Masculinity Around the World*

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Abstract

We examine the role of masculinity norms — the shared social expectations about how men should behave — in predicting economic, health, and political outcomes. We fielded the Global Masculinity Survey, integrating a short form of the Conformity to Masculinity Norms Inventory (CMNI) into nationally representative face-to-face and online surveys of 125,000 individuals across 70 countries. Economically, men who score higher on the CMNI supply more labor, are more competitive, and sort into traditionally masculine occupations. In terms of health, they take greater risks and report poorer mental health. Politically, they express4 stronger support for strongman authoritarianism and the military. Gender differences in CMNI scores are associated with 20–57% of the gender gaps in competitiveness, willingness to work longer hours, risk aversion, and support for illiberal values. Turning to potential determinants, we provide evidence linking masculinity norms to conflict exposure.

JEL classification: D91; I12; J16; J24; Z13

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

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1 Introduction

While men continue to earn more, hold more political offices and leadership positions (Goldin, 2021; Paxton and Hughes, 2017), they also suffer disproportionately from deaths of despair and are less likely to seek help (Case and Deaton, 2020; OECD, 2019). Men commit the vast majority of homicides worldwide and constitute 81% of homicide victims (UNODC, 2019), and recent commentary highlights gender divides in support for strongman populism, particularly on the right.[1] Masculinity norms—the shared social expectations about how men should behave—may help explain these gaps. While some dimensions of masculinity may vary across contexts (i.e., whether men should have long or short hair), cross-cultural research has identified core dimensions of masculinity that are remarkably stable across societies: prioritizing winning; endorsing toughness and violence; valuing emotional restraint, self-reliance, and autonomy; asserting power over women; and distancing from homosexuality (Gilmore, 1990; Mahalik et al., 2003). A large literature in sociology and psychology argues that these dimensions connect directly to observable outcomes (Kimmel et al., 2004; Levant and Wong, 2017). Norms that prescribe winning and status orientation can channel men into competitive, well-remunerated careers and long working hours; norms of self-reliance and emotional restraint can discourage help-seeking, contributing to excess male morbidity and mortality; and norms that legitimize violence and hierarchical authority can predict support for authoritarian politics. Yet, despite the breadth and potential consequences of these norms, we have limited systematic evidence on masculinity norms across contexts, their associations with men's outcomes, and gender gaps.

In this paper, we provide the first global evidence on the prevalence, manifestations, as well as some potential determinants of masculinity norms. We designed and fielded the Global Masculinity Survey (GMS), reaching 125,147 respondents across 70 countries. We measure individual adherence to masculinity norms[2] using a short form of the Conformity to Masculinity Norms Inventory, the most widely used measure of masculinity norms in psychology (Mahalik et al., 2003). Through a careful validation procedure, we extracted five core dimensions that are most predictive of the original 22-item scale: importance of winning, acceptance of violence, self-reliance, power over women, and homosexuality avoidance (hereafter, CMNI).[3,4] We refer

[1] E.g., Guiso et al. (2024), Financial Times (26-01-2024).

[2] We use the term 'adherence' to refer to the degree to which an individual's attitudes align with a particular norm, rather than to imply behavioral compliance alone.

[3] The original 22-item CMNI encompasses additional dimensions, including pursuit of status, emotional control, risk-taking, and primacy of work (Mahalik et al., 2003). Recent work has also begun to study more contemporary expressions of masculinity, such as inclusivity and emotional intimacy (Connor et al., 2021). We selected our five dimensions for their predictive power and cross-cultural consistency, though we acknowledge that masculinity norms extend beyond these five dimensions.

[4] Even if very few men fully enact all these dimensions, male socialization processes nonetheless dispropor-

to these five dimensions simply as 'masculinity norms' throughout. We further validate the cross-cultural relevance of the CMNI using open-text responses in which respondents describe what masculinity means to them. The GMS also includes standard measures of other norms and attitudes that have been the focus of existing literature, including attitudes towards gender roles, generalized and institutional trust, as well as a measure of gender identity.

We start by providing novel global evidence on adherence to masculinity norms across countries, which varies substantially. It is strongest in Northwest Africa, South Asia, and the Middle East, and lowest in Scandinavia and Western Europe. Among western countries, the United States exhibits the strongest adherence to winning, violence, and self-reliance, comparable to levels in Russia, itself scoring high compared to other post-communist European countries. At the country level, masculinity norms correlates *positively* with economic development—a pattern that crucially differentiates them from attitudes towards gender roles equality, which we also measure in the GMS. At the individual level, the strongest predictor of adherence to masculinity norms is age: younger men score significantly higher than older men, another notable difference with attitudes towards gender roles equality for which the age pattern is reversed. Religion and religiosity also predicts higher adherence, though with no consistent differences across denominations. Education, by contrast, is a weak predictor of adherence to masculinity norms.

We next link men's adherence to masculinity norms measured by the CMNI to a range of individual economic, health, and political outcomes. Economically, we document how men with a higher CMNI score show a greater willingness to work additional hours (by 18% relative to the mean), score 0.08 standard deviations higher in self-assessed competitiveness, and earn higher income. These positive association between adherence to masculinity norms and economic outcomes is consistent with prominent accounts in the sociology of gender. Connell and Messerschmidt (2005)'s and Berdahl et al. (2018)'s describe how masculine ideals are rewarded in labor markets and organizations. In Bourdieu (2001), these ideals operate as a form of socially valued capital that translates into economic returns, as well as greater status and influence.[5] However, these same norms may also generate labor market frictions. Consistent with research linking gender norms to occupational sorting (Akerlof and Kranton, 2000a, 2010; Delfino, 2024), we find that men with a higher CMNI score sort into traditionally masculine industries at higher rates. A possible interpretation is that masculinity norms may constrain

tionately emphasize them among boys, with remarkable consistency across cultures and eras, as we confirm using data from pre-industrial societies.

[5]Because of the connection of masculinity norms to status, resources, and power, these sociological accounts label the masculinity norms we focus on in this paper as "hegemonic" or "dominance" masculinity norms (Bourdieu, 2001; Connell and Messerschmidt, 2005). Our approach is instead positive, and we interpret these relationships solely through the empirical correlations we describe in this paper.

men's ability to transition into growing service-sector and care occupations when structural change erodes employment in male-dominated sectors (Autor et al., 2019; Kimmel, 2017).

The economic advantages associated with masculinity norms contrast with substantial costs in terms of health. Core dimensions of masculinity—such as emotional restraint, self reliance, excessive risk taking, and aggression—are directly linked to suicidal risk and substance abuse, thus contributing to excess male morbidity and mortality (Case and Paxson, 2005; WHO, 2013; Baker et al., 2014). In our data, a one standard deviation increase in CMNI score is associated with 0.15 standard deviations higher depression scores, 5.3 percentage points 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 measure of revealed risk preferences). The results are consistent with research documenting that men often cope with psychological distress not through help-seeking but through risky behaviors—substance abuse, binge drinking, reckless driving, and aggression—which are themselves normalized by masculinity norms (Mahalik and Rochlen, 2006; Cavanagh et al., 2017). These patterns suggest masculinity norms can reinforce harmful feedback loops by simultaneously increasing mental distress, reducing help-seeking and increasing risky-taking behaviors.

In the political domain, masculinity norms predict attitudes that may undermine democratic governance. CMNI scores strongly predict opposition to liberal political values and support for strongman authoritarianism and the military. 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 are consistent with the observation that populist rhetoric frequently appeals to masculine identity through framing around strength, toughness, and a rejection of weakness (Kimmel, 2017; Inglehart and Norris, 2019). Strikingly, these magnitude are largest in advanced industrialized democracies, contributing to our understanding of the connection between masculinity, strongman populism, and democratic backsliding from other social sciences (Blais and Dupuis-Déri, 2012; Roose et al., 2022).

While we have so far focused on the results for men, women may also adhere to masculinity norms. Masculinity norms function as informal standards defining socially accepted notions of competence, leadership, and authority, primarily among men, but also among women when they operate in shared arenas such as labor markets, organizations, and politics (Bourdieu, 2001). This is consistent with the widespread encouragement for women to "lean in" (Exley et al., 2020; Sandberg, 2015) by adopting masculinity traits such as competitiveness, which can yield higher life satisfaction (Danzer et al., 2025) but also social sanctioning (Dean et al., 2025). The combination of potential rewards and social sanctions predicts lower adherence among

women and weaker returns to adherence. Consistent with this prediction, we find a substantial CMNI gender gap of about 0.3 standard deviations, similar in magnitude to the gender gap in attitudes towards gender equality. CMNI's correlations with female outcomes are also similar in sign, though smaller in magnitude. Additionally, we show that across the board, gender gaps in CMNI scores account for substantial portions of gender gaps in outcomes that remain unexplained by standard covariates: 20% of the competitiveness gender gap, 25% of the gap in willingness to work longer hours, 23% of the risk aversion gap, and 57% of the gap in support for democracy.

We subject our results to a comprehensive set of sensitivity analyses. First, we document high consistency in these patterns across countries. Second, we show that social desirability bias or selection into online surveys do not meaningfully affect our findings. In particular, results replicate in the nationally representative face-to-face component of our sample[6] and remain consistent in the six countries where we fielded both face-to-face and online surveys. Finally, we show that masculinity norms operate independently from related constructs commonly studied in the economics literature, including attitudes towards gender role and equality, gender identity, competitiveness, risk preferences, generalized and institutional trust. Thus, masculinity norms capture a distinct and quantitatively important dimension in explaining outcomes across economics, health, and politics.

Finally, we engage with a well-known hypothesis in the social sciences that roots masculinity norms and their specific dimensions in conflict (see, e.g. Goldstein (2001)). War is pervasive across cultures and profoundly gendered, arguably the most gendered human social activity: across very different societies and eras, combatants are almost always men.[7] In the words of Goldstein (2001), "cultures develop concepts of masculinity that motivate men to fight" (p.264). Masculinity norms of emotional restraint, self-reliance, and violence, are essential for that purpose.[8] Military and combat experience no only directly inculcates and enforces these norms, 'hardening' men through emotional suppression and normalizing violence (Ertola Navajas et al., 2022; Gibbons and Rossi, 2022), it also elevates the figure of the male warrior and military hero—the very archetype of idealized masculinity—as the embodiment of a social ideal (Cagé et al., 2023).[9] Our analysis confirms a strong and robust association between

[6] As pre-analyzed in De Haas et al.® (2024) before generalizing to the full sample.

[7] Despite examples of effective women fighters, from Dahomey's "Amazons" to Soviet women in WWII and Kurdish female Peshmerga, historically, women have fought under exceptional circumstances or in marginal or support roles (Goldstein, 2001). Even the handful of modern militaries that have (very recently) removed formal bans for women and homosexuals remain male-dominated (Greenberg et al., 2024).

[8] For example, fear is particularly problematic. It is the most natural response to danger but debilitating for the purpose of fighting and highly contagious. It thus must be suppressed to motivate men to fight. By extension, other emotions, including grief, but also pity, compassion, gentleness, tolerance, need to be restrained.

[9] Participation in active or ritual warfare constitutes a test of manhood and a rite of passage in many societies. In many premodern cultures, including ancient Greece and Germany and American Indian cultures, "a man cannot

exposure to conflict and adherence to masculinity norms measured by the CMNI. Causality could run in both directions, however, with masculine societies being more prone to conflict, and conflict reinforcing masculinity norms. To hold constant society-level factors, we exploit within-country, individual-level variation in respondents' age during conflict episodes. We verify that age of exposure to conflict is orthogonal to other shocks, stemming namely from natural disasters, epidemics, or economic booms and busts. This analysis reveals that men exposed to conflict during their impressionable years adhere more to masculinity norms.

We advance the literature in three main ways. First, we contribute to a large body of research in the economics of gender, which has produced deep insights into gender gaps through the analysis of women's outcomes across labor markets (e.g. Goldin (2021); Blau and Kahn (2017)), household bargaining and the division of domestic work (e.g. Bertrand et al. (2015); Jayachandran and Voena (2025)), competitiveness and risk preferences (e.g. Croson and Gneezy (2009); Niederle and Vesterlund (2011)), and political representation (e.g. Beaman et al. (2009)). A subset of this literature has documented how gender role norms—the shared expectations about the respective appropriate behaviors of women relative to men—impact women's outcomes.[10] Other work has examined men's outcomes, studying namely the consequences of deindustrialization for male employment (Autor et al., 2019), the concentration of deaths of despair among men (Case and Deaton, 2020), men's entry into female dominated sectors (Delfino, 2024), and drivers of violent behavior (Grosjean, 2014; Heller et al., 2017; Blattman et al., 2017; Amorim et al., 2023). Yet, the potential role of masculinity norms has been largely overlooked, even though the patterns documented in these studies—occupational rigidity, externalizing distress through substance abuse, violent behavior—closely connect to them (see Matavelli et al.® (2025) for a comprehensive review). A few recent papers have begun to study masculinity norms in economics. Baranov et al. (2023) show how historically male-biased sex ratios shaped long-run male socioeconomic outcomes in Australia. Matavelli (2025) shows how masculinity norms may persist through a belief trap: adolescents overestimate peers' support for these norms and avoid the conversations that would correct their misperceptions.[11] We expand on this work with the first representative global evidence linking masculinity norms to outcomes across multiple domains and contexts. While the patterns we document are descriptive in nature, we show that incorporating masculinity norms into economic research provides new insights into the study of men's outcomes and persistent gender gaps

Second, we contribute to a literature on the historical origins and persistence of gender

be called a man or marry until he has proven himself in battle" (Goldstein, 2001, p. 274).

[10]See Jayachandran (2015), Giuliano (2020), Bau and Fernández (2023), Anderson (2025), and Bertrand (2025) for reviews.

[11]Our work also complements recent work on gender identity (Banan et al., 2023; Brenøe et al., 2024; Coffman et al., 2024; Ayyar et al., 2024; Danzer et al., 2025) by measuring specific dimensions of masculinity.

norms. A growing body of work in cultural economics has traced contemporary gender norms to historical conditions, including agricultural technology (Alesina et al., 2013), patterns of economic specialization (Nunn, 2012), and colonial institutions (Giuliano, 2020; Fernández, 2025). This work has focused primarily on norms governing women's roles and the origins of gender inequality—not on the specific origins of masculinity norms. We contribute by engaging with a well-known hypothesis in the social sciences that roots masculinity norms in conflict (Goldstein, 2001). A recent literature in economics has examined the connection between conflict and male status: Guarnieri and Tur-Prats (2023) argues that men use sexual violence to reassert male dominance when confronted with more gender-egalitarian groups, and Dincecco et al. (2024) discuss conflict, which elevates male status in society as combatants, as an explanation for male-biased sex ratios in India. We contribute to this literature by documenting that exposure to conflict during impressionable years strengthens adherence to masculinity norms—suggesting that conflict not only elevates male status but shapes the *type* of masculinity that is idealized: stoic, self-reliant, aggressive, and dominant.

Finally, our work expands the cross-cultural measurement of gender norms (see Bursztyn et al. (2023) for a recent contribution) by providing the first international evidence on adherence to a core set of masculinity norms beyond selected samples. This establishes the CMNI as a valid cross-cultural measure of masculinity norms, thus helping to advance research in other disciplines that has relied on small Western samples.[12] Existing representative surveys (such as the General Social Survey, World Values Survey, Demographic and Health Surveys, and previous rounds of LiTS) routinely assess gender role and equality norms. Our short CMNI module could be easily included in future cross-country surveys and studies on gender norms, answering calls for international surveys to measure masculinity norms, too (OECD, 2021).

We proceed as follows. Section 2 provides background on masculinity norms and motivates our outcome variables. Section 3 describes our Global Masculinity Survey. Section 4 presents descriptive statistics and global patterns, as well as individual-level results on the explanatory power of masculinity norms for economic, health, and political outcomes. Section 5 explores links to conflict and Section 6 concludes.

2 Masculinity Norms

This section defines masculinity norms; discusses how adherence to these norms may shape economic, health, and political outcomes; and discusses potential links between conflict and

[12] Among 78 masculinity studies in psychology, 65 were conducted in the US, four in Australia, and three in Canada (Wong et al., 2017). While Vandello et al. (2023) recently studied precarious manhood beliefs across 62 countries, their sample was limited to college students in an online survey.

masculinity norms.

2.1 Conceptual Background

Consistent with prevailing definitions in other disciplines, we use "masculinity norms" to describe the shared 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, 2000b), 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. 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 more strongly 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) and Giuliano (2020) for reviews).

While specific expressions of masculinity may vary across contexts, sociologists have argued that societies typically share a culturally idealized form of masculinity—what Connell and Messerschmidt (2005) call 'hegemonic masculinity'—that represents the most honored way of being a man and against which other men are evaluated. Several core dimensions of such idealized masculinity are remarkably consistent across societies and eras: restrictive emotionality, self-reliance and autonomy, aggression and violence, emphasis on winning, power over women, and homosexuality avoidance (Gilmore, 1990). Male socialization processes disproportionately emphasize these dimensions among boys, supported by formal cultural and institutional practices, such as schools, competitive sports, age sets, or initiation rituals (Connell et al., 1982). Evidence from the Standard Cross Cultural Sample, which collects ethnographic evidence from 186 pre-industrial societies, reveals in Figure B1 how boys are systematically socialized into values of self-reliance, competitiveness, aggression, and fortitude, with self-reliance showing the largest gender gap. These patterns show remarkable consistency across the globe (Figure B2).

Masculinity norms overlap with, but are not reducible to, gender role norms—the shared expectations about the respective appropriate behaviors of women relative to men—which

economists have studied extensively. Some masculinity norms directly prescribe men's roles vis-à-vis women: the male breadwinner norm, for example, prescribes that men should provide financially and, by implication, that women should not. While this norm prescribes male behavior, economists have typically studied its implications for women rather than for men. But masculinity norms also extend well beyond the gendered division of roles. They also govern how men are expected to behave toward *other men*, shaping which traits are valued and rewarded as competence and authority — toughness over vulnerability, self-reliance over dependence, domination over submissiveness, competitiveness over nurturance (Bourdieu, 2001; Berdahl et al., 2018).

Precisely because masculinity norms define what is valued as competence and authority, they are not exclusively adopted by men. Women too may endorse and adopt these norms—and are sometimes explicitly encouraged to do so and "lean in" by displaying competitiveness, assertiveness, and self-reliance (Sandberg, 2015; Exley et al., 2020). Women who do so may attain higher material rewards and wellbeing (Danzer et al., 2025), though they may also face social costs or backlash for deviating from expectations associated with their own gender (Leibbrandt et al., 2018; Dean et al., 2025).

2.2 Measurement

Psychologists have developed several instruments to measure masculinity norms. The most widely used instrument in the recent empirical research 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 across clinical, public health, and social science research.[13] The CMNI captures the degree to which individuals adhere to—that is, adopt as their own—attitudes and behaviors associated with core dimensions of masculinity. At the societal level, aggregated CMNI responses also provide a measure of descriptive norms—the prevalence of masculinity-related attitudes in a given population—and potentially for the local normative climate when individual adherence and social expectations are tightly linked. In this paper, we implement a short form of the CMNI as our primary measure of masculinity, which we describe in detail in Section 3.1. Another commonly used measure is the Male Role Norms Inventory (MRNI) (Levant and Fischer, 1998), which elicits agreement with prescriptive beliefs about how men should behave across seven core dimensions of masculinity (e.g., "Men should figure out their

[13]The index was developed by Mahalik et al. (2003) together with a larger group of researchers in counseling psychology. It was validated through focus groups, pilot studies, and clinical studies.

personal problems on their own without asking others for help"). We also present robustness with an adapted version of the MRNI.

2.3 Masculinity Norms and Outcomes

Economic behaviors. Three 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, men are on average more competitive than women (Niederle and Vesterlund, 2011). Third, occupational gender segregation and gender earnings gaps persist despite converging education levels (Goldin et al., 2006; Blau and Kahn, 2017). While demand in female-dominated sectors is growing, men remain underrepresented. Whether this is due to informational barriers about returns to ability (Delfino, 2024) or identity costs from violating masculine norms (Akerlof and Kranton, 2000b) remains contested.

Masculinity norms may contribute to each of these patterns through two main channels. First, masculinity emphasizes winning, status-seeking, and success: traits directly rewarded in many labor markets. A recent sociological literature describes work as an arena of "masculinity contests", where excessively competitive work environments normalize extreme working hours (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, not necessarily in line with productivity benefits. Recent work in economics is suggestive of related dynamics: (Adams-Prassl et al., 2024) show organizational tolerance for men perpetrating violence against subordinates (especially female) at work, and (Dupas et al., 2026) describe frequent and hostile interruptions in economics seminars, especially towards female speakers. Second, norms defining certain occupations as inherently masculine or feminine constrain occupational choice independently of economic returns, potentially explaining 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, with this gap widening in recent decades (Case and Deaton, 2020; Shirzad et al., 2024). Men use healthcare less frequently, particularly preventive and mental health services, despite higher morbidity for many conditions (Baker et al., 2014). Standard explanations for these health dis-

parities emphasize biological sex differences, discrimination in healthcare delivery, and differential exposure to occupational hazards. However, substantial gaps remain unexplained even after accounting for these factors (Schünemann et al., 2017).

The specific pattern of male health disadvantage—concentrated in preventable deaths from suicide, substance abuse, and accidents rather than chronic disease—suggests masculinity norms may play an important role. Core dimensions of masculinity norms—emotional restraint, self-reliance—directly contradict health-promoting behaviors like recognizing emotional distress or seeking professional help. In specific contexts, 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) (see Wong et al. 2017 for a meta analysis). Yet economists have only recently begun to consider the role of masculinity norms in shaping health outcomes (see Alsan and Neberai (2025) for a discussion).

Political attitudes. Masculinity norms may contribute to gender gaps in political attitudes – with men favoring the radical right consistently more than women[14]– through several pathways. First, masculinity norms emphasizes hierarchical social organization with clear authority structures—precisely what authoritarian movements promise. 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 invested in traditional status hierarchies (Connell, 2020). Fourth, economic disruptions may threaten masculine identity when concentrated in male-dominated industries, generating political responses beyond what income effects alone would predict (Autor et al., 2020). Despite these plausible channels, evidence linking masculinity norms to political attitudes remains limited.[15]

2.4 Origins and Persistence

A central hypothesis roots the core dimensions of masculinity norms we study in this paper in conflict. In the words of Goldstein (2001), "cultures develop concepts of masculinity that motivate men to fight" (p.264). Emotional restraint, self-reliance, importance of winning, and

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

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

adherence to violence all serve that purpose.[16] Military and combat experience no only directly inculcates and enforces standards of manhood, 'hardening' men through emotional suppression and normalizing violence (Ertola Navajas et al., 2022; Gibbons and Rossi, 2022), it also elevates the figure of the male warrior and military hero – the very archetype of idealized masculinity– as the embodiment of a social ideal (Cagé et al., 2023).[17] Society as a whole, including women, play an active role in enforcing these norms and ideals that push men to fight. Empirical studies in economics document social sanctions through public shaming for cowardice as powerful drivers of enlistment in WWI in Britain (Becker, 2021). Moreover, many aspects of the gendered division of roles and spheres of competence derive from the gendered specialization of males in conflict and the resulting patterns of male socialization. For example, emotional suppression in men entails a gendered division: women have to pick up "the slack in emotional work and relationships" (Goldstein, 2001, p.269) particularly in relation to child care.[18] This argument generalizes to broad dimensions of the binary gender opposition: self-reliant men vs. nurturing women, competitive men vs. cooperative women. Dincecco et al. (2024) document an empirical relationship between historical conflict exposure and missing women and girls in India today, which they interpret as manifestation of the subordination of women to men in society as a result of conflict.

This hypothesis also explains the universality of core masculinity norms, which is rooted in the pervasiveness of war across cultures. As summarized by Goldstein (2001) "those parts of masculinity that are found most widely across cultures and time are not arbitrary but shaped by the war system." Traits valorized during critical historical junctures, such as large-scale conflicts, may become entrenched and persist over time (Bisin and Verdier, 2001; Hauk and Saez-Marti, 2002; Baranov et al., 2020). The relationship between masculinity norms and social power structures further contributes to their transmission and persistence. Cultural norms associated with dominant and focal individuals (heroized soldiers and veterans, for example) spread more easily, as they are more likely to be imitated (Giuliano and Nunn, 2021) and because dominant individuals in social, political, or economic groups are more effective at imposing their preferences on others (Gelfand et al., 2024). When formal institutions and organizations (e.g. governments, corporations, the military) uphold dominant, masculine values, this

[16] For example, fear is particularly problematic. It is the most natural response to danger but debilitating for the purpose of fighting and highly contagious. It thus must be suppressed to motivate men to fight. By extension, other emotions, including grief, but also pity, compassion, gentleness, tolerance, need to be restrained.

[17] Participation in active or ritual warfare constitutes a test of manhood and a rite of passage in many societies. In many premodern cultures, including ancient Greece and Germany and American Indian cultures, "a man cannot be called a man or marry until he has proven himself in battle" (Goldstein, 2001, p. 274).

[18] However, as noted by others and documented in this paper, adherence to masculinity norms is not costless for men, however, who face the dilemma of paying the "price of a warrior mentality [...] or pay the price in humiliation and shame that faces the sissy as a failed man" (Goldstein, 2001, p.269).

accelerates the spread of these traits throughout society and strengthens their persistence.[19]

3 The Global Masculinity Survey

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 85% of global GDP. Appendix Table C1) lists sample sizes by country.

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. At its inception, the LiTS focused on Central and Eastern Europe and the former Soviet Union. It has since expanded to North Africa, the Middle East, and Sub-Saharan Africa. Our LiTS sample comprises 44,598 respondents (18,810 men and 25,788 women). 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, 38,690 women). Bilendi targeted participants aged 18-64 years with quota sampling on gender, age, and income.[20] The online survey instrument includes basic sociodemographic characteristics, masculinity norms, gender role norms, and the outcome variables measured in LiTS:[21] Six countries were included in both LiTS and the online survey, allowing us to compare responses across both survey modes.

[19] Bisin and Verdier (2023) (p. 80) explain this relationship succinctly: "*The more a trait is dominant, the more favorable to members of this group is the institutional equilibrium, and the more favorable the equilibrium to one group, the faster the spread of this group's trait in the population*". See also Belloc and Bowles (2013).

[20] Appendix Section A1.2.2 provides further details on the implementation of the online surveys.

[21] To 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.

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

Sample characteristics. Table C2 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 A1.4.1 for more details).

3.1 Measuring Masculinity Norms: The CMNI

To measure adherence to masculinity norms, we implement a short form of the CMNI, the most widely used instrument for this purpose across the social and clinical sciences (Section 2.2). We select five items through a validation procedure based on Australia's Ten to Men study—the only nationally representative survey to measure adherence to masculinity with a 22-item CMNI.[22] Our five-item index correlates strongly with the full score ($\rho = 0.75$) and captures 57% 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 Winning), (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 to other men. Together, these five items capture adherence to the core of masculinity as defined in Section 2.1. We administered the CMNI to males only in LiTS ($N = 18,810$) and to all online respondents ($N = 80,549$).[23] We explore robustness to alternative scales in Section 4.4.

[22] See Appendix A1.1 for details on our validation procedure.

[23] The CMNI has been widely validated in psychology, though mostly in male samples. This, combined with

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". Instructions asked respondents to consider their "own actions, feelings and beliefs" and emphasized that no answers were right or wrong. 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 to masculinity. For regression analysis, we standardize this score to mean 0 and standard deviation 1. The CMNI is highly internally consistent (Cronbach's $\alpha = 0.75$). The five items correlate positively with one another (pairwise ρ: 0.18–0.38) but not perfectly, reflecting the multidimensional nature of masculinity norms (Figure B3). Among male GMS respondents, the mean CMNI is 2.42 (s.d. 0.62). The highest score by each subdimension of the CMNI is for *Self Reliance* (2.62) and the lowest for *Violence* (1.87)—see Table C3. The mean in the LiTS sample is slightly higher than in the online component (2.53 vs. 2.37), consistent with the over-representation of urban respondents online.

Although we also administered the CMNI to women in the online sample, the scale was not originally designed 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 like 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 construct a three-item index (CMNI-3) based on the first three items, which unambiguously indicate stronger adherence to masculinity for both men and women. For comparability, we also present the results for men using the CMNI-3.

Our country-level CMNI correlates moderately with Hofstede (2001)'s well-known masculinity dimension ($\rho = 0.33$, Figure B4), one of the six cultural dimensions widely used in cross-country research. While both measures capture aspects of masculinity, they differ substantially in content and construction. The Hofstede masculinity index captures a country-level preference for achievement and material success—arguably dimensions of masculinity norms not directly included in the CMNI—among IBM employees in the 1960s and 1970s. That the two measures nonetheless correlate positively, despite these differences in content, construction, and sampling, provides additional validation of the CMNI as a cross-country measure of masculinity norms.

organizational priorities, survey costs, and respondent fatigue concerns, led us to administer the masculinity module only to men in LiTS.

3.2 Norms about Gender Roles and Gender Equality

As discussed in Section 2.1, masculinity norms overlap with, but are not reducible to, gender role norms. To capture this relationship and contrast the two masculinity empirically, 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 gendered contribution to household income, and views about women's competence in business leadership and politics. Appendix A1.5 lists the six questions we use. Our *Traditional Gender Role Norms Index* (hereafter, TGRI) is the mean of responses to these six questions, normalized to a 1-4 scale to ensure direct comparability with the CMNI. Higher values indicate more unequal views about gender roles and more negative views about women's ability to be competent business or political leaders. We administered the TGRI to both men and women in the GMS ($N = 125,147$).

The CMNI and TGRI correlate positively but moderately ($\rho = 0.44$), confirming that the two constructs are related but distinct. Two TGRI items are more directly related to other dimensions of masculinity norms that fall outside the core dimensions included in the CMNI: the male breadwinner norm ("It is better for everyone involved if the man earns the money and the woman takes care of the home and children") and men's responsibility for the home ("Men should take as much responsibility as women for the home and children"), which correlate with the CMNI at $\rho = 0.38$ and $\rho = 0.19$. By contrast, items about women's competence as political leaders or business executives, or their division of household chores, are less conceptually related to masculinity norms. In all tables, we present specifications that control for the full TGRI. Hence, the estimated associations with the CMNI capture the explanatory power of adherence to masculinity norms above and beyond gender role and gender equality norms.

3.3 Individual-Level Covariates

Figure 1 plots the relationship between male CMNI scores and basic socio-demographics. Age is the strongest predictor of adherence to masculinity, with younger men scoring significantly higher than older men. Religion and religiosity are also significant predictors, with higher CMNI scores for more religious individuals, though with no consistent differences across denominations. Education and urbanity are less consistent predictors. These relationships highlight key differences between masculinity and gender role norms. As Figure 1 shows, younger men hold significantly more equal views about gender roles yet adhere to masculinity norms more strongly. Furthermore, education strongly predicts gender role and gender equality norms but not masculinity norms.

4 Masculinity Around the World

We now present the main global and within-country patterns in our data.

4.1 Cross-Country Evidence

Masculinity norms and gender role norms. Figure 2 maps standardized z-scores for the CMNI-5 and, for comparison, the TGRI across countries. adherence to masculinity is strongest in Sub-Saharan Africa and South Asia. These regions also exhibit the least support for gender equality. Yet a closer examination of how the CMNI and TGRI co-varies across countries in Figure B5 reveals substantial heterogeneity both across and within regions. The scatterplot reveals four distinct country clusters: (1) Sub-Saharan Africa, MENA, and South/Southeast Asia in the upper right (high masculinity, unequal gender norms); (2) Western Europe, former socialist Europe, and Latin America in the lower left (low masculinity, egalitarian gender norms); (3) Central Asia and the Caucasus in the upper left (low masculinity, unequal gender norms); and (4) the US and Canada (and, to a lesser extent, the UK and Germany) in the lower right (high masculinity, egalitarian gender norms). Overall, Western Europe and its offshoots (US, Canada, Australia) clearly stand out for their egalitarian attitudes towards gender roles and cluster tightly on that dimension yet display substantial variation in masculinity norms. Sweden and Denmark, for example, score far lower on the CMNI than the US, which exhibits the highest masculinity score among Western nations, comparable to Russia's level (itself among the most masculine in the former socialist bloc). This American exceptionalism suggests that progressive attitudes toward women's equality can coexist with strong adherence to masculinity.

Economic development. Our data also reveal a strikingly asymmetric pattern in how masculinity norms and gender role norms correlate with economic development. The literature has long highlighted a negative relationship between inegalitarian gender role norms and economic development (e.g., Duflo (2012)). The right panel of Figure 3 indeed confirms a strong negative correlation between GDP per capita (PPP-adjusted) and the TGRI.[24] By contrast, the correlation between economic development and masculinity norms is *positive*. In the next section, we present individual-level evidence that helps explain this relationship.

[24] We 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. Observations are weighted by population size.

4.2 Individual-Level Evidence

We now examine how individual adherence to masculinity correlates with economic outcomes, health and well-being, and political preferences within countries. We focus primarily on men, but we explore in Section 4.3 how gender differences help explain significant portions of gender gaps across these domains.

4.2.1 Empirical Specification

We estimate the following equation:

$$Y_{ic} = \alpha + \beta CMNI_{ic} + \Gamma' X_{ic} + \delta_c + \varepsilon_{ic} \tag{1}$$

where Y_{ic} are economic, health, and political outcomes for respondent i in country c; $CMNI_{ic}$ is i's CMNI score; X_{ic} is a vector of individual characteristics; and δ_c are country fixed effects. Table C4 defines all outcomes and Table C5 presents summary statistics. Standard errors are heteroskedasticity-robust and clustered at the country level.

We condition on several sets of covariates that may co-vary with adherence to masculinity and with outcomes of interest. Age and life stages likely shape adherence to masculinity and of its different dimensions (Connell, 2020; Figure 1), which may also vary across rural or urban areas due to differences in local social structures (Silva, 2022; Figure 1). 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 of interest (Connell, 1989; Figure 1). Finally, to account for non-responses on some of the CMNI subitems and for potential unobserved heterogeneity across respondents who do not answer specific items, we include in all specifications a set of dummy variables that indicate whether the respondent answered each item or not.

To assess the relative magnitudes of adherence to masculinity norms and gender role norms in predicting outcomes of interest, we discuss estimations that regress outcomes on (i) CMNI; (ii) TGRI; and (iii) CMNI and TGRI together.

4.2.2 Economic Outcomes

We first examine five economic outcomes of interest: (i) willingness to work longer hours, (ii) employment status, (iii) employment in a masculine sector (agriculture, mining, construction, manufacturing, transportation), (iv) self-assessed competitiveness, and (v) earnings. Among

men in our sample, 29% are willing to work more hours, 76% are employed, including 35% in a masculine sector (Table C5).

Table 1 presents the estimation results. Panel A shows estimates including CMNI only, Panel B includes TGRI only, and Panel C includes both. All specifications include country fixed effects, age group indicators, and urban residence. Even-numbered columns additionally condition on education, religion, and religiosity.

Labor supply at the intensive margin. Men who adhere to masculinity norms more strongly are significantly more likely to want to work longer hours. A one standard deviation increase in CMNI is associated with a 5.2 percentage point increase in the willingness to work longer hours in their current job (column 2, Panel A). Panel C shows that this relationship is robust and similar in magnitude when conditioning on gender roles attitudes. Quantitatively, the relationship between willingness to work longer hours and CMNI is about twice as large as the relationship with the TGRI. This relationship is also remarkably consistent across countries. Figure B7 plots country-specific coefficients from separate regressions; the point estimate is positive in 60 of 70 countries.

Occupational sorting. In line with gender identity theories of occupational choice, columns 3 and 4 of Table 1 show that men who adhere to masculinity norms more strongly are significantly more likely to be employed in a masculine sector. A one standard deviation increase in CMNI is associated with a 2.4 percentage point increase in the probability of employment in 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 (Panel C). The country-specific estimates (Figure B7) show positive associations in a majority of countries.

Earnings. adherence to masculinity significantly predicts individual earnings, consistent with our country-level evidence of a positive correlation between masculinity norms and GDP per capita. A one standard deviation increase in CMNI is associated with a 2.8% increase in earnings (column 6, Panel A). This relationship remains statistically significant and unchanged in magnitude when conditioning for gender role attitudes, which are not themselves associated with earnings.

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 (see also Krueger, 2017; Autor et al., 2019; Suh et al., 2025). At the extensive margin, however, the CMNI shows no significant association with overall employment status: the coefficient is close to zero and statistically insignificant (column 8, Panels A and C). More traditional gender role attitudes, in contrast, predict slightly higher labor force participation, though the coefficient is small at approximately 1 percentage point (column 8, Panels B and C).

Competitiveness. Adherence to masculinity strongly predicts self-assessed competitiveness. A one standard deviation increase in the CMNI is associated with 0.085 standard deviations higher competitiveness (column 10, Panel A). This coefficient is substantially larger (and opposite in sign to) the coefficient associated with gender role attitudes (-0.032 sd, Panel B). When we condition on TGRI, the CMNI coefficient increases in magnitude to 0.112 sd (column 10, Panel C). Figure B7 demonstrates that this positive association between CMNI and competitiveness holds in most countries in our sample.

Table C6 decomposes these relationships by individual CMNI sub-items. All five dimensions of the CMNI are significantly associated with economic outcomes, with "importance of winning" and "power over women" exhibiting the largest coefficients.

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 across three contexts (as driver, front passenger, and back passenger) which serves as a revealed preference measure of risk-taking, (iii) the likelihood of seeking help from a mental health professional, and (iv) depression symptoms measured using a slightly modified 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 0-10 scale) and an average seatbelt use index of 0.75—with 87% (55%) 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 (Table C5). 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 increase in willingness to take risks (column 2, Panel A). This magnitude remains similar when conditioning on the TGRI, while the TGRI coefficient itself is statistically insignificant in Panel C (column 2, Panel C). CMNI significantly predict self-declared

risk-taking across nearly all countries (Figure B8). Among the CMNI dimensions, "importance of winning" is the strongest predictor of risk-seeking, though most other CMNI dimensions are also significant predictors (Table C7).

We validate these findings with a behavioral measure of risk-taking. Men who adhere to masculinity norms more strongly are also less likely to use a seatbelt (column 4, Panel A). While gender role attitudes are also a significant predictor of seatbelt use, a one standard deviation increase in the CMNI is associated with a 0.04 standard deviation reduction in seatbelt use (column 4, Panel C). Again, this negative association is evident across most countries in our sample (Figure B8).

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). 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 suggests that male health behaviors are primarily driven by masculine norms requiring self-reliance, imperatives to win, and the adherence to violence— rather than attitudes about women's roles. Table C7 shows that, in particular "self-reliance" is the masculinity dimension with the strongest association with these outcomes. These associations between adherence to masculinity norms and both help-seeking avoidance and depression symptoms are evident across most countries (Figure B8).

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. The majority of men in our sample (77%) supports a democratic regime, yet 45% support strongman leadership and 33% support army rule (Table C5). 51% are pro-market. Table 3 presents estimates of Equation 1 for these political outcomes.

Democracy and markets. 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 CMNI is associated with a 3.6 percentage point lower probability of agreeing that democracy is preferable to other political systems (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). The negative association with pro-democracy attitudes aligns with recent

scholarship on democratic backsliding in advanced democracies (Blais and Dupuis-Déri, 2012; Roose et al., 2022). Consistent with this pattern, the CMNI coefficients are negative across all advanced democracies in our sample (Figure B9). When including 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 strongly predict support for strongman leadership and army rule. A one standard deviation increase in 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 persist, at smaller but statistically significant magnitudes, after conditioning on gender role attitudes (columns 6 and 8, Panel C). Figure B9 demonstrates that this positive association between adherence to masculinity and support for both strongman leadership and military rule is present across nearly all countries in our sample.

Among the CMNI dimensions, Table C8 shows that "importance of winning", "violence", and "power over women" exhibit the largest and most consistent coefficients, predicting both weaker support for democracy and a market-based economy and more support for strongman leadership and army rule.

4.2.5 Summary.

adherence to masculinity systematically predict men's attitudes and behaviors across economics, health, and politics. Figure 4 provides a unified view of these relationships by constructing summary indices for each domain, following Anderson (2008). We plot these indices against CMNI, holding constant TGRI and other covariates. The figure reveals strong linear relationships across all domains, showing consistent relationships throughout the distribution and not concentrated at the extremes. The magnitudes are substantial: a one standard deviation increase in the CMNI is associated with increases of 0.096 standard deviations in the economic summary index, 0.116 in the political index, and a particularly large 0.169 in the health index. Moreover, these associations hold even after conditioning on gender role attitudes, demonstrating that adherence to masculinity predict male attitudes and behavior well beyond attitudes about gender roles and gender equality.

4.3 Gender Gaps

In describing the variation and manifestations of masculinity norms, our analysis thus far has focused on men. As discussed in Section 2.1, however, women may also adopt masculinity norms, as they shape which traits are recognized and rewarded as competence and authority in shared arenas such as labor markets, organizations, and politics. Women are often explicitly encouraged to adopt these traits—competitiveness, assertiveness, self-reliance—as a pathway to professional advancement (Sandberg, 2015). Using the online GMS component, which administered the CMNI to both men and women, we are able to estimate gender gaps in adherence to masculinity norms, to what extent adherence to masculinity norms predicts outcomes similarly among men and women, and how gender differences in adherence to masculinity norms help explain persistent gender gaps in economic, health, and political outcomes. As discussed in Section 3.1, we use the three-item CMNI (CMNI-3) in all analyses that include women. Table C9 also reports CMNI-3 results for men, which remain consistent with our main findings.

We show that women adhere to masculinity norms at systematically lower levels than men in every country of the GMS (Figure B10). There is substantial variation across countries, with the largest gaps observed in richer and more gender-equal economies, in line with Falk and Hermle (2018). Adherence to masculinity norms predicts economic, health, and political outcomes among women in similar ways as among men, albeit with attenuated magnitudes (Table C9). This attenuation may reflect the fact that women who adopt masculine-coded behaviors can face social or financial costs for doing so (Exley et al., 2020; Danzer et al., 2025).

We now turn to exploring the gender gaps in our outcomes of interest and the extent to which gender differences in adherence to masculinity account for in the decomposition of these gaps. We start by documenting the gender gaps in our outcomes by regressing each outcome on an F_{ic} dummy that equals 1 (0) if respondent i is female (male), conditioning on urban residence, age, education, religion, religiosity, and country c fixed effects (Equation 2).[25] The estimated coefficient on this female dummy indicates the gender gap in the outcome of interest.[26]

We then assess to what extent adherence to masculinity and traditional gender role norms can account for in the decomposition of these gaps. We follow the decomposition approach of Gelbach (2016), which nests the Kitagawa-Oaxaca-Blinder decomposition, and calculate the share of the gender gap that is statistically associated with variation in the CMNI, in the TGRI, or that remains unexplained.[27] The procedure effectively includes our mediating variables of

[25] The results are very similar when we include only a parsimonious set of controls (i.e., age, urban residence, and country fixed effects).

[26] All outcomes are standardized (including binary variables) such that the gender gap is reported in standard deviation units for comparability.

[27] See Allcott et al. (2019), Bandiera et al. (2020), and Cook et al. (2020) for recent applications of the Gelbach

interest W_{ic} (CMNI-3 and TGRI) in the equation estimating the gender gap (Equation 3) and recovers the mediating effects of the CMNI-3 and TGRI using the omitted variable bias formula. A key benefit of this decomposition, compared to simply adding covariates sequentially, is that it does not depend on the order in which the mediating variables are added. Nevertheless, gender gaps and gender norms may all be co-determined and influenced by a range of omitted variables, including media, labor-market structures, or political institutions. The decomposition is based on correlations and should not be interpreted causally.[28]

$$Y_{ic} = \alpha + \beta^{base} F_i + \Gamma' X_{ic} + \delta_c + \varepsilon_{ic} \tag{2}$$

$$Y_{ic} = \alpha + \beta^{full} F_i + \Gamma'_W W_{ic} + \Gamma' X_{ic} + \delta_c + \eta_{ic} \tag{3}$$

In our case, both the CMNI-3 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. The contribution of each mediating variable (or group of variables) to the gender gap can then be estimated using the omitted variable bias formula:

$$\begin{aligned} \beta^{base} - \beta^{full} &= (F'F)^{-1}(F'W)\Gamma_W \\ &= \Lambda\Gamma_W \\ &= \sum_k \Lambda^{W_k}\Gamma_{W_k} \end{aligned}$$

Here, $\Lambda^{W_k}\Gamma_{W_k}$ represents the change in the coefficient on the female indicator due to the mediation of each group $k \in \{\text{CMNI-3, TGRI}\}$. This term equals the mean female-male gap in group k variables (Λ^{W_k}), scaled by the group's outcome-equation impact (Γ_{W_k}), and summed within each group k. Figure 5 presents the decomposition of gender gaps following this approach. For each outcome, Panel A plots the raw gender gap (women minus men), while Panel B shows the portion of the gender gap attributable to the CMNI-3 (blue) and TGRI (red).

Economics. Consistent with a large existing literature, Panel A documents sizable gender gaps in competitiveness, willingness to work longer hours, earnings, and employment in traditionally male-dominated sectors. The decomposition in Panel B shows that gender differences in adherence to masculinity can account for nearly 20% of the gender gap in competitiveness,

decomposition.

[28] That is, we are not assuming that $E[\eta|W, X] = 0$, and the difference between β^{base} and β^{full} should not be interpreted as the causal effect of gender norms on the gender gaps. In particular,

25% of the gap in labor supply at the intensive margin, and 5% of the gap in log earnings. In contrast, gender differences in adherence to gender role norms play a smaller role in accounting for these gaps (11% on average). The gender gap in the sector of employment remains largely unexplained in this decomposition.

Risk and health. The gender gaps in health and help-seeking are more nuanced. Women exhibit lower risk tolerance and are more likely to use seatbelts, with gender differences in CMNI scores accounting for 23% and 31% of the respective gender gaps in these outcomes. However, women report more symptoms of depression, and masculinity norms do not significantly account for this depression gender gap. This findings 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).[29]

Politics. Recent commentary has highlighted the presence of gender divides in political values and, in particular, in support of democratic values and the authoritarian right.[30] The results in Figure 5 (Panel A) confirm that women are, on average, more supportive of democracy and more opposed to strongman leadership and army rule than men. The largest gender gap is in support for strongman leadership, with a 9 percentage point difference. The gender gaps in other outcomes are smaller, around 4-5 percentage points. In line with previous evidence (e.g., Edlund and Pande (2002)), women are also somewhat less supportive of market economies. Panel B of Figure 5 shows that gender differences in adherence to masculinity account for a substantial portion of these gender political gaps: 57% of the gap in support for democracy, 99% of the gap in support for army rule, and 60% of the gap in support for a strong leader. Gender differences in attitudes towards gender roles also account significantly for these political gender gaps, in some cases to an even larger extent than masculinity norms.[31]

4.4 Robustness and Extensions

We now discuss several robustness tests and additional results. We first leverage the unique, dual nature of the GMS to deal with potential limitations arising from online samples (sample selection bias) or face-to-face interviews (social desirability bias). We then examine whether

[29] If 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.

[30] See, for example, "A new global gender divide is emerging", Financial Times, 25 Jan. 2024.

[31] For the political attitudes related to support for army rule, strongman leadership, and democracy, the combined explanatory power of adherence to masculinity and gender role norms exceeds 100%, implying offsetting associations from other correlated but unmeasured factors.

our results are driven by gender identity rather than adherence to masculinity, and test whether the CMNI's explanatory power simply reflects underlying competitiveness and risk aversion rather than capturing distinct normative constraints on male behavior. Finally, we evaluate the robustness of our findings to another measure of masculinity norms.

Sample selection bias. We examine potential biases arising from sample selection as well as patterns of survey and item non-response in Appendix Section A1.3. Based on comparisons with the World Values Survey, we find no evidence that the selection of countries into the LiTS and/or the online GMS influences our results. Demographic comparisons for the six countries where both LiTS and the online survey were collected reveal some differences between the online and nationally representative samples. To address potential concerns about the representativeness of our cross-country comparisons, we employ survey weights to match the demographics in the latest Gallup World Poll for all cross-country analyses.

Selection into online samples could also bias our within-country analysis if the relationships between the CMNI and our outcomes of interest differ systematically between respondents in online panels and those in representative samples. To assess this potential bias, we demonstrate that within-country results are very similar when using the nationally representative LiTS subsample.[32] All the results are robust to restricting the analysis to the nationally representative LiTS data, as documented in our initial working paper (De Haas et al.® (2024)).

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 investigate the role of social desirability bias in our face-to-face surveys by examining how responses change by interviewer gender. For the CMNI-5, interviewer gender does not significantly predict the overall score; however, men report significantly less agreement with the 'violence' sub-item when interviewed by a woman (Table C10). For TGRI, female interviewer gender predicts a lower TGRI score by about 0.1 standard deviations, with the 'political leaders' and 'household chores' sub-items driving the estimated difference (Table C11). This pattern suggests that social desirability bias may be more pronounced for the TGRI. Importantly, all our results are robust to including interviewer gender as an additional control, substantially mitigating potential concerns about desirability bias (Tables C12-C14). Results are also robust to conditioning on interviewer fixed effects.

[32]The only difference between LiTS and online-based results consists in the relationship between age and CMNI. While we do not find a strong gradient for age as a determinant of the CMNI in LiTS, younger male respondents in the online survey systematically score higher on the CMNI.

Masculinity norms and gender identity. A vibrant recent literature explores how gender identity modulates the relationship between (non-)binary gender and economic behavior, economic outcomes, and subjective well-being (Brenøe et al., 2022; Banan et al., 2023; Ayyar et al., 2024; Brenøe et al., 2024; Coffman et al., 2024; Danzer et al., 2025). Gender identity is a subjective sense of self, therefore conceptually distinct from the socially enforced expectations about idealized male behavior that we study in this paper. However, the two concepts are related, since individuals with a more fluid gender identity may adhere less strongly to stereotypical gender norms (Danzer et al., 2025). We therefore include in the online component of the GMS the continuous gender identity (CGI) measure similar to Brenøe et al. (2022) and Brenøe et al. (2024), and examine how self-perceived gender identity correlates with adherence to masculinity, and whether our results change when additionally conditioning on gender identity.

On average, on the 0-10 CGI scale, where positive values indicate a more masculine gender identity, online male respondents rate themselves at 7.57 (s.d. 1.89), while female respondents rate themselves as 2.68 (s.d. 1.96). Self-positioning on the CGI scale correlates positively but moderately with the CMNI-5 score for men ($\rho = 0.18$), with the strongest correlations for homosexuality avoidance and the importance of winning, and the weakest for self reliance. As expected, for women, the correlations between the CGI scale and both homosexuality avoidance and power over women are negative (i.e., more feminine women endorse male power over women, and prefer to be perceived as heterosexual), while the correlation between the CMNI-3 and the CGI score is positive though close to zero ($\rho = 0.02$).

Table C15 displays the estimation results of Equation 1 for males, with responses to the CGI scale as an additional conditioning variable. More masculine gender identity correlates significantly with most outcomes in the same direction as the CMNI, with particularly large coefficients for occupational choice, earnings, competitiveness, and risk taking. However, our results pertaining to masculinity norms remain robust to conditioning on CGI scores, and remain stable in magnitude, confirming that adherence to masculinity norms and one's subjective sense of gender identity capture different constructs.[33] Gender identity and CMNI notably differ in their relationship to depression, with men who feel more masculine being less likely to show symptoms of depression, in line with recent findings by Danzer et al. (2025).

CMNI's explanatory power beyond risk and competitiveness. A potential criticism of our analysis, particularly in light of a large literature showing the importance of competitiveness and risk aversion preferences for a wide range of outcomes, is that our masculinity measures may simply capture competitiveness and risk aversion. We show that this is not the case and

[33]The CGI analysis is based on only the second wave of the online survey because of data quality issues with the CGI question in the first wave. Therefore, these results rest upon a smaller, only online sample and although internally consistent, are not directly comparable to the results in the full sample.

masculinity norms extends well beyond these dimensions. To do so, we re-estimate Equation 1 with the competitiveness and risk-taking questions in the set of controls. Tables C16-C18 show that, although competitiveness and risk aversion are themselves statistically significant predictors in many cases, the CMNI is still a robust predictor of our outcomes of interest. Moreover, the coefficients associated with the CMNI remain stable in magnitude. This indicates that CMNI capture much more than competitiveness and risk aversion preferences alone (Tables C16-C18).

Normative beliefs about masculinity. Our primary motivation for using the CMNI to measure masculinity norms was to rely on a well-validated and widely used instrument. However, a potential limitation is that the CMNI questions are not framed exactly as the TGRI, which could bias our comparisons.

To address this, the online GMS surveys include a set of normative statements about masculinity that mirror the CMNI dimensions but follow more closely the formulation of the TGRI questions (that is, beliefs about how men *should* behave). These items cover (*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, 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"). We use these items to construct a Normative Masculinity Index, described in detail in Appendix A1.6.

The mean Normative Masculinity Index among all male online respondents is 2.30. Like the CMNI, this index is highly internally consistent, with a Cronbach's alpha of 0.86. Figures B11 and B12 show positive correlations between the CMNI and the Normative Masculinity Index at both the individual ($\rho = 0.51$) and the country level ($\rho = 0.77$). We show in Table C19 that the results discussed thus far are robust to using the Normative Masculinity Index instead of the CMNI, except for earnings, for which it is still positive but insignificant.

Associations with marriage and fertility. As secondary outcomes, we examine whether adherence to masculinity predicts marriage and fertility patterns. Only few studies have investigated these relationships, with inconsistent findings across contexts (Snow et al., 2013; Sylvest et al., 2014). Appendix Table C20 shows that, on average, adherence to masculinity is associated with neither fertility nor with marriage and cohabitation. If anything, a higher CMNI correlates with slightly fewer children among younger men (aged 18–35). By contrast, higher TGRI scores are associated with a slightly greater likelihood that men aged 18–35 have any

children, and with slightly more children among men aged 36–49.[34]

5 The Conflict Origins of Masculinity Norms

We now explore hypotheses laid out in Section 2.4 on the relationship between the intensity of conflict and masculinity norms, exploiting both cross-country variation in historical conflict exposure and within-country variation across birth cohorts.

5.1 Long-Run Correlations

To motivate our analysis, we first examine the extent to which the intensity of historical conflict can account for some of the cross-country variation in adherence to masculinity in the GMS.To do so, we rely on the Correlates of War (CoW) database, which records conflicts across state borders between 1816 and 2007, and civil wars between 1816 and 2014 (Sarkees and Wayman (2010), see Appendix D1.1.2 for additional details). This dataset captures all conflicts between states (inter-state conflicts, $N = 337$), between states and extra-territorial entities that do not qualify as states (e.g. pre-independence states or al-Qaeda, as well as imperial and colonial wars) (extra-state conflicts, $N = 198$), and civil conflicts (inside a state, between a rebel group and a government, or between non-state entities, $N = 442$) and which result in at least 1,000 battle-related fatalities within a twelve-month period.

Our measure of historical conflict intensity is the number of conflicts each country has been involved in since 1816.[35] We consider both a simple cumulative measure and a time-discounted measure (with alternative discount rates in robustness), which we standardize to have mean zero and standard deviation one (see notes to Table C21). On average, a country in the GMS has been involved in 8.87 conflicts in total (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 B13, the countries with the highest exposure to the cumulative measure of historical conflict are, in order, the United Kingdom, Türkiye, France, China, Russia, Spain, Mexico, and the United States (Panel A) (and United Kingdom, France, China, Iraq, Türkiye, Russia, and the United States, with the discounted measure in Panel B). We then test whether variation in masculinity norms across countries today reflects the historical intensity of conflict.

Panel A of Table C21 reports partial correlations between the CMNI and different measures and categories of historical conflict. Each cell displays results from a separate regression of

[34] LiTS reports fertility as co-resident children rather than lifetime births, and does not include a measure of completed fertility. Therefore, fertility results for respondents aged 50+ are not interpretable.

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

average country-level CMNI scores on a specific measure and category of conflict, conditioning on survey mode and continent fixed effects throughout. The results reveal consistent, positive associations between historical militarized conflict and masculinity norms.

The total number of wars is positively associated with average country-level CMNI, and the relationship is statistically significant when using the discounted measure, suggesting a more robust influence of recent conflict. 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, albeit still positive, correlation with intra-state wars.

In terms of magnitude, the estimates suggest that a one standard deviation increase in the discounted measure of total conflict is associated with a 0.15 standard deviation increase in adherence to masculinity today. A one standard deviation increase in the discounted measure of *inter*-state conflict (alternatively, one additional inter-state conflict) is associated with a 0.21 standard deviation (0.04 standard deviation) higher adherence to masculinity today. Panel B shows that, in sharp contrast, historical conflict intensity is uncorrelated with TGRI scores, with coefficients that are statistically insignificant and small in magnitude across all measures and categories of conflict.[36]

In summary, historical militarized conflict systematically predicts present-day variation in masculinity norms but not gender role norms. These partial correlations, however, cannot establish causality or its direction. Causality may run both ways: dominance-oriented 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.

5.2 Conflict Exposure During Impressionable Years

Following recent work exploiting country-cohort variation in exposure to social and political events (Acemoglu et al., 2025; Cappelen et al., 2025), we leverage variation in conflict exposure across birth cohorts. The literature on attitude formation emphasizes the importance of experiences during the "impressionable years" of young adulthood (typically ages 18-25), when core beliefs crystallize and remain relatively stable throughout life (Roth and Wohlfart, 2018; Bieten-

[36] We 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 in the sample of 55 countries 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 C21.

beck et al., 2025; Giuliano and Spilimbergo, 2025). This age window is particularly salient for militarized conflicts, as it coincides with when men typically join the military and are most likely to experience combat.

We construct cohort-specific conflict exposure measures for each GMS respondent by calculating the cumulative (or average) conflict deaths (per 100,000 population) in their country during ages 18-25. We use the Uppsala Conflict Data Program's Georeferenced Event Dataset (GED), which records individual organized violence events from 1989 onward.[37] Because the GED assigns conflicts to countries based on borders at the time of occurrence, we exploit its disaggregated structure to recode events to present-day borders (e.g., obtaining separate measures for post-Yugoslavia states). We additionally consider measures of extra-territorial deaths in external conflicts.

We exploit within-country variation across birth cohorts in conflict exposure during ages 18-25, conditioning on urban–rural status, country×survey-wave fixed effects that absorb country-level factors, such as political institutions or other dimensions of national culture not related to conflict, and birth-year (cohort) fixed effects that absorb global cohort patterns. This design compares adherence to masculinity between more- and less-exposed cohorts within the same country–survey wave. Our main specification uses male GMS respondents who were age 18 or younger in 1989 and at least 25 at the time of survey, ensuring complete observation of their impressionable years. As shown in Appendix Figure B14, the country-cohorts with the highest conflict exposure during impressionable years are the 1971-1976 birth cohorts in Bosnia and Herzegovina. Cohorts born in West Bank and Gaza in 1998, and in Iraq in 1992-1993, are also among those with the highest exposure to violent conflicts.

Panel A of Table 4 presents OLS estimates relating cohort-specific conflict exposure to the CMNI. Birth cohorts exposed to more intense conflict during their impressionable years exhibit significantly higher adherence to masculinity compared to less-exposed cohorts within the same country, holding urban-rural status constant and conditioning on birth-year (cohort) fixed effects and country×survey-wave fixed effects. The estimates in column 1 indicate that a respondent with the highest conflict exposure during ages 18-25, relative to a respondent who experienced no conflict, scores 0.3 standard deviations higher on the CMNI. Figure B15 presents estimates from the specification in column 1 of Table 4 across four non-overlapping age windows: ages 2-9, 10-17, 18-25, and 26-33. Consistent with the impressionable years hypothesis, only exposure during ages 18-25 is statistically significantly associated with masculinity norms. In sharp contrast, Panel B of Table 4 shows no relationship between conflict expo-

[37] The GED includes all conflict events from all years between 1989-2024 from an identified dyad (a pair of two actors engaged in conflict, or one actor if violence is directed towards civilians) provided they pass a threshold of 25 deaths for at least one year.

sure and gender role norms (TGRI): coefficients are statistically insignificant and economically negligible across all specifications. This suggests a specific effect on adherence to masculinity norms, rather than a broad cultural shift for the cohorts exposed to conflict.

The results remain robust whether we measure average or cumulative violence over impressionable years (columns 1 and 4), or when we expand the sample to include men aged 18+ rather than 25+ at time of survey (column 2). The results are only slightly attenuated when conditioning on recession exposure during impressionable years (column 3), singling out violence exposure rather than potential conflict-related economic shocks as driving the result. The findings are also robust when using an inverse hyperbolic sine transformation (column 5) or levels (column 6) in place of logs. Standard errors are clustered at the country level (parentheses) or two-way clustered at both country and cohort levels (angled brackets); the results remain significant under both approaches.

Appendix Table C22 decomposes these results by CMNI component. The coefficients are positive across the board, and statistically significant for violence, homosexuality avoidance, and self reliance. These results are consistent with military conflict exposure legitimizing the adherence to violence, promoting self-reliance and emotional toughness, and stigmatizing less respected forms of masculinities (homosexuality). As shown in Appendix Table C23, these results are strongest for organized military conflict, and insignificant for non-state conflict. These results, consistent with cross-country descriptives, suggests a role for organized military mobilization beyond violence alone in the shaping masculinity norms.

6 Discussion and Conclusions

Drawing on new data from 70 countries across all continents, this study shows remarkably stable patterns across the world in how adherence to masculinity systematically predicts key economic, health, and political outcomes. Men with stronger adherence to these norms exhibit distinct patterns across all three domains: they are willing to work longer hours and sort more into stereotypically male industries; they engage in riskier health behaviors; and they show greater support for strongman political leadership while opposing democratic governance and market-based institutions. Finally, we provide evidence on the origins of these norms by linking adherence to masculinity to conflict exposure. We do so through both cross-country analysis of historical conflicts and cohort-level variation in conflict exposure within countries.

The implications of these patterns differ by domain. Economically, the picture is mixed: while higher labor supply may support economic activity, occupational sorting and labor-market frictions can limit these gains. One implication is that mitigating the costs of industrial transformation may require not only retraining displaced workers but also addressing male so-

cialization and the norms that inhibit men's transitions into expanding service-sector and care occupations. The health and political implications of strict adherence to masculinity appear unambiguously 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 deliberately exploit.

Future research could explore several promising directions. First, understanding how masculinity norms interact with economic shocks and technological change remains a clear priority. For example, investigating the intergenerational and horizontal transmission of these norms can inform interventions to ease labor-market transitions toward pink-collar occupations. Second, experimental studies could test whether emphasizing the health costs of masculinity norms reduces adherence to these norms. Third, qualitative research could illuminate cultural variations in masculinity definitions and expressions. By integrating the Conformity to Masculinity Norms Inventory into large-scale surveys, we have created a reliable tool to measure adherence to masculinity norms across diverse societies. Indeed, we hope that future research will shed light on different cultural adaptations of masculinity and their economic, health, and political consequences.

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Table 1: Masculinity and Gender Role Norms – Economics

	Would Work More		Masculine Sector		Log earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Masculinity Norms										
CMNI Score	0.055***	0.052***	0.025***	0.024***	0.030*	0.028**	0.003	0.001	0.085***	0.085***
	(0.006)	(0.006)	(0.003)	(0.003)	(0.016)	(0.013)	(0.004)	(0.003)	(0.013)	(0.012)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77	-0.00	-0.00
R-squared	0.11	0.12	0.05	0.07	0.57	0.59	0.13	0.16	0.15	0.16
Observations	46,239	46,239	46,257	46,257	44,394	44,394	59,898	59,898	59,898	59,898
Panel B: Gender Roles Norms										
TGRI Score	0.045***	0.041***	0.033***	0.030***	0.002	0.003	0.010***	0.010***	-0.032**	-0.032**
	(0.005)	(0.005)	(0.003)	(0.003)	(0.015)	(0.012)	(0.004)	(0.003)	(0.015)	(0.014)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77	-0.01	-0.01
R-squared	0.11	0.11	0.05	0.07	0.57	0.59	0.13	0.16	0.14	0.15
Observations	46,550	46,550	46,568	46,568	44,645	44,645	60,424	60,424	60,424	60,424
Panel C: Masculinity and Gender Roles Norms										
CMNI Score	0.044***	0.043***	0.014***	0.015***	0.036**	0.032***	-0.002	-0.003	0.114***	0.112***
	(0.006)	(0.006)	(0.003)	(0.003)	(0.014)	(0.012)	(0.004)	(0.004)	(0.012)	(0.011)
TGRI Score	0.027***	0.023***	0.026***	0.024***	-0.012	-0.009	0.012***	0.012***	-0.076***	-0.075***
	(0.005)	(0.004)	(0.004)	(0.003)	(0.012)	(0.010)	(0.004)	(0.004)	(0.012)	(0.012)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77	-0.00	-0.00
R-squared	0.12	0.12	0.05	0.07	0.57	0.59	0.13	0.16	0.15	0.16
Observations	46,195	46,195	46,213	46,213	44,363	44,363	59,795	59,795	59,795	59,795
Survey × country FEs	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×

Notes: OLS regressions. An observation is an individual GMS respondent. The dependent variables *Would Work More* (columns 1-2), *Masculine Sector* (columns 3-4), *Working* (columns 7-8) are defined as dummies equal 1 if the individual would like to work more hours, was working, or was employed in a masculine sector, respectively. *Log earnings* (columns 5-6) 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$. *Competitiveness* (columns 9-10) is a standardized competitiveness score. For more details on the definitions of the dependent variables, please refer to Table C4. 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***	0.100***	-0.083***	-0.079***	0.048***	0.053***	0.145***	0.146***
	(0.013)	(0.011)	(0.007)	(0.007)	(0.006)	(0.005)	(0.010)	(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 Roles Norms								
TGRI Score	0.049***	0.044***	-0.134***	-0.127***	0.021***	0.028***	0.055***	0.056***
	(0.014)	(0.013)	(0.010)	(0.009)	(0.006)	(0.005)	(0.009)	(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 Roles Norms								
CMNI Score	0.101***	0.098***	-0.039***	-0.038***	0.049***	0.051***	0.146***	0.147***
	(0.011)	(0.010)	(0.009)	(0.009)	(0.006)	(0.005)	(0.010)	(0.010)
TGRI Score	0.010	0.006	-0.119***	-0.113***	-0.003	0.004	-0.005	-0.004
	(0.011)	(0.010)	(0.011)	(0.011)	(0.006)	(0.005)	(0.010)	(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 defined as a dummy equals 1 if the respondent answered they are 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) encompass the mean across three questions on whether the respondent uses seatbelt, and *Depression Score* (columns 7-8) encompass four questions that measure frequency of depression and anxiety symptoms. For more details on the definitions of the dependent variables, please refer to Table C4. 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***	-0.036***	-0.033***	-0.035***	0.093***	0.090***	0.076***	0.073***
	(0.004)	(0.004)	(0.004)	(0.005)	(0.008)	(0.007)	(0.005)	(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 Roles Norms								
TGRI Score	-0.069***	-0.067***	-0.000	-0.004	0.097***	0.091***	0.092***	0.086***
	(0.005)	(0.004)	(0.008)	(0.007)	(0.008)	(0.007)	(0.006)	(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 Roles Norms								
CMNI Score	-0.013***	-0.013***	-0.039***	-0.040***	0.066***	0.065***	0.048***	0.047***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
TGRI Score	-0.064***	-0.062***	0.016**	0.013*	0.070***	0.065***	0.072***	0.067***
	(0.005)	(0.004)	(0.008)	(0.007)	(0.006)	(0.005)	(0.006)	(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		×		×		×		×

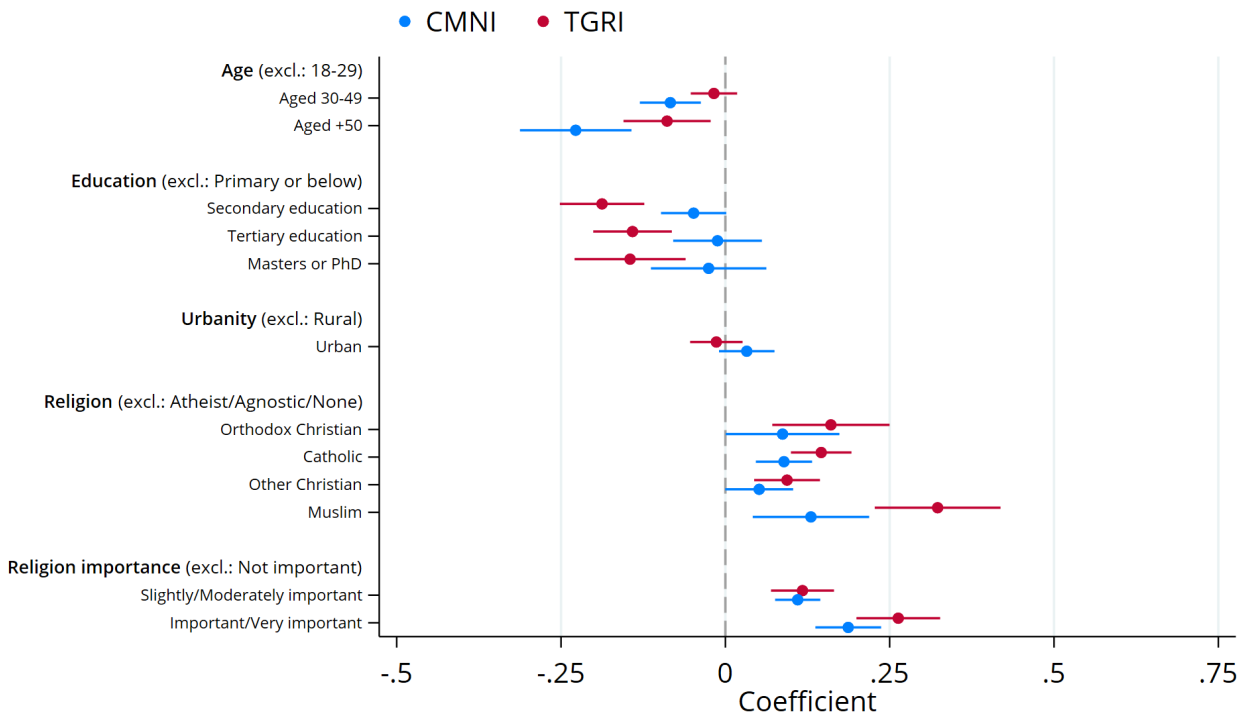
Notes: OLS regressions. An observation is an individual GMS respondent. All dependent variables are defined as dummies equal to 1 if the respondent agrees that democracy is preferable to any other political system (columns 1-2), if he agrees that a market economy is preferable to any other economic system (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). For more details on the definitions of the dependent variables, please refer to Table C4. 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: Impressionable Age Conflict Exposure, Masculinity Norms, and Gender Role Norms

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: CMNI						
Avg. conflict exposure (Log)	0.055	0.044	0.039			
	(0.019)***	(0.018)**	(0.018)**			
	[0.023]**	[0.024]*	[0.022]*			
Total conflict exposure (Log)				0.035		
				(0.013)***		
				[0.014]**		
Avg. conflict exposure (IHS)					0.044	
					(0.016)***	
					[0.019]**	
Avg. conflict exposure (99%)						0.012
						(0.005)**
						[0.006]*
Adj. R-squared	0.113	0.114	0.113	0.113	0.113	0.113
Observations	38,372	38,689	38,184	38,372	38,372	38,372
Panel B: TGRI						
Avg. conflict exposure (Log)	0.022	0.017	0.008			
	(0.019)	(0.017)	(0.020)			
	[0.020]	[0.019]	[0.019]			
Total conflict exposure (Log)				0.012		
				(0.011)		
				[0.012]		
Avg. conflict exposure (IHS)					0.017	
					(0.016)	
					[0.017]	
Avg. conflict exposure (99%)						0.005
						(0.005)
						[0.005]
R-squared	0.171	0.172	0.172	0.171	0.171	0.171
Observations	38,682	39,008	38,495	38,682	38,682	38,682
Urban control	×	×	×	×	×	×
Survey × country FEs	×	×	×	×	×	×
Cohort FEs	×	×	×	×	×	×
Recession			×			
Sample	25+	18+	25+	25+	25+	25+

Notes: This table reports OLS regression estimates where each observation represents an individual male GMS respondent. Both CMNI and TGRI scores are standardized. Avg. conflict exposure (Log) applies a $\log(1+x)$ transformation to the average conflict exposure (scaled per 100,000 population) experienced by individuals of age a in country c during their impressionable years. Total conflict exposure (Log) similarly transforms the cumulative conflict exposure during impressionable years for the same cohort. Avg. conflict exposure (IHS) uses an inverse hyperbolic sine transformation of the average conflict exposure measure, while Avg. conflict exposure (99%) represents the 99% winsorized level measure. The sample consists of male respondents born in 1971 or later who were at least 25 years old at survey, except in column 2, which includes respondents aged 18 or older at survey. For respondents in column 2 who were aged 18-24 at survey time, conflict exposure measures are calculated as averages (or totals) over their completed impressionable years only (e.g., ages 18-23 for a 23-year-old respondent). Column 3 condition on recession exposure between ages 18–25, following Bietenbeck et al. (2025). Cohort fixed effects correspond to birth year fixed effects. Standard errors clustered at the country level appear in parentheses; standard errors clustered at both the country and cohort levels appear in angled brackets. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. Source: GMS (LiTS and online surveys).

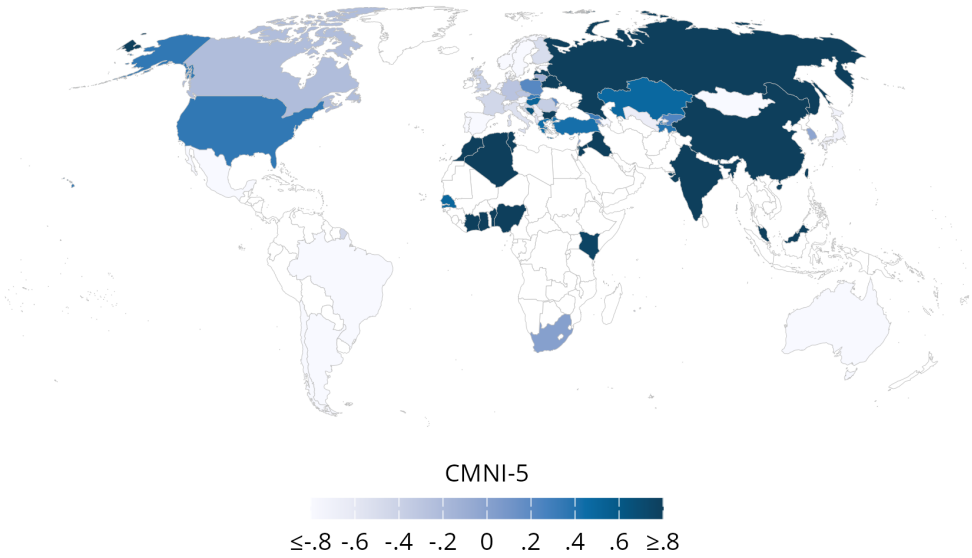
Figure 1: Individual Correlates of Masculinity Norms and Gender Role Norms



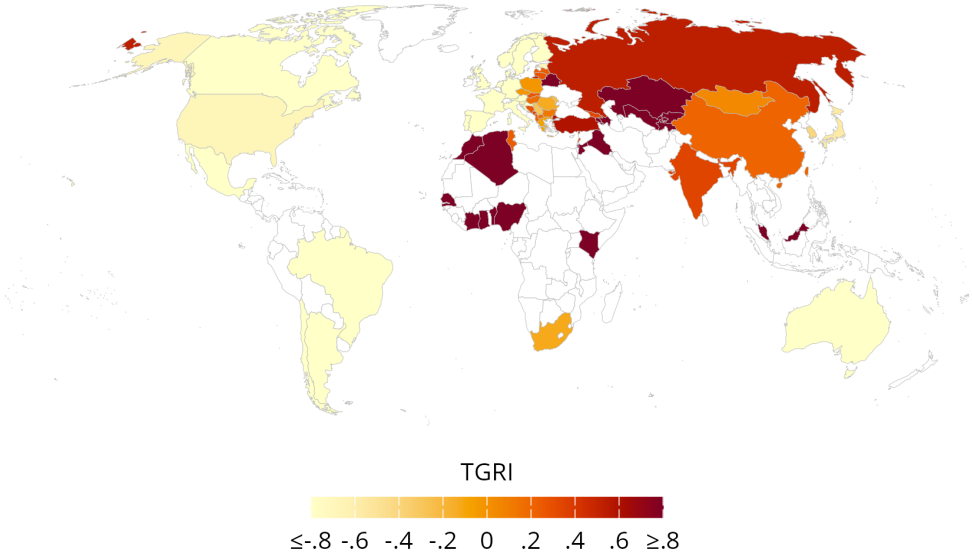
Notes: This figure displays a coefficient plot showing the results from OLS regressions of the five-item Conformity to Masculinity Norms Index (CMNI) or the Traditional Gender Roles Index (TGRI) on the displayed covariates, conditioning on country fixed effects. All coefficients are standardized. Spikes show 95% confidence intervals based on standard errors clustered at the country level. Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure 2: Masculinity Norms and Gender Role Norms Around the World

Panel A: Masculinity Norms

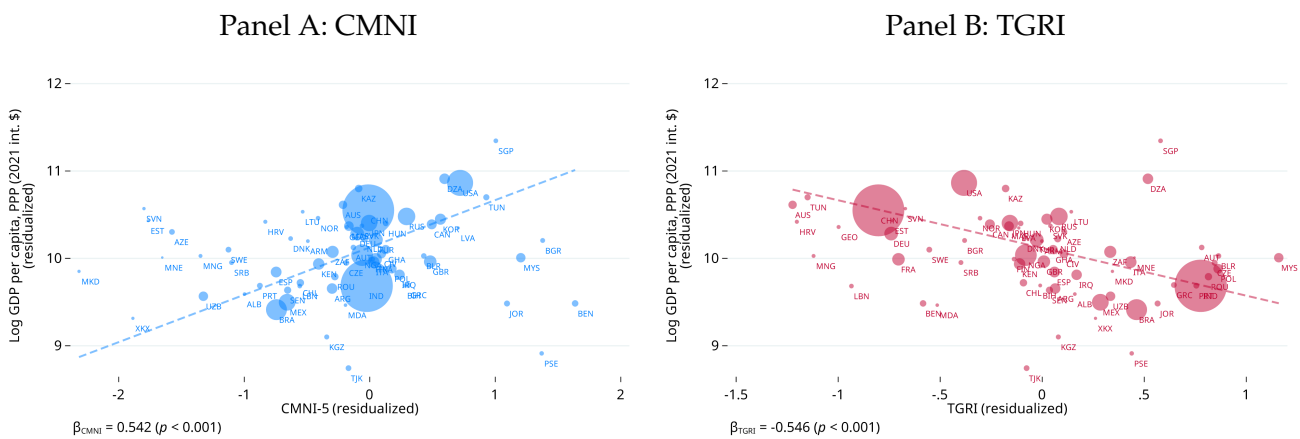


Panel B: Norms about Gender Roles



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 Norms Index (TGRI) across countries. Darker colors indicate more conservative gender role norms. Sample of male respondents only. Source: GMS (LiTS and online surveys).

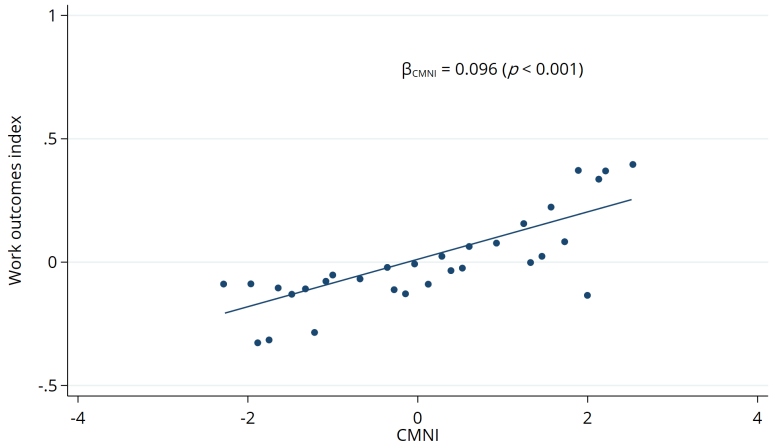
Figure 3: Masculinity Norms, Gender Role Norms, and GDP Per Capita



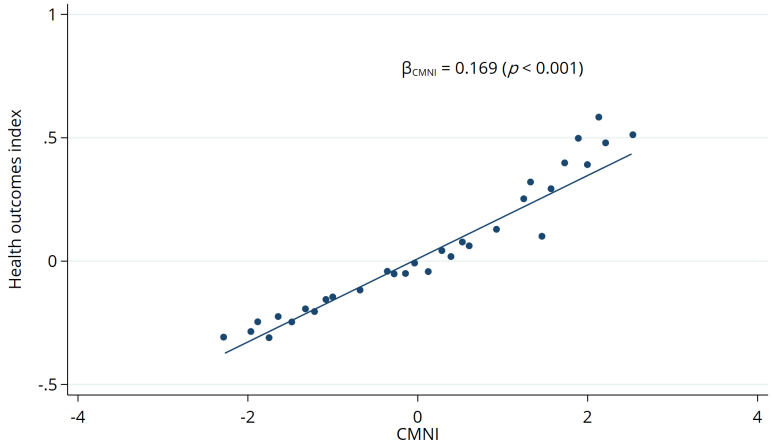
Notes: Panel A shows a scatter plot of the country-level relationship between the log of PPP-adjusted GDP per capita in 2023 and the standardized Conformity to Masculinity Norms Index (CMNI) once the influence of the Traditional Gender Roles Index (TGRI) is accounted for. Panel B shows the same for the TGRI after partialling out the CMNI. Both scatters account for the influence of continent fixed effects (Africa, Americas, Asia-Pacific, and Europe), population size, and a dummy for survey type (online/LiTS), and are weighted by population size. Sample of male respondents only. Source: World Bank WDIs, GMS (LiTS and online surveys).

Figure 4: Binscatter of Economic, Health, and Political Outcomes by CMNI

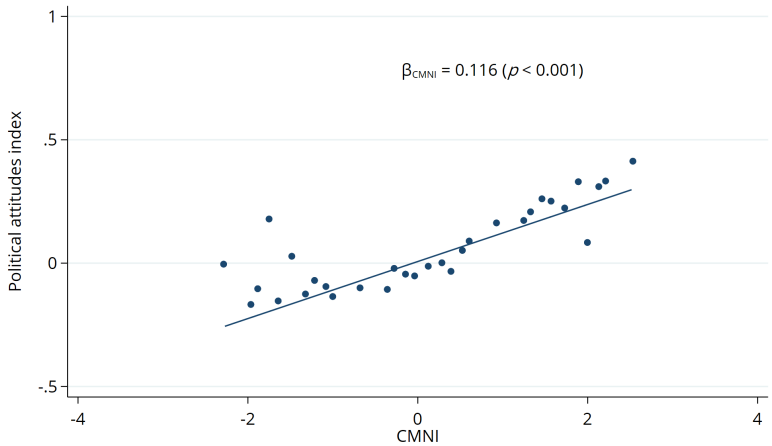
Panel A: Economic outcomes



Panel B: Health behaviors and outcomes



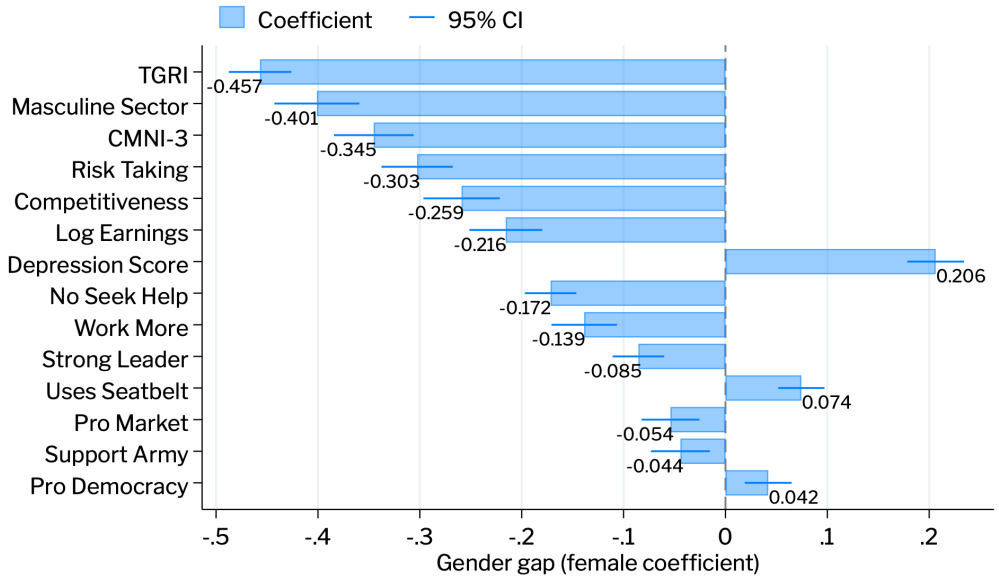
Panel C: Political attitudes



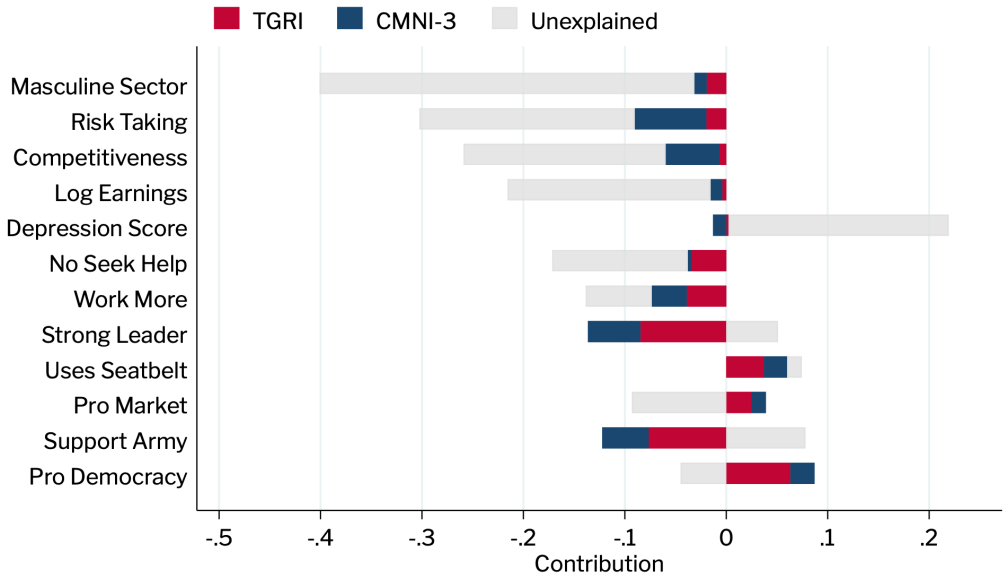
Notes: This figure shows binned scatter plots of summary indices for the economic, health, and political outcomes as a function of the CMNI score conditioning on the TGRI score, age, urbanity and country fixed effects. Each outcome index is constructed as a standardized weighted index following the procedure described in Anderson (2008). Source: GMS (LiTS and online surveys).

Figure 5: Decomposing Gender Gaps into Masculinity Norms and Gender Role Norms

Panel A: Raw gender gaps



Panel B: Gelbach decomposition



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, urban residence, education, religion, religiosity, and country fixed effects. The gender gap is expressed in standard deviations. Seatbelt use is only as the front passenger, rather than also in the back seat, because the gender gap (that men use seatbelts less) is only evident for the front seat. Panel B reports the share of the gender gap explained by CMNI-3, TGRI, or unexplained, using the Gelbach (2016) decomposition method. Source: GMS (online survey).

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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 3.1) 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.[38] 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*.[39] 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, its 22 sub-dimensions, 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-22 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 57% 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.*"

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*" (Help avoidance)
4. "*I love it when men are in charge of women*" (Control over women)
5. "*It is important to me that people think I am heterosexual*" (Disdain for homosexuals)

[38] The 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).

[39] See https://aifs.gov.au/research_programs/ten-men.

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	Control women	Disdain homo-sexuals	Violence	Import. win	Help avoid	Working	Would work more	Gendered sector	Masc. sector	Depress. score	Major de-press.	Suicide attempt	Doctor visit pushed	IPV	Rape
CMNI-22	1.00																
CMNI-5	0.75***	1.00															
Control women	0.47***	0.59***	1.00														
Disdain homosexuals	0.39***	0.59***	0.24***	1.00													
Violence	0.41***	0.55***	0.14***	0.05***	1.00												
Importance winning	0.49***	0.53***	0.24***	0.15***	0.09***	1.00											
Help avoidance	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 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	-0.01	-0.01	0.02**	-0.06***	0.01	-0.01	0.02**	-0.01	0.01	-0.01	-0.00	0.04***	0.01	0.05***	0.01	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***	0.12***	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).

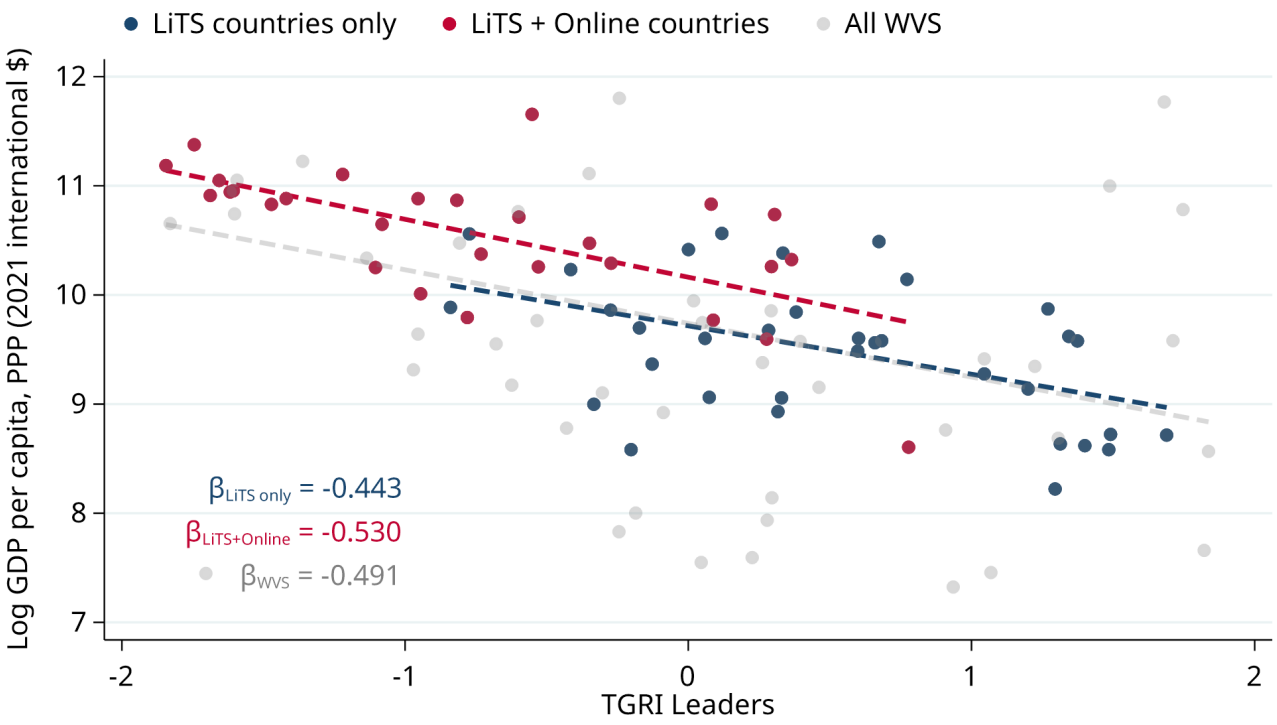
AI tools for data quality. Bilendi implemented AI-based tools to detect individuals who rush through surveys ("speeders") or exhibit other problematic response patterns. These tools help improve data quality by flagging or excluding respondents, which explains why sample sizes vary across countries. They oversample and then automatically exclude respondents 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. This keeps respondents engaged and encourages them to remain in the panel for future projects.

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 roles 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 (see Table A4 for more details on the TGRI Leaders Index). 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 cross-country patterns documented with the GMS are unlikely to be driven by the specific composition of countries in our survey.

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



Notes: This figure is based on cross-country regressions of logged GDP per capita on the country-level mean of the TGRI leaders index based on 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 distinct country samples: all countries with WVS data, countries covered only by LiTS, and countries covered by both LiTS and online surveys. Tests of differences in slopes yield p-values of 0.77 (WVS vs. LiTS countries only) and 0.82 (WVS vs. LiTS plus online countries). Source: GMS (LiTS and online surveys) and WVS.

A1.4 Sample Selection within Countries

A1.4.1 Representativeness

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).[40] Survey firms operating in middle- and low-income countries often rely on local partners rather than proprietary panels, potentially limiting sample representativeness further.

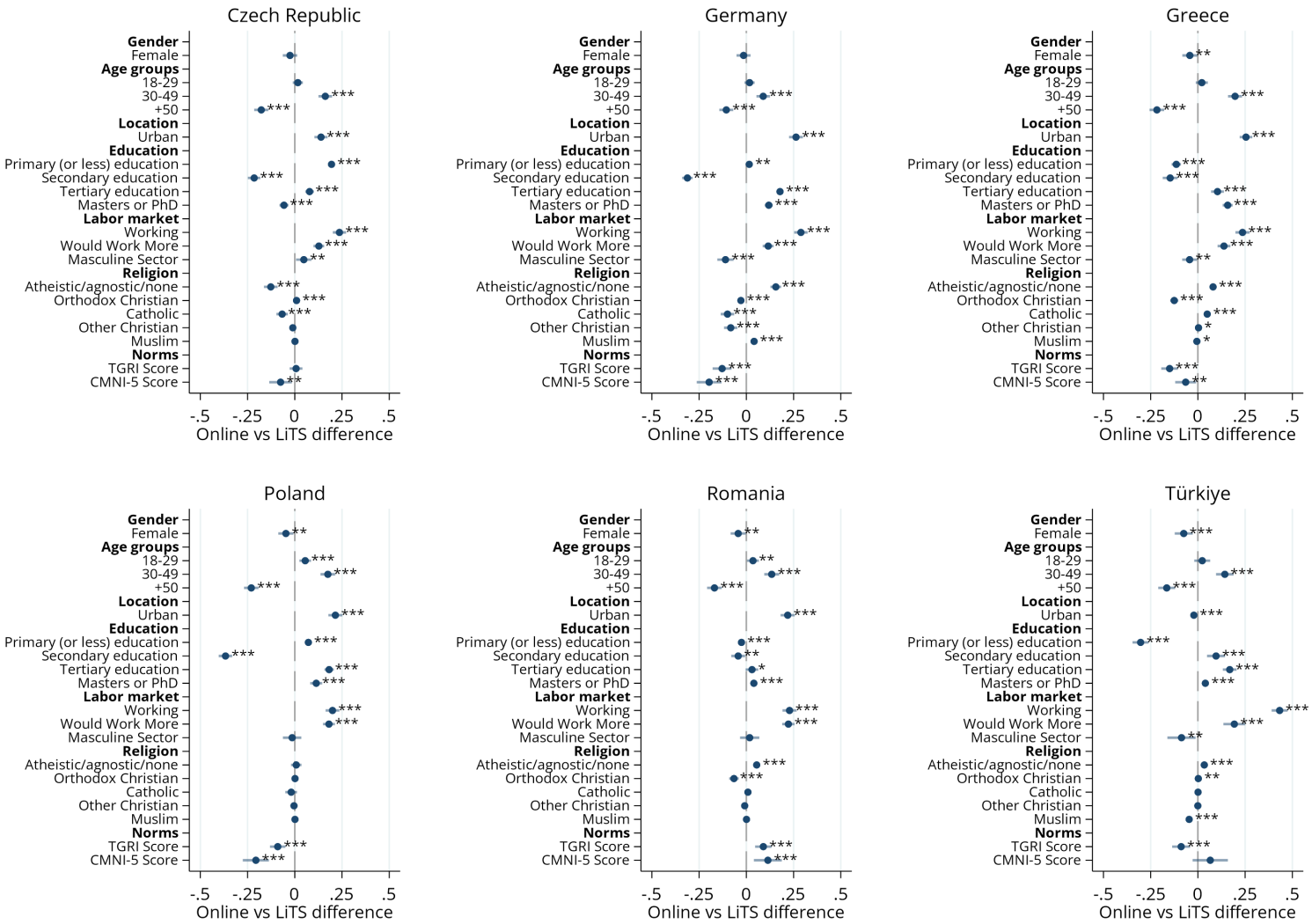
While the LiTS component of the GMS was designed to be nationally representative, the online component was not. Although Bilendi aims for representative samples by age, sex, and income, the survey's digital format underrepresents those without computers, smartphones, or stable internet connections. In certain countries, panels skew toward more educated or tech-savvy populations (see Section 3). 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)).

Tables A3 and A4 compare covariates and norms measured across different surveys: LiTS, online, Gallup, and WVS, with the Gallup and WVS being split into countries where the LiTS was conducted (Gallup-LiTS, WVS-LiTS) and where the online component was conducted (Gallup-online, WVS-online). We do this with both Gallup and WVS because Gallup overlaps more with the countries in the GMS (41 LiTS, 32 Online), but does not contain norms data, while the WVS country overlap is much smaller (20 LiTS, 20 online), but does have some TGRI questions. The Gallup World Poll (wave years 2021-2022) corresponds better to the LiTS data collection in 2022-2023. In Table A3, comparing demographics between the online vs Gallup surveys of the same countries (columns 2 and 4), we see quite marked standardized mean differences ranging from 0.03 to 0.66 standard deviations in magnitude (column 6) with an average of 0.29 SD. The online survey participants are younger, more male, more educated, and more likely to be working. However, there are differences between the two nationally representative surveys as well: LiTS participants are older, more educated, but less likely to be working compared to Gallup participants in the same countries. We see standardized mean differences ranging from 0.01 to 0.50 SD in magnitude, with an average of 0.18 SD, which is significant but considerably lower than the difference between the online and Gallup samples.

[40] Source: World Bank (2025).

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 1 (0) if the observation comes from the online (LiTS) survey. Female responses to the CMNI in the online survey are excluded. Spikes show 95% confidence intervals based on standard errors clustered at the country level. 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)
Demographics			
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***
Indices			
CMNI-5 Score (1-4)	2.482	2.266	-0.353***
Traditional Gender Norms Index (TGRI) (1-4)	2.093	1.988	-0.185***
Outcomes			
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	0.798	-0.097***
Depression Score (1-5)	2.032	2.539	0.492***
Pro Democracy (=1)	0.841	0.479	-0.991***
Pro Market (=1)	0.459	0.551	0.186***
Support for Strong Leader (=1)	0.299	0.529	0.501***
Support for Army (=1)	0.196	0.527	0.833***
Observations	6,111	15,346	
Countries	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).

Table A3: Comparison of Demographic Characteristics – Gallup, LiTS, Online Surveys

	(1) LiTS	(2) Online	(3) Gallup-LiTS	(4) Gallup-Online	(5) SMD (1)-(3)	(6) SMD (2)-(4)
Age	44.21	41.30	43.76	45.97	0.03***	-0.26***
Female (=1)	0.53	0.48	0.52	0.51	0.01	-0.05***
Tertiary Education (=1)	0.24	0.49	0.17	0.21	0.18***	0.66***
Secondary Education (=1)	0.62	0.41	0.55	0.56	0.14***	-0.29***
Primary Education (=1)	0.14	0.10	0.28	0.23	-0.31***	-0.31***
Urban (=1)	0.58	0.82	0.79	0.83	-0.50***	-0.03***
Working (=1)	0.49	0.81	0.55	0.60	-0.12***	0.43***
Observations	41,578	80,549	72,079	63,826		
Countries	41	32	41	32		

Notes: The number of observations reflects the number of cases with non-missing responses for all variables depicted in the table. The Gallup (LiTS countries) sample only includes Gallup data in LiTS countries and the Gallup (online countries) sample only includes Gallup data for online countries. Differences are reported as standardized mean differences (SMD) relative to the Gallup benchmark. Source: Gallup World Poll (wave years 2021-2022) and GMS (LiTS and online surveys).

Table A4: Comparison of Traditional Gender Roles Index Items – WVS, LiTS, Online Surveys

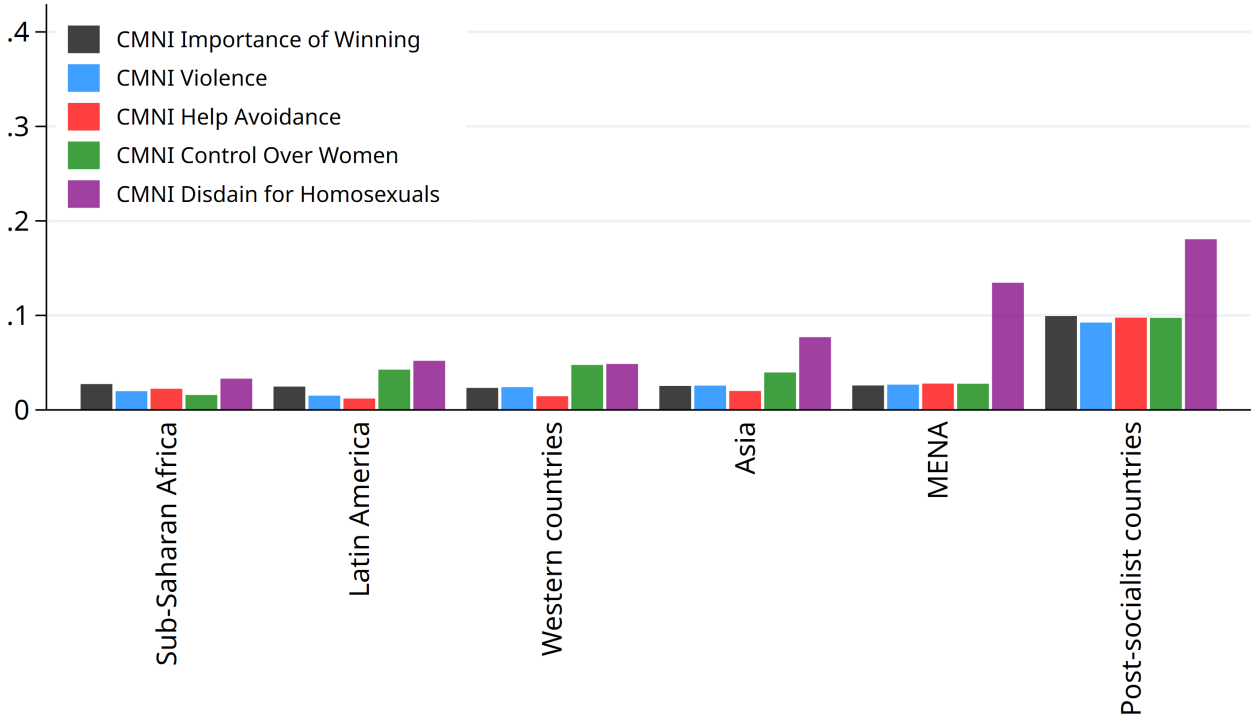
	(1) LiTS	(2) Online	(3) WVS-LiTS	(4) WVS-Online	(5) SMD (1)-(3)	(6) SMD (2)-(4)
Panel A: Males						
TGRI Competence Business Executives	1.97	1.99	2.61	2.13	-0.66***	-0.16***
TGRI Political Leaders	2.77	2.31	2.73	2.20	0.04***	0.12***
Panel B: Females						
TGRI Competence Business Executives	1.74	1.87	2.27	1.82	-0.54***	0.06***
TGRI Political Leaders	2.57	1.90	2.43	1.93	0.15***	-0.04***
Observations	19,244	48,409	25,710	34,626		
Countries	20	20	20	20		

Notes: Observations reflect non-missing responses for all variables shown. *TGRI Competence Business Executives* measures agreement with Women are as competent as men to be business executives" (1 = Strongly Agree, 4 = Strongly Disagree). *TGRI Political Leaders* measures agreement with On the whole, men make better political leaders than women do" (1 = Strongly Disagree, 4 = Strongly Agree). WVS (LiTS countries) and WVS (Online countries) restrict the WVS sample to LiTS and Online countries, respectively. Differences are standardized mean differences (SMD) relative to the WVS benchmark. Source: WVS (2017-2022) and GMS (LiTS and online surveys).

A1.4.2 Item Non-Response

A way to gauge the extent to which questions challenged respondents is to examine non-response rates. Appendix Figure A3 provides non-response rates for each question across regions. Non-response rates are low, but highest in post-socialist countries. The CMNI question with the lowest response rate is the one related to homosexuality, and the one with the highest response rate is related to help avoidance. As documented by Baranov et al. (2023), the help-avoidance question is also the most predictive, across all CMNI questions, of overall masculinity norms and of related behavioral outcomes. Non-response rates for this question are 5% on average across countries.

Figure A3: Non-Response Rates across Regions: CMNI Questions



Notes: This figure displays the proportion of male respondents across regions who refused to answer or answer they do not know to each item of the Conformity to Masculinity Norms Index (CMNI). Source: GMS (LiTS and online surveys).

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

Table A5 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 Norms 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 A5: Traditional Gender Roles Index

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

A1.6 The Normative Masculinity Index

Table A6 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 A6: Normative Masculinity Index

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

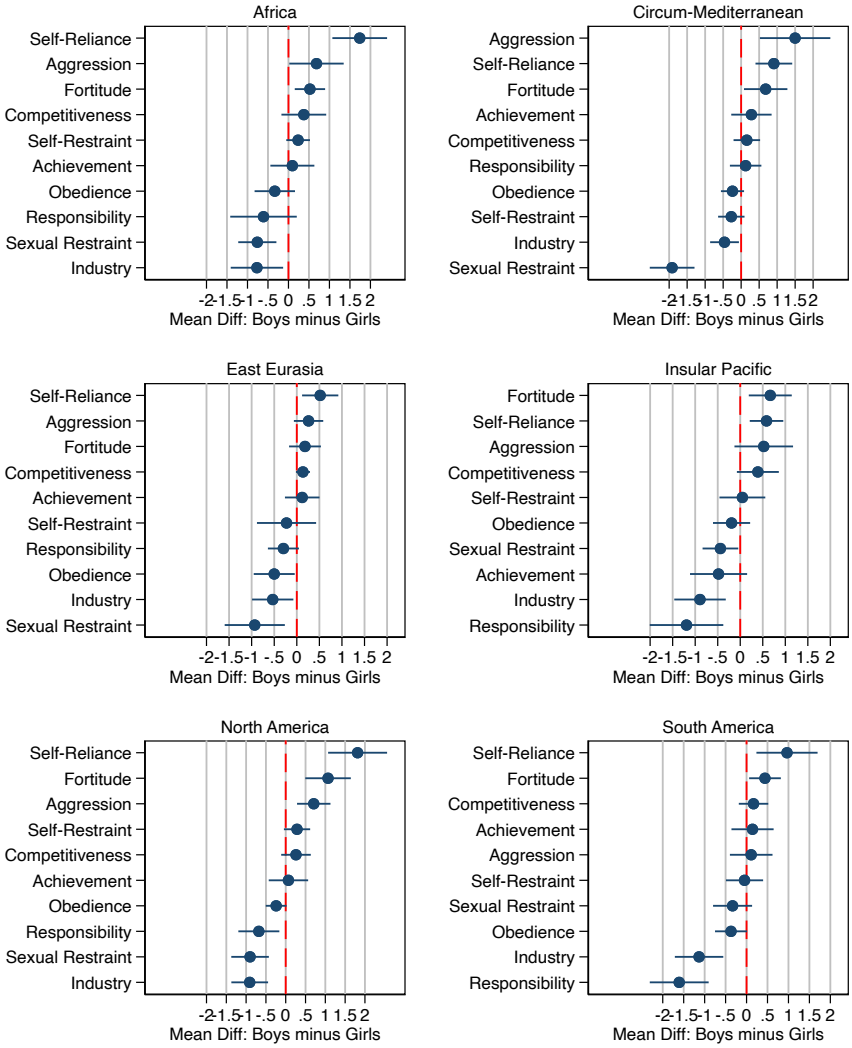
Online Appendix B: Supplementary Figures

Figure B1: Gender Gaps in Value Inculcation in the SCCS



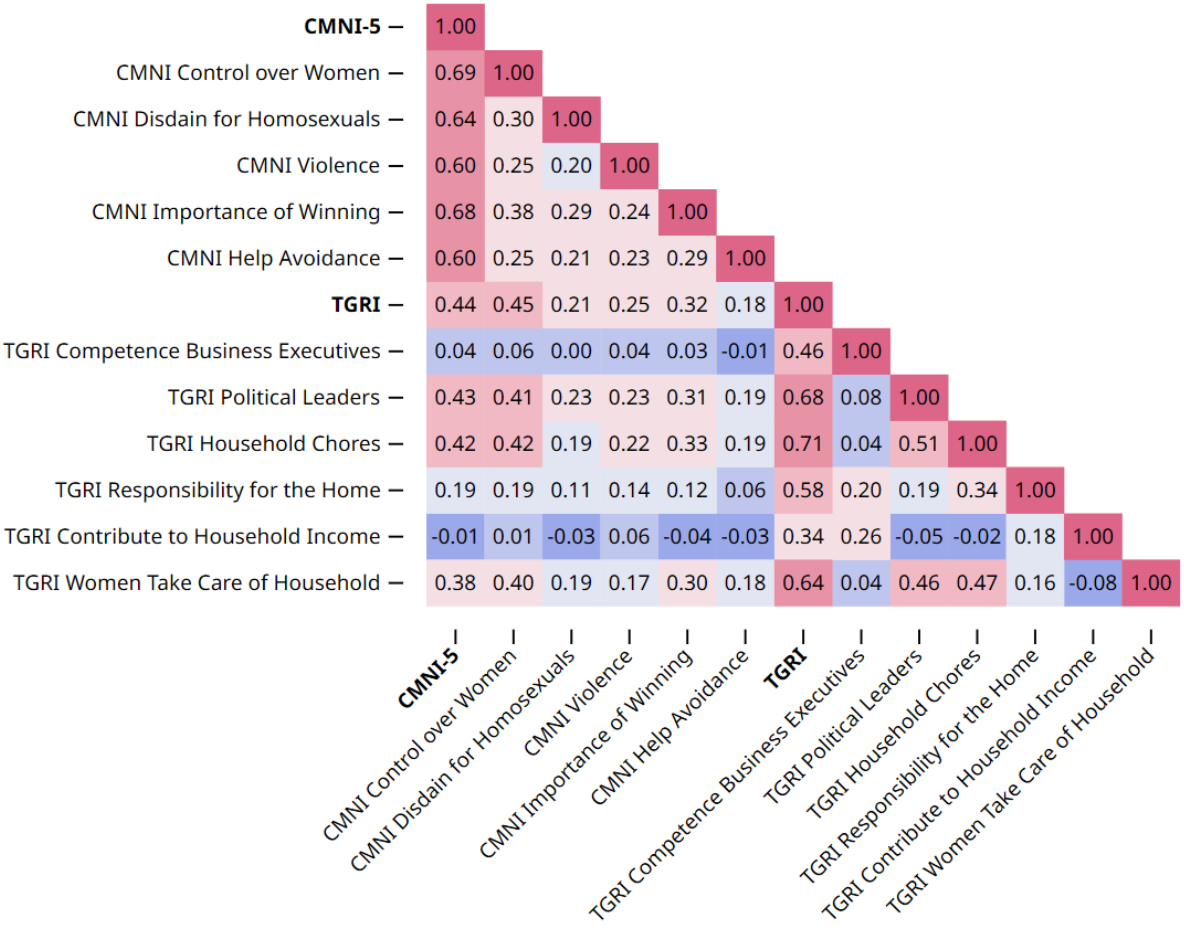
Notes: This figure displays the mean difference in value inculcation between boys and girls for ten traits measured during late childhood. The mean difference is calculated as the average inculcation score for boys minus the average inculcation score for girls. Positive values indicate higher inculcation 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. *Data source:* Standard Cross-Cultural Sample (SCCS), version 2008 (Murdock and White, 1969; Divale, 2004). *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 B2: Gender Gaps in Value Inculcation, by Region



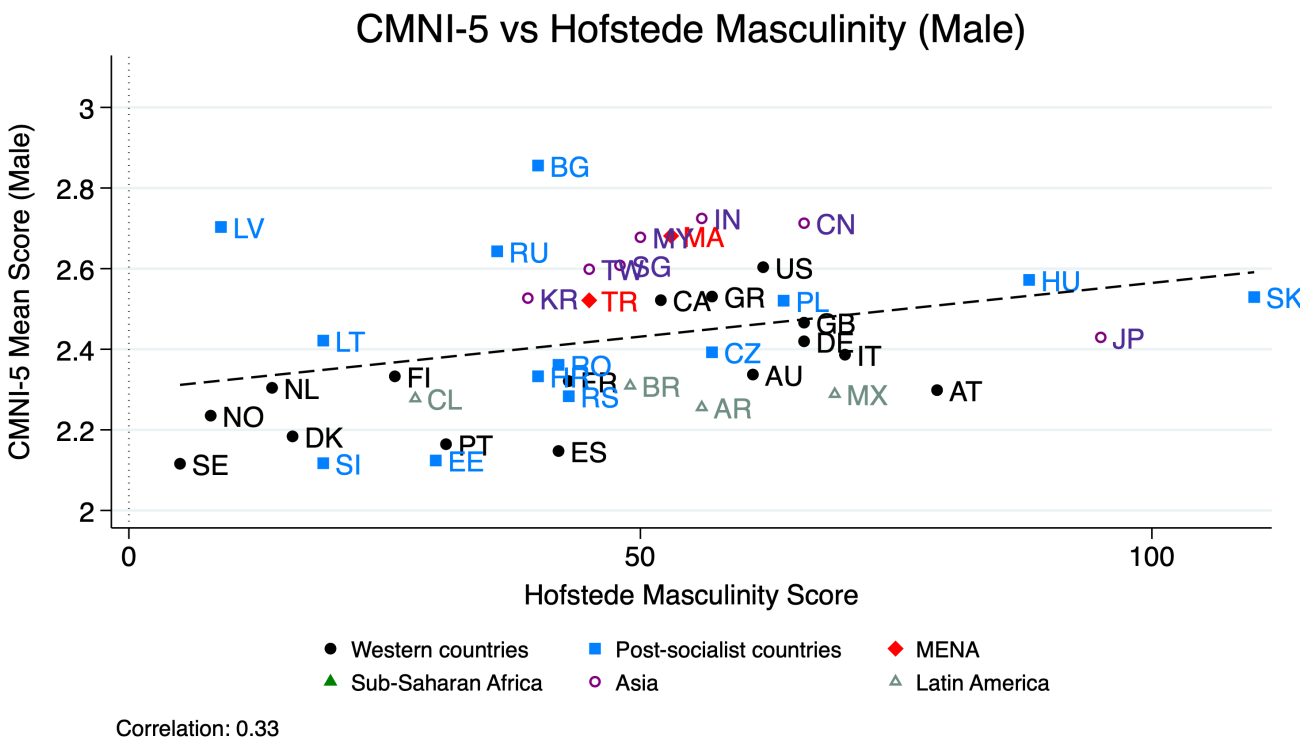
Notes: See notes to Figure B1. Regions are defined by variable v200 in SCCS. *Data source:* Standard Cross-Cultural Sample (SCCS), version 2008 (Murdock and White, 1969; Divale, 2004).

Figure B3: Correlation Matrix of Masculinity Norms and Gender Role Norms



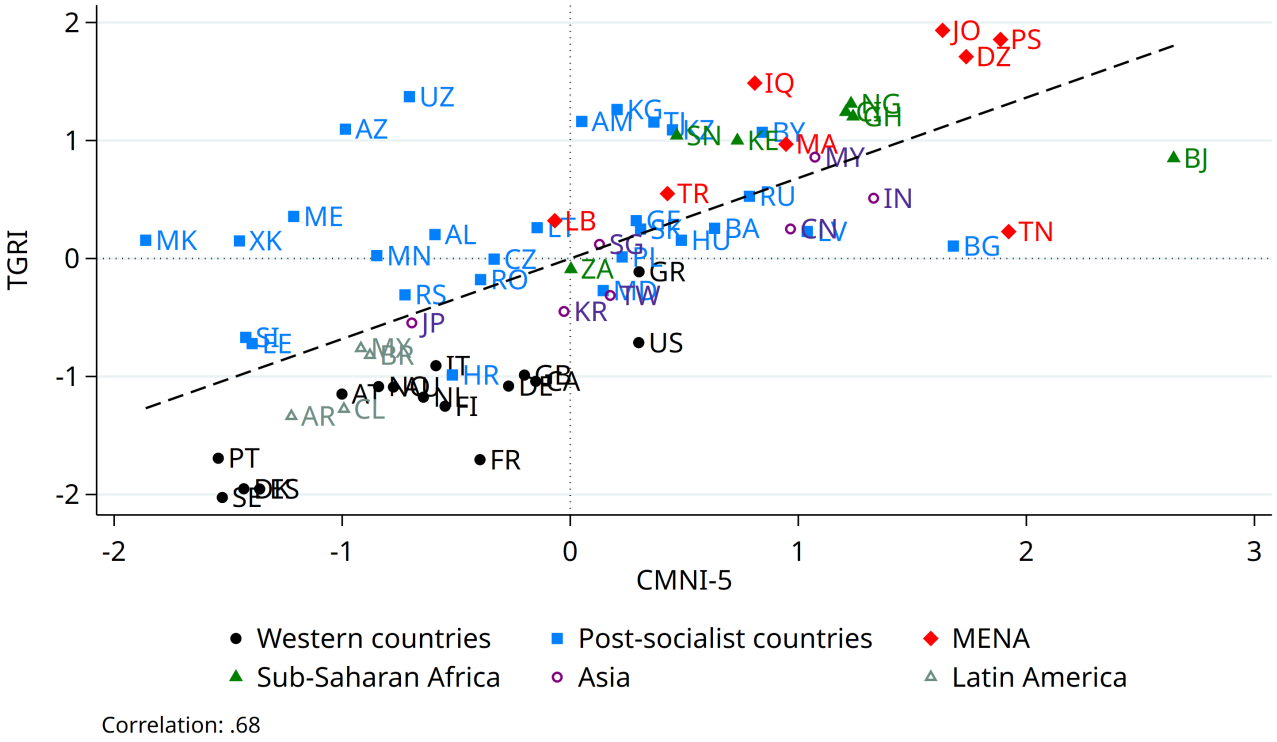
Notes: This figure displays the pair-wise individual correlation matrix between the five-item Conformity to Masculinity index (CMNI) and the Traditional Gender Roles Index (TGRI). Sample of male respondents only. Warmer colors indicate stronger positive correlations. Source: GMS (LiTS and online surveys).

Figure B4: Cross-Country Correlation Between CMNI and Hofstede Masculinity



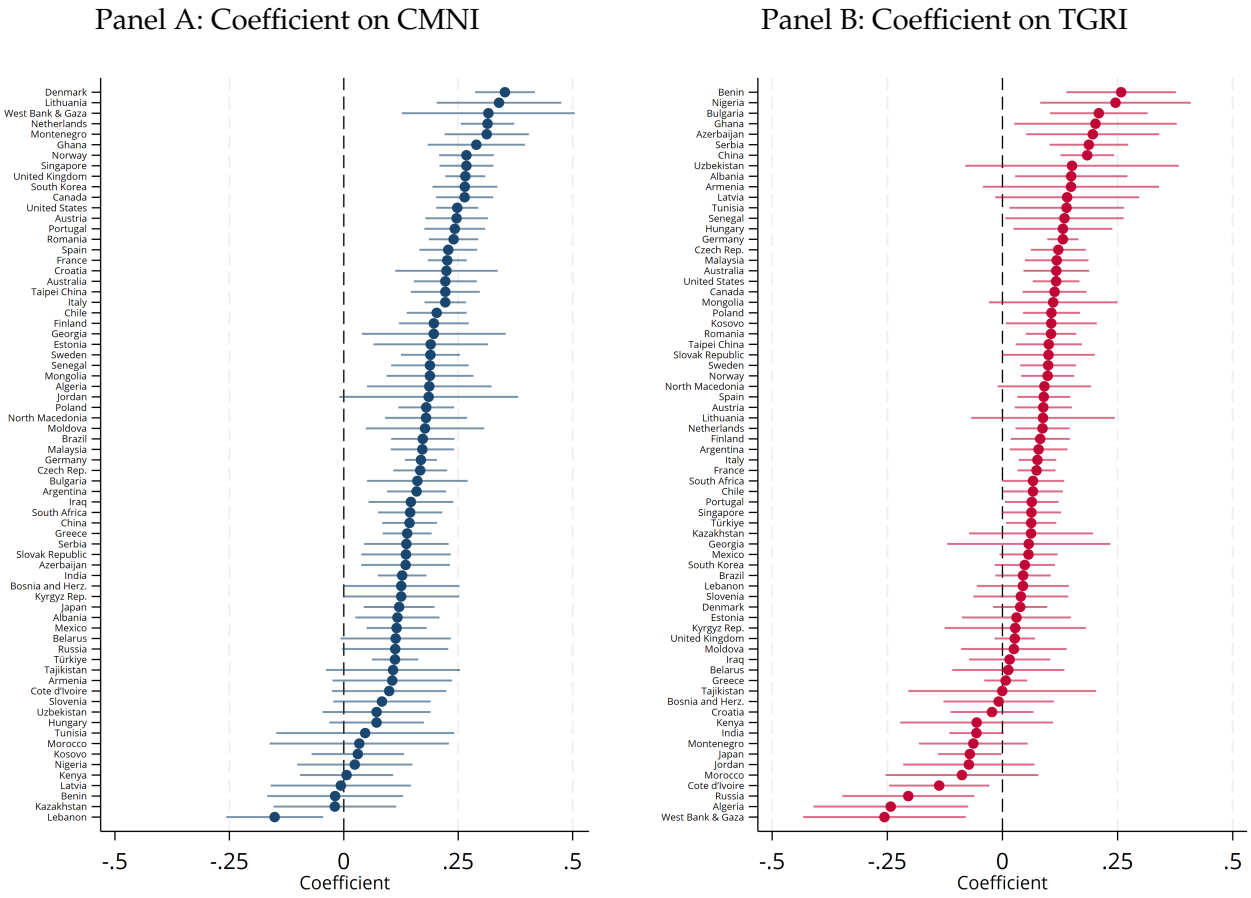
Notes: This figure displays the country-level correlation between the five-item Conformity to Masculinity Norms Index (CMNI) and Hofstede's masculinity dimension (Hofstede, 2001). Sample of male respondents only. Source: GMS (LiTS and online surveys); Hofstede (2001).

Figure B5: Cross-Country Correlation of Masculinity Norms and Gender Role Norms



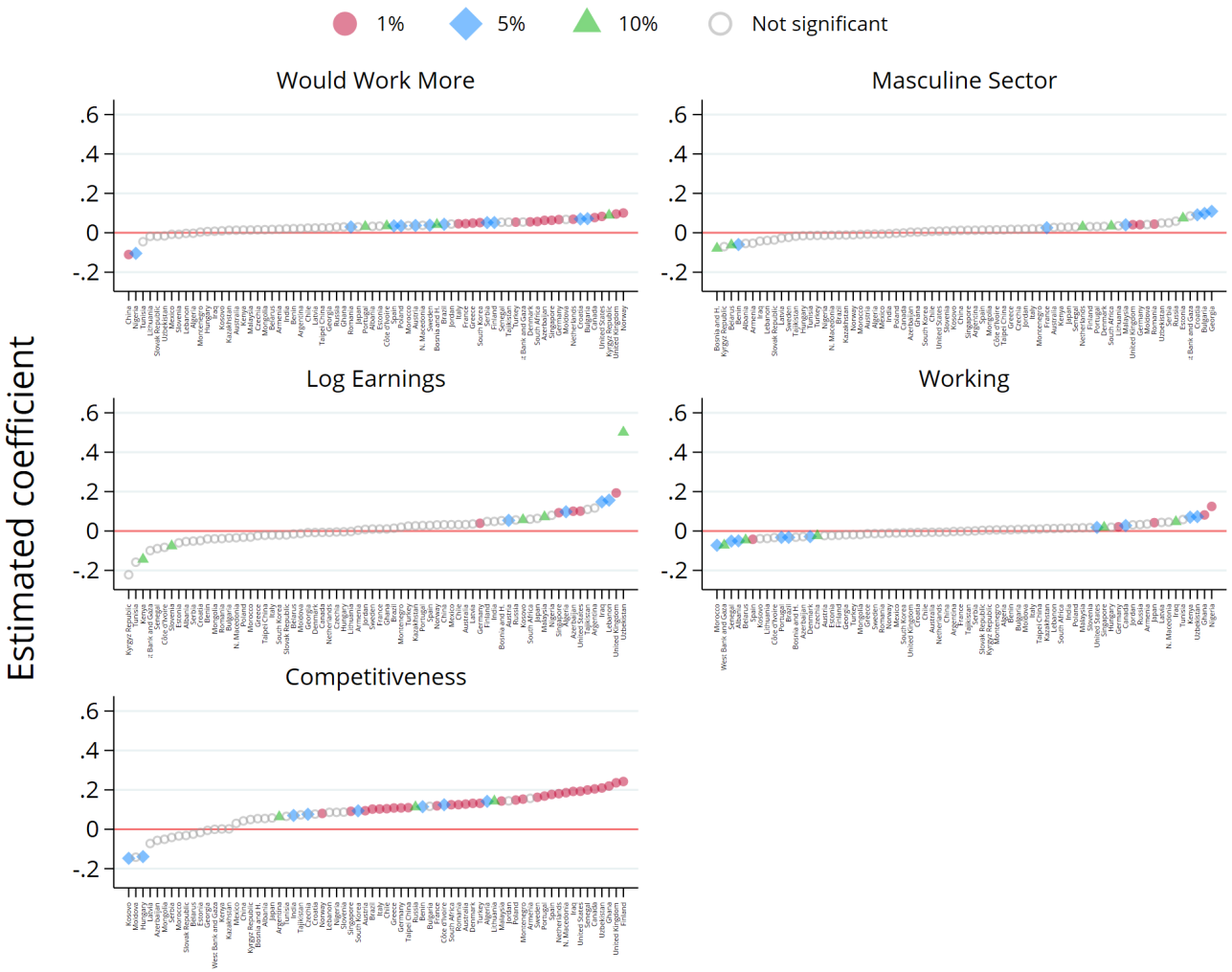
Notes: This figure displays a scatter plot and fitted linear regression of the five-item Conformity to Masculinity index (CMNI) and the Traditional Gender Roles Index (TGRI) across countries. Higher CMNI values indicate stronger adherence to masculinity norms, while higher TGRI values reflect more traditional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

Figure B6: Associations of CMNI and TGRI with a Summary Outcome Index, by Country



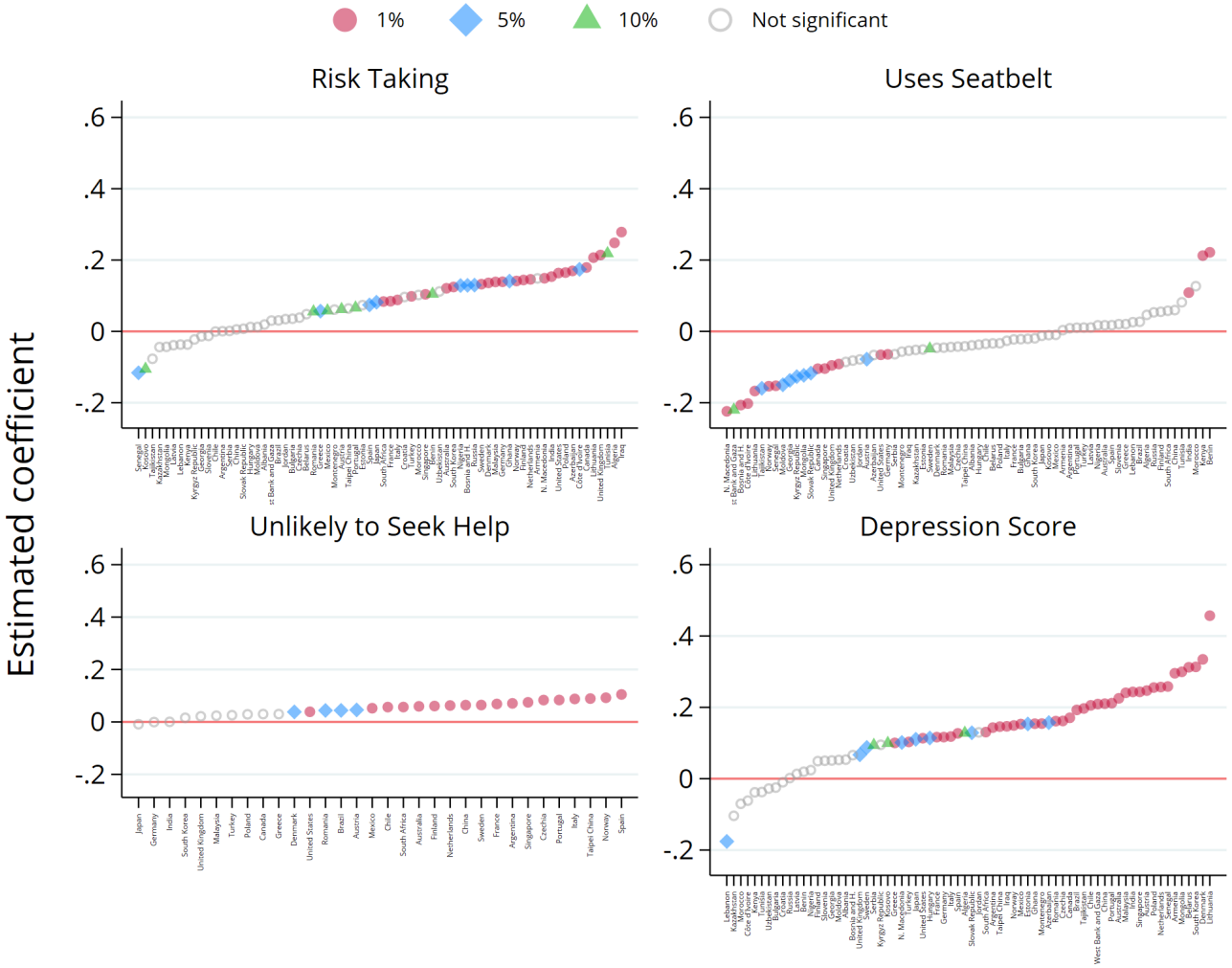
Notes: Panel A displays the coefficients on the CMNI, and Panel B the coefficients on the TGRI, from country-specific regressions of a summary index of all economic, health, and political outcomes regressed on both CMNI and TGRI, controlling for age and urbanity. The summary index is constructed as a standardized weighted index following the procedure described in Anderson (2008). Source: GMS (LiTS and online surveys).

Figure B7: Masculinity Norms by Country – Economics



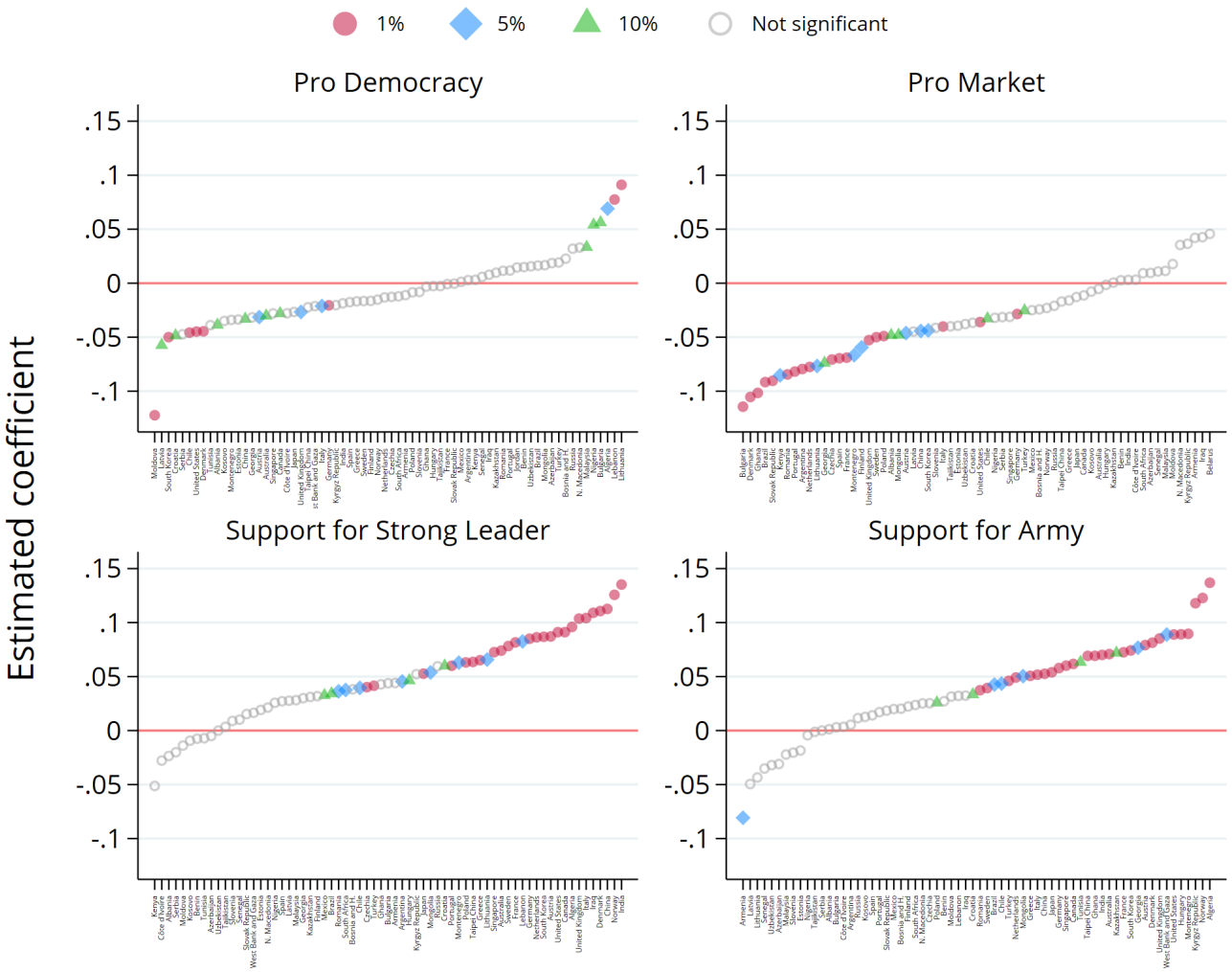
Notes: The dependent variables *Working*, *Would Work More*, and *Masculine Sector* are defined as dummies, whereas *Competitiveness* is standardized. See Table C4 for a more detailed description of these outcome variables. The chart reports the CMNI coefficients from an individual-level regression run separately for each country, controlling for the TGRI, age, urban status and survey type (online or LiTS). Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure B8: Masculinity Norms by Country – Risk and Health



Notes: The dependent variable *Unlikely to Seek Help* is defined as a dummy, whereas *Risk Taking*, *Uses Seatbelt* and *Depression Score* are standardized. See Table C4 for a more detailed description of the outcome variables. The chart reports the CMNI coefficients from an individual-level regression run separately for each country, controlling for the TGRI, age, urban status and survey type (online or LiTS). Sample of male respondents only. Source: GMS (LiTS and online surveys).

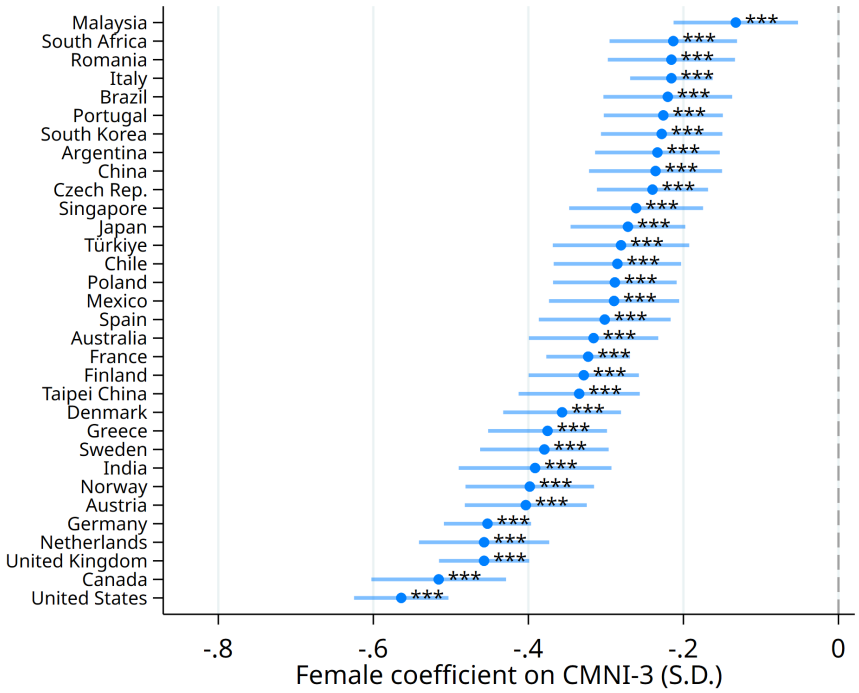
Figure B9: Masculinity Norms by Country – Politics



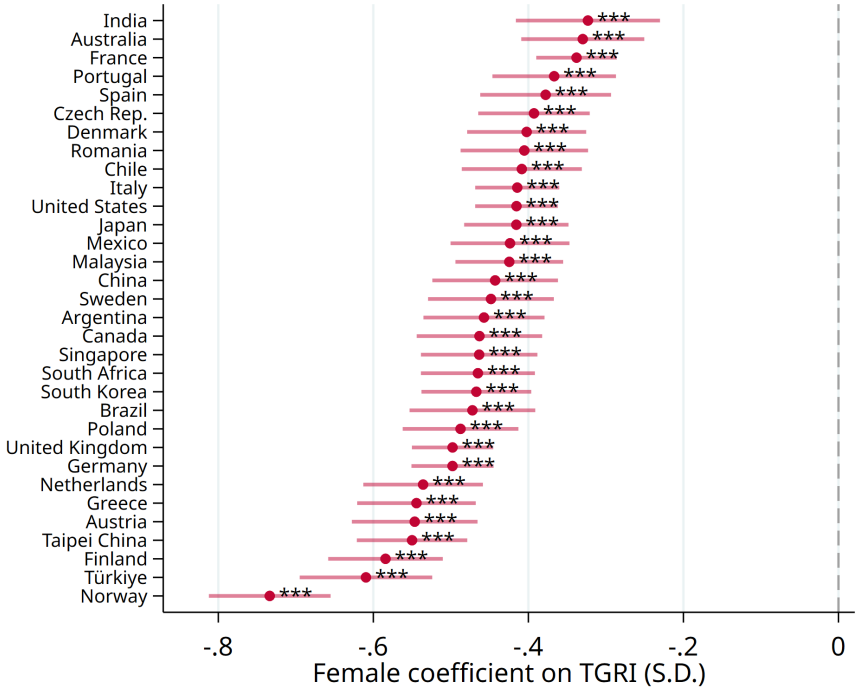
Notes: All dependent variables are defined as dummies. See Table C4 for a more detailed description of the outcome variables. The chart reports the CMNI coefficients from an individual-level regression run separately for each country, controlling for the TGRI, age, urban status and survey type (LiTS and online). Sample of male respondents only. Source: GMS (LiTS and online surveys).

Figure B10: Gender Gaps in Masculinity Norms and Gender Role Norms, By Country

Panel A: CMNI

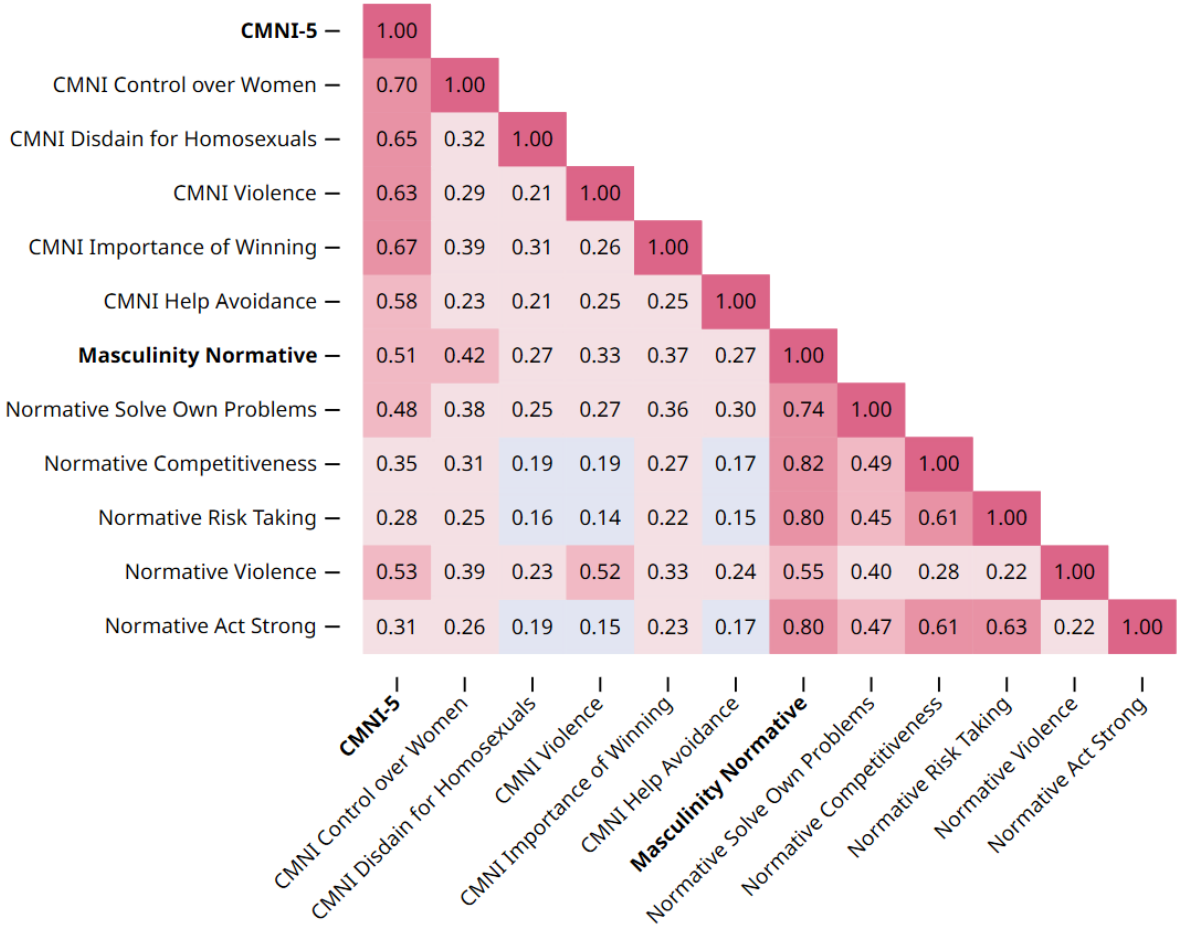


Panel B: TGRI



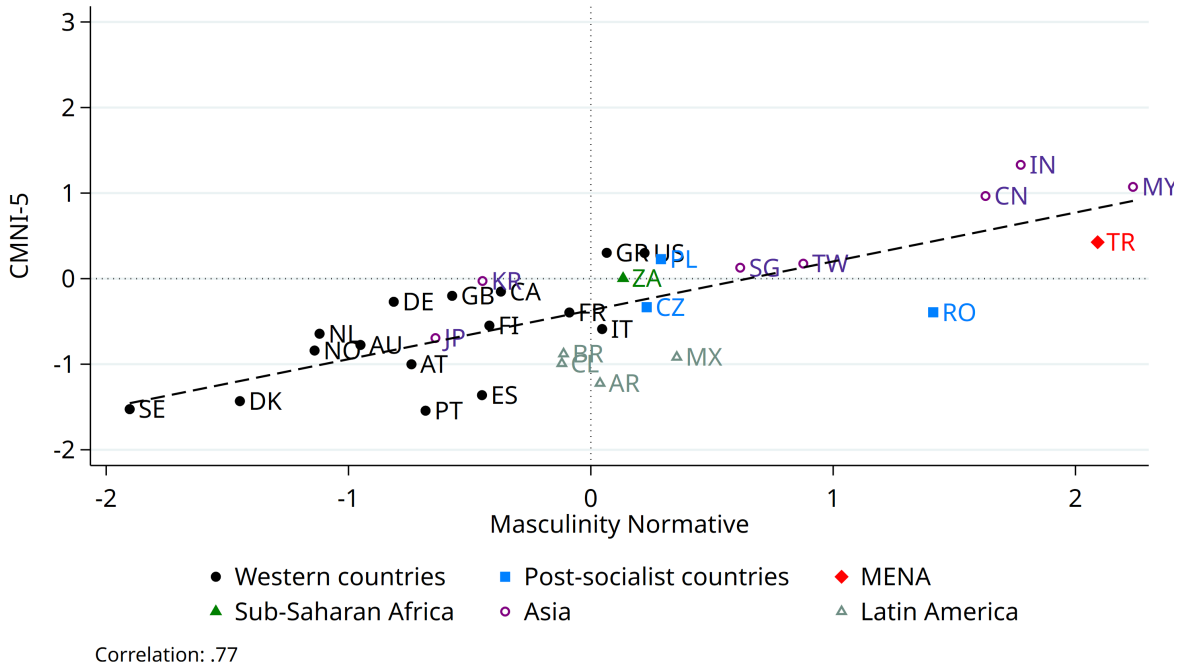
Notes: This figure displays the gender gap in the CMNI (Panel A) and TGRI (Panel B) indices across countries, estimated using country-specific regressions of standardized CMNI scores on a female dummy. Spikes reflect 95% confidence intervals based on robust standard errors. Source: GMS (online surveys).

Figure B11: Correlation Matrix CMNI and Normative Masculinity (Online Survey)



Notes: This figure displays the pair-wise individual correlation matrix between the five-item Conformity to Masculinity Index (CMNI) and the Normative Masculinity Index. Sample of male respondents only. Warmer colors indicate stronger positive correlations. Source: GMS (Online surveys).

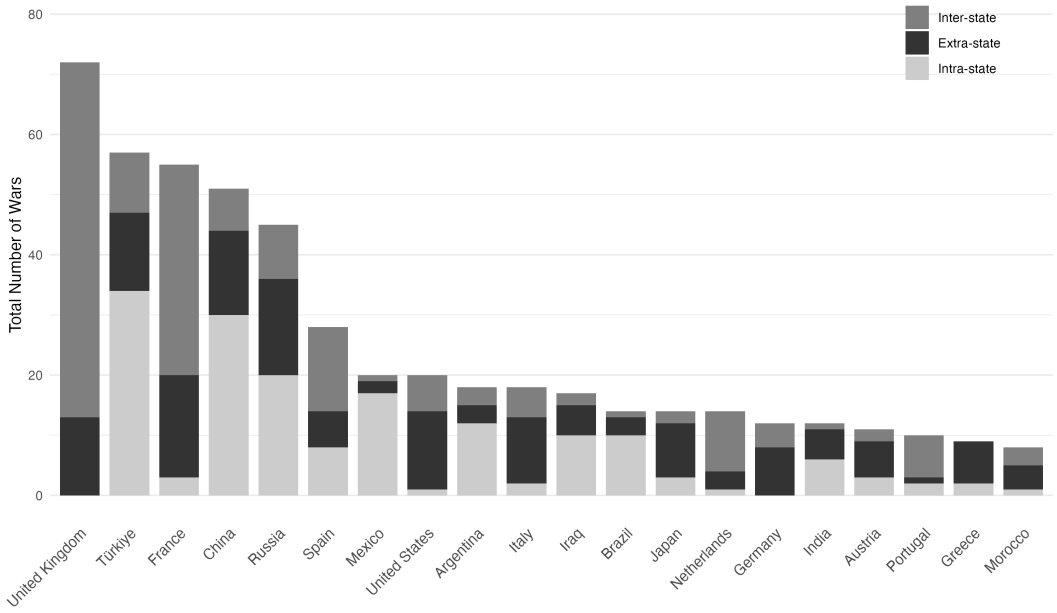
Figure B12: Cross-Country Correlations: CMNI and Normative Masculinity Norms



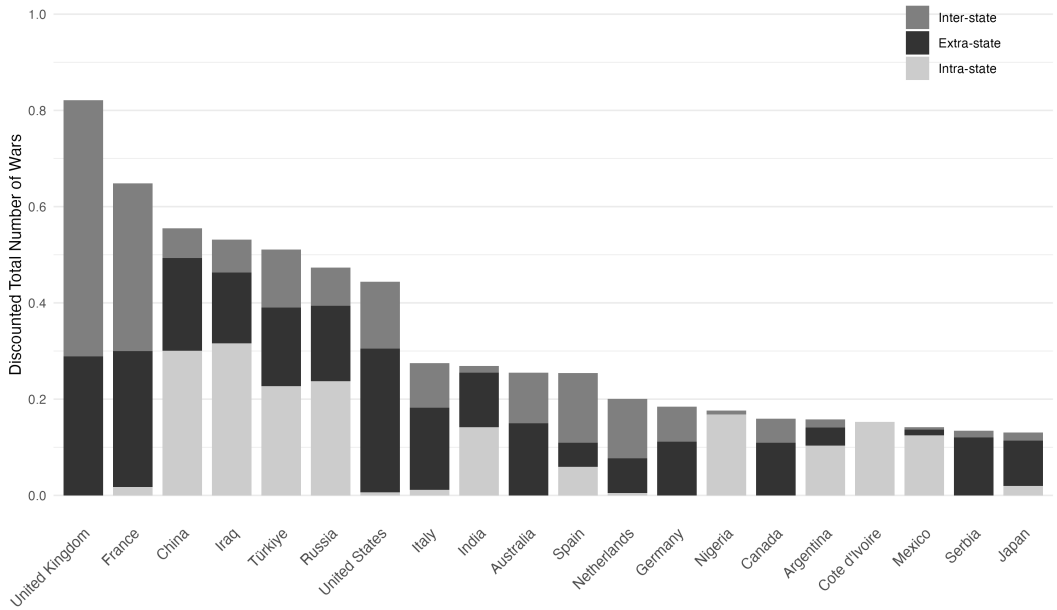
Notes: Scatter plot at the country level of the CMNI and the Normative Masculinity Index. Source: GMS (online surveys).

Figure B13: Number and Categories of Conflicts Across Countries: Top 20 Countries

Panel A: Cumulative Measure of Conflict

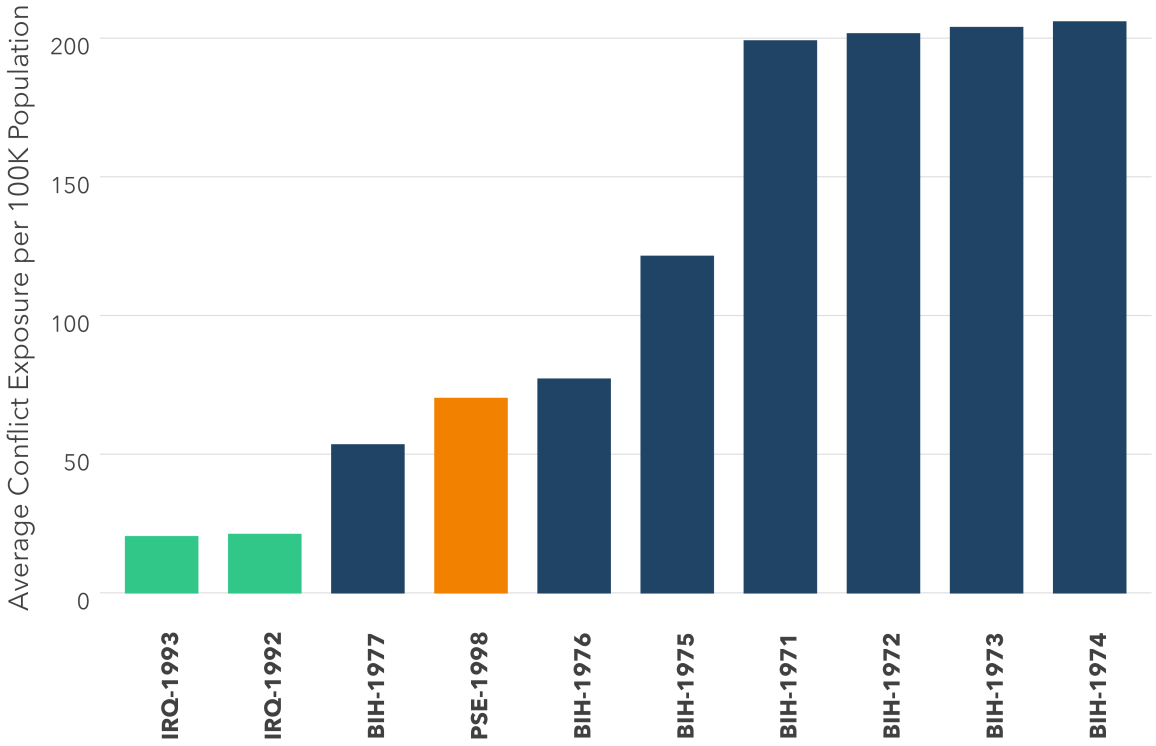


Panel B: Time-discounted Measure of Conflict



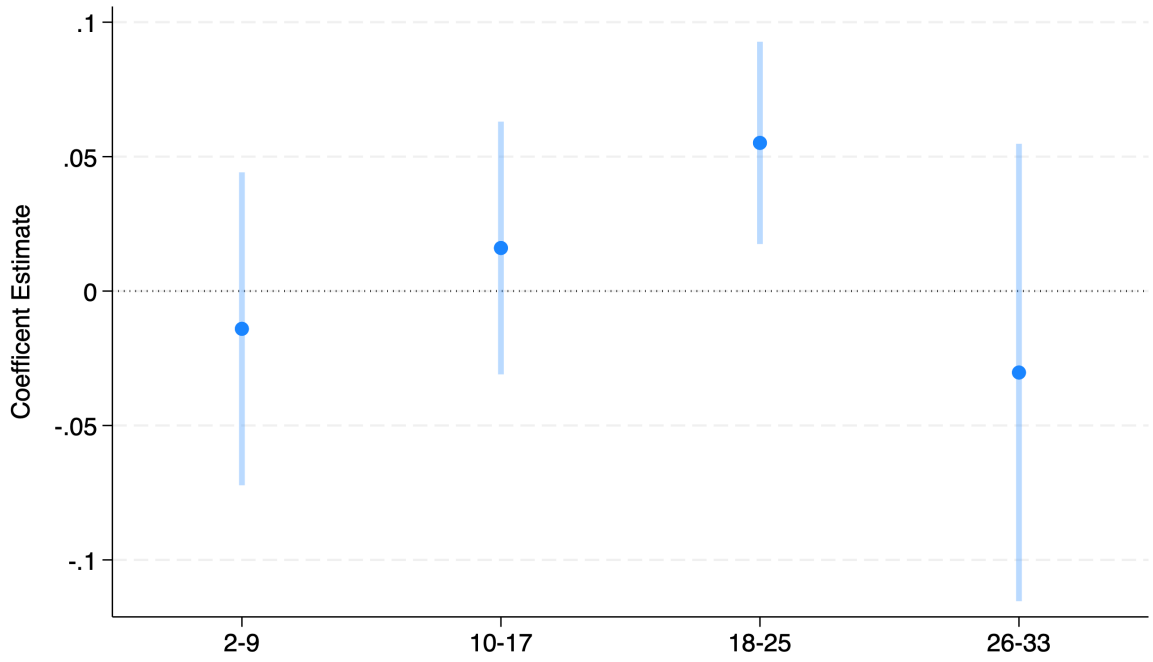
Notes: Panel A shows the total number of wars per country based on the simple cumulative measure. Panel B displays the same data using the time-discounted measure. Both graphs are broken down into the three conflict categories: inter-state (dark gray), extra-state (black), and intra-state (light gray).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

Figure B14: Top 10 Country Cohorts by Average Conflict Exposure



Notes: This figure shows the top ten cohorts by average conflict exposure per 100,000 population in our main Table 4 sample. IRQ refers to Iraq, BIH to Bosnia and Herzegovina and PSE to West Bank and Gaza.

Figure B15: Varying the Impressionable Age Window for Conflict Exposure



Notes: This figure presents estimates from four separate regressions based on the specification in column 1 of Table 4, where the "impressionable years" over which conflict exposure is measured is defined as 2-9, 10-17, 18-25 (as in the main specification), and 26-33.

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 Herz.	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 Rep.	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 Rep.	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
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	Slovak Republic	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: Summary Statistics – Demographics

	Full sample				Men			Women		
	Min	Max	Mean	SD	N	Mean	SD	N	Mean	SD
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

Notes: This table presents summary statistics (*min*, *max*, *mean* and *standard deviation*) for the main respondent characteristics used in this paper, except the CMNI and TGRI indices and subitems (see Table C3). Statistics are presented for the combined LiTS and online samples as well as separately for men and women.

Table C3: Summary Statistics – Masculinity Norms And Gender Role Norms

	Full sample				Men			Women		
	Min	Max	Mean	SD	N	Mean	SD	N	Mean	SD
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 Control over Women (1-4)	1	4	2.17	1.01	57,458	2.36	1.00	37,506	1.86	0.93
CMNI Help Avoidance (1-4)	1	4	2.62	0.88	58,753	2.63	0.90	38,073	2.61	0.85
CMNI Disdain for Homosexuals (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

Notes: This table presents summary statistics for the CMNI, TGRI, and their subitems based on LiTS and online surveys, separately for men and women.

Table C4: Outcomes Description

Domain	Variable Name	Question(s)	Variable Description
Economics	Working	How many hours do you work in your main job during a typical week?	= 1 if declared working positive hours, conditional on being employed
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). 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 *Agriculture, Forestry, and Fishing*, *Mining*, *Construction*, *Manufacturing* or *Transportation and Public utilities*
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 and 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 *Having a democratic political system* 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 *A market economy is preferable to any other form of economic system*
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 *Having a strong leader who does not have to bother with parliament and elections* 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 *Having the army rule* 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 C5: Summary Statistics – Outcome Variables

	Full sample				Men			Women		
	Min	Max	Mean	SD	N	Mean	SD	N	Mean	SD
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
Risk-Taking (1-10)	1	10	5.62	2.68	60,557	6.00	2.61	64,238	5.23	2.70
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
Would Work More (=1)	0	1	0.27	0.44	46,667	0.29	0.45	39,431	0.24	0.43
Log Earnings	-2.50	14.3	9.80	1.33	44,725	9.89	1.32	37,683	9.68	1.34
Working (=1)	0	1	0.69	0.46	60,669	0.76	0.43	64,478	0.62	0.48
Masculine Sector (=1)	0	1	0.27	0.44	46,685	0.36	0.48	39,443	0.16	0.36
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
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 presents summary statistics (*min*, *max*, *mean* and *standard deviation*) for all the variables used in this paper, except the CMNI and TGRI indices and subitems (see Table C3). The table presents the statistics for the full GMS (LiTS and online surveys) and separately for men and women.

Table C6: Masculinity Dimensions – Economics

	Would Work More		Masculine Sector		Log earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Masculinity - Importance of Winning										
CMNI Importance of Winning	0.046***	0.045***	0.014***	0.014***	0.039***	0.036***	0.001	-0.000	0.140***	0.138***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.014)	(0.012)	(0.003)	(0.003)	(0.014)	(0.013)
TGRI Score	0.032***	0.028***	0.028***	0.025***	-0.008	-0.006	0.011***	0.011***	-0.070***	-0.069***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.012)	(0.010)	(0.004)	(0.003)	(0.013)	(0.012)
Mean of outcome	0.30	0.30	0.35	0.35	9.93	9.93	0.78	0.78	0.00	0.00
R-squared	0.12	0.12	0.05	0.07	0.57	0.59	0.13	0.15	0.15	0.16
Observations	45,184	45,184	45,201	45,201	43,449	43,449	58,292	58,292	58,292	58,292
Panel B: Masculinity - Violence										
CMNI Violence	0.013***	0.013***	-0.000	0.001	-0.005	-0.007	-0.007***	-0.008***	0.029***	0.030***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.006)	(0.005)	(0.002)	(0.002)	(0.007)	(0.007)
TGRI Score	0.042***	0.037***	0.032***	0.029***	0.004	0.005	0.014***	0.013***	-0.042***	-0.042***
	(0.005)	(0.005)	(0.003)	(0.003)	(0.015)	(0.012)	(0.004)	(0.003)	(0.015)	(0.014)
Mean of outcome	0.29	0.29	0.35	0.35	9.93	9.93	0.77	0.77	0.00	0.00
R-squared	0.11	0.11	0.05	0.07	0.57	0.59	0.13	0.15	0.14	0.15
Observations	45,230	45,230	45,247	45,247	43,485	43,485	58,403	58,403	58,403	58,403
Panel C: Masculinity - Help Avoidance										
CMNI Help Avoidance	0.016***	0.016***	0.003	0.002	-0.012	-0.009	-0.007***	-0.007***	0.017**	0.017**
	(0.004)	(0.004)	(0.002)	(0.002)	(0.007)	(0.007)	(0.002)	(0.002)	(0.008)	(0.008)
TGRI Score	0.043***	0.039***	0.032***	0.029***	0.005	0.006	0.013***	0.012***	-0.036**	-0.037***
	(0.005)	(0.005)	(0.003)	(0.003)	(0.015)	(0.012)	(0.004)	(0.003)	(0.015)	(0.014)
Mean of outcome	0.29	0.29	0.35	0.35	9.93	9.93	0.78	0.78	0.00	0.00
R-squared	0.11	0.11	0.05	0.07	0.56	0.59	0.13	0.15	0.14	0.15
Observations	45,470	45,470	45,487	45,487	43,735	43,735	58,670	58,670	58,670	58,670
Panel D: Masculinity - Control over Women										
CMNI Control over Women	0.046***	0.045***	0.013***	0.013***	0.044***	0.041***	0.008*	0.007*	0.100***	0.098***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.016)	(0.013)	(0.004)	(0.004)	(0.018)	(0.016)
TGRI Score	0.029***	0.025***	0.027***	0.025***	-0.013	-0.011	0.009**	0.008**	-0.067***	-0.066***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.012)	(0.011)	(0.004)	(0.003)	(0.013)	(0.013)
Mean of outcome	0.30	0.30	0.35	0.35	9.92	9.92	0.77	0.77	0.00	0.00
R-squared	0.12	0.12	0.05	0.07	0.57	0.60	0.14	0.16	0.15	0.16
Observations	44,358	44,358	44,376	44,376	42,620	42,620	57,369	57,369	57,369	57,369
Panel E: Masculinity - Disdain for Homosexuals										
CMNI Disdain for Homosexuals	0.010***	0.009**	0.011***	0.012***	0.036***	0.032***	0.000	-0.001	0.053***	0.051***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.009)	(0.007)	(0.003)	(0.003)	(0.009)	(0.009)
TGRI Score	0.045***	0.040***	0.031***	0.028***	-0.004	-0.002	0.011***	0.011***	-0.045***	-0.045***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.015)	(0.012)	(0.004)	(0.003)	(0.015)	(0.013)
Mean of outcome	0.30	0.30	0.35	0.35	9.96	9.96	0.79	0.79	0.01	0.01
R-squared	0.11	0.12	0.05	0.07	0.56	0.59	0.12	0.15	0.14	0.15
Observations	42,999	42,999	43,017	43,017	41,466	41,466	54,780	54,780	54,780	54,780
Country FEs	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×

Notes: OLS regressions. An observation is a male GMS respondent. Dependent variables: *Would Work More* (columns 1-2, dummy = 1 if respondent would like to work more hours), *Masculine Sector* (columns 3-4, dummy = 1 if employed in masculine sector), *Log Earnings* (columns 5-6, natural log of annual labor earnings in US$ from main and side jobs), *Working* (columns 7-8, dummy = 1 if working), *Competitiveness* (columns 9-10, standardized). See Table C4 for variable definitions. CMNI subitems and TGRI are standardized. Standard errors clustered at country level in parentheses. *** p<0.01, $**p < 0.05$, $p0.05$, $*p0.05$, p <0.1. Source: GMS (LiTS and online surveys).

Table C7: 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***	0.123***	-0.031***	-0.030***	0.013***	0.015***	0.044***	0.046***
	(0.012)	(0.011)	(0.008)	(0.008)	(0.004)	(0.004)	(0.009)	(0.008)
TGRI Score	0.017	0.013	-0.127***	-0.121***	0.016***	0.023***	0.042***	0.043***
	(0.011)	(0.010)	(0.010)	(0.010)	(0.006)	(0.005)	(0.009)	(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***	0.049***	-0.034***	-0.034***	0.028***	0.028***	0.126***	0.126***
	(0.007)	(0.007)	(0.008)	(0.007)	(0.004)	(0.004)	(0.008)	(0.008)
TGRI Score	0.036***	0.031**	-0.126***	-0.119***	0.012**	0.020***	0.017**	0.018**
	(0.013)	(0.012)	(0.011)	(0.010)	(0.005)	(0.005)	(0.008)	(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 - Help Avoidance								
CMNI Help Avoidance	0.008	0.009	-0.023***	-0.023***	0.049***	0.048***	0.170***	0.169***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.004)	(0.004)	(0.012)	(0.011)
TGRI Score	0.050***	0.044***	-0.132***	-0.125***	0.011*	0.018***	0.026***	0.027***
	(0.014)	(0.013)	(0.010)	(0.010)	(0.006)	(0.005)	(0.009)	(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 - Control over Women								
CMNI Control over Women	0.096***	0.093***	-0.021*	-0.019	0.025***	0.028***	0.054***	0.056***
	(0.012)	(0.011)	(0.012)	(0.012)	(0.006)	(0.005)	(0.012)	(0.012)
TGRI Score	0.018	0.014	-0.128***	-0.122***	0.010	0.016***	0.035***	0.036***
	(0.012)	(0.011)	(0.012)	(0.011)	(0.006)	(0.006)	(0.010)	(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 - Disdain for Homosexuals								
CMNI Disdain for Homosexuals	0.019**	0.017**	0.001	0.001	0.023***	0.025***	0.016*	0.018**
	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.009)	(0.009)
TGRI Score	0.048***	0.042***	-0.143***	-0.136***	0.015**	0.023***	0.055***	0.056***
	(0.014)	(0.013)	(0.010)	(0.010)	(0.006)	(0.005)	(0.009)	(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
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 very 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 C4 for variable definitions. CMNI subitems and TGRI are standardized. Standard errors clustered at country level in parentheses. *** p<0.01, $**$ $p < 0.05$, $p0.05$, $*p0.05$, p <0.1. Source: GMS (LiTS and online surveys).

Table C8: 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***	-0.010***	-0.008**	-0.009**	0.063***	0.062***	0.050***	0.049***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)
TGRI Score	-0.067***	-0.066***	0.004	-0.000	0.080***	0.074***	0.079***	0.073***
	(0.004)	(0.004)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(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***	-0.014***	-0.041***	-0.041***	0.028***	0.029***	0.024***	0.024***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)
TGRI Score	-0.066***	-0.064***	0.014*	0.010	0.089***	0.083***	0.085***	0.079***
	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(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 - Help Avoidance								
CMNI Help Avoidance	-0.001	-0.001	-0.024***	-0.023***	0.017***	0.018***	0.009***	0.010***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
TGRI Score	-0.069***	-0.068***	0.005	0.001	0.095***	0.089***	0.091***	0.085***
	(0.005)	(0.005)	(0.008)	(0.007)	(0.008)	(0.007)	(0.006)	(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 - Control over Women								
CMNI Control over Women	-0.013***	-0.013***	-0.027***	-0.029***	0.062***	0.060***	0.045***	0.043***
	(0.004)	(0.004)	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
TGRI Score	-0.065***	-0.064***	0.012	0.008	0.075***	0.070***	0.077***	0.072***
	(0.005)	(0.004)	(0.009)	(0.008)	(0.006)	(0.005)	(0.006)	(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 - Disdain for Homosexuals								
CMNI Disdain for Homosexuals	0.002	0.002	-0.017***	-0.018***	0.026***	0.025***	0.014***	0.014***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
TGRI Score	-0.073***	-0.072***	0.003	-0.001	0.094***	0.088***	0.092***	0.086***
	(0.005)	(0.005)	(0.008)	(0.007)	(0.007)	(0.007)	(0.006)	(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
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is a GMS respondent. Dependent variables are defined as dummies equal to 1 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 C4. 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 C9: Masculinity and Economic, Health, and Political Outcomes – Male vs Female Samples

	Would Work More		Masculine Sector		Log Earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Economics										
CMNI-3	0.039***	0.037***	0.007**	0.008***	0.016	0.015	-0.003	-0.001	0.119***	0.099***
	(0.007)	(0.005)	(0.003)	(0.002)	(0.012)	(0.018)	(0.002)	(0.004)	(0.010)	(0.015)
TGRI	0.041***	0.037***	0.026***	0.015***	0.011	-0.006	0.023***	0.016**	-0.071***	-0.089***
	(0.006)	(0.005)	(0.004)	(0.004)	(0.015)	(0.014)	(0.004)	(0.006)	(0.019)	(0.018)
R-squared	0.10	0.09	0.03	0.04	0.36	0.29	0.02	0.03	0.17	0.17
Observations	35,462	29,269	35,480	29,281	35,480	29,281	41,642	38,484	41,642	38,482
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***	0.106***	-0.034***	-0.039***	0.045***	0.039***	0.198***	0.186***
	(0.011)	(0.021)	(0.011)	(0.011)	(0.005)	(0.006)	(0.010)	(0.010)
TGRI	0.046***	0.048*	-0.146***	-0.195***	0.003	0.009	-0.035***	-0.074***
	(0.014)	(0.027)	(0.014)	(0.012)	(0.005)	(0.007)	(0.012)	(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
Panel C: Politics								
CMNI-3	-0.014***	-0.018***	-0.039***	-0.037***	0.060***	0.049***	0.040***	0.037***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.003)
TGRI	-0.076***	-0.070***	0.029***	0.049***	0.091***	0.081***	0.092***	0.078***
	(0.006)	(0.007)	(0.006)	(0.008)	(0.007)	(0.007)	(0.007)	(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 C4. The CMNI 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 C10: Masculinity and the Effect of Female Interviewers

	CMNI-5		Importance of Winning		Violence		Help Avoidance		Control over Women		Disdain for Homosexuals	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female interviewer	-0.045	-0.045	-0.028	-0.028	-0.136***	-0.136***	0.057	0.057	-0.028	-0.028	-0.020	-0.020
	(0.053)	(0.053)	(0.055)	(0.055)	(0.044)	(0.044)	(0.047)	(0.047)	(0.059)	(0.059)	(0.051)	(0.051)
Mean of outcome	0.01	0.01	-0.01	-0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.03	0.03
R-squared	0.14	0.14	0.13	0.13	0.07	0.07	0.07	0.07	0.23	0.23	0.14	0.14
Observations	18,219	18,219	17,443	17,443	17,584	17,584	17,534	17,534	17,558	17,558	15,200	15,200
Country FEs	×	×	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. The dependent variables correspond to the standardized CMNI index and its subitems. *Female interviewer* is defined as a dummy equal to 1 if the interviewer in LiTS was a woman, and 0 otherwise. 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 C11: Gender Role Norms and the Effect of Female Interviewers

	TGRI		Political Leaders		Business Executives		Household Chores		Responsibility for the Home		Contribute to Household Income		Women Take Care of Household	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Female interviewer	-0.105**	-0.105**	-0.134***	-0.134***	-0.060	-0.060	-0.088*	-0.088*	-0.025	-0.025	0.016	0.016	-0.046	-0.046
	(0.049)	(0.049)	(0.042)	(0.042)	(0.039)	(0.039)	(0.051)	(0.051)	(0.062)	(0.062)	(0.053)	(0.053)	(0.038)	(0.038)
Mean of outcome	-0.02	-0.02	0.13	0.13	0.12	0.12	0.08	0.08	0.09	0.09	0.05	0.05	0.06	0.06
R-squared	0.12	0.12	0.05	0.05	0.07	0.07	0.10	0.10	0.03	0.03	0.06	0.06	0.09	0.09
Observations	18,596	18,596	18,181	18,181	17,963	17,963	18,121	18,121	18,242	18,242	18,212	18,212	17,954	17,954
Country FEs	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. The dependent variables correspond to the standardized TGRI index and its subitems. *Female interviewer* is defined as a dummy equal to 1 if the interviewer in LiTS was a woman, and 0 otherwise. 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 C12: Masculinity (CMNI) and Gender Role Norms – Economics (Controlling for Female Interviewer)

	Would Work More		Masculine Sector		Log earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Masculinity Norms										
CMNI-5 Score	0.021***	0.020***	0.020***	0.015**	0.001	0.011	0.001	0.004	0.037**	0.044**
	(0.005)	(0.005)	(0.007)	(0.007)	(0.022)	(0.022)	(0.008)	(0.007)	(0.017)	(0.016)
Female interviewer	0.001	0.001	0.011	0.004	0.019	0.034	-0.006	-0.001	-0.058	-0.046
	(0.017)	(0.017)	(0.022)	(0.019)	(0.052)	(0.051)	(0.018)	(0.016)	(0.053)	(0.049)
Mean of outcome	0.17	0.17	0.44	0.44	8.65	8.65	0.59	0.59	-0.02	-0.02
R-squared	0.11	0.11	0.07	0.11	0.63	0.64	0.12	0.14	0.11	0.13
Observations	10,754	10,754	10,754	10,754	8,891	8,891	18,219	18,219	18,219	18,219
Panel B: Gender Role Norms										
TGRI Score	0.001	-0.002	0.040***	0.026***	-0.042***	-0.018	-0.004	0.004	-0.050***	-0.031**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.011)	(0.011)	(0.006)	(0.005)	(0.014)	(0.014)
Female interviewer	-0.001	-0.002	0.013	0.005	0.016	0.033	-0.005	0.002	-0.065	-0.051
	(0.017)	(0.017)	(0.021)	(0.018)	(0.050)	(0.049)	(0.017)	(0.016)	(0.052)	(0.048)
Mean of outcome	0.17	0.17	0.44	0.44	8.64	8.64	0.59	0.59	-0.02	-0.02
R-squared	0.11	0.11	0.07	0.11	0.63	0.64	0.12	0.14	0.11	0.13
Observations	10,953	10,953	10,953	10,953	9,030	9,030	18,596	18,596	18,596	18,596
Panel C: Masculinity and Gender Role Norms										
CMNI-5 Score	0.021***	0.021***	0.012*	0.010	0.011	0.016	0.002	0.004	0.049***	0.052***
	(0.006)	(0.006)	(0.007)	(0.007)	(0.023)	(0.022)	(0.008)	(0.008)	(0.016)	(0.016)
TGRI Score	-0.004	-0.007	0.037***	0.023***	-0.046***	-0.022*	-0.003	0.005	-0.059***	-0.042***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.012)	(0.012)	(0.006)	(0.006)	(0.014)	(0.014)
Female interviewer	0.001	-0.000	0.014	0.006	0.017	0.034	-0.006	-0.001	-0.064	-0.051
	(0.017)	(0.017)	(0.021)	(0.019)	(0.053)	(0.051)	(0.018)	(0.016)	(0.053)	(0.049)
Mean of outcome	0.17	0.17	0.44	0.44	8.65	8.65	0.59	0.59	-0.02	-0.02
R-squared	0.11	0.11	0.07	0.11	0.63	0.65	0.12	0.14	0.11	0.13
Observations	10,715	10,715	10,715	10,715	8,865	8,865	18,130	18,130	18,130	18,130
Country FEs	×	×	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. The dependent variable *Would Work More* (columns 1-2) is a dummy equal to 1 if the individual would like to work more hours. *Masculine Sector* (columns 3-4) equals 1 if the individual was employed in a masculine sector. *Log earnings* (columns 5-6) 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$. *Working* (columns 7-8) equals 1 if the individual was working. *Competitiveness* (columns 9-10) was measured on a scale from 1 ("not competitive at all") to 10 ("very competitive") and is standardized. For more details on the definitions of the dependent variables, see Table C4. 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: LiTS.

Table C13: Masculinity and Gender Role Norms – Risk and Health (Controlling for Female Interviewer)

	Risk Taking		Uses Seatbelt		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Masculinity Norms						
CMNI-5 Score	0.055***	0.059***	-0.063***	-0.060***	0.103***	0.100***
	(0.015)	(0.015)	(0.014)	(0.014)	(0.018)	(0.018)
Female interviewer	-0.046	-0.037	0.096*	0.102*	0.058	0.053
	(0.039)	(0.037)	(0.051)	(0.052)	(0.039)	(0.039)
Mean of outcome	-0.03	-0.03	0.00	0.00	-0.01	-0.01
R-squared	0.09	0.10	0.21	0.22	0.25	0.25
Observations	18,126	18,126	17,634	17,634	17,971	17,971
Panel B: Gender Role Norms						
TGRI Score	-0.021*	-0.010	-0.068***	-0.062***	0.048***	0.040***
	(0.012)	(0.011)	(0.014)	(0.014)	(0.014)	(0.013)
Female interviewer	-0.046	-0.036	0.089*	0.095*	0.055	0.049
	(0.040)	(0.038)	(0.049)	(0.050)	(0.037)	(0.038)
Mean of outcome	-0.03	-0.03	0.01	0.01	-0.01	-0.01
R-squared	0.09	0.10	0.21	0.21	0.24	0.25
Observations	18,499	18,499	17,992	17,992	18,316	18,316
Panel C: Masculinity and Gender Role Norms						
CMNI-5 Score	0.062***	0.063***	-0.052***	-0.051***	0.095***	0.094***
	(0.016)	(0.015)	(0.015)	(0.015)	(0.018)	(0.018)
TGRI Score	-0.033***	-0.023**	-0.058***	-0.052***	0.028**	0.020
	(0.012)	(0.011)	(0.015)	(0.015)	(0.013)	(0.013)
Female interviewer	-0.047	-0.038	0.088*	0.094*	0.061	0.056
	(0.040)	(0.038)	(0.049)	(0.050)	(0.039)	(0.039)
Mean of outcome	-0.02	-0.02	0.00	0.00	-0.01	-0.01
R-squared	0.10	0.10	0.21	0.22	0.25	0.26
Observations	18,042	18,042	17,549	17,549	17,900	17,900
Country FEs	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. 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 willing to take risk"). *Uses Seatbelt* (columns 3-4) is the mean of three questions on seatbelt use. *Depression Score* (columns 5-6) is the mean of four questions measuring depression. For more details on the definitions of the dependent variables, see Table C4. 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: LiTS.

Table C14: Masculinity and Gender Role Norms – Politics (Controlling for Female Interviewer)

	Pro Democracy		Pro Market		Support for Strong Leader		Support for Army	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms								
CMNI-5 Score	-0.003	-0.002	-0.031***	-0.029***	0.032***	0.031***	0.035***	0.033***
	(0.006)	(0.006)	(0.009)	(0.009)	(0.006)	(0.005)	(0.009)	(0.008)
Female interviewer	0.005	0.008	0.011	0.013	-0.010	-0.012	0.035	0.029
	(0.013)	(0.013)	(0.022)	(0.022)	(0.024)	(0.023)	(0.023)	(0.023)
Mean of outcome	0.82	0.82	0.46	0.46	0.45	0.45	0.33	0.33
R-squared	0.05	0.05	0.06	0.06	0.16	0.17	0.20	0.21
Observations	16,366	16,366	15,103	15,103	15,773	15,773	15,688	15,688
Panel B: Gender Role Norms								
TGRI Score	-0.028***	-0.025***	-0.026**	-0.021*	0.034***	0.031***	0.037***	0.030***
	(0.005)	(0.005)	(0.012)	(0.012)	(0.007)	(0.007)	(0.007)	(0.007)
Female interviewer	0.000	0.003	0.012	0.015	-0.009	-0.011	0.038	0.032
	(0.012)	(0.012)	(0.021)	(0.022)	(0.023)	(0.023)	(0.023)	(0.024)
Mean of outcome	0.82	0.82	0.46	0.46	0.45	0.45	0.34	0.34
R-squared	0.05	0.06	0.05	0.06	0.17	0.17	0.21	0.22
Observations	16,645	16,645	15,410	15,410	16,056	16,056	15,975	15,975
Panel C: Masculinity and Gender Role Norms								
CMNI-5 Score	0.004	0.003	-0.027***	-0.026***	0.026***	0.025***	0.027***	0.027***
	(0.006)	(0.006)	(0.008)	(0.008)	(0.006)	(0.006)	(0.008)	(0.008)
TGRI Score	-0.029***	-0.026***	-0.019*	-0.014	0.028***	0.025***	0.031***	0.024***
	(0.005)	(0.004)	(0.011)	(0.011)	(0.007)	(0.007)	(0.007)	(0.007)
Female interviewer	0.002	0.005	0.009	0.012	-0.008	-0.010	0.038	0.033
	(0.013)	(0.013)	(0.022)	(0.022)	(0.024)	(0.023)	(0.023)	(0.023)
Mean of outcome	0.82	0.82	0.46	0.46	0.45	0.45	0.33	0.33
R-squared	0.05	0.06	0.06	0.07	0.17	0.17	0.20	0.22
Observations	16,316	16,316	15,043	15,043	15,721	15,721	15,636	15,636
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. All dependent variables are defined as dummies equal to 1 if the respondent agrees that democracy is preferable to other political system (columns 1-2), if agrees that a market economy is preferable to any other economic system (column 3-4), if thinks that having a strong leader in power is fairly or very good (column 5-6), or if 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 C4. 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: LiTS.

Table C15: Masculinity Norms, Gender Role Norms, and CGI

	Would Work More		Masculine Sector		Log Earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Economics										
CMNI-5	0.041***	0.039***	0.014**	0.011*	0.046***	0.037***	0.009**	0.007	0.117***	0.088***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.014)	(0.013)	(0.004)	(0.004)	(0.012)	(0.011)
TGRI	0.020***	0.019***	0.023***	0.022***	-0.019	-0.022	0.009*	0.009*	-0.031***	-0.038***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.013)	(0.013)	(0.005)	(0.005)	(0.010)	(0.010)
CGI		0.013**		0.018***		0.060***		0.017***		0.197***
		(0.005)		(0.006)		(0.010)		(0.004)		(0.013)
R-Squared	0.12	0.12	0.05	0.05	0.43	0.43	0.06	0.07	0.16	0.20
Observations	14,914	14,914	14,914	14,914	14,914	14,914	18,714	18,714	18,714	18,714

	Risk Taking		Uses Seatbelt		Unlikely to Seek Help		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: Risk and Health								
CMNI-5	0.108***	0.085***	-0.065***	-0.066***	0.030***	0.030***	0.128***	0.152***
	(0.011)	(0.010)	(0.010)	(0.009)	(0.008)	(0.008)	(0.014)	(0.012)
TGRI	0.007	0.001	-0.066***	-0.066***	0.032***	0.032***	-0.043***	-0.037***
	(0.010)	(0.010)	(0.007)	(0.007)	(0.004)	(0.004)	(0.013)	(0.012)
CGI		0.158***		0.012		-0.002		-0.169***
		(0.013)		(0.008)		(0.004)		(0.012)
R-Squared	0.14	0.16	0.13	0.13	0.08	0.08	0.09	0.11
Observations	18,714	18,714	18,601	18,601	18,714	18,714	18,714	18,714

	Pro Democracy		Pro Market		Support for Strong Leader		Support for Army	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel C: Politics								
CMNI-5	-0.001	-0.003	0.014**	0.011*	0.065***	0.061***	0.051***	0.048***
	(0.004)	(0.004)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
TGRI	-0.054***	-0.054***	0.011**	0.010*	0.046***	0.045***	0.045***	0.045***
	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)
CGI		0.015***		0.016***		0.024***		0.024***
		(0.004)		(0.004)		(0.006)		(0.004)
R-Squared	0.07	0.07	0.05	0.05	0.14	0.14	0.14	0.14
Observations	18,714	18,714	15,684	15,684	18,714	18,714	18,714	18,714
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 as defined in Tables 1, 2, and 3. For more details on the definitions of the dependent variables, see Table C4. The CMNI, CGI 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 surveys.

Table C16: Controlling for Competitiveness and Risk Preferences – Economics

	Would Work More		Masculine Sector		Log Earnings		Working	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms								
CMNI Score	0.048***	0.046***	0.024***	0.023***	0.016	0.016	-0.002	-0.003
	(0.005)	(0.005)	(0.003)	(0.003)	(0.014)	(0.012)	(0.003)	(0.003)
Risk Taking	0.043***	0.041***	-0.000	0.002	0.070***	0.058***	0.029***	0.025***
	(0.006)	(0.005)	(0.004)	(0.004)	(0.013)	(0.011)	(0.004)	(0.004)
Competitiveness	0.025***	0.026***	0.005	0.008**	0.071***	0.065***	0.023***	0.022***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.012)	(0.011)	(0.006)	(0.005)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77
R-squared	0.13	0.13	0.05	0.07	0.58	0.60	0.14	0.16
Observations	46,202	46,202	46,220	46,220	44,366	44,366	59,805	59,805
Panel B: Gender Role Norms								
TGRI Score	0.044***	0.040***	0.033***	0.030***	0.001	0.003	0.010***	0.010***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.014)	(0.011)	(0.003)	(0.003)
Risk Taking	0.041***	0.040***	-0.002	0.001	0.071***	0.059***	0.028***	0.024***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.013)	(0.011)	(0.004)	(0.003)
Competitiveness	0.032***	0.033***	0.009**	0.012***	0.074***	0.067***	0.025***	0.023***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.013)	(0.011)	(0.006)	(0.005)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77
R-squared	0.12	0.13	0.05	0.07	0.58	0.60	0.14	0.16
Observations	46,512	46,512	46,530	46,530	44,617	44,617	60,327	60,327
Panel C: Masculinity and Gender Role Norms								
CMNI Score	0.036***	0.036***	0.013***	0.013***	0.019	0.018*	-0.007**	-0.008**
	(0.005)	(0.005)	(0.003)	(0.003)	(0.012)	(0.010)	(0.004)	(0.003)
TGRI Score	0.029***	0.026***	0.027***	0.025***	-0.006	-0.004	0.013***	0.013***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.012)	(0.010)	(0.004)	(0.004)
Risk Taking	0.040***	0.039***	-0.003	0.001	0.070***	0.058***	0.028***	0.024***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.012)	(0.011)	(0.004)	(0.003)
Competitiveness	0.029***	0.030***	0.008**	0.011***	0.071***	0.065***	0.024***	0.023***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.012)	(0.011)	(0.006)	(0.005)
Mean of outcome	0.29	0.29	0.35	0.35	9.92	9.92	0.77	0.77
R-squared	0.13	0.13	0.05	0.07	0.58	0.60	0.14	0.16
Observations	46,160	46,160	46,178	46,178	44,336	44,336	59,707	59,707
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is an individual male respondent in the GMS. *Would Work More* (columns 1-2) equals 1 if the individual would like to work more hours. *Masculine Sector* (columns 3-4) equals 1 if the individual was employed in a masculine sector. *Log earnings* (columns 5-6) 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$. *Working* (columns 7-8) equals 1 if the individual was working. *Competitiveness* was measured on a scale from 1 ("not competitive at all") to 10 ("very competitive") and is standardized. *Risk Taking* was measured on a scale from 1 ("not willing to take risk at all") to 10 ("very willing to take risk") and is standardized. For more details on the definitions of the dependent variables, see Table C4. 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 C17: Controlling for Competitiveness and Risk Preferences – Health

	Uses Seatbelt		Unlikely to Seek Help		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Masculinity Norms						
CMNI Score	-0.075***	-0.071***	0.051***	0.055***	0.153***	0.154***
	(0.007)	(0.007)	(0.006)	(0.005)	(0.009)	(0.009)
Risk Taking	-0.133***	-0.128***	-0.020***	-0.014**	-0.034***	-0.030***
	(0.017)	(0.016)	(0.006)	(0.006)	(0.011)	(0.011)
Competitiveness	0.065***	0.057***	-0.001	-0.004	-0.051***	-0.049***
	(0.012)	(0.011)	(0.009)	(0.008)	(0.010)	(0.009)
Mean of outcome	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.17	0.17	0.02	0.03	0.13	0.14
Observations	59,112	59,112	41,679	41,679	59,568	59,568
Panel B: Gender Role Norms						
TGRI Score	-0.125***	-0.120***	0.022***	0.029***	0.055***	0.056***
	(0.009)	(0.009)	(0.005)	(0.005)	(0.009)	(0.009)
Risk Taking	-0.126***	-0.122***	-0.016***	-0.012**	-0.025**	-0.022*
	(0.016)	(0.015)	(0.006)	(0.005)	(0.011)	(0.011)
Competitiveness	0.050***	0.044***	0.002	0.001	-0.042***	-0.039***
	(0.011)	(0.011)	(0.008)	(0.008)	(0.010)	(0.010)
Mean of outcome	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.17	0.18	0.01	0.02	0.12	0.12
Observations	59,612	59,612	41,828	41,828	60,058	60,058
Panel C: Masculinity and Gender Role Norms						
CMNI Score	-0.032***	-0.032***	0.052***	0.054***	0.156***	0.157***
	(0.009)	(0.009)	(0.006)	(0.005)	(0.010)	(0.010)
TGRI Score	-0.113***	-0.108***	-0.002	0.004	-0.008	-0.007
	(0.011)	(0.011)	(0.005)	(0.005)	(0.009)	(0.009)
Risk Taking	-0.125***	-0.122***	-0.018***	-0.014**	-0.033***	-0.030***
	(0.016)	(0.015)	(0.006)	(0.005)	(0.011)	(0.011)
Competitiveness	0.053***	0.046***	-0.003	-0.004	-0.052***	-0.049***
	(0.011)	(0.010)	(0.008)	(0.008)	(0.009)	(0.009)
Mean of outcome	0.01	0.01	0.47	0.47	0.00	0.00
R-squared	0.18	0.18	0.02	0.03	0.13	0.14
Observations	59,019	59,019	41,665	41,665	59,486	59,486
Survey × country FEs	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×

Notes: OLS regressions. An observation is an individual male respondent in the GMS. *Uses Seatbelt* (columns 1-2) is the mean of three questions on seatbelt use and is standardized. *Unlikely to Seek Help* (columns 3-4) equals 1 if the respondent answered extremely unlikely or unlikely that they would seek help from a mental health professional if having a personal or emotional problem. *Depression Score* (columns 5-6) is the mean of four questions measuring depression and is standardized. *Competitiveness* was measured on a scale from 1 ("not competitive at all") to 10 ("very competitive") and is standardized. *Risk Taking* was measured on a scale from 1 ("not willing to take risk at all") to 10 ("very willing to take risk") and is standardized. For more details on the definitions of the dependent variables, see Table C4. 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 C18: Controlling for Competitiveness and Risk Preferences – 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***	-0.036***	-0.033***	-0.035***	0.089***	0.086***	0.074***	0.070***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.007)	(0.007)	(0.005)	(0.005)
Risk Taking	-0.027***	-0.027***	0.041***	0.035***	0.039***	0.038***	0.037***	0.036***
	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)
Competitiveness	0.031***	0.028***	-0.047***	-0.045***	-0.001	0.002	-0.015**	-0.012*
	(0.005)	(0.005)	(0.009)	(0.008)	(0.004)	(0.004)	(0.006)	(0.006)
Mean of outcome	0.77	0.77	0.51	0.51	0.45	0.45	0.32	0.32
R-squared	0.05	0.06	0.04	0.06	0.12	0.13	0.13	0.14
Observations	57,975	57,975	51,651	51,651	57,383	57,383	57,299	57,299
Panel B: Gender Role Norms								
TGRI Score	-0.067***	-0.065***	-0.003	-0.007	0.096***	0.090***	0.090***	0.084***
	(0.004)	(0.004)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)
Risk Taking	-0.024***	-0.024***	0.038***	0.033***	0.036***	0.036***	0.034***	0.033***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)
Competitiveness	0.022***	0.020***	-0.047***	-0.046***	0.011**	0.014***	-0.003	-0.001
	(0.004)	(0.004)	(0.009)	(0.008)	(0.005)	(0.005)	(0.005)	(0.005)
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	0.12	0.13	0.14	0.15
Observations	58,405	58,405	52,011	52,011	57,815	57,815	57,735	57,735
Panel C: Masculinity and Gender Role Norms								
CMNI Score	-0.013***	-0.013***	-0.037***	-0.038***	0.062***	0.061***	0.046***	0.045***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)
TGRI Score	-0.061***	-0.060***	0.012*	0.009	0.070***	0.065***	0.071***	0.066***
	(0.004)	(0.004)	(0.007)	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)
Risk Taking	-0.023***	-0.024***	0.039***	0.034***	0.034***	0.034***	0.032***	0.031***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)
Competitiveness	0.024***	0.022***	-0.044***	-0.043***	0.006	0.009*	-0.007	-0.004
	(0.004)	(0.004)	(0.009)	(0.008)	(0.005)	(0.005)	(0.005)	(0.005)
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	0.14	0.15	0.15
Observations	57,914	57,914	51,590	51,590	57,321	57,321	57,236	57,236
Survey × country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: OLS regressions. An observation is an individual male respondent in the GMS. All dependent variables are defined as dummies equal to 1 if the respondent agrees that democracy is preferable to any other political system (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). *Competitiveness* was measured on a scale from 1 – "not competitive at all" to 10 – "very competitive", and is standardized. *Risk Taking* was measured on a scale from 1 – "Not willing to take risk at all" to 10 – "Very much willing to take risk", and is standardized. For more details on the definitions of the dependent variables, please refer to Table C4. 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 C19: Normative Masculinity Index and Economic, Health, and Political Outcomes

	Would Work More		Masculine Sector		Log Earnings		Working		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Economics										
CMNI-5	0.047***		0.015***		0.037***		-0.001		0.144***	
	(0.007)		(0.004)		(0.013)		(0.003)		(0.011)	
Normative Masculinity		0.043***		0.021***		0.007		0.012***		0.107***
		(0.006)		(0.003)		(0.009)		(0.002)		(0.015)
TGRI	0.029***	0.033***	0.020***	0.019***	-0.006	0.009	0.018***	0.013***	-0.090***	-0.066***
	(0.005)	(0.005)	(0.004)	(0.003)	(0.012)	(0.013)	(0.004)	(0.003)	(0.016)	(0.016)
R-Squared	0.10	0.10	0.05	0.05	0.40	0.40	0.06	0.06	0.20	0.19
Observations	35,480	35,593	35,498	35,611	35,498	35,611	41,665	41,819	41,665	41,819

	Risk Taking		Uses Seatbelt		Unlikely to Seek Help		Depression Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: Risk And Health								
CMNI-5	0.123***		-0.025**		0.050***		0.167***	
	(0.012)		(0.010)		(0.005)		(0.013)	
Normative Masculinity		0.158***		-0.032***		0.027***		0.044***
		(0.009)		(0.011)		(0.006)		(0.009)
TGRI	0.022*	0.015	-0.133***	-0.131***	0.004	0.017**	-0.028**	0.032**
	(0.012)	(0.013)	(0.015)	(0.013)	(0.005)	(0.006)	(0.012)	(0.012)
R-Squared	0.14	0.15	0.14	0.14	0.03	0.02	0.08	0.07
Observations	41,665	41,819	41,552	41,702	41,665	41,819	41,665	41,819

	Pro Democracy		Pro Market		Support for Strong Leader		Support For Army	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel C: Politics								
CMNI-5	-0.017***		-0.045***		0.077***		0.051***	
	(0.004)		(0.004)		(0.006)		(0.005)	
Normative Masculinity		-0.026***		-0.026***		0.081***		0.069***
		(0.004)		(0.005)		(0.004)		(0.005)
TGRI	-0.071***	-0.069***	0.026***	0.015***	0.072***	0.075***	0.078***	0.073***
	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)	(0.007)	(0.007)	(0.006)
R-Squared	0.07	0.08	0.06	0.05	0.13	0.13	0.13	0.14
Observations	41,665	41,819	36,600	36,653	41,665	41,819	41,665	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 C4. The CMNI, 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 C20: Marriage and Fertility Outcomes

	Married or Cohabiting		Has Children		Number of Children	
	(1)	(2)	(3)	(4)	(5)	(6)
CMNI-5						
18-35 × CMNI Score	-0.004	-0.001	-0.015	-0.014	-0.065**	-0.063**
	(0.011)	(0.011)	(0.009)	(0.009)	(0.029)	(0.029)
36-49 × CMNI Score	-0.005	-0.004	-0.019*	-0.019*	-0.016	-0.014
	(0.006)	(0.006)	(0.011)	(0.010)	(0.031)	(0.031)
50+ × CMNI Score	-0.009	-0.010	-0.003	-0.004	-0.012	-0.015
	(0.007)	(0.007)	(0.006)	(0.006)	(0.015)	(0.015)
TGRI						
18-35 × TGRI Score	0.013	0.014	0.018**	0.017**	0.037*	0.031
	(0.010)	(0.009)	(0.009)	(0.008)	(0.021)	(0.020)
36-49 × TGRI Score	0.006	0.007	-0.005	-0.007	0.064**	0.053*
	(0.007)	(0.007)	(0.009)	(0.009)	(0.029)	(0.028)
50+ × TGRI Score	-0.003	-0.004	0.005	0.004	0.012	0.006
	(0.007)	(0.007)	(0.006)	(0.006)	(0.013)	(0.013)
Mean of outcome	0.63	0.63	0.29	0.29	0.59	0.59
R-squared	0.18	0.19	0.20	0.21	0.23	0.24
Observations	18,088	18,088	18,130	18,130	18,130	18,130
Survey × country FEs	×	×	×	×	×	×
Age group, Urban	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×

Notes: OLS regressions. An observation is an individual respondent in LiTS. *Marriage or Cohabiting* is a dummy equal to 1 if the respondent is married or cohabiting with a long-term partner and 0 otherwise. *Has children* is a dummy equal to 1 if the respondent has any children aged 0-15 living in the household and 0 otherwise. *Number of Children* is the total number of children aged 0-15 living in the household. These variables are based on the number of children living in the same household at the time of the survey (LiTS does not collect information on total fertility). 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: LiTS.

Table C21: 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
Panel A: Country Mean CMNI								
Simple cumulative count	0.007	0.41	0.040**	0.43	0.012**	0.41	0.000	0.40
	(0.005)		(0.020)		(0.005)		(0.016)	
Time-discounted count	0.149**	0.42	0.212**	0.44	0.143***	0.42	0.014	0.40
	(0.072)		(0.082)		(0.051)		(0.084)	
Panel B: Country Mean TGRI								
Simple cumulative count	0.001	0.57	0.003	0.56	-0.000	0.56	0.008	0.57
	(0.004)		(0.017)		(0.007)		(0.008)	
Time-discounted count	0.074	0.57	0.060	0.57	0.015	0.56	0.105	0.57
	(0.069)		(0.081)		(0.067)		(0.063)	
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 for 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 C 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.

Table C22: Conflict Exposure during Impressionable Years and Adherence to Masculinity Norms

	Importance of Winning	Violence	Disdain for Homosexuals	Control over Women	Help Avoidance
	(1)	(2)	(3)	(4)	(5)
Avg. conflict exposure (Log)	0.022	0.071***	0.029**	0.017	0.033*
	(0.023)	(0.014)	(0.011)	(0.019)	(0.019)
R-squared	0.092	0.063	0.068	0.214	0.040
Observations	37,528	37,548	35,392	36,877	37,714
Urban control	×	×	×	×	×
Survey × country FEs	×	×	×	×	×
Cohort FEs	×	×	×	×	×
Sample	25+	25+	25+	25+	25+

Notes: OLS regressions. An observation is an individual male respondent in the GMS. Dependent variables are standardized. All regressions control for urban status, age, and country × survey fixed effects. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: GMS (LiTS and online surveys).

Table C23: Conflict Exposure during Impressionable Years and Masculinity Norms, by Conflict Type

	CMNI-5			
	(1)	(2)	(3)	(4)
Avg. conflict exposure (Log)	0.055***			
	(0.019)			
Avg. State-based conflict exposure (Log)		0.067***		
		(0.020)		
Avg. One-sided conflict exposure (Log)			0.091***	
			(0.030)	
Avg. Non-state conflict exposure (Log)				0.045
				(0.048)
R-squared	0.113	0.113	0.113	0.113
Observations	38,372	38,372	38,372	38,372
Urban control	×	×	×	×
Survey × country FEs	×	×	×	×
Cohort FEs	×	×	×	×
Sample	25+	25+	25+	25+

Notes: OLS regressions. An observation is an individual male respondent in GMS. The CMNI modules are all standardised. State-based conflict refers to a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year. One-sided conflict refers to the use of armed force by the government of a state or by a formally organized group against civilians which results in at least 25 deaths in a year. Non-state conflict refers to the use of armed force between two organized armed groups, neither of which is the government of a state, which results in at least 25 battle-related deaths in a year. All regressions control for urban status, cohort, and country × survey fixed effects. Standard errors are clustered at the country level and shown in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Source: GMS (LiTS and online surveys).

Table C24: Main Specifications with Multiple Hypothesis Testing Corrections

	Economic Outcomes					Health Outcomes				Political Outcomes			
	Would Work More	Masculine Sector	Log Earnings	Working	Competi-tiveness	Risk Taking	Uses Seatbelt	Unlikely to Seek Help	Depression Score	Pro Democracy	Pro Market	Support for Strong Leader	Support for Army
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
CMNI Score	0.044***	0.014***	0.036**	-0.002	0.114***	0.101***	-0.039***	0.049***	0.146***	-0.013***	-0.039***	0.066***	0.048***
	(0.006)	(0.003)	(0.014)	(0.004)	(0.012)	(0.011)	(0.009)	(0.006)	(0.010)	(0.003)	(0.004)	(0.005)	(0.005)
TGRI Score	0.027***	0.026***	-0.012	0.012***	-0.076***	0.010	-0.119***	-0.003	-0.005	-0.064***	0.016**	0.070***	0.072***
	(0.005)	(0.004)	(0.012)	(0.004)	(0.012)	(0.011)	(0.011)	(0.006)	(0.010)	(0.005)	(0.008)	(0.006)	(0.006)
Unadjusted *p*-value (CMNI)	<0.001	<0.001	0.010	0.617	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
RW *p*-value (CMNI)	[0.001]	[0.001]	[0.001]	[0.397]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Mean of outcome	0.29	0.35	9.92	0.77	-0.00	0.00	0.01	0.47	0.00	0.77	0.51	0.45	0.32
R-squared	0.12	0.05	0.57	0.13	0.15	0.14	0.17	0.02	0.13	0.07	0.04	0.13	0.14
Observations	46,195	46,213	44,363	59,795	59,795	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) for the CMNI score are shown in brackets. *** p<0.01, ** p<0.05, * p<0.1. Source: GMS (LiTS and online surveys).

Online Appendix D: Data on Militarized Conflicts

D1.1 The Correlates of War Data

D1.1.1 Data Source

The data used in Section 5.1 come 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).

D1.1.2 War Typologies

The COW project defines a war as sustained combat between organized armed forces resulting in at least 1,000 battle-related fatalities within a twelve-month period, explicitly distinguishing wars from one-sided violence such as massacres, state repression, or unorganized riots. The primary challenge in linking data from the Global Masculinity Survey to country-level historical conflict data is harmonizing state entities over time. Our harmonization relies on COW country codes, which assign a single identifier to political entities that may have changed names but maintained relatively stable borders. The COW framework 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.

The COW project classifies wars into three types based on participants. Inter-state wars occur between two system members. 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. 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.

D1.1.3 Variables of Interest

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. We also construct a (standardized) time-discounted measure weighting each war by $1/(1 + (2020 - \text{conflict start year}))$; results remain consistent in sign and significance using $e^{-\lambda\,(2020-\text{war start year})}$ where $\lambda > 0$.

D1.2 The Uppsala Conflict Data

D1.2.1 Data Source

The cohort-level conflict exposure measures in Section 5.2 use the Uppsala Conflict Data Program's (UCDP) Georeferenced Event Dataset (GED). An event is defined as organized violence by an armed actor against another actor or civilians, causing at least one death at a specific location and time. We use Global GED version 25.1, covering 1989–2024, which provides date, location, actors, and fatality estimates for each event; we rely on UCDP's best estimate throughout. The GED includes events assignable to an identified dyad (two conflicting actors, or one actor targeting civilians) belonging to conflicts reaching at least 25 deaths in a calendar year. Events are geo-referenced to coordinates (and grid cells) and dated to specific days or bounded intervals. Since the GED assigns conflicts based on contemporaneous borders with precise geocodes, we exploit this structure to recode events to present-day borders where needed.

D1.2.2 Conflict Typologies

The GED distinguishes three forms of organized violence. State-based conflict involves contested incompatibility over government and/or territory between two parties (at least one a state government), causing at least 25 battle-related deaths annually. One-sided violence captures armed force by a state government or organized group against civilians, causing at least 25 civilian deaths per year. Non-state conflict involves armed force between two organized groups (neither a state government), resulting in at least 25 battle deaths annually.

D1.2.3 Variables of Interest

We leverage variation in conflict exposure across birth cohorts, focusing on exposure during the "impressionable years" of young adulthood (ages 18-25). Our main specifications use male respondents age 18 or younger in 1989 and at least 25 when surveyed, ensuring complete observation of their impressionable years. We construct cohort-specific exposure measures by calculating cumulative conflict deaths (per 100,000 population) in each respondent's country during ages 18-25. Since the GED assigns conflicts based on contemporaneous borders, we recode events to present-day borders where needed, obtaining separate measures for post-Yugoslavia states. Our estimation framework then compares endorsement of masculinity norms between more- and less-exposed cohorts within the same country–survey wave.