example, in France is the retirement age for the private sector 65 years, while this equals 60 years for the public sector.

the total hours spent on housework during a typical weekday could not exceed 24 hours, while the total hours spent on housework during a typical weekend were not able to surpass 48 hours. Moreover, it is necessary to exclude missing data from the dataset in order to conclude that the respondents who are included into the analysis responded to all the questions that are important for this study in a correct way.

3.3. Operationalisation

In this part of the research-paper, I will describe the operationalisation of the dependent variable, the independent variables, the control variables, and the country-level variable that are central in this study. The descriptives of all the variables used in the analysis are reported in table 1.

3.3.1. Dependent variable

The dependent variable is *her share,* which indicates women's proportional share in couples' domestic labour. The variable comprises a relative time-based measure of the household division within couples. The use of the relative allocation of household labour between partners is advantageous in contrast to absolute measurements, because it directly compares the hours spent on housework by men and women. As a consequence, the dependent variable 'her share' exists of a single indicator (Goldscheider and Waite 2001, in Presser 1994). Even though task-based data would also be appropriate to measure the household division between couples, as is argued by Fuwa (2004), Geist (2005) and Knudsen and Wærness (2008), time-based data are used. The main reason for this, is that within the ESS2-2004 dataset it is not possible to construct a task-based variable of the division of household labour. The use of a time-based dependent variable creates an extra angle, because most studies use a task-based dependent variable.

"Her share" is based on information from the ESS2-2004 about the total time (in hours) in the household that is spent on domestic work during a typical weekday and during a typical weekend. The household division within couples can be organised in totally different manners on weekdays than in weekends. Therefore, 'her share' is based on both a typical weekday component and a typical weekend component. Besides, ESS2-2004 presents data on the relative share in household labour of the respondent during a typical weekday and a typical weekend. In fact, these items measure the part women spend in performing domestic tasks as the respondents are all females. For example, respondents were able to indicate that they had spent none or almost none; up to a quarter; more than a quarter, up to half; more than

a half, up to three quarters; more than three quarters, but less than all; or all of the total time in the household on housework. I need to convert these items into numerical variables in order to use them in calculations. The conversion is done by taking averages. So, none or almost none of the time was converted into 0; up to a quarter of the time was converted into .125; more than a quarter, up to a half of the time was converted into .375; more than half, up to three quarters was converted into .625; more than three quarters, less than all of the time was converted into ,875; and all or nearly all of the time was converted into 1. Subsequently, a variable that indicates the number of hours spent on housework by a woman on a typical weekday is computed by multiplying a woman's relative share in numerical values by the total hours spent in household labour in the household. In the same way a variable that illustrates the number of hours that is spent on housework by a woman during a typical weekend is constructed. Eventually, the variable 'her share'[9] is created by dividing the number of hours that a women did spent on housework during a typical weekday and a typical weekend by the number of hours that in total are spent in the household on housework during a weekend and a weekday (see appendix 1 for clarification of the operationalisation of the dependent variable). In addition to table 1 where the mean measure of "her share" is illustrated, a measure of "her share" per country is demonstrated in table 2.

3.3.2. Independent variables

There are three main independent variables. One of these independent variables that is used in most previous studies are the "relative resources" (Shelton and John 1996; Bianchi et al. 2000; Fuwa 2004; Geist 2005; Knudsen & Wærness 2008). Relative resources are measured by using 'income' and 'education' measures. The *relative income* variable is used, which indicates the proportion of household income that the respondent provides[10]. This 'relative income' variable is used to create dichotomous variables 'less income female', 'equal income female', and 'more income female', which indicate respectively that a woman provides a smaller, an equal and a larger proportion of the household income compared to her partner. As there is information available on the highest educational level that is completed of the

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[9] I assume that the housework is performed by the woman and her partner and not by third persons. When a case has for instance a value of 70 percent on 'her share', it means that the woman does 70 percent of the total housework time in the household. It indirectly implies that the partner does 30 percent of the total housework time in the household.

[10] Based on the assumption that only the respondent and her partner are the possible breadwinners in the household, 1 – the proportion of household income that is provided by the respondent equals the proportion of the household income that is provided by the partner.

respondent and her partner in the ESS2-2004 data, the variable *relative education* can be computed. This variable is based on information about the highest level of education of the female respondent and her partner. I use three dichotomous variables indicating a woman having a higher, equal or lower educational background than/as her partner.

The second main independent variable is *time availability*. For this 'time availability'-variable the female's weekly work hours and the partner's weekly work hours (overtime included) are used. Because these weekly work hours variables are based on filter questions, respondents that indicated on previous items not to be currently working got the missing value 'not applicable' instead of '0' on these variables . For that reason, these missing values are converted into '0'. Categories are made to compare (with larger differences) the respondent's weekly work hours with the partner's weekly work hours. Based on a definition of part-time work of the Dutch statistical institute CBS[11], I categorise 0 hours work as no job; 1-11 hours work as a marginal job, which is (not acknowledged as job by CBS); 12-23 hours work as small part-time job; 24-35 hours work as a large part-time job; and more than 35 hours as a full-time job. On the basis of the comparison of these categories, the dichotomous variables 'less work hours female', 'equal work hours female' and 'more work hours female' are created. These variables indicate that a women works respectively less hours, an equal amount of hours or more hours a week in her main job than/as her partner does.

The third main independent variable is *gender ideology*. 'Gender ideology' is used to expose respondents' support for egalitarian gender role attitudes. 'Gender ideology' is based on the ordinal variables 'gender ideology: family', 'gender ideology: responsibility', and 'gender ideology: job'. 'Gender ideology: family' contains the statement: 'women should be prepared to cut down on paid work for sake of family'. The statement 'men should take as much responsibility as women for home and children' is indicated by the variable 'gender ideology: responsibility'. 'Gender ideology: job' includes the statement 'men should have more right to job than women when jobs are scarce'. The responses are measured on a five-point scale, from strongly agree (1) to strongly disagree (5)[12], with higher scores reflecting a more egalitarian gender ideology.   For the gender-ideology variable it is preferred to create

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[11] Full-time employment and part-time employment status is defined differently by country. Nevertheless, in this study the Dutch standard is used.

[12] Originally, a higher score on 'gender ideology: responsibility' reflected a more traditional gender ideology instead of a more egalitarian gender ideology. To simplify the interpretation of the gender ideology variables and in order to make the meanings of the gender ideology variables better comparable, the variable 'gender ideology: responsibility' is reverse recoded. This means that a high value on 'gender ideology: responsibility' indicates a more egalitarian gender ideology.

a scale, based on the three statements mentioned above. However, a factor analysis and reliability tests (Chronbach's alpha being .485 and split-half being .582) demonstrated that it is not possible to use a gender-ideology scale as the independent variable, because the alpha-level was not acceptable. Since the gender ideology variables are mutually not strongly correlated (*rho* = .417 (*p* < .001) for the association between 'gender ideology: family' and 'gender ideology: job'; *rho* = .073 (*p* < .001) for the association between 'gender ideology: family' and 'gender ideology: responsibility'; *rho* = .163 (*p* < .001) for the association between 'gender ideology: job' and 'gender ideology: responsibility') it is acceptable to put the gender ideology variables separately into the model. Owing to lacking information in the ESS2-2004 dataset about gender-role attitudes of the partners of the respondents, only information about women's gender ideology is included in the analysis.

3.3.3. Control variables

As is indicated by previous research about the division of household labour between couples, a control variable of 'marital status' is preferred (Bianchi et al. 2000). It is argued that married women do more in the housework than women who are not married. In order to control for the legal marital status of the respondents and their partners, a dichotomous variable *married* is created, which indicates that the respondent is married. The variable 'married' is based on information about ordinal variables 'legal marital status' and 'legal marital status for France'. The answer categories range from 'married', 'separated, but still legally married', 'divorced', 'widowed', and 'never married'. France is considered separately, since for this country there is one additional answer category 'pacte de solidarité' in comparison with the other European countries. All other values than 'married' indicate that the respondent is 'not married'. By combining the values 'married' and 'not married' of the variables 'legal marital status' and 'legal marital status for France' the dichotomous variable 'married' is constructed.

In addition, most studies also control for the variable *cohabitation*. However, since in this study only respondents are included who have a partner with whom they live in the household, it is not necessary to control for 'cohabitation'.

A second control variable that is often used in studies about the division of household labour is the dichotomous variable *having young children at home*, indicating that young children are living in the household (Fuwa 2004; Knudsen & Wærness 2008). According to the ESS2-2004 data, these children might be biological, foster, step or adopted children. Bianchi et al. (2000) and South and Spitze (1994, in Fuwa 2004) argue that especially the

presence of young children in the household influence the division of housework[13]. It is predicted that women with children at home perform more domestic work than women without children living at home. Therefore it is preferred to control for the presence of young children in the household.

Moreover, *age* is mostly used in household division studies as a control variable (Fuwa 2004; Knudsen & Wærness 2008). It is argued that the division of household labour differs for couples in different age categories. Younger people might have a more egalitarian household division than older people (Goldscheider & Waite 1991, in Presser 1994). The variable 'age' is computed based on information about the year in which the respondent is born and the year of the interview. Due to lacking information about the year in which the partner of the respondent is born, only information about the age of women is included into the analysis.

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[13] Although housework is not including childcare and leisure activities, children might influence the domestic work, because it can be assumed that more and younger children affect the housework that needs to be done in the household.

Table 1 Individual-level descriptive statistics

	Variables	Description	Mean (st.dev.) or %
Dependent variable			
	Her share	Women's share (in %) of couples' housework , mean (st.dev.)	72,77 (24,84)
Independent variables			
Relative resources			
Relative Income	Less income female	Less income female than male partner (yes =1, no = 0), in %	65,0%
	Equal income female	Equal income female as male partner (yes =1, no = 0), in %	23,0%
	More income female	More income female than male partner (yes =1, no = 0), in %	12,0%
Relative Education	Lower education female	Lower education female than male partner (yes =1, no = 0), in %	26,0%
	Equal education female	Equal education female as male partner (yes =1, no = 0), in %	49,4%
	Higher education female	Higher education female than male partner (yes =1, no = 0), in %	24,7%
Time availability			
	Less work hours female	Less work hours (in categories) female than male partner (yes =1, no = 0), in %	28,0%
	Equal work hours female	Equal work hours (in categories) female as male partner (yes =1, no = 0), in %	50,1%
	More work hours female	More work hours (in categories) female than male partner (yes =1, no = 0), in %	21,9%
Gender Ideology			
	Gender ideology: family	Statement 1: woman should be prepared to cut down on paid work for sake of family. [1-5], where 1 = traditional gender ideology and 5 = modern gender ideology, mean (st.dev).	2,83 (1,16)
	Gender ideology: responsibility	Statement 2: men should take as much responsibility as women for home and children. [1-5], where 1 = traditional gender ideology and 5 = modern gender ideology, mean (st.dev).	4,24 (0,76)
	Gender ideology: job	Statement 3: men should have more right to job than women when jobs are scarce. [1-5], where 1 = traditional gender ideology and 5 = modern gender ideology, mean (st.dev).	3,45 (1,26)
Control variables			
	age	Age of respondent, [18-65 years], mean (st.dev).	43,59 (11,70)
	Children 12 home	Own children/adopted/foster/partner's, aged 12 or under live with you (yes =1, no = 0), in %	38,4%
	married	Respondent is married (yes =1, no = 0), in %	86,2%

3.3.4. Country-level variable

To measure a country's level of female empowerment, which is also conceptualised as a country's *level of gender equality*, the Gender Empowerment Measure (GEM) is used. I mainly use the GEM from the Human Development Report (HDR) from 2006 of the United Nations Development Program (UNDP). Since the Human Development Reports of previous years do not contain information about the GEM score of France, the Human Development Report of 2009 is used. Because the GEM scores are quite stable across years, it is allowed to use values from the Human Development Report from 2009 in order to determine the GEM score for France. The GEM captures levels of women's participation in politics, professional opportunities, and their economic power (UNDP, 2004). Being more precise, the GEM-measure that is based on the Human Development Report from 2006 is a combination of the percentage of parliamentary seats held by women, the percentage of administrators and managers who are women, the percentage of professional and technical workers who are women, and women' share of earned income compared to that of men. All these GEM components are based on data that stem from various years prior to 2006. However, the GEM-measure of France is a combination of seven components; in addition to the four components on which the GEM of 2006 is based, also the components year women received right to vote and stand for election, the year a woman became Presiding Officer of parliament or one of its houses for the first time, and the percentage of women in ministerial positions are taken into account. These GEM components are based on data from various years prior to 2009. The GEM is, as is argued by Fuwa (2004), one of the most valid indicators of macro-level gender equality, since it provides cross-national data on gender equality in economic and political power. The GEM variable ranges from 0 to 1. A higher value on the GEM variable represents more gender equality.

3.4. Analysis

I will perform a multiple linear regression analysis[14], controlling for country clustering. Such an approach seems useful when analysing data in which individuals are nested within larger groupings (e.g. countries). A multiple linear regression model illustrates the influence of several categorical or continuous independent variables on the continuous dependent variable

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[14] It is preferred to perform a multi-level analysis. But since this method was not taught in the bachelor of sociology, it was not possible to perform a multi-level analysis..

(De Vocht 2007). Several main assumptions of multiple linear regression are made. For example, it is assumed that there is a causal relationship between the dependent variable and the independent variables. Moreover, it is assumed that the relationship between the dependent variable and the independent variables is asymmetrical; the dependent variable is affected by various independent variables. Furthermore, the model is assumed to be linear (De Vocht 2007). Two levels are incorporated into the regression analysis: the national and the individual. In addition, interactions between the national and the individual levels are implemented. Separate models are used. In the first model, only the control variables are incorporated. In the second model, also the country-level variable is included. In addition to the control variables and the country-level variable, the individual-level variables are comprised into the third model. In addition to all the variables that are incorporated in the third model, the interaction terms are added in the fourth model.

4. RESULTS

In this part of the research-paper attention is paid to the descriptive results as well as to the explanatory results, that stem from the multiple linear regression analysis.

4.1. Descriptive results

Table 2 shows that, on average, Sweden has the most egalitarian division of housework, because her share has got the lowest value for this country (60.74%), followed by Denmark (61.84%). Other countries with relative low values of her share are Ukraine (63.68%), Estland (64.95%), Finland (65.44%) and Norway (65.89%). On the other hand, Greece has the most traditional division of household labour, because her share has got the highest value for this country (89.15%), followed by Portugal (86.73%). Since in all countries woman's share is over 50 percent, this indicates that in all countries – even in the country with the most egalitarian division of household labour –, women do more housework than their partners. The results of a One-Way Anova, which is an extended T Test, show that the averages of woman's share differ significantly across European countries ($F = 44.630$, with $df = 22$, $p <$ .001). Therefore, the first hypothesis *European countries do differ in the division of household labour within couples* can be confirmed.

Table 2 Country-level descriptive statistics

Country	N	Women's share (in %) of couples' housework, mean (st.dev.)		Gender Empowerment Measure (GEM), 0-1
Austria	415	76,81	(23,49)	0,815
Belgium	411	73,72	(24,20)	0.855
Switzerland	456	75,25	(24,83)	0,797
Czech Republic	488	71,20	(23,89)	0,615
Germany	653	72,26	(24,21)	0,816
Denmark	403	61,84	(23,25)	0,861
Estonia	442	64,95	(22,55)	0,608
Spain	329	80,44	(24,83)	0,776
Finland	506	65,44	(21,60)	0,853
France	420	77,79	(23,30)	0,779
Greece	543	89,15	(20,03)	0,614
Hungary	325	70,48	(25,32)	0,560
Ireland	451	78,60	(23,53)	0,753
Iceland	119	68,09	(21,18)	0,866
Netherlands	515	74,17	(23,43)	0,844
Norway	471	65,89	(23,96)	0,932
Poland	378	70,40	(24,11)	0,610
Portugal	354	86,73	(20,51)	0,681
Sweden	458	60,74	(21,37)	0,883
Slovenia	228	68,31	(23,79)	0,603
Slovakia	247	67,80	(26,0)	0,599
Turkey	448	82,12	(28,55)	0,289
Ukraine	369	63,68	(25,45)	0,455
Total N	**9,429**			

Note: GEM = Gender Empowerment Measure. GEM ranges from 0 to 1, with higher values indicating more macro-level gender equality.
Her share = women's proportional share in couples' domestic labour. Her share ranges from 0 to 100 percent, with values up to 50 percent indicating that women share more in the household labour than men and values below 50 percent indicating that women share less in the household labour than men.

Moreover, table 2 illustrates the macro-level gender equality is especially high in the Nordic countries (.932 for Norway), (.883 for Sweden), (.861 for Denmark) and (.853 for Finland). But also some West-European countries such as the Netherlands (.866) and Belgium (.855) are characterised by high values of female empowerment. Turkey and Ukraine can be classified as countries with especially low values of female empowerment (.289 for Turkey) and (.455 for Ukraine).

A one-tailed test of the correlation between her share and the macro-level gender equality shows a negative association; that is, countries with more macro-level gender equality – indicated by higher GEM values – are characterised by lower values of her share, which means that these countries have, on average, a more equal division of household labour[15] ($r = -.087$, $p < .001$). Despite the fact that this association is not very strong, it seems

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[15] A low value of her share does not always imply that there is an equal division of household labour. A low value of her share can also be 20%, which means that the division of household labour is very unequal, since the man performs much more in the domestic work than the woman. For arguing that her share is the same as an equal division of household labour, her share should tend to 50%. However, in this study it is possible to

that when this correlation test is taken into account, it is expected that there is evidence to support the first hypothesis. Notwithstanding it, within this correlation, there has not been controlled for other characteristics. Without controlling for individual-level and control variables, it is not possible to confirm the second hypothesis *there is a negative country-level effect of countries that are characterised by more macro-level gender equality on a woman's share in the household labour* with certainty. Therefore a multiple linear regression analysis is performed in which is controlled for individual-level and control variables.

4.2. Explanatory results

Table 3 demonstrates multiple regression models in which individual-level determinants, country-level determinants, and interaction terms are incorporated. The results are controlled for country clustering. Controlling for country-clustering is performed because there is an overall tendency of people that originates from the same country to exhibit more similarity. Model 1 of the table includes the control variables. No independent variables at either level are included. The model illustrates that having young children at home has got a positive effect on her share ($b = 4.805$, $p < .001$). Also married has a positive coefficient ($b = 7.589$, $p < .001$). These significant coefficients indicate that women who have young children at home and women who are married share more in housework than women without young children or unmarried women. All control variables have effects in the expected directions, although no significant effect of age is ventilated. A model with only control variables included, explains 2 percent of the variance of her share ($R^2 = .0200$).

In model 2 of table 3, the Gender Empowerment Measure (GEM)[16] is added to the model with only the control variables. When no individual-level determinants are taken into account, the coefficient for GEM equals -11.164. This means that for women who live in countries with more macro-level gender equality, her share in the housework is less than for women who live in countries with less macro-level gender equality. Despite the fact that the effect of GEM on her share is in the expected direction, no significant effect emerged[17].

equalise the meaning of a low value of her share and an equal division of household labour, because all countries are characterised by a her share value over 50%. This means that in all these countries women still perform proportionally more domestic work than their partners. Now a low value in her share does indicate that the division of household labour is more equal.

[16] As was previously mentioned, the GEM measures the macro-level gender equality or the female empowerment in a country.

[17] Before I controlled for country clustering the negative effect of GEM on her share turned out to be significant.

Therefore, no evidence has been found to support the second hypothesis *there is a negative country-level effect of countries that are characterised by more macro-level gender equality on a woman's share in the household labour*. This outcome is not in line with previous research. Fuwa (2004) and Knudsen and Wærness (2008) both showed that the female empowerment negatively affected her share in the housework. However, these studies used other datasets, operationalised their key variables in other terms and did not solely focus on European countries, which might have caused the difference in outcome.

Moreover, after including GEM into the model, the positive effect of age has become significant ($b = .114$, $p < .05$). This result illustrates – as was expected – that older women share more in the household than younger women. The effects of the other control variables remained the same after adding the GEM to the model. The inclusion of GEM to the model, leads to a small increase in the percentage of explained variance of her share from 2 to almost 2.5 percent ($R^2 = .0247$).

Table 3 Multiple Linear Regression for (interaction between) Individual- and country-level determinants, controlled for country clustering

		Model 1	*Model 2*	*Model 3*	*Model 4*
Intercept	---	60.440***	68.393***	87.629***	64.111***
		(2.511)	(5.871)	(12,478)
GEM	+	---	-11.164	-3.592	28.690
			(9.038)	(7.335)	(17.088)
Age	---	.090	.114*	.125**	.129**
		(.059)	(.049)	(0.044)	(.045)
Children12home	---	4.805***	4.967***	3.615***	3.673***
		(.943)	(.888)	.824	(.813)
Married	---	7.589***	6.461***	3.899**	3.489**
		(1.739)	(7.130)	(1.083)	(1.013)
Equal income female	+	---	---	-4.725***	.620
				(.905)	(3.296)
More income female	+	---	---	-6.487***	-9.935
				(1.367)	(7.504)
Equal education female	+	---	---	-.643	.293
				(.680)	(2.069)
Higher education female	+	---	---	-.989	-3.461
				(.947)	(6.044)
Equal work hours female	+	---	---	-4.356***	-10.983**
				(.612)	(3.449)
More work hours female	+	---	---	-6.927***	-17.231*
				(1.082)	(7.700)
Gender ideology: family	+	---	---	-1.214*	5.007*
				(.596)	(2.616)
Gender ideology: Responsibility	+	---	---	-1.542*	.117
				(.682)	(4.529)
Gender ideology: Job	+	---	---	-1.842***	-.010
				(.364)	(1.915)
Equal income female_gem	+	---	---	---	-7.246
					(4.326)
More income female_gem	+	---	---	---	4.678
					(9.663)
Equal education female_gem	+	---	---	---	-1.447
					(3.024)
Higher education female_gem	+	---	---	---	3.235
					(7.626)
Equal work hours female_gem	+	---	---	---	8.882*
					(4.598)
More work hours female_gem	+	---	---	---	13.638
					(9.681)
Gender ideology: family_gem	+	---	---	---	-8.460**
					(3.284)
Gender ideology: responsibility_gem	+	---	---	---	-1.907
					(5.938)
Gender ideology: job_gem	+	---	---	---	-2.617
					(2.613)

Note: Standard errors are in parantheses. GEM = gender empowerment measure and measures the macro-level gender equality. + = one-tailed test. *= $p < .05$; **= $p < .01$; ***= $p < .001$.
In model 3 and 4, the dichotomous variables less income female, lower education female and less work hours female are chosen as the reference categories.

Model 3 of table 3 introduces the individual-level determinants in addition to the model with only the country-level determinant and the control variables. In this model, the dichotomous variables less income female, lower education female and less work hours female are chosen as the reference categories. Model 3 shows that the dichotomous variables equal income female and more income female have significant negative coefficients on her share (respectively $b = -4.725$, $p < .001$ and $b = -6.487$, $p < .001$). These findings illustrate that relative income is significantly and negatively related to her share. This means that women who earn as much as their partners and women who earn more than their partners, do less in the homework than women who earn less than their partners. This negative effect of more relative income on her share seems to be stronger for women who earn more than their partners than for women who earn as much as their partners, as the coefficient of more income female is more negative than the coefficient of equal income female. Neverthesless, this is not significantly tested. The second component of relative resources, relative education is not significantly related to the dependent variable her share. Although the signs of the coefficients of the dichotomous variables equal education female and higher education female are in the expected direction ($b = -.643$ for equal education female, $b = -.989$ for higher education), the results are not significant on the α is 5 percent level. Based on the relative income component of relative resources, I can partly confirm the third hypothesis that *there is a negative individual-level effect of a woman having more relative resources on her share in the household labour*. In fact, a negative individual-level effect of a woman having more relative income on her share is demonstrated, while no support was found for the negative individual-level effect of a woman having more relative education on her share. These results are partly in line with previous research, because in these studies also a significant negative effect of a woman having more relative education on her share was found (Presser 1994; Kamo 1988, in Shelton & John 1996; South & Spitze 1994; Brines 1993, in Shelton & John 1996).

Model 3 of table 3 also shows the effects on her share of the dichotomous variables equal work hours female and more work hours female that stand for time availability. These variables have negative coefficients – as was expected (respectively $b = -4.356$, $p < .001$; $b = -6.927$, $p < .001$). These significant coefficients illustrate that women who work equal hours in their main job as their partners and women who work more hours in their main job than their partners do less in the domestic work than women who work less hours in their main job than their partners. In other words, this means that women having equal time or less time available (which is negatively affected by spending time at work) than/as their partners, have

a smaller share in domestic work than women who have more time available than their partners. This effect seems to be stronger for women who work more hours than their partners than for women who work equal hours as their partners. However, this is not significantly tested. Based on these results, evidence has been found to confirm the fifth hypothesis that *there is a positive individual-level effect of less time availability of a woman on her share in the household labour.* Also previous found out that women with less time available do less work in the household than women who have more time available (Bergen 1991, Shelton & John; Kamo 1991, in Shelton & John).

In model 3 of table 3 it was shown that the three variables that comprise gender ideology have negative coefficients that are significant (b = -1.214, p < .05 for gender ideology: family; b = -1.542, p < .05 for gender ideology: responsibility; b = -1.842, p < .001 for gender ideology: job). This means that female's more egalitarian gender ideology is associated with women performing a smaller percentage of household labour across 23 European countries. Thus women who have more egalitarian gender role attitudes perform less domestic work than women who have more traditional gender role attitudes. These outcomes are in line with my expectations and confirm the seventh hypothesis that *there is a negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour.* This negative effect of a woman having more egalitarian gender role attitudes on her share in the household is also illustrated in preceding studies (Brayfield 1992, in Shelton & John 1996; Huber & Spitze 1983, in Shelton & John 1996).

Furthermore, it turned out that the effects of the macro-level gender equality and the control variables barely changed after adding the individual-level hypothesis to the model. The percentage of explained variance of the variable her share increased from 2.47 percent to 7.42 percent for model 3 in contrast to model 2.

In model 4 of table 3, the interaction terms[18] between the individual-level determinants and the macro-level gender equality are added. In this model, the dichotomous variables less income female, lower education female and less work hours female are chosen once more as the reference categories. The interaction term coefficients of equal income female and GEM and of more income female and GEM are both not significant on the α is 5 percent level Therefore, it can be stated that the interplay coefficient of relative income and GEM is not significant. Besides, the sign of the interaction term coefficient of more income female and

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[18] The interaction terms between the individual-level determinants and the macro-level gender equality are created by multiplying the dichotomous variables that measure the individual-level determinants by the GEM.

GEM (b = 4.678) is not in the predicted direction. On the contrary, the sign of the interplay coefficient of equal income female and GEM (b = -7.246) is in the expected direction. Furthermore, the interaction term coefficients of equal education female and GEM and of higher education female and GEM are not significant at the α is 5 percent level. For that reason, it can be concluded that the interplay coefficient between relative education and GEM is not significant. Also the sign of the interaction term coefficient of higher education female and GEM (b = 3.235) is not in the predicted direction, although the sign of the interplay coefficient of equal education female and GEM (b = -1.447) ís in the expected direction[19]. Regardless of the fact whether the interaction terms coefficients were in the expected direction, non-significant results are presented. Therefore no evidence has been found to support the fourth hypothesis *the negative individual-level of a woman having more relative resources on her share in the household labour is weaker in countries with less macro-level gender equality.* Also a study of Fuwa (2004) concluded that no significant interaction effects between relative resources and GEM on her share exist, although the effect was in the predicted direction. On the contrary, one preliminary study showed significant interaction effects between relative resources and GEM on her share (Knudsen & Wærness 2008).

Moreover it is shown in model 4 that the interaction term coefficients of women who work equal hours as their partners and GEM (b = 8.882) and women who work more hours than their partners and GEM (b = 13.638) are in the expected direction. Nevertheless, only the interaction term coefficient of women who work equal hours as their partners is significant (p < .05). This coefficient indicates that in countries with more macro-level gender equality, the positive effect of less time availability (through a lot of work hours) on her share is stronger. In other words this can be interpreted as in countries with less macro-level gender equality (more macro-level gender inequality) the positive effect of less time availability on her share is weaker. However, as not both dichotomous variables that stand for the time availability are significant, no distinct conclusion can be drawn from these results. Only some evidence is found to confirm the sixth hypothesis *the positive individual-level effect of less time availability of a woman on her share in the household labour is weaker in countries with more macro-level gender inequality.* This evidence is based on the interaction

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[19] These positive signs illustrate that – only if the interaction terms were significant – in countries with more macro-level gender equality, the negative effect of a woman having more relative resources on her share is stronger and that in a country with less macro-level gender equality, the negative effect of a woman having more relative resources on her share is weaker. Thus, interaction terms that are significant and have positive coefficients do support my interaction hypotheses. This logic also applies to the interaction terms between time availability and GEM and between gender ideology and GEM.

effect of equal work hours female and GEM on her share. The interaction effect of more work hours female and her share is, although in the predicted direction, not significant at the α is 5 percent level. Based on this result, no evidence has been found to support the sixth hypothesis. These results therefore are only partly in line with previous research, since in the studies of Fuwa (2004) and Knudsen and Wærness (2008) an "obvious" weakened effect of the macro-level gender equality on the positive individual-level effect of a woman having less time availability on her share was found.

Besides, in model 4 it is illustrated that the interaction term coefficient between the gender ideology component 'family' and the GEM is significant, though not in the predicted direction ($b = $ -8.460, $p < .01$). This implies that in countries with more macro-level gender equality, the negative individual-level effect of a woman having a more egalitarian gender ideology on her share − is weaker. This means in other words that in countries with less macro-level gender equality, the negative individual-level effect of a woman having a more egalitarian gender ideology on her share is stronger. This is not in line with my expectations. Therefore, the negative coefficient of one of the three components of gender ideology leads to refutation of the eighth hypothesis *the negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour is weaker in countries with less macro-level gender equality.* In addition, the interaction term coefficients between the gender ideology component 'responsibility' and the GEM ($b = $ -1.907) and between gender ideology component 'job' and GEM ($b = $ -2.617) turned out not to be significant on the α is 5 percent level, although they were in the expected direction. Based on the non-significant coefficients of two of the three components of gender ideology, no evidence has been found to support the eighth hypothesis. Thus, it can be concluded that there is few evidence to reject the eighth hypothesis, while there is also some evidence for not to support the eighth hypothesis. Therefore it is not possible to definitely conclude that the negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household, is weaker for a woman who lives in a country with less macro-level gender equality. In contrast, other studies did conclude that in countries with less female empowerment, women profit less from their individual asset 'an egalitarian gender ideology' than women in countries with more female empowerment.

Furthermore, by including the interaction terms between the individual-level assets of women and the GEM, the direct effect of the GEM became positive ($b = $ 28.690), although not significant at the α is 5 percent level. Moreover, the dichotomous variable equal income female became positive ($b = $ .621), but was not significant at the α = 5 percent level either.

The coefficient of the dichotomous variable more income female was still negative after adding the interaction terms to the model, but the coefficient was not significant anymore at the α is 5 percent level. Besides, the coefficient of the dichotomous variable equal education female became positive ($b = .293$), but is still not significant at the α is 5 percent level. In addition, the coefficient of gender ideology: family became positive ($b = 5.007$) and remained significant ($p < .05$) after adding the interaction terms to the model. The negative coefficients of gender ideology: responsibility and gender ideology: job are not significant at the α is 5 percent level anymore when the interaction terms are added to the model. The coefficients of the dichotomous variables higher education female, equal work hours female and more work hours female, and the coefficients of the control variables age, young children at home, and married did not change after inclusion of the interaction terms to the fourth model. Eventually, model 4 explains 8.05 percent of the variance of her share. Thus, when all country-level variables, individual-level variables, interaction-terms and control variables are added to the model than only 8.05 percent of the dependent variable her share is explained.

5. CONCLUSION AND DISCUSSION

Central in this study was the sub-question whether European countries differed in the division of household labour within couples. Much evidence was found to confirm the hypothesis that *European countries do differ in the division of household labour,* and with that result an answer is given on the first-sub question. Besides, it was central in this study to investigate the direct and indirect effects of the macro-level gender equality on the division of household labour within couples among European countries. It turned out that the macro-level gender equality did not have a significant direct effect on the division of household labour, because no evidence has been found to support the hypothesis: *there is a negative country-level effect of countries that are characterised by more macro-level gender equality on a woman's share in the household labour.* This outcome is not in line with previous research.

To test the indirect effects of the macro-level gender equality on her share, first the individual-level effects on her share were considered. It turned out that the hypothesis *there is a negative individual-level effect of a woman having more relative resources on her share in the household labour* could be only partly confirmed, because only the relative income component of relative resources turned out to be significantly related to her share. These results are partly in line with previous research, although in these studies also a significant negative effect of a woman having more relative education on her share was found. In this

study, the effect for relative education was not significant, although the effect was in the predicted direction. The hypothesis *there is a positive individual-level effect of less time availability of a woman on her share in the household labour* could be confirmed. Also previous studies came to the conclusion that women with less time available perform less work in the household than women who have more time. Moreover, evidence was found to confirm the hypothesis *there is a negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour*. Women with a more egalitarian gender ideology do less in the housework than women with a more traditional gender ideology. This is also illustrated in preceding studies.

It turned out that there was no significant indirect effect of the macro-level gender equality on her share via an interaction between relative resources and GEM. Therefore, the hypothesis *the negative individual-level of a woman having more relative resources on her share in the household labour is weaker in countries with less macro-level gender equality* is not supported. Though in previous research it was concluded that in countries with more macro-level gender equality, the negative effect of a woman having more relative resources on her share is stronger, this cannot be concluded based on the results posed in this study. However, the signs of the interaction term between equal income female and GEM and between equal education and GEM were positive, as was expected. Moreover, it can be stated that there is some evidence for the fact that there is a significant indirect effect of the macro-level gender equality on her share via an interaction between time availability and GEM. Only some evidence has been found to confirm the hypothesis *the positive individual-level effect of less time availability of a woman on her share in the household labour is weaker in countries with more macro-level gender inequality*. Because one of the components of the interaction effect between GEM and woman's time availability did not show significant results, the hypothesis cannot be totally confirmed. On the other hand, in forgoing research it was possible to state with absolute certainty that there is an indirect effect of the macro-level gender equality on the positive individual-level effect of a woman having less time availability on her share in the domestic work. Furthermore, it can be stated that there is no evidence for the fact that there is a significant indirect effect of the macro-level gender equality on her share via an interaction between gender ideology and GEM. The reason for this was on the one hand that few evidence was found to refute the eighth hypothesis *the negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the household labour is weaker in countries with less macro-level gender equality*, since one of the interaction-term components of the gender ideology and the GEM was

significant, but negative. This implies that the coefficient was not in the expected direction. On the other hand, it can be concluded that there is no support for the eighth hypothesis, because two of the interaction-term components of the gender ideology and the GEM were, although in the predicted direction, not significant. Previous research, however, found evidence that there is an indirect effect of the macro-level gender equality on the negative individual-level effect of a woman having a more egalitarian gender ideology on her share in the domestic work.

The outcomes mentioned above provide an answer to second sub-question of this study. It turned out that there is no significant direct effect of the macro-level gender equality on her share. Moreover, no significant indirect effect of the macro-level gender equality via an interaction between relative resources and GEM on her share has been found. Besides, no significant indirect of the macro-level gender equality via an interaction between the gender ideology and GEM have been found. However, some evidence is provided that there is a significant indirect effect of the macro-level gender equality on her share via an interaction between time availability and GEM. In short, few evidence has been found for the fact that the macro-level gender equality indirectly influences her share in the domestic work. The answers on the two sub-questions form the answer on the main question of this study:

> Do European countries differ in the division of household labour within couples and to what extent do differences in the country context, such as the macro-level gender equality within countries, explain the differences in the division of household labour within couples among different countries in Europe?

Some limitations of this study need to be mentioned. First of all, the percentage of explained variance of her share is very low when all variables are added to the model. Only 8.05 percent of her share is explained. There might be many other factors that contribute to the explanation of country differences in the division of household labour within couples. Previous studies for example indicated that various alternative macro-level factors influences the division of housework within couples. In several studies the welfare regime has been used as a direct macro-level determinant as well as an indirect macro-level determinant to explain country differences in couple's division of housework (Esping-Andersen 1999; Fuwa 2004; Geist 2005). It turned out that couples who live in countries that are characterised by a social-democratic welfare regime or by a liberal welfare regime, share more equal in domestic work than couples who live in countries that are characterised by other welfare regimes. Also the economic development in a country might affect the household labour within couples

(Knudsen & Wærness 2008; Van der Lippe et al. 2007). The division of household labour turned out to be more unequal in countries with a high gross domestic product (GDP), because women in these countries spend their time mainly in performing domestic work. This is because these women lack the need on more income. Another example of an alternative macro-level explanation for country differences in the division of household labour within couples is the social policy in a country (Hook 2006; Van der Lippe et al. 2007). For instance childcare facilities relieve women of some childcare responsibilities. Besides, it enables them to be employed. From this perspective, it has widely been expected that countries in which the government spends more money on public childcare, will be characterised by a more equal household division. Since the welfare regime, the economic development and social policies in a country also seem to be important explanations for country differences in the division of housework within couples, future research should also take into account these macro-level determinants.

A second limitation of this study was that a multiple linear regression analysis was used instead of a multi-level analysis. Most cross-national studies on the household division used multi-level analyses. This seems useful when data are analysed in which individuals are nested within larger groupings (Knudsen & Wærness 2008).

A third limitation of this study is that I did not included scales into the analysis. Most studies used a gender ideology scale instead of three separate gender ideology variables. These limitations might have caused inconsistent outcomes in contrast to previous studies. But also the fact that in this study a time-based measure for her share was used, might have caused the inconsistent results. Most previously studies namely used a taks-based measure for the division of household labour. Moreover, the facts that I used a different dataset, operationalised in a different manner, and included different countries than previous studies did, might have caused the discrepancy in outcomes.

A fourth limitation of this study is that the total number of respondents for some countries was low. For example, only 119 cases for Iceland were included. Especially in a study, in which many independent variables are used, it is important to have a large number of total respondents included. Non-significant effects might therefore be due to a small number of total respondents.

Another limitation is that in this study there is not controlled for religion. Especially with countries with high proportions of Christians and Muslims included, it is important to control for religion.

A sixth limitation is that only the gender ideology of women is considered in this study. Especially the male gender ideology seems to be important for the household division (Shelton & John 1996). Future studies should consider these limitations, and try to overcome them.

Moreover, another recommendation for future research is to decompose the Gender Empowerment Measure, because it seems relevant to know whether the political or the economic dimensions of the GEM matter more for the household division within couples among countries. A decomposition of the macro-level gender equality might have some policy implications. "Research that differentiates these specific aspects of macro-level gender inequality will improve our understanding of contextual effects in relation to public policies" (Fuwa 2004, p 765).

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[20] *In* means that the primary literature was not available, therefore I used the secondary source. But originally the information came from the researcher being cited.

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Appendix 1 Computation of the dependent variable hershare

```
fre hwktwd1.

fre hwktwe1.

RECODE hwkpwd1 (1=0) (2=0.125) (3=0.375) (4=0.625) (5=0.875) (6=1) (ELSE=Copy) INTO

   herpartweekday1.

VARIABLE LABELS  herpartweekday1 'part she spends of total time housework on typical weekday 1'.

EXECUTE.

freq herpartweekday1.

RECODE hwkpwe1 (1=0) (2=0.125) (3=0.375) (4=0.625) (5=0.875) (6=1) (ELSE=Copy) INTO

   herpartweekend1.

VARIABLE LABELS  herpartweekend1 'part she spends of total time housework on typical weekend1'.

EXECUTE.

freq herpartweekend1.

Compute hershare =  ((herpartweekday1 * hwktwd1) + (herpartweekend1* hwktwe1)) / (hwktwd1+hwktwe1).
```