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MASCULINITY AROUND THE WORLD

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Pauline Grosjean

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MASCULINITY AROUND THE WORLD

Abstract

We examine how masculinity norms – the social expectations about how men should behave – predict economic, health, and political outcomes. We field the Global Masculinity Survey, measuring adherence to core masculinity norms among 125,000 individuals across 70 countries. Economically, men who adhere more strongly to these norms supply more labor, earn more, and sort into traditionally masculine occupations. In terms of health, they take greater risks and report poorer mental health. Politically, they express stronger support for strongman authoritarianism and military rule. Adherence to masculinity norms is stronger among men exposed to war or economic recession during their impressionable years.

JEL Classification: D91, I12, J16, J24, Z13

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gKbhnRDIKMfH). This version supersedes an earlier version based on the LiTS sample only. Country-level data and methodological details are available through the Atlas of Masculinity (<https://www.atlasofmasculinity.org>).

Masculinity Around the World*

Ralph De Haas[†]  Victoria Baranov[‡]  Ieda Matavelli[§]  Pauline Grosjean[¶]

September 14, 2026

Abstract

We examine how masculinity norms—the social expectations about how men should behave—predict economic, health, and political outcomes. We field the Global Masculinity Survey, measuring adherence to core masculinity norms among 125,000 individuals across 70 countries. Economically, men who adhere more strongly to these norms supply more labor, earn more, and sort into traditionally masculine occupations. In terms of health, they take greater risks and report poorer mental health. Politically, they express stronger support for strong-man authoritarianism and military rule. Adherence to masculinity norms is stronger among men exposed to war or economic recession during their impressionable years.

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Keywords: Masculinity; gender norms; gender gaps; labor supply; health; political preferences

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1 Introduction

Men occupy the top of most economic hierarchies but rank at the bottom of many measures of health and well-being. They earn more than women and hold more leadership positions in politics and business (Goldin, 2021; Olivetti, Pan and Petrongolo, 2024), yet also seek medical help less often (Alsan and Neberai, 2025), have higher mortality rates than women at nearly every age, and are roughly twice as likely to die by suicide (Autor, Dorn and Hanson, 2019; Currie, 2025; World Health Organization, 2025). Men are also more supportive of authoritarianism than women, particularly in times of economic uncertainty (Spierings and Zaslove, 2015; Guiso et al., 2024). No single account of male advantage or disadvantage fits all these patterns. This paper argues that they can be understood through a common lens: masculinity norms.

Masculinity norms are the social expectations about how men should behave. Some norms, such as whether men should have long or short hair, are context-specific, but several *core* masculinity norms recur across societies and historical periods: valuing toughness and self-reliance; endorsing aggression, violence, and power; and prioritizing winning and status (Gilmore, 1990; Bourdieu, 2001; Jablonka, 2022).¹ Despite extensive descriptive work in sociology, anthropology, and psychology (Matavelli et al., 2026), no systematic evidence exists on how adherence to these core masculinity norms varies across countries, how it predicts men’s economic, health, and political outcomes, and what shapes adherence to these norms. This paper provides such evidence using a newly constructed global dataset.

We design and field the Global Masculinity Survey (GMS), combining nationally representative face-to-face and online surveys to reach 125,147 respondents in 70 countries, which account for two-thirds of the world population and 87 percent of global GDP. To measure individual adherence to masculinity norms, we employ a short form of the Conformity to Masculinity Norms Inventory (CMNI), a widely used measure in psychology (Mahalik et al., 2003). We use the five items that best predict the 22-item CMNI: importance of winning, acceptance of violence, self-reliance, power over women, and homosexuality avoidance. Drawing on open-text answers about what masculinity means to respondents, we confirm the cross-cultural and individual-level relevance of the 5-item CMNI.

Our focus on men and masculinity sets this paper apart from a large and rich economics literature studying social expectations about gender roles.² While some of these norms prescribe behaviors for men as well as women (such as the norm that men should be the main

¹In pre-industrial societies, several of these dimensions, in particular aggression, competitiveness, and self-reliance, were already instilled more strongly in boys than girls, as we discuss in Section 2.1.

²See Jayachandran (2015), Giuliano (2020), Bau and Fernández (2023), Olivetti, Pan and Petrongolo (2024), Anderson (2025), Bertrand (2025), Cortés et al. (2026), and Field, McKelway and Voena (2026) for reviews.

provider in the household), economists have almost exclusively studied their implications for women (Field, McKelway and Voena, 2026). More fundamentally, masculinity norms extend beyond the gendered division of roles: they also govern how men relate to one another, defining who is considered a ‘real’ man and legitimizing hierarchies among men. To distinguish these two constructs, we include standard measures of gender role norms alongside the CMNI in our global survey, and show that the two are empirically distinct.

We start by providing novel descriptive evidence on adherence to masculinity norms across countries. Adherence is strongest in North and Sub-Saharan Africa, the Middle East, and South Asia, and lowest in Scandinavia and post-socialist south-eastern Europe. Among Western countries, men in the United States exhibit the strongest adherence to winning, violence, and self-reliance. Across countries, masculinity norms correlate *positively* with economic development, in sharp contrast to conservative attitudes toward gender roles.

We also document that, at the individual level, age is the strongest correlate of adherence to masculinity norms: younger men adhere more strongly to these norms than older men. By contrast, education is largely unrelated to adherence to masculinity norms. This pattern differs sharply from gender role attitudes, for which more educated individuals hold more egalitarian views.

We then examine how adherence to masculinity norms relates to a range of economic, health, and political outcomes. Economically, men with higher CMNI scores earn higher incomes and display greater labor supply at the intensive margin. A one standard deviation increase in the CMNI is associated with 3% higher earnings, a 0.5 percentage point higher probability of being in the top decile of the within-country distribution of working hours, and a 5 percentage point increase in the willingness to work more hours. These patterns are robust to conditioning on gender role attitudes, which themselves predict these outcomes less consistently. These associations are consistent with prominent accounts in the socioeconomics of gender, according to which traits and behaviors such as competitiveness and status-seeking are associated with men and more commonly displayed by them (Niederle and Vesterlund, 2011; Exley, Niederle and Vesterlund, 2020; Dean et al., 2025) and are rewarded in labor markets (Berdahl et al., 2018). However, masculinity norms may also generate labor market frictions. Consistent with research linking gender norms to occupational sorting (Akerlof and Kranton, 2000, 2010; Delfino, 2024), we find that men with a higher CMNI score are more likely to sort into traditionally masculine industries.

The higher earnings associated with stronger adherence to masculinity norms coincide with substantially worse health outcomes. Norms emphasizing emotional restraint, self-reliance, and aggression discourage help-seeking behavior and are associated with elevated

risks of substance abuse, suicide, and excess male morbidity and mortality.³ In our data, a one standard deviation increase in the CMNI is associated with 0.15 standard deviations higher depression scores, a 5.3 percentage point lower likelihood of seeking mental health services, 0.10 standard deviations higher self-assessed risk-taking, and 0.08 standard deviations lower seatbelt use, a behavioral outcome that points directly to the cost of adherence to masculinity norms. These findings are consistent with research showing that men often respond to psychological distress not through help-seeking, but through behaviors such as substance abuse and reckless driving, which are themselves normalized as manly behavior (Mahalik and Rochlen, 2006).

In politics, masculinity norms predict illiberal attitudes. A one standard deviation increase in the CMNI is associated with 3.6 percentage points lower support for democracy, 3.5 percentage points lower support for a market economy, 9.0 percentage points higher support for strongman leadership, and 7.3 percentage points higher support for military rule. These patterns align with the claim that populist rhetoric frequently appeals to masculine identity through framing around force, toughness, and a rejection of weakness (Kimmel, 2017; Inglehart and Norris, 2019).

These associations are robust to conditioning on gender role norms, gender identity, other commonly measured cultural norms (such as generalized and institutional trust), social and economic preferences (such as patience and competitiveness), and other psychological traits (such as zero-sum thinking and social dominance orientation). Thus, adherence to masculinity norms captures a novel, distinct, and quantitatively important dimension in explaining outcomes across economics, health, and politics. Our results are also robust to corrections for multiple hypothesis testing, to using alternative indices of masculinity norms, and do not depend on any single item of the CMNI scale. Summary indices following Anderson (2008) provide a unified view: a one standard deviation increase in the CMNI is associated with increases of 0.08, 0.17, and 0.12 standard deviations in the economic, health, and political summary indices, respectively. The associations are consistently signed in over 90 percent of countries, significantly so in 74 percent.

Next, we document large and systematic gender gaps in CMNI scores and discuss how these help explain the presence of broader socio-economic gender gaps. Across countries, larger gender gaps in the CMNI are associated with larger gender gaps in health and politics. Within countries, individual-level differences in CMNI scores explain substantial shares of residual gender gaps in our outcomes after conditioning on standard covariates: 25% for willingness to work longer hours, 23% for risk aversion, and 57% for support for democracy.

Having documented these descriptive patterns, we study the origins of masculinity norms

³See, e.g., Courtenay (2000); Baker et al. (2014); Seidler et al. (2016); Wong et al. (2017).

using within-country, across-cohort variation in exposure to war and recession. We examine how exposure to these shocks during the impressionable years of late adolescence and early adulthood shapes men’s later adherence to masculinity norms. Our hypotheses are motivated by qualitative literatures across the social sciences describing war and resource stress as drivers of male status ([Hayden et al., 1986](#); [Goldstein, 2001](#); [Von Rueden, 2023](#)), and by a robust correlation we document between historical militarized conflict and adherence to masculinity norms across countries in the GMS today. Holding constant country-level factors and generational differences, we verify that exposure to conflict and exposure to recession are uncorrelated with one another and orthogonal to predetermined characteristics, including the socioeconomic environment in childhood.

Our analysis reveals that men exposed to war during their impressionable years adhere more strongly to masculinity norms, raising CMNI scores by 0.09 standard deviations. The effects are largest for the dimensions most directly tied to combat: winning, violence, and self-reliance. In contrast, war exposure has no detectable effect on gender role norms, consistent with the aggregate cross-country pattern. Exposure to recession during the impressionable years raises CMNI scores by 0.08 standard deviations and predicts higher adherence to all dimensions of masculinity norms as well as more traditional gender role attitudes. We offer an interpretation of the latter result through the precarious manhood framework, which predicts compensatory assertions of masculinity when economic pathways to traditional male roles are blocked (see [Vandello et al. \(2008\)](#) and [Matavelli et al. \(2026\)](#) for details).

Related literature. We advance the literature in three main ways. First, we shift the focus of the economics of gender toward *men*. In doing so, we complement a large body of research that has produced deep insights into gender gaps by analyzing women’s behaviors and outcomes in the labor market (e.g., [Fernández, 2013](#); [Blau and Kahn, 2017](#); [Bursztyn, Fujiwara and Pallais, 2017](#); [Goldin, 2021](#); [Olivetti, Pan and Petrongolo, 2024](#)), at home (e.g., [Bertrand, Kamenica and Pan, 2015](#); [Hancock, Lafortune and Low, 2025](#); [Ichino et al., 2026](#); [Jayachandran and Voena, 2026](#)), and in politics (e.g., [Beaman et al., 2009](#)). This literature shows how gender role norms—social expectations about the appropriate behaviors of women relative to men—impact women’s outcomes across these domains. By comparison, few studies examine men’s behaviors, and fewer still consider that social norms may constrain men, too. Studies of men’s outcomes have examined the consequences of deindustrialization for male employment ([Autor, Dorn and Hanson, 2019](#)), men’s entry into female-dominated sectors ([Delfino, 2024](#)), and the drivers of violent behavior ([Grosjean, 2014](#); [Heller et al., 2017](#); [Blattman, Jamison and Sheridan, 2017](#); [Cao et al., 2021](#)). Yet none interpret these patterns through the lens of masculinity norms, despite describing behaviors closely asso-

ciated with them, such as occupational rigidity, substance abuse, violence, and honor (see [Matavelli et al. \(2026\)](#) for a review).

A recent line of research in economics has begun to study masculinity norms. [Baranov, De Haas and Grosjean \(2023\)](#) study how historically male-biased sex ratios shaped male socioeconomic outcomes in Australia. [Matavelli \(2025\)](#) documents a belief trap through which masculinity norms may persist: adolescents overestimate peers' support for these norms and avoid conversations that would correct misperceptions. Using our measures, [Griselda, Profeta and Savio \(2026\)](#) find that the gender composition of university peers shapes students' adherence to masculinity norms.⁴ We unify these emerging strands within a common empirical framework, providing the first global evidence (including nationally representative samples for 44 countries) linking masculinity norms to outcomes across multiple domains and contexts.⁵

Second, we contribute to a literature on the formation of preferences and identities. A growing body of work in economics shows how aggregate shocks shape preferences, identities, and beliefs (see [Giuliano and Spilimbergo \(2025\)](#) for a recent review). Studies have examined how aggregate shocks influence political preferences ([Roth and Wohlfart, 2018](#); [Carreri and Teso, 2023](#); [Eichengreen, Saka and Aksoy, 2024](#); [Acemoglu et al., 2025](#)) as well as social and risk preferences ([Malmendier and Nagel, 2011](#); [Bietenbeck, Sunde and Thiemann, 2025](#); [Cappelen, Enke and Tungodden, 2025](#)). This literature finds that experiences during the impressionable years of late adolescence and early adulthood can have strong and enduring effects. Less attention has been paid to how these formative experiences shape gender norms. We show how specific aggregate shocks—war and recession—shape men's adherence to masculinity norms.

Third, we expand the cross-cultural measurement of economically relevant traits and attitudes such as gender role norms ([Bursztyn et al., 2025](#)), zero-sum thinking ([Carvalho et al., Forth.](#)), or economic and social preferences ([Falk et al., 2018](#); [Cappelen, Enke and Tungodden, 2025](#)). We provide the first international evidence on adherence to a core set of masculinity norms and establish the CMNI as a valid cross-cultural measure of masculinity norms. This moves the study of masculinity norms beyond the small Western samples on which existing evidence rests. Existing cross-country surveys (such as the World Values Survey, Demographic and Health Surveys, and previous rounds of the Life in Transition

⁴Using instead a biologically grounded measure (facial width-to-height ratio), [Carillo and Reynal-Querol \(2026\)](#) show that national leaders have more masculine facial features than other elites and that this trait has risen over the past 70 years.

⁵We also complement recent work on gender identity ([Banan, Santavirta and Sarzosa, 2023](#); [Ayyar et al., 2024](#); [Brenøe et al., 2024](#); [Coffman, Coffman and Ericson, 2026](#); [Danzer et al., 2025](#)) by measuring specific dimensions of masculinity.

Survey) routinely assess attitudes toward gender roles and gender equality. Our concise CMNI module could be easily included in future surveys and studies on gender norms, answering calls for international surveys to measure masculinity norms alongside gender role norms (OECD, 2021). To support such work, country-level data and methodological details are available through the [Atlas of Masculinity](#).

We proceed as follows. Section 2 provides background on masculinity norms and motivates our outcome variables. Section 3 describes the Global Masculinity Survey. Section 4 presents descriptive statistics and global patterns, as well as individual-level evidence on how masculinity norms predict economic, health, and political outcomes. Section 5 explores how exposure to war and recession during men’s formative years shapes adherence to masculinity norms. Section 6 concludes.

2 Masculinity Norms

This section defines masculinity norms and discusses how they may shape economic, health, and political outcomes.

2.1 Conceptual Background

Consistent with prevailing definitions in other disciplines, we define masculinity norms as the social expectations about how men should behave, providing a mapping between the social category “man” and expected behavior. How this mapping translates into individual behavior depends on the underlying social motivations at play. Economists have proposed several frameworks in which social factors shape decision-making: the desire for conformity (Bernheim, 1994), identity and self-image (Akerlof and Kranton, 2000), avoidance of social sanctions (Fehr and Gächter, 2002), and social-image concerns (Bénabou and Tirole, 2006). These frameworks are not mutually exclusive; indeed, multiple mechanisms likely operate simultaneously. For example, a man may internalize the prescription that asking for help is a sign of weakness (self-image), may also avoid help-seeking because others would view it negatively (social image), and may face direct social sanctions for deviating from this expectation. Regardless of the specific mechanism, the behavioral implications are similar: men who adhere to these prescriptions will act accordingly across a range of domains. This is consistent with the broader cultural economics literature, which typically documents the behavioral implications of norm adherence, without specifying micro-foundations (see

Nunn (2012); Giuliano (2020) and Bau and Fernández (2023) for reviews).⁶

While some superficial expressions of masculinity may vary across contexts, such as dress code or hair length, sociologists have argued that societies typically share a culturally idealized form of masculinity, what Connell and Messerschmidt (2005) call ‘hegemonic masculinity’. This represents the most honored way of being a man, and is the benchmark against which other men are evaluated. Several core dimensions of such idealized masculinity are remarkably consistent across societies and eras, such as valuing toughness and emotional restraint; endorsing aggression, violence, and power; and prioritizing winning and status (Gilmore, 1990). These dispositions are not intrinsically gendered, but they become associated with masculinity when they are disproportionately inculcated in and demanded of boys. Male socialization processes supported by broader cultural and institutional practices, such as age sets, initiation rituals, and competitive sports, systematically emphasize and reinforce these dimensions (Connell et al., 1982). Figure 1 summarizes evidence from the Standard Cross Cultural Sample, which includes ethnographic evidence from 186 pre-industrial societies representing the world’s major cultural regions. It shows how historically, and consistently across different regions (Appendix Figure B1), boys are socialized more strongly than girls into self-reliance, competitiveness, aggression, and fortitude.

Masculinity norms go beyond norms regarding the gendered division of roles, which have been the object of several economic studies (see footnote 2). They also govern how men are expected to behave toward *other men* by specifying what characterizes a ‘real’ man: which traits are recognized, valued, and rewarded as competence, authority, or status (Bourdieu, 2001; Berdahl et al., 2018). At the same time, these traits are often defined and valued in opposition to traits culturally coded as feminine. For example, toughness is valued over vulnerability, self-reliance over dependence, dominance over submissiveness, and competitiveness over nurturance. In this way, masculinity norms not only rank men relative to one another, but also sustain broader gender hierarchies.

Yet, precisely because masculinity norms define what is socially recognized as competence and authority, women too may come to internalize or strategically adopt them, particularly when interacting in shared arenas, such as educational settings, labor markets, or political organizations. In some modern contexts, women are, in fact, often explicitly encouraged to “lean in” by displaying competitiveness, assertiveness, and self-reliance (Exley, Niederle and Vesterlund, 2020). Women who do so may attain higher material rewards and well-being (Danzer et al., 2025), though they may also face social costs or backlash for deviating from expectations associated with their gender (Leibbrandt, Wang and Foo, 2018; Dean

⁶We use ‘adherence’ to refer to the degree to which an individual’s attitudes align with a particular norm, rather than exclusively behavioral compliance.

[et al., 2025](#)). We therefore expect women’s adherence to masculinity norms to be systematically lower than men’s but to similarly predict outcomes.

2.2 Links to Economic, Health, and Political Outcomes

Here, we provide a brief overview of the literature to motivate our outcome variables.

Economic behaviors. Several persistent labor market patterns remain only partially explained. First, substantial gender gaps exist in labor supply at the intensive margin. Men work longer hours than women even within narrowly defined occupation-industry-firm cells and conditional on children and spousal employment ([Goldin, 2014](#)). Second, occupational gender segregation and gender earnings gaps persist ([Olivetti and Petrongolo, 2008, 2014](#); [Blau and Kahn, 2017](#)) despite converging education levels ([Goldin, Katz and Kuziemko, 2006](#)).

Masculinity norms may contribute to these patterns through two main channels. First, masculinity emphasizes winning, status-seeking, and power: traits that may correlate with work orientation and are often directly rewarded in labor markets. A recent sociological literature describes work as an arena of “masculinity contests”, where highly competitive work environments normalize extreme working hours and aggressive workplace cultures ([Berdahl et al., 2018](#)). Organizations often select for these traits, creating feedback loops where competitive orientation predicts both individual success within organizations and aggregate workplace cultures that further reward competitiveness. Recent work in economics is suggestive of related dynamics: [Adams-Prassl et al. \(2024\)](#) show organizational tolerance for men’s violence against subordinates, especially women, at work; [Dupas et al. \(2026\)](#) describe frequent and hostile interruptions in economics seminars; [Cornelissen, Dustmann and Schönberg \(2026\)](#) show that men are particularly exposed to, and rewarded by, competitive promotion or retention contests; and [Guadalupe, Pollenne and Snellman \(2026\)](#) document pervasive hyper-competitive and aggressive workplace cultures in academia.

Second, norms defining certain occupations as inherently masculine or feminine may constrain occupational choice independently of economic returns. As the service economy expands and manufacturing declines (e.g., [Ngai and Petrongolo, 2017](#)), such norms may help explain why men avoid service-sector jobs even when unemployed in deindustrializing regions ([Kimmel, 2017](#)).

Health behaviors. Men face substantial health disadvantages. Globally, male life expectancy lags female life expectancy by five years ([GBD 2013, 2015](#)). “Deaths of despair” from suicide, alcohol, and drugs are three times more prevalent among men than among women ([Case and Deaton, 2020](#); [Shirzad et al., 2024](#); [Currie, 2025](#)). Men use healthcare less frequently, particularly preventive and mental health services, despite higher morbidity for many con-

ditions ([Baker et al., 2014](#)). Standard explanations for these health disparities emphasize biological sex differences and differential exposure to occupational hazards. Yet substantial gaps remain unexplained even after accounting for these factors ([Schünemann, Strulik and Trimborn, 2017](#)).

The specific pattern of male health disadvantage, which is concentrated in preventable deaths from suicide, substance abuse, and accidents rather than chronic disease, suggests masculinity norms may play an important role ([Courtenay, 2000](#)). Core masculinity norms such as emotional restraint and self-reliance directly contradict health-promoting behaviors like recognizing emotional distress or seeking professional help. Psychological research documents that men who score higher on masculinity norm scales report greater stigma around mental health treatment ([Mahalik et al., 2003](#)), lower utilization of preventive healthcare ([Springer and Mouzon, 2011](#)), and higher rates of risky behaviors including substance abuse ([Mahalik and Rochlen, 2006](#)). Yet economists have only recently begun to consider how masculinity norms shape health outcomes (see [Alsan and Neberai, 2025](#) for a discussion).

Political attitudes. Masculinity norms may contribute, through several pathways, to gender gaps in political attitudes, most notably the observation that men favor the radical right more than women do.⁷ First, masculinity norms align well with a hierarchical social organization with clear authority structures, precisely what authoritarian movements offer. Second, populist rhetoric often explicitly appeals to masculine identity through framing around strength, toughness, and a rejection of weakness ([Kimmel, 2017](#)). Third, progressive social movements directly challenge masculine privilege, potentially triggering backlash from men with a stake in traditional status hierarchies ([Connell, 2020](#)). Despite these plausible channels, evidence linking masculinity norms to political attitudes remains limited.⁸

3 The Global Masculinity Survey

3.1 Survey Design and Sample

The Global Masculinity Survey (GMS) combines nationally representative face-to-face surveys with online surveys (total $N = 125,147$). This combination overcomes some of the limitations of online surveys in terms of representativeness of the underlying populations, while leveraging the flexibility of online surveys to achieve global coverage in 70 countries, representing two-thirds of the world population and 87% of global GDP. Appendix Table C1 lists

⁷E.g., [Financial Times](#) (26-01-2024).

⁸An exception is [Vescio and Schermerhorn \(2021\)](#), who find that men scoring higher on the CMNI more strongly support President Trump, even conditioning on partisanship.

sample sizes by country. The [Atlas of Masculinity](#) contains additional detail on questionnaires, fieldwork, and descriptive statistics.

The Life in Transition Survey (LiTS). The LiTS is a face-to-face nationally representative survey that captures adults' sociodemographic characteristics and their political and social attitudes. The European Bank for Reconstruction and Development (EBRD) and the World Bank have conducted the survey as a repeated cross-section every four years since 2006. Respondents are selected through two-stage random sampling, with census enumeration areas as primary sampling units and households as secondary units. The LiTS initially focused on Central and Eastern Europe and the former Soviet Union but has since expanded to North Africa, the Middle East, and Sub-Saharan Africa. Our LiTS sample comprises 44,598 respondents in 44 countries (18,810 men and 25,788 women). From LiTS, we mainly use measures of demographic characteristics, adherence to masculinity norms (administered to men only), attitudes to gender roles, and our key outcome variables (see Appendix Table C2 for variable definitions). Appendix Section A1.2 provides more details on survey implementation.

Online surveys. To expand geographic coverage, we fielded additional online surveys through survey company Bilendi in 32 countries (primarily in the Americas, South and Southeast Asia, and Western Europe) from November to December 2024 (Wave 1) and May to June 2025 (Wave 2), collecting 80,549 responses (41,859 men and 38,690 women). Bilendi targeted participants aged 18–64 years with quota sampling on gender, age, and income.⁹ The online survey instrument includes basic sociodemographic characteristics, adherence to masculinity norms (administered to both men and women), gender role attitudes, and the key outcome variables measured in LiTS.¹⁰ We included six countries in both LiTS and the online survey, allowing us to compare responses across both survey modes.

Combining representative and online samples. To ensure comparability across countries, we re-weight the online samples to match national demographics on gender, age, education, employment status, and urban residence, using population benchmarks from Gallup World

⁹Appendix Section A1.2.2 provides further details on the implementation of the online surveys.

¹⁰To limit selection, survey invitations specified the estimated completion time but not the topic of study. The median completion time was nine minutes. We included an attention check question, and failure to complete it triggered exclusion from the sample.

Poll data.¹¹ Appendix Section A1.2 describes how we use the representative LiTS samples to validate inferences from the online data.

Sample characteristics. Panel A in Appendix Table C3 reports summary statistics for demographic characteristics in the global GMS sample. Respondents are 42 years old on average. Catholics and Muslims constitute 24% and 18% of respondents, respectively, while 89% have completed secondary education or higher. Nearly three-quarters (74%) reside in urban areas. Men and women are similar with respect to these demographic characteristics. Despite aiming for representative sampling based on gender, age, and income, our online survey sample diverges from overall population distributions in ways typical of internet-based research (see Appendix Section A1.4 for details).

3.2 Measuring Masculinity Norms: The CMNI

Psychologists have developed several instruments to measure masculinity norms. The most widely used is the Conformity to Masculinity Norms Inventory (CMNI) (Mahalik et al., 2003), which assesses adherence to masculinity norms through statements about one’s own actions, feelings, and beliefs (e.g., “It bothers me to ask for help”). Originally a 94-item scale covering 11 dimensions, the CMNI has been adapted into various shorter forms for use in clinical, public health, and social science research. We implement a short form of the CMNI as our primary measure of adherence to masculinity norms.¹² We select five items that are most predictive of the overall CMNI, drawing on Australia’s Ten to Men study, the only nationally representative survey that includes the CMNI.¹³ Our 5-item index correlates strongly with the full 22-item score ($\rho = 0.75$) and captures 56% of its variation.

The resulting module assesses five core dimensions of masculinity through agreement with the following statements: (i) “*Winning is the most important thing*” (Importance of Win-

¹¹The online surveys sample respondents aged 18–64, whereas LiTS has no upper age limit. Cross-country statistics that pool the two modes therefore compare the population aged 18–64 in online-only countries with the full adult population in LiTS countries, and because re-weighting can only adjust the composition of sampled age groups, it cannot correct for this difference in coverage. The difference is, however, quantitatively negligible: restricting LiTS to ages 18–64 changes the weighted country-level mean measure of masculinity norms among men by 0.01 points on the 1–4 scale on average (at most 0.04 in any country), and country means computed with and without this age restriction correlate at 0.998 (Spearman rank correlation: 0.996). The corresponding figures for measures of gender role norms among all respondents are 0.02 on average (at most 0.09), with a correlation of 0.995 (Spearman: 0.984). Cross-country comparisons are thus insensitive to the difference in age coverage.

¹²Another commonly used measure is the Male Role Norms Inventory (MRNI) (Levant, Hall and Rankin, 2013), which elicits agreement with prescriptive beliefs about how men should behave across seven core dimensions of masculinity (e.g., “Men should figure out their personal problems on their own without asking others for help”). We check robustness using a set of such normative masculinity statements, adapted from the MRNI and related scales, in Section 4.3.

¹³See Appendix Section A1.1 for details.

ning), (ii) “*Sometimes violent action is necessary*” (Violence), (iii) “*It bothers me when I have to ask for help*” (Self-Reliance), (iv) “*I love it when men are in charge of women*” (Power Over Women), and (v) “*It is important to me that people think I am heterosexual*” (Homosexuality Avoidance). *Importance of Winning* represents adherence to winning and status orientation as a normative priority. *Violence* captures the normative acceptance of force as a legitimate tool. *Self-Reliance* relates to prescriptive norms of autonomy and reluctance to seek help. *Power Over Women* and *Homosexuality Avoidance* relate more directly to expectations about men’s position relative to women and sexual minority men.

Respondents rated agreement on a four-point Likert scale from 1 (“Strongly disagree”) to 4 (“Strongly agree”), with the option to refuse or answer “Don’t know”. We average non-missing responses across the five items to create a CMNI score ranging from 1 to 4, with higher scores indicating stronger adherence. For regression analysis, we standardize this score to mean 0 and standard deviation 1.

Although we also administered the CMNI to women in the online sample, the scale was not originally validated for women, and a five-item aggregate score is not readily interpretable for female respondents. While endorsing violence, prioritizing winning, and avoiding help indicate stronger adherence to masculinity norms, the remaining two items are ambiguous for women. Agreement with “*I love it when men are in charge of women*” indicates deference to male authority in a female respondent, not adherence to masculinity norms. Likewise, endorsing heterosexual presentation reflects conformity to traditional femininity rather than masculinity. Accordingly, in analyses that include women we rely on a subindex (CMNI-3) based on the first three items to measure adherence to masculinity for both men and women.

3.3 Descriptive Statistics and Validation of the CMNI

Among male respondents, the mean CMNI is 2.42 (s.d. 0.62), with *Self-Reliance* scoring highest among the five dimensions (2.63) and *Violence* lowest (1.99) (Panel B in Appendix Table C3). The CMNI is internally consistent (Cronbach’s $\alpha = 0.64$). The five items correlate positively (pairwise ρ : 0.20–0.38) but not perfectly, reflecting the multidimensional nature of masculinity norms (Appendix Figure B2). Women’s CMNI-3 scores are systematically lower than men’s in every country (Panel A of Appendix Figure B3), with the largest gaps in richer, more gender-equal economies (consistent with Falk and Hermle, 2018). Yet, the dispersion of CMNI-3 scores is similar among men and women: the within-gender standard deviation is 0.64 among men and 0.59 among women. Thus, CMNI-3 captures substantial heterogeneity within both groups, rather than merely reflecting a sharp biological distinction between

men and women, such as testosterone levels.

We further validate the cross-cultural relevance of the CMNI using open-text responses in which respondents describe what masculinity means to them. After placing themselves on a 0 (very feminine) to 10 (very masculine) gender-identity scale, we asked respondents to explain their self-placement “in their own words” in an open-ended way. We rely on an LLM classifier to code whether these open-ended responses endorse, reject, or do not reference each of the five CMNI items.

Item-level coding is inherently sparse as it relies on respondents spontaneously mentioning specific dimensions of the CMNI, yet clear patterns emerge. Within countries, men who adhere more strongly to a particular CMNI dimension are significantly more likely to spontaneously endorse that dimension in their open-ended response (Appendix Figure B4, Panel A). Moreover, men who score higher on the CMNI endorse significantly more CMNI dimensions in their open-ended responses (Appendix Figure B4, Panel B). Across countries, higher CMNI adherence predicts higher open-ended endorsement of winning, self-reliance, and power over women, with a positive but insignificant relationship for violence (Appendix Figure B5, Panel A). For heterosexuality, the cross-country relationship is negative.¹⁴ This pattern is driven by Spanish- and Portuguese-speaking countries (e.g., Argentina, Brazil, Chile, Mexico, Portugal, Spain), where open-ended responses frequently invoke heterosexual attraction directly (e.g., “I am a man because I like women”) even for respondents who do not score high on the homosexuality avoidance CMNI dimension. Overall, respondents spontaneously endorse more CMNI dimensions in countries with higher average CMNI, although the relationship is imprecise (Appendix Figure B5, Panel B).

3.4 Gender Role Norms and Gender Equality

The GMS also includes standard questions on norms and attitudes toward women’s social and economic roles, drawn from established questionnaires such as the World Values Survey and previous rounds of LiTS. These items cover the gendered allocation of household chores and childcare, the relative contribution of men and women to household income, and views about women’s competence in business leadership and politics. Appendix Section A1.5 lists the six questions we use. Our *Traditional Gender Role Index* (hereafter, TGRI) is the mean of responses to these six questions. Higher values indicate more gender unequal views. We administered the TGRI to both men and women in the GMS ($N = 125,147$).

¹⁴Open-ended spontaneous answers rarely mention concern with being *perceived* as heterosexual, the construct of the survey item. Instead, they invoke heterosexuality directly, most often as attraction to women. The classifier therefore codes any endorsement of heterosexuality (whether expressed as attraction, identity, or distancing from homosexuality) as referencing this dimension, and we label it “heterosexuality”.

As discussed in Section 2.1, masculinity norms overlap with, but are not reducible to, gender role norms. Consistent with this, the CMNI and TGRI correlate positively but moderately ($\rho = 0.44$), with the strongest correlations between individual TGRI items and the CMNI for female specialization in household chores ($\rho = 0.42$) and men’s relative political leadership ($\rho = 0.43$), and the weakest for women’s competence as business executives ($\rho = 0.04$) (see Appendix Figure B2). When discussing results, we systematically present specifications that control for the full TGRI to capture the explanatory power of adherence to masculinity norms over and above gender role norms.

The sociodemographic correlates of the two indices reinforce their distinctiveness (Figure 2). Age is the strongest correlate of masculinity (younger men score significantly higher than older men) yet predicts gender role attitudes only weakly. Education strongly predicts gender role attitudes, with more educated men holding more equal views, but is unrelated to adherence to masculinity norms.

4 Masculinity Around the World

We now document how masculinity norms vary across countries and diverge from gender role norms. We then show that individual adherence to masculinity norms predicts men’s economic, health, and political outcomes, and helps account for gender gaps in those outcomes.

4.1 Cross-Country Evidence

Masculinity norms and gender role norms. Figure 3 maps standardized z-scores for the CMNI and the TGRI across countries. Adherence to masculinity norms is strongest in North and Sub-Saharan Africa, South Asia, and parts of the former socialist bloc; the first three regions also show the least support for gender equality. Yet a closer look at how the two indices co-vary reveals substantial heterogeneity across and within regions. The scatterplot in Appendix Figure B6 shows four broad country clusters: (1) Sub-Saharan Africa, Middle East and North Africa (MENA), and South Asia in the upper right (high masculinity, unequal gender role norms); (2) Western Europe, Canada, Australia, and Latin America in the lower left (low masculinity, egalitarian gender role norms); (3) Central Asia and the Caucasus in the upper left (moderate masculinity, unequal gender role norms); and (4) the U.S. and Greece in the lower right (high masculinity, egalitarian gender role norms). Western Europe and its offshoots cluster tightly on egalitarian gender role norms yet vary widely in masculinity norms. Sweden and Denmark, for example, score far below the U.S. and

Greece, which record the highest masculinity scores among Western countries. This illustrates how egalitarian attitudes toward women’s equality can coexist with strong adherence to masculinity norms.

Economic development. Our data also reveal an asymmetric pattern in how masculinity norms and gender role norms correlate with economic development. The literature has long highlighted a negative relationship between unequal gender role norms and development (e.g., [Duflo, 2012](#); [Field, McKelway and Voena, 2026](#)). The right panel of Figure 4 confirms such a negative correlation between GDP per capita (PPP-adjusted) and the TGRI.¹⁵ By contrast, the correlation between economic development and masculinity norms is *positive*. Both relationships are more pronounced when countries are weighted by population. The next section presents individual-level evidence.

4.2 Individual-Level Evidence

We now examine how individual adherence to masculinity norms correlates with economic outcomes, health and well-being, and political preferences within countries. We focus primarily on men, but we explore in Section 4.4 how gender differences help explain significant portions of gender gaps across these domains.

4.2.1 Empirical Specification

We estimate the following equation:

$$Y_{icw} = \alpha + \beta CMNI_{icw} + \Gamma' X_{icw} + \delta_{cw} + \varepsilon_{icw} \quad (1)$$

where Y_{icw} are economic, health, and political outcomes for respondent i in country c surveyed in mode w ; $CMNI_{icw}$ is i ’s standardized CMNI score; X_{icw} is a vector of individual characteristics (age, urban residence and, in more saturated specifications, also education, religion, and religiosity); and δ_{cw} are survey-by-country fixed effects.¹⁶ Appendix Table C2 defines all outcomes and Appendix Table C3 presents summary statistics. Standard errors are clustered at the country level.

We condition on several sets of covariates that may co-vary with adherence to masculinity norms and with outcomes of interest. Adherence to masculinity norms and its different dimensions likely vary with age and across rural and urban areas, reflecting differences in

¹⁵We show scatter plots of the relationship between GDP per capita and either masculinity norms (left) or gender role norms (right), partialling out the other set of norms and conditioning on continent fixed effects. We display both weighted (by population size) and unweighted fits.

¹⁶The six countries covered by both LiTS and the online GMS receive a separate intercept for each mode.

local social structures. We therefore condition on age and urban vs. rural location in all specifications. In extended specifications, we add education (primary, secondary, tertiary undergraduate level, tertiary graduate level) as well as religious denomination and religiosity, which are also important potential correlates of masculinity norms and of our outcomes (Figure 2). To control for item non-response, which may itself correlate with respondent characteristics, we include in all specifications an indicator for whether each CMNI item was answered. Lastly, to assess the relative magnitudes of adherence to masculinity norms and gender role norms in predicting outcomes, we report regressions of outcomes on (i) standardized CMNI; (ii) standardized TGRI; and (iii) both jointly.

The evidence in this section is descriptive in nature and should not be interpreted as establishing a causal effect of masculinity norms on the outcomes considered. Our objective is instead to document a set of robust empirical regularities between adherence to masculinity norms and economic, health, and political outcomes.

4.2.2 Economic Outcomes

We first examine five economic outcomes of interest: (i) earnings, (ii) employment in a masculine sector,¹⁷ (iii) employment status, (iv) labor supply at the intensive margin, measured by an indicator equal to one if the respondent's working hours are strictly above the 90th percentile of men's working hours in their country (computed separately by survey mode), and (v) self-declared willingness to work longer hours. Among men in our sample, 76% are employed, including 36% in a masculine sector, and 29% are willing to work more hours (Appendix Table C3). Table 1 presents the estimation results. Panel A shows estimates including CMNI only, Panel B includes TGRI only, and Panel C includes both.

Earnings. Adherence to masculinity norms significantly predicts individual earnings. A one standard deviation increase in the CMNI is associated with 2.8-3.0% higher earnings (columns 1–2, Panel A). This relationship remains statistically significant and unchanged in magnitude when conditioning on gender role attitudes, which are themselves not associated with earnings.

Occupational sorting. In line with gender identity theories of occupational choice, columns 3 and 4 of Table 1 show that men who adhere more strongly to masculinity norms are significantly more likely to be employed in a masculine sector. A one standard deviation increase in the CMNI is associated with a 2.4 percentage point higher probability of employment in

¹⁷We classify agriculture, mining, construction, manufacturing, and transportation as masculine sectors because they are both male-dominated and culturally gender-typed as masculine. Occupations involving manual labor and physical strength are consistently perceived as masculine, and such manual-intensive work shows persistent male over-representation across countries (Charles and Grusky, 2004).

these sectors: a 7% increase relative to the mean (column 4, Panel A). Gender role attitudes also predict employment in these sectors (Panel B), with a slightly larger magnitude than the CMNI. However, the CMNI association remains robust, albeit attenuated in magnitude when conditioning on the TGRI (Panel C).

Labor supply at the extensive margin. The occupational sorting patterns documented above raise the possibility of labor market frictions: men who adhere to masculinity norms more strongly may face barriers to transitioning out of masculine sectors during periods of structural economic change. At the extensive margin, however, the CMNI shows no significant association with overall employment status: the coefficient is close to zero and statistically insignificant (columns 5 and 6, Panels A and C). More traditional attitudes to gender roles, in contrast, predict slightly higher labor force participation, though the coefficient is small at approximately 1 percentage point (columns 5–6, Panels B and C).

Labor supply at the intensive margin. Men who adhere to masculinity norms more strongly are significantly more likely to work longer hours and to want to work longer hours. A one standard deviation increase in the CMNI is associated with a 0.5 percentage point higher probability of being in the top decile of work hours (column 8, Panel A), and a 5.2 percentage point higher self-declared willingness to work longer hours in their current job (column 10, Panel A). Panel C shows that this relationship is robust and similar in magnitude when conditioning on gender role attitudes. Quantitatively, the relationship between willingness to work longer hours and the CMNI is about twice as large as the relationship with the TGRI, and the TGRI is uncorrelated with actual work hours (columns 7–8, Panels B and C). Appendix Table C4 decomposes these relationships by individual CMNI dimensions. All five dimensions of the CMNI are significantly associated with economic outcomes, with “importance of winning” and “power over women” exhibiting the largest coefficients for earnings and “violence”, “importance of winning”, and “self-reliance” for working hours.

4.2.3 Risk and Health

Next, we examine outcomes in the risk-taking and health domains: (i) self-assessed willingness to take risks, (ii) an index of seatbelt use (as driver, front passenger, and back passenger), (iii) the likelihood of seeking help from a mental health professional, and (iv) depression symptoms measured using a version of the PHQ4 scale (Patient Health Questionnaire-4, a brief screener for depression and anxiety). On average, men in our sample report a moderate willingness to take risks (6 on a 1-10 scale) and an average seatbelt use index of 0.75, with 87% (56%) of men wearing a belt in the driving (back) seat. Men report a moderate depression score (2.3 on a 1-5 scale), though 47% indicate they would be unlikely to seek

help from a mental health professional (Appendix Table C3). Table 2 presents estimates of Equation 1 for these risk and health outcomes.

Risk-taking. Men who adhere to masculinity norms more strongly report significantly higher willingness to take risks. A one standard deviation increase in the CMNI is associated with a 0.10 standard deviation higher willingness to take risks (column 2, Panel A). This magnitude remains similar when conditioning on the TGRI, while the TGRI coefficient is statistically insignificant (column 2, Panel C). Among the CMNI dimensions, “importance of winning” is the strongest predictor of risk-seeking, though most other CMNI dimensions are also significant predictors (Appendix Table C5).

We validate these findings with a behavioral risk-taking outcome. Men who adhere to masculinity norms more strongly are less likely to use a seatbelt: a one standard deviation increase in the CMNI is associated with a 0.08 standard deviation lower seatbelt use (column 4, Panel A). The association halves, to 0.04 standard deviations, when conditioning on gender role attitudes, which are themselves a significant predictor of seatbelt use (column 4, Panel C).

Health behavior. Greater adherence to masculinity norms strongly predicts reluctance to seek help from a mental health professional and elevated depression symptoms. A one standard deviation increase in the CMNI is associated with a 5.3 percentage point lower willingness to seek help and a 0.15 standard deviation higher depression score (columns 6 and 8, Panel A).¹⁸ Gender role attitudes show no significant association with either outcome when included together with the CMNI (columns 6 and 8, Panel C): the TGRI coefficients are close to zero and statistically insignificant. This pattern indicates that these health behaviors specifically reflect masculinity norms rather than more general gender attitudes, with self-reliance the dimension most strongly associated with them (Appendix Table C5).

4.2.4 Politics

Lastly, we examine political attitudes measured by support for: (i) a democratic regime, (ii) a market economy, (iii) strongman leadership, and (iv) army rule. Most men rate democracy as a good way to govern their country (77%), but many also endorse authoritarian alternatives: 45% support strongman leadership and 33% support army rule (Appendix Table C3). A bare majority (51%) consider a market economy preferable to other economic systems. Table 3 presents estimates of Equation 1 for these political outcomes.

¹⁸The sample size is reduced for this outcome because this particular question was only asked in the online version of the GMS.

Political and economic liberalism. Within countries, men with stronger adherence to masculinity norms are significantly less supportive of both democratic governance and a market economy. A one standard deviation increase in the CMNI is associated with a 3.6 percentage point lower probability of men agreeing that democracy is good or very good for their country (column 2, Panel A) and a 3.5 percentage point lower probability of supporting a market economy over a planned economy (column 4, Panel A).

When including the TGRI in the analysis, either in isolation (Panel B) or together with CMNI (Panel C), we observe a strong positive association between more egalitarian gender role attitudes and pro-democracy attitudes, but a weaker and less consistent association between egalitarian gender role views and pro-market attitudes. Importantly, the results for the CMNI remain robust across all specifications.

Strongman leadership and army rule. Adherence to masculinity norms strongly predicts support for strongman leadership and army rule. A one standard deviation increase in the CMNI is associated with a 9 percentage point higher probability of supporting strongman leadership (column 6, Panel A) and a 7.3 percentage point higher probability of supporting military rule (column 8, Panel A). These represent substantial 20% and 23% increases relative to means of 45% and 32%, respectively. These patterns hold, though attenuated, after conditioning on gender role attitudes (columns 6 and 8, Panel C).

Among the CMNI dimensions, Appendix Table C6 shows that “power over women” is consistently among the two strongest correlates across all four political outcomes. “Importance of winning” has the largest point estimates for support for a strong leader and army rule, whereas “violence” has the largest negative point estimates for support for democracy and for a market economy.

4.3 Robustness and Extensions

We first address inference across multiple outcomes and show that the associations we have documented between adherence to masculinity norms and attitudes and behavior across economics, health, and politics are consistent across countries. Next, we discuss sample selection in the online samples and social desirability bias in the face-to-face interviews. We then show that the associations between masculinity norms and outcomes are robust to controlling for a range of other attitudes and traits, including self-perceived gender identity, social and economic preferences, trust, and zero-sum mindset. Last, we assess robustness to alternative measures of masculinity norms.

Inference across multiple outcomes and consistency across countries. Appendix Table C7 reports Romano–Wolf adjusted p -values that account for simultaneous inference across out-

comes. Of the 12 coefficients that are statistically significant in the baseline analysis, 10 remain significant at conventional levels after the adjustment; the adjusted p -values for the remaining two lie just above conventional thresholds.

We then follow [Anderson \(2008\)](#) and combine the outcomes within each domain (economics, health, and politics) into three domain-specific summary indices. Summary indices serve two purposes. First, they provide tests of whether adherence to masculinity norms predicts a common shift in outcomes within each domain, reducing concerns arising from testing multiple outcomes within domains separately. Second, they allow us to characterize the cross-country consistency of these associations in a more parsimonious way than reporting coefficients for each outcome in each country. Appendix Figure [B7](#) reports the coefficients on the CMNI from regressions estimated separately for each country, controlling for the TGRI, age, and urbanity. The point estimates associated with the CMNI are positive and comparable in magnitude in nearly every GMS country for economics, health, and politics related outcomes. To illustrate this even more parsimoniously, we combine all outcomes in a single summary index. Figure [5](#) shows that the CMNI coefficients are positive in over 90 percent of countries and individually significant at the 5 percent level in 74 percent, demonstrating the broad cross-country consistency of the results. A comparison with Panel B of Figure [5](#) further shows that the CMNI is a more consistent predictor of outcomes across countries than the TGRI.

Sample selection bias. Appendix Section [A1.3](#) examines sample selection and survey and item non-response. Comparisons with the World Values Survey show no evidence that selection of countries into the LiTS or the online GMS affects our results. For the six countries with both LiTS and online samples, demographics differ somewhat between the online and nationally representative samples. We therefore weight all cross-country analyses to match the latest Gallup World Poll. Selection into online samples could also bias the within-country analysis if the CMNI–outcome relationships differ systematically across online and representative respondents. They do not: the within-country results hold on the nationally representative LiTS subsample, as documented in our initial paper ([De Haas et al., 2024](#)).¹⁹

Social desirability bias. Face-to-face interviews may introduce social desirability bias in CMNI and TGRI reporting, while this concern is substantially reduced in our online survey component (see, e.g., [Young, 2025](#)). We gauge this bias by examining how responses change by interviewer gender. For the CMNI, interviewer gender does not significantly predict the overall score, though men report significantly less agreement with the ‘violence’ sub-item when interviewed by a woman (Appendix Table [C8](#)). For the TGRI, a female interviewer

¹⁹The only difference between LiTS- and online-based results concerns age: there is no strong age gradient in the CMNI in LiTS, whereas younger male respondents in the online survey score systematically higher.

predicts a lower score by about 0.1 standard deviations, driven by the ‘business executives’ and ‘household chores’ sub-items (Appendix Table C8), suggesting social desirability bias is more pronounced for the TGRI. Nonetheless, all results are robust to controlling for interviewer gender (Appendix Figure B8) or to interviewer fixed effects.

Potential confounders. To show that the CMNI captures information distinct from other commonly studied attitudes and traits, we test the sensitivity of our estimates to conditioning on these measures.²⁰ For brevity of exposition, Appendix Figure B9 presents estimates using the single summary index that combines all outcomes. Panel A shows that the CMNI coefficient is largely unaffected when conditioning on generalized trust, institutional trust, and tolerance for civic norm-breaking, proxies for social capital that have received much attention in the economics of culture and institutions (e.g., Algan and Cahuc, 2013) and that are also measured in the LiTS component of the GMS. Moreover, we show that our results are also robust to considering two measures that may be more closely linked to adherence to masculinity norms and that have been shown to predict economic outcomes: competitiveness and gender identity (e.g., Niederle and Vesterlund, 2011; Brenøe et al., 2022).

Additionally, we fielded an online survey in the United States (N = 972 men) to measure additional traits and preferences, such as zero-sum thinking (Chinoy et al., 2026), social preferences (patience, altruism, positive and negative reciprocity) (Falk et al., 2018), social dominance orientation (Pratto et al., 1994), and the Big Five personality traits (Goldberg, 2013). Panel B of Appendix Figure B9 shows that the association between adherence to masculinity norms and the summary outcome index remains stable when we condition on these variables. Together, these results indicate that adherence to masculinity norms is not simply a proxy for other traits, preferences, or attitudes that have received attention in related literature.

Alternative measures. The CMNI provides a well-validated measure of personal adherence to masculinity norms. We have shown that our results are not driven by any particular item in the CMNI, and we show in Section 4.4 that our results are robust to using the CMNI-3, which only includes questions related to winning, violence, and self-reliance. Yet, the CMNI does not have the same prescriptive formulation as the TGRI. To show that our results are not driven by the particular proxy of adherence to masculinity norms, we elicit in the online GMS surveys respondents’ agreement with a set of prescriptive statements overlapping with several CMNI dimensions: *Self Reliance* (“Men should figure out their personal problems on their own without asking others for help”); *Importance of Winning* (“Men should be aggressive and competitive to get ahead”); *Risk-Taking* (“It is important for a man to take risks,

²⁰See Appendix Table C9 for measurement details.

even if he might get hurt”); *Violence* (“Men should use violence to get respect if necessary”); and *Emotional Control* (“Men should act strong even if they feel scared or nervous inside”). From these items, we construct a Normative Masculinity Index, detailed in Appendix Section A1.6. This index is highly internally consistent, with a Cronbach’s alpha of 0.86, and strongly correlated with the CMNI ($\rho = 0.51$). Appendix Table C10 shows that all results are robust to using the Normative Masculinity Index in place of the CMNI, except for earnings, where the association is still positive but not statistically significant.

4.4 Gender Gaps

Men adhere more strongly to masculinity norms than women, and these norms predict the economic, health, and political outcomes examined above. These gender differences in adherence may therefore help account for gender gaps in the same outcomes. Appendix Figure B10 relates the cross-country gender gap in the CMNI-3 to the gender gap in each of our three summary indices. Countries with larger gender gaps in the CMNI-3 show significantly larger gender gaps in the health and political summary indices, while the economic summary index shows no strong positive association.

We proceed by using our individual-level data to measure the share of these gaps attributable to gender differences in the CMNI-3. As discussed in Section 3.2, we use the three-item CMNI (CMNI-3) in all analyses that include women. Appendix Table C11 reports the CMNI-3 results. For men, they are consistent with our main findings, further showing the robustness of our results to alternative measures of adherence to masculinity norms. For women, consistent with our hypothesis laid out in Section 2.1, the CMNI-3 predicts economic, health, and political outcomes in similar, but for most outcomes, attenuated ways.

We then follow the decomposition approach of Gelbach (2016), which nests the Kitagawa-Oaxaca-Blinder decomposition, and calculate the share of the gender gap in each outcome of interest that is statistically associated with variation in the CMNI, in the TGRI, or that remains unexplained. We condition on our usual set of covariates: urban residence, age, education, religion, religiosity, and country fixed effects.^{21,22} Because gender gaps and gender norms may be co-determined and influenced by a range of omitted variables, the decomposition is based on correlations and should be interpreted as descriptive evidence.

Panel A of Appendix Figure B11 plots for each outcome the gender gap (women minus

²¹See, e.g., Bandiera et al. (2020) and Cook et al. (2020) for recent applications of the Gelbach decomposition.

²²In our case, both the CMNI and TGRI are indices constructed from multiple questions. Rather than using the overall composite scores, we include each question as a separate predictor, then group the explanatory power of all questions associated with each index.

men), conditional on the full set of covariates, while Panel B shows the portion of the gender gap attributable to the CMNI-3 (blue) and TGRI (red). Consistent with existing literature, Panel A documents sizable gender gaps in earnings, willingness to work longer hours, sector of employment, and stated risk tolerance. However, women report more symptoms of depression, which aligns with prior research indicating that men tend to under-report symptoms of depression, a pattern frequently linked to masculinity norms (Seidler et al., 2016).²³

The decomposition in Panel B shows that the CMNI-3 gender gap accounts for 25% of the gap in willingness to work more, 5% of the gap in log earnings, 23% of the gap in stated risk tolerance, 31% of the gap in risky behavior (front-seat seatbelt use), 57% of the gap in support for democracy, and 61% of the gap in support for a strong leader. The gender gap in the sector of employment remains largely unexplained in this decomposition. Overall, these patterns indicate that the masculinity norms that predict men’s outcomes also account for part of the gender gaps in these outcomes, especially in political attitudes and risk-taking.

5 Drivers of Adherence to Masculinity Norms

Although core masculinity norms are cross-culturally stable, they are not immutable: like other cultural traits, they can evolve in response to changing conditions (Bau and Fernández, 2023). Motivated by a literature on male status across societies (Von Rueden, 2023), we consider exposure to war and resource stress as two potential drivers of adherence to masculinity norms. We focus on the impressionable years of late adolescence and early adulthood (ages 18–25) and exploit within-country variation in cohort-specific exposure to war and economic recession (the latter as a proxy for resource stress). This age window has been identified as formative for political attitudes, beliefs, and social preferences (see Giuliano and Spilimbergo (2025) for a review), and we show it is also the most relevant in shaping adherence to masculinity norms.

5.1 War and Masculinity

A long-standing argument in political science and anthropology is that the cross-cultural stability of the core masculinity norms examined in this paper is rooted in the human experience of war (Goldstein, 2001).²⁴ War is one of the most gendered human social activities,

²³If men who more strongly adhere to masculinity norms are less likely to report symptoms of depression, this would suggest that the associations presented in Table 2 may underestimate the true relationship between CMNI and actual experiences of depression.

²⁴As summarized by Goldstein (2001, p. 266): “Those parts of masculinity that are found most widely across cultures and time are not arbitrary but shaped by the war system”.

with combat roles almost exclusively performed by men. Motivating men to fight requires them to restrict their emotions, particularly fear and empathy,²⁵ to tolerate and embrace violence, to develop resilience and self-reliance, and to regard winning as imperative. These traits map closely onto the dimensions of masculinity measured by the CMNI. Wartime mobilization, in this view, selects for, valorizes, and propagates these traits: directly through the men who serve, and indirectly through the elevation of the soldier and veteran as social ideals.

Recent work in economics is consistent with this mechanism, showing that military service durably reshapes attitudes (Ertola Navajas et al., 2022; Gibbons and Rossi, 2022; Ronconi and Ramos-Toro, 2025; Gerling and Kibris, 2026). The dynamic goes beyond combatants: conflict also reshapes community-wide expectations about what it means to be a real man and how men should behave, through social rewards and sanctions. Combat exposure grants veterans status as heroes, as well as considerable influence in their local communities (Cagé et al., 2023), while historical conflict elevates male status more broadly (Dincecco et al., 2024). Social expectations and direct sanctions from non-combatants (including women) are often powerful drivers of male enlistment (Becker, 2021; Baranov, De Haas and Grosjean, 2023).²⁶ The channel is the activation and valorization of a particular conception of manhood, the idealized male warrior: emotionally and physically tough and self-reliant, violent and aggressive when needed, and intent on winning. Consistent with this, and motivating our approach below, Appendix D documents that CMNI scores are higher today in countries with greater historical exposure to military conflict.

5.2 Economic Recession and Masculinity

Recession exposure may shape masculinity norms not through the social valorization of the warrior ideal, but through an intensification of resource competition. Across a wide range of taxa, resource stress induces male strategies characterized by risk taking, violence, and control (Emlen and Oring, 1977). Among humans, research on pre-industrial communities indicates that frequent and severe resource scarcity is the strongest ecological factor associated with male dominance across societies (Hayden et al., 1986).

Two literatures in economics motivate the prediction that resource scarcity may shift adherence to masculinity norms. The first documents that macroeconomic conditions during

²⁵Fear is a particularly problematic emotion during war. The most natural response to danger, it is debilitating in battle and must therefore be suppressed to motivate combatants to fight. For similar reasons, other emotions (grief, pity, compassion, gentleness) must be restrained too.

²⁶Guarnieri and Tur-Prats (2023) show that more gender-unequal ethnic groups are more likely to use sexual violence in conflict, particularly against more gender-equal groups.

young adulthood leave durable imprints on beliefs and preferences (e.g., [Malmendier and Nagel, 2011](#); [Bietenbeck, Sunde and Thiemann, 2025](#)). The second shows that adverse labor-market shocks (e.g., the China trade shock), which depress the relative economic standing of low-skill men, also predict worse male outcomes, including substance abuse and violence ([Autor, Dorn and Hanson, 2019](#); [Charles, Hurst and Notowidigdo, 2019](#)). A literature in social psychology on precarious manhood clarifies the mechanism: when the economic pathway to manhood is blocked, men compensate along two dimensions. Men reassert masculine norms of self-reliance, toughness, and violence as alternative ways to enact manhood ([Bosson and Vandello, 2011](#)). But they also defend the provider role they can no longer fulfill by reaffirming the traditional household division of labor ([Munsch, 2015](#); [Matavelli et al., 2026](#)). We therefore predict that recession exposure raises adherence to both masculinity norms (CMNI) and traditional gender role attitudes (TGRI).

5.3 Empirical Approach

Sample. We restrict the analysis to male GMS respondents born in or after 1971, so that the full 18–25 window falls within the period for which our conflict data are systematically georeferenced (1989 onward, see below). We further require respondents to be at least 25 years old at the time of survey, so that the entire impressionable-years window is observed. The estimation sample comprises 39,637 male respondents across 70 countries.

War and recession exposure. We measure exposure to armed conflict using the Uppsala Conflict Data Program’s Georeferenced Event Dataset (UCDP-GED), which records organized violence events at high spatial resolution (village or equivalent) from 1989 onward. Because UCDP-GED assigns events to countries based on borders at the time of occurrence, we recode events to present-day borders, allowing us to construct consistent exposure measures for, e.g., the post-Yugoslav states.

Our baseline measure War_{cs}^{18-25} is a binary indicator equal to one if cohort s in country c experienced at least one year during ages 18–25 in which a war (more than 1,000 battle-related deaths, the standard UCDP threshold) was ongoing on the country’s territory or involved country c extra-territorially (e.g., American wars in Iraq and Afghanistan). Across our sample, we observe 143 country-year war events, and 8.3% of the country-cohorts in our sample are exposed to war during the impressionable years. Appendix Figure [B12](#) shows the country-cohorts exposed to conflict. In robustness checks, we consider battle deaths normalized by population as a measure of exposure at the intensive margin. The cohorts with most intense war exposure during their impressionable years are the 1971–1977 birth cohorts in Bosnia and Herzegovina, the 1998 birth cohort in the West Bank & Gaza, and the

1973–1974 birth cohorts in Tajikistan, as shown in Appendix Table C12.

We measure exposure to recession using annual real GDP per capita growth from the Maddison Project Database. We define a recession year if its real per capita GDP growth is at or below the tenth percentile of the pooled country-year distribution (as is standard in the literature, e.g., Carreri and Teso (2023)). There are 390 country-year recession events in our sample. Our baseline measure $Recession_{cs}^{18-25}$ is a binary indicator equal to one if cohort s in country c experienced at least one recession year during ages 18–25. In our sample, 39.7% of the country-cohorts are exposed to recession during their impressionable years. We also construct a symmetric measure $Boom_{cs}^{18-25}$, indicating years with growth at or above the ninetieth percentile, and include it to more flexibly control for macroeconomic conditions.

Specification. We estimate:

$$Y_{icw} = \beta_1 War_{cs}^{18-25} + \beta_2 Recession_{cs}^{18-25} + \lambda_{cw} + \eta_s + \varepsilon_{icw}, \quad (2)$$

where Y_{icw} is the standardized CMNI or TGRI score of individual i in country c surveyed in mode w , belonging to birth cohort s . λ_{cw} are country-by-survey mode fixed effects; η_s are birth cohort fixed effects. Coefficients β_1 and β_2 capture, respectively, the effect of war exposure conditional on recession exposure, and the effect of recession exposure conditional on war exposure. We report standard errors clustered at the country level (in parentheses) and as two-way clustered standard errors at the country and birth-cohort levels (in brackets).

Identifying assumption and balance. Identification of β_1 and β_2 requires that, conditional on country-by-survey mode and cohort fixed effects, the timing of war and recession exposure within country is not correlated with other unobserved cohort-specific determinants of adherence to masculinity norms. Appendix Table C13 provides an indirect diagnostic by regressing pre-determined characteristics, namely parental education, parental occupation, height, and books in the childhood home,²⁷ on each exposure. The coefficients are small and statistically indistinguishable from zero, indicating that exposed and non-exposed cohorts within the same country are comparable on observable family background and early-life conditions. This is consistent with our exposures reflecting plausibly exogenous variation in the timing of national-level shocks rather than selection on cohort characteristics.

Separate identification of the effects of war and recession in Equation 2 also requires that the two exposures exhibit sufficient independent variation. Column 1 of Appendix Table C13 shows that war and recession exposure during the impressionable years are uncorrelated in our sample, allowing us to separately estimate their effects.

²⁷These covariates are only measured in the LiTS, explaining the smaller sample size.

5.4 Results

Main results. Table 4 begins with specifications that only include war exposure (column 1) or recession exposure (column 2). Column 3 presents estimates of Equation (2). To examine the robustness of the results to conditioning on additional cohort-specific shocks during impressionable years, column 4 reports an extended specification that conditions on exposure to economic booms, and column 5 additionally controls for exposure to natural disasters.²⁸ Columns 6–10 repeat these specifications with the TGRI as the dependent variable.

We find that exposure to war during men’s impressionable years raises their CMNI by 0.092 standard deviations (column 1).²⁹ The coefficient is robust to controlling for recession (column 3), boom (column 4) and natural disaster exposures (column 5), stable in magnitude across specifications, and statistically distinguishable from zero. In contrast, exposure to war has no detectable effect on traditional gender role attitudes (columns 6 and 8–10), with coefficients that are small, negative, and far from statistically significant across specifications. This null effect on TGRI mirrors our cross-country results, which show a positive and statistically significant correlation between historical militarized conflict and CMNI, but no association with the TGRI across countries (Appendix Table D1).

Consistent with predictions linking resource stress to heightened masculinity norms adherence, column 2 of Table 4 shows that recession-exposed cohorts score 0.083 standard deviations higher on the CMNI. Again, this result is robust to controlling for war and/or boom exposure, with coefficients stable in magnitude across specifications and statistically significant at the 1% level. By contrast, the boom exposure indicator is small and insignificant, indicating that the recession effect is not a generic response to macroeconomic volatility but a specific response to adverse conditions of resource stress. Recession exposure also reinforces adherence to traditional gender roles (columns 6–10). Nevertheless, the results suggest that the first margin is larger than the second, with coefficients more precisely estimated and almost twice as large for the CMNI as for the TGRI.

Dimensions of masculinity. Appendix Table C14 disaggregates the CMNI into its components. War exposure has statistically significant and the largest effects on winning (0.138), violence (0.091), and self-reliance (0.075), which correspond to the dimensions most directly

²⁸Data on natural disasters come from the EM-DAT International Disaster Database. We create an indicator equal to one if cohort s in country c experienced at least one year during ages 18–25 in which deaths from natural disasters in country c exceeded 1,000. This parallels the UCDP battle-death threshold used to define war exposure.

²⁹For women, the effect of war exposure during impressionable years is positive but much smaller, less than half the magnitude estimated in men, and not statistically significant. We do not present these results here as they are based only on the online sample, with limited variation in war exposure (since women were not asked the CMNI in LiTS).

aligned with combat ideology. Recession exposure, by contrast, impacts all dimensions of the CMNI, consistent with the precarious-manhood prediction that economic threat triggers compensatory pursuit of all traditional pathways to enacting manhood.

Timing. Appendix Figure B13 reports estimates of equation (2) over four non-overlapping age windows: 2–9, 10–17, 18–25, and 26–33. For war, the 18–25 window, which corresponds to the period of greatest likelihood of first being drafted and actively exposed to combat, is the only one with a positive and statistically significant coefficient. For recession, the 18–25 window yields the largest and only statistically significant estimate, with a smaller and imprecise estimate at ages 10–17. Together, the 10–17 and 18–25 windows span the years of human capital accumulation, labor-market entry, and household formation, and are therefore formative periods in which exposure to adverse economic shocks may have lifelong consequences.

Robustness. A concern with our two-way fixed-effects specification is that, under treatment-effect heterogeneity, the estimator returns a weighted average of underlying treatment effects in which some weights may be negative (De Chaisemartin and d’Haultfoeuille, 2020). Following the recommended diagnostics, we report in Appendix Table C15 that only 9.09% and 4.24% of underlying ATTs receive negative weights, and these sum to -0.003 and -0.017 for war and recession exposures, respectively. This is an order of magnitude smaller than the war coefficient and roughly one-fifth of the recession coefficient.

We further probe the robustness of our results by, first, considering intensive margin measures of both exposures (battle deaths normalized by population; cumulative output loss), reported in Appendix Table C16. The results carry through. Second, Appendix Figure B14 shows that our estimates are not sensitive to dropping any individual country from the sample.

6 Conclusion

Drawing on new data from 70 countries, we document consistent global patterns in how adherence to masculinity norms predicts key economic, health, and political outcomes. Men with stronger adherence to these norms exhibit distinct patterns across all three domains: they work longer hours, earn more, and are more likely to sort into stereotypically male industries; they have worse mental health and engage in riskier health behaviors; and they show greater support for strongman political leadership while opposing democratic governance and market-based institutions.

These associations hold conditional on traditional gender role attitudes, and of the two,

the CMNI is the more consistent predictor of our outcomes of interest. Moreover, we show that gender differences in adherence to masculinity norms account for substantial parts of the corresponding gender gaps. Finally, we provide evidence that historical exposure to militarized conflict explains cross-sectional variation in adherence to masculinity norms across countries, and that within a country, individual adherence to masculinity norms is shaped by wars and economic recessions during one's formative years.

The implications of these findings differ by domain. Economically, the picture is mixed. Higher labor supply may support economic activity, but occupational sorting implies potential labor-market frictions that can offset these gains. Norms emphasizing self-reliance, physical toughness, winning at all costs, and power over women plausibly carried higher returns in highly gender-segregated economies organized around manual and industrial production, but may be poorly adapted to an economy in which employment growth is concentrated in services and care and where female autonomy is high. This suggests a mismatch between inherited cultural traits and technological change ([Nunn, 2022](#); [Gelfand, Gavrilets and Nunn, 2024](#)). Our results also give no reason to expect these norms to fade on their own. Adherence is higher in richer countries and among younger men, and adverse shocks during impressionable years raise adherence. These patterns suggest mechanisms through which norms may persist despite being maladapted to structural change. One implication is that mitigating the costs of industrial transformation may require not only retraining displaced workers but also directly addressing male socialization and the norms that inhibit men's transitions into expanding service-sector and care occupations.

The health and political implications of strong adherence to masculinity norms appear clearly negative. From a public health perspective, reducing health risks requires challenging the masculinity norms that discourage help-seeking for mental health problems, preventive screenings, and protective measures. Similarly, countering threats to democratic governance requires addressing the masculinity norms that populist leaders often exploit.

By embedding the CMNI in large-scale surveys, we provide a validated instrument for measuring adherence to masculinity norms. Future research could pursue several directions. First, establishing how masculinity norms and economic shocks causally interact remains a priority. Second, studying the intergenerational and horizontal cultural transmission would inform interventions to ease labor-market transitions into care and service occupations. Third, experimental studies could test how policy interventions, such as emphasizing the health costs of masculinity norms, shift adherence. Fourth, qualitative research could illuminate cross-cultural variation in how masculinity is defined and expressed. To facilitate future work, our [Atlas of Masculinity](#) provides the cross-country data and [the Life in Transition Survey site](#) provides the LiTS microdata.

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Tables and Figures

Table 1: Masculinity and Gender Role Norms – Economics

	Log earnings		Masculine Sector		Working		Hours > p90		Would Work More	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Masculinity Norms										
CMNI Score	0.030*	0.028**	0.025***	0.024***	0.003	0.001	0.005**	0.005**	0.055***	0.052***
	(0.016)	(0.013)	(0.003)	(0.003)	(0.004)	(0.003)	(0.002)	(0.002)	(0.006)	(0.006)
Mean of outcome	9.93	9.93	0.35	0.35	0.77	0.77	0.09	0.09	0.29	0.29
R-squared	0.55	0.58	0.05	0.07	0.13	0.16	0.00	0.01	0.11	0.12
Observations	44,394	44,394	46,257	46,257	59,898	59,898	44,305	44,305	46,239	46,239
Panel B: Gender Role Norms										
TGRI Score	0.002	0.003	0.033***	0.030***	0.010***	0.010***	0.002	0.001	0.045***	0.041***
	(0.015)	(0.012)	(0.003)	(0.003)	(0.004)	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)
Mean of outcome	9.93	9.93	0.35	0.35	0.77	0.77	0.09	0.09	0.29	0.29
R-squared	0.55	0.58	0.05	0.07	0.13	0.16	0.00	0.01	0.11	0.11
Observations	44,645	44,645	46,568	46,568	60,424	60,424	44,606	44,606	46,550	46,550
Panel C: Masculinity and Gender Role Norms										
CMNI Score	0.036**	0.032***	0.014***	0.015***	-0.002	-0.003	0.004**	0.005**	0.044***	0.043***
	(0.014)	(0.012)	(0.003)	(0.003)	(0.004)	(0.004)	(0.002)	(0.002)	(0.006)	(0.006)
TGRI Score	-0.012	-0.009	0.026***	0.024***	0.012***	0.012***	0.000	-0.000	0.027***	0.023***
	(0.012)	(0.010)	(0.004)	(0.003)	(0.004)	(0.004)	(0.002)	(0.002)	(0.005)	(0.004)
Mean of outcome	9.93	9.93	0.35	0.35	0.77	0.77	0.09	0.09	0.29	0.29
R-squared	0.55	0.58	0.05	0.07	0.13	0.16	0.00	0.01	0.12	0.12
Observations	44,363	44,363	46,213	46,213	59,795	59,795	44,261	44,261	46,195	46,195
Survey × country FEs	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×

Notes: OLS regressions. An observation is an individual GMS respondent. *Log earnings* (columns 1-2) is the natural logarithm of annual labor earnings from main and side jobs, based on the midpoint of country-specific gross income bands (GMS) or the annualized sum of monthly after-tax earnings (LiTS), expressed in US\$. *Masculine Sector* (columns 3-4), *Working* (columns 5-6), and *Would Work More* (columns 9-10) are defined as dummies equal to one if the individual was employed in a masculine sector, was working, or would like to work more hours, respectively. *Hours > p90* (columns 7-8) is a dummy equal 1 if the respondent's usual weekly hours in the main job are strictly above the 90th percentile of the within-survey × country men's hours distribution. For more details on the definitions of the dependent variables, please refer to Table C2. The CMNI and TGRI scores are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table 2: Masculinity and Gender Role Norms – Risk and Health

	Risk Taking		Uses Seatbelt		Unlikely to Seek Help		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms								
CMNI Score	0.104*** (0.013)	0.100*** (0.011)	-0.083*** (0.007)	-0.079*** (0.007)	0.048*** (0.006)	0.053*** (0.005)	0.145*** (0.010)	0.146*** (0.009)
Mean of outcome	0.00	0.00	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.14	0.14	0.16	0.16	0.02	0.03	0.13	0.13
Observations	59,805	59,805	59,197	59,197	41,679	41,679	59,650	59,650
Panel B: Gender Role Norms								
TGRI Score	0.049*** (0.014)	0.044*** (0.013)	-0.134*** (0.010)	-0.127*** (0.009)	0.021*** (0.006)	0.028*** (0.005)	0.055*** (0.009)	0.056*** (0.009)
Mean of outcome	-0.00	-0.00	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.13	0.13	0.16	0.17	0.01	0.02	0.11	0.12
Observations	60,327	60,327	59,702	59,702	41,828	41,828	60,144	60,144
Panel C: Masculinity and Gender Role Norms								
CMNI Score	0.101*** (0.011)	0.098*** (0.010)	-0.039*** (0.009)	-0.038*** (0.009)	0.049*** (0.006)	0.051*** (0.005)	0.146*** (0.010)	0.147*** (0.010)
TGRI Score	0.010 (0.011)	0.006 (0.010)	-0.119*** (0.011)	-0.113*** (0.011)	-0.003 (0.006)	0.004 (0.005)	-0.005 (0.010)	-0.004 (0.009)
Mean of outcome	0.00	0.00	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.14	0.14	0.17	0.17	0.02	0.03	0.13	0.13
Observations	59,707	59,707	59,101	59,101	41,665	41,665	59,565	59,565
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is an individual GMS respondent. The dependent variable *Unlikely to Seek Help* (columns 5-6) is a dummy equal to one if the respondent answered they were “Extremely Unlikely” or “Unlikely” to seek help from a mental health professional. The other outcome variables are standardized: *Risk Taking* (columns 1-2) was measured on a scale from 1 – “Not willing to take risk at all” to 10 – “Very much willing to take risk”, *Uses Seatbelt* (columns 3-4) is the mean across three questions on whether the respondent uses a seatbelt, and *Depression Score* (columns 7-8) encompasses four questions that measure frequency of depression and anxiety symptoms. For more details on the definitions of the dependent variables, see Table C2. The CMNI and TGRI scores are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table 3: Masculinity and Gender Role Norms – Politics

	Pro Democracy		Pro Market		Support for Strong Leader		Support for Army	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms								
CMNI Score	-0.037*** (0.004)	-0.036*** (0.004)	-0.033*** (0.004)	-0.035*** (0.005)	0.093*** (0.008)	0.090*** (0.007)	0.076*** (0.005)	0.073*** (0.005)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.05	0.05	0.04	0.05	0.11	0.12	0.13	0.14
Observations	58,045	58,045	51,707	51,707	57,452	57,452	57,367	57,367
Panel B: Gender Role Norms								
TGRI Score	-0.069*** (0.005)	-0.067*** (0.004)	-0.000 (0.008)	-0.004 (0.007)	0.097*** (0.008)	0.091*** (0.007)	0.092*** (0.006)	0.086*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.06	0.07	0.03	0.05	0.12	0.12	0.14	0.15
Observations	58,473	58,473	52,066	52,066	57,884	57,884	57,803	57,803
Panel C: Masculinity and Gender Role Norms								
CMNI Score	-0.013*** (0.003)	-0.013*** (0.003)	-0.039*** (0.004)	-0.040*** (0.004)	0.066*** (0.005)	0.065*** (0.005)	0.048*** (0.005)	0.047*** (0.005)
TGRI Score	-0.064*** (0.005)	-0.062*** (0.004)	0.016** (0.008)	0.013* (0.007)	0.070*** (0.006)	0.065*** (0.005)	0.072*** (0.006)	0.067*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.07	0.07	0.04	0.06	0.13	0.13	0.14	0.15
Observations	57,981	57,981	51,643	51,643	57,386	57,386	57,301	57,301
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

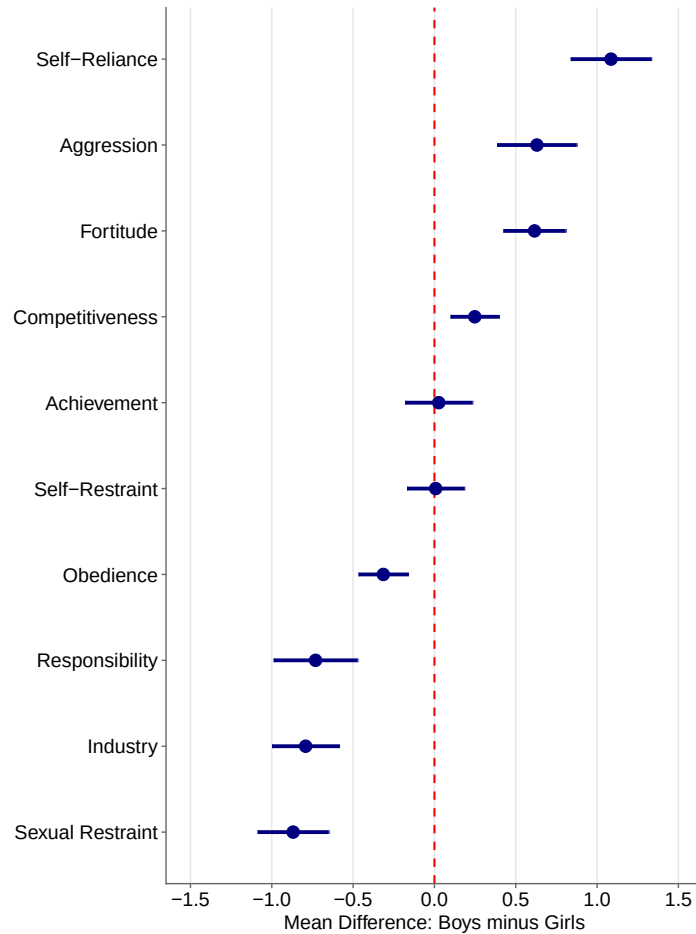
Notes: OLS regressions. An observation is an individual GMS respondent. All dependent variables are defined as dummies equal to one if the respondent agrees that having a democratic political system is fairly or very good for their country (columns 1-2), if he agrees that a market economy is preferable to any other economic system (columns 3-4), if he thinks that having a strong leader in power is fairly or very good (columns 5-6), or if he thinks that having the army rule is fairly or very good (columns 7-8). For more details on the definitions of the dependent variables, see Table C2. The CMNI and TGRI scores are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table 4: War, Recession, and Adherence to Masculinity and Gender Role Norms

	CMNI					TGRI				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
War	0.092 (0.040)** [0.040]**		0.088 (0.038)** [0.035]**	0.085 (0.038)** [0.035]**	0.076 (0.039)* [0.036]**	-0.047 (0.064) [0.065]		-0.050 (0.061) [0.062]	-0.052 (0.061) [0.062]	-0.065 (0.061) [0.063]
Recession		0.083 (0.025)*** [0.024]***	0.082 (0.024)*** [0.024]***	0.083 (0.024)*** [0.024]***	0.080 (0.023)*** [0.022]***		0.045 (0.020)** [0.022]**	0.046 (0.020)** [0.022]**	0.046 (0.019)** [0.021]**	0.042 (0.018)** [0.020]**
Boom				-0.014 (0.022) [0.021]	-0.012 (0.023) [0.021]				-0.013 (0.028) [0.031]	-0.011 (0.029) [0.031]
Natural disaster					0.051 (0.037) [0.041]					0.074 (0.021)*** [0.022]***
Mean of outcome	0.01	0.01	0.01	0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01
R-squared	0.11	0.11	0.11	0.11	0.11	0.17	0.17	0.17	0.17	0.17
Observations	39,637	39,637	39,637	39,637	39,637	39,951	39,951	39,951	39,951	39,951
Cohort FE	×	×	×	×	×	×	×	×	×	×
Survey × country FE	×	×	×	×	×	×	×	×	×	×

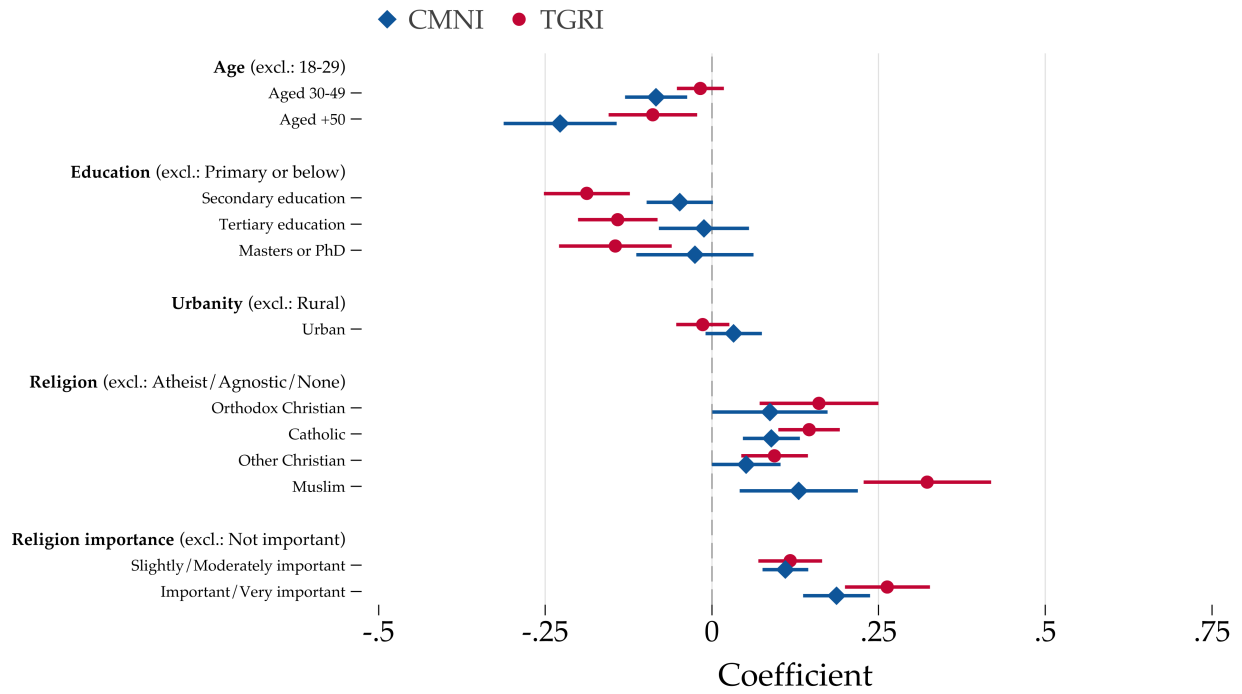
Notes: OLS regressions. An observation is an individual male respondent aged 25 or older. The dependent variables are the CMNI (columns 1-5) and the TGRI (columns 6-10). The CMNI and TGRI scores are standardized. *Boom* is a dummy equal to one if any year of the respondent's age 18–25 window recorded real GDP-per-capita growth at or above the 90th percentile of the pooled country-year distribution. *Natural disaster* is a dummy equal to one if any year of the same window recorded >1,000 natural disaster deaths. All regressions include year-of-birth and survey × country fixed effects and are weighted by survey sampling weights. Standard errors clustered at the country level are shown in parentheses; two-way clustered standard errors (country and cohort) are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure 1: Gender Gaps in Value Incultation in the SCCS



Notes: This figure displays the mean difference in value inculcation between boys and girls for ten traits measured during late childhood. The mean difference is calculated as the average inculcation score for boys minus the average inculcation score for girls. Positive values indicate higher inculcation for boys, while negative values indicate higher inculcation for girls. Traits are sorted in descending order by mean difference, with the most male-biased traits at the top. Error bars represent 95% confidence intervals calculated using the *t*-distribution. The vertical dashed line at zero indicates gender equality. Source: Standard Cross-Cultural Sample (SCCS), 2008 online edition (Murdock and White, 1969; Divale, 2004; White, 2008). *Variables:* The analysis uses paired variables for boys and girls for each trait: Fortitude (v296 for boys, v297 for girls), Aggression (v300/v301), Competitiveness (v304/v305), Self-Reliance (v308/v309), Achievement (v312/v313), Industry (v316/v317), Responsibility (v320/v321), Obedience (v324/v325), Self-Restraint (v328/v329), and Sexual Restraint (v332/v333). All variables measure the degree of value inculcation during late childhood on a standardized scale.

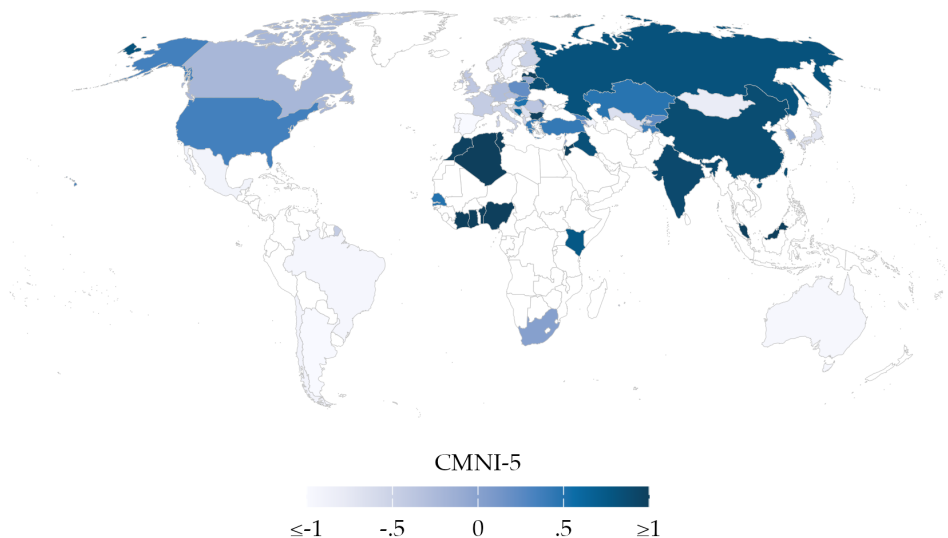
Figure 2: Individual Correlates of Masculinity Norms and Gender Role Norms



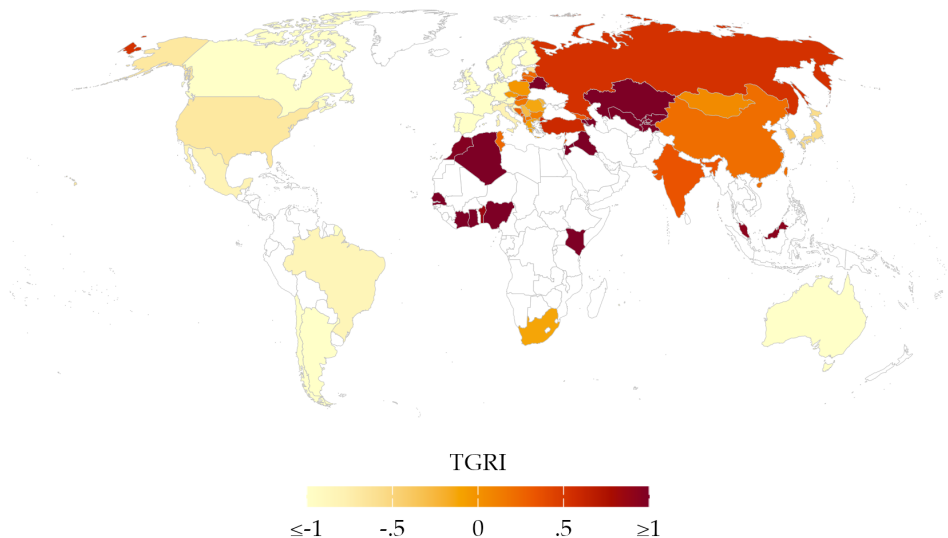
Notes: This figure plots coefficients from OLS regressions of the five-item Conformity to Masculinity Norms Index (CMNI) or the Traditional Gender Role Index (TGRI) on the covariates shown on the vertical axis, conditioning on survey-by-country fixed effects. The dependent variables are standardized. Spikes reflect 95% confidence intervals based on standard errors clustered at the country level. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure 3: Masculinity Norms and Gender Role Norms Around the World

Panel A: Masculinity Norms

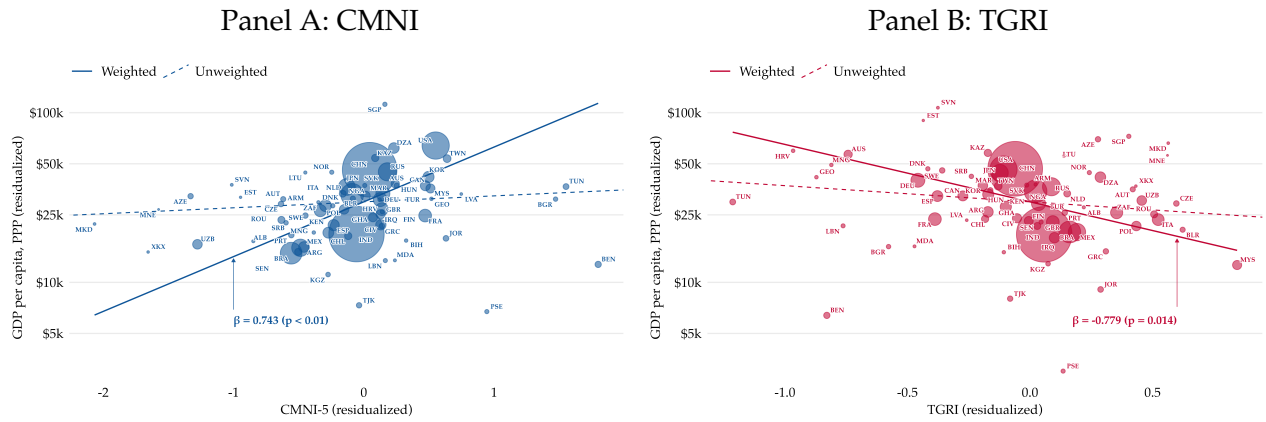


Panel B: Gender Role Norms



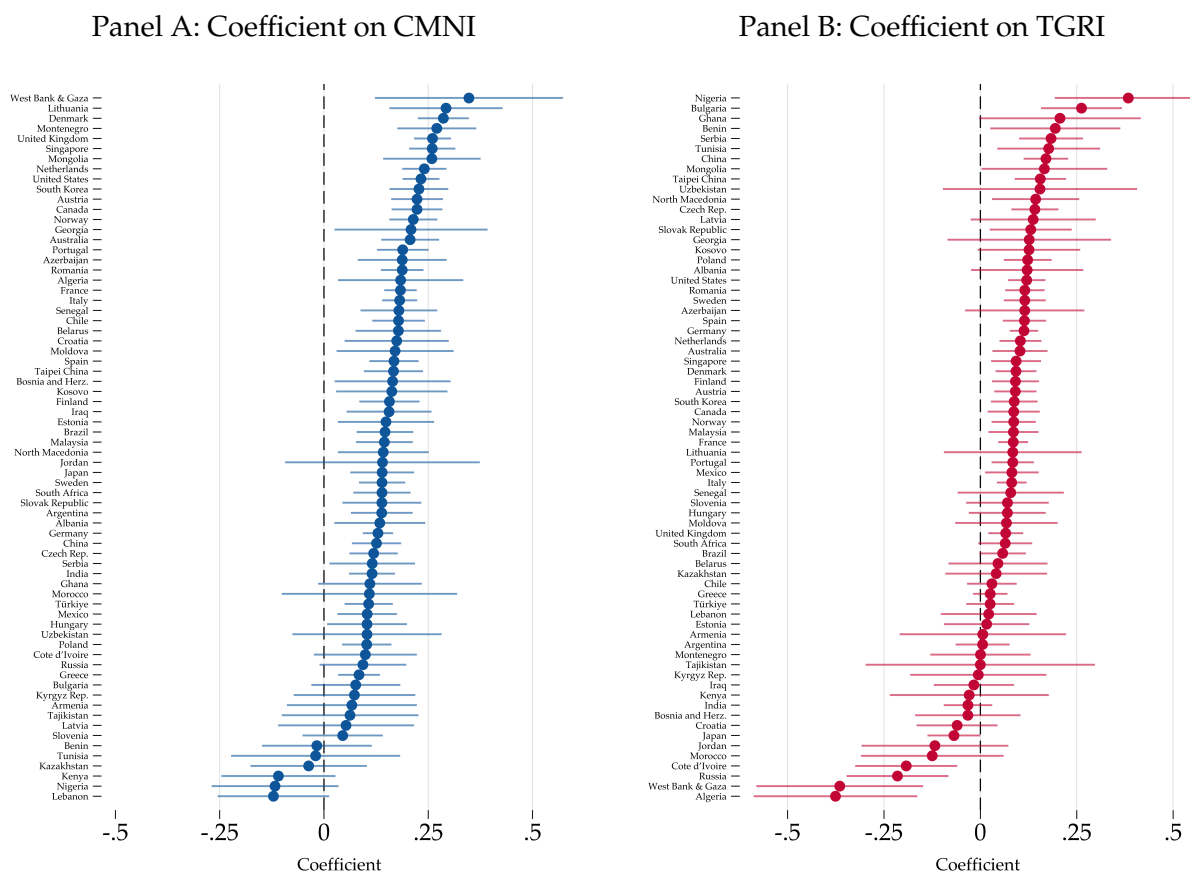
Notes: Panel A shows a map of the average standardized five-item Conformity to Masculinity Norms Index (CMNI) across countries. Darker colors indicate stronger adherence to masculinity norms. Panel B shows a map of the average standardized six-item Traditional Gender Role Index (TGRI) across countries. Darker colors indicate more conservative gender role norms. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure 4: Masculinity Norms, Gender Role Norms, and GDP Per Capita



Notes: Panel A shows a scatter plot of the country-level relationship between the log of PPP-adjusted GDP per capita in 2024 and the standardized Conformity to Masculinity Norms Index (CMNI) after partialling out the Traditional Gender Role Index (TGR1). Panel B shows the same for the TGR1 after partialling out the CMNI. Both panels also partial out continent fixed effects (Africa, Americas, Asia-Pacific, and Europe), population size, and indicators for whether a country's data come from LiTS, the online survey, or both. Scatter points and the solid line reflect population-weighted regressions; the dashed line shows the corresponding unweighted linear fit. Marker sizes are proportional to population. Sample of male respondents only. Source: IMF WEO, GMS (LiTS and online surveys).

Figure 5: Associations of CMNI and TGRI with a Summary Outcome Index, by Country



Notes: Panel A displays the coefficients on the CMNI, and Panel B the coefficients on the TGRI, from country-specific regressions of a summary index of all economic, health, and political outcomes (the outcomes in Tables 1, 2, and 3) on both CMNI and TGRI, controlling for age and urbanity. The summary index is constructed following the inverse-covariance-weighted procedure of [Anderson \(2008\)](#). Spikes reflect 95% confidence intervals based on robust standard errors. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Online Appendix

“Masculinity Around the World”

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Online Appendix A: Additional Information on the CMNI

A1.1 Selection and Validation of the CMNI module

The full CMNI (CMNI-22) was developed through a qualitative and quantitative process to identify the most prevalent norms and expectations characteristic of male behavior (see Section 3.2) and is widely used in clinical and social psychology, and public health. Although CMNI-22 scores consistently predict male behavior, particularly in the physical and mental health domains (Mahalik and Rochlen, 2006; Wong et al., 2017), and correlate highly with normative measures of masculinity (Mahalik et al., 2003; Levant et al., 2010), most of this evidence comes from small-scale, non-representative, laboratory studies in Western countries.³⁰ A first wider application of the CMNI-22 was in a nationally representative Australian survey of boys and men: *The Australian Longitudinal Study on Male Health*.³¹ This Ten to Men survey also includes individual data on health behaviors, physical and mental health outcomes, suicidal ideation and suicide attempts, and experiences of violence, including as perpetrators. This allowed for further validation of the CMNI-22 with a broad range of behavioral outcomes in a nationally representative sample. Table A1 below provides correlations between the CMNI-22 index, the five CMNI items selected for the GMS, and health and violence outcomes (all based on the Ten to Men data). These correlations in the raw data confirm positive and significant relationships between individual CMNI-22 scores and depression, suicide attempts, and perpetrating domestic and sexual violence. Given the health focus of the clinical and psychology literature using the CMNI, existing studies include few or no measures of economic or political behaviors or values.

Due to institutional constraints and cost considerations, we included five of the 22 CMNI items in the GMS—the five that correlated most strongly with the overall CMNI-22 in Ten to Men. As shown in Table A1, this CMNI subscore correlates 0.75 with the full CMNI-22 and explains 56% of its variation. The subscore’s correlations with willingness to work more, masculine employment sector, suicide attempts, and intimate partner violence are statistically significant at the 1% level and similar in magnitude to those of the full CMNI-22. The module asks: “Thinking about your own actions, feelings and beliefs, how much do you personally agree or disagree with each statement? There are no right or wrong answers—you should just give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering.”

³⁰The CMNI-22 is most widely used in the United States but has also been validated in Canada (Jbilou et al., 2021), Australia (Pirkis et al., 2016), and Germany (Komlenac et al., 2023).

³¹See https://aifs.gov.au/research_programs/ten-men.

1. *"Winning is the most important thing"* (Importance of winning)
2. *"Sometimes violent action is necessary"* (Violence)
3. *"It bothers me when I have to ask for help"* (Self-reliance)
4. *"I love it when men are in charge of women"* (Power over women)
5. *"It is important to me that people think I am heterosexual"* (Homosexuality avoidance)

Table A1: Correlations between CMNI and Outcome Variables from the Ten to Men Survey

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Dep. Var.	CMNI-22	CMNI-5	Power Over Women	Homosexuality Avoidance	Violence	Importance of Winning	Self-Reliance	Working	Would Work More	Gendered Sector	Masculine Sector	Depression Score	Major Depression	Suicide Attempt	Doctor's Visit Pushed	IPV	Rape
CMNI-22	1.00																
CMNI-5	0.75***	1.00															
Power Over Women	0.47***	0.59***	1.00														
Homosexuality Avoidance	0.39***	0.59***	0.24***	1.00													
Violence	0.41***	0.55***	0.14***	0.05***	1.00												
Importance of Winning	0.49***	0.53***	0.24***	0.15***	0.09***	1.00											
Self-Reliance	0.34***	0.49***	0.08***	0.09***	0.10***	0.14***	1.00										
Working	0.00	-0.01	0.00	-0.00	-0.03***	0.02**	-0.00	1.00									
Would Work More	0.07***	0.07***	0.04***	-0.00	0.06***	0.04***	0.07***	-0.07***	1.00								
Gendered Sector	0.08***	0.07***	0.06***	0.06***	0.00	0.03***	0.06***	0.01	-0.01	1.00							
Masculine Sector	0.05***	0.06***	0.05***	0.06***	-0.00	0.01	0.04***	0.00	-0.01	0.89***	1.00						
Depression Score	0.10***	0.14***	0.01	0.01	0.08***	-0.01	0.30***	-0.03***	0.12***	0.02	0.00	1.00					
Major Depression	0.04***	0.08***	-0.01	0.00	0.04***	-0.02***	0.19***	-0.04***	0.08***	0.00	-0.01	0.69***	1.00				
Suicide Attempt	0.02***	0.05***	0.00	0.01	0.03***	-0.01	0.09***	-0.02**	0.09***	0.01	0.01	0.25***	0.20***	1.00			
Doctor's Visit Pushed	0.17***	0.12***	0.05***	0.03***	0.04***	0.05***	0.16***	0.00	0.04***	0.03***	0.01	0.14***	0.09***	0.03***	1.00		
IPV	0.08***	0.08***	0.06***	0.02**	0.07***	0.00	0.06***	-0.02**	0.03***	0.02*	0.02**	0.13***	0.09***	0.13***	0.03***	1.00	
Rape	0.06***	0.06***	0.05***	0.02**	0.04***	0.02*	0.05***	-0.01	0.03***	0.01	0.02**	0.05***	0.03***	0.05***	0.03***	0.13***	1.00

Notes: This table presents correlations between the CMNI-22, the CMNI-5 and each of its five subitems, as well as outcomes from the *Ten to Men* survey. *** p<0.01, ** p<0.05, * p<0.1. Source: *Ten to Men*.

A1.2 Data and Quality Checks

A1.2.1 Translation

All questions in LiTS and the online surveys were back-translated and validated by the contracted survey firms (IPSOS for LiTS, Bilendi for online surveys), their in-country representatives, and EBRD staff. Translations underwent multi-stage quality control—professional translators produced initial versions, which were verified and reviewed by IPSOS and local country managers, then checked by EBRD—and were field-tested during training and pilot studies before deployment in every country. Since the CMNI was developed in a Western context, the question arises whether the scale is valid across the diverse countries we study. Piloting revealed that in only two cases—Algeria and West Bank & Gaza—the question on homosexuality was too sensitive and was therefore dropped.

A1.2.2 Online Surveys

How the panels work. We fielded online surveys through survey company Bilendi in 32 countries from November to December 2024 (Wave 1) and May to June 2025 (Wave 2). Bilendi recruits participants from a pool of respondents who have previously expressed a willingness to take part in research studies. Recruitment happens via multiple affiliate networks, advertising channels (including Facebook and Google AdWords), address databases, referrals, and other outreach methods. New participants join these panels on a rolling basis, ensuring a constantly refreshed set of respondents. When it is time to field a survey, Bilendi or its local partner sends an invitation (often via email) to panel members. The invitation includes key details such as the estimated time to complete the questionnaire and the nature of the compensation. It usually does not reveal the specific topic of the survey to avoid skewing responses. Clicking on the link in the invitation directs prospective respondents to the survey landing page, where they must read the consent form and confirm their eligibility. For example, if the survey targets individuals aged 18–64 and a respondent turns out to be 15, the system will automatically drop them from the survey. Among the invited individuals in Wave 2, 15% clicked our survey link and 80% completed the survey (similar data on Wave 1 is unavailable).

AI tools for data quality. Bilendi implemented AI-based tools to detect individuals who rush through surveys (“speeders”) or exhibit other problematic response patterns. These tools help improve data quality by flagging or excluding respondents, which explains why sample sizes vary across countries. They oversample and then automatically exclude re-

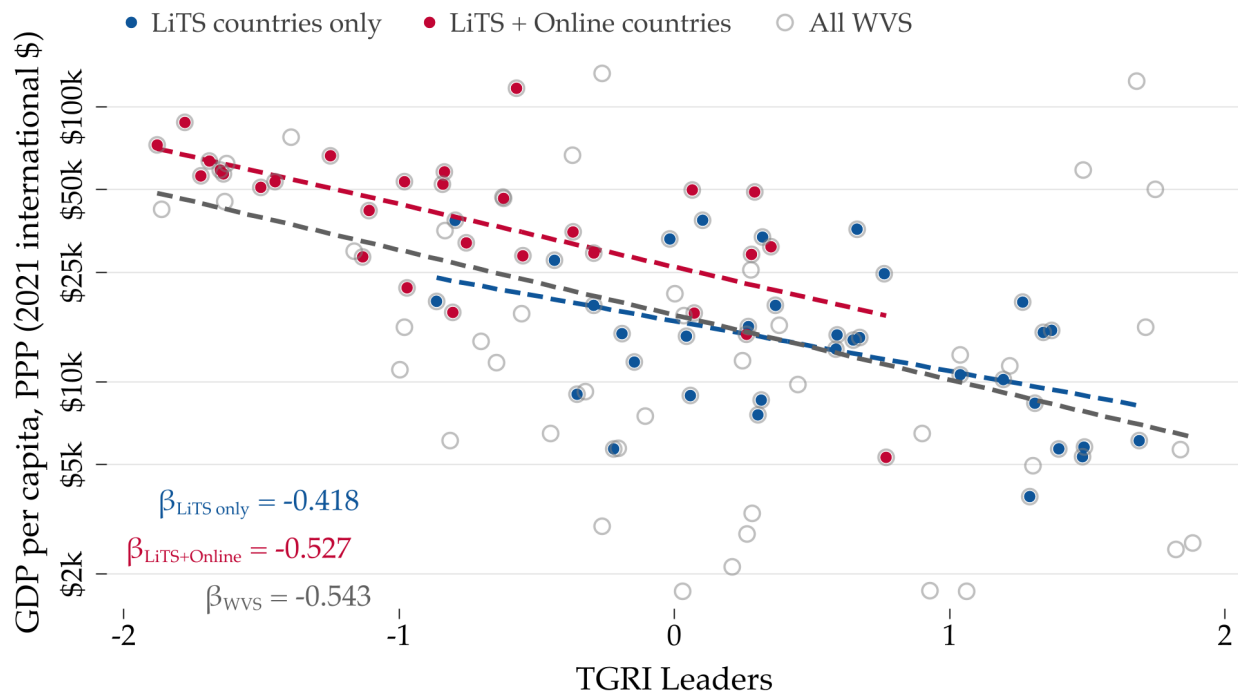
spondents who provide problematic answers, either by completing the survey unreasonably quickly or by spending an excessively long time on each question in a suspicious manner. In Wave 2, Bilendi identified and dropped from the main sample 4% of “speeders”.

Compensation and incentives. Respondents who complete a survey are compensated with cash, vouchers, or reward points that they can redeem for goods or donate to charitable organizations.

A1.3 Sample Selection at the Country Level

We investigate the degree to which cross-country comparisons may be biased due to non-random country selection into our study. To do so, we assess whether the correlation between gender role attitudes and country-level economic development differs across the 70 countries in the GMS (either LiTS only or LiTS plus online surveys) and the global population, as approximated by the World Values Survey (WVS). To make this comparison, we rely on the TGRI Leaders Index, which is common across GMS and the WVS. For the WVS analysis, we use each country’s most recent data point, matching country-level outcomes to the survey year. The timing of the latest WVS waves for which the TGRI questions are available varies across countries, with 60% of country-year observations from 2016 or later. Figure [A1](#) displays correlations between the TGRI Leaders Index and log GDP per capita, showing consistent patterns across the three country samples, with no statistically significant differences in the slope coefficients. This similarity across samples indicates that the cross-country patterns in gender role attitudes documented with the GMS are unlikely to be driven by the specific composition of countries in our survey. Because the WVS does not field the CMNI, an analogous check for masculinity norms is not feasible.

Figure A1: Country Sample Representativeness: Relationship Between GDP per capita and the TGR Leaders Index in the LiTS, LiTS plus Online, and WVS Country Sample



Notes: This figure is based on cross-country regressions of the log of PPP-adjusted GDP per capita on the country-level mean of the TGR leaders index, constructed from two questions (women as politicians and women as CEOs). We use data from the WVS only (most recent available observation for each country) for three country samples: all countries with WVS data, countries covered only by LiTS, and countries covered by the online surveys (including those also covered by LiTS). Tests of differences in slopes yield p-values of 0.41 (WVS vs. LiTS countries only) and 0.92 (WVS vs. LiTS plus online countries). GDP per capita is in constant 2021 international dollars, matched to each country's survey year. Source: WVS, IMF WEO.

A1.4 Sample Selection within Countries

Online samples may not fully represent the general population, particularly in countries with low internet penetration. According to 2023 statistics, the share of population using the internet in the last three months is 67.4% on average, ranging from 36.7% in Sub-Saharan Africa to 97.8% in North America. Among the largest economies in the online sample, internet use is high in Brazil (84.2%) and China (77.5%), but relatively low in India (43.4% according to 2020 statistics).³² Survey firms operating in middle- and low-income countries often rely on local partners rather than proprietary panels, potentially limiting sample representativeness further.

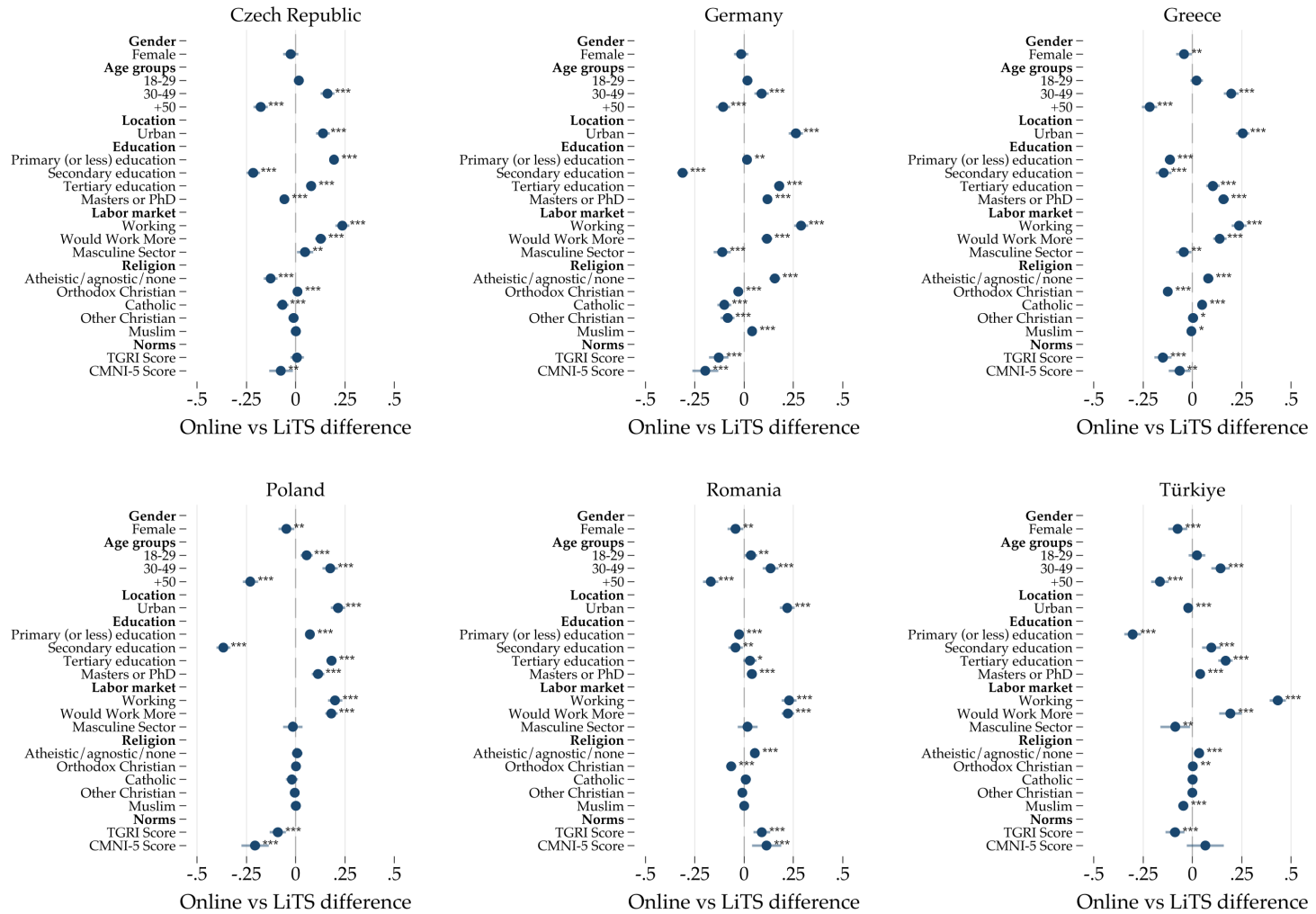
While the LiTS component of the GMS was designed to be nationally representative, the online component was not. Although Bilendi aims for representative samples by age, sex,

³²Source: [World Bank \(2025\)](#).

and income, the survey's digital format underrepresents those without computers, smartphones, or stable internet connections. In certain countries, panels skew toward more educated or tech-savvy populations (Section 3.1). This representativeness issue may persist despite quota designs. Potential sample biases should be considered when drawing conclusions, particularly in countries with lower internet penetration, where older adults, rural residents, and low-income groups are typically undersampled. Additionally, online surveys are self-administered, limiting immediate clarifications compared to in-person or phone interviews.

Figure A2 and Table A2 compare average covariates in LiTS and the online surveys for the six countries where we conducted both (Czech Republic, Germany, Greece, Poland, Romania, and Türkiye). Men, younger individuals, those living in urban areas, the employed and the more educated are overrepresented in the online sample. However, if anything, respondents in online surveys tend to score lower on the CMNI. Importantly, the cross-country and within-country patterns we document in this paper are not driven by the online sample only. Indeed, our earlier working paper, in which we use the nationally representative LiTS data only, shows remarkably consistent results (De Haas et al., 2024).

Figure A2: Sample Representativeness: LiTS vs. Online Survey Comparison



Notes: Each row represents a separate regression at the individual level for each country sampled in both LiTS and the online surveys. We regress the variable on the y-axis on a dummy equal to one (zero) if the observation comes from the online (LiTS) survey. Female responses to the CMNI in the online survey are excluded. Spikes reflect 95% confidence intervals based on robust standard errors (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Source: GMS (LiTS and online surveys).

Table A2: Comparison of Characteristics Between Overlapping Countries in LiTS (In-Person) and Online Surveys

	(1) LiTS	(2) Online	(3) SMD (2)-(1)
<i>Demographics</i>			
Female	0.515	0.477	-0.075***
18-29	0.175	0.195	0.055***
30-49	0.366	0.506	0.290***
+50	0.460	0.299	-0.322***
Urban	0.656	0.812	0.329***
Primary (or less) education	0.095	0.064	-0.107***
Secondary education	0.688	0.525	-0.352***
Tertiary education	0.134	0.253	0.349***
Masters or PhD	0.083	0.158	0.274***
<i>Indices</i>			
CMNI-5 Score (1-4)	2.482	2.266	-0.353***
Traditional Gender Role Index (TGRI) (1-4)	2.093	1.988	-0.185***
<i>Outcomes</i>			
Would Work More (=1)	0.092	0.245	0.530***
Masculine Sector (=1)	0.322	0.276	-0.098***
Working (=1)	0.543	0.822	0.560***
Competitive Self-Assessment (1-10)	5.901	5.901	0.000
Risk-Taking (1-10)	4.858	5.995	0.468***
Uses Seatbelt (=1)	0.822	0.753	-0.277***
Depression Score (1-5)	2.032	2.539	0.492***
Pro Democracy (=1)	0.841	0.781	-0.164***
Pro Market (=1)	0.459	0.551	0.186***
Support for Strong Leader (=1)	0.299	0.398	0.215***
Support for Army (=1)	0.196	0.273	0.193***
<i>Observations</i>	6,111	15,346	
<i>Countries</i>	6	6	

Notes: Differences are reported as standardized mean differences (SMD) relative to the LiTS benchmark using the six countries where both LiTS and online surveys were conducted (Czech Republic, Germany, Greece, Poland, Romania, and Türkiye). Source: GMS (LiTS and online surveys).

A1.5 Survey Questions about Gender Roles and Attitudes Toward Women

Table A3 presents the questions about gender role norms and attitudes towards women's roles (column 1) included in both components of the GMS, their dimensions (column 2), and sources (column 3). We followed the same approach as used to elicit the CMNI questions, and participants provided answers on a four-point Likert scale from 1 ("Strongly disagree") to 4 ("Strongly agree"). We again recode answers so that a higher value indicates more unequal views about gender roles and stronger beliefs that women are not equal to men as political or business leaders. We build a summary *Traditional Gender Role Index* (hereafter, TGRI) as the mean of these variables over the six questions, and calculate a z-score as our main measure. The TGRI is reasonably internally consistent, with a Cronbach's alpha of 0.59. In the online component of the GMS, we randomized the order of the statements.

Table A3: Traditional Gender Role Index

Statement (1)	Dimension (2)	Source (3)
<i>A woman should do most of the household chores even if the husband is not working</i>	Division of Household Chores	Multiple (e.g., HILDA)
<i>Men should take as much responsibility as women for the home and children (reversed)</i>	Responsibility for the Home	Multiple (e.g., European Social Survey)
<i>It is better for everyone involved if the man earns the money and the woman takes care of the home and children</i>	Women Take Care of Household	Multiple (e.g., General Social Survey)
<i>Both the man and woman should contribute to household income (reversed)</i>	Contribute to Household Income	Multiple (e.g., General Social Survey)
<i>On the whole, men make better political leaders than women do</i>	Political Leaders	Multiple (e.g., World Values Survey)
<i>Women are as competent as men to be business executives (reversed)</i>	Competence Business Executives	Multiple (e.g., World Values Survey)

A1.6 The Normative Masculinity Index

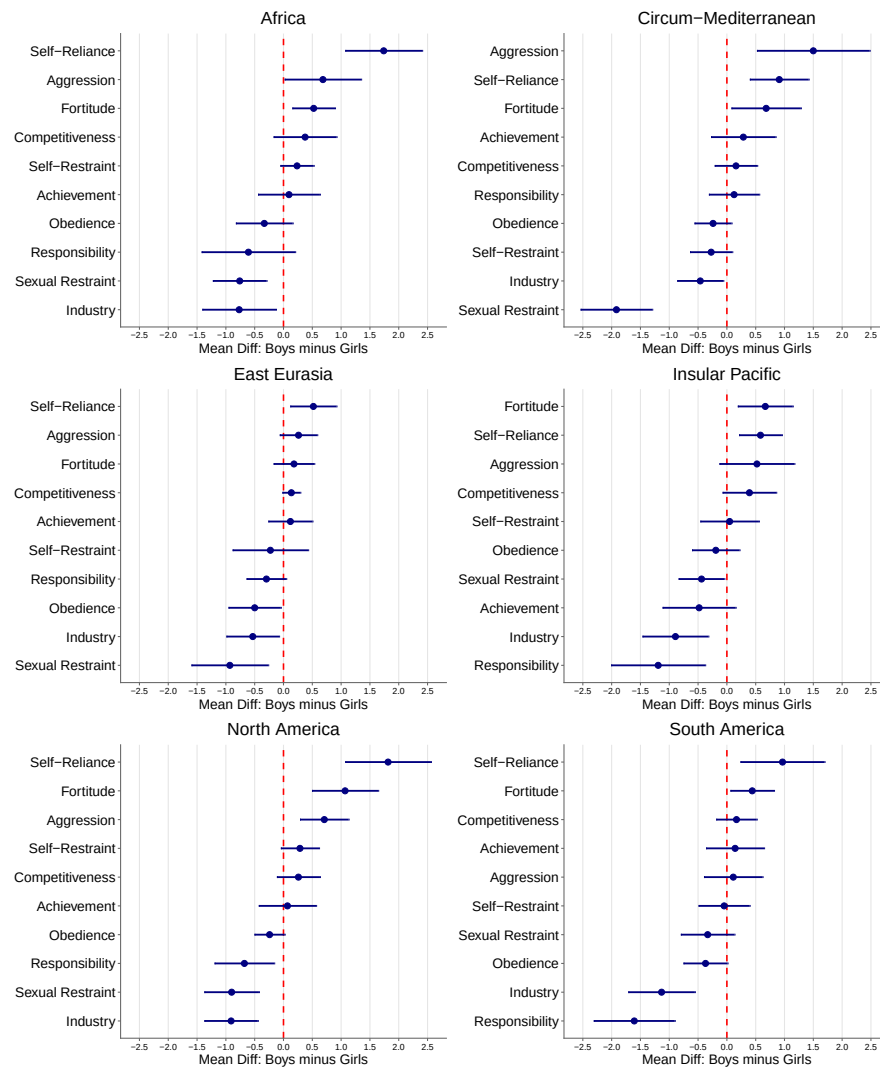
Table A4 presents each item (column 1) in the Normative Masculinity Index with its masculinity dimension (column 2) and source (column 3). Respondents used the same instructions as for the CMNI and answered on a four-point Likert scale from 1 (“Strongly disagree”) to 4 (“Strongly agree”). The index averages across domains and calculates a z-score, where higher scores indicate stronger adherence to masculinity norms. These questions appeared at the survey’s end to avoid priming concerns, with statement order randomized.

Table A4: Normative Masculinity Index

Statement (1)	Dimension (2)	Source (3)
<i>Men should figure out their personal problems on their own without asking others for help</i>	Self-Reliance	Man Box (Hill et al., 2020)
<i>Men should be aggressive and competitive to get ahead</i>	Importance of Winning	Multicultural Masculinity Ideology Scale, adapted (Doss and Hopkins, 1998)
<i>It is important for a man to take risks, even if he might get hurt</i>	Risk-Taking	Male Role Norms Inventory (Levant, Hall and Rankin, 2013)
<i>Men should use violence to get respect if necessary</i>	Violence	Man Box (Hill et al., 2020)
<i>Men should act strong even if they feel scared or nervous inside</i>	Emotional Control	Man Box (Hill et al., 2020)

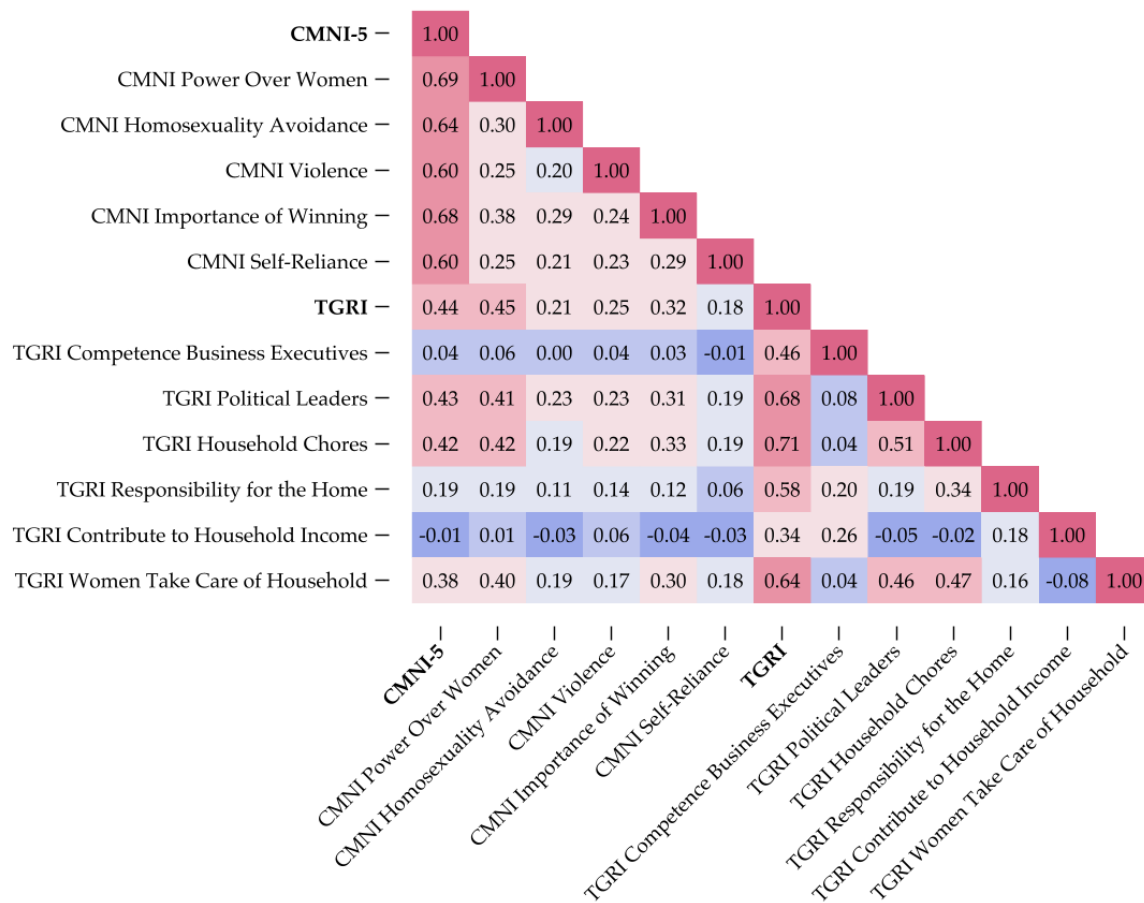
Online Appendix B: Supplementary Figures

Figure B1: Gender Gaps in Value Inculcation, by Region



Notes: See notes to Figure 1. Regions are defined by variable v200 in SCCS. Source: Standard Cross-Cultural Sample (SCCS), 2008 online edition (Murdock and White, 1969; Divale, 2004; White, 2008).

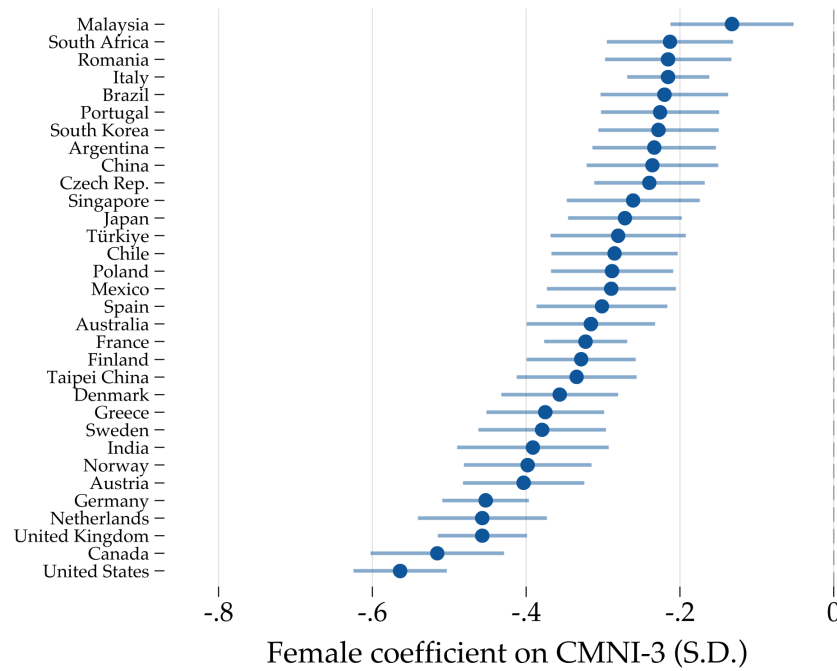
Figure B2: Correlation Matrix of Masculinity Norms and Gender Role Norms



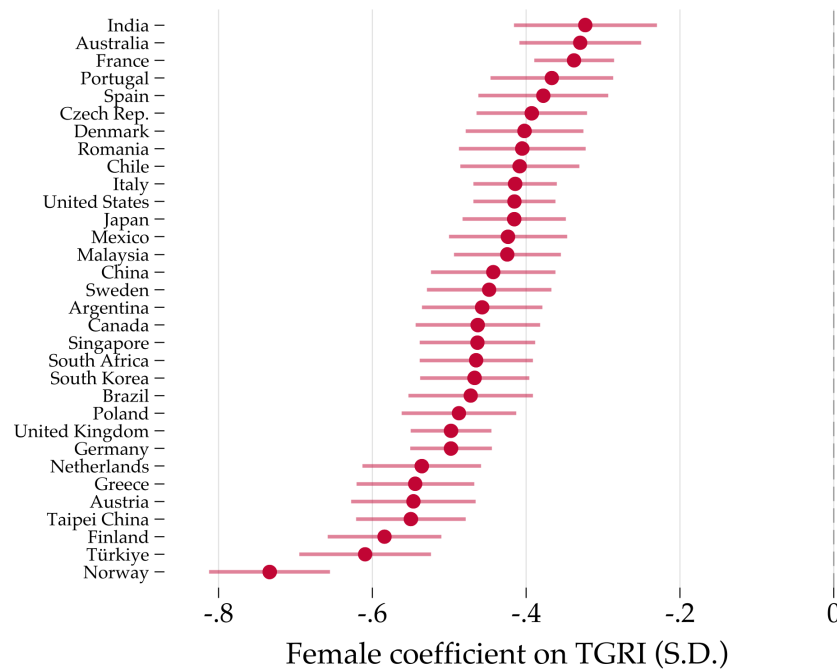
Notes: This figure displays the pairwise individual-level correlation matrix between the five-item Conformity to Masculinity Norms Index (CMNI-5), the Traditional Gender Role Index (TGRl), and their constituent items. Sample of male respondents only. Warmer colors indicate stronger positive correlations. Source: GMS (LiTS and online surveys).

Figure B3: Gender Gaps in Masculinity Norms and Gender Role Norms, By Country

Panel A: CMNI-3

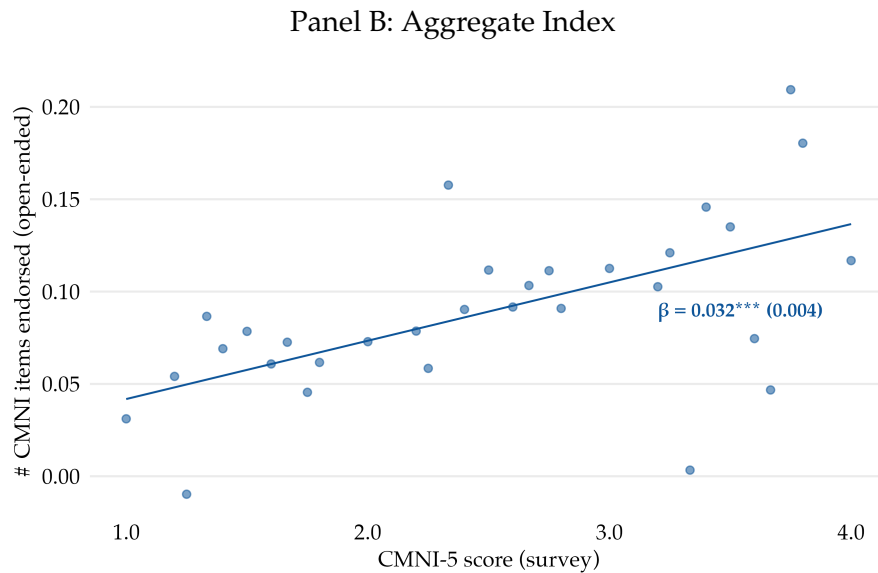
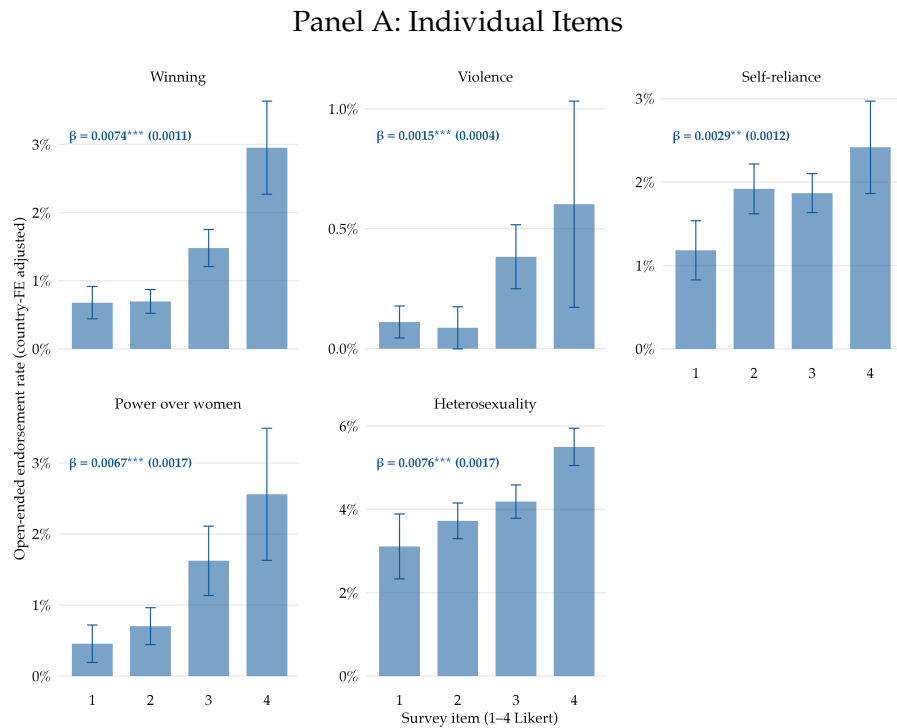


Panel B: TGRI



Notes: This figure displays the gender gap in the CMNI-3 (Panel A) and TGRI (Panel B) indices across countries, estimated using country-specific regressions of the standardized CMNI-3 or TGRI score on a female dummy. Spikes reflect 95% confidence intervals based on robust standard errors. Source: Online surveys.

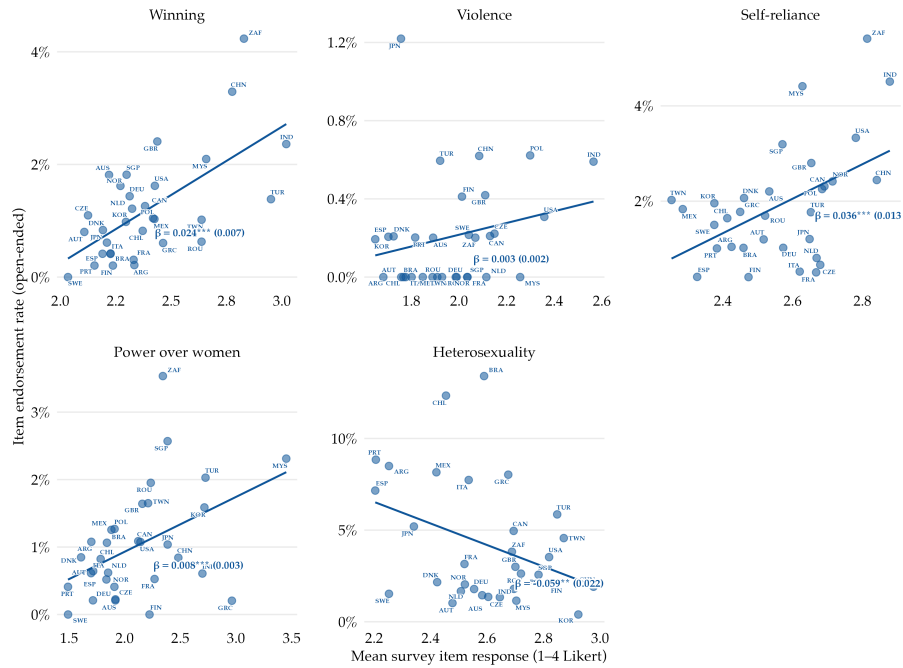
Figure B4: Open-ended Endorsement of CMNI Dimensions and Survey CMNI Scores (Within Country)



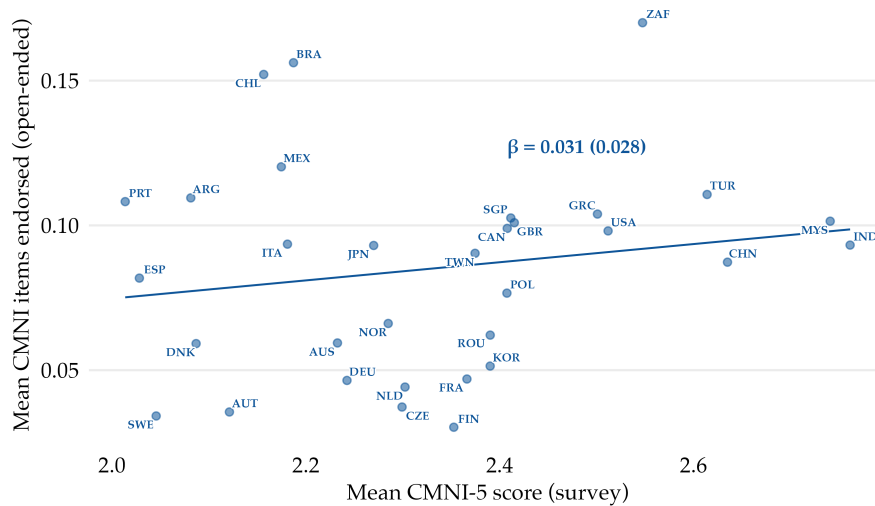
Notes: The figure shows within-country relationships between the survey CMNI score and open-ended endorsement of the corresponding CMNI dimensions among male respondents. Panel A relates the open-ended endorsement of each of the five CMNI dimensions to male respondents' answers to the corresponding survey CMNI item, elicited on a four-point Likert scale from 1 ("Strongly disagree") to 4 ("Strongly agree"). Bars show the mean open-ended endorsement rate at each response level of the survey item, controlling for country fixed effects. Error bars are 95% pointwise confidence intervals based on standard errors clustered at the country level. Annotations report the coefficient β from an OLS regression of the open-ended endorsement indicator on the survey item response, controlling for country fixed effects, with standard errors clustered at the country level in parentheses. Panel B plots the number of CMNI dimensions endorsed in the open-ended response against the CMNI score at the individual level, controlling for country fixed effects. The solid line represents the OLS fit. The annotation reports the coefficient β from an OLS regression of the number of CMNI dimensions endorsed in the open-ended response on the CMNI score, controlling for country fixed effects, with standard errors clustered at the country level in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Sample of male respondents only. Source: Online surveys (wave 2).

Figure B5: Open-ended Endorsement of CMNI Dimensions and Survey CMNI Scores (Across Countries)

Panel A: Individual Items

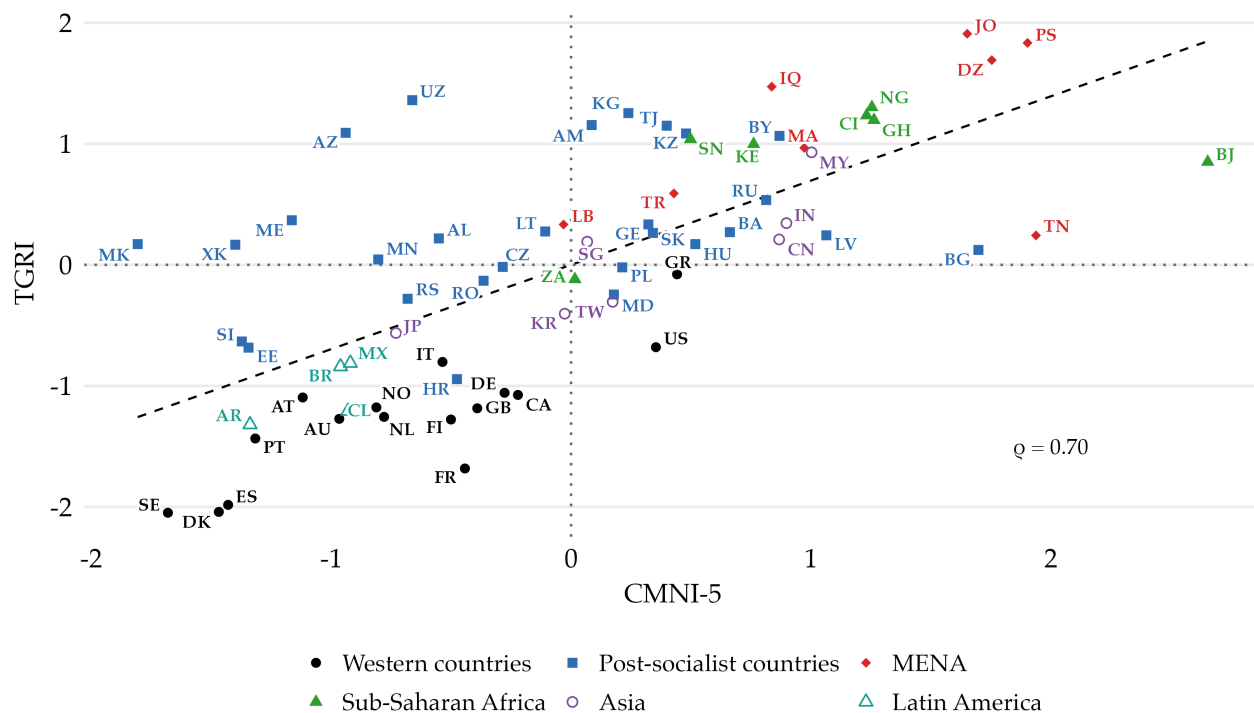


Panel B: Aggregate Index



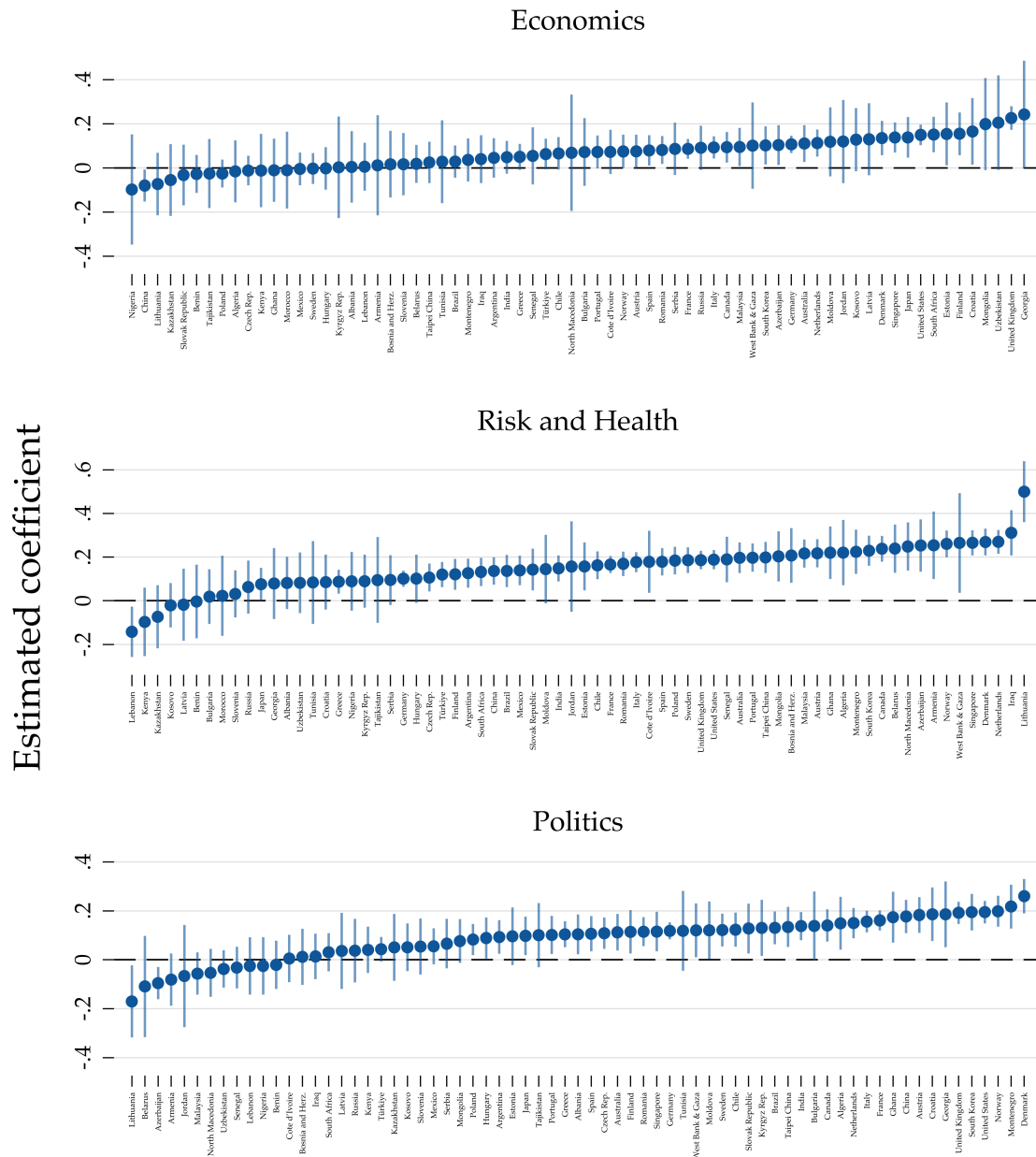
Notes: The figure shows cross-country relationships between the average survey CMNI score and average open-ended endorsement of the corresponding CMNI dimensions among male respondents. Panel A relates the average open-ended endorsement rate of each of the five CMNI dimensions to the average survey response to the corresponding CMNI item, across countries. Each point represents a country. Lines represent OLS fits. Annotations report the coefficient β from a country-level OLS regression of the open-ended endorsement rate on the mean survey item response, with robust standard errors in parentheses. Panel B plots the average number of CMNI dimensions endorsed in the open-ended response against the average CMNI score, across countries. The solid line represents the OLS fit. The annotation reports the coefficient β from an OLS regression of the mean number of CMNI dimensions endorsed on the mean CMNI score, with robust standard errors in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Sample of male respondents only. Source: Online surveys (wave 2).

Figure B6: Cross-Country Correlation of Masculinity Norms and Gender Role Norms



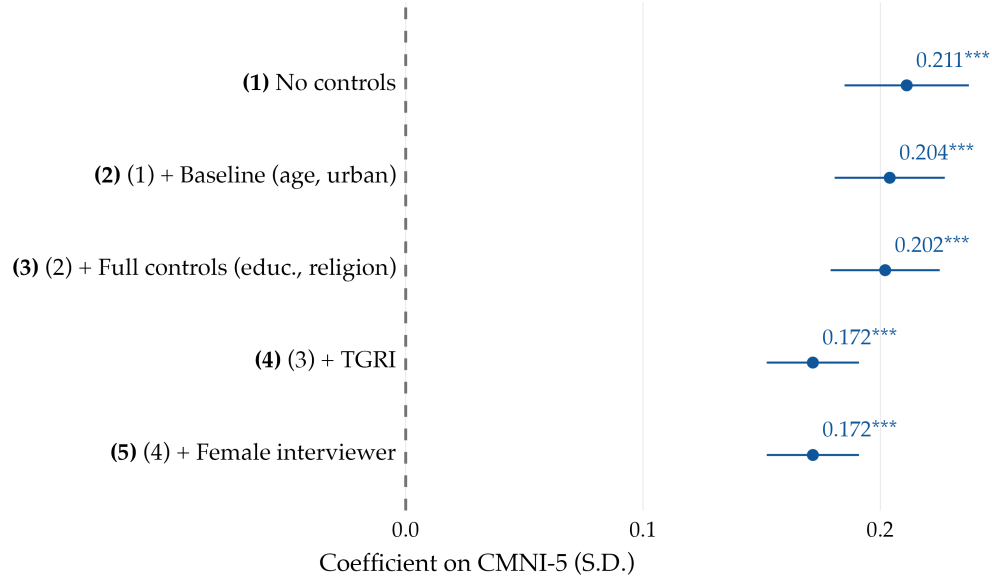
Notes: This figure displays a scatter plot and fitted regression line of the five-item Conformity to Masculinity Norms Index (CMNI) and the Traditional Gender Role Index (TGRI) across countries. Higher CMNI values indicate stronger adherence to masculinity norms, while higher TGRI values reflect more traditional and unequal gender role attitudes. Sample of male respondents only. MENA: Middle East and North Africa. Source: GMS (LiTS and online surveys).

Figure B7: Masculinity Norms and Summary Outcome Indices, by Country



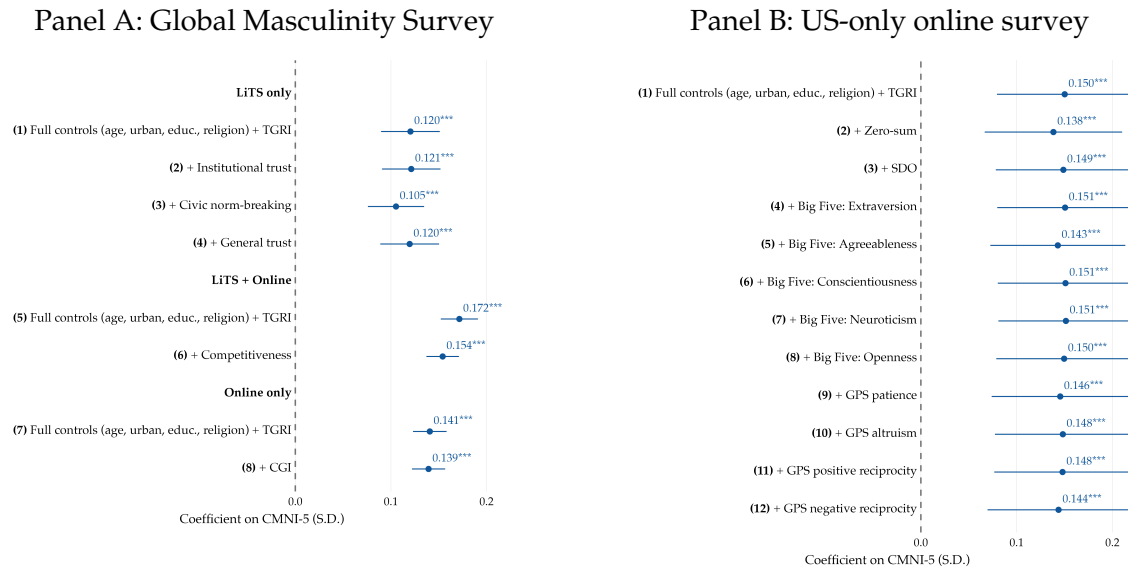
Notes: Each panel reports the CMNI coefficient from an individual-level regression of a summary outcome index on the CMNI, estimated separately for each country, controlling for the TGRi, age, and urbanity. The three indices aggregate the economic (top panel), health (middle panel), and political (bottom panel) outcomes from Tables 1, 2, and 3, respectively; each is constructed following the inverse-covariance-weighted procedure of [Anderson \(2008\)](#), exactly as in Figure 5. Spikes reflect 95% confidence intervals based on robust standard errors. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure B8: Robustness By Interviewer Gender



Notes: The figure plots the estimated coefficient on the standardized CMNI score, with 95% confidence intervals, from regressions of a summary index of the economic, health, and political outcomes studied in the paper on the CMNI. The index is constructed following the inverse-covariance-weighted procedure of [Anderson \(2008\)](#). Specifications are cumulative: (1) no controls; (2) adds age and urbanity; (3) adds education, religion, and religiosity fixed effects; (4) adds the standardized TGRI; and (5) adds a female-interviewer indicator. The interviewer indicator equals 1 if the LiTS interviewer was a woman and 0 otherwise; it is set to 0.5 for online respondents (who have no interviewer), so that the female-interviewer coefficient is identified from LiTS respondents only. All specifications include survey-by-country fixed effects. Standard errors are clustered at the country level (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Sample of male respondents only. Source: GMS (LiTS and online surveys).

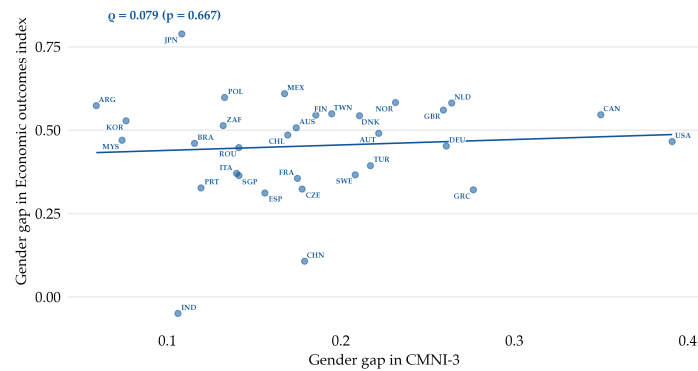
Figure B9: Robustness to Potential Confounders



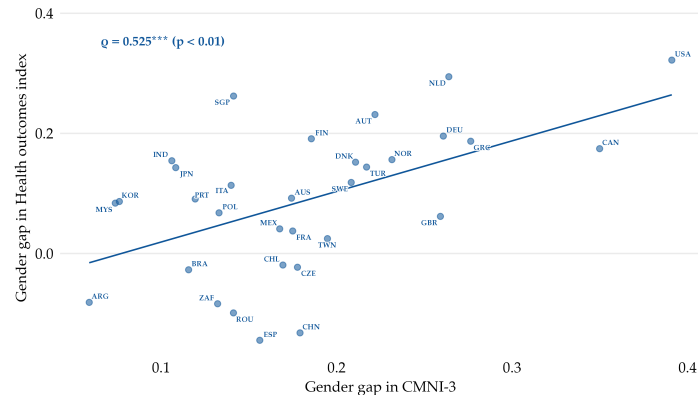
Notes: Each panel plots the estimated coefficient on the standardized CMNI score, with 95% confidence intervals, from regressions of a summary index of the economic, health, and political outcomes on the CMNI. The index is constructed following the inverse-covariance-weighted procedure of [Anderson \(2008\)](#). Table C9 describes each additional control. In Panel A, institutional trust, civic norm-breaking, and generalized trust are observed only in LiTS; gender identity (CGI) is observed only in the second wave of the online survey, and competitiveness is observed in both LiTS and the online GMS. For each additional control(s) included in the specification, we include the relevant comparison estimate ((1), (5), (7)) depending on the relevant sample. Panel A specifications include country ((1) to (4), (7) and (8)) or survey-by-country ((5) and (6)) fixed effects; standard errors are clustered at the country level. Panel B uses robust standard errors (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Sample of male respondents only. Source: GMS (LiTS and online surveys; Panel A) and US-only online survey (Panel B).

Figure B10: Gender Gaps in Summary Indices vs. Gender Gap in CMNI-3 Across Countries

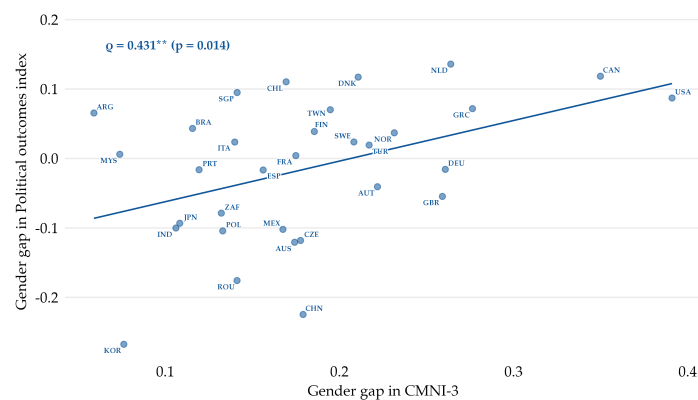
Panel A: Economic Outcomes



Panel B: Health Outcomes

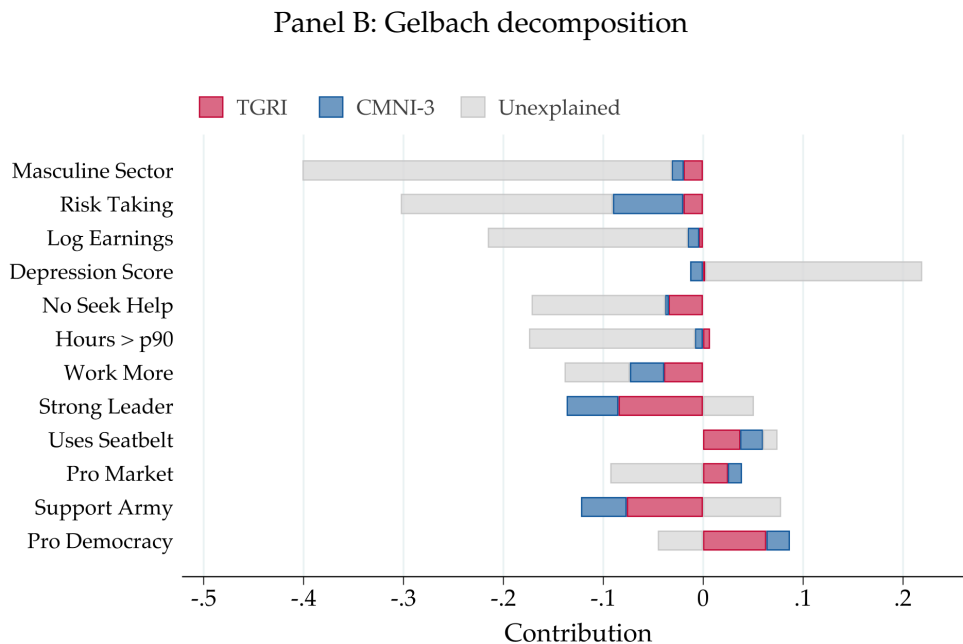
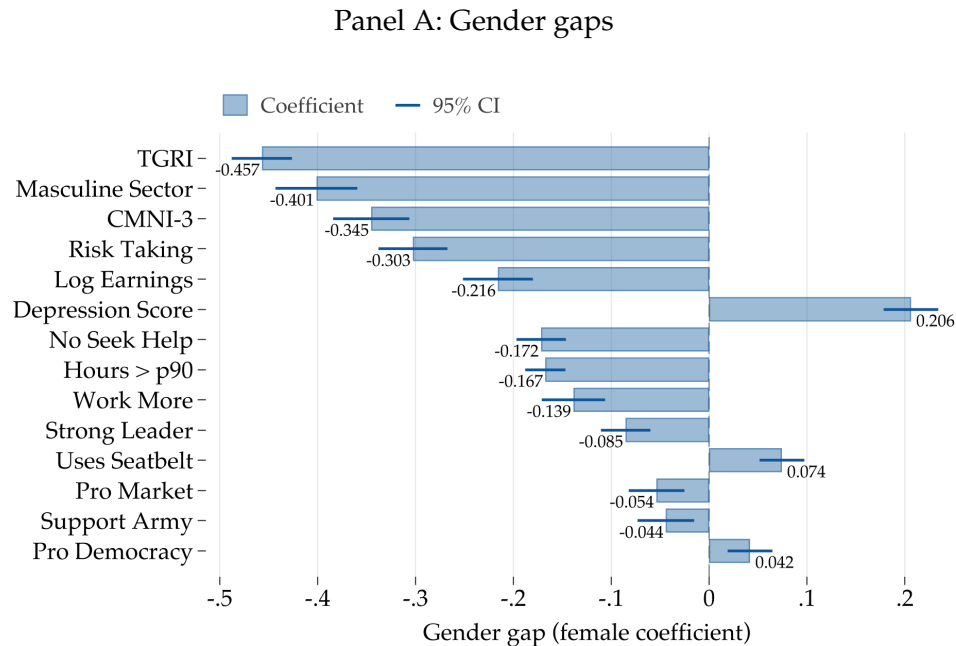


Panel C: Political Outcomes



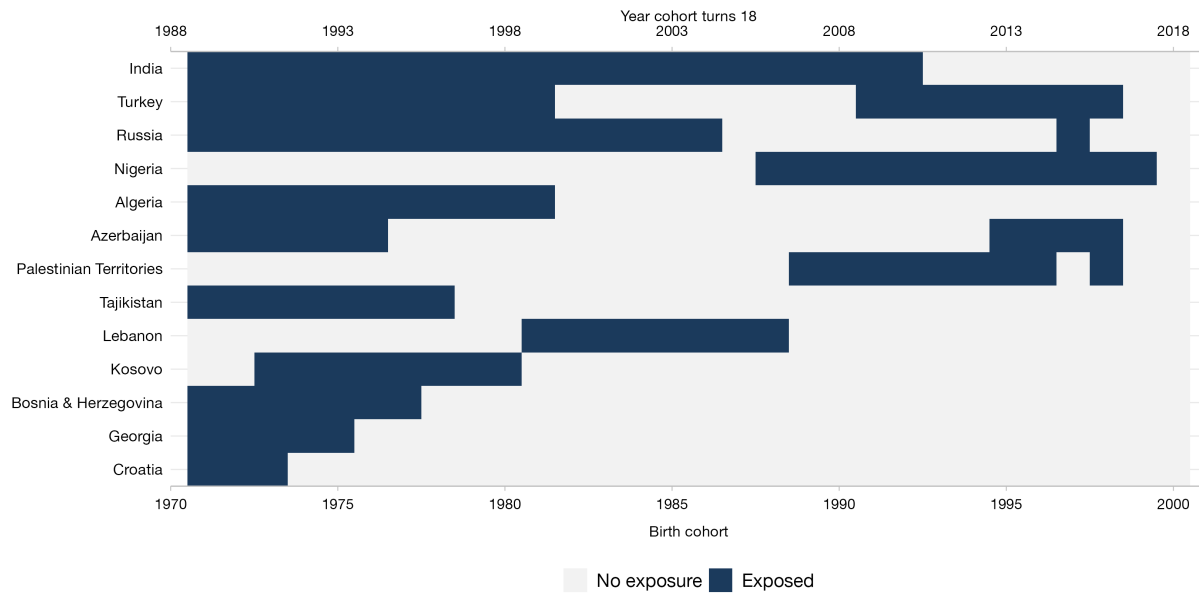
Notes: Each panel is a country-level scatter plot of the gender gap (male minus female country mean) in a summary index against the gender gap in the CMNI-3 (Panel A: economic outcomes, Table 1; Panel B: health outcomes, Table 2; Panel C: political outcomes, Table 3). Each summary index aggregates the corresponding outcomes from these tables following the inverse-covariance-weighted procedure of Anderson (2008), computed on the pooled sample of male and female respondents so that the two groups lie on a common scale. Each panel reports the Pearson correlation coefficient (ρ) between the two gender gaps and its significance level (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). Source: Online surveys.

Figure B11: Decomposing Gender Gaps into Masculinity Norms and Gender Role Norms



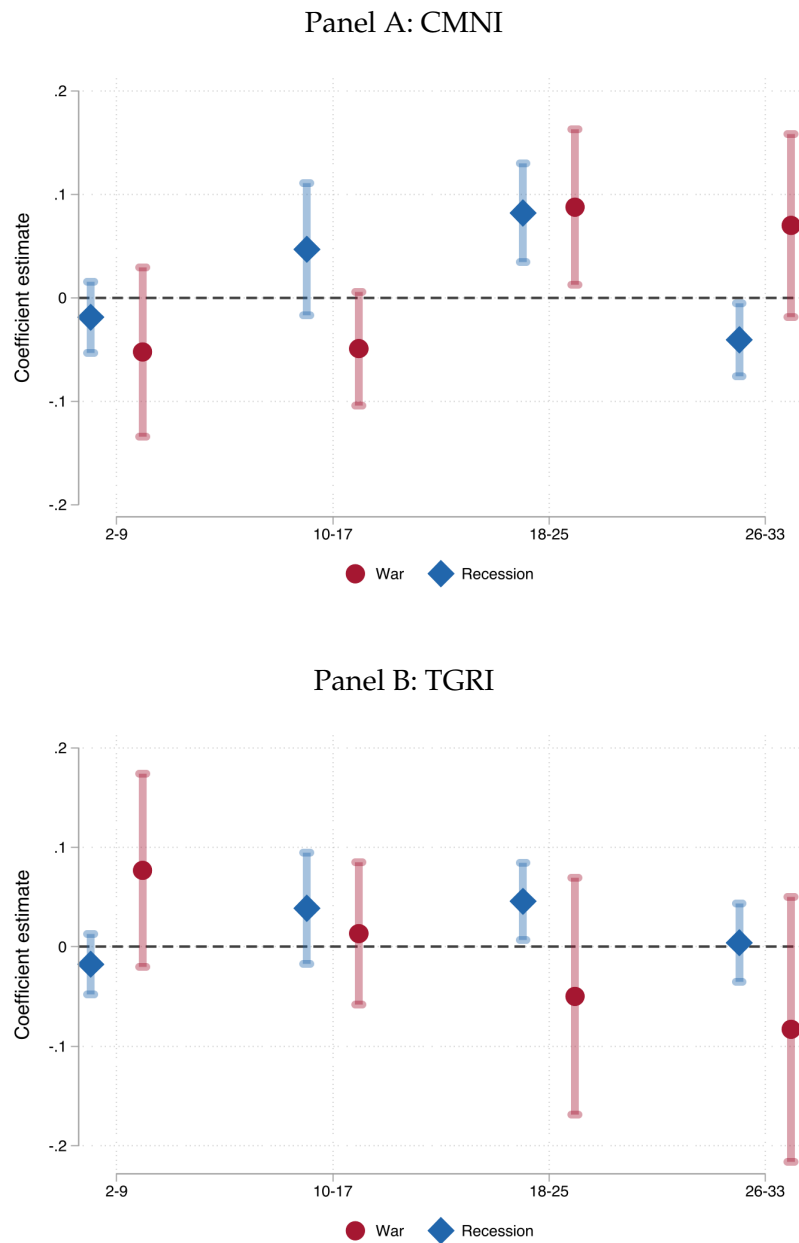
Notes: Panel A shows the gender gap for each outcome, calculated as the coefficient on the female dummy from regressions of standardized outcomes on gender, conditioning on age, urbanity, education, religion, religiosity, and country fixed effects. The gender gap is expressed in standard deviations. Seatbelt use refers to wearing a seatbelt as a front-seat passenger, where the gender gap is largest. Panel B reports the share of the gender gap explained by the CMNI-3, by the TGRI, and the share left unexplained, using the Gelbach (2016) decomposition method. Source: Online surveys.

Figure B12: Exposure to War by Birth Cohort and Country



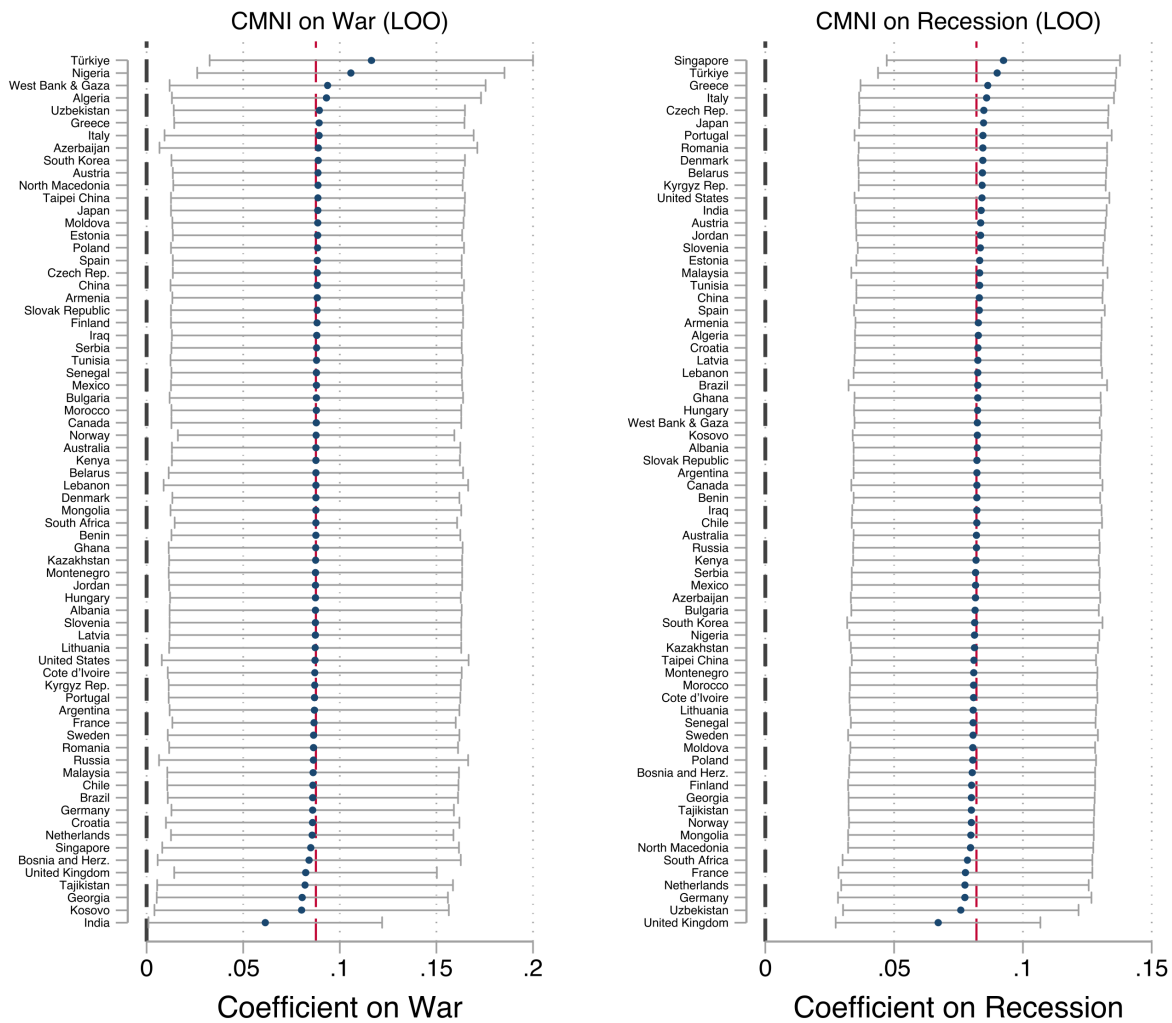
Notes: The figure shows war exposure by country and birth cohort. Each row corresponds to a country or territory, and each column corresponds to a birth cohort. Dark-blue cells indicate cohorts classified as exposed; light cells indicate no exposure. The bottom x-axis reports birth year, while the top x-axis reports the calendar year in which each cohort turns 18. Countries with no war over the sample period are not displayed. Source: GMS (LiTS and online surveys).

Figure B13: Coefficient Estimates Across Alternative Impressionable-Years Windows



Notes: Each pair of markers reports the point estimate and 95% confidence interval from a separate OLS regression of the outcome on a binary *War* indicator and a binary *Recession* indicator, with both indicators constructed over the same age window (2-9, 10-17, 18-25, or 26-33 years). The outcome is the standardized CMNI (Panel A) or TGRI (Panel B); both are standardized. All regressions include year-of-birth and survey $\times$ country fixed effects and are weighted by survey sampling weights. Standard errors are clustered at the country level. Sample of male respondents aged 25 or older. Source: GMS (LiTS and online surveys).

Figure B14: Country-by-Country Leave-One-Out Sensitivity of the Baseline Estimates



Notes: Each row reports the point estimate and 95% confidence interval from a separate OLS regression of CMNI on *War* and *Recession* jointly (the baseline specification of Table 4, column 3), dropping the labeled country from the estimation sample. The CMNI score is standardized. All regressions include year-of-birth and survey $\times$ country fixed effects and are weighted by survey sampling weights. Standard errors are clustered at the country level. The gray dashed vertical line marks zero; the cranberry dashed vertical line marks the full-sample coefficient. Sample of male respondents aged 25 or older. Source: GMS (LiTS and online surveys).

Online Appendix C: Supplementary Tables

Table C1: Sample Size by Country

Country Code	Country	Survey	Region	N (Total)	N (Men)
AU	Australia	Online	Western countries	2,131	1,097
AT	Austria	Online	Western countries	2,126	1,098
CA	Canada	Online	Western countries	2,118	1,064
DK	Denmark	Online	Western countries	2,120	1,101
FI	Finland	Online	Western countries	2,161	1,073
FR	France	Online	Western countries	4,746	2,377
DE	Germany	LiTS & Online	Western countries	5,822	2,944
GR	Greece	LiTS & Online	Western countries	3,148	1,587
IT	Italy	Online	Western countries	4,776	2,560
NL	Netherlands	Online	Western countries	2,125	1,156
NO	Norway	Online	Western countries	2,099	1,077
PT	Portugal	Online	Western countries	2,120	1,076
ES	Spain	Online	Western countries	2,127	1,086
SE	Sweden	Online	Western countries	2,107	1,066
GB	United Kingdom	Online	Western countries	4,671	2,367
US	United States	Online	Western countries	4,790	2,481
AL	Albania	LiTS	Post-socialist countries	1,039	472
AM	Armenia	LiTS	Post-socialist countries	1,001	315
AZ	Azerbaijan	LiTS	Post-socialist countries	1,012	482
BY	Belarus	LiTS	Post-socialist countries	1,002	393
BA	Bosnia and Herzegovina	LiTS	Post-socialist countries	1,003	502
BG	Bulgaria	LiTS	Post-socialist countries	1,008	415
HR	Croatia	LiTS	Post-socialist countries	1,006	426
CZ	Czech Republic	LiTS & Online	Post-socialist countries	3,164	1,624
EE	Estonia	LiTS	Post-socialist countries	1,009	415
GE	Georgia	LiTS	Post-socialist countries	1,003	315
HU	Hungary	LiTS	Post-socialist countries	1,000	409
KZ	Kazakhstan	LiTS	Post-socialist countries	1,028	370
XK	Kosovo	LiTS	Post-socialist countries	1,004	425
KG	Kyrgyz Republic	LiTS	Post-socialist countries	1,002	403
LV	Latvia	LiTS	Post-socialist countries	1,004	372
LT	Lithuania	LiTS	Post-socialist countries	1,005	452
MK	North Macedonia	LiTS	Post-socialist countries	1,002	411
MD	Moldova	LiTS	Post-socialist countries	1,002	327
MN	Mongolia	LiTS	Post-socialist countries	1,001	434

Continued on next page

Table C1 (continued)

Country Code	Country	Survey	Region	N (Total)	N (Men)
ME	Montenegro	LiTS	Post-socialist countries	1,006	444
PL	Poland	LiTS & Online	Post-socialist countries	3,128	1,513
RO	Romania	LiTS & Online	Post-socialist countries	3,104	1,557
RU	Russia	LiTS	Post-socialist countries	1,017	346
RS	Serbia	LiTS	Post-socialist countries	1,001	456
SK	Slovakia	LiTS	Post-socialist countries	1,002	462
SI	Slovenia	LiTS	Post-socialist countries	1,004	461
TJ	Tajikistan	LiTS	Post-socialist countries	1,034	337
UZ	Uzbekistan	LiTS	Post-socialist countries	1,006	334
DZ	Algeria	LiTS	MENA	1,000	352
IQ	Iraq	LiTS	MENA	1,066	535
JO	Jordan	LiTS	MENA	1,019	358
LB	Lebanon	LiTS	MENA	1,010	438
MA	Morocco	LiTS	MENA	1,000	318
TN	Tunisia	LiTS	MENA	1,036	364
TR	Türkiye	LiTS & Online	MENA	3,091	1,698
PS	West Bank & Gaza	LiTS	MENA	1,012	343
BJ	Benin	LiTS	Sub-Saharan Africa	1,006	629
CI	Cote d'Ivoire	LiTS	Sub-Saharan Africa	1,021	483
GH	Ghana	LiTS	Sub-Saharan Africa	1,026	495
KE	Kenya	LiTS	Sub-Saharan Africa	1,013	426
NG	Nigeria	LiTS	Sub-Saharan Africa	1,053	541
SN	Senegal	LiTS	Sub-Saharan Africa	1,024	447
ZA	South Africa	Online	Sub-Saharan Africa	2,115	1,098
CN	China	Online	Asia	2,113	1,096
IN	India	Online	Asia	1,855	934
JP	Japan	Online	Asia	2,122	1,141
MY	Malaysia	Online	Asia	2,088	1,081
SG	Singapore	Online	Asia	2,119	1,095
KR	South Korea	Online	Asia	2,104	1,143
TW	Taipei China	Online	Asia	2,087	1,064
AR	Argentina	Online	Latin America	2,090	1,124
BR	Brazil	Online	Latin America	2,109	1,135
CL	Chile	Online	Latin America	2,121	1,116
MX	Mexico	Online	Latin America	2,063	1,133
Total				125,147	60,669

Notes: This table lists all countries and sample sizes ("Total" and "Men only") in LiTS and the online surveys.

Table C2: Outcomes Description

Domain	Variable Name	Question(s)	Variable Description
Economics	Working	Online survey asked: Last week what was your work status? Answers: Working for pay, whether on business premises or working from home; Employed and paid, but not working; Unemployed, looking for work; Unemployed, awaiting recall to my old job; Not working, and not looking for work. LiTS asked: Did you work in the last 7 days, for at least one hour? Answers: Yes or No.	= 1 if currently working; online respondents answering <i>Working for pay</i> or <i>Employed and paid, but not working</i> ; LiTS respondents who worked in the last 7 days and report hours in their main job. 0 otherwise
Economics	Hours > p90	How many hours do you work in your main job during a typical week?	= 1 if reported weekly hours in the main job are strictly above the 90th percentile of the men's hours distribution in the respondent's country and survey mode. Defined for working respondents
Economics	Would Work More	Would you like to work more hours in your main job? Answers: Yes or No	= 1 if would like to work more hours in main job
Economics	Log Earnings	Online survey asked: Approximately how much did you earn by working in 2023, on a before-tax basis? (please report the total annual gross income received from wages in main and side jobs). Answers: [Country specific income bands]. LiTS asked: How much do you earn in a typical month (a) in your main job and (b) in your other job(s), excluding bonuses and benefits and after tax and social insurance. All answers were provided in local currency units.	Natural logarithm of earnings. For Online respondents, this is based on the midpoint of country-specific annual gross labor income bands, where respondents in the top unbounded bracket are assigned the lower bound of that bracket. For LiTS respondents, this is based on the sum of reported monthly earnings from the main job and other job(s), multiplied by 12. Earnings are converted to US\$ using the yearly average exchange rate for 2023.
Economics	Masculine Sector	In which sector do you work in your main job? Answers: Agriculture, Forestry, and Fishing; Mining; Construction; Manufacturing; Transportation and Public Utilities; Wholesale Trade; Retail Trade; Finance, Insurance and Real Estate; Services; Public Sector	=1 if employed in <i>Agriculture, Forestry, and Fishing, Mining, Construction, Manufacturing or Transportation and Public utilities</i>
Economics	Competitiveness	How competitive do you consider yourself to be? Please choose a value on a scale of 0 to 10, where the value 0 means "not competitive at all" and the value 10 means "very competitive".	Answers coded from 0 to 10, standardized
Risk and Health	Uses Seatbelt	Do you normally wear a seatbelt in the car (a) if you are the driver; (b) if you are a passenger sitting in the front seat; (c) if you are a passenger sitting in the back seat?. Answers: Yes or No for each question.	Mean across the three GMS questions that ask about seatbelt use, coded individually as = 1 if they answer Yes, and 0 otherwise
Risk and Health	Risk Taking	Please rate your willingness to take risks, in general, on a scale from 1 to 10, where 1 means that you are not willing to take risks at all, and 10 means that you are very much willing to take risks.	Self-assessed willingness to take risks
Risk and Health	Unlikely to Seek Help (Online only)	If you were having a personal or emotional problem, how likely is it you would seek help from a mental health professional (i.e. psychologist, social worker, counselor)	= 1 if responds Extremely Unlikely or Unlikely and 0 otherwise
Risk and Health	Depression Score	How often, if at all, do the following apply to you? (a) You feel very anxious, nervous, or worried; (b) You feel very sad; (c) You feel depressed; (d) You have little interest or pleasure in doing things. Answers: Never, A few times a year, Monthly, Weekly, Daily.	Mean across the four GMS questions on mental health, coded on a Likert scale from 1 to 5, meaning the larger the score, the more depressed
Politics	Pro-Democracy	I am going to describe various types of political systems and ask what you think about each as a way of governing [COUNTRY]. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing [COUNTRY]? (d) Having a democratic political system	= 1 if thinks that <i>Having a democratic political system</i> is fairly or very good for their country
Politics	Pro-Market	Which one of the following statements do you agree with most? Answers: A market economy is preferable to any other form of economic system; Under some circumstances, a planned economy may be preferable to a market economy; For people like me, it does not matter whether the economic system is organised as a market economy or as a planned economy	= 1 if agrees that <i>A market economy is preferable to any other form of economic system</i>
Politics	Support for Strong Leader	I am going to describe various types of political systems and ask what you think about each as a way of governing [COUNTRY]. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing [COUNTRY]? (a) Having a strong leader who does not have to bother with parliament and elections	= 1 if thinks that <i>Having a strong leader who does not have to bother with parliament and elections</i> is fairly or very good for their country
Politics	Support for Army	I am going to describe various types of political systems and ask what you think about each as a way of governing [COUNTRY]. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing [COUNTRY]? (c) Having the army rule	= 1 if thinks that <i>Having the army rule</i> is fairly or very good for their country

Notes: This table describes each outcome variable (based on either the LiTS or the online surveys) in the *Economics*, *Risk and Health*, and *Politics* domains.

Table C3: Summary Statistics

	Full sample				Men			Women		
	Min	Max	Mean	SD	N	Mean	SD	N	Mean	SD
<i>Panel A: Demographics</i>										
Age	18	95	42.36	14.28	60,669	42.44	13.92	64,478	42.27	14.64
Urban	0	1	0.74	0.44	60,669	0.76	0.43	64,478	0.72	0.45
Primary Education (=1)	0	1	0.11	0.31	60,669	0.11	0.31	64,478	0.12	0.32
Secondary Education (=1)	0	1	0.49	0.50	60,669	0.49	0.50	64,478	0.49	0.50
Tertiary Education (=1)	0	1	0.40	0.49	60,669	0.41	0.49	64,478	0.39	0.49
Orthodox (=1)	0	1	0.13	0.33	60,669	0.12	0.32	64,478	0.13	0.34
Catholic (=1)	0	1	0.24	0.42	60,669	0.24	0.43	64,478	0.23	0.42
Other Christian (=1)	0	1	0.15	0.36	60,669	0.15	0.36	64,478	0.16	0.36
Muslim (=1)	0	1	0.18	0.38	60,669	0.18	0.38	64,478	0.18	0.39
Atheistic/Agnostic/None (=1)	0	1	0.20	0.40	60,669	0.21	0.41	64,478	0.19	0.39
Other Religion (=1)	0	1	0.08	0.27	60,669	0.08	0.27	64,478	0.08	0.27
<i>Panel B: Masculinity Norms and Gender Role Norms</i>										
CMNI-5 Score (1-4)	1	4	2.42	0.62	59,898	2.42	0.62	0	.	.
CMNI-3 Score (1-4)	1	4	2.29	0.65	59,719	2.38	0.67	38,494	2.15	0.59
CMNI Importance of Winning (1-4)	1	4	2.37	0.92	58,375	2.51	0.93	37,809	2.14	0.86
CMNI Violence (1-4)	1	4	1.87	0.93	58,482	1.99	0.96	37,844	1.68	0.85
CMNI Power Over Women (1-4)	1	4	2.17	1.01	57,458	2.36	1.00	37,506	1.86	0.93
CMNI Self-Reliance (1-4)	1	4	2.62	0.88	58,753	2.63	0.90	38,073	2.61	0.85
CMNI Homosexuality Avoidance (1-4)	1	4	2.45	1.04	54,842	2.61	1.03	35,934	2.19	0.99
Traditional Gender Norms Index (TGRI) (1-4)	1	4	2.02	0.53	60,424	2.12	0.51	64,218	1.93	0.52
TGRI Political Leaders (1-4)	1	4	1.90	0.88	59,408	1.97	0.87	63,197	1.82	0.88
TGRI Competence Business Executives (1-4)	1	4	2.24	0.97	58,961	2.40	0.96	62,493	2.07	0.96
TGRI Household Chores (1-4)	1	4	2.02	0.97	59,682	2.13	0.95	63,610	1.91	0.97
TGRI Responsibility for the Home (1-4)	1	4	1.68	0.78	59,055	1.80	0.81	62,978	1.55	0.73
TGRI Contribute to Household Income (1-4)	1	4	1.84	0.78	59,739	1.88	0.78	63,350	1.80	0.78
TGRI Women Take Care of Household (1-4)	1	4	2.47	0.99	59,232	2.54	0.96	62,951	2.39	1.01
<i>Panel C: Outcome Variables</i>										
Log Earnings	-2.50	14.3	9.81	1.31	44,725	9.90	1.29	37,683	9.69	1.33
Masculine Sector (=1)	0	1	0.27	0.44	46,685	0.36	0.48	39,443	0.16	0.36
Working (=1)	0	1	0.69	0.46	60,669	0.76	0.43	64,478	0.62	0.48
Hours > p90	0	1	0.08	0.28	44,722	0.10	0.30	37,427	0.06	0.24
Would Work More (=1)	0	1	0.27	0.44	46,667	0.29	0.45	39,431	0.24	0.43
Work Agriculture (=1)	0	1	0.03	0.17	46,685	0.04	0.19	39,443	0.02	0.15
Work Mining (=1)	0	1	0.01	0.08	46,685	0.01	0.09	39,443	0.00	0.05
Work Construction (=1)	0	1	0.07	0.26	46,685	0.11	0.31	39,443	0.03	0.17
Work Manufacturing (=1)	0	1	0.11	0.31	46,685	0.13	0.34	39,443	0.08	0.27
Work Transportation (=1)	0	1	0.07	0.25	46,685	0.09	0.28	39,443	0.04	0.19
Work Wholesale Trade (=1)	0	1	0.03	0.18	46,685	0.03	0.18	39,443	0.03	0.17
Work Retail Trade (=1)	0	1	0.09	0.29	46,685	0.07	0.26	39,443	0.12	0.32
Work Finance (=1)	0	1	0.06	0.24	46,685	0.06	0.23	39,443	0.06	0.24
Work Services (=1)	0	1	0.20	0.40	46,685	0.20	0.40	39,443	0.20	0.40
Work Public Sector (=1)	0	1	0.21	0.41	46,685	0.15	0.35	39,443	0.28	0.45
Risk-Taking (1-10)	1	10	5.62	2.68	60,557	6.00	2.61	64,238	5.23	2.70
Uses Seatbelt (0-1)	0	1	0.75	0.29	59,922	0.75	0.29	63,035	0.74	0.30
Seatbelt in Front Seat (=1)	0	1	0.84	0.37	59,700	0.83	0.38	62,687	0.85	0.35
Seatbelt in Back Seat (=1)	0	1	0.55	0.50	58,587	0.56	0.50	61,616	0.53	0.50
Seatbelt in Driver Seat (=1)	0	1	0.87	0.33	55,741	0.87	0.33	51,739	0.87	0.34
Unlikely to Seek Help (=1)	0	1	0.43	0.49	41,859	0.47	0.50	38,690	0.39	0.49
Depression Score	1	5	2.43	1.06	60,319	2.32	1.04	64,102	2.53	1.07
Competitive Self-Assessment (1-10)	1	10	5.76	2.68	60,669	6.07	2.56	64,476	5.44	2.76
Pro Democracy (=1)	0	1	0.78	0.42	58,600	0.77	0.42	60,327	0.78	0.41
Pro Market (=1)	0	1	0.49	0.50	52,203	0.51	0.50	48,675	0.47	0.50
Support for Strong Leader (=1)	0	1	0.44	0.50	58,013	0.45	0.50	59,492	0.43	0.49
Support for Army (=1)	0	1	0.32	0.47	57,932	0.33	0.47	59,146	0.32	0.47

Notes: This table reports summary statistics (*min*, *max*, *mean* and *standard deviation*) for the main variables used in this paper. Statistics are shown for the full GMS sample (LiTS and online surveys) and separately for men and women.

Table C4: Masculinity Dimensions – Economics

	Log earnings		Masculine Sector		Working		Hours > p90		Would Work More	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Masculinity - Importance of Winning										
CMNI Importance of Winning	0.039*** (0.014)	0.036*** (0.012)	0.014*** (0.004)	0.014*** (0.004)	0.001 (0.003)	-0.000 (0.003)	0.004* (0.002)	0.004* (0.002)	0.046*** (0.005)	0.045*** (0.005)
TGRI Score	-0.008 (0.012)	-0.006 (0.010)	0.028*** (0.003)	0.025*** (0.003)	0.011*** (0.004)	0.011*** (0.003)	0.001 (0.002)	0.000 (0.002)	0.032*** (0.004)	0.028*** (0.004)
Mean of outcome	9.94	9.94	0.35	0.35	0.78	0.78	0.09	0.09	0.30	0.30
R-squared	0.55	0.58	0.05	0.07	0.13	0.15	0.00	0.01	0.12	0.12
Observations	43,449	43,449	45,201	45,201	58,292	58,292	43,284	43,284	45,184	45,184
Panel B: Masculinity - Violence										
CMNI Violence	-0.005 (0.006)	-0.007 (0.005)	-0.000 (0.003)	0.001 (0.003)	-0.007*** (0.002)	-0.008*** (0.002)	0.005** (0.002)	0.005*** (0.002)	0.013*** (0.004)	0.013*** (0.004)
TGRI Score	0.004 (0.015)	0.005 (0.012)	0.032*** (0.003)	0.029*** (0.003)	0.014*** (0.004)	0.013*** (0.003)	0.000 (0.002)	-0.000 (0.002)	0.042*** (0.005)	0.037*** (0.005)
Mean of outcome	9.94	9.94	0.35	0.35	0.77	0.77	0.09	0.09	0.29	0.29
R-squared	0.55	0.58	0.05	0.07	0.13	0.15	0.00	0.01	0.11	0.11
Observations	43,485	43,485	45,247	45,247	58,403	58,403	43,349	43,349	45,230	45,230
Panel C: Masculinity - Self-Reliance										
CMNI Self-Reliance	-0.012 (0.007)	-0.009 (0.007)	0.003 (0.002)	0.002 (0.002)	-0.007*** (0.002)	-0.007*** (0.002)	0.004** (0.002)	0.004** (0.002)	0.016*** (0.004)	0.016*** (0.004)
TGRI Score	0.005 (0.015)	0.006 (0.012)	0.032*** (0.003)	0.029*** (0.003)	0.013*** (0.004)	0.012*** (0.003)	0.001 (0.002)	0.001 (0.002)	0.043*** (0.005)	0.039*** (0.005)
Mean of outcome	9.94	9.94	0.35	0.35	0.78	0.78	0.09	0.09	0.29	0.29
R-squared	0.55	0.57	0.05	0.07	0.13	0.15	0.00	0.01	0.11	0.11
Observations	43,735	43,735	45,487	45,487	58,670	58,670	43,562	43,562	45,470	45,470
Panel D: Masculinity - Power Over Women										
CMNI Power Over Women	0.044*** (0.016)	0.041*** (0.013)	0.013*** (0.004)	0.013*** (0.004)	0.008* (0.004)	0.007* (0.004)	0.000 (0.002)	0.000 (0.002)	0.046*** (0.005)	0.045*** (0.005)
TGRI Score	-0.013 (0.012)	-0.011 (0.011)	0.027*** (0.004)	0.025*** (0.004)	0.009** (0.004)	0.008** (0.003)	0.002 (0.002)	0.001 (0.002)	0.029*** (0.004)	0.025*** (0.004)
Mean of outcome	9.93	9.93	0.35	0.35	0.77	0.77	0.09	0.09	0.30	0.30
R-squared	0.55	0.58	0.05	0.07	0.14	0.16	0.00	0.01	0.12	0.12
Observations	42,620	42,620	44,376	44,376	57,369	57,369	42,499	42,499	44,358	44,358
Panel E: Masculinity - Homosexuality Avoidance										
CMNI Homosexuality Avoidance	0.036*** (0.009)	0.032*** (0.007)	0.011*** (0.003)	0.012*** (0.003)	0.000 (0.003)	-0.001 (0.003)	-0.000 (0.002)	0.000 (0.002)	0.010*** (0.004)	0.009** (0.004)
TGRI Score	-0.004 (0.015)	-0.002 (0.012)	0.031*** (0.004)	0.028*** (0.004)	0.011*** (0.004)	0.011*** (0.003)	0.002 (0.002)	0.002 (0.002)	0.045*** (0.005)	0.040*** (0.005)
Mean of outcome	9.97	9.97	0.35	0.35	0.79	0.79	0.09	0.09	0.30	0.30
R-squared	0.55	0.57	0.05	0.07	0.12	0.15	0.00	0.01	0.11	0.12
Observations	41,466	41,466	43,017	43,017	54,780	54,780	41,163	41,163	42,999	42,999
Survey × country FEs	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×

Notes: OLS regressions. An observation is a male GMS respondent. Dependent variables: *Log Earnings* (columns 1-2, natural log of annual labor earnings in US\$ from main and side jobs), *Masculine Sector* (columns 3-4, dummy = 1 if employed in masculine sector), *Working* (columns 5-6, dummy = 1 if working), *Hours > p90* (columns 7-8, dummy = 1 if usual weekly hours in the main job are strictly above the 90th percentile of the within-survey country men's hours distribution), *Would Work More* (columns 9-10, dummy = 1 if respondent would like to work more hours). See Table C2 for variable definitions. CMNI subitems and TGRI are standardized. Standard errors clustered at country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C5: Masculinity Dimensions – Risk and Health

	Risk Taking		Uses Seatbelt		Unlikely to Seek Help		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity - Importance of Winning								
CMNI Importance of Winning	0.125*** (0.012)	0.123*** (0.011)	-0.031*** (0.008)	-0.030*** (0.008)	0.013*** (0.004)	0.015*** (0.004)	0.044*** (0.009)	0.046*** (0.008)
TGRI Score	0.017 (0.011)	0.013 (0.010)	-0.127*** (0.010)	-0.121*** (0.010)	0.016*** (0.006)	0.023*** (0.005)	0.042*** (0.009)	0.043*** (0.009)
Mean of outcome	0.01	0.01	0.01	0.01	0.46	0.46	0.00	0.00
R-squared	0.14	0.15	0.17	0.17	0.01	0.02	0.11	0.12
Observations	58,214	58,214	57,626	57,626	40,921	40,921	58,095	58,095
Panel B: Masculinity - Violence								
CMNI Violence	0.049*** (0.007)	0.049*** (0.007)	-0.034*** (0.008)	-0.034*** (0.007)	0.028*** (0.004)	0.028*** (0.004)	0.126*** (0.008)	0.126*** (0.008)
TGRI Score	0.036*** (0.013)	0.031** (0.012)	-0.126*** (0.011)	-0.119*** (0.010)	0.012** (0.005)	0.020*** (0.005)	0.017** (0.008)	0.018** (0.008)
Mean of outcome	0.01	0.01	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.13	0.14	0.17	0.17	0.02	0.02	0.13	0.13
Observations	58,327	58,327	57,736	57,736	40,888	40,888	58,209	58,209
Panel C: Masculinity - Self-Reliance								
CMNI Self-Reliance	0.008 (0.008)	0.009 (0.008)	-0.023*** (0.007)	-0.023*** (0.007)	0.049*** (0.004)	0.048*** (0.004)	0.170*** (0.012)	0.169*** (0.011)
TGRI Score	0.050*** (0.014)	0.044*** (0.013)	-0.132*** (0.010)	-0.125*** (0.010)	0.011* (0.006)	0.018*** (0.005)	0.026*** (0.009)	0.027*** (0.009)
Mean of outcome	0.01	0.01	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.13	0.13	0.17	0.17	0.02	0.03	0.14	0.14
Observations	58,591	58,591	58,000	58,000	41,207	41,207	58,478	58,478
Panel D: Masculinity - Power Over Women								
CMNI Power Over Women	0.096*** (0.012)	0.093*** (0.011)	-0.021* (0.012)	-0.019 (0.012)	0.025*** (0.006)	0.028*** (0.005)	0.054*** (0.012)	0.056*** (0.012)
TGRI Score	0.018 (0.012)	0.014 (0.011)	-0.128*** (0.012)	-0.122*** (0.011)	0.010 (0.006)	0.016*** (0.006)	0.035*** (0.010)	0.036*** (0.010)
Mean of outcome	0.01	0.01	0.01	0.01	0.46	0.46	0.00	0.00
R-squared	0.13	0.14	0.17	0.17	0.01	0.02	0.12	0.12
Observations	57,288	57,288	56,700	56,700	39,888	39,888	57,169	57,169
Panel E: Masculinity - Homosexuality Avoidance								
CMNI Homosexuality Avoidance	0.019** (0.007)	0.017** (0.007)	0.001 (0.007)	0.001 (0.007)	0.023*** (0.004)	0.025*** (0.004)	0.016* (0.009)	0.018** (0.009)
TGRI Score	0.048*** (0.014)	0.042*** (0.013)	-0.143*** (0.010)	-0.136*** (0.010)	0.015** (0.006)	0.023*** (0.005)	0.055*** (0.009)	0.056*** (0.009)
Mean of outcome	0.02	0.02	0.02	0.02	0.47	0.47	-0.01	-0.01
R-squared	0.13	0.14	0.17	0.18	0.01	0.02	0.10	0.11
Observations	54,722	54,722	54,237	54,237	39,630	39,630	54,636	54,636
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is a male GMS respondent. Dependent variables: *Risk Taking* (columns 1-2, standardized, scale 1-10 from not willing to take risks), *Uses Seatbelt* (columns 3-4, standardized mean of three seatbelt use questions), *Unlikely to Seek Help* (columns 5-6, dummy = 1 if respondent would be extremely unlikely/unlikely to seek mental health help for personal/emotional problems), *Depression Score* (columns 7-8, standardized mean of four depression questions). See Table C2 for variable definitions. CMNI subitems and TGRI are standardized. Standard errors clustered at country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C6: Masculinity Dimensions – Politics

	Pro Democracy		Pro Market		Support for Strong Leader		Support for Army	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity - Importance of Winning								
CMNI Importance of Winning	-0.010*** (0.003)	-0.010*** (0.003)	-0.008** (0.004)	-0.009** (0.004)	0.063*** (0.005)	0.062*** (0.005)	0.050*** (0.004)	0.049*** (0.004)
TGRI Score	-0.067*** (0.004)	-0.066*** (0.004)	0.004 (0.007)	-0.000 (0.007)	0.080*** (0.006)	0.074*** (0.006)	0.079*** (0.006)	0.073*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.06	0.07	0.03	0.05	0.13	0.13	0.14	0.15
Observations	56,654	56,654	50,500	50,500	56,079	56,079	55,966	55,966
Panel B: Masculinity - Violence								
CMNI Violence	-0.014*** (0.003)	-0.014*** (0.003)	-0.041*** (0.004)	-0.041*** (0.004)	0.028*** (0.005)	0.029*** (0.004)	0.024*** (0.004)	0.024*** (0.004)
TGRI Score	-0.066*** (0.005)	-0.064*** (0.005)	0.014* (0.007)	0.010 (0.007)	0.089*** (0.007)	0.083*** (0.007)	0.085*** (0.006)	0.079*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.44	0.44	0.32	0.32
R-squared	0.06	0.07	0.04	0.05	0.12	0.12	0.14	0.14
Observations	56,736	56,736	50,584	50,584	56,144	56,144	56,038	56,038
Panel C: Masculinity - Self-Reliance								
CMNI Self-Reliance	-0.001 (0.003)	-0.001 (0.003)	-0.024*** (0.004)	-0.023*** (0.004)	0.017*** (0.003)	0.018*** (0.003)	0.009*** (0.003)	0.010*** (0.003)
TGRI Score	-0.069*** (0.005)	-0.068*** (0.005)	0.005 (0.008)	0.001 (0.007)	0.095*** (0.008)	0.089*** (0.007)	0.091*** (0.006)	0.085*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.06	0.07	0.03	0.05	0.12	0.12	0.13	0.14
Observations	56,970	56,970	50,792	50,792	56,401	56,401	56,301	56,301
Panel D: Masculinity - Power Over Women								
CMNI Power Over Women	-0.013*** (0.004)	-0.013*** (0.004)	-0.027*** (0.007)	-0.029*** (0.007)	0.062*** (0.006)	0.060*** (0.006)	0.045*** (0.005)	0.043*** (0.005)
TGRI Score	-0.065*** (0.005)	-0.064*** (0.004)	0.012 (0.009)	0.008 (0.008)	0.075*** (0.006)	0.070*** (0.005)	0.077*** (0.006)	0.072*** (0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.07	0.07	0.03	0.05	0.13	0.13	0.14	0.15
Observations	55,718	55,718	49,796	49,796	55,124	55,124	55,020	55,020
Panel E: Masculinity - Homosexuality Avoidance								
CMNI Homosexuality Avoidance	0.002 (0.003)	0.002 (0.003)	-0.017*** (0.004)	-0.018*** (0.004)	0.026*** (0.004)	0.025*** (0.004)	0.014*** (0.004)	0.014*** (0.004)
TGRI Score	-0.073*** (0.005)	-0.072*** (0.005)	0.003 (0.008)	-0.001 (0.007)	0.094*** (0.007)	0.088*** (0.007)	0.092*** (0.006)	0.086*** (0.006)
Mean of outcome	0.77	0.77	0.52	0.52	0.44	0.44	0.32	0.32
R-squared	0.07	0.07	0.03	0.05	0.12	0.12	0.13	0.14
Observations	53,468	53,468	48,267	48,267	52,913	52,913	52,786	52,786
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is a male GMS respondent. Dependent variables are defined as dummies equal to one if the respondent thinks that democracy is fairly or very good (columns 1-2), if he agrees that a market economy is preferable to any other economic system (column 3-4), if he thinks that having a strong leader in power is fairly or very good (column 5-6), or if he thinks that having the army rule is fairly or very good (columns 7-8). More details on the definitions of the dependent variables are given in Table C2. The CMNI subitems and TGRI score are standardized. Standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C7: Main Specifications with Multiple Hypothesis Testing Corrections

	Economic Outcomes					Health Outcomes				Political Outcomes			
	Log Earnings (1)	Masculine Sector (2)	Working (3)	Hours > p90 (4)	Would Work More (5)	Risk Taking (6)	Uses Seatbelt (7)	Unlikely to Seek Help (8)	Depression Score (9)	Pro Democracy (10)	Pro Market (11)	Support for Strong Leader (12)	Support for Army (13)
CMNI Score	0.036** (0.014)	0.014*** (0.003)	-0.002 (0.004)	0.004** (0.002)	0.044*** (0.006)	0.101*** (0.011)	-0.039*** (0.009)	0.049*** (0.006)	0.146*** (0.010)	-0.013*** (0.003)	-0.039*** (0.004)	0.066*** (0.005)	0.048*** (0.005)
TGRI Score	-0.012 (0.012)	0.026*** (0.004)	0.012*** (0.004)	0.000 (0.002)	0.027*** (0.005)	0.010 (0.011)	-0.119*** (0.011)	-0.003 (0.006)	-0.005 (0.010)	-0.064*** (0.005)	0.016** (0.008)	0.070*** (0.006)	0.072*** (0.006)
Unadjusted <i>p</i> -value (CMNI)	0.010	<0.001	0.617	0.046	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
RW <i>p</i> -value (CMNI)	[0.149]	[0.019]	[0.903]	[0.149]	[0.001]	[0.001]	[0.002]	[0.001]	[0.001]	[0.007]	[0.001]	[0.001]	[0.001]
Mean of outcome	9.92	0.35	0.77	0.09	0.29	0.00	0.01	0.47	0.00	0.77	0.51	0.45	0.32
R-squared	0.57	0.05	0.13	0.00	0.12	0.14	0.17	0.02	0.13	0.07	0.04	0.13	0.14
Observations	44,363	46,213	59,795	44,261	46,195	59,707	59,101	41,665	59,565	57,981	51,643	57,386	57,301
Survey × country FEs	×	×	×	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×	×	×	×

Notes: OLS regressions. An observation is an individual male respondent in GMS. Both the CMNI and TGRI scores are standardized. Standard errors clustered at the country level are shown in parentheses. Unadjusted *p*-values for the CMNI score are computed based on standard errors clustered at the country level. Romano-Wolf adjusted *p*-values (1,000 bootstrap replications, with resampling clustered at the country level) for the CMNI score are shown in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C8: Masculinity, Gender Role Norms, and the Effect of Female Interviewers

	(1)	(2)
<i>Panel A: Masculinity Norms</i>		
CMNI-5	-0.045 (0.053)	-0.049 (0.053)
Importance of Winning	-0.027 (0.055)	-0.033 (0.054)
Violence	-0.135*** (0.044)	-0.138*** (0.044)
Self-Reliance	0.054 (0.046)	0.053 (0.046)
Power Over Women	-0.030 (0.058)	-0.035 (0.058)
Homosexuality Avoidance	-0.021 (0.051)	-0.021 (0.051)
<i>Panel B: Gender Role Norms</i>		
TGRI	-0.106** (0.050)	-0.122** (0.048)
Political Leaders	-0.060 (0.040)	-0.068* (0.039)
Business Executives	-0.133*** (0.042)	-0.142*** (0.042)
Household Chores	-0.090* (0.051)	-0.102** (0.050)
Responsibility for the Home	-0.025 (0.062)	-0.027 (0.061)
Contribute to Household Income	0.017 (0.053)	0.011 (0.052)
Women Take Care of Household	-0.047 (0.037)	-0.061 (0.037)
Country FEs	×	×
Age, Urban	×	×
Education, Religion, Religiosity		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. Each cell reports the coefficient on *Female interviewer* – a dummy equal to one if the interviewer in LiTS was a woman, and 0 otherwise – from a separate regression of the standardized index or sub-item (rows) on the female-interviewer dummy. Standard errors are clustered at the country level and shown in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample of male respondents only. Source: LiTS.

Table C9: Other constructs: Description

Construct	Question(s)	Variable Description	Survey
Generalized trust	<i>Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?</i> Answers: 1 (complete distrust) to 5 (complete trust).	= 1 if respondent chose 4 or 5, and 0 otherwise.	LiTS
Institutional trust	<i>To what extent do you trust each of the following institutions?</i> Respondents rate each institution on a 1–5 scale (1 = complete distrust, 5 = complete trust). Institutions: (a) the presidency / monarchy; (b) the government / cabinet of ministers; (c) regional government; (d) local government; (e) parliament; (f) the courts; (g) political parties; (h) the armed forces; (i) the police; (j) banks and the financial system; (k) foreign investors and international bodies; (l) religious institutions; (m) scientific institutions; (n) public health services.	Mean across the 14 institutional trust items (1–5).	LiTS
Civic norm-breaking	<i>Please tell me for each of the following whether you think it can always be justified, never be justified, or something in between.</i> Respondents rate each statement on a 1–10 scale (1 = never justifiable, 10 = always justifiable). Items: <i>Claiming government benefits to which you are not entitled; Avoiding a fare on public transport; Cheating on taxes if you have a chance.</i>	Mean across the three civic norm items; higher values indicate greater acceptance of rule-breaking.	LiTS
Gender identity (CGI)	<i>In general, how do you see yourself?</i> Women: scale from 0 (<i>Very masculine</i>) to 10 (<i>Very feminine</i>). Men: scale from 0 (<i>Very feminine</i>) to 10 (<i>Very masculine</i>).	Responses are recorded on an 11-point scale. For men, the score is the reported position on the feminine-to-masculine scale. For women, the reported position on the masculine-to-feminine scale is reversed. Both are rescaled to 0–10, with higher values indicating a more masculine gender identity. Available in online GMS wave 2 only.	Online GMS
Competitiveness	<i>How competitive do you consider yourself to be?</i> Please choose a value on a scale of 0 to 10, where 0 means “not competitive at all” and 10 means “very competitive”.	Self-assessed competitiveness coded from 0 to 10 (rescaled to 1–10 in online GMS wave 2).	LiTS + Online GMS
Zero-sum thinking	<i>Please indicate how much you agree with each of the following statements. (a) In the United States, there are many different ethnic groups (Black, White, Asian, Hispanic, etc.). If one ethnic group becomes richer, this generally comes at the expense of other groups in the country. (b) In international trade, if one country makes more money, then it is generally the case that the other country makes less money. (c) In the United States, there are those with American citizenship and those without. If those without American citizenship do better economically, this will generally come at the expense of American citizens. (d) In the United States, there are many different income classes. If one group becomes wealthier, it is usually the case that this comes at the expense of other groups.</i> Answers: Strongly disagree to Strongly agree.	Mean across the four items, coded on a Likert scale from 1 to 4; higher values indicate stronger zero-sum beliefs.	US Online
Social dominance orientation (SDO)	<i>Show how much you favor or oppose each idea below (1–7 scale): An ideal society requires some groups to be on top and others to be on the bottom; No one group should dominate in society; Group equality should not be our primary goal; We should do what we can to equalize conditions for different groups.</i>	Mean across four items on a 1–7 scale; pro-equality items are reverse-coded so that higher values indicate stronger social dominance orientation.	US Online
Big Five: Extraversion	<i>Below are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. I see myself as:</i> (a) <i>Extraverted, enthusiastic</i> ; (b) <i>Reserved, quiet.</i> Answers: Strongly disagree to Strongly agree.	Mean of the extraversion item and the reverse-coded reserved item; Likert scale 1–4.	US Online
Big Five: Agreeableness	<i>Below are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. I see myself as:</i> (a) <i>Critical, quarrelsome</i> ; (b) <i>Sympathetic, warm.</i> Answers: Strongly disagree to Strongly agree.	Mean of the reverse-coded critical item and the sympathetic item; Likert scale 1–4.	US Online
Big Five: Conscientiousness	<i>Below are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. I see myself as:</i> (a) <i>Dependable, self-disciplined</i> ; (b) <i>Disorganized, careless.</i> Answers: Strongly disagree to Strongly agree.	Mean of the dependable item and the reverse-coded disorganized item; Likert scale 1–4.	US Online
Big Five: Neuroticism	<i>Below are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. I see myself as:</i> (a) <i>Anxious, easily upset</i> ; (b) <i>Calm, emotionally stable.</i> Answers: Strongly disagree to Strongly agree.	Mean of the anxious item and the reverse-coded calm item; Likert scale 1–4.	US Online
Big Five: Openness	<i>Below are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement. I see myself as:</i> (a) <i>Open to new experiences, complex</i> ; (b) <i>Conventional, uncreative.</i> Answers: Strongly disagree to Strongly agree.	Mean of the openness item and the reverse-coded conventional item; Likert scale 1–4.	US Online
Patience	<i>How willing are you to give up something that is beneficial for you today in order to benefit more from that in the future?</i> Answers: 0 (completely unwilling) to 10 (very willing).	Willingness score on a 0–10 scale; higher values indicate greater patience.	US Online
Altruism	<i>How willing are you to give to good causes without expecting anything in return?</i> Answers: 0 (completely unwilling) to 10 (very willing).	Willingness score on a 0–10 scale; higher values indicate greater altruism.	US Online
Positive reciprocity	<i>When someone does me a favor I am willing to return it.</i> Answers: 0 (completely disagree) to 10 (completely agree).	Agreement score on a 0–10 scale; higher values indicate stronger positive reciprocity.	US Online
Negative reciprocity	<i>We now ask you for your willingness to act in a certain way. Please indicate your answer on a scale from 0 to 10, where 0 means “completely unwilling to do so” and 10 means “very willing to do so.” How willing are you to punish someone who treats you unfairly, even if there may be costs for you? How willing are you to punish someone who treats others unfairly, even if there may be costs for you? How much do you agree with the following statement: If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so.</i> Answers: 0–10 willingness or agreement scales.	Mean across the three items; higher values indicate stronger negative reciprocity.	US Online

Notes: This table describes additional constructs used as controls in the robustness analysis reported in Figure B9.

Table C10: Normative Masculinity Index and Economic, Health, and Political Outcomes

	Log Earnings	Masculine Sector	Working	Hours > p90	Would Work More
	(1)	(2)	(3)	(4)	(5)
Panel A: Economics					
Normative Masculinity	0.007 (0.009)	0.021*** (0.003)	0.012*** (0.002)	0.003** (0.001)	0.043*** (0.006)
TGRI	0.009 (0.013)	0.019*** (0.003)	0.013*** (0.003)	-0.001 (0.002)	0.033*** (0.005)
R-Squared	0.40	0.05	0.06	0.01	0.10
Observations	35,611	35,611	41,819	33,650	35,593
	Risk Taking	Uses Seatbelt	Unlikely to Seek Help	Depression Score	
	(1)	(2)	(3)	(4)	
Panel B: Risk And Health					
Normative Masculinity	0.158*** (0.009)	-0.032*** (0.011)	0.027*** (0.006)	0.044*** (0.009)	
TGRI	0.015 (0.013)	-0.131*** (0.013)	0.017** (0.006)	0.032** (0.012)	
R-Squared	0.15	0.14	0.02	0.07	
Observations	41,819	41,702	41,819	41,819	
	Pro Democracy	Pro Market	Support for Strong Leader	Support For Army	
	(1)	(2)	(3)	(4)	
Panel C: Politics					
Normative Masculinity	-0.026*** (0.004)	-0.026*** (0.005)	0.081*** (0.004)	0.069*** (0.005)	
TGRI	-0.069*** (0.005)	0.015*** (0.005)	0.075*** (0.007)	0.073*** (0.006)	
R-Squared	0.08	0.05	0.13	0.14	
Observations	41,819	36,653	41,819	41,819	
Country FEs	×	×	×	×	
Age, Urban	×	×	×	×	
Education, Religion, Religiosity	×	×	×	×	

Notes: OLS regressions. An observation is an individual male respondent in the online component of the GMS. The dependent variables are defined in Tables 1, 2 and 3. For more details on the definitions of the dependent variables, please refer to Table C2. The Normative Masculinity Index and TGRI are standardized. All regressions control for age, urban status, education, religion, religiosity and country fixed effects. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: Online survey.

Table C11: Masculinity and Economic, Health, and Political Outcomes – CMNI-3 in Male and Female Samples

	Log Earnings		Masculine Sector		Working		Hours > p90		Would Work More	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Economics										
CMNI-3	0.016 (0.012)	0.015 (0.018)	0.007** (0.003)	0.008*** (0.002)	-0.003 (0.002)	-0.001 (0.004)	0.008*** (0.002)	0.003** (0.001)	0.039*** (0.007)	0.037*** (0.005)
TGRI	0.011 (0.015)	-0.006 (0.014)	0.026*** (0.004)	0.015*** (0.004)	0.023*** (0.004)	0.016** (0.006)	-0.002 (0.002)	0.002 (0.002)	0.041*** (0.006)	0.037*** (0.005)
R-Squared	0.36	0.29	0.03	0.04	0.02	0.03	0.00	0.00	0.10	0.09
Observations	35,480	29,281	35,480	29,281	41,642	38,484	33,529	27,284	35,462	29,269
Sample	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	Risk Taking		Uses Seatbelt		Unlikely to Seek Help		Depression Score			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Panel B: Risk And Health										
CMNI-3	0.114*** (0.011)	0.106*** (0.021)	-0.034*** (0.011)	-0.039*** (0.011)	0.045*** (0.005)	0.039*** (0.006)	0.198*** (0.010)	0.186*** (0.010)		
TGRI	0.046*** (0.014)	0.048* (0.027)	-0.146*** (0.014)	-0.195*** (0.012)	0.003 (0.005)	0.009 (0.007)	-0.035*** (0.012)	-0.074*** (0.009)		
R-Squared	0.13	0.13	0.13	0.15	0.02	0.04	0.09	0.08		
Observations	41,642	38,484	41,530	38,344	41,642	38,484	41,642	38,484		
Sample	Men	Women	Men	Women	Men	Women	Men	Women		
	Pro Democracy		Pro Market		Support for Strong Leader		Support For Army			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Panel C: Politics										
CMNI-3	-0.014*** (0.003)	-0.018*** (0.003)	-0.039*** (0.004)	-0.037*** (0.004)	0.060*** (0.005)	0.049*** (0.004)	0.040*** (0.004)	0.037*** (0.003)		
TGRI	-0.076*** (0.006)	-0.070*** (0.007)	0.029*** (0.006)	0.049*** (0.008)	0.091*** (0.007)	0.081*** (0.007)	0.092*** (0.007)	0.078*** (0.009)		
R-Squared	0.07	0.07	0.03	0.04	0.12	0.10	0.12	0.12		
Observations	41,642	38,484	36,590	28,766	41,642	38,484	41,642	38,484		
Sample	Men	Women	Men	Women	Men	Women	Men	Women		
Country FEs	×	×	×	×	×	×	×	×		
Age, Urban	×	×	×	×	×	×	×	×		

Notes: OLS regressions. An observation is an individual respondent in the online component of the GMS. The dependent variables are defined in Tables 1, 2, and 3. For more details on the definitions of the dependent variables, see Table C2. The CMNI-3 and TGRI are standardized. All regressions control for age, urban status and country fixed effects. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: Online surveys.

Table C12: Top 10 War-Exposed Country-Birth Cohorts by Battle-Deaths per 100,000

Country	Birth cohort	Deaths per 100,000
Bosnia and Herzegovina	1974	157.5
Bosnia and Herzegovina	1973	156.0
Bosnia and Herzegovina	1972	154.3
Bosnia and Herzegovina	1971	152.3
Bosnia and Herzegovina	1975	92.1
West Bank & Gaza	1998	69.9
Bosnia and Herzegovina	1976	49.8
Bosnia and Herzegovina	1977	27.4
Tajikistan	1973	18.3
Tajikistan	1974	18.0

Notes: Each row is a country specific birth-year cohort present in the main estimation sample. *Deaths per 100,000* is the average annual state-based conflict deaths per 100,000 population over the cohort's ages 18–25 window. The ten most-exposed cohorts are shown. Source: UCDP–GED.

Table C13: Balance Tests for Impressionable Years Exposures

	War	Parents above Primary Education	Parents White-Collar	Respondent Height	Few Childhood Books
	(1)	(2)	(3)	(4)	(5)
War		0.027 (0.042) [0.042]	-0.011 (0.025) [0.027]	-0.318 (0.451) [0.389]	0.002 (0.019) [0.021]
Recession	0.012 (0.052) [0.054]	0.016 (0.019) [0.020]	0.011 (0.013) [0.010]	-0.041 (0.264) [0.226]	-0.009 (0.013) [0.012]
Mean of outcome	0.12	0.79	0.56	174.92	0.36
R-squared	0.54	0.43	0.08	0.22	0.29
Observations	8,672	8,672	8,672	8,672	8,672
Cohort FE	×	×	×	×	×
Survey × country FE	×	×	×	×	×

Notes: OLS regressions. An observation is an individual male respondent. *War* is a dummy equal to one if any year of the respondent's age 18-25 window experienced more than 1,000 militarized conflict deaths in the country of residence. *Recession* is a dummy equal to one if any year of the same window recorded real GDP-per-capita growth at or below the tenth percentile of the pooled country-year distribution. *Parents above Primary Education* is a dummy equal to one if at least one parent attained schooling beyond primary. *Parents White-Collar* is a dummy equal to one if at least one parent worked in tertiary services or the public sector. *Respondent Height* is self-reported height in centimeters. *Few Childhood Books* is a dummy equal to one if the respondent reports none or very few books in their home as a child. All regressions include year-of-birth and survey×country fixed effects and are weighted by survey sampling weights. Standard errors clustered at the country level are shown in parentheses; two-way clustered standard errors (country and cohort) are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C14: Impact of Impressionable Years Exposures on Dimensions of Masculinity

	Importance of Winning	Violence	Self-Reliance	Power Over Women	Homosexuality Avoidance
	(1)	(2)	(3)	(4)	(5)
War	0.138 (0.070)* [0.066]**	0.091 (0.032)*** [0.031]***	0.075 (0.040)* [0.040]*	0.014 (0.042) [0.041]	-0.027 (0.019) [0.003]***
Recession	0.060 (0.023)** [0.021]***	0.063 (0.021)*** [0.022]***	0.051 (0.022)** [0.022]**	0.047 (0.026)* [0.024]*	0.043 (0.016)** [0.014]***
Mean of outcome	0.00	0.01	0.00	-0.00	0.01
R-squared	0.09	0.06	0.04	0.21	0.07
Observations	38,778	38,795	38,966	38,103	36,616
Cohort FE	×	×	×	×	×
Survey × country FE	×	×	×	×	×

Notes: OLS regressions. An observation is an individual male respondent aged 25 or older. Each column reports a separate regression with one of the five CMNI subcomponents as the dependent variable; the subcomponents are defined in Section A1.1. All subcomponents are standardized. All columns use the baseline specification of Table 4, column 3. All regressions include year-of-birth and survey×country fixed effects and are weighted by survey sampling weights. Standard errors clustered at the country level are shown in parentheses; two-way clustered standard errors (country and cohort) are in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Table C15: Impact of Impressionable Years Exposures - TWFE robustness

Sample	# ATTs	Positive	Negative	Σ neg. wt.
	(1)	(2)	(3)	(4)
Panel A: War				
	187	170	17	-0.003
Panel B: Recession				
	872	835	37	-0.017

Notes: Two-way fixed-effects (TWFE) weight decomposition and Weighted Average of Switchers (WAS) estimator for the binary impressionable-years exposures, applied to CMNI as the dependent variable. The CMNI score is standardized. Columns 1-4 report the number of average treatment effects on the treated (ATTs), the number of positive and negative weights, and the sum of the negative weights, from a regression of CMNI on the panel exposure (Panel A: *War*; Panel B: *Recession*) with year-of-birth and survey $\times$ country fixed effects and survey sampling weights. Sample of male respondents aged 25 or older. Source: GMS (LiTS and online surveys).

Table C16: Impact of Impressionable Years Exposures on Masculinity and Gender Role Attitudes – Intensive Margin Robustness

	CMNI		TGRI	
	(1)	(2)	(3)	(4)
Battle deaths per 100k population (99%)	0.017 (0.007)** [0.008]**		0.006 (0.007) [0.007]	
Cumulative output decline		0.004 (0.001)*** [0.001]**		0.003 (0.001)*** [0.001]**
Mean of outcome	0.01	0.01	-0.01	-0.01
R-squared	0.11	0.11	0.17	0.17
Observations	39,637	39,637	39,951	39,951
Cohort FE	×	×	×	×
Survey × country FE	×	×	×	×

Notes: OLS regressions. An observation is an individual male respondent aged 25 or older. The dependent variables are the CMNI (columns 1-2) and the TGRI (columns 3-4). The CMNI and TGRI scores are standardized. Battle deaths per 100,000 population are the average annual UCDP state-based conflict deaths experienced in the respondent's country during ages 18–25, normalized by the country's mean population over the same period and winsorized at the 99th percentile. Cumulative output decline is the sum of the absolute values of negative annual GDP-per-capita growth rates during ages 18–25; years of non-negative growth contribute zero. All regressions include year-of-birth and survey × country fixed effects and are weighted by survey sampling weights. Standard errors clustered at the country level are shown in parentheses; two-way clustered standard errors (country and cohort) are in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Online Appendix D: Militarized Conflicts and Masculinity Norms

D1.1 The Correlates of War Data

This Appendix shows how historical conflict explains variation in adherence to masculinity norms across countries.

D1.1.1 Data

We use data on historical conflict exposure from the Correlates of War (COW) project, initiated in 1963 by J. David Singer at the University of Michigan to record wars worldwide since 1816. The COW project classifies wars based on participants' status as members of the inter-state system ("states"). We use version 4.0 of both the Inter-State and Extra-State War datasets, covering 1816–2007 ([Sarkees and Wayman, 2010](#)), and version 5.1 of the Intra-State War dataset, covering 1816–2014 ([Dixon and Sarkees, 2015](#)).

COW defines a war as sustained combat between organized armed forces resulting in at least 1,000 battle-related fatalities within a twelve-month period, distinguishing wars from one-sided violence such as massacres or unorganized riots. The challenge in linking GMS data to country-level historical conflict data is harmonizing state entities over time. We rely on COW country codes, which assign a single identifier to political entities that may have changed names but maintained relatively stable borders. The COW records entities capable of acting independently in international relations, providing each with a standardized code, abbreviation, and membership dates. Specifically, it includes entities that, before 1920, had a population exceeding 500,000 and maintained diplomatic missions at or above the rank of *chargé d'affaires* with both Britain and France; and after 1920, those belonging to the League of Nations or United Nations, or with a population exceeding 500,000 and receiving diplomatic missions from two major powers. Entities are excluded for limited sovereignty, insufficient population, or lack of diplomatic recognition. Our harmonization assigns each historical COW entity to at most one present-day GMS country, following COW entity continuity and name mappings.³³ Conflicts recorded for a mapped predecessor entity are assigned in full to its designated successor and are not divided among other successor states, although conflicts recorded under a successor state's own name are counted for that country. Present-day GMS countries with no matched COW entity are coded as having zero historical conflicts.

³³For example, we map the USSR to Russia, the Ottoman Empire to Türkiye, Austria-Hungary to Austria, Yugoslavia to Serbia, and Czechoslovakia to the Czech Republic.

The COW project classifies wars into three types based on participants. Inter-state wars occur between two system members ($N = 337$). Extra-state wars occur between a system member and a non-system entity, either imperial or colonial. Imperial wars involve independent entities that do not qualify as system members due to limited sovereignty, insufficient population, or lack of recognition. Colonial wars involve adversaries that are already colonies, dependencies, or protectorates, ethnically distinct and geographically distant from the system member's metropolitan territory ($N = 198$). Intra-state wars occur within a state's metropolitan territory, involving either the government against a non-state entity or intercommunal conflict among non-state entities ($N = 442$). The Inter-State War Dataset (version 4.0) provides data at the participant $\times$ war level, while the Extra-State (version 4.0) and Intra-State (version 5.1) War Datasets provide war-level information listing main participants. After harmonizing country names across datasets, we compute the cumulative number of wars per state, aggregating across categories to obtain total wars per country.

Our measure of historical conflict intensity is the number of conflicts each country has been involved in since 1816.³⁴ We consider both a simple cumulative measure of conflict and a temporally discounted measure that assigns greater weight to more recent conflict events. The (standardized) time-discounted measure weighs each war by $1/(1 + (2020 - \text{conflict start year}))$. We consider alternative weighting schemes using $e^{-\lambda(2020 - \text{war start year})}$ where $\lambda > 0$. On average, a country in the GMS was involved in 8.87 conflicts (s.d.: 14.74), including 3.13 inter-state wars (s.d. 4.32), 2.90 extra-state wars (s.d. 8.39), and 2.84 intra-state wars (s.d. 6.30). As shown in Figure D1, the countries with the highest historical exposure to conflict are the UK, Türkiye, France, China, Russia, Spain, Mexico, and the USA.

D1.1.2 Results

Panel A of Table D1 reports partial correlations between the CMNI and measures of historical conflict. Each cell displays the results from a separate regression of average country-level CMNI on conflict, conditioning on survey mode and continent fixed effects throughout. The results reveal consistent, positive associations between historical militarized conflict and masculinity norms. The number of wars is positively associated with average country-level CMNI, and the relationship is statistically significant with the discounted measure. This aggregate relationship between total historical conflict and CMNI masks heterogeneity across conflict categories, with a positive and statistically significant correlation with organized large-scale military conflict (inter- and extra-state wars) and a smaller and insignificant correlation with intra-state wars.

³⁴Other measures included in the dataset, such as conflict duration or number of battle deaths, are less consistently available and less precise.

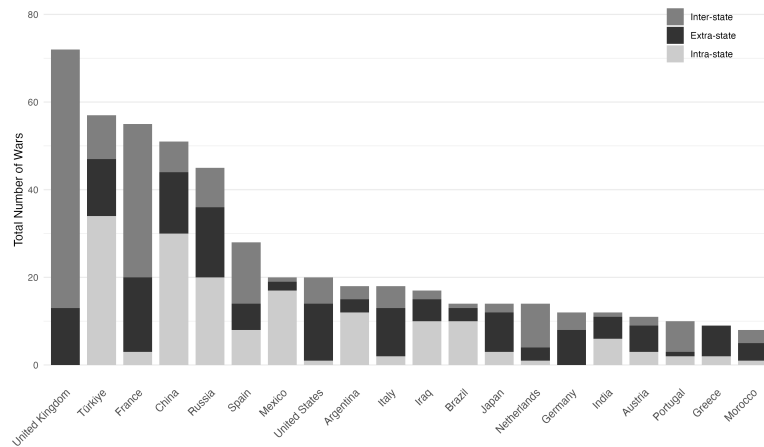
Panel B shows that, in contrast, historical conflict intensity is uncorrelated with average TGRI scores at the country level, with coefficients that are statistically insignificant and small in magnitude across all measures and categories of conflict.³⁵

In summary, historical militarized conflict systematically predicts present-day variation in adherence to masculinity norms but not gender role norms. These partial correlations, however, cannot establish causality or its direction. Causality may run both ways: more masculine cultures may be more bellicose, while conflict may further entrench masculinity norms. To move beyond descriptive cross-country correlations, we therefore leverage within-country variation in individual conflict exposure.

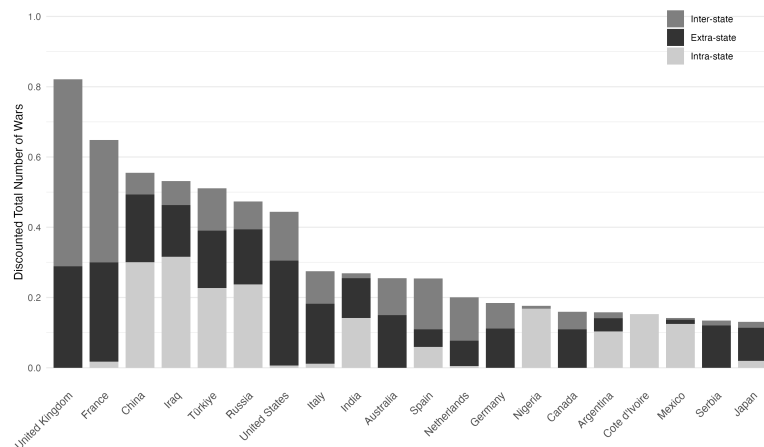
³⁵We conduct several robustness and sensitivity tests. First, we address issues related to CoW data limitations. The database records the political entities involved in each conflict. As a consequence, small satellite states that secede from multi-nation states or empires are not allocated any previous conflict experience of the broader entity. For example, in our sample, North Macedonia, the Kyrgyz Republic, and Slovenia all appear as having experienced no conflict. We verify that our results are unchanged when we exclude those states from our analysis. Second, we confirm our results are insensitive to the discounting formula applied to historical conflict, as indicated in the notes to Table [D1](#).

Figure D1: Number and Categories of Conflicts Across Countries: Top 20 Countries

Panel A: Cumulative Measure of Conflict



Panel B: Time-discounted Measure of Conflict



Notes: Panel A shows the total number of wars per country based on the simple cumulative measure. Panel B displays the same data using the time-discounted measure. Both graphs are broken down into the three conflict categories: inter-state (dark gray), extra-state (black), and intra-state (light gray). Each graph displays the 20 countries with the highest total number of wars according to the chosen measure. Source: Correlates of War Project.

Table D1: Wars, Masculinity Norms, and Gender Role Norms Across Countries

Conflict Type	Sum of All Types		Inter-State		Extra-State		Intra-State	
Statistics	Coeff. & s.e.	R ²	Coeff. & s.e.	R ²	Coeff. & s.e.	R ²	Coeff. & s.e.	R ²
<i>Panel A: Country Mean CMNI</i>								
Simple cumulative count	0.007 (0.005)	0.41	0.040** (0.020)	0.43	0.012** (0.005)	0.41	0.000 (0.016)	0.40
Time-discounted count	0.149** (0.072)	0.42	0.212** (0.082)	0.44	0.143*** (0.051)	0.42	0.014 (0.084)	0.40
<i>Panel B: Country Mean TGRI</i>								
Simple cumulative count	0.001 (0.004)	0.57	0.003 (0.017)	0.56	-0.000 (0.007)	0.56	0.008 (0.008)	0.57
Time-discounted count	0.074 (0.069)	0.57	0.060 (0.081)	0.57	0.015 (0.067)	0.56	0.105 (0.063)	0.57
Observations	70		70		70		70	
Continent FEs	×		×		×		×	
Survey FEs	×		×		×		×	

Notes: An observation is a country. Each cell reports estimates of a separate OLS regression of average country-level CMNI (Panel A) or TGRI (Panel B) on a separate measure of conflict, conditioning throughout on continent fixed effects and survey fixed effects. Both CMNI and TGRI scores are standardized. Independent variables measure the number of wars in which each country participated between 1816 and 2007 for extra-state and inter-state conflicts, and between 1816 and 2014 for intra-state conflicts, based on data from the CoW project. Both a simple cumulative count and a time-discounted measure (giving less weight to older events) are used. Each war in the simple cumulative measure counts as 1, and as $1/(1 + (2020 - \text{conflict start year}))$ in the time-discounted measure. Time-discounted war counts are then standardized to have mean zero and standard deviation one for interpretability. Using alternative time discount factors as $e^{-\lambda (2020 - \text{war start year})}$ where $\lambda > 0$ yields consistent results in both sign and significance. The total number of wars aggregates the three conflict categories. See Appendix Section D for more details on the definitions of the independent variables. Heteroskedasticity-robust standard errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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