THE IMPACT OF MILITARIZATION ON GENDER INEQUALITY

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THE IMPACT OF MILITARIZATION ON GENDER INEQUALITY

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1.1

OVERVIEW

This study uses various panel regression methods to analyze the effects of different militarization indicators (e.g., military spending as a ratio of GDP and the Global Militarization Index) on gender inequality and female labour force participation rates for 1990-2019 in 153 countries. The findings suggest a clear association between militarization and gender inequality for different model specifications and robustness checks. The study also introduces a Kaleckian-feminist model to examine the effect of military spending on economic growth through gender inequality.

1.1.1

Theoretical background

Feminist scholars have argued that militarism is a product of patriarchy. This paper focuses on militarization, which is a narrower concept than militarism. While the latter is the set of material and ideological manifestations that promote militaristic values – such as a belief in hierarchy, obedience, and the use of force – in the political, social and economic spheres, the former usually refers to increased military spending.

Militarization affects women's lives in both the private sphere of the household and the public sphere of states, markets, and institutions. In the private sphere, feminist scholars have emphasized that militarization reinforces patriarchal values in society. In the public sphere, research shows that higher military expenditure crowds out civilian expenditure, such as on education and health. This disproportionately affects women who are more reliant on social spending. Extensive research shows that higher military spending widens income inequality, which adversely affects women and their dependents, given the gender gaps in wages, income, and assets. The relevant literature suggests that a higher representation of women in parliament can reduce military budgets, thereby improving gender equality.[1]

Against this background, four hypotheses are empirically tested:

Hypothesis 1: Militarization leads to higher gender inequality and lower female labour force participation.

Hypothesis 2: The negative impact of militarization on gender inequality is weaker in countries with a higher democracy level.

Hypothesis 3: The negative impact of militarization on gender inequality is weaker in high-income countries and stronger in low-income countries.

Hypothesis 4: A higher representation of women in the legislative or executive branches of government leads to lower defence spending.

Considering the significant relationship between gender inequality and growth that has long been discussed in economics, the association between militarization and gender inequality suggests an indirect impact of militarization on economic growth in the long-term. That is, in addition to the mechanisms noted in defence economics, militarization also affects economic growth through gender inequality. The following section examines this effect with a Kaleckian-feminist model.

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1 Several quantitative studies have investigated the impact of war on women's access to economic and political resources (Hudson et al. 2012; Peksen 2011; Plümper and Neumayer 2006), or the effect of women's parliamentary representation on military expenditure (Caprioli 2003; Caprioli and Boyer 2001; Hughes and Paxton 2019). However, only two studies have examined the effect of militarization on gender inequality (Elveren and Moghadam 2019 and Elveren et al. forthcoming)

2.1

A KALECKIAN-FEMINIST MODEL ON THE NEXUS OF MILITARY SPENDING AND ECONOMIC GROWTH

There have been some models that examine the effect of military spending on economic growth in defence economics (Elveren 2019) and substantial theoretical discussions on the mechanisms through which militarization affects gender inequality in feminist security and international relations, as noted above. However, there is no structural model to show how military spending affects economic growth through gender inequality. This model aims to fill this gap.

Military spending has two conflicting effects on economic growth (Smith 2019). On the one hand, military expenditure has a positive impact on economic growth, with fiscal expansion and higher aggregate demand increasing employment and output, if there is spare capacity. On the other hand, military expenditure reduces economic growth by misallocating resources and crowding out investments in the productive areas of education and health, thus reducing the long-term productive capacity of the economy. Gender inequality plays a key role in the latter mechanism. Both feminist and neoclassical economics have long examined the impact of gender inequality on economic growth (Klasen 2002; Stotsky 2006; Berik and Rodgers 2008; Braunstein 2008; Nallari and Griffith 2011; Elborgh-Woytek et al. 2013; Cuberes and Teignier 2014; Benería et al. 2016; Onaran 2017). Extensive literature has underscored the significant relationship between women's empowerment, the increase in women's bargaining power within the household, and (human) development (Hashemi et al. 1996; Phipps and Burton 1998; Kabeer 2001; Quisumbing and Maluccio 2003; Duflo 2003, 2012; Duflo and Udry 2004; Pitt et al. 2006; Morrison and Sinha 2007; Himmelweit et al. 2013; Buvinic and O'Donnell 2019; Onaran et al. 2022a).

According to neoclassical theory, gender inequality affects growth both directly and indirectly (Klasen 1999). The direct effect is realized through labour markets. Gender inequality reduces productivity in the economy by failing to reach the entire talent pool – the so-called 'selection-distortion effect'. As Boschini (2003) showed, systematic gender disparities in investment in education can be inefficient because of selection distortion (Berik at al. 2009) That is, a higher

female labour participation rate benefits the economy more than simply having more workers, because women enrich the workplace by bringing new skills, different risk preferences and incentives, and challenging obsolete social norms (Ostry et al. 2018).

The indirect effect of gender inequality is realized through family relations. Gender inequality perpetuates women's limited access to education and economic opportunities, which in turn prevent them from investing in their children, reducing human capital in future generations, thereby reducing productivity. Conversely, higher female education and income strengthens women's household bargaining power (Klasen 1999). This, in turn, reduces fertility rates, allowing more investment per child (Haddad et al. 1997). Many studies have shown that gender equality leads to higher growth, which in turn reduces gender gaps in participation in paid work, education, and health (Hill and King 1995; Dollar and Gatti 1999; Klasen 2002; Knowles et al. 2002; Esteve-Volart 2004; Berik et al. 2009; Chakraborty et al. 2019).

Microeconomic studies generally show that household needs are met more from women's than men's income, whereas men tend to spend their earnings on expensive or luxury goods (Blumberg 1991; Antonopoulos et al. 2010; Onaran et al. 2022a,2022b).

Consequently, increasing women's income may increase household investments on children's education and well-being (Vogler and Pahl, 1994; Lundeberg et al. 1997; Cappellini et al 2014) and also change household power dynamics (Vogler and Pahl 1994). Kabeer (1997) and Seguino (2010; 2012) note that women in developing countries are more likely to consume domestically produced goods, whereas men tend to consume more luxury and/or imported goods (Onaran et al. 2022a,2022b). Thus, increasing women's income has two effects: first, it reduces current poverty and boosts short-term economic growth due to higher consumption spending; second, it reduces future poverty and stimulates long-term growth via higher savings, because women have a higher marginal propensity to consume to improve the well-being of household members, particularly children (Seguino and Floro 2003; Morrison et al. 2007). Micro-level studies underscore that increasing women's income through greater access to education and employment improves quality of life and strengthens the workforce in the long term (Kabeer 2003; Quisumbing 2003).

To sum up, militarization leads to gender inequality, which in turn affects economic growth. Higher military spending reduces the productive capacity of the economy in the long run, by exacerbating gender inequality. The proposed structural theoretical model analyses this mechanism, slightly adapting the model suggested by Onaran et al. (2022a) to examine the effect of military spending on economic growth through gender inequality.

Onaran et al. (2022a) provide a feminist post-Keynesian/post-Kaleckian demand-led growth model. This three-sector model includes both public and private physical and social sectors (health, social care, education, childcare), and an unpaid reproductive sector for short and long-run analyses. The model provides the most comprehensive theoretical framework for analysing the effects of public spending on social infrastructure and decreasing gender wage gaps – particularly in the female-dominated social sector. The model allows analysis of the differential effects of changes in the gender wage gap and public spending in social or physical infrastructure. These changes affect the demand side of the economy in both the short and long run, and the supply side in the long run, changing output, productivity, and male and female employment and income. The model thus integrates i) the impact of gender inequality; ii) the impact of fiscal policies, particularly the effects of government expenditure on social versus physical infrastructure, and different types of taxation; iii) both the demand- and supply-side effects; and iv) effects on both output and employment.

The model introduced in this paper in Appendix 2 is a two-sector (e.g., civilian and military sector) version of Onaran et al. (2022a) to examine the impact of gender gaps in employment and income on economic growth. It suggests that both civilian government spending and military spending will have a direct positive effect on aggregate output in the short run. However, the long-term effect of an increase in the military sector might be lower than that of the civilian sector for two reasons: the female share of employment in the military sector is smaller than the one in the civilian sector and – as micro-level studies show – women tend to spend a larger share of their income on education and healthcare compared to men, which in turn increases the productive capacity of the economy by increasing human capital, as discussed above.

An increase in the military sector will affect the aggregate output via consumption in the civilian sector, private investment, and the multiplier effect. Any increase in the military sector will increase the aggregate output by boosting consumption. However, such an increase may crowd out private investment if public debt as a ratio of GDP, D/Y, increases in the short run, due to an increase in interest rates, when investment is sensitive to interest rates. Therefore, if the increase in aggregate output (i.e., GDP) is higher than the increase in debt, an increase in the military sector may lead to a decline in D/Y. Also, an increase in the military sector may increase productivity through a spill-over effect on the civilian sector. However, it is plausible to argue that such an effect would be at best negligible due to advances in many civilian technologies in the 1990s spilling over from the civilian to the military sector. The key issue is that, if the increase in GDP due to an increase in aggregate demand cannot offset the increase in debt, then the negative impact of increase in D/Y in the short run will be prolonged in the medium run. Finally, the type of military spending, whether in the form of an increase in employment or of more arms purchases, may have differential impacts. Also, whereas arms importing will have a detrimental impact on the balance of payments, producing arms in the domestic economy for export is likely to boost the economy and profit rates (Elveren 2019).[2]

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[2]   Several quantitative studies have investigated the impact of war on women's access to economic and political resources (Hudson et al. 2012; Peksen 2011; Plümper and Neumayer 2006), or the effect of women's parliamentary representation on military expenditure (Caprioli 2003; Caprioli and Boyer 2001; Hughes and Paxton 2019). However, only two studies have examined the effect of militarization on gender inequality (Elveren and Moghadam 2019 and Elveren et al. forthcoming.

2.2.

METHOD

The hypotheses outlined above, are tested using data from over 150 countries for 1990-2019, for the largest data set possible. The impact of military spending on gender inequality and the female labourforce participation rate is analysed usingseveral different panel estimation methods, including pooled ordinary least square (OLS), fixed effect, two-stage least square (IV-2SLS), seemingly unrelated models (see the Appendix 1), and autoregressive distributed lag (ARDL).

The primary dependent variable is the UNDP's Gender Inequality Index (GII). The analysis also focuses on components of the GII, including the female labour force participation rate, the proportion of women parliamentarians, the adolescent fertility rate, and the maternal mortality ratio. Moreover, acknowledging that using more direct measures of patriarchal institutions, such as property rights, divorce laws, and the prevalence of violence, better serves the purposes of this analysis, the OECD's Social Institutions and Gender Inequality index (SIGI) is also used to emphasize the cross-sectional dimension of the relationship in question. Except for SIGI, whose variables are only available for 2009, 2012, 2014, and 2019, the other dependent variables allow for the use of different methods to better account for the time dimension. Finally, as a robustness check, the Gender Development Index (GDI) is used as an alternative dependent variable.

The primary militarization variable is the Global Militarization Index (GMI), computed by the Bonn International Center for Conversion. This index draws on three elements of militarization: military expenditure, military personnel, and heavy weapons. The military in politics *(milinpol)* variable is also used, taken from the PRS Group's International Country Risk Guide (ICRG) data set.[3] Military spending as a share of GDP and military spending as a share of government spending are also used, both from the Stockholm International Peace Research Institute (SIPRI), the standard source of military spending data.

Finally, alternative variables are included to control for economic development, conflict, and democracy level. GDP per capita (PPP, constant 2011 international $US) is used, obtained from the World Development Indicators. There are three conflict variables: the primary conflict variable, named *conflict*, is from the UCDP/PRIO Armed Conflict Dataset Version 18.1. The categories "interstate armed conflict which occurs between

two or more states" and "internationalized internal armed conflict which occurs between the government of a state and one or more internal opposition group(s) with intervention from other states (secondary parties) on one or both sides" are considered as major conflicts (e.g., wars), as they may have more significant negative impacts than other types of conflicts. Also, it is reasonable to assume that the impact of other minor conflicts will be captured by increasing military expenditure during the times of conflict. The alternative conflict variables for the robustness check, named *internal conflict* and *external conflict*, are taken from the PRS Group's International Country Risk Guide (ICRG) data set. The variable of internal conflict is "an assessment of political violence in the country and its actual or potential impact on governance" (PRS 2012). The variable of external conflict is "an assessment both of the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc.) to violent external pressure (cross-border conflicts to all-out war)" (PRS 2012). *Polity2* is used to measure the level of democracy, taken from the POLITY™ IV Project. The variable ranges from -10 to +10. The higher the number, the higher the level of democracy, with -10 referring to the most autocratic regime and +10 referring to the most democratic regime. The variable *parliament* is used as an alternative democracy variable, from the Anckar and Fredriksson Data Set for political regimes.

Analyses are repeated both for the alternative dependent and alternative militarization variables, such as GMI, military in politics, and military spending as a share of GDP, as well as alternative conflict and democracy variables.

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3   Note that a higher level of milinpol represents a lower role of the military in politics.

2.3

FINDINGS

Using various variables and methods, the study provides clear evidence on the relationship between militarization and gender inequality (see Appendix 3).

2.3.1

Hypothesis 1

Militarization leads to higher gender inequality and lower female labour force participation.

The hypothesis holds (see Table 1 and Table 2). The disproportionate defence budget characteristic of militarization comes at the expense of investments in social spending programs, the basic trade-off of the budget. Thus, militarization is likely to increase gender inequality, because women are disproportionally reliant on welfare programs. Furthermore, in militarized societies, gender equality is ignored or placed near the bottom of the government's social agenda. By reinforcing patriarchal relations, militarization is also

likely to create an economic environment with fewer job opportunities for women, thereby depressing the female labour force participation. Finally, the findings suggest that war and conflict are likely to increase gender inequality. These results are consistent for different model specifications and country groups. That is, militarization may increase gender inequality directly by crowding out social expenditures and indirectly by sustaining gender norms that reinforce women's subordinate status in the society. This finding is consistent with the suggestions of feminist security studies and feminist political economy literature (inter alia Plümper and Neumayer 2006; Sjoberg and Via 2010; True 2012).

TABLE A1:

Fixed Effects Results (Dependent Variable is GII)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Islamic)	Model 6 (MENA)
GMI	0.0008***	0.0008***	0.0008***	0.0008***	0.0011***	0.0016***
	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)
GDP per capita	-0.0023	-0.0022	-0.0024	-0.0022	0.0035***	0.0036**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0013)	(0.0015)
conflict	0.0059**	0.0055**	0.0058**	0.0059**	0.0086***	0.0132**
	(0.0024)	(0.0024)	(0.0024)	(0.0024)	(0.0031)	(0.0056)
polity2	-0.0024*	-0.0025*	-0.0024*	-0.0024*	-0.0009	-0.0021
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0009)	(0.0021)
low income		0.0463***				
		(0.0702)				
middle income			-0.0264**			
			(0.0119)			
high income				-0.0259		
				(0.0201)		
R-sq	0.29	0.31	0.30	0.29	0.21	0.26
Obs.	2986	2986	2986	2986	669	372
Year Fixed Effects	No	No	No	No	No	No

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported. All the analyses are conducted with *externalconflict* instead of *conflict,* which is insignificant.

Fixed Effects Results (Dependent Variable is FLFP)

	Model 1	Model 2	Model 3	Model 4
GMI	-0.0063***	-0.0056**	-0.0060***	-0.0063***
	(0.0022)	(0.0022)	(0.0022)	(0.0022)
GDP per capita	0.2980***	0.2936***	0.2994***	0.2991***
	(0.0176)	(0.0176)	(0.0176)	(0.0178)
conflict	-0.0808	-0.0717	-0.0763	-0.0813
	(0.0562)	(0.0562)	(0.0562)	(0.0563)
polity2	-0.0541**	-0.0532**	-0.0530**	-0.0540**
	(0.0262)	(0.0262)	(0.0262)	(0.0262)
low income		-1.1270***		
		(0.3209)		
middle income			0.8514***	
			(0.2706)	
high income				-0.1942
				(0.5293)
R-sq	0.12	0.12	0.12	0.12
Obs.	3289	3289	3289	3289

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

2.3.2

Hypothesis 2

The worsening impact of militarization on gender inequality is weaker in countries with a higher democracy level.

The hypothesis holds to a certain degree (see Table 3). The level of democracy is significantly associated with lower gender inequality and improving democracy counteracts the negative impact of military spending on gender equality. Societies with higher levels of democracy are more likely to promote gender equality and have smaller military budgets. Regarding the relationship between the level of democracy and militarization, the empirical literature suggests that there is a guns-vs-butter trade- off, which is much more significant for non-democratic than democratic countries (Töngür et al. 2015). Moreover, compared to autocracies, democratic countries are less likely to be involved in wars or other conflicts, and

less likely to alter their allocations between social and military spending in wartime. Considered together, these results indicate that more democratic countries are likely to enjoy higher social spending that largely benefits women, thereby reducing gender inequality.

However, this relationship is not significant in the case of high-income countries, Islamic, or MENA countries. This is because religion and culture, enshrined in conservative family laws that reinforce the male breadwinner model, along with low democracy levels and a heavy economic reliance on oil, offset the potential for economic development to improve women's lives (Moghadam 2003; Elveren and Moghadam 2019).

TABLE A3:

Fixed Effect IV-2SLS Results (Dependent Variable is GII)

	Model 1	Model 2	Model 3	Model 4
GMI	0.0010***	0.0009***	0.0009***	0.0011***
	(0.0000)	(0.0000)	(0.0001)	(0.00005)
GDP per capita	-0.0019***	-0.0024***	-0.0019***	-0.0022***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
conflict	0.0070***	0.0068***	0.0053*	0.0081***
	(0.0012)	(0.0013)	(0.0032)	(0.0012)
polity2	-0.0026***	-0.0028***	-0.0026***	0.0031***
	(0.0005)	(0.0005)	(0.0006)	(0.0011)
GMIGDPcapita		0.0038**		
		(0.0017)		
GMIconflict			0.000009	
			(0.00001)	
GMIpolity2				-0.00004***
				(0.0011)
Obs.	2880	2880	2880	2880

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

2.3.3

Hypothesis 3

The worsening impact of militarization on gender inequality is weaker in high-income countries and stronger in low-income countries.

The findings confirm the hypothesis (see Table 3). A higher level of economic development generates more paid work opportunities for women, counteracting the negative impact of military spending on gender equality. This finding also suggests that the opportunity cost of military spending is larger in low-income countries. In otherwords, even if high-income countries spend large amounts on the military, they can still afford a high level of social spending, whereas the negative impact of military spending on socio-economic indicators is more significant in countries with limited resources. Higher income levels are oftentimes correlated with greater gender equality. However, considering Hypothesis 2, it is worth noting that – beyond affluence – legislature, institutions, and culture also matter.

2.3.4

Hypothesis 4

A higher representation of women in the legislature or executive branches of government leads to lower defence spending.

The results confirm and strengthen the finding that a higher representation of women in the parliament and other executive branches may reduce gender inequality by encouraging social spending and reducing militarization (see Table 4). The findings show a highly significant association between increasing women's share of parliament seats and less militarization. Some empirical studies show that women are more likely than men to initiate and pass laws that benefit women and children (Caprioli and Boyer 2001; Hughes and Paxton 2019; Elveren and Moghadam 2019). It is also true that countries with higher female political representation are less likely to be involved in conflict (Hudson et al. 2012). However, it is important to note that increasing women's representation in parliament does not automatically lead to such outcomes. When women themselves adopt male-biased gender roles and continue "masculine" behaviours or are selected by their male superiors just to fulfil female leadership quotas, then the effect on policy outputs remains limited. That is, the level of democracy is critical to realize the positive impact of increasing women's representation in the legislature and executive.

	Model 1		Model 2		
	GII	GMI	GII	GMI	women seats
GMI	0.0036***		0.0032***		
	(0.00003)		(0.00003)		
GDP per capita	-0.00003***		-0.00003***		
	(0.0000)		(0.0001)		
military in politics		-4.372***		-4.402***	
		(0.4392)		(0.470)	
conflict		11.209***		12.804***	
		(1.518)		(1.667)	
women seats		-1.0419***		-5.167***	
		(0.0535)		(0.0585)	
polity2		-2.2561***			0.6312***
		(0.1040)			(0.0221)
Obs.	2267	2267	2267	2267	2267
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Overall, the findings suggest four main mechanisms through which militarization, represented as disproportionate military spending, interacts with gender inequality (and female labour force participation rate).

i. Higher military spending crowds out social spending, which would otherwise largely benefit women.

ii. Militarism reinforces patriarchal values, thereby perpetuating the gender gap in both the private and public spheres.

iii. The negative impact of military spending on gender equality is lower in wealthy and more democratic countries.

iv. A higher women's representation in parliament is likely to reduce military spending.

APPENDIX I

Two systems of equations are estimated based on the theoretical literature.

$$GII_{i,t} = \beta_{1_0} + \beta_{1_1} GMI_{i,t} + \sum_{k=2}^{n} \beta_{1_k} X_{k_{i,t}} + \theta_i + \emptyset_t + \varepsilon_{1_{i,t}}$$

$$GMI_{i,t} = \beta_{2_0} + \sum_{k=1}^{n} \beta_{2_k} Z_{k_{i,t}} + \delta_i + \gamma_t + \varepsilon_{2_{i,t}}$$

where θ_i and δ_i refer to country dummies, $\emptyset_t$ and γ_t refer to year dummies, $X_{k_{i,t}}$ stands for exogenous variables that potentially affect the GII, and $Z_{k_{i,t}}$ accounts for exogenous variables that create variance in the GMI. Country and year dummies are controlled for, if significant.

APPENDIX II: A KALECKIAN-FEMINIST MODEL ON THE NEXUS OF MILITARY SPENDING-ECONOMIC GROWTH

Aggregate output (Y_t) is the sum of the total female wage bill (WB_t^F), the total male wage bill (WB_t^M), and profits (R_t). Throughout the model, the same notations with Onaran et al. (2022a) are used for simplicity.

$$Y_t = WB_t^F + WB_t^M + R_t \tag{1}$$

The total female wage bill (WB_t^F) is a function of female wages in the civilian sector (w_t^{CF}), female employment in the civilian sector (E_t^{CF}), female wages in the military (e.g., non-civilian) sector (w_t^{NF}), female employment in the military sector (E_t^{NF}), and C and N refer to the civilian and the military, respectively. For simplicity, it is assumed that the military sector is totally a public sector.

$$WB_t^F = w_t^{CF}E_t^{CF} + w_t^{NF}E_t^{NF} \tag{2}$$

In a similar manner, the total male wage bill (WB_t^M) is a function of male wages in the civilian sector (w_t^{CM}), male employment in the civilian sector (E_t^{CM}), male wages in the military sector (w_t^{NM}), and male employment in the military sector (E_t^{NM}).

$$WB_t^M = w_t^{CM}E_t^{CM} + w_t^{NM}E_t^{NM} \tag{3}$$

In line with Onaran et al. (2022a) all wage rates are defined in terms of hourly real wages and employment in terms of total hours worked by persons. Referring to hours instead of headcount figures better reflects the high share of women in part-time work.

Since the average wages in both C and N sectors are higher for male workers, gender wage gaps (α_t) for C and N sectors are defined as follows:

$$\alpha_t^C = \frac{w_t^{CM}}{w_t^{CF}} > 1, \ \alpha_t^N = \frac{w_t^{NM}}{w_t^{NF}} > 1 \tag{4}$$

The aggregate output (Y_t) is

$$Y_t = C_t^C + I_t + G_t^C + G_t^N + X_t - M_t \tag{5}$$

C_t^C is the household consumption in the civilian sector, I_t is private investment expenditures[1], G_t^C is government spending in the civilian sector, G_t^N is government spending in the military sector (e.g., military spending), X_t is exports of goods and services, and M_t is imports of goods and services.

Government spending in the military sector is a fiscal policy, targeting as a share of aggregate output κ_t^N, and constitutes the civilian public sector output Y_t^N. Therefore,

$$Y_t^N = G_t^N = \kappa_t^N Y_t \tag{6}$$

$$Y_t^C = Y_t - G_t^N = Y_t(1 - \kappa_t^N) \tag{7}$$

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[1] It is assumed that the share of private military companies in private investment is negligible. In other words, it is assumed that all military spending in the economy is shown by government spending in the military sector.

Hours of employment in both the civilian and the military sector are determined by output and labour productivity in the relevant sectors. Social norms about occupational segregation dramatically influence the total number of hours of employment for men and women in both sectors. The structuralist characteristics of the model suggest that employment is demand-constrained due to excess capacity and involuntary unemployment in the economy, and supply is determined by labour supply behaviour below.

The employment in the civilian sector C is the output over labour productivity sector C (T_t^C)

$$E_t^C = \frac{Y_t^C}{T_t^C} = \frac{(1-\kappa_t^N)Y_t}{T_t^C} \tag{8}$$

The share of female employment in sector C is exogenously determined by occupational segregation resulting from social norms. The share of female is β_t^C and therefore that of male is $(1-\beta_t^C)$:

$$E_t^{CF} = \frac{(1-\kappa_t^N)Y_t}{T_t^C}\beta_t^C = \frac{Y_t^C}{T_t^C}\beta_t^C \tag{9}$$

$$E_t^{CM} = \frac{(1-\kappa_t^N)Y_t}{T_t^C}(1-\beta_t^C) = \frac{Y_t^C}{T_t^C}(1-\beta_t^C) \tag{10}$$

The military sector can be written as a function of employment E_t^N, average female wage w_t^{NF}, average male wage w_t^{NM}, female employment share β_t^N, and male employment share $(1-\beta_t^N)$ in the military sector.

Therefore, G_t^N can be written as follows

$$G_t^N = \kappa_t^N Y_t = \beta_t^N E_t^N w_t^{NF} + (1-\beta_t^N)E_t^N w_t^{NM} + G_t^A \tag{11}$$

$\beta_t^C > \beta_t^N$ and G_t^A is a constant term that refers to spending on arms.

Using (9)-(11) and (4), the total employment E_t^N, female employment E_t^{NF} and male employment E_t^{NM} in the military sector can be written as a function of public military expenditure and female wages in the military sector.

$$E_t^N = \frac{G_t^N}{w_t^{NF}(\beta_t^N+\alpha_t^N-\beta_t^N\alpha_t^N)} = \frac{\kappa_t^N Y_t}{w_t^{NF}(\beta_t^N+\alpha_t^N-\beta_t^N\alpha_t^N)} \tag{12}$$

$$E_t^{NF} = \frac{\beta_t^N\kappa_t^N Y_t}{w_t^{NF}(\beta_t^N+\alpha_t^N-\beta_t^N\alpha_t^N)} \tag{13}$$

$$E_t^{NM} = \frac{(1-\beta_t^N)\kappa_t^N Y_t}{w_t^{NF}(\beta_t^N+\alpha_t^N-\beta_t^N\alpha_t^N)} \tag{14}$$

The profit income (R_t^N) in sector N is the surplus after wage payments

$$R_t^N = Y_t^N - w_t^{NF}E_t^{NF} - w_t^{NM}E_t^{NM} \tag{15}$$

The profit share (π_t^N) is the share of profit in the total output in sector N and it depends on productivity in sector N, therefore:

$$\pi_t^N = \frac{Y_t^N - w_t^{NF}E_t^{NF} - w_t^{NM}E_t^{NM}}{Y_t^N} \tag{16}$$

Similarly, the profit income (R_t^C) in sector C is the surplus after wage payments

$$R_t^C = Y_t(1-\kappa_t^N) - w_t^{CF}E_t^{CF} - w_t^{CM}E_t^{CM} \tag{17}$$

The profit share (π_t^C) is the share of (R) that depends on productivity in sector N, therefore:

$$\pi_t^C = \frac{Y_t(1-\kappa_t^N) - w_t^{CF}E_t^{CF} - w_t^{CM}E_t^{CM}}{Y_t(1-\kappa_t^N)} \tag{18}$$

On the demand-side, household consumption is a function of female and male wage income and profits. Consumption in C depends on the differences in the marginal propensities to consume (MPC) out of female and male wage income and profits. So, household consumption in civilian sector can be written as follows:

$$\log C_t^C = c_0 + c_R \log[R_t^C(1-t_t^R)] + c_F \log[(w_t^{CF}E_t^{CF} + w_t^{NF}E_t^{NF})(1-t_t^W)] +$$

$$c_M \log[(w_t^{CM}E_t^{CM} + w_t^{NM}E_t^{NM})(1-t_t^W)] \tag{19}$$

where t_t^R is the implicit tax rate on profits and t_t^W is the implicit tax rate on wages.

Private investment I_t is a function of the after-tax π^N_t and π^C_t, GDP, and public debt/GDP $\left(\frac{D}{Y}\right)_t$.

$$logI_t = i_0 + i_1 logY_t + i_2 log[\pi^N_t(1-t^R_t)] + i_3 log[\pi^C_t(1-t^R_t)] + i_4 log\left(\frac{D}{Y}\right)_t \qquad (20)$$

The public debt (D_t) is determined by the public debt in the previous period (D_{t-1}), the interest rate (r_{t-1}), plus the total government expenditures in t, minus the taxes collected on profits, wages, and consumption:

$$D_t = (1 + r_{t-1})D_{t-1} + G^C_t + G^N_t - t^W_t(WB^F_t + WB^M_t) - t^R_t(R^C_t + R^N_t)$$
$$- t^C_t C^C_t \qquad (21)$$

where t^C_t is the implicit tax rate on consumption.

Exports are a function of prices of exports relative to foreign prices and foreign income (Y_{world}) and the exchange rate (ε); imports are a function of Y^C and domestic prices relative to import prices. For simplicity, it is assumed that marginal propensity to import is zero. The wage share equals to the real unit labour cost, thereby when the profit share decreases (wage share increases), exports decrease and imports increase. The magnitude of the effect is determined by the pass through from the wage share to nominal unit labour costs and prices, and the price elasticity of exports and imports. For simplicity, exports and imports are defined as reduced form functions of π:

$$logX_t = x_0 + x_1 logY^{world}_t + x_2 log\pi^C_t + x_3 log\pi^N_t + x_4 log\varepsilon_t \qquad (22)$$
$$logM_t = n_0 + n_1 logY^C_t + n_2 log\pi^C_t + n_3 log\pi^N_t + n_4 log\varepsilon_t \qquad (23)$$

The Effect of Expanding Military Sector on Total Output

$$\Psi^k_{tt} = \frac{dY_t}{d\kappa^N_t} = \frac{dY_t}{dY^C_t}\frac{dY^C_t}{d\kappa^N_t} + \left|\frac{dY_t}{d\kappa^N_t}\right|_{Y_t} \qquad (24)$$

$$\Psi^k_{tt} = \frac{1}{(1-\kappa^N_t)}\left[\frac{\left|\frac{\partial C^C}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial I}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial G^C}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial G^N}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial X_t}{\partial\kappa^N_t}\right|_{Y^N_t} - \left|\frac{\partial M_t}{\partial\kappa^N_t}\right|_{Y_t}}{(1-\varphi_k)}\right] + Y_t \qquad (25)$$

Where

$$\frac{dY^C_t}{d\kappa_t} = \frac{\left|\frac{\partial C^C_t}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial I_t}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial G^C_t}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial G^N}{\partial\kappa^N_t}\right|_{Y^N_t} + \left|\frac{\partial X_t}{\partial\kappa^N_t}\right|_{Y^N_t} - \left|\frac{\partial M_t}{\partial\kappa^N_t}\right|_{Y_t}}{(1-\varphi_k)} \qquad (26)$$

$$\varphi_k = \left|\frac{\partial C^C_t}{\partial Y^C_t}\right|_{\kappa^N_t}\frac{1}{\partial Y^N_t}\Big|_{\kappa^N_t} + \left|\frac{\partial I_t}{\partial Y^N_t}\right|_{\kappa^N_t} + \left|\frac{\partial G^C_t}{\partial Y^N_t}\right|_{\kappa^N_t} + \left|\frac{\partial G^N_t}{\partial Y^N_t}\right|_{\kappa^N_t}\frac{1}{\partial Y^N_t}\Big|_{\kappa^N_t} - \left|\frac{\partial M_t}{\partial Y^N_t}\right|_{\kappa_t} \qquad (27)$$

For a constant output in C, the partial impact of an increase in κ^N_t on female and male employment in N and C are shown as follows:

$$e^{NF}_{kt} = \left|\frac{\partial E^{NF}_t}{\partial\kappa^N_t}\right|_{Y^C_t} = \frac{\beta^N_t Y^C_t}{w^{NF}_t(\beta^N_t + \alpha^N_t - \beta^N_t\alpha^N_t)}\frac{1}{(1-\kappa^N_t)^2} > 0 \qquad (28)$$

$$e^{NM}_{kt} = \left|\frac{\partial E^{NM}_t}{\partial\kappa^N_t}\right|_{Y^C_t} = \frac{(1-\beta^N_t)Y^C_t}{w^{NF}_t(\beta^N_t + \alpha^N_t - \beta^N_t\alpha^N_t)}\frac{1}{(1-\kappa^N_t)^2} > 0 \qquad (29)$$

$$e^{CF}_k = 0 \qquad (30)$$

$$e^{CM}_k = 0 \qquad (31)$$

For simplicity, it is assumed that an increase in κ_t^N does not have any effect on profit rates, neither in C nor in N.

The effect of an increase in κ_t^N on consumption is as follows:

Since $e_{kt}^{CF} = 0$ and $e_{kt}^{CM} = 0$
$$\left| \partial \frac{C_t^C}{\partial \kappa_t^N} \right|_{\frac{C}{Y_t}} = C_t^C \left(c_F \frac{e_{kt}^{CF} w_t^{CF}}{WB_t^F} + c_M \frac{e_{kt}^{CM} w_t^{CM}}{WB_t^M} \right) = 0 \qquad (32)$$

$$\left| \frac{\partial I_t}{\partial \kappa_t^N} \right|_{\frac{C}{Y_t}} = I_t \left(i_1 \frac{1}{1-\kappa_t^N} + i_2 \frac{d_{tt}^k}{\left(\frac{D}{Y}\right)_t} \right) \qquad (33)$$

Where

$$d_{tt}^k = \left| \frac{\partial \left(\frac{D}{Y}\right)_t}{\partial \kappa_t^N} \right|_{Y_t^C} = \left| \frac{\partial D_t}{\partial \kappa_t^N} \right| \frac{1}{Y_t^C} \quad \frac{1}{1-\kappa_t^N} \frac{D_t}{Y_t} \qquad (34)$$

$$\left| \frac{\partial D}{\partial \kappa_t^N} \right|_{Y_t^C} = \frac{Y_t}{1-\kappa_t^N} - t_t^W w_t^{NF} (\alpha^N e_{tk}^{NM} + e_{kt}^{NF}) \qquad (35)$$

For a constant output in C, the impact of κ_t^N on exports and imports is zero:

$$\left| \frac{\partial X_t}{\partial \kappa_t^N} \right|_{\frac{C}{Y_t}} = 0 \qquad (36)$$

$$\left| \frac{\partial M_t}{\partial \kappa_t^N} \right|_{\frac{C}{Y_t}} = 0 \qquad (37)$$

APPENDIX III

Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
fertility	4,560	58.80	47.85	1.26	223.69
mortality	2,736	197.26	306.67	2	2480
femalelabourforce	4,530	49.96	16.29	6	90.77
womenseat	3,409	18.45	11.57	0	63.75
gdi	1,860	0.92	0.08	0.32	1.05
gii	3,750	0.40	0.20	0.02	0.83
rgdp	4,544	3.91E+11	1.39E+12	3.22E+08	1.83E+13
gdppercap	4,541	12700.81	18330.6	164.33	112077.6
internalconf	3,688	9.16	2.02	0	12
externalconf	3,688	10.01	1.57	0	12
conflict	4,161	0.17	0.38	0	1
polity2	4,087	3.91	6.29	-10	10
milinpol	3,688	3.95	1.69	0	6
milexindex	4,236	1.35	0.70	0	8
milexpersonindex	4,236	0.84	0.52	0	4.02
heavyindex	4,236	1.20	0.86	0	4
gmi	4,236	172.27	86.73	2	661
milex	4,183	2.20	2.73	0	117.34
milexbud	3,729	7.47	6.41	0	57.47

Fixed Effects Results (Dependent variable is GII, with milex)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Islamic)	Model 6 (MENA)
milex	0.021***	0.021***	0.021***	0.021***	0.017	0.020
	(0.007)	(0.007)	(0.007)	(0.007)	(0.012)	(0.014)
GDP per capita	-0.004***	-0.004**	-0.004**	-0.004**	0.003	0.005
	(0.002)	(0.002)	(0.002)	(0.002)	(0.009)	(0.007)
externalconf	0.008***	0.007***	0.008***	0.007***	0.011	0.027**
	(0.003)	(0.002)	(0.002)	(0.003)	(0.008)	(0.012)
polity2	-0.004***	-0.004***	-0.004***	-0.004***	-0.003	-0.005
	(0.0013)	(0.001)	(0.001)	(0.001)	(0.002)	(0.006)
low income		0.056***				
		(0.010)				
middle income			-0.033***			
			(0.011)			
high income				-0.029		
				(0.018)		
R-sq	0.22	0.25	0.23	0.22	0.06	0.11
Obs.	2930	2930	2930	2930	644	358

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effects Results (Dependent variable is GII, with milinpol)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Islamic)	Model 6 (MENA)
milinpol	-0.004	-0.004	-0.004	-0.004	-0.006	0.001
	(0.005)	(0.005)	(0.005)	(0.005)	(0.013)	(0.022)
GDP per capita	-0.004*	-0.004*	-0.004*	-0.004*	0.007	0.008
	(0.002)	(0.002)	(0.002)	(0.002)	(0.008)	(0.007)
externalconf	0.006**	0.006**	0.006**	0.006**	0.008	0.016
	(0.003)	(0.002)	(0.002)	(0.003)	(0.006)	(0.011)
polity2	-0.005***	-0.005***	-0.005***	-0.005***	-0.003	-0.005
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
low income		0.062***				
		(0.009)				
middle income			-0.036***			
			(0.011)			
high income				-0.037*		
				(0.018)		
R-sq	0.12	0.16	0.14	0.12	0.07	0.11
Obs.	3084	3084	3084	3084	700	400

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effects Results (Dependent variable is womenseat)

	Model 1	Model 2	Model 3	Model 4
GMI	-0.088***	-0.086***	-0.087***	-0.088***
	(0.019)	(0.019)	(0.019)	(0.019)
GDP per capita	0.2976*	0.281*	0.302*	0.290*
	(0.166)	(0.164)	(0.167)	(0.169)
externalconf	-1.065***	-0.991***	-1.028***	-1.061***
	(0.307)	(0.302)	(0.306)	(0.306)
polity2	0.3559**	0.375**	0.367**	0.355**
	(0.1530)	(0.152)	(0.152)	(0.152)
low income		-3.036**		
		(1.262)		
middle income			1.817	
			(1.107)	
high income				0.941
				(1.999)
R-sq	0.20	0.21	0.20	0.20
Obs.	2476	2476	2476	2476

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effects Results (Dependent variable is fertility, with conflict)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Low)	Model 6 (Middle)	Model 7 (High)	Model 8 (Islamic)	Model 9 (MENA)
GMI	0.104***	0.099***	0.102***	0.103***	0.088*	0.041	0.086***	0.120*	0.222***
	(0.026)	(0.026)	(0.026)	(0.025)	(0.049)	(0.034)	(0.023)	(0.066)	(0.059)
GDP per capita	-0.261**	-0.221**	-0.267**	-0.246**	-7.583***	-2.081***	-0.097***	-0.403	-0.486
	(0.116)	(0.108)	(0.117)	(0.114)	(1.813)	(0.414)	(0.072)	(0.418)	(0.307)
conflict	-0.681	-0.677	-0.684	-0.677	-0.884	1.554	-6.382	0.349	-3.892
	(1.866)	(1.874)	(1.864)	(1.870)	(2.208)	(1.358)	(4.791)	(2.837)	(3.459)
polity2	-0.782***	-0.809***	-0.802***	-0.781***	-0.688**	-0.274	0.201	-0.732	-0.355
	(0.248)	(0.247)	(0.248)	(0.248)	(0.282)	(0.471)	(1.736)	(0.442)	(0.357)
low income		7.883***							
		(2.598)							
middle income			-4.959**						
			(2.168)						
high income				-2.329					
				(3.063)					
R-sq	0.15	0.16	0.15	0.15	0.20	0.42	0.23	0.12	0.34
Obs.	3622	3622	3622	3622	1948	707	967	915	413

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effects Results (Dependent variable is mortality)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Low)	Model 6 (Middle)	Model 7 (High)	Model 8 (Islamic)	Model 9 (MENA)
GMI	0.618**	0.611**	0.615**	0.621**	0.981*	0.054	0.033***	0.231	0.269**
	(0.277)	(0.278)	(0.278)	(0.278)	(0.551)	(0.074)	(0.009)	(0.244)	(0.096)
GDP per capita	-0.478	-0.315	-0.469	-0.575	-39.31***	-4.339***	-0.082**	-1.666	-0.586**
	(0.655)	(0.637)	(0.648)	(0.657)	(11.723)	(1.155)	(0.039)	(1.095)	(0.251)
conflict	16.680	16.919	16.861	16.659	22.322	-0.351	0.735	19.082	-15.294
	(20.022)	(20.013)	(20.006)	(20.019)	(23.805)	(1.909)	(0.494)	(33.936)	(10.431)
polity2	-6.896**	-6.999**	-7.004**	-6.908**	-7.321**	-1.929	0.172	-8.320	-0.809
	(2.879)	(2.875)	(2.876)	(2.880)	(3.619)	(1.872)	(0.376)	(5.157)	(0.965)
low income		18.554*							
		(10.242)							
middle income			-16.342**						
			(7.668)						
high income				11.851					
				(7.315)					
R-sq	0.06	0.06	0.06	0.06	0.12	0.17	0.27	0.05	0.26
Obs.	2330	2330	2330	2330	1181	502	647	590	277

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

TABLE 2F:

Fixed Effects Results (Dependent variable is GDI)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Low)	Model 6 (Middle)	Model 7 (High)	Model 8 (Islamic)	Model 9 (MENA)
GMI	-0.0002**	-0.0001**	-0.0001**	-0.0001**	-0.0001	-0.0001*	-0.0002***	-0.0001	-0.0001
	(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0001)	(0.0002)
GDP per capita	0.001*	0.0007*	0.0008**	0.0008*	0.021***	0.004***	0.0001	0.005**	0.003
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.006)	(0.001)	(0.0001)	(0.002)	(0.002)
externalconf	-0.002	-0.0014	-0.0016	-0.0017	0.0002	-0.002	0.002*	-0.002	-0.004
	(0.002)	(0.0021)	(0.002)	(0.0021)	(0.004)	(0.002)	(0.001)	(0.006)	(0.005)
polity2	0.0012	0.0013	0.0013	0.0012*	0.002	-0.001	0.006***	0.002	0.001
	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
low income		-0.015**							
		(0.005)							
middle income			0.009*						
			(0.004)						
high income				0.0023					
				(0.005)					
R-sq	0.10	0.12	0.11	0.10	0.22	0.39	0.58	0.28	0.07
Obs.	1361	1361	1361	1361	569	366	906	426	193

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

TABLE 3A:

Fixed Effect IV-2SLS Results (Dependent variable is labourforce)

	Model 1	Model 2	Model 3	Model 4
GMI	-0.0072***	0.0071**	-0.0103	-0.0140***
	(0.0026)	(0.0029)	(0.0103)	(0.0028)
GDP per capita	0.3060***	0.4538***	0.3063***	0.3321***
	(0.0192)	(0.0230)	(0.0192)	(0.0194)
externalconf	-0.0777	-0.0389	-0.1311	-0.1168
	(0.0759)	(0.0745)	(0.1824)	(0.0755)
polity2	-0.0729**	-0.0365	-0.0726**	-0.3743***
	(0.0333)	(0.0329)	(0.0333)	(0.0576)
GMIGDPcapita		-1.1651**		
		(0.1047)		
GMIexternalconf			0.0003	
			(0.0009)	
GMIpolity2				0.0021***
				(0.0003)
Obs.	3158	3158	3158	3158

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

TABLE 3B:

Fixed Effect IV-2SLS Results (Dependent variable is womenseat)

	Model 1	Model 2	Model 3	Model 4
GMI	-0.097***	-0.093***	-0.190***	-0.107***
	(0.006)	(0.007)	(0.024)	(0.007)
GDP per capita	0.277***	0.308***	0.271***	0.304***
	(0.044)	(0.059)	(0.044)	(0.045)
externalconf	-1.403***	-1.403***	-3.022***	-1.421***
	(0.192)	(0.192)	(0.437)	(0.192)
polity2	0.399***	0.403***	0.401***	-0.021
	(0.078)	(0.078)	(0.077)	(0.158)
GMIGDPcapita		-0.177**		
		(0.223)		
GMIexternalconf			0.009***	
			(0.002)	
GMIpolity2				0.003***
				(0.001)
Obs.	2454	2454	2454	2454

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effect IV-2SLS Results (Dependent variable is fertility)

	Model 1	Model 2	Model 3	Model 4
GMI	0.134***	0.149***	0.181***	0.133***
	(0.008)	(0.008)	(0.030)	(0.008)
GDP per capita	-0.135**	0.024	-0.139**	-0.132**
	(0.057)	(0.069)	(0.056)	(0.057)
externalconf	-0.276	-0.234	0.522	-0.279
	(0.223)	(0.222)	(0.536)	(0.224)
polity2	-0.897***	-0.858***	-0.902***	-0.923***
	(0.098)	(0.098)	(0.098)	(0.171)
GMIGDPcapita		-1.251***		
		(0.313)		
GMIexternalconf			-0.005	
			(0.003)	
GMIpolity2				0.0002
				(0.0009)
Obs.	3158	3158	3158	3158

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effect IV-2SLS Results (Dependent variable is mortality)

	Model 1	Model 2	Model 3	Model 4
GMI	0.577***	0.801***	2.323***	0.484***
	(0.084)	(0.103)	(0.351)	(0.091)
GDP per capita	-0.468	2.056**	-0.219	-0.141
	(0.674)	(0.948)	(0.670)	(0.684)
externalconf	0.868	0.985	32.521***	0.853
	(2.889)	(2.880)	(6.588)	(2.887)
polity2	-9.371***	-9.011***	-9.431***	-15.013***
	(1.174)	(1.175)	(1.163)	(2.335)
GMIGDPcapita		-12.001***		
		(3.079)		
GMIexternalconf			-0.174***	
			(0.034)	
GMIpolity2				0.032***
				(0.011)
Obs.	2146	2146	2146	2146

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

TABLE 3E:

Fixed Effect IV-2SLS Results (Dependent variable is GDI)

	Model 1	Model 2	Model 3	Model 4
GMI	-0.0002***	-0.0003***	-0.0005***	-0.0002***
	(0.0000)	(0.0000)	(0.0001)	(0.0000)
GDP per capita	0.0005**	0.0002	0.0005**	0.0005**
	(0.0002)	(0.0003)	(0.0002)	(0.0002)
externalconf	-0.004***	-0.004***	-0.009***	-0.004***
	(0.001)	(0.001)	(0.002)	(0.001)
polity2	0.0017***	0.0017***	0.0017***	0.002***
	(0.0003)	(0.0003)	(0.0003)	(0.0007)
GMIGDPcapita		0.003**		
		(0.001)		
GMIexternalconf			0.00003***	
			(0.0000)	
GMIpolity2				-0.00002
				(0.00003)
Obs.	1353	1353	1353	1353

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

TABLE 3F:

Fixed Effect IV-2SLS Results (Dependent variable is GII, with milex)

	Model 1	Model 2	Model 3	Model 4
milex	0.032***	0.080***	0.015	0.031***
	(0.002)	(0.005)	(0.010)	(0.002)
GDP per capita	-0.003***	-0.001*	-0.003***	-0.003***
	(0.0003)	(0.0004)	(0.0003)	(0.0003)
externalconf	0.010***	0.014***	0.006**	0.009***
	(0.001)	(0.002)	(0.003)	(0.001)
polity2	-0.005***	-0.004***	-0.005***	-0.006***
	(0.0005)	(0.001)	(0.001)	(0.001)
GMIGDPcapita		-0.001***		
		(0.0001)		
GMIexternalconf			0.002*	
			(0.001)	
GMIpolity2				0.005**
				(0.0002)
Obs.	2813	2813	2813	2813

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Fixed Effect IV-2SLS Results (Dependent variable is GII, with milinpol)

	Model 1	Model 2	Model 3	Model 4
milinpol	-0.005**	-0.010***	-0.019**	-0.003
	(0.002)	(0.002)	(0.008)	(0.002)
GDP per capita	-0.004***	-0.008***	-0.004***	-0.004***
	(0.0003)	(0.001)	(0.0003)	(0.0003)
externalconf	0.007***	0.007***	0.002	0.007**
	(0.001)	(0.001)	(0.003)	(0.001)
polity2	-0.006***	-0.005***	-0.006***	-0.004***
	(0.0006)	(0.001)	(0.001)	(0.001)
milinpolGDPcapita		0.0007***		
		(0.0002)		
milinpolexternalconf			0.001*	
			(0.001)	
milinpolity2				-0.0006**
				(0.0003)
Obs.	2983	2983	2983	2983

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

System Estimations (with milex)

	Model 1		Model 2		
	GII	milex	GII	milex	women seats
milex	0.089***		0.078***		
	(0.002)		(0.00003)		
GDP per capita	-0.005***		-0.005***		
	(0.0001)		(0.0001)		
military in politics		-0.038**		-0.018	
		(0.015)		(0.470)	
conflict		0.602***		0.671***	
		(0.056)		(0.060)	
women seats		-0.031***		-0.186***	
		(0.002)		(0.002)	
polity2	0.089***	-0.089***			0.633***
	(0.002)	(0.004)			(0.021)
Obs.	2231	2231	2231	2231	2231
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

System Estimations (with labourforce)

	Model 1		Model 2		
	labourforce	GMI	labourforce	GMI	women seats
GMI	-0.107***		-0.080***		
	(0.004)		(0.003)		
GDP per capita	0.057***		0.019		
	(0.014)		(0.013)		
military in politics		17.846***		18.022***	
		(1.032)		(1.030)	
conflict		43.528***		43.231***	
		(4.045)		(4.166)	
women seats		-1.595***		-10.197***	
		(0.143)		(0.144)	
polity2		-5.046***			0.623***
		(0.264)			(0.023)
Obs.	2378	2378	2378	2378	2378
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

System Estimations (with GDI)

	Model 1		Model 2		
	GDI	GMI	GDI	GMI	women seats
GMI	-0.0008***		-0.0007***		
	(0.0000)		(0.0000)		
GDP per capita	0.0006***		0.0007***		
	(0.0000)		(0.0000)		
military in politics		3.898***		4.296***	
		(1.122)		(1.124)	
conflict		37.491***		38.225***	
		(4.073)		(4.167)	
women seats		-0.947***		-8.984***	
		(0.140)		(0.143)	
polity2		-4.552***			0.586***
		(0.281)			(0.029)
Obs.	1199	1199	1199	1199	1199
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

System Estimations (alternative model)

	GII	Military in Politics	GMI	women seats
military in politics	-0.1220***			
	(0.0016)			
GMI		-0.0233***		
		(0.0003)		
women seats			-8.2835***	
			(0.0661)	
polity2				0.5846***
				(0.0165)
Obs.	2369	2369	2369	2369

Standard errors are in parentheses. ***, **, * denote 1, 5, and 10% confidence levels, respectively. In all regressions, a constant is also included but not reported.

Pooled OLS Estimation Results (Dependent variable is SIGI)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7 (Low)	Model 8 (Middle)	Model 9 (High)	Model 10 (Islamic)	Model 11 (MENA)
Milex	1.186*	1.964**	1.304*	1.529**	1.040*	1.261*	3.345**	-1.121	2.343**	2.317*	2.697
	[0.453]	[0.442]	[0.510]	[0.357]	[0.355]	[0.458]	[0.992]	[0.487]	[0.427]	[0.943]	[1.967]
GDPcap	-2.885**	-1.577	-3.097***	-1.578	-3.052**	-3.606***	-11.307	2.859	-1.149	-3.822	-0.575
	[0.586]	[1.044]	[0.508]	[0.786]	[0.607]	[0.602]	[7.291]	[7.983]	[1.017]	[2.682]	[2.133]
Conflict	0.039**	0.037**	0.038**	0.039**	0.046**	0.055**	0.012	0.101	0.011	0.091*	0.052
	[0.009]	[0.010]	[0.008]	[0.010]	[0.014]	[0.012]	[0.031]	[0.051]	[0.008]	[0.032]	[0.043]
Democ	-0.009***	-0.006**	-0.009***	-0.008***			0.001	-0.018*	-0.009***		
	[0.000]	[0.001]	[0.000]	[0.000]			[0.002]	[0.006]	[0.000]		
Low		0.093**									
		[0.016]									
Middle			-0.037								
			[0.017]								
High				-0.066***							
				[0.008]							
Islamic					0.097***						
					[0.011]						
Mena						0.079*					
						[0.034]					
2012	0.123***	0.127***	0.123***	0.127***	0.118***	0.121***	0.115***	0.142***	0.125***	0.093**	0.071
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.004]	[0.002]	[0.011]	[0.007]	[0.017]	[0.033]
2014	0.079***	0.081***	0.076***	0.085***	0.067***	0.066***	0.082***	0.124***	0.060***	0.069***	0.040*
	[0.001]	[0.000]	[0.001]	[0.000]	[0.001]	[0.001]	[0.001]	[0.007]	[0.003]	[0.010]	[0.015]
2019	0.227***	0.226***	0.225***	0.229***	0.212***	0.209***	0.230***	0.296***	0.202***	0.204***	0.296***
	[0.006]	[0.009]	[0.007]	[0.007]	[0.005]	[0.005]	[0.008]	[0.008]	[0.009]	[0.004]	[0.020]
Obs.	354	354	354	354	371	371	130	58	166	103	27

Standard errors in brackets. Significance denoted by *** at 1%, ** at 5%, and * at 10% level.

Pooled mean group ARDL Estimation Results (Dependent variable is labourforce)

	Model 1 Whole Set		Model 2 High Income		Model 3 Non-High Income		Model 4 Parliament	
	GMI	Milex	GMI	Milex	GMI	Milex	GMI	Milex
Long-run Coefficients								
Militarization	-0.028***	-0.004	-0.074	-0.164***	-0.206***	-0.009*	-0.047*	-0.577***
	[0.008]	[0.003]	[0.246]	[0.016]	[0.032]	[0.004]	[0.025]	[0.097]
GDPcap	0.123***	0.005	0.557	0.316***	-0.125***	-0.196***	0.124***	0.651***
	[0.020]	[0.017]	[0.652]	[0.026]	[0.007]	[0.018]	[0.032]	[0.092]
FLFPglobal	1.239***	1.734***	4.795	-0.545	-0.221	1.877***	0.688***	-3.560***
	[0.267]	[0.230]	[3.142]	[0.451]	[0.297]	[0.342]	[0.177]	[0.682]
Time trend	-0.003**	-0.003**	-0.027	-0.002	0.005***	-0.003*	0.0009	Omitted
	[0.001]	[0.001]	[0.024]	[0.002]	[0.001]	[0.001]	[0.001]	
Short-run Coefficients								
Error Correction Coefficient	-0.115***	-0.109***	-0.451***	-0.113***	-0.106***	-0.120***	-0.136***	-0.045***
	[0.017]	[0.015]	[0.040]	[0.021]	[0.023]	[0.025]	[0.032]	[0.014]
ΔMilitarization	0.097*	0.002	0.144**	0.023***	0.123	-0.001	0.267	0.025***
	[0.054]	[0.004]	[0.055]	[0.007]	[0.088]	[0.006]	[0.234]	[0.008]
ΔGDPcap	-0.018	-0.003	-0.002	0.016	-0.027	-0.027	0.102	0.100
	[0.022]	[0.022]	[0.051]	[0.029]	[0.030]	[0.030]	[0.076]	[0.078]
ΔFLFPglobal	0.794***	0.770***	0.547*	0.762***	0.811***	0.649**	0.716***	0.767***
	[0.212]	[0.222]	[0.309]	[0.256]	[0.302]	[0.301]	[0.185]	[0.189]
Intercept	-0.214***	-0.311***	0.934	0.239***	0.754***	-0.201***	0.051**	0.409***
	[0.032]	[0.044]	[1.393]	[0.044]	[0.161]	[0.044]	[0.025]	[0.189]
No. Countries	74	74	30	30	44	44	33	33
Obs.	1998	1964	810	810	1188	1154	785	785

Standard errors in brackets. Significance denoted by *** at 1%, ** at 5%, and * at 10% level.

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