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### Working mothers around the world

*Moderating effects of social position on mothers' paid work in middle- and high-income countries*

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# Chapter 1

Introduction

## 1.1 Why Study Mothers' Paid Work in a Global Context

### 1.1.1 Motivation and scope

In both developing and industrialized countries today, mothers constitute a substantial share of the labor force (Abramo & Valenzuela, 2005; Agüero & Marks, 2010; Goldin, 2014; Gornick, Meyers, & Ross, 1997; Pettit & Hook, 2005). Mothers' engagement in paid labor has also been encouraged across levels of economic development through a political agenda for equal rights, opportunities, and investments in early childhood care (Branisa, Klasen, & Ziegler, 2009; Bruneforth, 2015; Razavi, 2016; UNESCO, 2015). At the same time, mothers have not made up for their increased efforts in paid labor by relinquishing responsibilities in the private sphere (Bianchi et al., 2000; Ferree, 1991; Hochschild & Machung, 2012; Jacobs & Gerson, 2004; van der Lippe, Tijdens, & de Ruijter, 2004). Care tasks are still a quintessential facet of working mothers' daily routines as well as their identities (Blair-Loy, 2003; Christopher, 2012; Gerson, 2010; Hochschild & Machung, 2012; Pepin, Sayer, & Casper, 2018). Indeed, a long tradition of feminists have made it abundantly clear that unpaid care work performed by both employed and non-employed mothers, remains the undervalued foundation of labor markets across the world (Arruzza, 2014; Benería, 1992; Boeri, 2018; Fraser, 2013; Tancred, 1995).

It is unsurprising, then, that motherhood also continues to have a large impact on women's paid labor (Gutiérrez-Domènech, 2005; Uunk, Kalmijn, & Muffels, 2005). The relationship between motherhood and paid work has, as a rule, been conflictual because societal norms towards both good mothers and good workers have tended to demand full-time commitment and dedication; even to the extent that engagement in one implies a slight on the other, or on both (Blair-Loy, 2003; Ekinsmyth, 2014; Christopher, 2012). Thus, in most if not all countries, combining paid employment and care work remains associated with time and role incompatibilities (Cuddy, Fiske, & Glick, 2004; Fortin, 2005; Hochschild & Machung, 2012; Jacob & Gerson, 2004; Pfau-Effinger, 2005). In consequence, motherhood affects whether women are in the labor force, their status in employment, and the rewards they receive from their labor (Brewster & Rindfuss, 2000; Budig & England, 2001; Grunow, Hofmeister, & Buchholz, 2006; McManus, 2001; Simoes, Crespo, & Moreira, 2016; Steiber & Haas, 2012).

In this dissertation, I study the consequences of motherhood on different facets of women's paid labor in the public sphere, which I refer to as labor market outcomes. I do not mean to imply that paid labor is the only valuable form of work, or that mothers are the only people who provide unpaid care. Mothers' paid work in the labor market, however, does define the scope of this dissertation. I chose this delineation because it represents much of the actual tension deriving from greater female involvement in labor markets and mothers'

continued care responsibilities: the clash between the pressure to emancipate towards equal labor market outcomes and two-earner families on the one hand, and the unwillingness to admit or change that unpaid care sustains capitalist labor markets. While women (and men) admittedly also care for their spouses, parents, and grandchildren, motherhood remains the epitaph of unpaid care responsibilities: care burdens are larger, more long term, and occur in some way or another for virtually every woman who gives birth.

Mothers juggle their double responsibilities in many different ways. Their engagement in paid work is affected by the need and wish to provide care and education for their children, the opportunities and necessities to engage in paid labor, and the extent to which the former two are mutually exclusive (Abramo & Valenzuela, 2005; Amin & Alam, 2008; Barrientos & Kabeer, 2004; Lincove, 2008; Semyonov, 1980). Such factors can lead to different behavior across, but also within countries. The balance between the need and wish to care or work can be quite different for a mother working as a manager, a medic, or a maid. In any country, there are mothers who provide fulltime care, who outsource almost all care work, and who perform both tasks (Chang, 2004; Goldin, 1995; Mehra & Gammage, 1999; Mishra, Nielsen, & Smyth, 2010; Pampel & Tanaka, 1986). These different combinations of care and work responsibilities are entangled with societal and labor market inequality (Korpi, Ferrarini, & Englund, 2013; Pettit & Hook, 2005). In separate segments of societies, some work-care configurations can be preferred over others; or they can be within or outside reach through economic and policy pressures (Baird & Renolds, 2004; Biersteker, 2010; Bruneforth, 2015; Glauber, 2011). Mothers in different social positions, defined as more or less privileged positions from a socio-economic perspective, have different ways of dealing with time and role incompatibilities (Bhalla & Kaur, 2011; Goldin, 2006; Haas et al., 2006; Jacobs & Gerson, 2004; Mandel, 2011; Milkman, 2016; Nussbaum, 2001; Salway, Rahman, & Jesmin, 2003).

Country comparative research indicates that the incompatibility of work and care tasks is also bigger in some countries than in others (Agüero & Marks, 2010; Matysiak & Steinmetz, 2008; Parrado, 2002; Pettit & Hook, 2005; Tjzens, 2002). We know that country differences in mothers' paid work are associated with economic conditions, such as the degree of inequality, hardship, and level of economic development (England, Garcia-Beaulieu, & Ross, 2004; Haghihat, 2002; Pampel & Tanaka, 1986; Rendall, 2013; Steiber & Haas, 2012). Previous research has shown that mothers' engagement in paid work, and the nature of that work, differs according to the institutional support that is provided in a country, as well as the extent to which such behavior is considered appropriate (Apps & Rees, 2001; Branisa, Klasen, & Ziegler, 2009; Boeckmann, Misra, & Budig, 2015; Fortin, 2005; Hegewisch & Gornick, 2011; Kremer, 2007; Orloff, 2002; Stier, Lewin-Epstein, & Braun, 2001). Scholars have also explored the interaction between the different domains, particularly the effect of work-family policies in different cultural contexts (Hummelsheim & Hirschle, 2010; Mandel, 2009; Pfau-Effinger,

2005). We thus know that the effect of motherhood on women's labor market outcomes differ between countries and that economic, policy, and cultural contexts matter.

We know much less about the applicability of these findings across labor market outcomes, levels of economic development, and social positions. While scholars have explored the effects of country contexts on a range of labor market outcomes, studies that test the same country level contexts on different labor market outcomes are rare (Hegewisch & Gornick, 2011; Steiber & Haas, 2012). Therefore, we are less certain about the exact way in which economic, policy, and cultural contexts affect mothers' paid labor. Second, with a few notable exceptions (c.f. Bloom et al., 2007; Lincove, 2008), research on motherhood effects on women's labor market outcomes in (post)industrial and developing economies is still largely conducted in separate studies. Quantitative, country-comparative studies in developing countries are often geared towards explain gender inequality rather than motherhood; theories regarding motherhood effects are regularly tested on high-income countries only (Abramo & Valenzuela, 2005; Bloom et al., 2009; Brewster & Rindfuss, 2000; Fortin, 2005). As such, it is difficult to ascertain on the basis of existing evidence to what degree motherhood effects on women's paid labor differ between levels of economic development.

Finally and perhaps most importantly for the purpose of this dissertation, we also know very little about how these country contexts affect the labor market outcomes of mothers in different social positions. There are certainly a number of studies that have investigated which group of women is most affected by motherhood in terms of their labor force participation, status in employment, and job rewards (Budig, 2006a; England et al., 2016; Wilde, Batchelder, & Ellwood, 2010). Few studies, however, have researched this from a country-comparative perspective. Those studies that did, found different results (Budig, Misra, & Boeckmann, 2016; Halldén, Levanon, & Kricheli-Katz, 2016; Todd, 2001; Tonoyan, Budig, & Strohmeyer, 2010). Thus, while motherhood effects on women's paid labor have been the subject of sociological studies for some time, large questions remain regarding the heterogeneity of previous findings across labor market outcomes, levels of economic development, and social position.

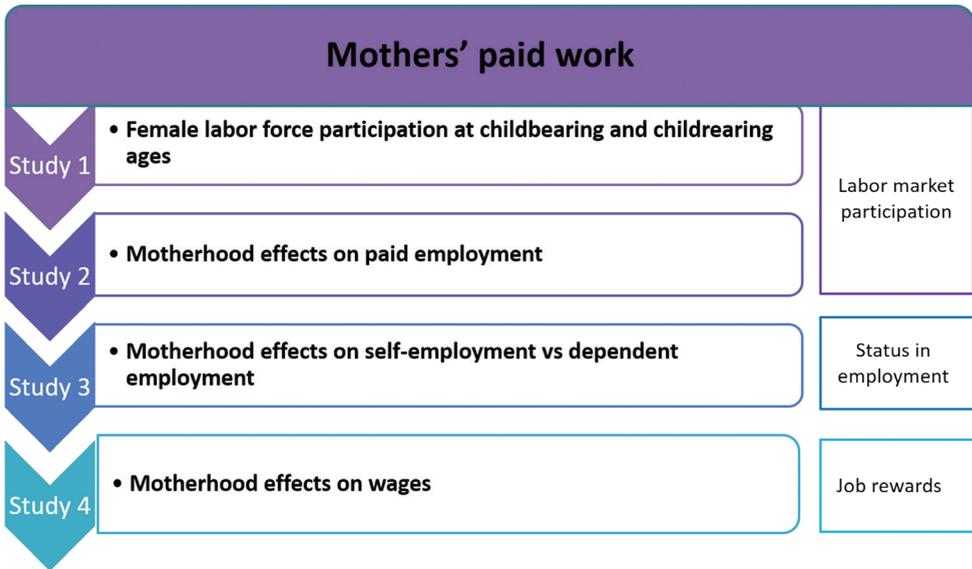
### **1.1.2 Research questions and aims**

The main research question of this dissertation is: how does women's social position moderate the way economic, policy, and cultural contexts influence motherhood effects on labor market outcomes in industrialized and developing countries? As such, the central phenomenon studied in this dissertation is the role that social position plays in the relation between motherhood status and labor market outcomes. I refer to the interaction between social position and country contexts as the heterogeneous effects of country contexts.

I research these heterogeneous effects in four studies. In the initial, explorative first study, I ask which country level characteristics can explain aggregate labor force participation of prime age women at different levels of economic development? In the remaining three studies, I then research the interplay of country contexts and women's social position on mothers' paid labor by studying three labor market outcomes. First, motherhood effects on employment as a proxy for mothers' labor market participation (chapter 3), understood as their engagement in paid labor regardless of working hours, sector or any other conditions of employment. Second, motherhood effects on self-employment as a proxy for status in employment (chapter 4), which in accordance with ILO definitions represents the "type of explicit or implicit contract of employment the person has with other persons or organizations and measures the type of economic risk and the type of authority over establishments and other workers which the job incumbents have or will have (ILO, 2000)." Third, motherhood effects on wages as a proxy for rewards from paid labor (chapter 5), which refer to mothers' relative position in the labor market (Cobb & Lin, 2017; Kalleberg & Sorenson, 1979; Tu, 2017). As Figure 1.1 shows, I ask: how does women's social position moderate the way country contexts influence the motherhood effect on (1) employment, (2) self-employment, and (3) wages in industrialized and developing countries?<sup>1</sup> Each study includes both high- and middle-income countries, as outlined in the overview in table 1.1 later in this section. In the sixth chapter, the findings from these four studies are drawn on to answer the overarching research question.

By systematically studying the same social position and country context effects across high- and middle-income countries but dividing the different labor market outcomes across the four core chapters of the dissertation, as displayed in Figure 1.1, I attempt to meet five main aims. The first aim is to disentangle motherhood effects by labor market outcome, social position, and country context. This aim is what brings the four studies of this dissertation together in a larger project. Inquiries into mothers' labor force participation, employment, self-employment, and wages are not new; neither are considerations of intersections with social hierarchies, or of the factors driving differences between countries (Steiber & Haas, 2012; Hegewisch & Gornick, 2011). Previous work, however, has rarely considered more than two of these dimensions. By studying the effects of motherhood across social position, high- and middle-income countries, and three labor market outcomes, I am uniquely able to disentangle in what way the paid labor of three social position groups of mothers is affected by economic, policy, and cultural contexts.

Figure 1.1 Overview of the four studies in the dissertation



The second aim is to contribute to the work-family literature and the sociology of family and work by engaging with academic debates about the relative importance of economic, policy, and cultural contexts for mothers' labor market outcomes. The responsiveness of actors to policies is a longstanding debate in work-family research. Some authors have argued that policies convincingly shape behavior, whereas others stress constraints on mothers' available choices posed by economic squeezes and preferences (Hegewish & Gornick, 2011; Korpi, Ferrarini, & Englund, 2013; Mandel & Semyonov, 2006). An important aspect of this debate is push versus pull arguments, debating whether actors strive towards a specific work-family balance that diverges from the full-time worker norm or suffer from work-family conflict (Amin, 1997; Annink, den Dulk, & Steijn, 2016; Boeri, 2018; Chen, Vanek, & Heintz, 2006; Elson, 1999; Hughes, 2003; Jacobs & Gerson, 2004 Johansson Sevä & Öun, 2015). By examining the effects of economic, policy, and cultural contexts across mothers' social positions, I am able to hypothesize about the relative importance of these domains for three social position groups of mothers.

The third aim is to contribute to the stratification and intersectionality literatures by exploring which group of women experiences the largest motherhood effects. This study measures mothers' labor market *behavior* rather than lived experiences and refrains from measuring membership of other social groups, such as ethnicity or sexuality. Therefore, it cannot be said to apply a truly intersectional method (Choo & Ferree, 2010; Salem, 2018). I do, however, attempt to follow an approach that McCall (2005) refers to as 'intercategorical

complexity' and aims to research the inequality inherent in the intersection of multiple social dimensions – motherhood status and social position in this case (Nash, 2008). This is one of the most current debates in the sociology of family and work, in which both the relative size of motherhood wage effects across different social position groups and the tradeoffs between success on one labor market outcome versus another have been examined (Mandel, 2011; England, Bearak, Budig, & Hodges, 2016; England, Garcia-Beaulieu, & Ross, 2004; Pettit & Hook, 2005). I contribute to this debate by systematically examining the effect of social position on size of motherhood effects across three labor market outcomes, rather than only focusing on wage effects.

The fourth aim is to explore the geographical and developmental ranges of theories and concepts that are currently debated in sociological work covering industrialized countries. As shown in Table 1.1., I include countries from all levels of economic development in the first study (Chapter 2) and reduce the scope to middle- and high-income countries for reasons of comparability (reported in the second chapter). I rigorously apply theories from high-income countries to show their applicability and limitations in middle-income countries. I attempt to engage in a global form of sociological thinking, which takes into account mothers' paid work beyond the binary divide between developing and industrialized countries. I believe that studying paid work in broader developmental and geographical contexts can provide insights for two reasons. First, by focusing on the moderating effect of social position, which is still under debate in European and US sociology, the inclusion of middle-income countries can lead to new insights regarding the mechanisms driving differences found across industrialized countries. Second, including middle-income countries can answer questions regarding the universality of previous findings. Of particular interest is the question whether mothers' labor market outcomes and the moderating effect of social position in the often studied European and Anglo-Saxon countries are inherent to their level of economic development or more time-space specific. Throughout the four studies, I pay particular attention to the generalizability of findings across levels of development and evaluate the limits of comparability in the concluding sixth chapter.

**Table 1.1 Number of countries per study per World Bank income group**

	Study 1	Study 2	Study 3	Study 4
Low Income	20			
Lower Middle Income	28	11	6	2
Upper Middle Income	37	11	9	6
High Income	32	9	8	5
Total	117	31	23	13

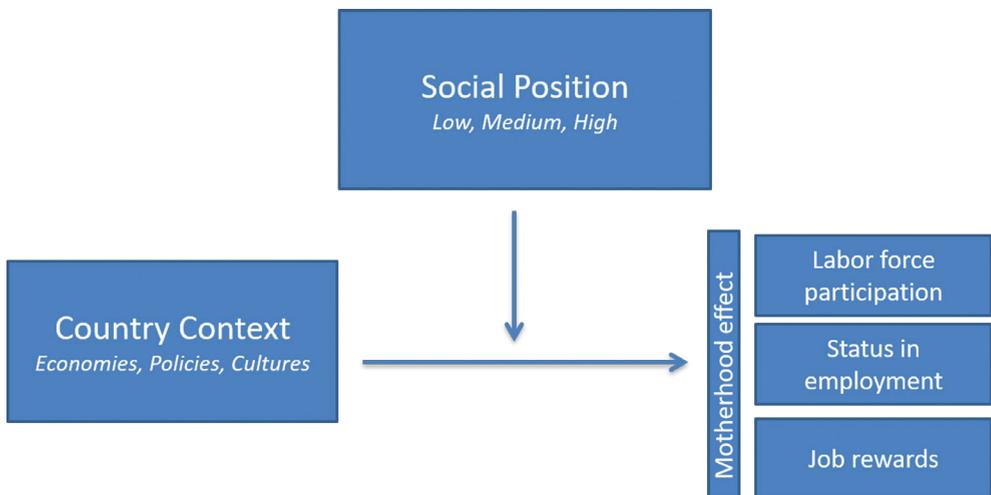
The fifth aim is to critically review the state of scientific knowledge by examining the quality and reliability of both the data I use and results I find. By studying motherhood effects across country contexts and social positions on three different labor market outcomes using a systematic research design, I can bring together estimates found in a single project to draw conclusions about mothers' broader labor market position. This is a worthwhile endeavor because it facilitates reflection on both the significant *and* the non-significant results – the latter being generally undervalued in quantitative social sciences (Benjamin et al., 2018; Fanelli, 2012; Lee et al., 2013). Including both high- and middle-income countries allows me to evaluate and report on the quality and availability of micro-datasets and country level indicators for sociological research. In the four studies, I use a range of datasets and consider a large number of potential indicators that can measure and explain differences in mothers' labor market outcomes. I critically evaluate which indicators are available in high- and middle-income countries alike, which are the most promising indicators across levels of development, and where data is lacking. In so doing, I aim to contribute to future research by pointing out both the most promising indicators and the gaps in our current data infrastructure.

## 1.2 Conceptual framework

In this dissertation, I thus study mothers' paid work by looking at the effect of motherhood on women's labor force participation, status in employment, and job rewards, as shown in Figure 1.2. In Section 1.2.1, I will expand on how scholars in sociology and development studies have conceptualized the relevance of motherhood for women's paid work in general and for the three labor market outcomes that are studied in this dissertation. These labor market outcomes are displayed on the right hand side of the schema in Figure 1.2 and represent the labor market outcomes on which the effect of motherhood is researched. I use two sets of explanatory concepts to explain the effects of motherhood on women's labor market outcomes: the country context in which mothers are embedded and their social position within that country. In Section 1.2.2.1, I will go through the concepts of economic,

policy, and cultural contexts that are used in this dissertation, detailing their associations with mothers' labor market outcomes found in previous research (Figure 1.2, horizontal arrow). In Section 1.2.2.2, I then introduce the concept of social position and explain how it is expected to moderate the effects of the country level contexts on mothers' labor market outcomes (Figure 1.2, vertical arrow). As such, the section is not intended to be an exhaustive literature review or a complete theoretical framework, which are provided in the separate chapters. This section focuses on the relevance of motherhood status, country contexts, and social position for women's labor market outcomes. It seeks to clarify which concepts are used and how they are understood. An overview of concepts per chapter is included in Table 1.2 in Section 1.3.

**Figure 1.2 Moderating effects of social position on the relation between country contexts and mothers' paid labor**



## 1.2.1 Perspectives on mothers' paid work

### 1.2.1.1 Sociological perspectives

In the sociological tradition of industrialized countries, mother's paid labor is primarily understood in terms of conflicting roles and time constraints (Byron, 2005; Pitt-Catsouphes et al., 2006). Especially when children are small, parents must ensure both around the clock care and sufficient income, usually requiring at least one full-time earner. This dual time obligation shapes mothers' commitment to the labor market much more than fathers' (Jacobs & Gerson, 2004). Gerson (2010) describes how the combination of what she terms *greedy institutions* and intensive mothering ideals lead to a general impression of paid work and family obligations as being mutually exclusive. In modern-day capitalist societies, the

notion that productive and reproductive work might be performed at the same time is almost unfathomable (Ekinsmyth, 2013). While scholars and policy-makers do yield that care and paid work responsibilities could both be performed at different times, any combination of the two tasks commonly invokes a sense of inferior commitment to either (Christopher, 2012; Cuddy, Fiske, & Glick, 2004; Hochschild & Machung, 2012). As famously described in Mary Blair-Loy's *Competing Devotions*.

*Career oriented women who publicly spend too much time attending to family needs violate the work devotion schema. And work-dedicated women who evade or delegate family responsibilities violate the family devotion schema. And so, work-family conflict is born (Blair-Loy, 2003, p.2).*

In the sociological tradition in industrialized countries, motherhood is thus understood to affect women's labor market outcomes because of the impossibility of simultaneously meeting both full-time worker and full-time mothering ideals and demands. The conflicting role and time demands of paid and unpaid work, or mothers' "double shifts," are the basis of debates about the relationship between mothers' labor market outcomes, preferences and policies, which are discussed in detail in Section 1.2.2.

#### 1.2.1.2 Gendered development perspectives

A certain duality exists in the conceptualization of mothers' work in the gender and development literature. The first leans perhaps more heavily on economic thought, connecting female labor force participation to the availability of work in different industries – implying women's care and paid work tasks are more easily (and more appropriately) combined in fields and offices than in factories (Goldin, 1995; Lincove, 2008; Mehrotra & Parida, 2017; Pampel & Tanaka, 1986; Rendall, 2013). This literature theorizes female employment primarily as dependent on the opportunity cost of not working, and recognizes mothers' particular situation only in as far as care tasks affect the utility function (Apps & Rees, 2001; Becker, 1991; Engelhardt & Prskawetz, 2004). Feminist economists have called attention to the inequality that is associated with economic growth (Çatagay & Özler, 1995; Gray, Kittilson, & Sandholtz, 2006; Horton, 1999; Rendall, 2013). These scholars have argued that the re-direction of the benefits of growth towards marginalized groups and communities is a promising strategy for realizing inclusive economic development (Gupta, Pouw, & Ros-Tonen, 2015; McGregor & Pouw, 2016). Such views are also reflected in reports from major international institutions such as the World Bank and the United Nations, which advocate for women's and mothers' employment as the road to both emancipation and inclusive

economic growth (Anderson & Eswaran, 2009; Gray, Kittilson, & Sandholtz, 2006; Iversen & Rosenbluth, 2008; Sassen, 1999).

Within the gender and development literature, a second strand of scholars have argued that women's and mothers' labor in developing countries is exploitative, precarious, and mostly need-driven (Elson, 1999; Kucera & Tejani, 2014). This school of thought leans more heavily on capability theory, qualitative fieldwork, and global value chain analysis (Barrientos & Kabeer, 2004; Barrientos & Smith, 2007; Nussbaum, 2001). Scholars in these fields spend ample time considering that a mother might effectively be better off if she refrains from engagement in paid labor, especially when jobs are insecure, filthy, dangerous, and low paid (Bhalla & Kaur, 2011; Elson, 1999; Kabeer 1997; Mehrotra & Parida, 2017; Safa, 1977). Mothers' employment is regularly put in the context of a neo-liberalist/capitalist agenda to convert unpaid agricultural activities into paid market work (Boeri, 2018; Salway, Rahman, & Jesmin, 2003). This strand of research is not dissimilar to sociological theories when it shows that mothers' employment is considered inappropriate in many middle-income countries (Amin, 1997; De Giusti & Kambhampati, 2015; Goldin, 1995; Salway, Rahman, & Jesmin, 2003).

### 1.2.1.3 *Three conceptions of mothers' paid work*

The key phenomenon studied in this dissertation is the effect of motherhood on women's labor market outcomes. In line with the ILO (2000) definition, I categorize work as taking place in the *labor market* when it is performed for pay in the formal or informal sector, in dependent employment, in self-employment, or in family businesses that generate income, but not when work is performed for subsistence. There is an almost unlimited number of ways to operationalize labor market outcomes within this definition. This includes participation, wages, hours, occupations, promotions, satisfaction, authority, autonomy, and so on. To study them all would go beyond the scope of this dissertation. As shown in Figure 1.2, I chose three different outcomes as examples of the most important facets of mothers' labor market position: labor market participation, status in employment, and job rewards. These three outcomes constitute three possible measures of mothers' paid work.

Labor market participation is operationalized as women's labor force participation in the second chapter and as mothers' paid employment in the third chapter. Both chapters discuss basic engagement in paid market work. Previous work has stressed the relevance of employment for mothers' position in the household and society (Anderson & Eswaran, 2009; Iversen & Rosenbluth, 2008; Kabeer, 1997; Matysiak & Steinmetz, 2008; Stockemer & Byrne, 2012). Motherhood, or the responsibility for the care of children, is understood to be associated with both different preferences for paid work and the opportunity cost of not working (Becker, 1991; Connelly, 1992; Del Boca, Pasqua, & Pronzato, 2009; Gerson, 2010;

Gutiérrez-Domènech, 2005; Kremer, 2007). Maternal employment thus measures mothers' access to the labor market as the extent to which women with care responsibilities for dependent children combine their mothering roles with an attachment to the paid labor force.

Chapter 4 considers mothers' status in employment. The primary focus is on whether mothers engage in paid labor through self-employment or dependent employment. In this chapter, motherhood is understood to affect labor market outcomes through the presence of current care tasks. Motherhood might affect the type of labor relation, because mothers are excluded from stable jobs in full-time dependent employment or because the more flexible and autonomous reconciliation of work and care responsibilities in self-employment is more appealing to mothers (Carr, 1996; Joonas, 2017; Simoes, Crespo, & Moreira, 2016). Contemporary debates about motherhood and self-employment include the interaction with inequality structures and whether self-employment is associated with more or less work-family conflict (Annink & den Dulk, 2012; Budig, 2006; Carr, 1996; Ekinsmyth, 2011; Johansson Sevä & Öun, 2015; McManus, 2001).

Finally, in Chapter 5, mothers' job rewards are examined by looking at wage gaps. Motherhood is associated with a lower hourly wage through real or perceived lower work commitment and work-family conflict (Aisenbrey, Evertsson, & Grunow, 2009; Correll, Benard, & Paik, 2007). In this case, effects of prior work-care decisions on mothers' career standing can ripple through even after children have grown up (Anderson, Binder, & Krause, 2002; Baum, 2002; Gangl & Ziefle, 2009; Phipps, Burton, & Lethbridge, 2001). Motherhood is thus conceptualized as including those mothers that no longer perform care tasks on a day to day basis. This is a field where motherhood has long been associated with penalties, particularly for mothers who reduce their work commitment in favor of caregiving, thus moving away from ideal worker norms (Bardasi & Meyers, 2004; Budig & England, 2005; Budig, Misra, & Boeckmann, 2012; England, 2005; Hook & Pettit, 2005; Lundberg & Rose, 2000; Waldfogel, 1998). In recent years, research has paid much attention to determining which group of mothers pays the largest penalties, debating whether privilege in society at large increases or decreases the price of motherhood (Anderson, Binder, & Krause, 2003; England et al., 2016; Halldén, Levanon, & Kricheli-Katz, 2016; Napari, 2010; Wilde, Batchelder, & Elwood, 2010).

In summary, I study the effect of motherhood on women's employment, self-employment, and wages. These outcomes represent three facets of paid labor, from the engagement in paid employment per se, to the nature of that engagement, and the material rewards. Motherhood is expected to affect these labor market outcomes because the presence of children influences the income the household requires, the volume of care tasks to be performed, and the identities of women as perceived by themselves and their communities.

This implies mothers' needs, opportunities, time availability, preferences for paid work, and attractiveness to employers differ from those of childless women.

## **1.2.2 Main explanatory concepts**

### *1.2.2.1 Country contexts*

A large body of literature has shown that mothers' labor market outcomes are at least co-dependent on the country they live in and can partly explain the effect of motherhood on women's labor force participation, status in employment, and job rewards (Bose, 2015; Korpi, Ferrarini, & Englund, 2013; Pettit & Hook, 2009; Pfau-Effinger, 2005; Stier, Lewin-Epstein, & Braum, 2001). In this dissertation, I group the most used concepts into three broad domains of country level characteristics: economic, policy, and cultural contexts. I briefly summarize previous work outlining the relevance of these domains for motherhood effects on women's labor market outcomes.

Economic contexts refer to the structural conditions in the labor market and economy, which can provide both the necessity and opportunity to work. Economically, countries differ in the extent to which opportunities to engage in paid employment exist and whether mothers' incomes are required to sustain the family. Much of the literature on motherhood effects in the labor market draws on two strands of theories: New home economics, focusing on the principle of opportunity cost in the allocation of time, predict that employment behavior depends on the potential financial gains and cost of (not) working; and capability theory posits that economic conditions pose constraints on actors' employment behavior (Apps & Rees, 2001; Becker, 1991; Engelhardt & Prskawetz, 2004; Nussbaum, 2001). Motherhood is relevant to these decisions, because the need to provide constant care while more resources become necessary to maintain the larger household, changes optimal outcomes (Boeckmann, Misra, & Budig, 2015; Del Boca, Pasqua, & Pronzato, 2009; Gerson, 2010). Economic contexts can exacerbate the need for two-earner families, affect mothers' expected earnings levels, and can thus influence utility functions. Studies have shown that in some countries wages fail to offset the cost of childcare, depressing maternal employment, whereas in others mothers cannot afford to forego paid labor (Elson, 1999; England, Garcia-Beaulieu, & Ross, 2004; Gerson, 1985; Korpi, Ferrarini, & Englund, 2013; Steiber & Haas, 2012). Economic contexts thus affect labor supply as well as potential earnings and the type of work and occupations that mothers have access to.

When referring to policy contexts, I include policies that facilitate or impede the participation and position of mothers in the labor market. These policies, or sets of policies, that influence motherhood effects in the labor market are often referred to as work-family policies (Gornick, Meyers, & Ross, 1997; Korpi, 2000; Mandel, 2009; Mandel & Semyonov, 2006; Orloff, 2002; Pascall & Lewis, 2004; Stier, Lewin-Epstein, & Braum, 2001). Broadly

speaking, these work-family policies have aimed to facilitate the reconciliation of work and family life in one of three ways: by helping parents, primarily mothers, to split their time between paid work and care tasks; by outsourcing care tasks to promote a commitment to paid work; or by alleviating the economic pressure to engage in the labor market to promote a commitment to care work (Hegewish & Gornick, 2011; Pitt-Catsoupes, Kossek, & Sweet, 2015; Steiber & Haas, 2012). In this dissertation, I primarily examine the effect of work-family policies that aim to promote some form of engagement in paid work, and thus focus on the first two.

Work-family policies that aim for reconciliation whilst encouraging mothers to perform both paid and care work, which I sometimes refer to as time-splitting policies, have sometimes been linked to more conservative gender regimes (Kremer, 2007). The prime example, part-time work, has been associated with weaker labor market positions of mothers (Bardasi & Gornick, 2000, 2008; López Bóo, Madrigal & Pagés, 2010; Matteazzi, Pailhé, & Solaz, 2014). Admittedly, part-time work has also been shown to yield relatively high labor force participation and with more gender equality in total worked hours in paid and unpaid labor together (Chung & Tijdens, 2013; Tijdens, 2002). Paid maternity and parental leaves have been associated with a smoother return to the workplace and job retention, except when leaves are very long (Aisenbrey, Evertsson, & Grunow, 2009; Fallon, Mazar, & Swiss, 2017). Further leave and working hour policies, like annual leave and maximum working hours, have also been quoted as instruments to reconcile work and family (Gornick, Meyers, & Ross, 1997). The delegation of care tasks to allow for a stronger commitment to paid work has been exemplified by early childhood care and education policies. Formal, institutionalized childcare has been associated with higher employment levels and smaller motherhood wage effects (Abendroth, Huffman, & Treas, 2014; Budig, Misra, & Boeckmann, 2016; Gornick & Meyers, 2004). In summary, policy contexts affect mothers' labor market outcomes by reducing the incompatibility of time demands from paid work and unpaid care tasks.

Finally, cultural contexts, sometimes referred to as gender ideologies, are related to cultural appropriateness of mothers' paid work (Boeckmann, Misra, & Budig, 2015; Jacobs & Gerson, 2016; Goldin, 2006; Kremer, 2007; Mandel, 2009; Pfau-Effinger, 2005). Scholars have studied institutional settings and gender equality outcomes, as well as more attitudinal factors (Steiber & Haas, 2012). Gender equality outcomes are often used as a proxy for cultural contexts. A range of studies have associated gender equal outcomes with reduced gender gaps in all kinds of fields, including labor force participation and employment (Bose, 2015; Branisa, Klasen, & Ziegler, 2013; Iversen & Rosenbluth, 2008). Average attitudes in a country have more often been used to reflect the softer side of cultural contexts: the desirability of and support for mothers' paid work. Previous studies have shown that countries differ in the extent to which they believe mothers' paid work outside the home

negatively affects children's wellbeing, as well as the extent to which paid work or care tasks should be considered more fulfilling (Amin, 1997; Chadwick & Garrett, 1995; Christopher, 2012; Clark, Ramsbey, & Stier Adler, 1991; Ekinsmyth, 2014; Fortin, 2005; Kremer, 2007; Seguino, 2011; Wejnert & Djumabaeva, 2005; Zhou, 2017). As such, cultural contexts influence the extent to which the roles or identities of mothers are incompatible with those of workers and could potentially affect the motherhood effect on employment, as well as the intensity of that paid work.

### 1.2.2.2 *Social position*

Social position is introduced as a key explanatory variable in the second study (Chapter 3). The concept of social position serves as a way of operationalizing societal hierarchies and is one of the major stratifying axes in this dissertation. In a long sociological tradition, there are many ways of understanding social inequality structures (Bourdieu, [1986] 2013; Bourdieu & Passeron, 1990; Marx & Engels, [1844] 2009; Weber, [1922] 1968). These socio-economic status hierarchies or social classes have been operationalized through actors' incomes, occupational class, educational achievement, and socio-economic status, amongst other things (Blau & Duncan, 1967; Erikson & Goldthorpe, 1992; Grusky, 2014; Hout & DiPrete, 2006; Meron et al., 2014). Social hierarchies have also been shown to be qualitatively related to a range of labor market outcomes of mothers (Biersteker, 2010; England et al., 2016; Gutiérrez-Domènech, 2005; Korpi, Ferrarini, & Englund, 2013; Mandel, 2011).

In this dissertation, I do not study the existence of social position groups per se, but examine how they relate to mothers' labor market outcomes, as well as how they affect the way mothers interact with country contexts (Figure 1.2, vertical arrow). As such, I primarily attempt to measure how women's social position intersects with their motherhood status without contesting the existence of these social position groups in themselves (Crenshaw & McCall, 2013; Hancock, 2007). In recent years, social position has also been extensively considered in debates on the relative size of motherhood effects on employment, self-employment, and wages; particularly whether motherhood is a uniformly disruptive event to women's careers, or whether it compounds pre-existing inequalities between women in low and high social positions (Budig, 2006a, 2006b; England et al., 2016; Halldén, Levanon, & Kricheli-Katz, 2016).

Economically, mothers' social position affects how much income they can or have to generate in the labor market, the occupations they have access to, their working conditions, benefits, etc. This debate has been reflected in a large number of papers written about differences in female employment by social position (Abramo & Valenzuela, 2005; Aromolaran, 2014; Bhalla & Kaur, 2011; England, Gornick, & Schafer, 2012; Ganguli, Hausmann, & Viarengo, 2013; Lincove, 2008). Earnings inequality, through larger differential

returns to paid work, has also been associated with divergent labor market attachment across social position groups (Blau & Kahn, 1992; DiPrete, 2005; Mandel & Semyonov, 2005). Studies have shown that in some countries, mothers with a low earnings capacity are better off outside the labor force than in it, whereas they are forced into work in others (Elson, 1999; England, Garcia-Beaulieu, & Ross, 2004; Steiber & Haas, 2012). In other words, social position affects how susceptible mothers are to the opportunities and constraints encapsulated in economic contexts.

Comparative research has also suggested that social position moderates the way mothers are affected by policy contexts (Korpi, Ferrarini, & Englund, 2013; Mandel, 2011). Social position affects the extent to which families are dependent on public policy for the provision of services like childcare (Bastos & Straume, 2016; Del Boca, Pasqua, & Pronzato, 2009; Gutiérrez-Domenèch, 2005). A range of studies in both industrialized and developing countries has also demonstrated that women in different social positions differ in the extent to which they are aware of policies and make use of them (Baird & Renolds, 2004; Biersteker, 2010; Bruneforth, 2015; Glauber, 2011). Third, in this thesis I consider that policies might affect specific labor market outcomes and not others, like wages versus employment participation, according to mothers' social position in the way that authors like Mandel (2011) and Shalev (2008) found to be the case for women in general. Thus, policy contexts differentially affect mothers in low, medium, and high social positions because of dissimilarities in their dependence on public policy, their awareness of, and capabilities to take-up these measures.

Finally, intersections of social position and motherhood status are expected to be relevant to the effect of cultural contexts through two mechanisms. First, social position groups could differ in the extent to which they are able to act on preferences and opportunities (Branisa, Klasen, & Ziegler, 2013; Fortin, 2005; Korpi, 2000). Indeed, a number of studies have shown that women in higher social positions disproportionately reap the benefits of advances in gender equality (Fortin, 2005; Kremer, 2007; Mandel & Shalev, 2009). Second, cultural expectations towards mothers' behavior might differ depending on their social position. Stigmatization of working mothers, for instance, has been associated with a much stronger distaste of manual and factory work than non-manual or home-based work (Boeri, 2018; Goldin, 1995; Kabeer, 2000; Mammen & Paxson, 2000). More recent studies have also highlighted that attitudes towards a mothers' employment behavior differs according to the preconditions of work, including whether the income is required to maintain the family, whether high-quality childcare facilities are available, or how much time parents spend with their children next to paid work (Grunow, Begall, & Buchler, 2018; Jacobs & Gerson, 2016). Cultural contexts have heterogeneous effects on mothers' labor market outcomes because

women in different social positions perform different kinds of paid labor and are unequal in their ability to act on preferences and opportunities.

## 1.3 Data and methods

### 1.3.1 Data and measurement

Mothers' paid work has been studied using a broad spectrum of methodological approaches (Pitt-Catsoupes, Kossek, & Sweet, 2015). There are many things to be said for studies that try to isolate the motivation of mothers' work-family choices in a specific context or to isolate the particular effect of an actor's characteristics or country's policies. The aim of this dissertation, however, is to discover patterns through which different country contexts are associated with a range of labor market outcomes for mothers in different social positions across high- and middle-income countries. This line of inquiry leads to a quantitative approach, which is well suited for measuring behavioral outcomes from a comparative perspective. While sacrificing a certain depth in understanding the micro-level mechanisms when behavior and policies are reduced to scales and variables, this method does have the significant advantage of greater generalizability and the potential to cover many more countries. In this dissertation, I gratefully profit from the valuable work done by so many colleagues in both quantitative and qualitative studies of mothers' paid work and rely on those insights when choosing the best indicators to measure complex underlying processes.

### 1.3.2 Measures of mother's labor market outcomes

In line with the conceptualizations described in Section 1.2.1, motherhood is understood as having or having had to take care of dependent children, rather than the biological determinant of giving birth. It is the presence of those care tasks, or the aftershocks of previous care responsibilities, that distinguishes mothers from women without dependent children in the labor market. In the presence of care tasks, mothers could be full-time care providers, full-time paid workers, or any combination thereof, but the decision about who provides care at which time must be or have been in the mother's universe. Effects of these behaviors can be limited to the period of time they are acted upon, or carry long term consequences.

Three datasets are used to measure motherhood effects on labor market outcomes: the sixth edition of the ILO Estimates and Projections of the Economically Active Population (EAPEP), the Integrated Public Use Microdata Series International (IPUMS International), and the online WageIndicator continuous volunteer survey. In the ILO EAPEP dataset, which contains estimates of the share of the population over fifteen years of age that is in the labor force (i.e. employed or unemployed), aggregate female labor force participation rates

in eleven age groups is used (ILO, 2011). As the EAPEP dataset contains only aggregate level data, mothers are not individually identified in this first study. A constructed measure, described in detail in chapter 2, is used to approximate average care burdens in the 117 countries in the study.

The second dataset, which is used in the studies presented in Chapters 3 and 4, is the IPUMS International (Minnesota Population Center, 2015). This dataset contains harmonized micro-data from censuses, and occasionally household or labor force surveys. Motherhood status is identified through a variable measuring how many of her own children the respondent shares a household with, as well as the ages of the oldest and youngest own child in the household. The IPUMS International dataset is used to measure two outcome variables of mothers' paid work: being employed (Chapter 3) and being self-employed (Chapter 4).

The third dataset, used in Chapter 5, is the WageIndicator dataset 2012–15 (Tijdens & Osse; [www.wageindicator.org](http://www.wageindicator.org)). The WageIndicator dataset stems from a continuous online volunteer survey run by the WageIndicator Foundation in almost 90 countries. The websites attract large numbers of visitors (c.f. 34 million unique visitors in 2017). Teasers invite visitors to complete a web survey with a lottery incentive. Respondents complete the survey in their own language, answering detailed questions about their education, jobs, working hours, and remuneration. Although the dataset, as a non-probability sample, requires extensive weighting procedures, it contains a rare combination of detailed information on women's hourly wages, occupations, and a range of other work-related characteristics from a single multi-country survey. It offers a unique opportunity to study 13 high- and middle-income countries that have been under-researched in comparative designs. Motherhood is self-reported and respondents provide additional information on children's ages, the use of childcare facilities, trade union membership, and shift work that allow for tests of individual as well as country level hypotheses.

### **1.3.3 Measures of country contexts**

In the dissertation, a broad range of datasets are used to measure country characteristics in regard to economic, policy, and cultural contexts to answer the research questions of the four studies (Chapters 2-5). Different indicators are used depending on the theoretical mechanisms studied in the relevant chapter, as well as the requirement for country coverage. In some cases cruder measures were chosen over more detailed indicators in order to meet the dissertation's specific aim of expanding the analyses to include countries at different levels of economic development. The exact choice of variables for each study, detailed in Table 1.2, is also a consequence of the theoretical mechanisms and outcomes being measured. This can imply that there are no theoretical reasons to suspect a specific indicator is associated with motherhood effects on a particular outcome or that a different

operationalization of the concept will more accurately capture the researched relation. In order to provide the reader with full information, the concluding sixth chapter contains a set of appendices with the association between all variables and all outcomes, which are discussed in the main text only where it is substantively relevant.

**Table 1.2 Overview of main concepts used in the four studies**

	Study 1	Study 2	Study 3	Study 4
	Female labor force participation	Employment	Self-employment	Wages
Motherhood	Dependency scale	Own child under 15 years in the household	Own child under 15 years in the household	Has a child
Social Position		Relative education	Relative education	Occupational group
Economic contexts	- Economic development - Sector - Education	- Economic development - Economic inequality - Poverty	- Economic development	- Economic development - Economic inequality - Collective bargaining coverage
Policy contexts	- Pre-primary education - Maternity leave	- Childcare 0-2 - Pre-primary education - Maternity leave - Part-time work	- Childcare 0-2 - Pre-primary education - Maternity leave - Part-time work	- Childcare 0-2
Cultural contexts	- Women's political rights - Anti-discrimination law Religion	- Gender equality - Stigmatization of housewives and working mothers	- Gender equality - Stigmatization of housewives and working mothers	

Throughout the analyses, economic contexts are primarily a measure of opportunity versus necessity. In chapter 2, which studies aggregate female labor force participation in 117 low-, middle-, and high-income countries, two sets of variables measure economic structures and opportunities. The size of four sectors of industrial activity measures the broad distribution of available jobs across types of occupations, such as industrial and services work. Female enrollment rates in primary and secondary education, as well as their enrollment rates relative to men's, are used as proxies for opportunities. In the remaining chapters (3-5), opportunities are primarily measured on the individual level, through women's social position and a number of interaction terms between that position and country level contexts. To take

account of country differences that might be due to levels of economic development, per capita GDP is used as a control variable. The countries are also classified into low-, lower-middle, upper-middle, and high-income countries according to the World Bank definition for the relevant year. These country income groupings are used to split the sample for robustness checks of the effects of the country level indicators.

Chapters 3 and 5 introduce measures of inequality within the economic structure, operationalized as countries' scores on the GINI index and poverty rates. In the chapter on motherhood wage effects, collective bargaining coverage is used as an additional measure (Visser, 2015). Collective bargaining coverage has been repeatedly shown to condense wage inequality and has featured in a number of debates as created potential insider/outsider effects in the labor market (Blau & Kahn, 2003; Gartner & Stephan, 2004; Kahn, 2000). As chapter 4 on self-employment limits the analyses to effects of work-family issues, no indicators are used to measure economic contexts.

Measures for policy contexts included in the analyses are aimed at improving the reconciliation of paid work and care tasks. Broadly, they fall into two categories: those measuring policies that allow for the outsourcing of care tasks, like childcare, and those that allow mothers to split time between care work and paid labor, like part-time work. A measure of early childhood care and education is introduced in all four studies. Due to data limitation, the study on aggregate labor force participation only tests for enrollment in pre-primary education. In the study on wage effects (chapter 5), childcare under the age of 3 was available for all countries and found to be the more accurate indicator, as well as being closest to the individual level measure of childcare use. The studies on employment and self-employment test a number of enrollment and quality indicators in pre-primary education and childcare for the 0-2 age group. The first three studies (Chapters 2 through 4) all test measures for time-splitting work-family policies, whereas I control for this on the individual level in the fifth chapter. The length of paid maternity leave is introduced in all three chapters. In the third and fourth chapters, the share of women that work part-time is used to test the extent to which (dependent) employment is associated with full-time work.

Finally, cultural contexts contain two types of measures: one focused on measuring gender equality in economic and societal outcomes and another focusing on attitudes and cultural respectability of work-related behavior. For gender equality, I consider the presence of anti-discrimination legislation and women's political rights in the study on aggregate female labor force participation in low-, middle-, and high-income countries (Chapter 2). In the subsequent chapters, which limit the scope to middle- and high-income countries, more detailed measures are available. Chapter three on employment considers a summary measure of four gender equality indices that reflect the position of women in the labor market, institutions, and society. In chapter four, which studies the motherhood effect

on self-employment compared to dependent employment, I select only the economic participation and opportunity sub-index of the 2009 Global Gender Gap Report. To measure the acceptability of mothers' paid work, I use attitudes towards working mothers and full-time housewives from the World Values Survey and European Values Survey in chapters 3 and 4. These data are not available for 117 countries. Therefore, a measure of religious observation was used as a rough proxy in the second study on aggregate level labor force participation. Cultural contexts were not tested in chapter 5.

The four studies thus test the same country level contexts, but do not always use the same indicators. In the concluding chapter, therefore, I treat findings regarding the effect of economic, policy, and cultural contexts on motherhood effects across women's social position as indicative of their association with different four labor market outcomes, but do not claim to have measured their precise effect across the different conditions. The appendices of the concluding chapter, presenting the associations between all indicators and outcomes regardless of their inclusion in the original analyses of the four studies themselves, do aid in the interpretation of the robustness of these results.

### **1.3.4 Measures of social position**

Social position, introduced in chapter 3, is operationalized in two different ways to ensure the measurement most closely matches the theoretical mechanisms and the sampled populations. In chapters 3 and 4, I chose an education-based measure, because a substantial share of the mothers in the study are non-employed and would therefore be difficult to classify through an occupation based measure. In chapter 4, studying the motherhood effect on self-employment, this measure has the additional advantage of avoiding discussions about the classification of the self-employed in traditional occupation-based class schemas (Müller & Arum, 2004). For both chapters, I use mothers' relative educational achievement. I choose a relative measure because the inclusion of both middle- and high-income countries suggests the absolute levels of education, like a university degree, would classify women in much more selective groups in some countries than in others. The measure, which is described in detail in the relevant chapters, divides women in each country into three groups containing about a third of the sample whilst harmonizing the coding of the social position variable within the three income groupings (lower-middle, upper-middle, and high-income countries).

In chapter 5, I analyze the motherhood wage penalty among working women, thus allowing for the classification of all women through an occupation-based measure.<sup>2</sup> Here, social position is operationalized using the European Socio-Economic Groups (ESeG\_2014) classification (Meron et al., 2014). The ESeG\_2014 is a multidimensional social classification tool that maps two-digit ISCO codes and status as dependent or self-employed worker to 31 socio-economic groups of employed persons. The 31 ESeG groups are recoded into

three social position groups that closely match the type of activities and tasks described in the theoretical mechanisms. I differentiate between low social position (skilled industrial employees and less skilled workers), medium social position (technicians, associate professionals, small entrepreneurs, clerks, and skilled service employees) and high social position (managers and professionals).

### **1.3.5 Analytical strategies**

By the very nature of the comparative research project, the mothers whose labor market outcomes are studied, are nested in countries. I therefore use multi-level modelling techniques. The cross-sectional nature of the data furthermore makes a random effects design the self-evident modelling choice. I consequently employ a standard two-level random effects design in chapter two, measuring age effects on women's labor force participation in 117 countries. However, standard multi-level modelling techniques have been noted to yield sub-optimal coefficients when fewer than 30 countries are compared (Bates et al., 2015; Heisig, Schaeffer, & Giesecke, 2017; Stegmueller, 2013). All studies include a number of robustness checks, which are described in chapters 2 through 5, to test the sensitivity of the country level effects to different modeling specifications. Additionally, in the three subsequent studies, two different strategies are adopted based on sample sizes. Chapters 3 and 4 use the IPUMS International dataset, which provides large samples for each country. Therefore, I use two-step multilevel models: I estimate the individual level effects separately for each country using binomial<sup>3</sup> (chapter 3) and multinomial (chapter 4) logistic regressions. These regressions produce estimates of the motherhood and social positions effects. To address concerns about the comparability of the coefficients from logistic regressions across model specifications, as well as following general trends towards a greater focus on effect sizes in quantitative sociology, I report average marginal effects in these and the fifth chapter (Breen, Holm, & Karlson, 2014; Breen, Karlson, & Holm, 2018).

Due to the smaller sample sizes in the WageIndicator survey, I chose a different modelling strategy in chapter five, which estimates the motherhood effect on wages. Following a strategy proposed by Heisig, Schaeffer, and Giesecke (2017), I relax the usual assumption of hierarchical modelling that individual-level effects are equal across countries. I do so by adding random slopes to all level-1 control variables, thus allowing the effects of variables like age or weekly working hours to vary across countries. The modeling strategy in chapter five thus does rely on hierarchical models, allowing the estimations in countries with smaller sample sizes to borrow strength from the larger ones, and country-specific effects are derived through empirical Bayes' estimates.

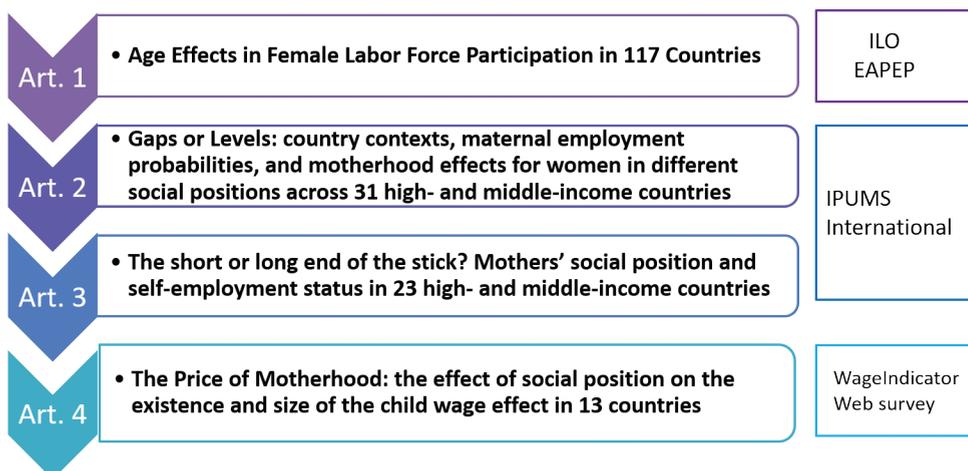
Finally, these estimation strategies and data choices imply the study has a number of limitations. First and foremost is the cross-sectional nature of the data. This limitation, at

least at this point in time, is inherent to the research design of studying a large number of middle- and high-income countries with the aim to discover broad patterns in motherhood effects in the labor market. Certainly longitudinal models have the advantage of being better able to address issues of selectivity and reverse causality. A number of longitudinal datasets also include detailed indicators on spousal characteristics, parental background, preferences and other valuable information. The available datasets, however, impose strong geographical and developmental limitations on researchers. I accept that my choice prevents me from using longitudinal modelling techniques, from employing household perspectives, or acquiring the most detailed indicators for that matter. I also refrain from making causal claims. My goal in this dissertation is not to provide answers with such certainty or finality as to close an unsolved debate, but to open it. Results should be interpreted as descriptive and aim to provide an overview of patterns of motherhood effects in the labor market as they are found in a globalizing world.

## 1.4 Chapter summary

The analyses starts from a birds' eye view of aggregate female labor force participation across all levels of economic development, i.e. from the basic condition of labor supply, and gradually move down to more detailed measures of mothers' labor market outcomes at lower levels of analysis in high- and middle-income countries. It is presented in four substantive chapters, which were written as separate articles and can be read independently of each other, as shown in figure 1.3. The subsequent chapters do follow in part from questions arising from the previous studies and reflect the evolution of my own thinking.

Figure 1.3 Overview of the four articles in the dissertation



**Chapter 2** is a broad study of the level of female labor force participation across low-, middle-, and high-income countries. We<sup>4</sup> ask which country level characteristics can explain age effects in aggregate female labor force participation in 117 countries at very different levels of economic development. We test the effect of economic conditions, absolute and relative education levels, work-family policies, as well as cultural contexts. We find that economic development and educational indicators, including the well-known U-shaped relationship between economic development and female labor force participation, primarily explain the country patterns found for women below 20 and over 55 years of age. Effects of work-family policies and cultural contexts, on the other hand, are more closely associated with the labor force participation of women in age groups that are most likely to care for dependent children.

We find that the female labor force participation rate of the prime age group is higher in countries with higher enrollment in pre-primary education and where women's political rights are more entrenched, while they are lower in countries with more pervasive religious observance. These results suggest, be it indirectly, that motherhood effects are in fact sizeable enough to drive country differences in aggregate female labor force participation. These empirical results validate the focus on motherhood effects in the remainder of the dissertation. Results indicate that the labor force participation of women in the prime age group starts rising at about mean levels of economic development and that higher care burdens start being associated with lower labor force participation somewhere at the transition from lower- to upper-middle-income countries, prompt the decision to focus the next three studies on middle- and high-income countries for motives of comparability.

In the **third chapter**, the scope of analysis is therefore re-adjusted to high- and middle-income countries, using the IPUMS International micro-data, in which women's motherhood and employment statuses are directly identifiable. The ability to distinguish between women with and without dependent children in the sample allows me to study which factors affect women in general and which affect mothers specifically. Measuring both the share of mothers in paid employment (maternal employment *levels*) and the motherhood effect, i.e. the gap in employment participation between women with and without dependent children, this study addresses how mothers' employment varies between countries and seeks to explain effects of economic, cultural, and policy contexts.

This chapter also introduces women's social position as an important axis of stratification to aid understanding of unequal outcomes within countries, as well as heterogeneous effects of economic, policy, and cultural contexts. More favorable attitudes towards working mothers and gender equality are found to be associated with higher *levels* of maternal employment, but not with the size of the motherhood *effect*. Results indicate that early childhood care and education is associated both with higher levels of maternal employment and reductions

in the negative motherhood effect. Heterogeneous effects of country contexts by social position are negligible when measuring maternal employment *levels*, but substantial for motherhood *effects*. Results indicate that the positive effect of childcare enrollment is reserved to the medium and high social position groups. For the low social position groups, higher poverty rates and earnings inequality are associated with larger penalties. I argue that the effects of country contexts on maternal employment *levels* most closely measure the existence of opportunities and necessities to work, the higher social position group being more sensitive to the former and the lower social position group to the latter. The effects of country contexts on the motherhood *effect*, on the other hand, measure the size of time and role incompatibilities, with time incompatibilities shown to be most relevant to the low and medium social position groups and role incompatibilities to the medium and high social position groups. As the primary aim of this dissertation is to study how mothers' care responsibilities affect labor market outcomes across countries and social positions, these results lead to the further focus on motherhood *effects* in the remaining chapters.

In the **fourth chapter**, I explore the effect of motherhood on women's status in employment by studying the effect of caring for children under the age of 15 on women's probability of being self-employed. I test two theories about the motherhood premium on self-employment. The *mumpreneurship* thesis presents the motherhood effect on self-employment as the preference-based reconfiguration of the time and location of paid work activities around care tasks. The *disadvantaged worker* thesis, on the contrary, argues that mothers in the weakest labor market position are pushed into self-employment as the work-family conflict they experience in dependent employment makes them less desirable workers to employers than their counterparts without care responsibilities. In testing these two theories, I engage with stratification literature by exploring the relation between maternal self-employment and women's social position, and with work-family literature by examining time-based and role-based incompatibilities.

Exploring patterns of motherhood effects across high- and middle-income countries, I conclude that the *mumpreneurship* and *disadvantaged worker* theses should not be considered as conflicting hypotheses, but rather as addressing the motherhood effects of separate social position groups. I identify four groups of countries where one, both, or neither of the two mechanisms can be found at work. I then test a set of work-family policies and attitudinal indicators to explain cross-country variation. Results indicate that more negative attitudes towards housewives are associated with larger motherhood premiums for women in high social positions, whereas higher enrollment and smaller classes in pre-primary education increase the motherhood premium for all social position groups.

In **Chapter 5**, I study the effect of motherhood on job rewards by looking at the motherhood wage penalty. The study engages with the two sociological mechanisms for

explaining motherhood effects: time and role incompatibilities. I test one theory based on the former, the *time incompatibility thesis*, and two based on conflicting roles: the *foregone career* and the *disadvantaged worker* theses. I find larger penalties for mothers in low social positions (19%) compared to those in medium (10%) and high (9%) social positions. I also find evidence of larger penalties for medium social position mothers who adjust work patterns away from 9 to 5 office jobs. Results indicate that mothers in low social positions pay the largest penalties and that this disadvantage is larger in countries with larger income inequality and lower enrollment in formal childcare institutions.

In **Chapter 6**, I draw conclusions and discuss their theoretical implications, as well as reflecting on avenues for further research. After briefly summarizing the findings from chapters 2 through 5, I bring together the results from the four studies to answer the overarching research question. I then place the results in the contexts of the broader sociological, stratification, and work-family literatures by discussing the extent to which the five aims of the theses were met. In the final section, I discuss how gaps in our current knowledge and data availability can be addressed in future research.

## End notes

- <sup>1</sup> The research questions of the four studies in the dissertations were rephrased in the research articles due to considerations related to peer review.
- <sup>2</sup> A previous version of chapter 5 operationalized social position using relative education and found similar results.
- <sup>3</sup> For this study, linear probability models were also tested and yielded the same results.
- <sup>4</sup> Throughout this dissertation, I refer to myself in the first person singular, except when referring to the two studies that have been submitted to peer reviewed journals as co-authored publications, when the pronoun 'we' is used.