

Couples in Lockdown: “La vie en rose”?

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Abstract – Stay-at-home policies during the COVID-19 pandemic challenged household members who faced forced cohabitation and increased housework (domestic chores and childcare). Based on individual data collected online from partnered women during the spring 2020 in France, we study the lockdown effects on housework division and conflicts between partners. We find that during the lockdown, couples experienced minor changes in the allocation of housework, mainly carried out by women. Simultaneously, men increased their participation in the production of household goods mainly through “enjoyable” or “quasi-leisure” activities. Our results suggest that the gendered connotation of domestic work can be context-dependent and not stable over time. Tensions between partners, reported by women, increased during the lockdown, and appear to be strongly correlated with an unequal division of housework. Overall, our results suggest that this period did not structurally affect the gender stereotypes at home.

JEL: D13, J12, J13, J16, J22

Keywords: COVID-19, housework, childcare, intrahousehold tensions, gender roles

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In France, as in other countries applying stay-at-home policies at the start of the COVID-19 pandemic, the first lockdown in spring 2020¹ harshly affected and challenged couples' activities and organization. The effects of forced and constant presence at home impacted the quantity of domestic chores and childcare (Farré *et al.*, 2021; Del Boca *et al.*, 2020), the occurrence of domestic tensions (Biroli *et al.*, 2021), and even intimate partner violence (i.e. Arenas-Arroyo *et al.*, 2021; Beland *et al.*, 2021). Helplines observed a dramatic rise of distress calls in western countries (Leslie & Wilson, 2020; Bullinger *et al.*, 2021; Miller *et al.*, 2020) as well as in developing countries (Agüero, 2021; Perez-Vincent & Carreras, 2020). In France, 13% of couples (and 16% of those with children) reported more frequent disputes (Barhoumi *et al.*, 2020), police interventions for family disputes rose by 44%, and the number of calls to helplines for domestic violence doubled.² Furthermore, 49% of couples reported tensions or conflicts over the housework during the lockdown, and one-third of the women who reported frequent disputes suffered from verbal abuse.³

In this paper, we address two intertwined research questions: (i) Did the lockdown induce a redistribution of housework within couples? And if yes, in which tasks did men increase their participation? (ii) Is there a relation between the occurrence of conflicts and the unbalanced sharing of housework during the lockdown?

We use original data that we collected, *via* an online survey between April 21 and May 10, 2020 in France, from 2,844 partnered women. These data are not representative, since the women in our sample are younger, slightly more educated and more active in the labor market than French women on average. This survey provides fine-grained information, based on women's perceptions. They self-reported their own and their partner's contribution to housework, and the occurrence of conflicts in their couple before and during the lockdown.⁴ The analysis takes into account the couples' confinement status, i.e. whether each partner continued to work at their workplace, or was at home, working remotely or in a status of reduced activity.

We find a reduction in the gender gap in participation in housework among couples who experienced an important increase of the home production (i.e. those with children) and for who women kept working, whether from home or at their workplace, during the lockdown. For totally confined parents, the change was driven

mainly by fathers' participation in "enjoyable" or "quasi-leisure" activities during lockdown (shopping and playing with kids). This finding suggests a feeble effect of the lockdown on housework division between partners.

This also indicates that individual preferences play an important role in shaping intrahousehold equilibrium. When the quantity of household public goods that need to be produced increases and the opportunities for leisure are reduced, men's preferences have a crucial role in determining the new equilibrium. The increase in the men's contribution to activities that became a "quasi-leisure" in the lockdown period, indicates that the gendered nature of a task could respond to its relative attractiveness rather than being an absolute feature. This finding confirms Stratton's finding that men's preferences drive their commitment to household tasks (Stratton, 2012).

For couples with children, we also find that conflicts increased when the gender gap in the distribution of household activities increased during the lockdown. We document that this increase in tensions is mainly associated with an increased gap in the contribution to the task of cleaning, known as one of the most time-consuming and less enjoyable domestic tasks.

Our paper first contributes to the literature on the gendered division of production of public goods within households, and in particular on the relationship between gender preferences and the within-couple variation of household tasks division over time. We also relate to the economic and sociological literature analyzing the link between the occurrence of conflicts and the allocation of tasks between partners, and between men's participation in household activities and the risk of separation. We show that an increase in the unbalanced division of

1. The first announcement of the lockdown, on March 12, 2020, imposed the closure of kindergartens, schools and universities for an unspecified time. Other restrictive measures followed, announced on March 16, 2020: going out of home was limited to essential activities, such as food shopping and working (when working from home was unfeasible, e.g. for "essential workers"), plus the possibility of going out for a walk or physical activities for at most one hour per day within a one-kilometer radius from home.

2. France Inter's website, "Violences faites aux femmes : que s'est-il vraiment passé pendant le confinement ?", May 15, 2020. <https://www.franceinter.fr/violences-faites-aux-femmes-que-s-est-il-vraiment-passe-pendant-le-confinement>.

3. Data from the Ifop survey "Enquête sur les conditions de logement des Français confinés et les tensions au sein des foyers" on a representative sample of 3,011 respondents, published on April 7, 2020 (https://www.ifop.com/wp-content/uploads/2020/04/117261_Ifop_Consolab_Confinement_2020.04.07.pdf). In a previous Ifop survey in 2019, 45% of the French couples surveyed reported conflicts due to the division of housework.

4. We use the terms 'housework', 'household tasks', 'household activities', to refer to the production of household goods. Housework includes domestic chores (i.e. cleaning, laundry, shopping and cooking) and childcare (i.e. helping with homework, playing); these two components will be distinguished along the analysis.

housework during a stressful situation is correlated to the occurrence of conflicts between partners, particularly in presence of children and when the woman is active in the labor market. Finally, we contribute to the emerging literature on the effects of stay-at-home policies during the COVID-19 pandemic. To the best of our knowledge, our paper is the first in the literature to explore the link between the division of housework and the occurrence of conflicts between partners during the confinement period and the only one that looks at the partner’s involvement in specific household activities for France.

The rest of the paper is structured as follows: Section 1 provides a brief review of relevant literature, then Section 2 presents a conceptual framework where the possible effects of lockdown on the division of household tasks and on the probability of conflict occurrence are presented. Section 3 describes our original dataset and illustrates the empirical strategy. The results are presented in Section 4, then we conclude.

1. Literature Review

The fact that women carry out a disproportionate share of housework – the “lion’s share” – is well established in the empirical literature. The asymmetric allocation of housework between partners has also been largely highlighted since the seminal theoretical papers by Becker (1965) or Gronau (1977). Despite a large reduction of the gender gap in the labor market, women continue to perform most of the housework (see a literature review by Lachance-Grezla & Bouchard, 2010). Besides time availability, many unobservable factors, such as social norms, stereotypes or preferences, remain and are shaping the gender gap across cohorts. Exploiting changes in the labor market participation of partners, Killewald & Gough (2010) and Foster & Stratton (2018) show that recently unemployed men increase their share of housework, but to just around half of the time devoted by women to them. Álvarez & Miles-Touya (2019), exploiting a specific feature of the Spanish Time Use Survey, provide evidence that men increase their contribution to housework in their non-working days, but to a lesser extent than women.

As observed by Kahneman *et al.* (2004), household tasks differ in terms of pleasantness and physical effort. Van Berkel & De Graaf (1999) show that cooking and shopping are considered enjoyable housework by men and women, while both dislike cleaning. This is in line with Shaw

(1988), who found that cooking was among the preferred tasks by both partners. Empirical work on housework often distinguishes between “female-type housework” or chores, which includes laundry, housecleaning, washing dishes and cooking, and “total housework”. Shopping is included in the second category, together with gardening, pet care and other tasks that can be considered as semi-leisure (Kahneman *et al.*, 2004). Using an experiment, Couprie *et al.* (2020) investigate the influence of gender stereotypes and find that partners overspecialize in specific tasks in accordance with gender role. Interestingly, Stratton (2012) shows that the more men dislike doing housework, the less they are committed to it and the more time their partner spends on it. Gender preferences could thus drive the involvement of the partner in housework.⁵

The literature also points to interactions between the housework division, marriage stability and the risk of separation. Sociological empirical work shows that the risk of separation is lower in couples where the man is more involved in domestic chores and childcare (Cooke, 2006; Sigle-Rushton, 2010; Ruppner *et al.*, 2018). Norman *et al.* (2018) find that fathers’ involvement in childcare in the first year after birth is associated with couple stability, but this is not necessarily so with other tasks. Altintas & Sullivan (2016) and Van der Lippe *et al.* (2014), show that frictions about housework division among partners are one of the main sources of marital conflict.⁶

The COVID-19 pandemic and lockdown have logically incentivized issues and research about housework division. Several studies have documented the increase in the number of hours allocated to domestic chores and childcare, and the change in couples’ behavior. In Spain, Farré *et al.* (2021) show a slight increase in male partners’ share of housework, but also that women still do most of it. They also show that the increase in men’s contribution to housework was mostly concentrated on shopping. In Italy, Del Boca *et al.* (2020) find that men increased the time spent on gratifying tasks, such as activities with children, rather than the time spent on chores. Andrew *et al.* (2020), using data

5. Van der Lippe *et al.* (2013) suggest that gender preferences for housework also matter for outsourcing. Conversely, Auspurg *et al.* (2017) find little evidence of any systematic gender difference in preferences.

6. There is also evidence of a negative association between psychological distress and the distribution of housework among partners (Lennon & Rosenfield, 1994; Kalmijn & Monden, 2012; Harryson *et al.*, 2012). Carlson *et al.* (2016) show that a more egalitarian division of housework matters for sexual relations.

from England, show that mothers increased the time spent in housework relatively more than fathers during the lockdown.

In France, Pailhé *et al.* (2022, this issue) show that both men and women have increased the time dedicated to household goods production during the spring 2020 lockdown, but that women still spent more time on it, even when the time constraint of the two partners was the same. Dominguez-Folgueras (2021) observes that French men who were at home during the lockdown, whether working from home or temporary unemployed, increased their participation in domestic work. On the contrary, Zamberlan *et al.* (2022) showed for the UK that gender equality in domestic work improved only if men's workload decreased during lockdown.⁷ Concerning the long-term impact of the lockdown on gender inequality, Sánchez *et al.* (2021) remark that couples with young children reverted to the pre-lockdown division of housework after a few months.

To our knowledge, there is less evidence of conflicts between partners during the pandemic. Arenas-Arroyo *et al.* (2021), Beland *et al.* (2021), and Hsu & Henke (2021) have documented an increase in domestic violence and family tensions during the lockdown. Berniell & Facchini (2021) document an increase in Google searches of topics related to domestic violence in European and Latin American countries, a few weeks after the beginning of the lockdown. More specifically on our research question, Biroli *et al.* (2021) document that, in Italy and in the United States, families experienced an increase in intrahousehold tensions, even where men had increased their share of childcare and grocery shopping duties.

2. Conceptual Framework

2.1. The Setting

In this section we present a setting inspired from theoretical family economics, more specifically Browning *et al.* (2014). Consider a household composed of two parents and their child(ren).⁸ We denote the two parents with $i = 1, 2$, denoting the father as the first parent, and the mother as the second parent. Each parent's utility function takes the following form:

$$U_i = \alpha V_1 + (1 - \alpha) V_2, \text{ with } i = 1, 2$$

where $\alpha \in [1/2, 1]$, $i, j = 1, 2$, and $\frac{\partial U_i}{\partial V_j} > 0$, when

$i = j$. This specification allows for altruism between the parents. The inner utility V_i , with

$i = 1, 2$, is a function of three arguments: the consumption of a vector of private consumption goods C^i , a vector of household-level public goods X with N elements, and leisure L^i :

$$V_i = g_i(C^i, X, L^i), \quad i = 1, 2.$$

This specification allows heterogeneity in preferences, as the function g_1 might be different from the function g_2 , e.g., $\frac{\partial V_1}{\partial L^1} > \frac{\partial V_2}{\partial L^2}$ when $C^1 = C^2$ and $L^1 = L^2$, so that the father derives a greater utility from leisure than the mother.

Consumption goods can be purchased on the market, and the vector p^C denotes their prices. Public goods, such as child care, education and cleaning, can be either purchased on the market and/or home-produced, and the vector p^X denotes the prices of these goods. X_k^m is the quantity of the public good k purchased on the market.

Home production X_k^h is given by:

$$X_k^h = h_k(t_k^1, t_k^2),$$

where t_k^1 and t_k^2 represent the time devoted respectively by the father and by the mother to the production of the public good k . If the two parents are perfect substitutes in the production of this public good and are equally productive, then X_k^h is simply a function of $t_k^1 + t_k^2$, and neither parent has an advantage in the production of the public good k . The total quantity of the public good k that is consumed is given by $X_k = X_k^m + X_k^h$.

Leisure L^i depends on the time l^i spent on two pure leisure activities, defined as activities that do not generate an income and do not contribute to the production of any public good. One activity, e.g., going for a walk, does not require the payment of a price, while a second pure leisure activity, e.g., playing tennis, is denoted with $p^L \geq 0$. The time devoted to each of these activities is denoted with l_1^i and l_2^i respectively.

We assume that L^i also depends on the vector t^i of the time devoted by the parent i to home production of public goods, as some of these activities, e.g., playing with the children, may also have a leisure dimension. In particular: $L^i = l^i + \sum_1^N a_k t_k^i$ where the parameter a_k

7. Boring & Moroni (2022) find that, in France, beliefs in traditional gender norms increased during the pandemic, particularly among couples with children.

8. This can easily be adapted to couples without children. For them, the increase in the home public goods is lower and the spectrum of domestic activities is reduced.

translates the time devoted to the home production of the public good k into an equivalent time devoted to a pure leisure activity. We have that $a_k \in [0,1]$, i.e., some activities (such as cleaning) might not have any leisure component, and no activity is as effective as pure leisure activity. Without loss of generality, we can label the various activities related to the production of public goods in a way such that $a_1 \leq a_2 \leq \dots \leq a_N$.

Each parent has a fixed time endowment (which can be normalized to unity without loss of generality), and can work for a wage w^i , with $i = 1,2$. The income y^i , with $i = 1,2$, is then given by:

$$y^i = w^i * t_w^i, \text{ with: } \left(t_w^i + \sum_{k=1}^N t_k^i + l^i \right) = 1$$

The household chooses $C^1, C^2, X^m, t_w^1, t_w^2, t_k^1, t_k^2, l^1$ and l^2 taking the prices and the wages as given in order to achieve a Pareto efficient outcome.

2.2. Lockdown

The various effects the lockdown can have on home working can be integrated in the model as follows:

1. The elements the vector p^x and the price p^l of the second pure leisure activity diverged to infinity, i.e., household-level public goods can only be home-produced,⁹ and leisure L can only be generated with the costless leisure activity, or as a by-product of the time devoted to the production of public goods.

2. Some parents could rely on teleworking; if working from home was impossible, either a parent kept on going to work, or the parent received a transfer from the government which was equivalent to his or her pre-lockdown income. This, in turn, implies that the lockdown did not give rise to any variation in household income.¹⁰

3. Working from home also represents a technological shock for the home production of some public goods: the time devoted to home working can also generate a nonnegative amount of time devoted to home production of the household-level public goods. For instance, taking care of the children is (to some extent) possible also while working from home. Letting d^i being equal to 1 if the parent i works from home and 0 otherwise, we have that:

$$t_k^i = t_k^i + b_k * (d^i * t_w^i)$$

where the parameter $b_k \in [0,1)$ translates the time t_w^i devoted to home working into additional time devoted to the production of the public good k .¹¹

2.3. Home-Production of Public Goods during the Lockdown

The lockdown can change the working conditions of the partners, which can generate changes in the partners' comparative advantage in the production of public goods. In particular:¹²

1. Suppose only one of the two partners works during the lockdown (whether working from home or outside). In that case, the other should unambiguously provide most of the increase in the home production of public goods as his or her time constraint has been relaxed.¹³

2. Suppose both partners work during the lockdown but only one works from home. In that case, the increase in the production of public goods should be disproportionately provided by the one working from home as he or she benefits from the technological shock induced by the lockdown.

3. Suppose both partners work from home or do not work, then the technological shock is either affecting both or neither. In that case, the lockdown does not give rise to any change in advantage in the production of public goods, and the relative contribution of the two partners to the increase in the production of public goods would reflect only a possible heterogeneity in their preferences for leisure. In particular, if $\frac{\partial V_1}{\partial L} > \frac{\partial V_2}{\partial L}$ when $C^1 = C^2$ and $L^1 = L^2$, then the woman will provide most of the increase in home production, and the man will mostly contribute to the production of public goods having a higher leisure component, represented by the parameter a_k .

2.4. Variations in Utility, Home-Production of Household Goods and Conflicts between Partners

The theoretical framework delineated above allows us to make some hypotheses on the

9. For instance, childcare or cleaning services could no longer be purchased on the market, so that $X_k = X_k^0$.

10. In France, public transfers for partial unemployment in France were equivalent to 72% of the wages, and could not fall below the minimum wage. Furthermore, in the extraordinary situation, many employers maintained the same income (completing the public transfers). Partial unemployment concerned 25% to 30% of French workers during the first two months of the pandemic.

11. This assumption can also be seen as a natural by-product of the fact that home working saves on commuting time, which is not included in the time constraint of each parent.

12. We do not consider here the particular case where both parents were working at their workplace during the lockdown. For most couples in this situation both partners worked in the health sector; the increase in the need of production of public goods was lower, as childcare was provided for their children in French schools and kindergartens.

13. If one of the parents works outside, then he or she would have an advantage in the provision of some specific public goods implying to go out, such as shopping.

relationship between the variations in the utility of partners, home-production of household goods and intrahousehold conflicts. The reduction in the opportunities for leisure, the increase in the home production of household public goods and the variation in (paid) work hours and conditions during lockdown clearly induced an (inward) shift of the utility possibility frontier of the households. Partners were forced to negotiate a new equilibrium on this new possibility frontier. The point that describes the level of utility of the two parents during the lockdown can correspond to a different (absolute or relative) variation in each partner's utility with respect to the pre-lockdown equilibrium. We hypothesize that, if either the woman or the man (or both) perceives the new equilibrium (corresponding to an abrupt change and not to the outcome of repeated interactions in a stable setting) as unfair, tensions could arise from attempts to induce a movement along the (new and lower) utility frontier. During the lockdown, a variation in the time devoted to the home-production of public goods, and in the allocation between the partners of the tasks with a higher leisure component, represent the two main ways to move along the utility possibility frontier of the household. Conflicts could thus be associated to the perception by one of the partners to make a disproportionate contribution to the home-production of public goods (while possibly not benefiting from a reduction in her own labor supply compared to her partner), and notably for those tasks that have a low or non-existent leisure component.

In the article, we draw from Section 2.3 the testable assumption that different outputs in terms of housework division depend on the type of working shock experienced in the couples. When the lockdown shock is asymmetric, the partner whose time constraint is the most reduced or benefiting from the technological shock of remote working will provide most of the increase in the home production. We can empirically verify this assumption on couples in which only one partner worked outside during the lockdown or for those at home but with different employment statuses. When the shock is symmetric, i.e. both faced the same working conditions (remote working or not working), the redistribution of housework is driven by preferences for leisure. If men derive a greater utility for leisure, they should be more involved in activities with higher leisure components, while women should provide most of the increase in home production. We can empirically test this prediction on both (temporary) unemployed or remote working

partners. From Section 2.4, we empirically test if changes in the home production division lead to an increase in conflicts among partners during the lockdown. We notably assume that highly unequal division of housework drives conflicts.

3. Data and Empirical Strategy

3.1. The Survey and Variables

3.1.1. The Survey

In the context of the global pandemic, we conducted an online survey to investigate intrahousehold changes during the first lockdown in spring 2020.¹⁴ The questionnaires were disseminated online from April 21 to May 10 (the end of the first – and strictest – lockdown) in three steps: (i) among our personal and professional networks, using the university's tools (such as mailing the university communities); (ii) through a mass mailing to kindergartens and primary schools (from May 2); (iii) through a marketing campaign on Facebook (from May 5).¹⁵ The survey campaign was aimed at free and voluntary respondents (no rewards were offered to participants), and targeted adults, without any reference to gender or location.

We collected 4,639 individual questionnaires, mostly from women (88.3%), whilst they were not explicitly targeted in the survey campaign.¹⁶ Based on our research interests and the low proportion of men among the respondents, we only retain a sample of partnered women. We finally rely on 2,844 women who reported background characteristics (location, age, education, and activity status before and during lockdown). The same background information is reported for their partners.

Because of the participants' self-selection and the absence of a sampling strategy, this is not a representative sample of women. Indeed, beyond the fact that all of them live in couple, the sample differs notably from national-level figures in some other characteristics (see Table A1 in Appendix). First, it includes 40% of graduated

14. A first version of the survey was developed by Lidia Farré (Universitat de Barcelona) and Libertad Gonzales (Universitat Pompeu Fabra) with the aim of collecting early data on the labor market and intrahousehold relationships during the lockdown. For France, we developed our survey, named Enquête sur l'Impact économique et social du Covid-19 sur les Ménages (EICM), using online tools. Similar surveys were carried out in Italy, Germany and Austria. The French and the Italian versions of this survey included detailed questions to parents on children's time use, and the French survey included some questions on the conflicts between partners during the lockdown. Our survey also provides information on parents' evaluation of children learning process and emotional well-being, and on distance learning methods, analyzed in Champeaux et al. (2022).

15. Using Facebook Ads Manager (FAM) allowed us to promote our survey and to amplify our audience. Most of the information was collected during the last two phases of the survey campaign (80% of the sample).

16. This might reflect a greater interest of women in the topics of the survey.

women compared to 24.4% among women aged 25 to 64, according to national statistics from INSEE. This might reflect a particular interest of highly educated women in the survey’s topics. We consider this by weighting to correct for the representativeness of the lowest educated women.¹⁷ Second, it over represents women active in the labor market: 80.5% in our sample, vs. 76.7% in the population of French women aged 25 to 49. The women in our sample are also younger, with an average age of 37 vs. 43.3¹⁸ in the French population. Finally, 57% of them have a child; this makes two-child families also over-represented in our sample, leading to a potential overestimation of the childcare burden during the lockdown. Otherwise, thanks to the sample size and the dissemination of the survey, the geographical location of respondents across regions is close to that of the metropolitan French population (except for Paris and its region, and the Auvergne Rhône-Alpes region). Aware of these specific characteristics, we underline that our results only refer to this population sample.

3.1.2. The Variables

The main variables used in the analysis are based on the responses to questions on the share of housework carried out by the respondent and her partner, on their activity status, and on conflicts between partners, all before and during the lockdown.¹⁹

Woman’s share of housework – For four domestic chores (cleaning, cooking, laundry, shopping) and for two activities related to children (helping with homework and playing), respondents were asked who carried out the task before and during the lockdown. The response included six modalities: 1- always me; 2- me most of the time; 3- my partner and me equally; 4- my partner most of the time; 5- always my partner; 6- another person. Only a minority of respondents selected the sixth modality (less than 1% either before or during the lockdown, except for cleaning before the lockdown, with 4.4%).

We use these responses to build measures of the woman’s participation in the production of household goods. Specifically, we respectively assign the values 1, 0.75, 0.5, 0.25 and 0 to the first five modalities,²⁰ and the value of 0.5 (i.e. equal sharing) to the sixth modality.

For each housework task and childcare activity, we then obtain a value from 0 to 1, that indicates the woman’s share in the task. Correspondingly, the man’s share is considered as the reverse of the woman’s involvement. For example, if woman declares that she takes care of the task

most of the time, we consider her share of the task being 75% and partner’s share 25%.

We also build two general indexes obtained by computing the average of the woman’s participation in all activities; the first index is only composed of domestic chores, the second adds childcare.

We denote $Share_{it}$ the share of housework done by women, that can be measured for each of the three scopes of the indicator: (i) the woman’s share of domestic chores; (ii) the woman’s share of domestic chores and childcare (for women with children); (iii) the women’s share of work for each one of the household activities.

Confinement status – To take into account the different types of situations that were possible during the first lockdown, we differentiate four “confinement status”: 1- both partners working outside (at their workplace); 2- the woman working outside; 3- her partner working outside; 4- both partners staying at home. In this last situation, we further distinguish more in detail the combination of (temporary) unemployment and teleworking: either both partners teleworking, or both temporary unemployed, or one teleworking and the other – the man or the woman – temporary unemployed.

Conflicts – Each respondent was asked whether the occurrence of conflictual situations with their partner had changed during the lockdown compared with before. Five responses were proposed: much more frequent, a little more, not different, a little less, much less. Based on this question, we create a dependent variable named $Conflict_{it}$, that takes the value one for the period t_0 or t_1 in which the woman experienced the highest conflictual situations. Therefore, if the occurrence of conflicts decreased during the lockdown, the dummy is equal to 1 in t_0 and 0 in t_1 . Conversely, $Conflict_{it}$ is equal to 1 at time t_1 and 0 for t_0 if the occurrence of conflicts increased. For a couple that did not experience any change in conflict’s occurrence, the dummy is equal to 0 in both t_0 and t_1 .

Beyond these three central variables, the survey also provides information on the employment status of the respondent and her partner before and during the pandemic, on their respective contribution to the total household income, and on some other household characteristics.

17. All our results (available upon request) remain stable when unweighted.

18. See <https://www.insee.fr/fr/statistiques/2381476>.

19. The complete questionnaire is available from the authors upon request.

20. Tests of sensitivity changing these values (e.g. 0.66 instead of 0.75; 0.33 for 0.25) did not affect the results.

The questionnaire also includes questions on the number of weekly hours devoted to cleaning, cooking and laundry, only used for descriptive statistics.

3.2. Descriptive Statistics on Housework and Conflicts

As mentioned earlier, the lockdown may have strongly affected the production of household goods, because of the increase in the time spent at home and the disappearance of outsourcing options (especially childcare with the closed schools). Table A2 in Appendix presents the main descriptive statistics based on our sample of partnered women, before and during the lockdown. Before the pandemic, women with children devoted 80 minutes more to domestic chores than those without, but both reported a similar increase of about 3 hours in such activities during the pandemic. Unsurprisingly, the time spent in childcare considerably increased during the lockdown, from 2.5 to 10 hours, i.e. four times higher.²¹

Figure I shows that women did most of the housework before the pandemic and the lockdown did not change this situation, as the gender gap remained positive in each activity.²² This is consistent with other research using representative data (e.g. Barhoumi *et al.*, 2020; Pailhé *et al.*, 2022). Gender gaps were already higher before the lockdown for couples with children (see also Figure A1 in Appendix), indicating that women take the additional burden due to the presence of kids. Couples with children experienced on average a substantial reduction of the gap in shopping activities, while fathers also increased their participation in all activities except cleaning. Conversely, in couples without children, men did not increase their share for

most tasks, except for shopping which presents the greatest change. This is similar to the results of Mangiavacchi *et al.* (2021) in Italy and Farré *et al.* (2021) in Spain, where the gender gap on shopping became negative during the lockdown. Cooking and shopping (and playing with kids for couples with children) are the activities in which men were already more involved before lockdown. This stylized fact might illustrate the leisure component of some tasks and a difference in preference for leisure between genders.

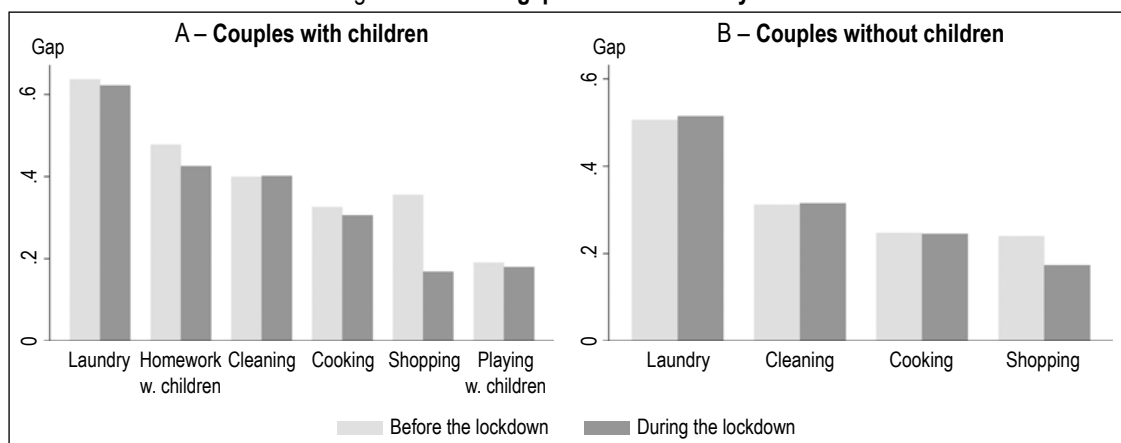
Figure II illustrates the change in the gender gap in housework by confinement status for all couples (for children related activities only couples with children are used). We observe a higher reduction in the gender gap in the group where only the woman worked outside during the lockdown. Conversely, the gender gap increases for all activities when men worked outside, except shopping. Figure II also shows a very small reduction in the gender gap for some activities when both partners were in the same situation (i.e. working outside or both at home). This illustrates the heterogeneity of the division of housework across confinement statuses and the necessity to consider the couple's confinement status in our empirical strategy.

Concerning conflicts, Figure III shows that most women reported that there was not any change in the frequency of conflicts with their partner. However 28% of those with children and 22% of those without reported an increase.

21. The survey asked no question about activities like changing nappies, bathing, feeding or dressing babies. This could affect the measurement of the distribution of tasks for couples with at least one young child, i.e. 39.4% of the couples with children in our sample.

22. Here, the gender gap is computed as the difference between women's and men's shares. When the gender gap is zero, the task is equally distributed among partners, while a positive gap means that women take care of most of the burden.

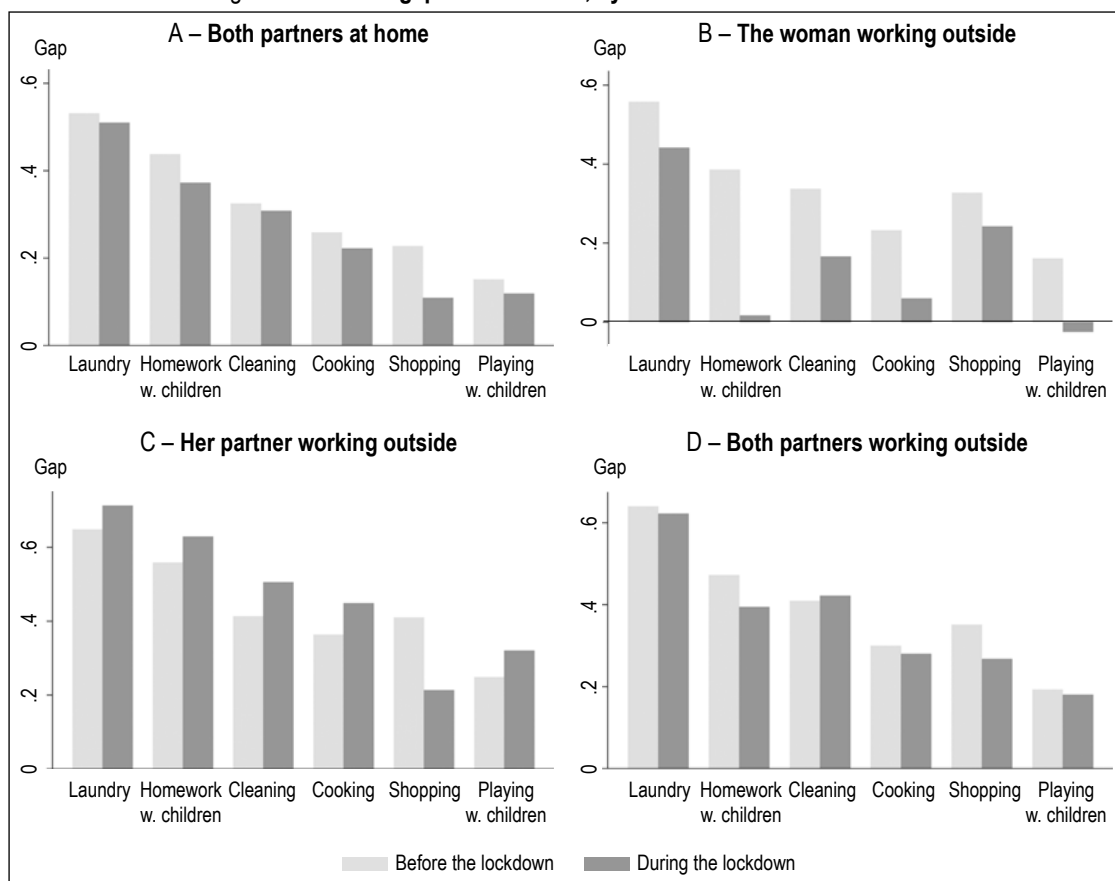
Figure I – Gender gap^(a) in housework by task



^(a) Woman's share – Man's share

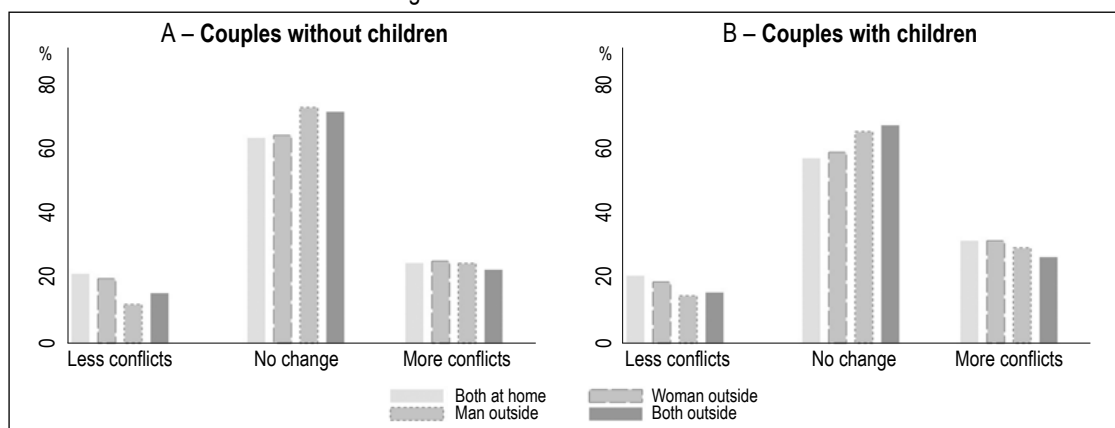
Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

Figure II – Gender gap in housework, by task and confinement status



Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

Figure III – Occurrence of conflicts



Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

This difference between couples with and without children is also observed with INSEE data (Barhoumi *et al.*, 2020). Here again, the patterns appear heterogeneous across confinement statuses.²³

3.3. Empirical Strategy

3.3.1. Household Division of Housework

Our first objective is to determine the influence of the lockdown on the division of household goods

production between partners. The dependent variable is the share of housework carried out by women (as defined in Section 3.1). We alternatively consider the share of domestic chores, childcare, global housework, and by detailed tasks. Our specification applies a panel

23. Income inequality between partners (measured by the woman's contribution to the couple's total income reported by women) does not appear to change the occurrence of conflicts during the lockdown: around 25% reported more conflicts whether the contribution was equal or not.

fixed-effects model with two time periods, before and during the pandemic. It is estimated as follows:

$$Share_{it} = \theta_0 Lockdown_t + \sum_{s=1}^3 \theta_s Lockdown_t \times Status_s + \gamma X_{it} + u_i + \epsilon_{it} \quad (1)$$

with $Share_{it}$ the measure of housework done by the woman i in the period t . The variables of interest include $Lockdown_t$, a dummy variable equal to 1 for lockdown period, and its interactions with $Status_s$, the confinement status of the couple. s corresponds to three situations where at least one partner (only the woman, only the man, both) worked outside during the pandemic. The coefficient θ_0 consequently captures the effect of the lockdown on the distribution of housework when both partners stayed at home and θ_s capturing the conditional effect to each s situation. Therefore, we need to interpret total effects as $\theta_0 + \theta_s$ for each s situation.²⁴ In one specification, $Lockdown_t$ is also interacted with a dummy (*Children*) that is equal to 1 if the couple lived with one child or more during the lockdown. The vector X_{it} includes controls for the respondent's and her partner's employment status before and during the lockdown. u_i captures time-invariant characteristics of the respondent, her partner and the household, and ϵ_{it} is the error term. Estimates are weighted to account for the over-representation of highly educated women in our sample. Since t has two dimensions, 0 and 1, Eq. (1) is estimated as a first difference estimator, as follows:

$$\Delta Share_i = Share_{i0} - Share_{i1} = \theta_0 + \sum_{s=1}^3 \theta_s \Delta Status_s + \gamma \Delta X_i + \Delta c_i$$

3.3.2. Intrahousehold Conflicts

The second objective of our analysis is to explore the link between housework task division and tensions between partners. This is done on the basis of the question on the change in the occurrence of conflicts during the lockdown, as described in Section 3.1.

We estimate the following panel fixed effects model:

$$Conflict_{it} = \theta Lockdown_t + \alpha Share_{it} + \beta Share_{it} \times Lockdown_t + \sum_{s=1}^3 \theta_s Lockdown_t \times Status_s + \gamma X_{it} + u_i + \epsilon_{it}, \quad (2)$$

where $Share_{it}$, $Lockdown_t$, $Status_s$ and X_{it} are defined as above. As in Equation (1), we control for the specific role played by the confinement status of the couple, interacting $Status_s$ with $Lockdown_t$. u_i captures time-invariant

characteristics. ϵ_{it} is the error term. As in Eq. (1), we use weights in order to correct the over-representation of high educated women in the sample. Considering the time-dimension of our model with two period, the analysis is akin to an estimation in first differences:

$$\Delta Conflict_i = \theta + \alpha \Delta Share_{it} + \sum_{s=1}^3 \theta_s \Delta Status_s + \gamma \Delta X_i + \Delta c_i.$$

Our empirical strategy has some important limitations. First, as the outbreak affected the whole population in France, we are unable to establish a counterfactual group, which would have helped us to clearly identify the relationships between lockdown, housework division and conflicts among partners.²⁵ In other words, we are not able to assess what would have been intra-household dynamics during this period without the pandemic. Furthermore, our data only allow observing the division of housework perceived by the respondent, but not the actual housework division. Consequently, we can only analyze women's perceptions on the variations in household task division and conflicts occurrences during the lockdown. In the survey, we asked for retrospective pre-lockdown information; this could have induced a recall bias and thus a measurement error. We believe that this is not the case because the survey took place only 5 to 7 weeks after the beginning of the lockdown, and because the lockdown induced a really clear-cut change in the daily life. Moreover, although respondents' time invariant characteristics are absorbed in first differences, our identification strategy fails to capture potential time-variant unobservables, which can both play on housework division and on conflicts, e.g. the respondent's ability to deal with time constraints. Finally, our results are valid for a specific population of women, living in heterosexual couples, better educated and more often active in the labor market than on average.

4. Results

4.1. Changes in the Division of Housework during the Lockdown

We estimate Eq. (1) firstly for all the respondents, then for the subsamples of couples without and with children. The results are presented in Table 1. Columns 1 to 4 use the overall share of

24. We will also provide a subsample analysis on couples where both members were at home, detailing whether they were teleworking or temporarily unemployed.

25. Even if their work situation was not affected during the lockdown, workers who continued to work outside cannot be associated to a counterfactual group as they experienced other shocks (e.g. cleaning or babysitting services were no more available, opportunities for leisure were considerably reduced).

Table 1 – Lockdown effect on the woman's share of housework

Dependent variable	All couples		Without children ⁽¹⁾	With children	
	Domestic chores (1)	Domestic chores (2)	Domestic chores (3)	Domestic chores (4)	Housework (5)
Lockdown	-0.0225*** (0.00625)	-0.0120 (0.00785)	-0.0177 (0.0103)	-0.0297*** (0.00520)	-0.0296*** (0.00587)
Children (=1) x Lockdown		-0.0236** (0.00884)			
Woman working outside x Lockdown	-0.0272** (0.0114)	-0.0252** (0.0113)	-0.00767 (0.0229)	-0.0384** (0.0154)	-0.0546*** (0.0137)
Partner working outside x Lockdown	0.0265*** (0.00809)	0.0319*** (0.00902)	0.0378* (0.0182)	0.0266*** (0.00742)	0.0376*** (0.00658)
Both working outside x Lockdown	0.00399 (0.00901)	0.00785 (0.00936)	0.000531 (0.0137)	0.0105 (0.0120)	0.00889 (0.00901)
Woman is employed	-0.0296* (0.0148)	-0.0296* (0.0149)	-0.0405** (0.0171)	-0.0213 (0.0174)	-0.0297* (0.0164)
Man is employed	0.0533*** (0.00933)	0.0497*** (0.00907)	0.0434** (0.0190)	0.0539*** (0.00904)	0.0473*** (0.00792)
Mean Share when $t=0$	0.693	0.693	0.663	0.715	0.699
R-squared	0.860	0.861	0.873	0.851	0.853
Observations	5,688	5,688	2,458	3,230	3,230
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes

⁽¹⁾ In this case, housework consists only of domestic chores.

Notes: All the specifications correspond to Eq. (1), and the estimations use sampling weights. Standard errors in parentheses are clustered at regional level. ***, ** and * indicate significance at 1%, 5% and 10% respectively. The situation of reference is “Both partners at home during the lockdown”.

Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

domestic chores (thus excluding childcare) as the outcome. Col. 1 presents the results on the full sample of respondents. We add in col. 2 an interactive term between the lockdown variable and a dummy equal to one for couples with children to explore the heterogeneity of the lockdown effect on housework sharing according to the presence of children at home. Col. 3 provides a subsample analysis for couples without children, and col. 4 and 5 focus on couples with children at home during the lockdown. Col. 5 uses the global share of housework as the outcome.

Overall, we notice that the effects of the lockdown on housework sharing are heterogeneous across couples' confinement status. Moreover, comparing col. 1 and 2, we remark that the effects for couples where both partners stayed home (i.e. the reference category) are different according to the presence of children at home. In what follows, we focus our analysis on the subsamples.

The results shown in columns 3 and 4 are presented in Figure IV-A, and those from col. 5 in Figure IV-B; we draw point estimates and 95% confidence interval, as well as the sample distribution across confinement situations.

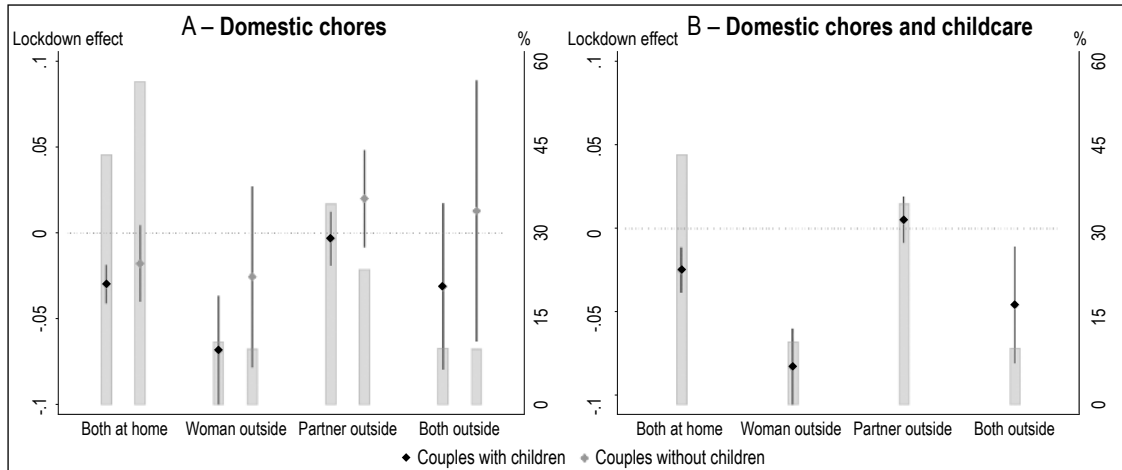
For couples with children at home (Figure IV-A), there is a redistribution of housework in favor of women only when men were at home during

the lockdown. When both partners were at home, the estimated coefficient is negative and significant, meaning a more equal division. When the woman was the sole working outside the home, we find that this redistribution is even stronger in her favor. On the other hand, when the man was the only one to work outside or when both partners worked outside, there is not any significant change of the housework division during the pandemic. Interestingly, the situation is not symmetric across gender: while men increased their participation in household tasks when their partner was working outside, women did not do the same. Below, we will see that this null effect for women is explained by the change in the type of activities men are involved in. For couples without children, we find that the distribution of the housework during the lockdown has not significantly changed, regardless of the confinement status.

The results remain stable to the inclusion of childcare in the outcome (Figure IV-B), except for the case where both partners worked outside during the lockdown, which becomes significant, suggesting an increase in the time fathers devoted to childcare in this specific situation.

As mentioned above, the case of both partners staying at home can correspond to various situations with regard to work: both partners could be teleworking (*i*), both temporary unemployed (*ii*),

Figure IV – Lockdown effect on the woman's share of housework by confinement status



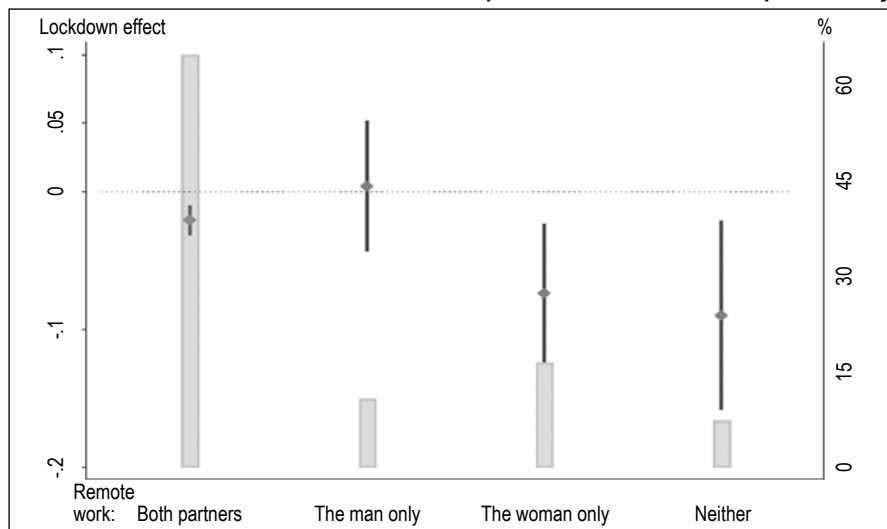
Notes: The marginal effects are directly computed from the coefficients presented in Table 1 (Col. 3 to 5) relative to the confinement status of the couple. The vertical bars represent the share respondents in each confinement status. Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

or one teleworking – the man or the woman – while the other was temporary unemployed (iii). In cases (i) and (ii), the time constraint is similar for the two partners, but not in case (iii). We then reexamine more closely the redistribution of the household tasks in each of these situations, limiting the analysis to couples with children, since no redistribution is observed in couples without children where both partners are at home. The results are presented in Figure V. First of all, it is worth noting that, in the vast majority of couples in our sample who stayed at home during the lockdown, both partners were teleworking. There was no redistribution when the father was working from home while the mother was not. This result is symmetric to that shown in Figure IV-B, where the father was the only outside worker of the household. We find an important redistribution

of tasks in favor of women when they were the only parent working from home, again in line with the results for women who worked outside. Here again, the lockdown effect is then not similar across genders: while men in temporary unemployment increased their participation when their partner was teleworking, women did not. Most interesting are the situations in which the two partners experienced the same working condition: the redistribution was significant but small when both worked from home, while relaxing the time constraint for both created a more substantial redistribution in favor of women.²⁶

26. Note that couples at home where both partners were unemployed and couples where only the man was teleworking during the lockdown represent a small part of the sample (respectively 2% and 4.5%). Estimates could be less precise on these subsamples.

Figure V – Lockdown effect on housework division in couples with children, the two parents staying at home



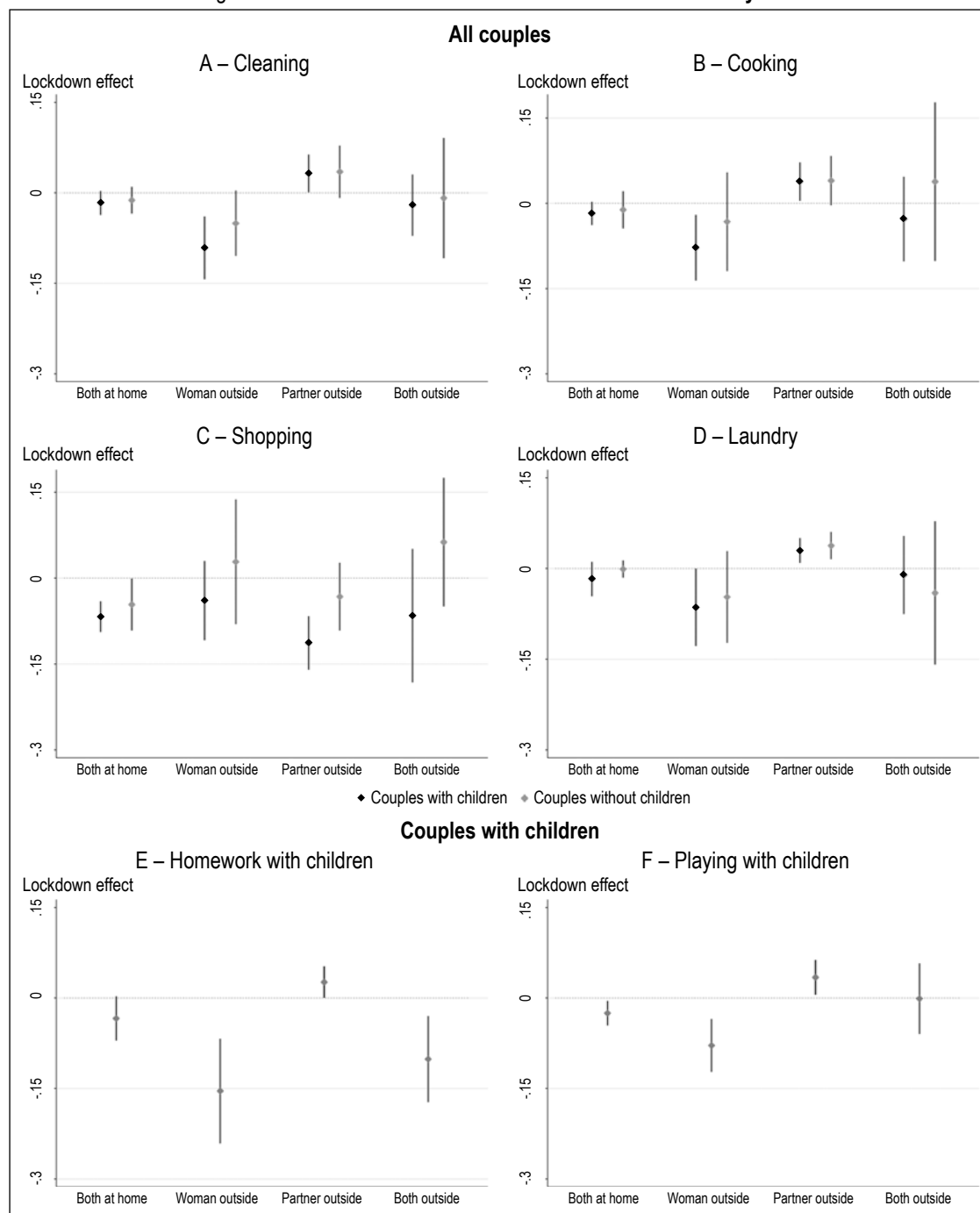
Notes: The marginal effects of the lockdown are directly computed from the coefficients, for different configurations relative to remote working. The vertical bars represent the share of respondents in each configuration. Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

So far, we have considered the aggregate shares of domestic work and childcare. Based on our conceptual framework, we now explore the potentially heterogeneous involvement of the partners in different tasks, following the assumption that preferences might drive the tasks redistribution, notably in couples whose partners experienced a symmetric shock on the labor market. In order to understand if some specific tasks are behind the results, we re-estimate Eq. (1)

with the woman's share in each task as outcome. The results are presented in Figure VI.

When mothers were the only one working out of home, their partner's contribution increased in all tasks, except shopping. This is the situation in which the redistribution is really effective between partners. For couples without children, when the woman was the only one working outside, men only increased their participation in cleaning, thus not inducing a significant redistribution.

Figure VI – Effects of the lockdown on housework division by task



Notes: The marginal effects of the lockdown are directly computed from the estimated coefficients of Eq. (1) with the woman's share by task as dependent variable.

Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

While we found an overall no-effect when only men worked outside during the lockdown, we note here that they significantly reduced their participation in the main domestic chores such as cleaning, cooking or laundry, as well as in childcare, while fathers increased their participation only in shopping. The absence of an overall effect may then result from a reorientation of the type of activities men are involved in. When both partners worked outside, we only find a redistribution in favor of women for homework with children. This is consistent with the previous result of a significant effect of the lockdown on the overall share of housework for couples where both partners worked outside only when childcare was included in the index. For couples with children where both partners were at home, the redistribution effect is driven only by shopping and playing with children. Looking more closely at couples at home, we remark that the only situation in which men took care of the activities with a low leisure component (e.g. cleaning and laundry), is when his partner was working from home.²⁷ For couples without children, although the effect on total housework was not significant, we observe a reduction in the woman's contribution to shopping for confined couples, even if this decrease is smaller than for couples with children in the same situation. We also observe a positive effect of the lockdown on women's share of laundry when their partner worked outside during the pandemic. Other results for couples without children are non-significant.

We can conclude from these analyses that, on average, the lockdown did not result in a large change in the division of housework. The main changes are observed, almost exclusively, for couples with children and where at least one of the two partners was staying at home during the lockdown, i.e. couples who experienced both a significant increase in the production of household public goods and a shock on the labor market. Where only one of the partners worked outside, the other logically increased his or her contribution to all housework activities. The case of shopping suggests a rational assignation of this task to the partner who was already out for his/her work.

For couples where both partners were at home during the lockdown, we showed that the reduction in women's overall share of housework is mainly driven by couples where the man was not teleworking. This finding confirms the intuition, mentioned in the conceptual framework, that the partner whose time is least constrained takes care of most of the household tasks.

However, gender preferences seem to play a role as well, considering the leisure dimension (in

the context of the lockdown) of the task – shopping – in which men increased their participation. In a situation where people were only allowed to go out for essential tasks, shopping became an interesting activity for those staying at home, a kind of leisure, and may have represented an escape from forced cohabitation. The case of shopping during the lockdown suggests that the “gender” of a task could be context-dependent rather than being a stable, essential feature.²⁸

4.2. The Change in Housework Division and Conflicts Occurrence

We explore now whether the harmony between partners has been affected by the lockdown. As mentioned earlier, this period represented a sudden shock in the household environment. We assume that the process of renegotiation about household goods production led to an increase in tensions.

The results of the estimation of Eq. (2) are presented in Table 2. We firstly show results for the full sample (col. 1 to 2) then distinguish between couples without and with children (col. 3 to 5). We find that the occurrence of conflicts increased on average for all the couples during the lockdown (col. 1). However, only couples with children experienced more conflicts linked to the distribution of the housework during the lockdown.²⁹ Given that, we decide to focus exclusively on couples with children.

To clearly depict our main findings (col. 5), Figure VII represents the results across the confinement situations.³⁰

Firstly, we observe a significant and positive relationship between women's share of housework

27. The results on the various working situations of partners at home, not presented here, are available from the authors upon request.

28. An alternative explanation for the increase in men's participation in shopping might exist. Shopping could have been considered a risky activity due to the pandemic, and men could have assumed their traditional role of 'protector' of the family, taking the risk upon themselves. In this scenario, shopping was likely to become a male-connoted task and the household's choice was to conform to social gender roles (Couprie et al., 2020).

29. For couples without children, we find that only an extremely unbalanced housework division was associated to a significant increase in the occurrence of conflicts between partners when the woman was at home. However, very few couples were in such a situation. When the woman was working outside, no increase in conflicts due to housework division is observed. These results are available upon request.

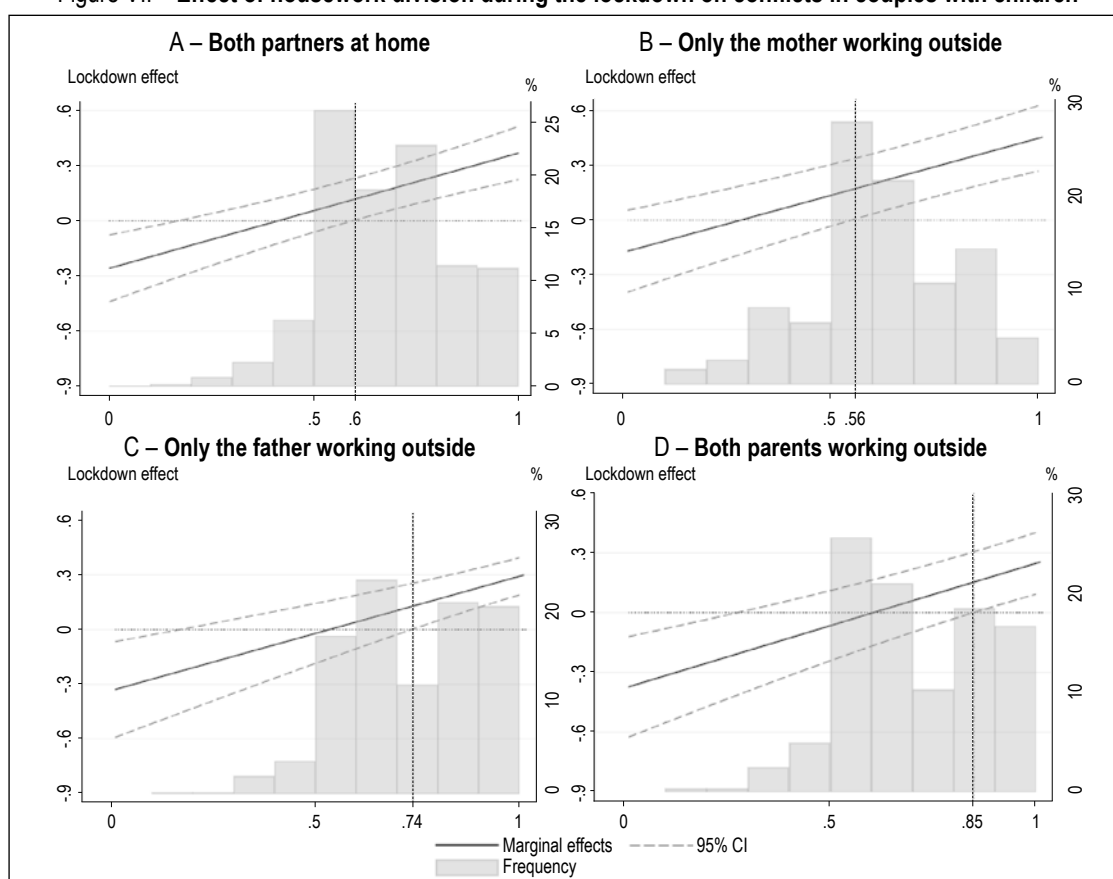
30. Due to the interaction terms in the Eq. (3), θ captures the effect of the lockdown on conflicts when both $Share_{it}$ and $Status_{it}$ are equal to 0. The β measures the average effect of the division of housework during the lockdown. As $Share_{it}$ is a continuous variable from 0 to 1, and in order to obtain the total effect, we need to carry out non-linearity analyses for each value of $Share_{it}$. Moreover, as we included interaction terms between the lockdown dummy and the couple's confinement status, we also need to interpret each situation during the pandemic. For couples with both partners at home ($Status_{it} = 0$, the reference), this means interpreting total effects $\theta + \beta \times Share_{it}$, and computing the combined coefficients' values and standard errors for each potential value of $Share_{it}$. For couples in other status, total effects are interpreted as $\theta + \beta \times Share_{it} + \theta_0 Status_{it}$.

Table 2 – Lockdown, housework division and conflicts between partners

	Full sample		No Children (3)	With Children	
	(1)	(2)		(4)	(5)
Lockdown	0.0810** (0.0288)	-0.142 (0.0937)	-0.167 (0.148)	-0.0910 (0.108)	-0.257** (0.0923)
Domestic Chores		0.0414 (0.158)	0.0320 (0.312)	0.0633 (0.238)	
Domestic Chores x Lockdown		0.338** (0.118)	0.277 (0.198)	0.375*** (0.0983)	
Housework ⁽¹⁾					-0.104 (0.227)
Housework x Lockdown					0.625*** (0.117)
Partner outside x Lockdown	0.0501 (0.0441)	0.0209 (0.0458)	0.0958 (0.0646)	-0.0586 (0.0958)	-0.0766 (0.0996)
Both outside x Lockdown	-0.0162 (0.0676)	-0.0332 (0.0646)	0.0506 (0.131)	-0.117 (0.0820)	-0.121 (0.0806)
Woman outside x Lockdown	0.0545 (0.0935)	0.0667 (0.0961)	0.0627 (0.194)	0.0641 (0.0581)	0.0812 (0.0550)
R-squared	0.507	0.512	0.511	0.517	0.521
Observations	5,688	5,688	2,458	3,230	3,230
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes

⁽¹⁾ For couples without children, housework is equal to domestic chores.
 Notes: All the specifications correspond to Eq. (2), and the estimations use sampling weights. Standard errors in parentheses are clustered at regional level. ***, ** and * indicate significance at 1%, 5% and 10% respectively. The situation of reference is "Both partners at home during the lockdown".
 Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

Figure VII – Effect of housework division during the lockdown on conflicts in couples with children



Notes: The marginal effects are directly computed from the coefficients presented in Table 2, Column (5). The vertical bars represent the woman's share of housework during the lockdown for each confinement status, and the vertical line corresponds to the threshold from which the woman's share of housework increased the occurrence of conflicts.

Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

(i.e. domestic chores and childcare) during the lockdown and the increase in conflicts regardless of the couple's confinement status. When both parents worked outside, the effect is significant and positive only for an extremely unequal sharing, i.e. where the woman carried out almost all the housework. Only a few couples (161)

were in this confinement situation. When only the father was working outside, the turning point of the mother's share of housework, i.e. from which we observe a significant effect on conflicts, is lower than in the previous situation, suggesting a lower tolerance for an unequal distribution of tasks in this case. Most of the

couples in this subgroup experienced conflicts because of the prevalence of an unequal housework division during the lockdown. Finally, when the father stayed at home (i.e. either when both parents stayed at home or only the mother was working outside), even a slightly unbalanced housework division led to increase the conflicts during the lockdown. The threshold from which the woman's share of housework increased the occurrence of conflicts does not differ between couples with both partners at home and couples where the woman was the only one working outside (respectively 60% and 56%). However, the magnitude of the effect is different, more substantial when only the father stayed at home, as expected.³¹

We now explore the specific case of both partners at home, distinguishing teleworking and (temporary) unemployment. The results, presented in Figure VIII, show that conflicts are linked to an unequal division of housework only when women worked from home.

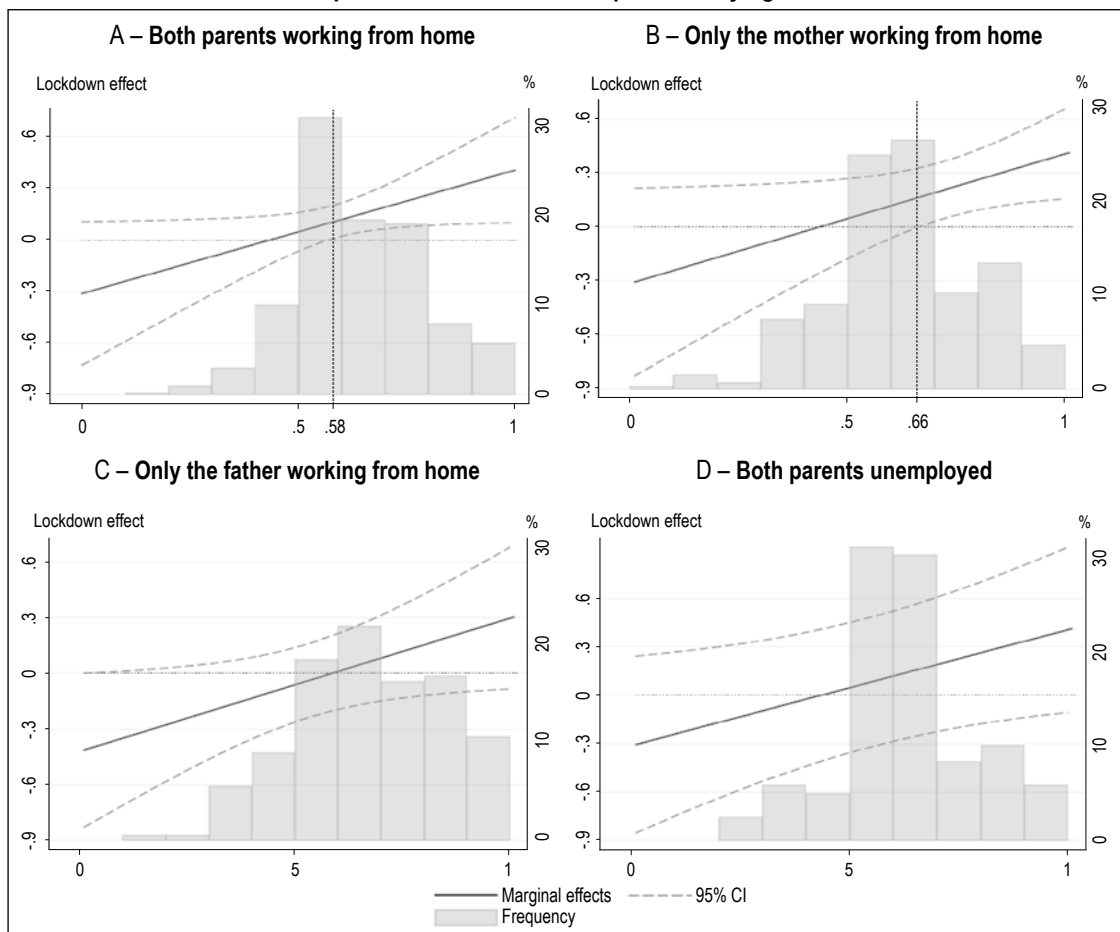
The estimation results of the role of each activity in the occurrence of tensions among at-home parents and a graphical presentation are provided in Appendix 2. We remark that an increase in the woman's participation in any household activity during the lockdown increased the occurrence of conflicts between partners. Remarkable differences emerge across activities, with the magnitude of coefficients systematically higher and the slope steeper for cleaning and for the two activities related to children. The results³² are similar for couples in which one of the two partners worked outside during lockdown, while conflicts increased in couples where both parents worked outside only in the case of an unequal division for the activity "playing with children".

All in all, these results suggest that an unequal division of housework was more likely to result

31. The results are similar when only domestic chores are considered (cf. Table 2, col. 4).

32. Not presented in the paper but available upon request.

Figure VIII – Effect of housework division during the lockdown on conflicts in couples with children, the two parents staying at home



Notes: The marginal effects are directly computed from the coefficients of Eq (2) on the subsample of parents staying at home. The vertical bars represent the share of respondents by woman's share of housework during the lockdown within each confinement status, and the vertical line on panels A and B corresponds to the threshold from which the woman's share of housework increased the occurrence of conflicts. Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

in increased conflicts during the lockdown when only the mother was working outside or when both parents stayed at home and the mother was teleworking. In these two situations, women experienced an intense time constraint (combining work and increased domestic tasks) which may have led to tensions with the partner over the distribution of housework. This would be consistent with the assumption, made in Section 2, that the necessity to negotiate a new equilibrium in a short period could increase the risk of conflicts. We also show that conflicts particularly increased when mothers increased their share of cleaning and childcare (see Appendix 2). Being the most time consuming task, cleaning is also one of the chores with the lowest leisure component and the highest female connotation. It is likely that mothers were unsatisfied with an equilibrium where their partners carried out the most pleasant tasks, and conflicts appeared as a mean to renegotiate a better sharing.

* *
*

The allocation of housework within couples is typically stable over time, with a gendered connotation of a large number of tasks (Akerlof & Kranton, 2010). However, the COVID-19 epidemic, and the ensuing lockdown adopted in spring 2020, have brought a sudden and unprecedented shock to this stable allocation. The quantity of household tasks increased and challenged the partners’ abilities to respond to the shock. At the same time, the disappearance of most leisure opportunities may have led to changes in the attractiveness of some household tasks, given their possible “quasi-leisure” connotation. Furthermore, in addition to the increased burden of housework, the anxiety about the pandemic, its evolution and its economic consequences, the disruption of social life and a forced cohabitation also contributed to an increase in the likelihood of the occurrence of violence (Arenas-Arroyo *et al.*, 2021) and tensions between partners.

Based on an original conceptual framework and data collected in France during the spring 2020 lockdown, our results suggest no drastic changes in housework division between partners. Women remained the main provider, notably in activities with a low leisure component. Substantial heterogeneities are observed according to the presence of children in the household, the confinement status of the couple and the employment status of the individual. As drawn in the conceptual framework, we empirically show that the redistribution became more favorable to women only when the two partners experienced an asymmetric shock

on the labor market and women had a tight time constraint (i.e. when the mother worked outside and the father at home or the mother worked from home while the father was temporarily unemployed). Facing a sizeable increase in household tasks, it is likely that fathers who were at home during the lockdown felt compelled to increase their share of household tasks. Nevertheless, when possible (i.e. when their partner was also at home), they increased only their share in activities already considered as enjoyable (especially playing with kids) or that became in the context (such as shopping). Compared to the other tasks, shopping was also a highly noticeable activity for the other household members during the lockdown and could help the protagonist to bargain his lower involvement in other housework.

Our results also suggest that conflicts between partners in couples with children increased with the share of household activities carried out by women, particularly when men stayed at home during the lockdown. Most of the increase in conflicts were related to childcare and cleaning, suggesting that the unequal division of work in these activities could be perceived by women as less acceptable in the context. As expected, the renegotiation of the production of household public goods on a short period of time is associated for women to an increase in the perceived occurrence of conflicts with their partners, in particular when men’s involvement is low in less pleasant activities, like cleaning.

Based on the perceptions of a population of relatively highly educated and active women, we show that men behave following their gender role. However, they adapt to the contingent situation. A female-connotated activity like shopping became an almost exclusive prerogative of males when it gained in attractiveness. The gendered nature of a task does not seem stable and responds to its changing attractiveness. Male preferences seem to drive the division of household activities between partners, and the choice of domestic activities in which they engage, notably depending on their leisure component, is not neutral on the harmony between partners.

All in all, the lockdown does not seem to have redefined gendered roles at home or induced a structural change of the housework division. These findings shed light on the importance of gendered preferences as well as time constraints to understand what barriers remain for an equal housework division between partners. With the recent development of remote work in many sectors, further research is needed to investigate mid and long-term effects of such situations. □

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APPENDIX 1

DESCRIPTIVE STATISTICS

Table A1-1 – Sample statistics and national figures

	EICM sample		INSEE
	Observations	%	%
Auvergne Rhône-Alpes	690	24.3	11.9
Bourgogne	158	5.6	4.4
Bretagne	143	5.0	5.1
Centre	127	4.5	3.9
Corse	6	0.2	0.5
Grand Est	278	9.8	8.4
Hauts-de-France	209	7.5	8.6
Île-de-France	226	8.0	17.6
Normandie	147	5.2	5.1
Nouvelle Aquitaine	238	8.4	9.2
Occitanie	263	9.3	9.1
Pays de la Loire	147	5.2	5.6
Provence-Alpes-Côte d'Azur	204	7.2	7.8
Outre-Mer	8	0.3	2.6
Total	2,844		
Education ^(a)			
High school diploma or less	1,702	59.9	75.4
Above high school diploma	1,142	40.2	24.4
Unknown			0.2
Children			
None	1,229	43.2	35.0
1 child	568	35.2	44.8
2 children	776	48.1	38.7
3 children	230	14.2	12.7
4 and plus children	41	2.5	3.8
Employment rate (%) ^(b)	2,289	80.5	76.7
Age (years)	2,844	37	43.3
Age of partner (years)	2,835	39	-

^(a) "High school diploma or less" groups all respondents with a high school diploma at most, including no education, *CAP*, *Brevet* (equivalent to apprenticeship or other professional diploma) and baccalaureate (equivalent to a highschool level). "Above high school diploma" groups all respondents with a level higher than the baccalaureate.

^(b) Before the pandemic.

Sources and coverage:

EICM: Authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

INSEE:

- Regional population and number of children: Population Census 2016.
- Education level: Labor force survey 2019; women aged 25 to 64.
- Labor force participation: Labor force survey 2019; women aged 25 to 49.
- Average age: <https://www.insee.fr/fr/statistiques/2381476>

Table A1-2 – Summary statistics

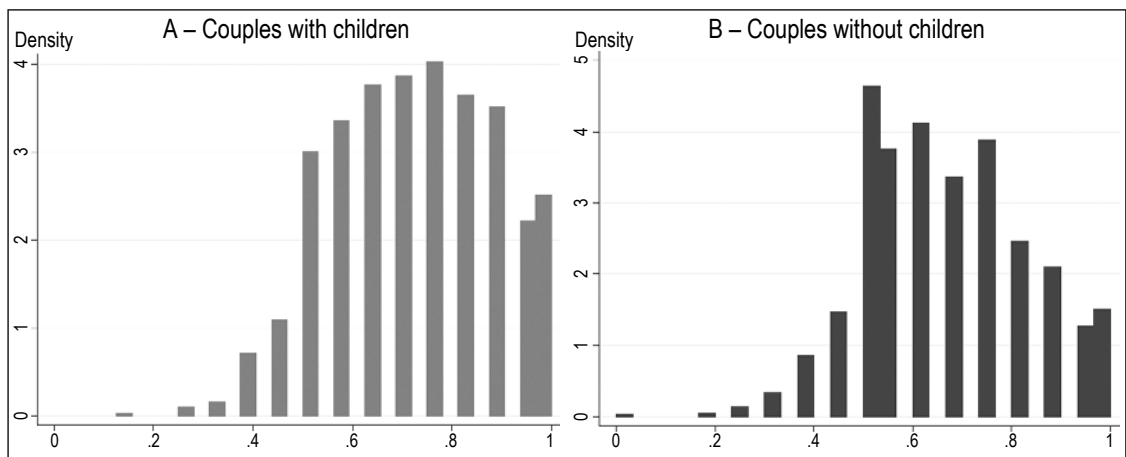
	N	Pre-lockdown			Lockdown		
		Median	Mean	St. Dev.	Median	Mean	St. Dev.
<i>Woman share</i>							
Overall (total housework)	2,844	0.69	0.71	0.17	0.69	0.69	0.18
Domestic chores	1,615	0.63	0.68	0.18	0.63	0.67	0.21
Childcare	1,615	0.71	0.72	0.15	0.67	0.69	0.16
<i>Woman share by task</i>							
Shopping	2,844	0.75	0.67	0.27	0.50	0.60	0.35
Laundry	2,844	1.00	0.81	0.24	1.00	0.81	0.25
Cooking	2,844	0.75	0.67	0.28	0.75	0.66	0.28
Cleaning	2,844	0.75	0.71	0.24	0.75	0.70	0.25
Helping children with homework	1,615	0.75	0.76	0.22	0.75	0.73	0.26
Playing with children	1,615	0.50	0.61	0.21	0.50	0.60	0.22
<i>Conflicts between partners</i>	2,844	0.00	0.15	0.36	0.00	0.25	0.44
<i>Panel covariates</i> ^(a)							
Woman working	2,844	1.00	0.76	0.43	1.00	0.56	0.50
Partner working	2,844	1.00	0.88	0.32	1.00	0.69	0.46
<i>Confinement status</i>							
Both partners working at home	2,844				0.00	0.45	0.50
Woman working outside	2,844				0.00	0.11	0.31
Partner working outside	2,844				0.00	0.34	0.47
Both partners working outside	2,844				0.00	0.10	0.30
<i>Hours of housework</i> ^(b)							
Domestic chores, couples without children	646	7.00	8.35	6.52	9.00	11.27	8.14
Domestic chores, couples with children	503	8.00	9.61	7.01	10.00	12.53	9.70
Childcare, couples with children	1,615	2.00	2.60	3.28	10.00	9.99	7.81

Notes: All statistics are computed using sampling weights.

^(a) Panel covariates are the variables related to the labor market participation of the woman and her partner before and during the lockdown, equal to one if the woman (resp. her partner) was working during the considered period.

^(b) The number of missing values is due to the possibility for respondents to skip the questions on the number of hours spent by type of tasks. Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

Figure A1 – Density (histogram) of the overall woman's share of housework before the lockdown



Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

APPENDIX 2

HOUSEWORK AND CONFLICTS

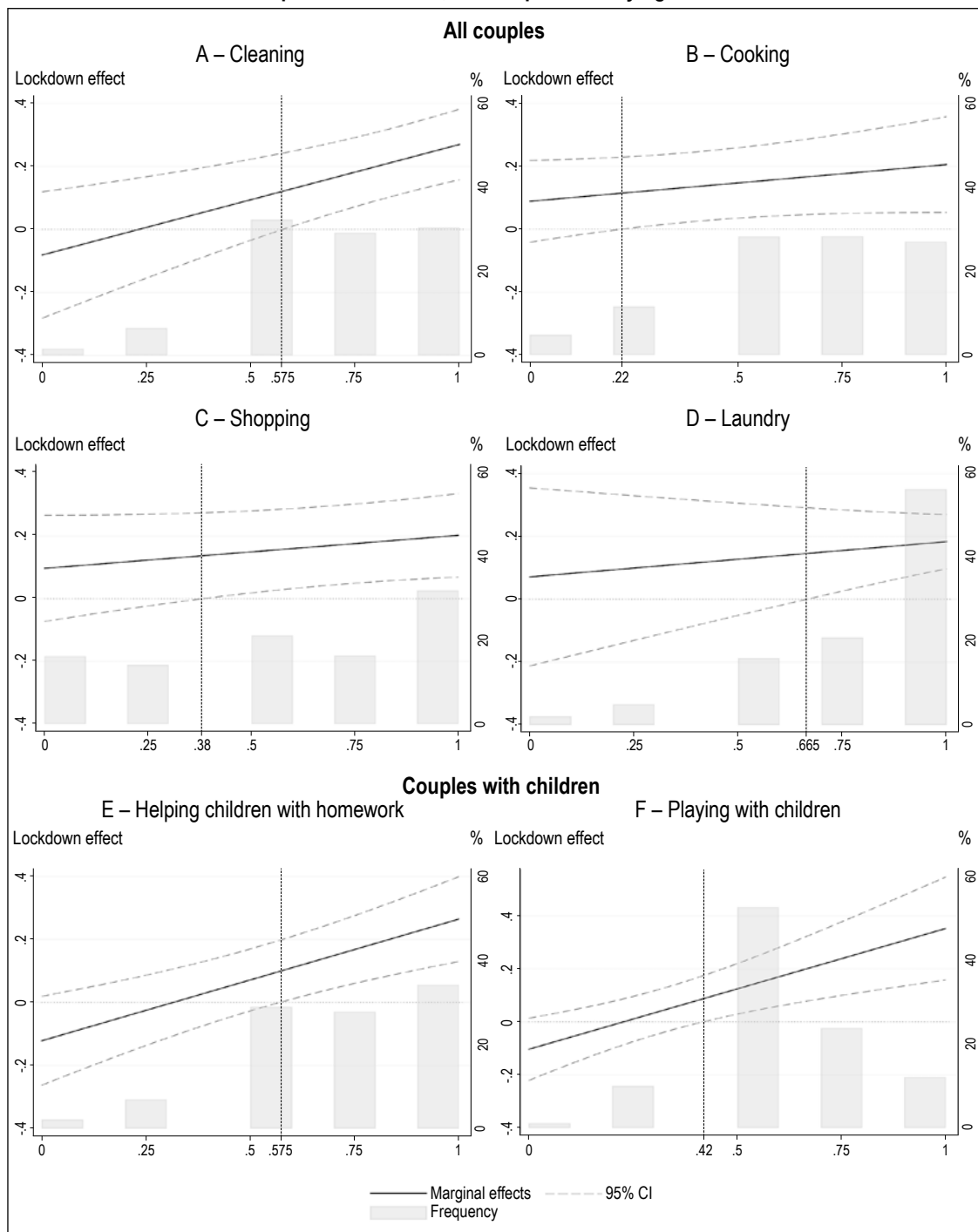
Table A2 – Detailed estimation results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lockdown	0.160** (0.0597)	0.0970 (0.0866)	0.0711 (0.145)	0.0886 (0.0663)	-0.0815 (0.102)	-0.122 (0.0720)	-0.104 (0.0599)
Shopping	-0.0345 (0.142)						
Shopping x Lockdown	0.106 (0.0799)						
Laundry			0.0262 (0.171)				
Laundry x Lockdown			0.112 (0.112)				
Cooking				0.169 (0.119)			
Cooking x Lockdown				0.117 (0.0884)			
Cleaning					-0.0211 (0.122)		
Cleaning x Lockdown					0.351*** (0.101)		
Homework with children						-0.289* (0.152)	
Homework with children x Lockdown						0.386*** (0.0988)	
Playing with children							-0.119 (0.187)
Playing with children x Lockdown							0.456*** (0.132)
Woman working outside x Lockdown	0.0389 (0.0571)	0.0340 (0.0615)	0.0500 (0.0580)	0.0619 (0.0610)	0.0727 (0.0481)	0.0649 (0.0438)	0.0598 (0.0479)
Partner working outside x Lockdown	-0.0245 (0.0928)	-0.0307 (0.0878)	-0.0357 (0.0923)	-0.0471 (0.0957)	-0.0585 (0.0934)	-0.0501 (0.0963)	-0.0542 (0.0933)
Both working outside x Lockdown	-0.102 (0.0800)	-0.108 (0.0812)	-0.107 (0.0803)	-0.102 (0.0802)	-0.117 (0.0821)	-0.112 (0.0764)	-0.110 (0.0774)
R^2	0.511	0.512	0.512	0.515	0.519	0.519	0.521
Observations	3,230	3,230	3,230	3,230	3,230	3,230	3,230
Labor Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: All the specifications correspond to Eq. (2), and the estimations use sampling weights. Standard errors in parentheses are clustered at regional level. ***, ** and * indicate significance at the 1%, 5% and 10% thresholds, respectively. The situation of reference is "Both partners at home during the lockdown".

Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.

Figure A2 – Effects of housework division by task during the lockdown on conflicts between partners – Couples with children, the two parents staying at home



Notes: The marginal effects are directly linked to the coefficients presented in Table A2, for Status = 0 when both parents were at home. The vertical bars represent the share of respondents according to the woman's share of a task during the lockdown for each confinement status, and the vertical line corresponds to the threshold from which the woman's share of housework increased the occurrence of conflicts. Sources and coverage: EICM, authors' online survey collected in France from April 21 to May 10, 2020; partnered women.