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Early birds, short tenures, and the double squeeze: how gender and age intersect with parliamentary representation

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ABSTRACT

The gender and age composition of a parliament impacts who is descriptively represented and marginalized and what types of policy ideas and solutions are brought forward or excluded. While important for both descriptive and substantive representation, scholarship on the intersection of gender and age in parliaments has thus far been limited. To broaden our understanding, we conducted a large-scale cross-sectional analysis of the gender and ages of over 20,000 representatives from 78 national assemblies. We identified four types of gender-age patterns depending on whether women enter legislatures younger than men (“early birds”) or have served in parliament for a shorter period of time than men (“short tenures”). Most surprisingly, we found few countries exhibit the predicted “double squeeze” pattern whereby women enter parliament older than men and have shorter tenures. Lastly, since most women enter parliament after child-bearing age, we conclude that the motherhood penalty still exists.

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Age; gender; legislatures; parliament; representation; women

I. Introduction

Age and gender matter for the quality and equality of political representation. In recent decades, members of parliament (MPs) have become older leading to a greying of the legislature. This hints at the systemic exclusion of young and middle-aged citizens. This matters because studies find younger citizens have different perspectives on issues such as jobs and job training, environmental sustainability and climate change, war and the military draft, gender equality, and same-sex marriages (e.g. Inglehart 1990; Norris and Inglehart 2001; Shin 2001; Iversen and Stephens 2008; Busemeyer, Goerres, and Weschle 2009; Kissau, Lutz, and Rosset 2012; Van Gyampo 2015; Cammaerts et al. 2016; Trantidis 2016). Thus, when MPs tend to be older, policy issues salient to older citizens might receive greater attention while concerns of younger generations are excluded (Krook 2016). Beyond the exclusion of interests (substantive representation), a broad portion of the population is marginalized when young and middle-aged individuals are absent from parliament (descriptive representation). But knowing who is marginalized allows us to revisit existing political recruitment strategies

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and political candidate training to better target and recruit underrepresented age groups.

In the past, scholars paid little attention to gendered age gaps and if they did, the conventional wisdom was that women on average were older than their male colleagues. One common explanation for this age gap was the motherhood penalty: women enter political careers later in their life as family responsibilities left little time for political engagement (Dodson 1997; Franceschet, Piscopo, and Thomas 2016; Parker 2017). Accordingly, female MPs tend to be in their forties and fifties since they run for political office only once their children are older or out of the house and care responsibilities have lightened (Darcy, Welch, and Clark 1994; Murray 2010a).

But times might have changed. Fertility rates have dropped in many countries with more women choosing to forego or delay motherhood. The issue of motherhood and politics has recently made headlines when women cabinet ministers and senators gave birth while in office and breastfed during parliamentary meetings. Thus, there has been increased momentum to allow children on the parliamentary floor, breastfeeding in chambers, and campaign donations to be spent on childcare. If more women are now entering politics before having children or while raising young children, the old wisdom that women delay their political careers might no longer be true. Recent studies support this assumption: in some countries, female to male ratios are higher among younger parliamentarians than their older counterparts (e.g. IPU 2014; Krook 2016, 2018; Joshi and Timothy 2018; Stockemer and Sundström 2019a). Other studies suggest that younger women may even be advantaged in countries where media covers younger women in politics more favorably or where party gatekeepers balance senior male representatives on their party lists with young women (Campus 2013; Celis and Erzeel 2017).

Against this backdrop, this article analyzes age gaps between women and men in parliaments, drawing on data we have collected on the demographic characteristics of over 20,000 members of parliament from 78 national assemblies. The article begins with a review of past studies on the personal characteristics of MPs with attention to the intersection between gender and age. One key issue is determining when women begin their parliamentary careers in order to better understand whether women experience different or higher hurdles than men in their political careers. Our empirical analysis finds that female MPs are younger than male MPs by an average of about four years and women younger than men by a statistically significant margin in the majority of countries. However, patterns of gender-age disparity vary across countries depending on whether women enter legislatures younger than men (“early birds”) or whether women have served in parliament for a shorter period of time than men (“short tenures”).

We find three general patterns: (1) countries where women enter at the same age as men and have a similar length of tenure; (2) countries where women enter parliament at a younger age than men, and (3) countries where women have been in parliament for a shorter period of time. Women in this last category either experience a “single squeeze”, i.e. enter younger but have shorter tenures or a “double squeeze” where women enter older than men and have shorter tenures. In contrast to previous studies, we find little evidence for the double-squeeze pattern. However, we do find that the motherhood penalty still exists. Lastly, our article concludes with a discussion of strategies for scholars to further investigate gender-age intersectionality in legislative representation.

II. Literature review

We know from previous studies that women often have different backgrounds and traverse different pathways to parliament than their male counterparts. For example, women in parliaments are less likely than men to hail from male-dominated fields such as law or business. Instead, women often have occupational backgrounds in education, nursing, or clerical employment (e.g. Darcy, Welch, and Clark 1994; Black and Erickson 2000; Murray 2010a; Carroll and Sanbonmatsu 2013; Tadros 2014). Both male and female MPs tend to have university degrees, but women tend to have higher educational credentials than men (Franceschet and Piscopo 2013; Beer and Camp 2016). Women MPs are also less likely to be married, have young children, or tend to have fewer children than male MPs and are more likely to be single, divorced, or widowed (e.g. Dodson 1997; Black and Erickson 2000; Saint-Germain 2009; Schwindt-Bayer 2011; Carroll and Sanbonmatsu 2013; Franceschet and Piscopo 2013; Franceschet, Piscopo, and Thomas 2016).

This might be expected since fatherhood is generally not considered a constraint on a man's work (Giese 2018). Questions such as "who will make dinner?" or "will you be able to attend to your children's needs" while holding office are questions that voters almost never ask of men (Heilweil 2016). In fact, being a family man can serve as a political resource for men whereas having children can be a real political liability for women. The motherhood penalty, however, may ultimately stem less from voters and more from party elites who select candidates in the first place. For instance, recent experimental research conducted in the US and UK suggests that voter attitudes towards politicians who are mothers are not necessarily negative and often positive when compared to women politicians without children (e.g. Stalsburg 2010; Bell and Kaufmann 2015; Campbell and Cowley 2018). However, since female candidates with young children may be seen as having less time to fulfill their political duties it may result in a "double bind" whereby women who are married with children are preferred by voters but also saddled with greater burdens and expectations than male and childless women politicians (Teele, Kalla, and Rosenbluth 2018). Under these conditions, women political aspirants themselves may decide to opt of political careers altogether, delay them until their children are older, or curtail them after only one or two terms in office (Vanlangenakker, Wauters, and Maddens 2013). Moreover, cultural differences might mean that in some countries older women are more revered than younger women (Murray 2010b) and therefore might have an easier time entering parliament compared to younger women. Thus, if there are political biases or disincentives against women with young children and those women who are mothers typically delay their political careers until their children are above a certain age, we should expect that women in parliaments on average will be older than men.

Overall, however, the picture appears to be more complicated: some studies have found a greying across parliaments over time with both male and female MPs becoming older (e.g. Carroll and Sanbonmatsu 2013). Today, the majority of MPs regardless of sex tend to be in their forties and fifties (Krook 2016; see also Best and Cotta 2000; Murray 2010a, 2010c; Franceschet and Piscopo 2013; Franceschet, Piscopo, and Thomas 2016). At the same time, studies have found that on average, women in parliament tend to be younger than men (Bird 2003; Murray 2010c; Schwindt-Bayer 2011; Joshi and Och

2014; Allen, Cutts, and Campbell 2016; Lühiste and Kenny 2016) while other studies found no age difference (e.g. Franceschet and Piscopo 2013).

To better understand whether the motherhood penalty prevents or delays women from entering politics, we need to pay closer attention to the average ages of men and women when they are first elected to parliament. If the motherhood penalty still exists, women will be older than men when they first enter parliament. Some previous studies confirm this expectation (Darcy, Welch, and Clark 1994; Dodson 1997; Murray 2004, 2010a). Others have found the opposite or no meaningful difference in age (Dolan and Ford 1997; Bird 2003; Murray 2010c).

A key reason why we do not see consistent findings on age and gender is that past studies addressing age representation generally focused on a single country (e.g. Burness 2000; Shin 2001; Murray 2008; Kissau, Lutz, and Rosset 2012; Golosov 2014; Van Gyampo 2015; Erikson and Josefsson 2019) or single multi-national parliament (e.g. Stockemer and Sundström 2019a, 2019b). Most studies including more than one case are limited to a single region such as Western Europe (Norris 1997; Best and Cotta 2000), Scandinavia (Narud and Valen 2000), North Africa (Belschner 2018) or various sub-regions in Asia (Joshi 2013, 2015; Joshi and Och 2014). It is only in the past few years that a small number of comparative cross-regional studies have appeared, but their more preliminary analysis of the gender-age nexus in legislative representation has not examined the ages that women and men enter parliament or how long they have served (e.g. IPU 2014; Krook 2016, 2018; Stockemer and Sundström 2018).

III. Hypotheses

We propose the following six hypotheses: our null hypothesis (H0) is that *in today's parliaments there is no statistically significant difference in the average age of female and male MPs*. While earlier studies have suggested that women enter parliament at an older age than men and that women leave parliament earlier than men it is possible that these two factors cancel each other out resulting in men and women being of the same age on average.

Our first hypothesis (H1) assumes that *on average, in today's parliaments women are younger than men*. Yet, even if this holds true across a large number of parliaments, we do not know whether this is due to women entering at a younger age (i.e. men entering older) or women having entered parliament at a later date (i.e. men having been in office for a longer period of time). Thus, we have developed the following four hypotheses to help explain why gender-based age discrepancies in parliament may occur.

Our second hypothesis (H2) is that *in today's parliaments women enter parliament on average at a younger age than men do*. There are several reasons why women may start younger than men: (1) on the candidate supply side, women may choose to go into politics before (or instead of) having children; (2) women from younger age cohorts may be more interested or willing to go into politics than older cohorts perhaps due to generational changes regarding perceptions of gender and gender equality; (3) on the demand side, party gatekeepers may select younger women as candidates because media coverage and voter impressions may be more favorable towards younger women. They may also select older men as candidates if they believe the media and voters prefer older men to younger men. Or voters may simply prefer younger women and older men.

Our third hypothesis (H3) is that *in today's parliaments on average women have served less years in parliament than men* up to the point of our analysis. Women's shorter tenure may be due to a spillover effect whereby male incumbents previously serving in almost all-male parliaments continue to be re-elected. Most women have only joined parliament more recently and therefore may have on average served for fewer years. Not too long ago, women had a harder time getting elected either due to limited access to campaign funding, less party support for their candidacy, or allocation to unwinnable districts or lower spots on a party-list. As these trends only started to unravel in the late 1990s, women's shorter tenure as MPs may likely be due to entering parliament at a later point than male colleagues.

Our fourth hypothesis (H4) combines H2 and H3 by proposing that *in today's parliaments women, on average, both enter parliament earlier (at a younger age) than men do and have stayed for a shorter time*. Our fifth and final hypothesis (H5) is that *in today's parliaments women enter parliament older than men and have also stayed for a shorter time*.

A visual depiction of these hypotheses appears in [Figure 1](#). If it turns out there is no gender gap in the starting ages of MPs and no gender gap in how long they have served in parliament thus far, we should end up with the result that women and men in parliament are of the "same age" as predicted by our null hypothesis (H0). If, however, there is a "start gap" whereby women enter younger than men it will match our first and second hypotheses (H1, H2). We call this pattern "early birds." If there is no start gap, but there is an incumbency gap whereby women have not served as many terms in parliament as the men we call this pattern "short tenures." Cases in this group will either match our first and third hypotheses as a "single squeeze" (H1, H3) or they may match our first and fifth hypothesis (H1, H5) of a "double squeeze" where women enter older than men but have been present in parliament for a shorter time. Lastly, if there is both a start gap and an incumbency gap, it will match our first and fourth hypotheses (H1, H4) in which there will be both "early birds" and "short tenures."

IV. Analysis

To test our hypotheses, we analyzed the ages of female and male MPs across 78 parliaments with data on the gender and ages of over 20,000 individual MPs. Our data were obtained from a cross-sectional dataset compiled by the authors with the help of research

		Incumbency Gap (women serving fewer legislative terms than men)	
		No	Yes
Start Gap (women entering younger than men)	No	Same Age (H0)	Short Tenures: Single Squeeze (H1 & H3) or Double Squeeze (H1 & H5)
	Yes	Early Birds (H1 & H2)	Early Birds & Short Tenures (H1 & H4)

Figure 1. Hypothesized age impacts of gendered start and incumbency gaps in parliament.

assistants to better understand the parliamentary demographics of nearly one hundred countries across Asia, Europe, the Middle East, and Oceania. Data were collected on recently elected MPs in the national lower house or single house of parliament. The data were collected from parliament websites listing the gender and birth years of currently serving MPs in their member biographies.

We started off by testing our null hypothesis (H0) and first hypothesis (H1) concerning whether there is indeed a gendered age gap in parliament. As shown in [Table 1](#) which displays the average ages of men and women across parliaments, we were able to reject the null (H0). Across 78 parliaments and 20,087 MPs, the average age for women in parliament was 47.2 years old, whereas the average man was 50.9 years – a difference of nearly four years. Confirming H1, we found women were younger than men in 63 out of 78 countries and by a statistically significant margin in 35 ($p < .05$) or 44 ($p < .10$) out of these 63 countries as measured by one-tailed, unequal variance *t*-tests. By contrast, in only 0 ($p < .05$) or 2 ($p < .10$) countries (Uzbekistan and Poland) were women older than men by a statistically significant margin. Thus, the overall trend observed in today's parliaments is clearly one of older men and younger women.

Since mean ages can potentially obscure the age distributions of men and women, we also conducted an age-cohort breakdown by gender to assess whether younger and older women and men are as equally represented as their middle-aged counterparts. Combining the data from all 78 parliaments, we found that gender equality in descriptive representation is much higher among younger age cohorts. Male-to-female MP ratios progressively increase among MPs in their twenties (1.33), thirties (1.96), forties (2.56), fifties (3.72), sixties (5.15) and for those aged seventy and above (7.54). Complete national-level breakdowns of female and male age cohort representation for all seventy-eight parliaments are presented in [Table A1](#) of the Appendix.

In order to test Hypotheses 2–5, we examined a subset of parliaments to compare the entry years (and ages) and duration rates of all current members of parliament since many contemporary MPs have also served previous sessions in parliament. For these parliaments, the official website of the national parliament provided the year when each MP was first elected, allowing us to identify the number of years each MP had already served in parliament prior to the start of the current parliamentary session. This subset of 33 parliaments was selected on the basis of a *convenience sample* as these were the only countries for which we were able to obtain complete data on the year all current MPs first entered parliament. Two strengths of the sample include its coverage of a much larger number of countries than any previous studies on the topic. It also contains countries from a number of different world regions. As shown in [Figure 2](#), our results demonstrate that each of our hypotheses (H2–H5) had some merit as all four patterns of proposed gender-age gaps do occur in today's parliaments.

The upper-left hand quadrant of [Figure 2](#) lists those parliaments in which there was no statistically significant difference between men's and women's starting ages or duration in parliament.¹ A representative case of this pattern is the unicameral Swedish Riksdag elected in 2014. Women first entered the Riksdag (on average) less than one year older than the age when men first entered parliament (39.4 vs. 40.2 years old), a difference that was not statistically significant. Women and men have also stayed on average for the same amount of time in parliament. The average woman in the Riksdag had previously served for 5.2 years prior to the current session while the average man had previously been

Table 1. Average age of female and male MPs in 78 countries (2008–2017).

Country	Year	Females	Males	Age gap	t-test
Afghanistan	2010	38.5	44.4	-5.9***	0.00
Andorra	2015	42.6	46.2	-3.6	0.12
Armenia	2017	47.4	51.1	-3.7	0.12
Australia	2016	49.8	49.1	0.7	0.34
Austria	2013	46.7	49.1	-2.4*	0.06
Azerbaijan	2015	50.6	55.9	-5.3**	0.04
Bahrain	2014	34.3	45.4	-11.1***	0.00
Belarus	2016	48.1	51.1	-3.0**	0.01
Belgium	2014	43.5	48.0	-4.5***	0.00
Bhutan	2008	31.5	44.3	-12.8**	0.03
Bosnia	2014	51.5	50.8	0.7	0.43
Bulgaria	2017	46.1	48.6	-2.5**	0.04
Cambodia	2013	58.2	57.2	1.0	0.31
China	2013	48.8	54.3	-5.5***	0.00
Croatia	2016	45.0	47.6	-2.6*	0.10
Czech Republic	2013	49.5	50.3	-0.8	0.35
Denmark	2015	43.0	47.0	-4.0***	0.01
Egypt	2015	47.5	51.4	-3.9***	0.00
Estonia	2014	45.4	48.7	-3.3*	0.10
Finland	2015	45.6	49.5	-3.9***	0.01
France	2017	47.8	50.0	-2.2***	0.01
Georgia	2016	45.5	46.1	-0.6	0.40
Germany	2017	49.4	49.6	-0.2	0.36
Greece	2015	53.1	55.1	-2.0*	0.09
Hong Kong	2016	50.9	50.3	0.6	0.43
Hungary	2014	44.6	48.0	-3.4	0.12
Iceland	2016	42.3	49.6	-7.3***	0.00
India	2014	48.0	55.0	-7.0***	0.00
Indonesia	2014	44.7	49.8	-5.1***	0.00
Iran	2012	48.6	49.2	-0.6	0.38
Iraq	2014	46.7	49.2	-2.5**	0.01
Ireland	2016	50.4	50.5	-0.1	0.48
Israel	2015	45.8	54.3	-8.5***	0.00
Italy	2013	43.3	47.8	-4.5***	0.00
Japan	2017	51.7	55.2	-3.5***	0.01
Jordan	2016	42.9	52.1	-9.2***	0.00
Kazakhstan	2016	52.3	54.6	-2.3	0.12
Kuwait	2016	52.0	48.3	3.7	n/a
Kyrgyzstan	2015	44.6	46.0	-1.4	0.26
Latvia	2014	50.5	50.2	0.3	0.46
Liechtenstein	2017	51.7	50.9	0.8	0.43
Lithuania	2016	47.3	52.4	-5.2**	0.02
Luxembourg	2013	48.6	49.8	-1.2	0.35
Macedonia	2016	45.1	46.6	-1.5	0.23
Malta	2013	41.9	48.0	-6.1*	0.06
Mexico	2009	44.3	46.7	-2.4**	0.01
Moldova	2014	47.4	47.1	0.3	0.47
Monaco	2013	46.2	54.1	-7.9***	0.00
Myanmar	2015	48.5	54.3	-5.8***	0.00
Nepal	2013	45.7	52.9	-7.2***	0.00
Netherlands	2017	44.1	45.9	-1.8	0.13
New Zealand	2014	48.4	49.0	-0.6	0.36
Norway	2013	47.0	46.1	0.9	0.29
Philippines	2013	52.5	52.8	-0.3	0.44
Poland	2015	50.8	49.3	1.5*	0.09
Portugal	2015	46.0	48.9	-2.9**	0.03
Romania	2016	42.5	46.2	-3.7***	0.00
Russia	2016	53.0	52.1	0.9	0.27
Rwanda	2008	41.2	49.2	-8.0***	0.00
San Marino	2016	41.5	44.3	-2.8	0.22
Serbia	2016	46.2	50.7	-4.5***	0.00

(Continued)

Table 1. Continued.

Country	Year	Females	Males	Age gap	t-test
Seychelles	2011	40.1	42.3	-2.2	0.25
Singapore	2015	47.0	48.9	-2.0	0.16
Slovakia	2016	46.0	48.8	-2.8*	0.06
Slovenia	2014	48.6	47.2	1.4	0.29
South Korea	2016	53.7	56.7	-3.0***	0.01
Spain	2016	46.3	49.6	-3.3***	0.00
Sri Lanka	2015	50.6	52.3	-1.7	0.22
Sweden	2014	45.3	43.9	1.3	0.15
Switzerland	2015	49.1	50.3	-1.3	0.21
Taiwan	2016	48.0	53.0	-5.0***	0.00
Tajikistan	2015	48.0	54.0	-6.0***	0.00
Thailand	2014	62.4	61.5	0.8	0.25
Timor-Leste	2012	48.0	49.4	-1.4	0.23
UK	2015	49.2	51.1	-1.9***	0.01
Ukraine	2014	41.9	44.1	-2.3*	0.06
Uzbekistan	2015	49.0	43.6	5.4***	0.00
Vietnam	2016	43.9	51.6	-7.7***	0.00
Country Avg.		47.0	49.8	-2.8***	0.00
All MPs		47.2	50.9	-3.7***	0.00

Source: Authors' Dataset.

Notes: Data for Greece is from its December 2015 election. Asterisks mark statistically significant differences as measured by one-tailed, unequal variance *t*-tests, *p*-values: * < .1, ** < .05, *** < .01. Unless otherwise mentioned ages represent the average ages of all female and male MPs in each country at the start of the national single or lower house parliamentary session after the respectively mentioned election. Ages for a few MPs from the following countries were unobtainable: Afghanistan (22), Greece (8), Iran (6), Jordan (5), Kyrgyzstan (1), Malta (9), Moldova (7), New Zealand (2), Philippines (27), Rwanda (4), Seychelles (1), Slovenia (1), Sri Lanka (19), and Timor-Leste (1).

in parliament for 4.7 years. As Sweden is a country that places a high emphasis on social and political equality (Joshi and Navlakha 2010; Steinmo 2010), this outcome is not surprising. Among the 10 countries that fit this pattern, we also found a strong prevalence of corporatist European social democracies (Austria, Germany, Norway, Sweden, and Switzerland).

The upper-right-hand quadrant of Figure 2 lists parliaments with “short tenures.” In these cases, women have been in parliament for a shorter time than men by a statistically significant margin while entering parliament at either the same age (“single squeeze”) or older age (“double squeeze”) than men. For this category, no particular regional trend was identified although a number of these parliaments have a majority of their seats filled through single-member district (SMD) elections (Australia, Japan, Philippines, South Korea, and the UK). A clear example of the double squeeze pattern is the United Kingdom’s House of Commons elected in 2015. Not only had men served nine years longer on average than women (5.4 years compared to 14.6 years for men), but women also entered the House more than seven years older on average than the men (43.8 vs. 36.6 years old). This finding is in line with previous studies which have documented that women in the UK often have to wait until after their child-bearing years to enter parliament (Campbell and Childs 2014, 2017). Statistically significant instances of a “double squeeze” were also observed in the English-speaking countries of Ireland and Australia.

The lower-left hand quadrant of Figure 2 lists those parliaments with “early birds” where women entered parliament younger than men by a statistically significant margin and have been in parliament about the same length of time. An example of this pattern is the 12th session of the unicameral National People’s Congress (NPC) (全国人民代

		Incumbency Gap (women are in parliament fewer years than men)	
		<u>No</u>	<u>Yes</u>
Start Gap (women enter younger than men)	<u>No</u>	<i>Same Age</i> Austria Germany Greece Iran Luxembourg Hong Kong New Zealand Norway Sweden Switzerland	<i>Short Tenures</i> <i>“Single Squeeze”</i> Hungary* Japan*** Liechtenstein* Malta* Philippines** Portugal*** South Korea** Spain*** <i>“Double Squeeze”</i> Australia* Ireland** United Kingdom**
	<u>Yes</u>	<i>Early Birds</i> Belgium** China*** Denmark** Finland** Iceland*** Kazakhstan** Taiwan** Vietnam***	<i>Early Birds & Short Tenures</i> Bahrain*** Israel*** Lithuania** Romania***

Figure 2. Prevalence of start gaps and incumbency gaps among women and men in parliament.

Note: Asterisks mark statistically significant differences in parliamentary starting ages ('early birds'), duration ('short tenures'), or age at most recent election ('early birds and short tenures') of female and male legislators as measured by one-tailed, unequal variance t-tests, p-values: * < 0.1, ** < 0.05, *** < 0.01.

表大会) of China elected in 2013 where women had first entered parliament on average roughly five years younger than the men (46.2 vs. 51.1 years old). However, both women and men in that session had previously served about the same amount of time in the NPC (2.4 vs. 2.8 years). As China is a country which proclaims gender equality in line with its communist ideology but in practice maintains differing official retirement ages for women (age 55 years) and men (60 years) in its civil service (Edwards 2007), this pattern of roughly equal parliamentary duration but divergent starting ages may not be surprising. As for regional trends, we observed the “early birds” pattern only in Central and Eastern Asia (China, Kazakhstan, Taiwan, and Vietnam) and in Northern and Western Europe (Belgium, Denmark, Finland, Iceland).

The lower-right-hand quadrant of Figure 2 lists those parliaments in which (a) women entered parliament younger than men and (b) where women have been in parliament for less time than men by a statistically significant margin (“early birds and short tenures”). An example of this pattern is the unicameral Israeli Knesset elected in 2015 where women serving in that session first entered parliament on average about five years younger than their male counterparts (42.8 vs. 47.6 years old). Prior to that session,

women in parliament had also served in the Knesset for an average of 2.9 years compared to 6.7 years for men – a difference of nearly four years. As for regional trends, the four countries that fit this pattern were located in either Eastern Europe (Lithuania, Romania) or the Middle East (Bahrain, Israel).

We then examined two factors which might explain discrepancies between the MPs' ages – parliamentary incumbency rates as obtained from parliamentary websites and legal gender quotas for national parliaments as recorded by International IDEA (2019). As for incumbency rates (share of current MPs who served in a past assembly) we found variation across countries (see Appendix Table A2). However, we did not find any correlation between incumbency rates and incumbency gaps between women and men in parliament (Pearson's $r = -0.032$). We did find a positive and statistically significant ($p < .10$) relationship whereby those parliaments with legislated gender quotas (Belgium, Greece, Ireland, Portugal, South Korea, Spain, and Taiwan) and reserved seats (China and Vietnam) had larger age gaps. In fact, female MPs were younger than male MPs by 3.8 years on average when legislated gender quotas were present compared to women being only 2.4 years younger in parliaments without legal gender quotas. Thus, quotas might not only increase the chances of women entering parliament overall but also make it more likely that younger women are elected to parliament. More research is necessary to test this provisional finding, but if it holds, electoral gender quotas could potentially work against a greying of parliaments and aid a more equitable age distribution across parliaments.

Finally, we conducted a more restricted examination focusing only on the ages of newcomers. Limiting our analysis to newcomers allows us to highlight more recent trends relating to gender and age. As shown in Table 2, we found that, on average, newcomer women entered younger than men in 26 out of 33 countries and this difference was statistically significant in 14 cases. Gendered newcomer age gaps varied across countries with Asian countries generally featuring larger gaps than European countries, but this was not always the case. The UK is the lone outlier in our sample whereby newcomer women were older than men by a statistically significant margin.

V. Discussion and conclusion

Generally speaking, in today's world, women start serving in parliament younger than men. "Young" is a relative term since women MPs are on average in their forties while men are in their fifties. Thus, the greying of the parliament is a real concern. The exclusion of younger generations from parliament also means that the talents, policy ideas, and concerns of a significant portion of the population is excluded.

Overall age averages, however, are less meaningful if we want to determine whether women still experience the motherhood penalty. A more important indicator of the motherhood penalty is the average age when women first enter parliament. We found that most women enter parliament over the age of 40 (after their child-bearing years). Thus, the motherhood penalty still applies to women, i.e. family care obligations still have a discriminatory effect on women in politics. Greater parliamentary reforms are therefore necessary to achieve equality in representation, for example, offering day care to all members of parliament and scheduling parliamentary committee meetings only during school hours. This is particularly important if we want to increase the descriptive representation of young people.

Table 2. Average age of female and male newcomers in 33 parliaments (2012–2017).

Country	Year	Average age of newcomer females	Average age of newcomer males	Age gap	t-test	No. of female newcomers	No. of male newcomers
Iceland	2016	36.5	48.9	-12.4***	0.006	10	13
Bahrain	2014	34.3	45.0	-10.7***	0.000	3	28
Vietnam	2016	41.7	49.7	-8.0***	0.000	88	232
China	2013	46.6	52.7	-6.1***	0.000	465	1401
Israel	2015	44.8	50.7	-5.8***	0.031	13	24
Malta	2013	37.8	43.2	-5.4*	0.076	5	17
Kazakhstan	2016	46.9	52.0	-5.1**	0.034	15	47
Greece	2016	50.6	55.4	-4.8**	0.033	17	124
Belgium	2014	43.6	48.3	-4.7**	0.017	32	53
Lithuania	2016	44.6	48.9	-4.3*	0.080	17	57
Hungary	2014	39.0	42.8	-3.8	0.276	5	26
Switzerland	2015	43.4	46.9	-3.5	0.117	14	38
Taiwan	2016	46.0	49.5	-3.5*	0.073	22	30
South Korea	2016	51.6	54.3	-2.7*	0.078	25	108
Romania	2016	41.3	43.8	-2.4*	0.057	50	165
Germany	2017	46.0	48.2	-2.1**	0.049	90	208
Ireland	2016	45.7	47.8	-2.1	0.202	18	42
Iran	2012	44.8	46.7	-1.9	0.221	5	165
Denmark	2015	42.7	44.5	-1.8	0.254	24	47
Hong Kong	2016	39.5	40.9	-1.4	0.219	2	23
Luxembourg	2013	44.3	45.7	-1.3	0.385	9	18
Finland	2015	40.2	41.4	-1.2	0.419	25	37
Sweden	2014	38.6	39.5	-0.8	0.344	59	75
Portugal	2015	45.9	46.6	-0.8	0.386	33	48
Japan	2017	47.5	47.9	-0.4	0.445	13	43
Austria	2013	45.9	46.0	-0.1	0.484	24	57
Spain	2016	46.5	46.1	0.4	0.444	20	26
Norway	2013	43.8	43.0	0.8	0.453	5	26
Philippines	2013	51.2	49.3	1.9	0.254	23	57
New Zealand	2014	46.8	44.3	2.5	0.254	9	21
Liechtenstein	2017	51.0	48.5	2.5	0.378	2	8
UK	2015	45.3	42.8	2.5**	0.039	83	100
Australia	2016	47.4	44.2	3.1	0.117	14	23

Source: Authors' dataset.

Notes: Asterisks mark statistically significant differences as measured by one-tailed, unequal variance *t*-tests, *p*-values: * < .1, ** < .05, *** < .01. The relatively small number of newcomers in some parliaments likely explains why more cases were not statistically significant.

The exceptions in our study are Bahrain, Iceland, Hungary, Malta, and Sweden where women entered parliament under the age of 40 years. Future studies are needed to explore the factors that contribute to women entering parliament at a younger age. For now, we propose two possible explanatory factors: (1) more comprehensive welfare states including generous paid parental leaves and child care support might lower or remove the motherhood penalty. (2) More gender-sensitive parliaments might have a similar effect. In contexts like these where better public daycare is available and MPs are allowed to take family leave time and be temporarily replaced by a parliamentary substitute, it may be easier for women (and men) to combine politics with family obligations.² Future studies should also analyze the impact of socio-economic class on a woman's ability to enter parliament during child-bearing/raising years as middle or upper-class individuals are more likely to afford childcare or servants to take care of family care obligations.

Another important finding of this study is that legislatures fall into different age-gender patterns depending on the length of tenure and the age when women and men enter parliament. This classification adds greater nuance to previous studies on the age-gender nexus. Though beyond the scope of this article, we also believe further research is

necessary to explain what conditions might explain the patterns identified in this study. For example, institutional and structural factors such as political regime types, inter-party competition, electoral system proportionality, level of economic development, or dominant cultural norms might shape gender-age intersections. Future research should also include a longitudinal element to determine whether these patterns remain stable in countries or change over time. Longitudinal studies would allow us to better understand whether women MPs are more likely to exit parliament earlier than men and how this might impact the gender-age gap.

To conclude, a major strength of this study is its coverage of a large number of countries. Even though it only represents a snapshot of the gender-age nexus in parliamentary representation at a specific moment in time, it provides us with important insights into how this intersection operates today. As such, our study contributes new knowledge to the study of gender and age representation in parliaments beyond that of the typical single-case or single-region study most commonly conducted in the past.

Notes

1. In 2 out of 10 cases (Austria and Greece) women were still younger than men by a statistically significant margin even though the start gaps and incumbency gaps were not statistically significant.
2. Author's personal communication with a Swedish member of parliament.

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Appendix

Table A1. Ten-year MP age cohort shares of women (F) and men (M) in 78 parliaments.

Country	Year	Age 20–29 years		Age 30–39 years		Age 40–49 years		Age 50–59 years		Age 60–69 years	
		F	M	F	M	F	M	F	M	F	M
Afghanistan	2010	0.13	0.03	0.39	0.30	0.44	0.38	0.05	0.25	0.00	0.03
Andorra	2015	0.00	0.00	0.22	0.32	0.56	0.26	0.22	0.37	0.00	0.05
Armenia	2017	0.11	0.00	0.22	0.18	0.11	0.24	0.39	0.36	0.17	0.18
Australia	2016	0.00	0.00	0.18	0.12	0.30	0.46	0.36	0.26	0.16	0.14
Austria	2013	0.09	0.03	0.14	0.10	0.36	0.35	0.38	0.39	0.04	0.13
Azerbaijan	2015	0.00	0.01	0.24	0.10	0.29	0.17	0.19	0.31	0.24	0.31
Bahrain	2014	0.00	0.00	1.00	0.19	0.00	0.46	0.00	0.35	0.00	0.00
Belarus	2016	0.00	0.00	0.05	0.08	0.47	0.29	0.47	0.53	0.00	0.10
Belgium	2014	0.03	0.01	0.36	0.16	0.34	0.39	0.22	0.32	0.03	0.11
Bhutan	2008	0.75	0.09	0.00	0.23	0.25	0.33	0.00	0.33	0.00	0.02
Bosnia	2014	0.00	0.00	0.10	0.25	0.20	0.09	0.40	0.53	0.30	0.13
Bulgaria	2017	0.05	0.02	0.24	0.19	0.35	0.36	0.27	0.20	0.10	0.20
Cambodia	2013	0.00	0.00	0.04	0.11	0.11	0.17	0.36	0.22	0.46	0.39
China	2013	0.03	0.01	0.11	0.02	0.36	0.18	0.39	0.58	0.10	0.21
Croatia	2016	0.04	0.02	0.30	0.16	0.26	0.42	0.37	0.29	0.04	0.09
Czech Rep.	2013	0.07	0.01	0.15	0.16	0.24	0.28	0.34	0.36	0.17	0.16
Denmark	2015	0.03	0.05	0.46	0.25	0.24	0.29	0.21	0.23	0.04	0.16
Egypt	2015	0.03	0.02	0.20	0.11	0.38	0.27	0.24	0.38	0.13	0.18
Estonia	2014	0.04	0.04	0.41	0.26	0.11	0.18	0.30	0.28	0.15	0.24
Finland	2015	0.06	0.07	0.29	0.17	0.28	0.21	0.29	0.33	0.07	0.18
France	2017	0.03	0.05	0.22	0.13	0.29	0.29	0.31	0.32	0.13	0.18
Georgia	2016	0.00	0.01	0.30	0.29	0.35	0.34	0.22	0.27	0.09	0.06
Germany	2017	0.01	0.02	0.18	0.14	0.27	0.34	0.42	0.31	0.13	0.17
Greece	2015	0.00	0.00	0.09	0.09	0.26	0.17	0.42	0.38	0.17	0.29
Hong Kong	2016	0.00	0.02	0.09	0.23	0.36	0.19	0.36	0.30	0.18	0.25
Hungary	2014	0.05	0.01	0.32	0.23	0.37	0.30	0.11	0.35	0.16	0.08
Iceland	2016	0.17	0.00	0.17	0.21	0.40	0.33	0.23	0.21	0.03	0.24
India	2014	0.06	0.01	0.21	0.08	0.33	0.21	0.17	0.34	0.17	0.28
Indonesia	2014	0.04	0.01	0.24	0.10	0.41	0.40	0.25	0.32	0.04	0.17
Iran	2016	0.00	0.00	0.00	0.04	0.33	0.26	0.44	0.53	0.22	0.16
Iraq	2014	0.00	0.00	0.21	0.12	0.43	0.47	0.30	0.26	0.07	0.13
Ireland	2016	0.00	0.02	0.17	0.13	0.31	0.37	0.29	0.23	0.23	0.23

(Continued)

Table A1. Continued.

Country	Year	Age 20–29 years		Age 30–39 years		Age 40–49 years		Age 50–59 years		Age 60–69 years	
		F	M	F	M	F	M	F	M	F	M
Israel	2015	0.00	0.00	0.27	0.09	0.39	0.18	0.27	0.38	0.06	0.31
Italy	2013	0.11	0.04	0.32	0.23	0.24	0.27	0.25	0.32	0.07	0.13
Japan	2014	0.02	0.00	0.17	0.09	0.26	0.28	0.41	0.31	0.13	0.25
Jordan	2016	0.05	0.00	0.30	0.04	0.45	0.35	0.20	0.45	0.00	0.13
Kazakhstan	2016	0.00	0.01	0.14	0.04	0.14	0.21	0.59	0.47	0.14	0.24
Kuwait	2016	0.00	0.00	0.00	0.18	0.00	0.37	1.00	0.33	0.00	0.08
Kyrgyzstan	2015	0.05	0.03	0.21	0.17	0.37	0.49	0.37	0.27	0.00	0.04
Latvia	2014	0.00	0.04	0.13	0.12	0.27	0.29	0.33	0.34	0.27	0.18
Liechtenstein	2017	0.00	0.00	0.00	0.14	0.33	0.32	0.67	0.36	0.00	0.18
Lithuania	2016	0.07	0.02	0.18	0.14	0.32	0.17	0.32	0.43	0.11	0.23
Luxembourg	2013	0.06	0.02	0.12	0.16	0.29	0.23	0.35	0.47	0.18	0.09
Macedonia	2016	0.03	0.01	0.29	0.27	0.26	0.31	0.38	0.32	0.03	0.07
Malta	2013	0.00	0.04	0.57	0.18	0.29	0.35	0.14	0.27	0.00	0.13
Mexico	2009	0.08	0.03	0.23	0.20	0.39	0.39	0.25	0.30	0.04	0.07
Moldova	2014	0.14	0.01	0.05	0.31	0.36	0.24	0.27	0.31	0.18	0.11
Monaco	2013	0.00	0.00	0.00	0.00	1.00	0.26	0.00	0.53	0.00	0.21
Myanmar	2015	0.07	0.01	0.14	0.14	0.39	0.18	0.20	0.27	0.20	0.36
Nepal	2013	0.03	0.00	0.22	0.08	0.42	0.27	0.25	0.40	0.07	0.22
Netherlands	2017	0.00	0.01	0.26	0.26	0.51	0.40	0.19	0.24	0.04	0.07
New Zealand	2014	0.00	0.03	0.20	0.15	0.37	0.33	0.29	0.32	0.15	0.17
Norway	2013	0.08	0.11	0.15	0.18	0.25	0.31	0.43	0.32	0.09	0.09
Philippines	2013	0.03	0.02	0.14	0.12	0.30	0.30	0.23	0.27	0.19	0.20
Poland	2015	0.03	0.04	0.16	0.18	0.21	0.25	0.35	0.33	0.23	0.18
Portugal	2015	0.06	0.03	0.22	0.20	0.35	0.25	0.27	0.33	0.08	0.18
Romania	2016	0.07	0.04	0.31	0.26	0.39	0.33	0.19	0.23	0.03	0.11
Russia	2016	0.00	0.01	0.14	0.12	0.20	0.30	0.38	0.30	0.24	0.22
Rwanda	2008	0.05	0.06	0.36	0.21	0.48	0.18	0.10	0.41	0.02	0.15
San Marino	2016	0.19	0.09	0.25	0.25	0.31	0.34	0.13	0.20	0.13	0.09
Serbia	2016	0.02	0.01	0.29	0.19	0.33	0.31	0.24	0.25	0.11	0.20
Seychelles	2011	0.13	0.07	0.33	0.33	0.40	0.40	0.13	0.20	0.00	0.00
Singapore	2015	0.00	0.00	0.29	0.14	0.33	0.39	0.29	0.34	0.08	0.11
Slovakia	2016	0.00	0.03	0.19	0.21	0.45	0.30	0.26	0.25	0.10	0.19
Slovenia	2014	0.03	0.10	0.23	0.16	0.29	0.24	0.26	0.40	0.16	0.10
South Korea	2016	0.00	0.00	0.04	0.00	0.19	0.13	0.48	0.56	0.29	0.28
Spain	2016	0.04	0.01	0.21	0.17	0.38	0.27	0.27	0.40	0.09	0.13
Sri Lanka	2015	0.00	0.02	0.08	0.09	0.25	0.31	0.50	0.35	0.17	0.15
Sweden	2014	0.12	0.14	0.19	0.26	0.26	0.26	0.34	0.24	0.07	0.09
Switzerland	2015	0.03	0.01	0.20	0.16	0.26	0.24	0.32	0.40	0.18	0.18
Taiwan	2016	0.02	0.00	0.12	0.06	0.45	0.25	0.29	0.44	0.12	0.24
Tajikistan	2015	0.00	0.00	0.00	0.04	0.54	0.18	0.46	0.57	0.00	0.20
Thailand	2014	0.00	0.00	0.00	0.00	0.05	0.07	0.22	0.31	0.57	0.47
Timor-Leste	2012	0.00	0.00	0.17	0.13	0.42	0.35	0.38	0.43	0.04	0.10
UK	2015	0.02	0.02	0.17	0.13	0.32	0.31	0.34	0.31	0.11	0.19
Ukraine	2014	0.06	0.03	0.44	0.30	0.28	0.39	0.18	0.20	0.04	0.06
Uzbekistan	2015	0.00	0.03	0.13	0.32	0.31	0.37	0.56	0.23	0.00	0.05
Vietnam	2016	0.05	0.01	0.26	0.05	0.45	0.24	0.22	0.62	0.02	0.07
Nat'l Avg.		0.05	0.02	0.21	0.16	0.32	0.29	0.30	0.34	0.11	0.16
All MPs		0.04	0.02	0.20	0.13	0.33	0.27	0.31	0.37	0.11	0.18

Table A2. Legal gender quotas and incumbency ratios in 33 parliaments.

Country	Year	Legal gender quota	Total incumbency ratio	Female incumbency ratio	Male incumbency ratio	Incumbency gap (male – female)
Australia	2016	No	0.753	0.682	0.783	0.101
Austria	2013	No	0.536	0.500	0.551	0.051
Bahrain	2014	No	0.225	0.000	0.243	0.243
Belgium	2014	Yes	0.433	0.448	0.424	–0.024

(Continued)

Table A2. Continued.

Country	Year	Legal gender quota	Total incumbency ratio	Female incumbency ratio	Male incumbency ratio	Incumbency gap (male – female)
China	2013	Yes	0.374	0.335	0.387	0.052
Denmark	2015	No	0.618	0.647	0.602	–0.045
Finland	2015	No	0.690	0.699	0.684	–0.015
Germany	2017	No	0.580	0.595	0.574	–0.021
Greece	2015	Yes	0.514	0.660	0.481	–0.179
Hong Kong	2016	No	0.632	0.818	0.596	–0.222
Hungary	2014	No	0.844	0.737	0.856	0.119
Iceland	2016	No	0.635	0.667	0.606	–0.061
Iran	2012	No	0.391	0.444	0.389	–0.056
Ireland	2016	Yes	0.620	0.486	0.659	0.173
Israel	2015	No	0.625	0.545	0.655	0.110
Japan	2017	No	0.880	0.723	0.897	0.174
Kazakhstan	2016	No	0.421	0.483	0.397	–0.085
Kuwait	2016	No	0.580	1.000	0.571	–0.429
Liechtenstein	2017	No	0.600	0.333	0.636	0.303
Lithuania	2016	No	0.468	0.393	0.486	0.094
Luxembourg	2013	No	0.550	0.471	0.581	0.111
Malta	2013	No	0.671	0.444	0.705	0.260
New Zealand	2014	No	0.748	0.780	0.731	–0.050
Norway	2013	No	0.817	0.923	0.750	–0.173
Philippines	2013	No	0.701	0.680	0.708	0.028
Portugal	2015	Yes	0.648	0.571	0.686	0.115
Romania	2016	No	0.345	0.254	0.368	0.114
South Korea	2016	Yes	0.554	0.479	0.568	0.089
Spain	2016	Yes	0.869	0.856	0.877	0.021
Sweden	2014	No	0.617	0.634	0.603	–0.030
Switzerland	2015	No	0.729	0.785	0.701	–0.083
Taiwan	2016	Yes	0.540	0.476	0.577	0.101
UK	2015	No	0.718	0.574	0.779	0.205
Vietnam	2016	Yes	0.359	0.333	0.368	0.035