

The short or long end of the stick? Mothers' social position and self-employment status from a comparative perspective

Janna Besamusca 

Department of Sociology, University of Amsterdam, Netherlands

Correspondence

Janna Besamusca, Department of Sociology, University of Amsterdam, I Nieuwe Achtergracht 166, NL-1018 WB Amsterdam, Netherlands
Email: J.Besamusca@uva.nl

Funding information

H2020 Research Infrastructures, Grant/Award Number: 730998

Women with dependent children have repeatedly been shown to be more likely to be self-employed than other women. The mumpreneurship thesis explains this motherhood effect as a preference-based strategy to meet both good worker and good mother norms. The disadvantaged worker thesis argues that mothers in weak labour market positions are pushed into self-employment because of work-family conflict. Exploring patterns of motherhood effects across 23 high- and middle-income countries, I argue that the mumpreneurship and disadvantaged worker theses should not be considered as conflicting hypotheses, but rather as addressing separate social position groups. I identify four clusters of countries where either one, both or neither of the two hypotheses can be confirmed. Country-level analyses indicate that more negative attitudes towards housewives are associated with larger motherhood premiums for women in high social positions, whereas higher enrolment and smaller classes in pre-primary education increase the motherhood premium for all groups.

KEYWORDS

childcare, labour market inequality, motherhood, self-employment, work-family conflict

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2020 The Author. *Gender, Work & Organization* published by John Wiley & Sons Ltd

1 | INTRODUCTION

In 2011, 13 per cent of working women in the member states of the Organisation for Economic Co-operation and Development (OECD) were self-employed, thus constituting a substantial share of the total female workforce (OECD, 2017). Evidence from industrialized and developing countries alike indicates that there is a motherhood premium on self-employment: that is to say, women are effectively *more* likely to be self-employed when they care for dependent children (Blanchflower, 2000; McManus, 2001; Van der Sluis & Van Praag, 2005). Previous research in middle- and high-income countries has suggested that the overrepresentation of mothers in female self-employment is due to its use as a work–family reconciliation strategy (Boden, 1999; Carr, 1996; Joonas, 2017; Simoes, Crespo, & Moreira, 2016; Taniguchi, 2002). In a time that work–family conflict has proven to be one of the foremost impediments to mothers' labour market participation and career advancement, this has made self-employment a phenomenon of interest to both scholars and policymakers (Berglund, Ahl, Pettersson, & Tillmar, 2018; Hughes, 2003).

Self-employed women, with or without dependent children, are not a homogeneous group and work in very diverse occupations. They include childminders, cleaners, salespersons, shop owners, potters, midwives, manicurists, consultants, designers, and so on. The intersection of motherhood status and social position in self-employment is thus complex. This has sparked a debate about the driving force behind mothers' overrepresentation among the female self-employed (Hughes, 2003; Johansson Sevä & Öun, 2015; McManus, 2001; Patrick, Stephens, & Weinstein, 2016). Some work–family scholars have argued that self-employment offers an attractive avenue for mothers in higher social positions, sometimes referred to as *mumpreneurs*, to reconcile career ambitions with intensive mothering ideals (Carr, 1996; Ekinsmyth, 2011; Georgellis & Wall, 2005). Taking a different approach, other scholars have theorized self-employment as a precarious form of employment that mothers in low social positions are pushed into, because work–family conflict makes it difficult to attain and retain jobs in dependent employment (Blanchflower, 2000; Budig, 2006b; Kalleberg, Reskin, & Hudson, 2000; Taniguchi, 2002).

Both theories, which I refer to as the *mumpreneurship* and *disadvantaged worker* theses, essentially describe the motherhood premium as stemming from the incompatibility of worker and mother roles in traditional, full-time, dependent employment. However, they present diverging views on how these motherhood effects relate to inequality structures. The preference-based *mumpreneurship* thesis suggests motherhood premiums on self-employment should be observed among highly positioned mothers and be associated with reductions in work–family conflict. The *disadvantaged worker* theory, on the other hand, argues mothers in low social positions are pushed into involuntary self-employment due to work–family conflict, resulting in the further precarization of their working conditions. In short, the two theories suggest that the motherhood effect on self-employment is driven by different social position groups and they therefore expect to find different empirical patterns.

A field of studies investigating the mechanisms behind the motherhood premium has started to emerge and found (occasionally contradictory) evidence for both theses. The vast majority of studies have focused on single country cases (primarily in European and Anglo-Saxon nations) and they are often based on small samples, either because of the research design or the low number of female self-employed included in survey research (Annink & den Dulk, 2012; Blanchflower, 2000; Hughes, 2003; Johansson Sevä & Öun, 2015; Tonoyan, Budig, & Strohmeier, 2010). This study considers the underlying expectations of empirical patterns derived from both theses. I aim to research the extent to which observed patterns of motherhood effects on self-employment for women in different social positions in 23 high- and middle-income countries conform to expectations formulated under the *mumpreneurship* and *disadvantaged worker* theses. To do so, I test (i) how the motherhood effect on self-employment differs by women's social position, as well as (ii) how country-level policies and preferences regarding work and family can explain the moderating effect of social position on the motherhood effect.

There are several reasons to study the relationship between social position and the motherhood premiums from a comparative perspective. First, a large body of literature has shown that country-level contexts affect which social position group bears the brunt of the work–family conflict (Gornick & Meyers, 2003; Korpi, Ferrarini, & Englund, 2013; Mandel, 2011; Pettit & Hook, 2009; Pfau-Effinger, 2005; Stier, Lewin-Epstein, & Braun, 2001). As of

yet, no consensus exists about which country contexts are conducive to the existence of motherhood premiums for one social position group or the other (Poggesi, Mari, & De Vita, 2016). Second, by testing the *mumpreneurship* and *disadvantaged worker* theses from a comparative perspective, I am able to address the extent to which they present opposite or complementary frameworks of understanding motherhood premiums on self-employment. Finally, by using harmonized census data from the International Integrated Public Use Microdata Series (IPUMS International) (Minnesota Population Center, 2017), I can test these theories on a large sample of self-employed women that allows for considerable generalization of the findings, which due to the relatively small number of women that is self-employed has often proven difficult in survey-based studies or non-random samples (Johansson Sevä & Öun, 2015).

2 | THEORETICAL BACKGROUND

2.1 | Motherhood, self-employment and social position

There are certainly many reasons for which mothers engage in self-employment. The vast literature on self-employed workers and entrepreneurs includes considerations of skill, expected gains, autonomy, risk aversion and access to starting capital (Blanchflower, 2000; Blanchflower & Oswald, 1998; Cramer, Hartog, Jonker, & van Praag, 2002; McManus, 2001; Van der Sluis & Van Praag, 2005; Van Praag & Cramer, 2001). While there are some indications that motherhood is associated with increases in risk aversion and preferences for autonomy, these reasons have not been able to explain why women who care for dependent children tend to be self-employed at higher rates than those who do not: autonomy and risk aversion notably yield opposite expectations regarding mothers' relative probability of being self-employed and do not explain differences across countries (Caballero, 2017; Foley, Baird, Cooper, & Williamson, 2018; Poggesi et al., 2016). Yet, empirically, the positive relationship between motherhood and women's probability of being self-employed has been solidly established (Boden, 1999; Carr, 1996; Joonas, 2017; Taniguchi, 2002). In studies throughout North America and Western Europe, mothers were found more likely to be in self-employment than women without dependent children (McManus, 2001; Simoes et al., 2016). More recent studies have confirmed these findings in Eastern Europe (Gerber, 2009; Róbert & Bukodi, 2009; Tonoyan et al., 2010), Asia (Yu & Su, 2009; Zhang & Pan, 2012), Africa (Heath, 2017) and Latin America (Campaña, Giménez-Nadal, & Molina, 2017; Pisani & Pagán, 2004).

The literature thus coincides in expecting a positive effect of caring for dependent children on women's probability of being self-employed, which for the sake of brevity I refer to as the motherhood premium. However, there is currently no consensus regarding the group of mothers and the specific work-family mechanisms that are driving these findings (Berglund et al., 2018; Johansson Sevä & Öun, 2015). In the last decades, two strands of empirically supported studies have explained the motherhood effect on self-employment as representing either a preference-based blending of paid work and care tasks or a precarious last resort. In industrialized nations, self-employed mothers have been portrayed as anything from running Internet-based businesses from the living room when their children are asleep or in school (Carr, 1996; Ekinsmyth, 2011; McKie, Biese, & Jyrkinen, 2013) to low-wage workers without entitlements to pensions, social security or union representation (Berglund et al., 2018; Kalleberg et al., 2000; Wall, 2015). In developing countries, maternal self-employment has both been heralded as a driver of inclusive economic growth (Buvinić & Gupta, 1997; World Bank, 2012; World Economic Forum, 2014) and condemned as the feminization of the most insecure form of labour (Chen, Vanek, & Heintz, 2006; Elson, 1999; Kabeer, 2000; Mandelman & Montes-Rojas, 2009).

The conceptualization of maternal self-employment in these two opposite ways is crucial to understanding the relationship between the motherhood effect and labour market inequality. One strand of literature would theorize that the motherhood effect is driven by affluent women's attempts to have it both ways; the other that the most vulnerable mothers are left holding the short end of the stick. As such, motherhood is expected to intersect in

opposite ways with women's social position, that is, women's relatively advantaged or disadvantaged position in social hierarchies. In this study, I theorize actors' social position as dependent on their educational achievement relative to that of others in the same country (Cáceres-Delpiano, 2012; Campaña et al., 2017). I choose this approach because, contrary to occupation- and income-based conceptualizations, it allows me to classify both women that do and do not engage in paid labour and avoids debates about whether occupations signal the same social position when performed in dependent compared to self-employment (Arum & Müller, 2004a; Bjuggren & Henrekson, 2018; Budig, 2006a, 2006b; Kalleberg et al., 2000; Müller & Arum, 2004). In the remainder of this section, I discuss the premises of these two strands of literature and outline their expectations of the relation between women's social position and the motherhood premium on self-employment across country contexts.

2.2 | The mumpreneurship thesis

In essence, the *mumpreneurship* thesis presents self-employment as a strategy for women to simultaneously meet both good worker and good mother norms. Pragmatically, the *mumpreneurship* literature views self-employment as a strategy to autonomously split time between work and family life. Proponents like Carol Ekinsmyth (2014) argue that self-employment allows mothers to blur business and care activities, both time-wise and spatially. As such, mumpreneurship rejects the mutual exclusiveness of *home* and *work* spheres that is often assumed in traditional labour relations. Foley et al. (2018) see mothers' self-employment as a constrained choice that both fulfils autonomy preferences *and* affirms gendered caregiving roles. After interviewing 60 self-employed mothers in Australia, they conclude entrepreneur-mothers' motives for choosing self-employment include the moral importance of (intensive) mothering, experienced time-related conflicts and constraints in dependent employment, and perceptions that the available career options for mothers in organizational employment are intellectually unchallenging (Foley et al., 2018). Home-based self-employment has also been reported to be a work choice that does not violate gender norms against working mothers, nor against stay-at-home mothers (Bjuggren & Henrekson, 2018; Boeri, 2018; Kabeer, 2000). The *mumpreneurship* literature thus considers self-employment to occupy the middle ground between home-making and dependent employment through the more flexible organization of both time and income, as well as enabling women to fulfil conflicting obligations as *good mothers* and *good workers* (Boden, 1999; Carr, 1996; Ekinsmyth, 2011; Simoes et al., 2016).

Self-employment has been associated with greater autonomy over working hours compared to waged or salaried work and is regularly found as a self-reported motivation for choosing self-employment (Annink & den Dulk, 2012; Boden, 1999; Ekinsmyth, 2013; Hughes, 2003; Lombard, 2001). Studying Swedish men and women, Johansson Sevå and Öun (2015) report that self-employed women with what they refer to as 'family and lifestyle motives' are considerably less likely to report work-family conflict. Studies from Spain and Latin America also indicate that self-employed mothers spend more time on educational childcare activities than their peers in dependent employment (Campaña et al., 2017; Gimenez-Nadal, Molina, & Ortega, 2012). Evidence that self-employed mothers plan the hours and location of their business activities around children's school and after-school engagements suggests the organization of time is of prime importance (Bjuggren & Henrekson, 2018; Boeri, 2018; Ekinsmyth, 2011).

The mumpreneurship literature does not imply that preferences for such autonomous career-mothering interfaces are specific or exclusive to women in high social positions. However, it does posit that some groups of mothers are better able to select into family-driven self-employment due to their higher financial security and skill levels. In consequence, the *mumpreneurship* thesis has commonly presented motherhood effects on self-employment as driven by affluent women whose families do not depend on their incomes and who can, therefore, afford to flexibly adjust work intensity in the business (Annink & den Dulk, 2012; Carr, 1996; Ekinsmyth, 2013). Mothers in lower social positions are deterred from becoming self-employed by the unsteady income compared to waged or salaried work, as well as the lower access to social security (McManus, 2001; Zhang & Pan, 2012). The relation between the motherhood effect and social position is expected to be positive

due to highly positioned mothers' superior capabilities to choose self-employment, not because of distinctive caring or career preferences. Studies have confirmed larger motherhood effects for women in higher social positions in the United States in the 1980s and 1990s, as well as more recently in Belgium, Germany, the Netherlands and the UK (Blanchflower, 2000; Boden, 1999; Carr, 1996; Ekinsmyth, 2011; Georgellis & Wall, 2005). The *mumpreneurship* thesis, while primarily focused on explaining the behaviour of mothers in higher social positions, can thus be conceived of as a sliding scale on which motherhood effects are larger and more positive as women are more highly positioned.

The fact that the *mumpreneurship* thesis suggests mothers opt into self-employment to combine intensive mothering ideals with a career, is relevant from a country-comparative perspective. While these highly positioned mothers could afford alternative care options, they choose to spend the time with their children; while they could afford to drop out of paid employment, they attach value to pursuing a career. Their choice revolves around norms and values, which have been shown to differ across countries. Some single-country studies have demonstrated that mothers are pulled into self-employment to meet intensive mothering ideals, whilst avoiding the stigmatization of being a housewife (Bjuggren & Henrekson, 2018; Ekinsmyth, 2011; Patrick et al., 2016). In South Asia, Boeri (2018) and Kabeer (2000) show that home-based self-employment does not carry the same stigma as factory work, whereas Islam et al. (2018) find that female-run beauty parlours in Bangladesh flourish in those communities where the practice is more socially acceptable. In countries with a stronger aversion of either housewives or working mothers, then, mothers would be more likely to be in self-employment.

2.3 | The disadvantaged worker thesis

The *disadvantaged worker* strand of research holds a very different view of motherhood effects on self-employment. Proponents view dependent employment as a relatively privileged work status that is difficult to attain for actors in weaker labour market positions, who are then relegated to more precarious forms of labour, like self-employment (Kalleberg et al., 2000; Van der Sluis & Van Praag, 2005; Zhang & Pan, 2012). This is not to say that all self-employment or entrepreneurship must be precarious, but that a substantial segment of self-employed work is. A range of studies have indicated that self-employment is much more polarized than dependent employment in terms of earnings, working hours and job quality (Kalleberg et al., 2000; Mandelman & Montes-Rojas, 2009; McManus, 2001; Patrick et al., 2016). A substantial share of self-employed workers earn low wages and lack entitlements to health care and social security in many countries, including the United States and China (Budig, 2006a; Kalleberg et al., 2000; Zhang & Pan, 2012). Proponents argue that self-employed *women* can be found in both types of self-employment, but that women whose self-employed status is due specifically to motherhood, will be found in the more precarious lower segment of the market (Budig, 2006a, 2006b; Patrick et al., 2016; Taniguchi, 2002; Tonoyan et al., 2010).

There is a long tradition of research into motherhood as a disadvantageous characteristic associated with worse opportunities and outcomes in employment (Steiber & Haas, 2012; Uunk, Kalmijn, & Muffels, 2005). Motherhood engenders stereotypes of what Blair-Loy famously called *competing devotions*: the status of motherhood per se signals a step away from patriarchal ideal-worker norms (Blair-Loy, 2003; Christopher, 2012; Cuddy, Fiske, & Glick, 2004; Hochschild & Machung, 2012). Even in the absence of information on individual women's actual mothering behaviour, employers have been shown to evaluate mothers as less competent and productive, in short, as less desirable workers than childless women (and than men, with or without children) (Correll, Benard, & Paik, 2007; Ridgeway & Correll, 2004). On top of that, mothers are less able to find or hold on to waged or salaried jobs than their peers without care obligations because of the rigid separation of work and family responsibilities in traditional labour relations (Gornick & Meyers, 2003; Jacobs & Gerson, 2004). The *disadvantaged worker* thesis thus holds that family-related self-employment is generally a precarious form of work that mothers are pushed into when unable to find work in dependent employment.

While motherhood status is theorized to disadvantage all women in the labour market, other status characteristics can exacerbate its effects (Budig, 2006b; Mandel, 2011). Mothers in low social positions are conceived to be more vulnerable to these forces because they tend to work in workplaces with fewer available work–family arrangements, are replaced by other workers at relatively low cost and lack the resources to outsource care tasks (Jacobs & Gerson, 2004; Milkman, 2016). The combination of their weak labour market position and their care obligations makes it difficult to attain and retain jobs in traditional full-time, dependent employment (Kalleberg et al., 2000). Conversely, women are less likely to be pushed into self-employment due to motherhood if they are in higher social positions, because of their stronger bargaining position, their larger autonomy over working hours, and the higher wages and entitlements in professional dependent employment (Arum & Müller, 2004b; McManus, 2001; Zhang & Pan, 2012).

Under the *disadvantaged worker* thesis, where mothers in low social positions are pushed into self-employment due to their inability to combine work and care obligations, the availability of childcare would present a way of reducing work–family conflict within the traditional employer–employee relationship (Berglund et al., 2018; Forry & Hofferth, 2011). In a study of the United States and 22 Western and Eastern European countries, Tonoyan et al. (2010) do find that mothers in non-professional occupations were less likely to be self-employed in countries with higher enrolment in early childhood care and education.

2.4 | The long or short end of the stick

In summary, the *mumpreneurship* thesis attributes the motherhood premium on self-employment to the agency of relatively well-off women who prefer to autonomously split their time between their careers and caregiving. It predicts that:

H1a *The motherhood premium on self-employment is larger for women in higher social positions.*

H1b *Motherhood effects will be larger in countries with more negative attitudes towards working mothers or housewives.*

The *disadvantaged worker* thesis explains the motherhood premium by pointing towards structural forces that drive those women who are least able to attain and retain jobs into self-employment. It predicts that:

H2a *The motherhood premium on self-employment is larger for women in lower social positions.*

H2b *Motherhood effects will be smaller in countries with higher enrolment in early childhood care and education.*

Finally, I address the potential relationship between these two theories, arguing that they need not be mutually exclusive. The *mumpreneurship* thesis expects that only women in higher social positions will experience motherhood premiums based on the pragmatic expectation that they form a sub-group of women that possesses the necessary human capital and resources to act on their preferences. The *disadvantaged worker* theory attributes the motherhood premium exclusively to mothers in lower social positions because opportunities for the reconciliation of work and family are scarce in precarious dependent employment. The explanatory mechanisms speak to the behaviour of different social position groups at opposite tails of the distribution. Since mothers in both lower and higher social positions can be found in any society, these mechanisms could both be at work in a single country: highly positioned Dutch mothers could choose to start their own consultancy practice while, at the same time, their peers in lower social positions are strong-armed into performing their tasks as self-employed workers. I, therefore, posit that:

H3 *Motherhood premiums on self-employment for women in low and high social positions are not mutually exclusive.*

3 | METHODS

3.1 | Data

Analyses were performed using the IPUMS International dataset, which harmonizes national census data from both industrialized and developing countries (Minnesota Population Center, 2017). For this study, all high- and middle-income countries were selected that provided data within the time frame from 2009 to 2011, which is the most recent period available in most cases. Seven datasets were dropped because they did not provide information on motherhood status (Argentina, Austria, Greece and Poland), self-employment status (South Africa and Uruguay) or because individuals were not organized into households (Netherlands). This resulted in a sample of 23 countries including eight high-income (Canada, France, Hungary, Ireland, Portugal, Puerto Rico, Spain and the United States), ten upper-middle-income (Belarus, Botswana, Brazil, Costa Rica, Dominican Republic, Ecuador, Iran, Mexico, Panama and Romania) and five lower-middle-income (Armenia, Ghana, India, Vietnam and Zambia) countries. To ensure sufficient observations for the group of self-employed women, the full public use samples were used. The analytical sample includes all women between the ages of 18 and 55, who were neither in full-time education nor in the agricultural sector. This resulted in a sample of just over 9.1 million women. A table with sample sizes by country is included in the Appendix (Table A2). For the country-level indicators, data from various publicly available sources were used, as detailed in Section 3.2 and the description of the dataset in Table A1.

3.2 | Operationalization

The dependent variable is a categorical indicator measuring whether women are self-employed, non-employed or in dependent employment. In line with the guidelines of the International Labour Organization (ILO, 1982), dependent employment is defined as paid work outside the household, including the informal sector. Self-employment status contains entrepreneurs regardless of whether or not they have employees. There are two main independent variables: motherhood status and social position. To measure motherhood in a way that best captures the dimension of work–family conflict, motherhood status is a dummy variable that takes the value one if a woman reported living with at least one dependent child under the age of 15. Below this age, children are in compulsory education not allowed to work full-time jobs in any of the countries in the analysis. Thus, motherhood is measured as having care responsibilities. Women without children, with adult children or children that do not live with them are considered as not having dependent children. Social position is operationalized as a woman's relative educational achievement. IPUMS International contains harmonized data on educational attainment in 13 categories running from no schooling to having completed university. Given the inclusion of both high- and middle-income countries in this study, absolute levels of education are unlikely to signal the same degree of (dis)advantage across the countries. Therefore, dummies for low, medium and high social positions were constructed based on the within-country distribution across the educational levels, each containing about a third of the women in a country. The coding was harmonized within the three country income levels to facilitate comparability and allow for compositional differences in the social position distribution, as described in the Appendix (Table A1).

On the individual level, several potential confounding variables are controlled for. As a matter of common practice, these include measures for age (mean-centred) and age squared. To control for the differential opportunities for dependent and self-employment, a dummy variable for living in a rural area was included in the analyses of all countries (ref. urban), except Spain, the United States, Uruguay, Zambia and Puerto Rico. A dummy variable for having a spouse and/or parent who is self-employed (ref. no self-employed parent or spouse) was added to account for intergenerational transfers (Caballero, 2017; Poggesi et al., 2016). Two dummy variables for being unmarried (ref. married) and for having an unemployed or non-employed spouse (ref. employed spouse) were added

because social position could affect self-employment differently in households where women are the only earner. To avoid misidentifying the social position of some mothers who may have married into more or less privileged families than their own education would indicate, their spouses were classified on the same three-category social position variable as the women; partners were coded to be higher or lower positioned if they score one category above or below their spouse.

On the country-level, indicators for early childhood care and education and cultural attitudes were included. Early childhood care and education were measured through two participatory variables: childcare enrolment under age three and enrolment in pre-primary education. To address concerns of endogeneity, two additional measures were tested: public investment in pre-primary education as a share of gross domestic product (GDP) and the number of pupils per teacher in pre-primary education. Data were taken from the UNESCO Institute for Statistics and Eurostat for 2009. Data on attitudes towards housewives and working mothers were derived from the 2008 *European* and 2006–2013 *World Values Surveys* for the 18 countries for which they were available. These surveys contained two items asking respondents to rank their agreement with the statements that 'being a housewife is just as fulfilling as working for pay' and 'pre-school children suffer when the mother works' on a four-point scale (0 = strongly agree; 3 = strongly disagree). The item on working mothers was recoded so higher values indicate less favourable opinions and sample means were calculated for each country. Since the two items did not form a reliable scale, they were tested separately.

3.3 | Analytical strategy

To measure the effect of motherhood on the probability of being self-employed compared to being in dependent employment or not in employment, multinomial logit models were used. These models were preferred over models comparing women in dependent and self-employment because both the *mumpreneurship* and *disadvantaged worker* theses consider self-employment status as the outcome of a three-way choice.

Since the 23 countries differ substantially from each other, a two-step multilevel design was used, which does not assume equal effects of micro-level variables across countries (Heisig, Schaeffer, & Giesecke, 2017; Stegmüller, 2013). In the first step, 23 separate multinomial logistic regressions estimate the effect of motherhood on women's probabilities of being self-employed, non-employed or in dependent employment (ref.). These regressions produce coefficients estimating the effect of motherhood on the probability of being in self-employment compared to the reference state (dependent employment) while controlling for the above-mentioned individual-level variables. In order to measure the effect of motherhood on the absolute probability of being self-employed – that is to say, taking into account both non-employment and dependent employment as alternatives –, I then estimated the average marginal effects (AME) of motherhood. This method has the added advantage of being able to compare effect sizes across analytical samples and model specifications (Breen, Holm, & Karlson, 2014; Breen, Karlson, & Holm, 2018). To measure the moderating effect of social position, two dummies for low and high social position were introduced and interacted with the variable for motherhood. The contrast operator of Stata's margins command (contrast of predictive margins, CPM) estimates the differences in the AME of motherhood between women in low and medium social positions, and between the high and medium social positions. These estimated motherhood effects should be interpreted as associations rather than causal effects. Since status in (self) employment and motherhood are measured at one point in time, the analyses cannot reveal the sequence or duration of these behaviours.

In the second-step analyses, the estimated AME of motherhood and contrasts of predictive margins (CPM) of the low and high social position indicators were used as dependent variables in a set of OLS regressions to estimate the effect of the country-level variables. Following Di Stasio, Bol, and Van de Werfhorst (2016) and Lewis and Linzer (2005), I applied the *edvreg* package for Stata. *Edvreg* weighs the second-step estimates using the standard errors of the estimated motherhood effects from the first step to take into account different levels of uncertainty

across countries. Since the second-step analyses still contain limited statistical power, effectively estimating associations based on 23 countries at one point in time (or 18 in the models including the variables for attitudes), only bivariate regressions of the country-level contexts on the overall motherhood effect and on the social position effect are presented (Table 2, regression series (a)–(c)). Associations controlled for per capita GDP are shown as a robustness check to address potential or even probable omitted variable bias as best as possible (Table 2, regression series (d)–(f)). Significant associations are displayed in Figures 4–6 while overlaying the scatterplots of the country positions on the relevant explanatory variables. Additional models show the strength of the association when controlling for other correlated country characteristics (Table 3), which should be considered as a descriptive robustness check because of the limited degrees of freedom in the models. Finally, I performed several general robustness checks of the second-step results: I checked for influential outliers using Cook’s *D* and re-ran analyses without the outliers, as well as splitting the sample by the 11 countries with the lowest and 12 with the highest per capita GDP. The results of these checks are reported in the Section 4.

4 | RESULTS

4.1 | Effects of motherhood and social position on self-employment

Except for Ghana (72 per cent) and Vietnam (40 per cent), the percentage of mothers that are self-employed as a share of all mothers varies between less than 1 per cent in Armenia and 19 per cent in Zambia. As Figure 1 shows, the share of mothers that are self-employed increases with their social position in 12 countries: Armenia, Canada, Costa Rica, France, Hungary, Iran, Ireland, Mexico, Portugal, Puerto Rico, Romania and the United States. In contrast, Botswana, Ghana and Vietnam show the opposite pattern, suggesting mothers negatively select into self-employment. In the remaining eight countries (Belarus, Brazil, Dominican Republic, Ecuador, India, Panama, Spain and Zambia) mothers in the middle group are most likely to be self-employed. The share of mothers from low, middle and high social positions in self-employment thus varies across countries.

The share of mothers in self-employment, however, cannot tell us whether these patterns are specific to mothers, that is, different from the behaviour of women without dependent children. Results from the step-one multinomial regressions show the estimated effect of motherhood status in each country (Table 1, model 1; Figure 2). The analyses reveal a mixed pattern, with ten of the countries showing a significant and positive

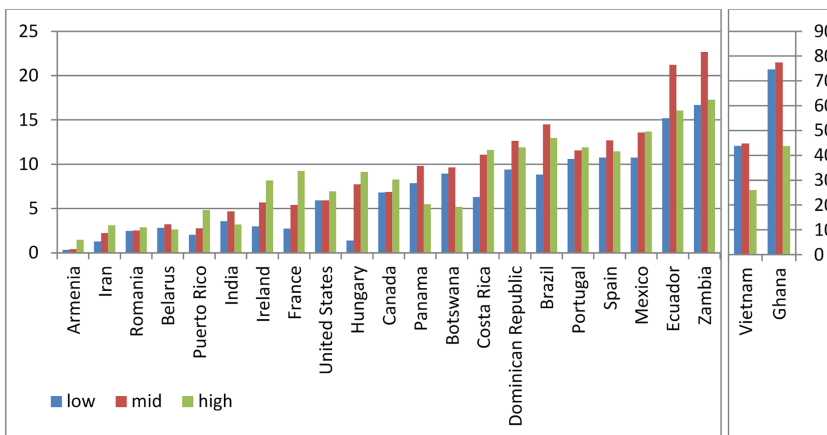


FIGURE 1 Self-employed mothers as a share of all mothers by country and social position [Colour figure can be viewed at wileyonlinelibrary.com]

TABLE 1 Average marginal effects of motherhood and contrast of predictive margins of social position by country

	Model 1	Model 2		
	Motherhood effect	Main effect	CPM low social position	CPM high social position
Armenia	0.000	0.000	0.005*	0.002
Belarus	-0.002**	-0.002**	0.002*	-0.004***
Botswana	0.004	0.004	0.007	0.004
Brazil	0.002*	0.005***	-0.012***	-0.008***
Canada	0.007***	0.006***	0.001	-0.009**
Costa Rica	-0.007***	-0.003	-0.009*	0.000
Dominican Republic	0.008***	0.008***	-0.006*	0.007*
Ecuador	0.014***	0.015***	-0.004	0.022***
France	-0.002***	-0.001*	-0.007***	-0.008***
Ghana	0.103***	0.087***	-0.045***	0.005
Hungary	-0.010***	-0.008***	0.003	-0.011***
India	0.005	0.005	-0.006	-0.001
Iran	-0.004***	-0.003***	0.004***	0.009***
Ireland	-0.007***	-0.006***	0.005 [†]	0.003
Mexico	0.012***	0.013***	-0.011***	0.007*
Panama	-0.001	-0.001	-0.007 [†]	-0.001
Portugal	0.004*	0.006**	-0.011**	0.005
Puerto Rico	-0.009	-0.009*	-0.012	-0.006
Romania	-0.005***	-0.004***	-0.004***	0.005***
Spain	0.001	0.001	-0.004*	-0.007**
United States	0.003***	0.003***	0.002*	-0.006***
Vietnam	0.051***	0.049***	-0.030***	-0.038***
Zambia	0.020***	0.019***	-0.029***	0.014***

Note. Model 1 and model 2 controlled for age, marital status, rural setting, self-employed spouse or parent, spouse social position. Model 3 controlled for all above-mentioned controls, social position, and interaction of motherhood status and social position.

[†] $p < 0.1$;

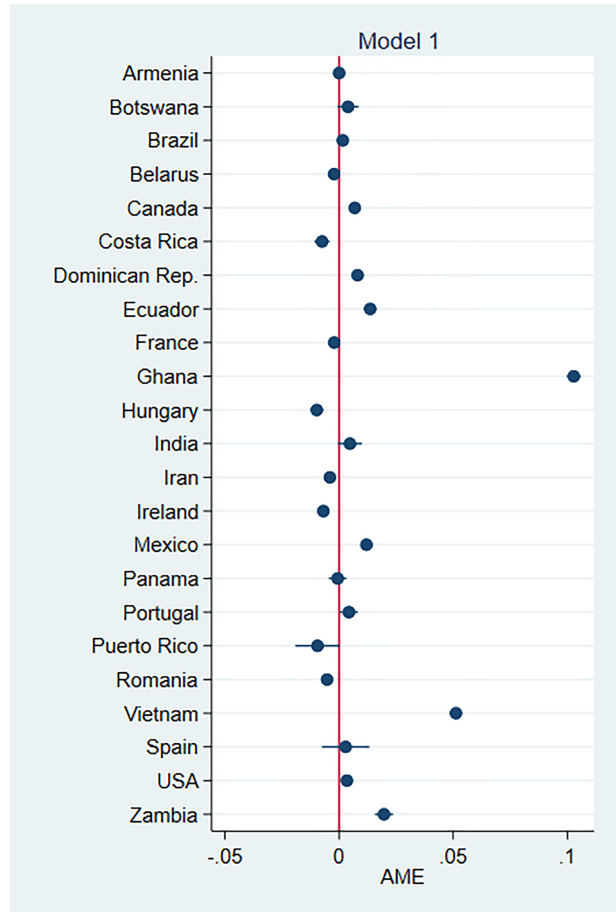
* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$.

relationship between motherhood and women's probability of being self-employed after controlling for all individual-level variables except women's social position. This is indicated in Table 1 by the AME above zero and the point estimates to the right of the zero line in Figure 2. While some of the effects may appear small, the reader should take into account that the AMEs measure the increases in absolute probability of being self-employed. Canada's motherhood effect of 0.007 (sig. $p < 0.001$) thus implies that mothers' probability of being self-employed is 0.7 percentage points higher than that of women without dependent children; a considerable effect size taking into account that about 7 per cent of Canadian mothers are self-employed. Vietnam and Ghana are outliers, where mothers' probability of being self-employed exceeds that of other women by five percentage points (Vietnam) and ten percentage points (Ghana), respectively. I find non-significant effects in six countries (Armenia, Botswana, India, Panama, Puerto Rico and Spain) and negative effects in Belarus, Costa Rica, France, Hungary, Iran, Ireland and Romania (Table 1, model 1).

FIGURE 2 Average marginal effect of motherhood on self-employment status by country [Colour figure can be viewed at wileyonlinelibrary.com]



I then tested whether motherhood effects differ significantly by women's social position. Table 1 (model 2) shows the motherhood effect interacted with the dummies for being in a high and low social position; the main effect of motherhood in model 2 thus reflects the estimated penalty or premium for the medium social position group. The last two columns show the size of the interaction terms. They do not indicate which group of mothers is most likely to be self-employed in absolute terms, but for which group of women the motherhood effect is largest. The *disadvantaged worker* theory predicts women in low social positions will experience larger motherhood effects than their medium and high social position peers. Empirically, this could be confirmed either by a positive effect of being in a low social position (low social position women experience larger motherhood premiums than their medium social position peers) or by a negative effect of being in a high social position (high social position women experience smaller motherhood premiums than their medium social position peers). In this vein, model 2 (Table 1) indicates that the effect of motherhood for women in low social positions is significantly larger compared to their medium social position peers in four countries and smaller for women in high social positions in eight countries. The *mumpreneurship* theory, on the contrary, predicts motherhood effects will be larger for women in high social positions than for women in medium and low social positions. Six countries show larger effects for high social position mothers; a negative effect of being in a low social position is found in 12.

The effects of the low and high social position dummy variables are plotted together in Figure 3. Displaying the effects of being in a low (y-axis) and a high (x-axis) social position simultaneously presents a visual aid to

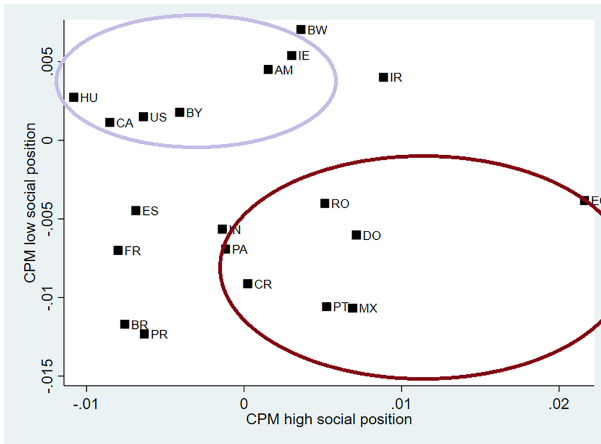


FIGURE 3 Contrasts of predictive margins of being in a low or high social position compared to middle social position by country [Colour figure can be viewed at wileyonlinelibrary.com]

quickly examine two issues: first, in which countries the estimated motherhood effects conform to the expectations of the *mumpreneurship* or *disadvantaged worker* theses; second, whether these hypotheses are mutually exclusive interpretations of the moderating effect of social position on the motherhood effect. In the circle in the upper-left corner is a group of six countries, where estimated motherhood effects conform to expectations under the *disadvantaged worker* thesis: they either show a positive effect of being in a low social position and a negative effect of being in a high social position (Belarus and United States), or one of the above in combination with a non-significant effect on the other social position dummy variable (Armenia, Canada, Hungary and Ireland). Effect sizes indicate that there are motherhood premiums for Canadian and US women in low and medium social positions (Table 1, model 2). In Armenia, only women in low social positions experience a (positive) motherhood effect. In Ireland, Hungary and Belarus, three countries with a negative main effect of motherhood, I find that motherhood penalties are smaller or non-existent for the low social position group. In the circle in the bottom-right corner, seven countries show motherhood effects in line with expectations under the *mumpreneurship* thesis, as do outliers Ghana and Zambia (excluded from the figure, see Table 1, model 2 for estimates). The Dominican Republic, Mexico, Romania and Zambia show a significant negative effect of being in a low social position on the motherhood effect and a significant positive effect of being in a high social position. In Ecuador, a motherhood premium is found for all women, but it is significantly larger for those in a high social position. In the remaining four countries (Costa Rica, Ghana, Panama, Portugal) the effect of being in a low social position is negative, whereas the high social position group does not differ significantly from the medium group. Thus, two countries conform perfectly to patterns expected under the *disadvantaged worker* thesis (Belarus and the United States) and four do so imperfectly. Incidence patterns expected under the *mumpreneurship* thesis are fully met in four countries (Dominican Republic, Mexico, Romania and Zambia) and at least partially in five more.

Figure 3 also shows that nine countries match expectations of neither or of both of the theories. In Iran, the motherhood effect is larger for women in both low and high social positions. Table 1 shows that the main effect of motherhood is negative in Iran (-0.003 , sig. $p < 0.001$), with effect sizes of the two social position variables (0.004 and 0.009, sig. $p < 0.001$) indicating motherhood premiums do exist for the high and low social position groups. In the last, lower-left corner of the graph, are France, Brazil, Spain and outlier Vietnam (not shown), which show significant negative effects of both the high and low social position dummies and therefore do not conform to either the *disadvantaged worker* or the *mumpreneurship* theory.

These results indicate that the *mumpreneurship* and *disadvantaged worker* theses are not mutually exclusive and each might help explain motherhood effects for either the low or high social position group. This would result in four possible outcome patterns, including not only larger effects for either the low or high social position groups, as

displayed on the diagonal running from the upper-left to lower-right corner, but also allowing for polarized or inverted patterns, as found in Brazil, Iran, France, Spain and Vietnam.

4.2 | Motherhood effects across countries

To attempt to explain country variation in moderating effect of social position on the motherhood effect on self-employment, I then examined the effects of early childhood care and education and cultural contexts. Table 2 displays the regressions of the AME of motherhood and the contrasts of predictive margins for being in low and high social positions on the indicators for early childhood care and education and cultural contexts, first bivariate (left) and then controlling for per capita GDP (right). Each cell in the table represents a separate regression. For example, the negative coefficient of childcare enrolment in column (a) (−0.0003, n.s.; column (a)) means that the bivariate association between the childcare enrolment rate and the main effect of motherhood is negative; this effect is more negative for women in a high social position (−0.0001, n.s.; column (c)).

The *disadvantaged worker* thesis predicts that higher enrolment in early childhood care and education will be associated with a reduction in the positive effect of being in a low social position. To measure the association of the motherhood effect with early childhood care and education, I examined two enrolment measures (childcare under three and pre-primary education) and two quality indicators (public investment in pre-primary education as a share of GDP and the number of pupils per teacher in pre-primary education). As Table 2 shows, the association with enrolment of children under three is negative overall, whereas enrolment in pre-primary education is positively associated with motherhood effects. While non-significant, these associations are in line with earlier findings by Tonoyan et al. (2010), who correlated the share of mothers in self-employment with similar indicators for the United States and several European countries.

A stronger and significant association exists between motherhood effects and the pupil-teacher ratio (Table 2). The bivariate regression models show a positive effect of the pupil-teacher ratio on the main effect

TABLE 2 Effects of childcare and cultural contexts on the size of the motherhood and social position effects

	Bivariate regression			Controlled for per capita GDP		
	(a)	(b)	(c)	(d)	(e)	(f)
	Main effect of motherhood (AME)	Low social position (CPM)	High social position (CPM)	Main effect of motherhood (AME)	Low social position (CPM)	High social position (CPM)
<i>Childcare (23 countries)</i>						
Childcare enrolment 0–2	−0.0003	0.0001	−0.0001	0.0002	−0.0002	0.0000
Pre-primary enrolment	0.0001	−0.0001	0.0000	0.0002	−0.0001	0.0000
Childcare expenditure	−0.0001	0.0002	−0.0003	−0.0001	0.0002	−0.0003
Pupil-teacher ratio	0.0021**	−0.0010**	0.0004	0.0020**	−0.0010**	0.0004
<i>Attitudes (18 countries)</i>						
Housewife stigma	0.0223	−0.0150 [†]	0.0136 [†]	0.0172	−0.0120	0.0133
Working mother stigma	−0.0090	0.0028	0.0095	−0.0335	0.0145	0.0055

Note. Each cell represents the coefficient of the country-level indicator in a regression of the AME of motherhood and CPMs of low and high social position bivariate (left) or controlled for per capita GDP (right).

[†]*p* < 0.1;

**p* < 0.05;

***p* < 0.01;

****p* < 0.001.

of motherhood (0.00021, sig. $p < 0.01$; column (a)) that is replicated after controlling for per capita GDP (column (d)). These results indicate that the motherhood effect on self-employment is larger in countries with more children per teacher in pre-primary education. In other words, the overrepresentation of mothers in female self-employment is larger when class size goes up. Though positive, the association with the effect of being in a high social position is not significant with or without controls for per capita GDP, meaning that a higher pupil–teacher ratio does not increase the motherhood effect for women in high social positions at a significantly greater rate than for medium social position women. The effect is significant when excluding Vietnam. The negative associations with the CPM of being in a low social position (-0.001 , sig. $p < 0.01$; columns (b), (e)), however, indicate that women in low social positions are less likely than their peers to experience a motherhood premium in countries with higher pupil–teacher ratios. To aid the interpretation, Figure 4 visualizes the positive effects of the pupil–teacher ratio (x-axis) on the AME of motherhood (y-axis, left pane). It also shows the negative association with the motherhood effect of low social position women compared to the medium group (middle pane) and the stronger positive effect for the high social position (right pane) compared to the medium group.

Figure 4 also shows that both the main effect of motherhood and the effect of being in a low social position are only significant at higher pupil–teacher ratios, as indicated by the confidence intervals that do not overlap the zero-line on the y-axis (over 20 pupils per teacher for the main effect, over 15 for the low social position effect). As a sensitivity check, I tested whether the effects of the pupil–teacher ratio in pre-primary education hold when controlling for enrolment, as shown in models 1–4 of Table 3. Models 1 and 3 add pre-primary enrolment as a control variable, replicating the positive association of the pupil–teacher ratio with the main effect for motherhood (model 1) and the negative association with the low social position effect (model 3). Models 2 and 4 add an interaction term, suggesting the effect of the pupil–teacher ratio is not equal across levels of enrolment. Model 2 is visualized in Figure 5, suggesting that the pupil–teacher ratio becomes relevant at higher levels of pre-primary enrolment.

Finally, the *mumpreneurship* thesis predicts a larger motherhood effect for women in high social positions in countries with more negative attitudes towards housewives or working mothers. As Table 2 shows,

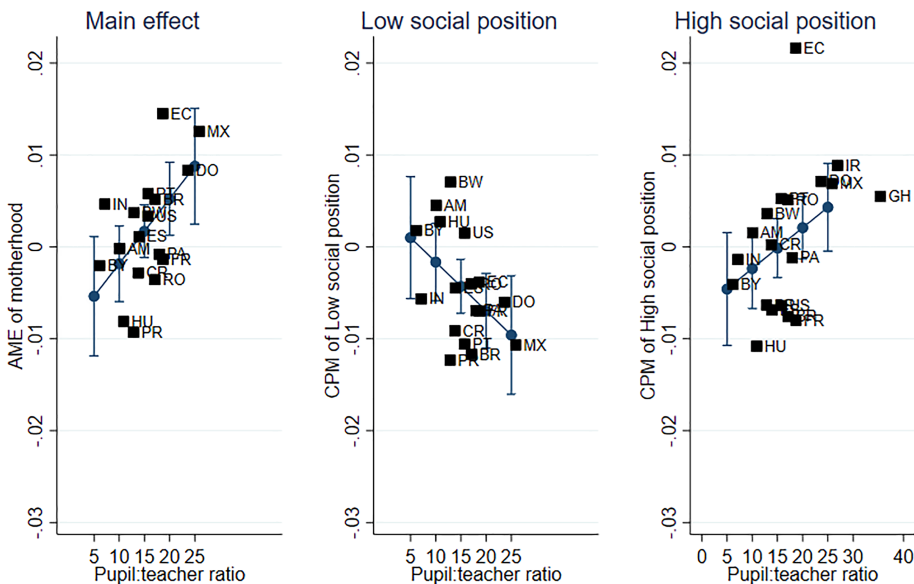


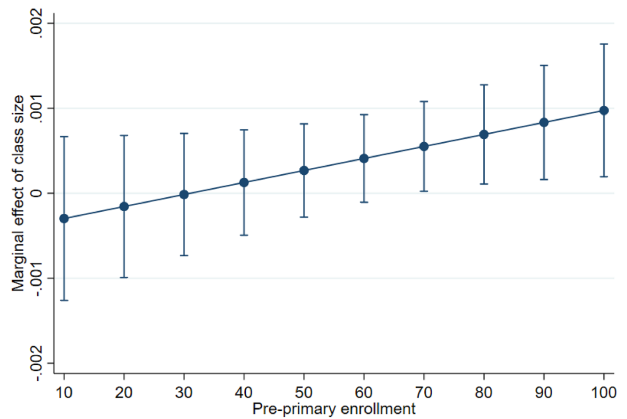
FIGURE 4 Marginal effects of the number of pupils per teacher in pre-primary education with the motherhood and social position effects [Colour figure can be viewed at wileyonlinelibrary.com]

TABLE 3 Sensitivity checks of the effects of pre-primary care and housewife stigma on the size of the motherhood and social position effects

	Main effect		Low social position effect				High social position effect	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-primary enrolment	0.0000	-0.0006*	-0.0001	0.0002				
Pupil-teacher ratio	0.0020**	-0.0014	-0.0009*	0.0007				
<i>Pre1 * pupil-teacher</i>		0.0000**		0.0000*				
Housewife stigma					-0.0181 [†]	-0.0166 [†]	0.0073	0.0078
Working mother stigma					0.0011	-0.0653	0.0104	-0.0045
<i>Housewife * working mother stigma</i>						0.0293		0.0066

[†]*p* < 0.1;
 **p* < 0.05;
 ***p* < 0.01;
 ****p* < 0.001.

FIGURE 5 Marginal effects of the number of pupils per teacher in pre-primary education on the motherhood at different levels of enrolment [Colour figure can be viewed at wileyonlinelibrary.com]



unfavourable attitudes towards housewives are associated with more negative motherhood effects for women in low social position (-0.015, sig. *p* < 0.1; column (b)) and more positive effects for women in high social positions (0.0136, sig. *p* < 0.1; column (c)). These effects are not significant when controlling for per capita GDP in models (e) and (f), although effect sizes are unchanged. Figure 6 shows a clear association between negative attitudes towards housewives and the effect of being in a high social position group (right pane) as well as weaker associations for the main effect (left pane) and low social position effect (right panel). In the models including both attitudinal measures and an interaction term (Table 3, models 5-8), the negative effect on the CPM of low social position is replicated, whereas the effect on the CPM of high social position is halved.

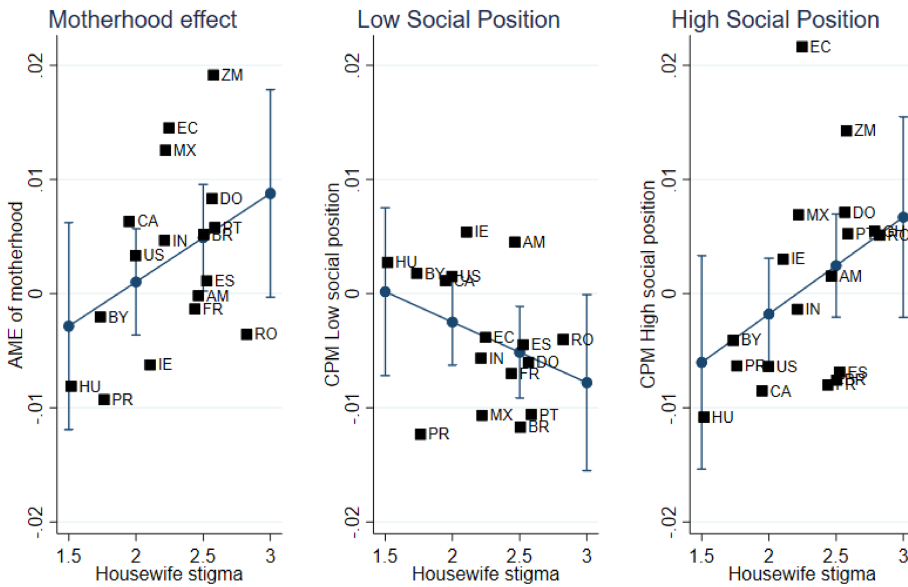


FIGURE 6 Average marginal effects of attitudes towards housewives on the main effect of motherhood and the effect of being in low and high social positions [Colour figure can be viewed at wileyonlinelibrary.com]

5 | CONCLUSIONS AND DISCUSSION

In this article, I asked how women's social position affects the motherhood effect, as well as how country-level contexts can explain the size and direction of the social position effect. To do so, I tested the *mumpreneurship* and *disadvantaged worker* theses on a sample of 23 high- and middle-income countries. After exploring patterns of the motherhood effects on self-employment by women's social position, I posit that the two theories should be conceived of as explaining the behaviour of different groups, which yields four possible configurations of social position effects: patterns of disadvantage, advantage, polarization and inverted effects. In a first group of countries, motherhood premiums on self-employment are larger among women in lower social positions, as expected under the *disadvantaged worker* thesis. Two countries (Belarus and the United States) clearly conform to this pattern of disadvantage, whereas four do so partially (Armenia, Canada, Hungary and Ireland). Evidence from the second cluster of countries is fully (Dominican Republic, Mexico, Romania and Zambia) or partially (Ecuador, Costa Rica, Ghana, Panama and Portugal) consistent with the patterns of advantage expected under the *mumpreneurship* thesis, implying that the motherhood premium is larger for women in higher social positions. In a third, more polarized pattern, both high and low social position women experience larger motherhood effects, like in Iran. Finally, an inverted pattern of motherhood effects was found in Brazil, France, Spain and Vietnam, where motherhood effects were more *negative* for both the high and low social position groups compared to women in medium social positions. Thus, the analysis suggests that both *mumpreneurship* and *disadvantaged worker* configurations, and different combinations thereof, occur in practice. A four-category classification, which allows for one group being pulled into self-employed as another is simultaneously pushed into it, finds more empirical support than a view taking the *mumpreneurship* and *disadvantaged worker* theses as competing.

Results indicate that there is country variation in the moderating effect of social position on the motherhood effect on self-employment. This calls for exploration of the country contexts in which the low or high social position effects become more salient. I examined country-level associations between the size of the motherhood and social position effects and several childcare and attitudinal measures. Findings indicate that early childhood care and

education is associated with motherhood effects on self-employment in complex ways. Motherhood premiums on self-employment were larger in countries with higher enrolment in pre-primary education (H2b), as found by Tonoyan et al. (2010), but childcare enrolment under age three was not. There is tentative evidence to suggest that the motherhood premium is larger for women in medium and high social positions in countries with larger class sizes in pre-primary education *and* high enrolment. These findings prompt questions about the role of quality and schedules play in promoting maternal self-employment. Finally, I found larger motherhood premiums in countries with more negative attitudes towards housewives (H1b). Bjuggren and Henrekson's (2018) findings that self-employment functions as a role-reconciliation strategy in countries where full-time homemaking is generally looked down upon, are confirmed in a cross-country setting.

This study has some limitations and its results warrant a cautious interpretation. First, these results are cross-sectional and lack individual-level measures of attitudes or timing of entry into motherhood and self-employment statuses. Therefore, I could not test whether entry into self-employment occurred *because* of childcare-related reasons; rather, I point out which patterns exist in the effect of motherhood and its relative size by social position. These results should be interpreted as descriptive. Second, the limited number of countries in the study mean that country-level control variables were added primarily as sensitivity checks to the bivariate regressions.

What this study has attempted to do, is study the relationship between motherhood status and social position in a larger sample context, testing the two largest theories regarding the motherhood effect on self-employment in a single study. The research not only indicates that social position moderates the relation between motherhood and self-employment status, but also that its effects are heterogeneous across countries. These findings imply, first of all, that the context in which motherhood premiums are studied matters. Furthermore, these results speak against uniform policies toward maternal self-employment. Policy recommendations on the desirability of motherhood effects on self-employment will depend on the context in which they are researched and should be clearly delimited to those countries or social position groups. Finally, by expanding the analysis of motherhood effects on self-employment beyond the often studied Anglo-Saxon and Western European countries, this study shows that comparable motherhood effects on self-employment exist in both high- and middle-income countries.

Towards future research, the study proposes four country-clusters in which the motherhood effects on self-employment relate to inequality structures in different ways: patterns of disadvantage, advantage, polarization and inverted effects. Patterns of advantage have probably been most studied until now and put emphasis on the values of intensive mothering and its incompatibility with meaningful careers in professional dependent employment. The findings from this study suggest the role of trust in and convenience of early childhood care and education institutions should be studied further. While a substantial share of high- and middle-income countries exhibited patterns of disadvantage, the presence of childcare institutions and attitudes were less successful in explaining country variation in this effect. This configuration of motherhood premiums might be more driven by factors in the realm of labour relations and social security, such as the costs associated with typical and atypical employment. The policies were beyond the scope of this article but provide interesting avenues for further research. The last two clusters are currently least explored and present a whole range of questions about the policy packages that result in the absence or presence of both high and low social position effects. In particular, they call for closer study of the medium social position group, which has been curiously understudied.

ACKNOWLEDGEMENTS

Part of this article was written during a research stay at the Sociology Department of the University of Pennsylvania. The author would like to thank Professor Jerry Jacobs, Professor Maarten Keune, Dr Stephanie Steinmetz and Professor Kea Tjzens as well as three anonymous reviewers for comments on earlier drafts. The author acknowledges the InGRID2 – Inclusive Growth Infrastructure Diffusion – project (No. 730998, EU H2020). The following statistical offices are acknowledged for providing the underlying data that made this research possible: National Institute of Statistics and Economic Studies, France; BPS Statistics Indonesia, Indonesia; National Institute of Statistics, Geography, and Informatics, Mexico; National Statistics Office, Philippines; Federal State Statistics

Service, Russia; and General Statistics Office, Vietnam. National Statistical Service, Armenia; Ministry of Statistics and Analysis, Belarus; Central Statistics Office, Botswana; Institute of Geography and Statistics, Brazil; Statistics Canada, Canada; National Institute of Statistics and Censuses, Costa Rica; National Statistics Office, Dominican Republic; National Institute of Statistics and Censuses, Ecuador; Ghana Statistical Services, Ghana; Central Statistical Office, Hungary; Statistical Centre, Iran; Central Statistics Office, Ireland; National Institute of Statistics, Italy; National Statistical Committee, Kyrgyz Republic; Census and Statistics Directorate, Panama; National Institute of Statistics, Portugal; US Bureau of the Census, Puerto Rico; National Institute of Statistics, Romania; Statistics South Africa, South Africa; National Institute of Statistics, Spain; Central Statistical Office, Trinidad and Tobago; Bureau of the Census, United States; National Institute of Statistics, Uruguay; and Central Statistics Office, Zambia.

DECLARATION OF CONFLICTING INTERESTS

The author declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

ORCID

Janna Besamusca  <https://orcid.org/0000-0002-8974-7017>

REFERENCES

- Annink, A., & den Dulk, L. (2012). Autonomy: The panacea for self-employed women's work-life balance? *Community, Work & Family*, 15(4), 383–402. <https://doi.org/10.1080/13668803.2012.723901>
- Arum, R., & Müller, W. (2004a). The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality. Retrieved from <https://www.jstor.org/stable/j.ctt7t1w>
- Arum, R., & Müller, W. (2004b). The reemergence of self-employment: Comparative findings and empirical propositions. In R. Arum & W. Müller (Eds.), *The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality* (pp. 426–454). Princeton, NJ: Princeton University Press.
- Berglund, K., Ahl, H., Pettersson, K., & Tillmar, M. (2018). Women's entrepreneurship, neoliberalism and economic justice in the postfeminist era: A discourse analysis of policy change in Sweden. *Gender, Work and Organization*, 25(5), 531–556. <https://doi.org/10.1111/gwao.12269>
- Bjuggren, C., & Henrekson, M. (2018). Avoiding the housewife stigma: Self-employment as a female career choice (No. 1200). Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3122503
- Blair-Loy, M. (2003). *Competing devotions: Career and family among women executives*. Cambridge, MA: Harvard University Press.
- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics*, 7(5), 471–505. [https://doi.org/10.1016/S0927-5371\(00\)00011-7](https://doi.org/10.1016/S0927-5371(00)00011-7)
- Blanchflower, D. G., & Oswald, A. J. (1998). What makes an entrepreneur? *Journal of Labor Economics*, 16(1), 26–60. <https://doi.org/10.1086/209881>
- Boden, R. J. (1999). Flexible working hours, family responsibilities, and female self-employment. *American Journal of Economics and Sociology*, 58(1), 71–83. <https://doi.org/10.1111/j.1536-7150.1999.tb03285.x>
- Boeri, N. (2018). Challenging the gendered entrepreneurial subject: Gender, development, and the informal economy in India. *Gender & Society*, 32(2), 157–179. <https://doi.org/10.1177/0891243217750119>
- Breen, R., Holm, A., & Karlson, K. B. (2014). Correlations and nonlinear probability models. *Sociological Methods & Research*, 43(4), 571–605. <https://doi.org/10.1177/0049124114544224>
- Breen, R., Karlson, K. B., & Holm, A. (2018). Interpreting and understanding logits, probits, and other nonlinear probability models. *Annual Review of Sociology*, 44(1), 39–54. <https://doi.org/10.1146/annurev-soc-073117-041429>
- Budig, M. (2006a). Gender, self-employment, and earnings. *Gender & Society*, 20(6), 725–753. <https://doi.org/10.1177/0891243206293232>
- Budig, M. (2006b). Intersections on the road to self-employment: Gender, family and occupational class. *Social Forces*, 84(4), 2223–2239. <https://doi.org/10.1353/sof.2006.0082>. Retrieved from <https://academic.oup.com/sf/article-abstract/84/4/2223/2235045>
- Buvinić, M., & Gupta, G. R. (1997). Female-headed households and female-maintained families: Are they worth targeting to reduce poverty in developing countries? *Economic Development and Cultural Change*, 45(2), 259–280. <https://doi.org/10.1086/452273>
- Caballero, G. A. (2017). Responsibility or autonomy: Children and the probability of self-employment in the USA. *Small Business Economics*, 49(2), 493–512. <https://doi.org/10.1007/s11187-017-9840-3>
- Cáceres-Delpiano, J. (2012). Can we still learn something from the relationship between fertility and mother's employment? Evidence from developing countries. *Demography*, 49(1), 151–174. <https://doi.org/10.1007/s13524-011-0076-6>

- Campaña, J. C., Giménez-Nadal, J. I., & Molina, J. A. (2017). Self-employment and educational childcare time: Evidence from Latin America. Retrieved from https://mpr.aub.uni-muenchen.de/77360/1/MPRA_paper_77360.pdf
- Carr, D. (1996). Two paths to self-employment? *Work and Occupations*, 23(1), 26–53. <https://doi.org/10.1177/0730888496023001003>
- Chen, M., Vanek, J., & Heintz, J. (2006). Informality, gender and poverty: A global picture. *Economic and Political Weekly*, 41(21), 2131–2139. Retrieved from. <https://www.jstor.org/stable/4418269>
- Christopher, K. (2012). Extensive mothering. Employed mothers' constructions of the good mother. *Gender & Society*, 26(1), 73–96. <https://doi.org/10.1177/0891243211427700>
- Correll, S. J., Benard, S., & Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology*, 112(5), 1297–1338. <https://doi.org/10.1086/511799>
- Cramer, J., Hartog, J., Jonker, N., & van Praag, C. (2002). Low risk aversion encourages the choice for entrepreneurship: An empirical test of a truism. *Journal of Economic Behavior and Organization*, 48(1), 29–36. [https://doi.org/10.1016/S0167-2681\(01\)00222-0](https://doi.org/10.1016/S0167-2681(01)00222-0). Retrieved from, <https://www.sciencedirect.com/science/article/pii/S0167268101002220>
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2004). When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues*, 60(4), 701–718. <https://doi.org/10.1111/j.0022-4537.2004.00381.x>
- Di Stasio, V., Bol, T., & Van de Werfhorst, H. G. (2016). What makes education positional? Institutions, overeducation and the competition for jobs. *Research in Social Stratification and Mobility*, 43, 53–63. <https://doi.org/10.1016/j.rssm.2015.09.005>
- Ekinsmyth, C. (2011). Challenging the boundaries of entrepreneurship: The spatialities and practices of UK 'Mumpreneurs'. *Geoforum*, 42(1), 104–114. Retrieved from. <https://www.sciencedirect.com/science/article/pii/S0016718510001284>
- Ekinsmyth, C. (2013). Managing the business of everyday life: The roles of space and place in 'mumpreneurship'. *International Journal of Entrepreneurial Behavior & Research*, 19(5), 525–546. <https://doi.org/10.1108/IJEBR-10-2011-0139>
- Ekinsmyth, C. (2014). Mothers' business, work/life and the politics of 'mumpreneurship'. *Gender, Place & Culture*, 21(10), 1230–1248. <https://doi.org/10.1080/0966369X.2013.817975>
- Elson, D. (1999). Labor markets as gendered institutions: Equality, efficiency and empowerment issues. *World Development*, 27(3), 611–627. [https://doi.org/10.1016/S0305-750X\(98\)00147-8](https://doi.org/10.1016/S0305-750X(98)00147-8). Retrieved from, <https://www.sciencedirect.com/science/article/pii/S0305750X98001478>
- Foley, M., Baird, M., Cooper, R., & Williamson, S. (2018). Is independence really an opportunity? The experience of entrepreneur-mothers. *Journal of Small Business and Enterprise Development*, 25(2), 313–329. <https://doi.org/10.1108/JSBED-10-2017-0306>
- Forry, N. D., & Hofferth, S. L. (2011). Maintaining work: The influence of child care subsidies on child care — Related work disruptions. *Journal of Family Issues*, 32(3), 346–368. <https://doi.org/10.1177/0192513X10384467>
- Georgellis, Y., & Wall, H. J. (2005). Gender differences in self-employment. *International Review of Applied Economics*, 19(3), 321–342. <https://doi.org/10.1080/02692170500119854>
- Gerber, T. P. (2009). Chapter Nine. Three forms of emergent self-employment in post-Soviet Russia: Entry and exit patterns by gender. In R. Arum & W. Müller (Eds.), *The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality* (pp. 277–309). Princeton, NJ: Princeton University Press. <https://doi.org/10.1515/9781400826117.277>
- Gimenez-Nadal, J. I., Molina, J. A., & Ortega, R. (2012). Self-employed mothers and the work–family conflict. *Applied Economics*, 44(17), 2133–2147. <https://doi.org/10.1080/00036846.2011.558486>
- Gornick, J. C., & Meyers, M. (2003). Families that work: Policies for reconciling parenthood and employment. Retrieved from <https://www.jstor.org/stable/10.7758/9781610442510>
- Heath, R. (2017). Fertility at work: Children and women's labor market outcomes in urban Ghana. *Journal of Development Economics*, 126, 190–214. <https://doi.org/10.1016/j.jdeveco.2016.11.003>. Retrieved from, <https://www.sciencedirect.com/science/article/pii/S0304387816300955>
- Heisig, J. P., Schaeffer, M., & Giesecke, J. (2017). The costs of simplicity: Why multilevel models may benefit from accounting for cross-cluster differences in the effects of controls. *American Sociological Review*, 82(4), 796–827. <https://doi.org/10.1177/0003122417717901>
- Hochschild, A. R., & Machung, A. (2012). *The second shift: Working families and the revolution at home*. New York, NY: Penguin Books.
- Hughes, K. D. (2003). Pushed or pulled? Women's entry into self-employment and small business ownership. *Gender, Work and Organization*, 10(4), 433–454. <https://doi.org/10.1111/1468-0432.00205>
- ILO (1982). In ILO (Ed.). In *Resolution concerning statistics of the economically active population, employment, unemployment and underemployment*. Geneva, Switzerland: ILO. Retrieved from https://www.ilo.org/wcmsp5/groups/public/-dgreports/-stat/documents/normativeinstrument/wcms_087481.pdf
- Islam, N., Arefin, M. S., Chanda, A., Azam, A., Tajrian, A., Khan, M. R., ... Nazrul, T. (2018). Factors influencing the development of women entrepreneurship in beauty-care and parlor industry of Bangladesh. *SSRN Electronic Journal*, 1–14. <https://doi.org/10.2139/ssrn.3152253>
- Jacobs, J. A., & Gerson, K. (2004). *The time divide: Work, family, and gender inequality*. Cambridge, MA: Harvard University Press.

- Johansson Sevä, I., & Öun, I. (2015). Self-employment as a strategy for dealing with the competing demands of work and family? The importance of family/lifestyle motives. *Gender, Work and Organization*, 22(3), 256–272. <https://doi.org/10.1111/gwao.12076>
- Joona, P. A. (2017). Are mothers of young children more likely to be self-employed? The case of Sweden. *Review of Economics of the Household*, 15(1), 307–333. <https://doi.org/10.1007/s11150-016-9349-6>
- Kabeer, N. (2000). *The power to choose: Bangladeshi women and labour market decisions in London and Dhaka*. New York, NY: Verso.
- Kalleberg, A. L., Reskin, B., & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*, 62(2), 256–278. Retrieved from. <https://www.jstor.org/stable/2657440>
- Korpi, W., Ferrarini, T., & Englund, S. (2013). Women's opportunities under different family policy constellations: Gender, class, and inequality tradeoffs in western countries re-examined. *Social Politics*, 20(1), 1–40. <https://doi.org/10.1093/sp/jxs028> Retrieved from, <https://academic.oup.com/sp/article-abstract/20/1/1/1653426>
- Lewis, J., & Linzer, D. (2005). Estimating regression models in which the dependent variable is based on estimates. *Political Analysis*, 13(4), 345–364. <https://doi.org/10.1093/pan/mpi026>. Retrieved from <https://www.cambridge.org/core/journals/political-analysis/article/estimating-regression-models-in-which-the-dependent-variable-is-based-on-estimates/BE545AD531D482F5D052A27662C37FA7>
- Lombard, K. (2001). Female self-employment and demand for flexible, nonstandard work schedules. *Economic Inquiry*, 39(2), 214–237. <https://doi.org/10.1111/j.1465-7295.2001.tb00062.x>
- Mandel, H. (2011). Rethinking the paradox: Tradeoffs in work–family policy and patterns of gender inequality. *Community, Work & Family*, 14(2), 159–176. <https://doi.org/10.1080/13668803.2011.571397>
- Mandelman, F., & Montes-Rojas, G. (2009). Is self-employment and micro-entrepreneurship a desired outcome? *World Development*, 37(12), 1914–1925. <https://doi.org/10.1016/j.worlddev.2009.05.005>. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0305750X09000989>
- McKie, L., Biese, I., & Jyrkinen, M. (2013). 'The best time is now!': The temporal and spatial dynamics of women opting in to self-employment. *Gender, Work and Organization*, 20(2), 184–196. <https://doi.org/10.1111/gwao.12019>
- McManus, P. A. (2001). Women's participation in self-employment in Western industrialized nations. *International Journal of Sociology*, 31(2), 70–97. <https://doi.org/10.1080/15579336.2001.11770229>
- Milkman, R. (2016). On gender, labor, and inequality. Retrieved from <https://www.press.uillinois.edu/books/catalog/78zmr4fm9780252040320.html>
- Minnesota Population Center. (2017). *Integrated public use microdata series, international: Version 6.5 [dataset]*. Minneapolis: University of Minnesota.
- Müller, W., & Arum, R. (2004). Self-employment dynamics in advanced economies. In R. Arum & W. Müller (Eds.), *The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality* (pp. 1–35). Princeton, NJ: Princeton University Press. Retrieved from. [https://books.google.nl/books?hl=en%26lr=%26id=HrMe_od8H-8C%26oi=fnd%26pg=PA1%26dq=M%FCller,%2BW.,%2B%26%2BArum,%2BR.%2B\(2004\).%2BSelf-employment%2Bdynamics%2Bin%2Badvanced%2Beconomies.%2B%26ots=gMnyDhG0tX%26sig=xfAFJUusKkP0Qd2rUU5cfj-khnU](https://books.google.nl/books?hl=en%26lr=%26id=HrMe_od8H-8C%26oi=fnd%26pg=PA1%26dq=M%FCller,%2BW.,%2B%26%2BArum,%2BR.%2B(2004).%2BSelf-employment%2Bdynamics%2Bin%2Badvanced%2Beconomies.%2B%26ots=gMnyDhG0tX%26sig=xfAFJUusKkP0Qd2rUU5cfj-khnU)
- OECD. (2017). OECD labour force statistics 2016. Retrieved from https://www.oecd%20iibrary.org/docserver/oecd_lfs%20102016%2010en.pdf?expires=1559741273%26id=id%26acname=ocid56024160%26checksum=ABAE6951F208101706D2BB4D4F4CECCE
- Patrick, C., Stephens, H., & Weinstein, A. (2016). Where are all the self-employed women? Push and pull factors influencing female labor market decisions. *Small Business Economics*, 46(3), 365–390. <https://doi.org/10.1007/s11187-015-9697-2>
- Pettit, B., & Hook, J. L. (2009). *Gendered tradeoffs: Family, social policy, and economic inequality in twenty-one countries*. New York, NY: Russell Sage Foundation.
- Pfau-Effinger, B. (2005). Culture and welfare state policies: Reflections on a complex interrelation. *Journal of Social Policy*, 34, 3–20. <https://doi.org/10.1017/S0047279404008232>. Retrieved from, <https://www.cambridge.org/core/journals/journal-of-social-policy/article/culture-and-welfare-state-policies-reflections-on-a-complex-interrelation/8B1A023048ACE801BBD9BE56A1337124>
- Pisani, M. J., & Pagán, J. A. (2004). Self-employment in the era of the new economic model in Latin America: A case study from Nicaragua. *Entrepreneurship & Regional Development*, 16(4), 335–350. <https://doi.org/10.1080/0898562042000263285>
- Poggesi, S., Mari, M., & De Vita, L. (2016). What's new in female entrepreneurship research? Answers from the literature. *International Entrepreneurship and Management Journal*, 12(3), 735–764. <https://doi.org/10.1007/s11365-015-0364-5>
- Ridgeway, C. L., & Correll, S. J. (2004). Motherhood as a status characteristic. *Journal of Social Issues*, 60(4), 683–700. <https://doi.org/10.1111/j.0022-4537.2004.00380.x>
- Róbert, P., & Bukodi, E. (2009). Chapter Eight. Winners or losers? Entry and exit into self-employment in Hungary: 1980s and 1990s. In R. Arum & W. Müller (Eds.), *The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality* (pp. 245–276). Princeton, NJ: Princeton University Press. <https://doi.org/10.1515/9781400826117.245>

- Simoes, N., Crespo, N., & Moreira, S. B. (2016). Individual determinants of self-employment entry: What do we really know? *Journal of Economic Surveys*, 30(4), 783–806. <https://doi.org/10.1111/joes.12111>
- Stegmueller, D. (2013). How many countries for multilevel modeling? A comparison of frequentist and Bayesian approaches. *American Journal of Political Science*, 57(3), 748–761. <https://doi.org/10.1111/ajps.12001>
- Steiber, N., & Haas, B. (2012). Advances in explaining women's employment patterns. *Socio-Economic Review*, 10(2), 343–367. <https://doi.org/10.1093/ser/mwr039>
- Stier, H., Lewin-Epstein, N., & Braun, M. (2001). Welfare regimes, family-supportive policies, and women's employment along the life-course. *American Journal of Sociology*, 106(6), 1731–1760. <https://doi.org/10.1086/321302>
- Taniguchi, H. (2002). Determinants of women's entry into self-employment. *Social Science Quarterly*, 83(3), 875–893. <https://doi.org/10.1111/1540-6237.00119>
- Tonoyan, V., Budig, M., & Strohmeyer, R. (2010). Exploring the heterogeneity of women's entrepreneurship: The impact of family structure and family policies in Europe and the US. In C. Brush, A. de Bruin, E. J. Gatewood, & C. Henry (Eds.), *Women entrepreneurs and the global environment for growth* (pp. 137–159). Cheltenham, UK: Edward Elgar. Retrieved from. https://books.google.nl/books?hl=en&lr=%26id=U1bsW1SdUgC%26oi=fnd%26pg=PA137%26dq=Exploring%2Bthe%2Bheterogeneity%2Bof%2Bwomen%27s%2Bentrepreneurship:%2Bthe%2Bimpact%2Bof%2Bfamily%2Bstructure%2Bband%2Bfamily%2Bpolicies%2Bin%2BEurope%2Band%2Bthe%2BUS%26ots=CNAP8fkaba%26sig=P9lf82RanXuBSmjX3o_YT3yq
- Uunk, W., Kalmijn, M., & Muffels, R. (2005). The impact of young children on women's labour supply. *Acta Sociologica*, 48(1), 41–62. <https://doi.org/10.1177/0001699305050986>
- Van der Sluis, J., & Van Praag, M. (2005). Entrepreneurship selection and performance: A meta-analysis of the impact of education in developing economies. *The World Bank Economic Review*, 19(2), 225–261. <https://doi.org/10.1093/wber/lhi013>. Retrieved from, <https://academic.oup.com/wber/article-abstract/19/2/225/1681026>
- Van Praag, C. M., & Cramer, J. S. (2001). The roots of entrepreneurship and labour demand: Individual ability and low risk aversion. *Economica*, 68(269), 45–62. <https://doi.org/10.1111/1468-0335.00232>
- Wall, S. (2015). Dimensions of precariousness in an emerging sector of self-employment: A study of self-employed nurses. *Gender, Work and Organization*, 22(3), 221–236. <https://doi.org/10.1111/gwao.12071>
- World Bank. (2012). World development report 2013. <https://doi.org/10.1596/978-0-8213-9575-2>
- World Economic Forum. (2014). *The global gender gap report 2014*, 1–395. http://www3.weforum.org/docs/GGGR14/GGGR_CompleteReport_2014.pdf
- Yu, W., & Su, K.-H. (2009). On one's own: Self-employment activity in Taiwan. In R. Arum & W. Müller (Eds.), *The reemergence of self-employment: A comparative study of self-employment dynamics and social inequality* (pp. 388–425). Princeton, NJ: Princeton University Press. <https://doi.org/10.1515/9781400826117.388>
- Zhang, Q., & Pan, Z. (2012). Women's entry into self-employment in urban China: The role of family in creating gendered mobility patterns. *World Development*, 40(6), 1201–1212. <https://doi.org/10.1016/j.worlddev.2011.11.004>. Retrieved from, <https://www.sciencedirect.com/science/article/pii/S0305750X11002889>

AUTHOR BIOGRAPHY

Janna Besamusca is a postdoctoral researcher at the University of Amsterdam. Her research is concerned with the relation between labor relations, atypical employment and mothers' position in the labor market.

How to cite this article: Besamusca J. The short or long end of the stick? Mothers' social position and self-employment status from a comparative perspective. *Gender Work Organ.* 2020;27:1285–1307. <https://doi.org/10.1111/gwao.12483>

APPENDIX

TABLE A1 Description of dataset

Variable description	Measurement	Source
Class of worker	0 = not in paid employment; 1 = in dependent employment; 2 = self-employed	IPUMS International
Motherhood status	Own child under the age of 15 in the household: 0 = no; 1 = yes	IPUMS International
Social position	For lower-middle-income countries: 0 = low (less than primary); 1 = middle (primary or lower secondary completed); 2 = high (upper secondary education or more) For upper-middle-income countries: 0 = low (primary or less); 1 = middle (secondary); 2 = high (some tertiary or university) For high-income countries: 0 = low (secondary or less); 1 = middle (some tertiary); 2 = high (university completed)	IPUMS International, own calculation
Age and age squared	Age, mean centred	IPUMS International
Single	0 = married; 1 = not married	IPUMS International
Living in rural area	0 = urban area; 1 = rural area	IPUMS International
Self-employed family member	Class of worker of spouse or at least one parent is self-employed: 0 = no; 1 = yes	IPUMS International, own calculation
Spouse in higher social position	0 = spouse in same social position (if applicable); 1 = spouse in higher social position	IPUMS International, own calculation
Spouse in lower social position	0 = spouse in same social position (if applicable); 1 = spouse in lower social position	IPUMS International, own calculation
Childcare enrolment	Country enrolment rate in 0–3 childcare institutions ($\bar{\mu}$ 13.48, σ 14.25)	UNESCO UIS Statistics
Pre-primary enrolment	Country enrolment rate in pre-primary education ($\bar{\mu}$ 70.55, σ 33.06)	UNESCO UIS Statistics
Childcare expenditure	Country expenditure on pre-primary as a percentage of government expenditure on education (%) ($\bar{\mu}$ 7.96, σ 6.32). Available for 22 countries	UNESCO UIS Statistics
Pupil–teacher ratio	Country average pupil–teacher ratio in pre-primary education (headcount basis) ($\bar{\mu}$ 16.98, σ 7). Available for 22 countries	UNESCO UIS Statistics
Stigma against working mothers	Country mean response to statement ‘when a mother works for pay, children suffer’ from 0 (agree) to 3 (disagree); reversed ($\bar{\mu}$ 2.54, σ 0.28). Available for 18 countries	European values survey wave 4; world values survey wave 5 or 6
Stigma against housewives	Country mean response to statement ‘being a housewife is just as fulfilling as working for pay’ from 0 (agree) to 3 (disagree) ($\bar{\mu}$ 2.28, σ 0.37). Available for 18 countries	European values survey wave 4; world values survey wave 5 or 6
Per capita GDP	Per capita GDP in 2009 (current US\$) divided by 1000	World Bank

TABLE A2 Sample sizes by class of worker and motherhood status

	Self-employed		Employee		Non-employed		Total
	Non-mother	Mother	Non-mother	Mother	Non-mother	Mother	
Armenia	249	115	15,867	6607	22,255	15,808	60,901
Belarus	2907	1961	117,867	68,105	36,150	17,212	244,202
Botswana	1022	1207	11,356	8713	10,900	7710	40,908
Brazil	61,030	57,331	337,939	270,740	277,054	275,991	1,280,085
Canada	7410	5540	114,151	57,207	30,257	19,943	234,508
Costa Rica	4146	3938	22,562	16,562	32,289	35,933	115,430
Dominican Republic	8505	10,419	34,386	36,523	66,073	67,168	223,074
Ecuador	18,405	25,870	49,932	51,671	77,439	106,254	329,571
France	18,816	16,758	327,878	243,947	123,899	59,430	790,728
Ghana	80,720	127,806	35,385	22,004	93,958	40,301	400,174
Hungary	3900	1886	51,255	21,738	21,976	14,803	115,558
India	1760	1586	4802	4396	41,908	48,793	103,245
Iran	3790	3051	17,724	13,885	187,176	192,549	418,175
Ireland	2530	2294	42,626	26,904	26,077	17,142	117,573
Mexico	64,937	84,020	184,986	167,967	440,138	676,089	1,618,137
Panama	2583	2789	19,281	16,141	18,298	24,118	83,210
Portugal	6244	4890	45,196	33,976	23,706	8149	122,161
Puerto Rico	162	85	2277	1639	2388	1277	7828
Romania	6746	3207	163,375	83,891	117,691	58,169	433,079
Spain	40,717	25,705	319,349	171,633	159,968	36,541	753,913
United States	19,552	14,454	305,573	176,672	107,944	81,320	705,515
Vietnam	91,949	122,076	167,466	149,381	171,018	113,663	815,553
Zambia	5808	13,437	8177	11,351	52,638	77,173	168,584
Total	479,202	505,111	2,569,250	1,491,813	2,176,835	1,959,901	9,182,112