Masculinity Norms: International Evidence and Implications for Economics, Health, and Politics^{*}

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Abstract

This paper explores the roles of masculinity norms: gender norms that prescribe and constrain the behavior of men. We collect the first cross-cultural evidence on men's adherence to masculinity norms from nationally representative face-to-face surveys across 43 countries in Europe, Asia, the Middle East, and Africa. Our analysis unveils substantial variation across and within countries and reveals three domains where these norms exert significant influence. First, masculinity norms play an ambivalent economic role. They correlate positively with behaviors supporting economic growth, such as labor supply at the intensive margin and competitiveness, but also generate frictions by constraining occupational choice to traditionally masculine sectors. Second, masculinity norms encourage risk-taking, including in health behaviors, and are associated with depressive symptoms among men and shorter male life expectancy across countries. Third, masculinity norms correlate with both the demand for and the supply of strongman populism. Crucially, in all three domains—economics, health, and politics—the role of masculinity norms is distinct, and sometimes opposite, from that of social norms about women and a positive driver of gender gaps.

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1 Introduction

Social norms about the appropriate behavior of women continue to influence and constrain women's lives, choices, and outcomes across various socioeconomic domains. Such norms not only circumscribe women's sexual and reproductive health behavior (Jayachandran, 2015), they also dictate how women should take care of their homes and children (Bertrand et al., 2015); how much labor they should supply (Alesina et al., 2013; Grosjean and Khattar, 2019; Jayachandran, 2021); which education and occupation are appropriate for them (Blau and Kahn, 2017); and whether they can participate in politics (Beaman et al., 2009; Alesina et al., 2013). In all these areas, social norms about women can perpetuate gender inequalities and therefore continue to attract significant political, media, and academic interest¹ and to constitute the target of considerable policy efforts to promote gender equality.

In comparison, the role of social norms about the appropriate behavior of *men* has been relatively ignored. This paper aims to fill this gap. To do so, we provide the first large scale, cross-cultural, nationally representative, individual-level evidence on masculinity norms, document how they influence economics, well-being, and politics, and how they constitute important drivers of gender inequality both across and within countries.

What are masculinity norms? They are the set of practices and beliefs that represent "the most honored way of being a man in a given social context" (Wedgwood et al., 2023, pg.1) and constrain men's behavior, both in relation to women and in relation to other men, legitimizing and maintaining male domination over women and less respected forms of masculinity in society.^{2,3} Most commonly, adherence to masculinity norms is measured by the Conformity to Masculine Norms Inventory (CMNI) index (Mahalik et al., 2003), a measure thoroughly validated through clinical studies and focus groups and used extensively

 $^{^{1}}$ A large literature—reviewed in Giuliano (2020)—studies the importance, origins, and persistence of social norms and individual beliefs about the appropriate roles of women.

²See, for example, Thompson Jr and Pleck (1986); Connell (1987, 2020); Wedgwood et al. (2023).

³Masculinity norms, particularly in their hegemonic manifestation and link to male domination in society, were first studied in an ethnographic analysis of male hierarchies in an Australian high school (Connell et al., 1982) and since became central to fields ranging from gender studies, education and antiviolence work, to health and counseling.

in psychology, public health, and clinical studies.⁴

We integrated a tailored CMNI scale into the 2022-2023 Life in Transition Survey (LiTS), a face-to-face, nationally representative individual survey conducted by the European Bank for Reconstruction and Development and the World Bank among more than 43,000 respondents in 43 countries in Europe, Asia, Middle East and Africa. Our analysis focuses on five core masculinity norms: importance of winning, violence, help avoidance, control over women, and disdain for homosexuals, which we are able to connect to rich individual level data on socio-demographics, economic choices, health behavior and outcomes, as well as political attitudes. Doing so allows us to contribute to, and connect with, several strands of the economics and social sciences literature.

Our first contribution is to expand the cross-cultural measurement of gender norms to norms about men. Existing representative surveys, either for individual countries (like the *General Social Survey* or the *German Socio-Economic Panel*) or across countries (like the *World Values Survey*, the *International Social Survey*, the *Demographic and Health Surveys*, and LiTS) routinely elicit attitudes about women and women's roles in society.⁵ Our novel focus on men answers recent calls by policy makers and international organizations to shed more light on measuring and analyzing masculinity norms (OECD, 2021).⁶

Armed with this new data, we provide the first systematic evidence on how masculinity norms relate to norms about women and how the two sets of norms respectively influence economic, social, and political outcomes. Our comparison delivers some intriguing heterogeneity across countries. While Western countries are far more progressive on views towards

 $^{^{4}}$ Wong et al. (2017) provides a meta-analysis of studies that use the CMNI to measure men's adherence to masculinity norms.

⁵For example, these surveys routinely ask how acceptable it is for women to work outside the home and earn money, how acceptable domestic violence is, or whether women can be (good) business leaders or politicians. We include many of these questions in LiTS as well.

⁶The Hofstede Value Survey Module includes a measure of "Masculinity/Femininity", defined as societal orientation towards achievement, heroism, assertiveness, and material rewards for success, as opposed to societal orientation towards cooperation, modesty, caring for the weak, and quality of life (Hofstede et al., 2010). An important difference between this measure and ours is that the Hofstede Masculinity/Femininity dimension is defined at the societal level and cannot be used for any comparisons at the individual level. By contrast, we measure individual adherence to masculinity norms, which varies across and within countries. The CMNI also has more precise and specific dimensions.

gender equality relative to all other countries in our sample, this divergence is not present for masculinity norms. Western countries in our sample stand towards the middle of the distribution of adherence to masculinity norms, more progressive than countries in the Middle East and Africa, but less progressive than many countries of the former socialist bloc in South Eastern Europe or the Baltic. These findings provide the first hint of how masculinity norms are distinct from more traditionally measured norms about women's roles. In fact, while men who adhere to more traditional versions of masculinity also tend to display more conservative norms towards women, these two sets of gender norms have a raw correlation of less than 0.5 with one another. Moreover, individual covariates are much weaker predictors of masculinity norms compared with norms about women. While age, education, and religiosity have a clear gradient as predictors of gender norms about women, with younger, more educated and less religious men being much more progressive, the same is not true for masculinity norms. Last, a clustering analysis reveals clear clusters consisting of progressive individuals on both dimensions of gender norms, conservative individuals on both dimensions of gender norms, but a much larger intermediate cluster of individuals who score high in one dimension but low in the other.

Masculinity norms and norms about women also contribute to economic, health, and political outcomes in profoundly different ways. Cross nationally, while traditional norms about women's roles are negatively associated with economic inequality and with economic development – in line with the literature documenting a positive feedback between female empowerment and economic growth, e.g. Duflo (2012) and Jayachandran (2015) –, masculinity norms are instead *positively* correlated with economic development and with economic inequality. Masculinity norms and norms about women also relate to life expectancy gender gaps in opposite ways, a relationship partly explained by a strong and positive association between male suicide and norms about women. Moving from the 10th to the 90th percentile of average masculinity norms at the country level, equivalent to moving from

Montenegro to Algeria while keeping GDP per capita constant, is associated with a reduction in the gender mortality gap by 21 percent and in the gender gap in suicide mortality rates by 50 percent. Across countries, we also document a strong, positive, and statistically significant relationship between the supply of populism by political parties in recent years and conservative masculinity norms, which is not present for norms about women's roles.

Our within-country analysis unveils underlying explanations for these aggregate patterns and further contributes to a broad literature on the role of cultural norms as determinants of individual behavior and economic, social, and political outcomes.⁷ We first uncover how masculinity norms have ambivalent implications for economic growth. Men who adhere strongly to masculinity norms have a higher labor supply at the intensive margin and are more competitive. While these behaviors may feed positively into economic growth, they may nevertheless contribute to gender inequality gaps, which have been linked in recent literature to gender differences in the willingness or ability to withstand long and inflexible hours required in certain jobs (Goldin, 2014, 2021) and to gender differences in competitiveness (Niederle and Vesterlund, 2011). By contrast with masculinity norms, traditional norms about women are not systematically associated with labor supply nor with competitiveness. Consistent with work linking gender identity to occupational sorting between women and men (Akerlof and Kranton, 2000, 2010), we also document how masculinity norms and traditional norms about women may generate frictions in the labor market by confining men to employment in traditionally masculine sectors.

Second, we document unambiguous negative consequences of masculinity norms for individual men's health and wellbeing. Certain elements of masculinity norms, such as emotional restraint, help avoidance, excessive risk taking, and aggression have been hypothesized to constitute important cultural drivers of gender health gaps (WHO, 2013; Schanzenbach et al.,

⁷A large literature has established how the beliefs, traits, and values of social groups shape individual decision making and aggregate outcomes, ranging from fertility and trade to violence and political preferences. See Nunn (2012) and Alesina and Giuliano (2015) for reviews. We show how accounting for masculinity norms can deepen our understanding of male decision making and related socio-economic and political outcomes, as well as gender inequality.

2016) and important risk factors in suicide, substance abuse, morbidity, and mortality (Case and Paxson, 2005; IHME, 2010; Baker et al., 2014). Accordingly, our analysis reveals that men who adhere more strongly to masculinity norms take more risk, measured both through revealed and stated preferences. These men also underinvest in protective health measures (as measured by doctors' visits) and have poorer mental health (as measured by the PHQ-4 scale). In contrast, attitudes towards women's roles have no consistent bearing on men's risk preferences or on their physical and mental health behaviors and outcomes.

Third, consistent with commentary discussing potential links between masculinity norms and strongman populism and democratic backsliding (e.g. Blais and Dupuis-Déri 2012; Lombardo et al. 2021; Roose et al. 2022 and Washington Post, June 20, 2022), we show that men who adhere more strongly to masculinity norms are, indeed, less pro-democracy, less promarket, and more supportive of strongman leadership, including by the army. Traditional norms about women's roles play a less consistent role in explaining such political preferences.

Finally, we contribute to the literature on the deeply rooted determinants of cultural norms⁸ by providing evidence on the role of individual masculinity norms to explain the relationship between historically male-biased sex ratios induced by convict transportation to Australia in the 18th and 19th century and behavioral manifestations of masculinity norms in the present day at the aggregate level documented by Baranov et al. (2023). We show the persistent effect of male biased convict sex ratios on adherence to masculinity norms, and, similarly to the LiTS sample, on labor supply at the intensive margin, depression, and healthcare avoidance based on an independent, nationally representative survey of Australian men and boys.

Overall, our findings show how the study of masculinity norms can provide new insights into the roots and persistence of gender inequality. Although attitudes towards women have become much more progressive, at least in Western countries (Fernández et al., 2021), convergence towards gender equality has stalled in the last 20 years. As women caught up and even

 $^{^{8}}$ See Alesina and Giuliano (2015) and Nunn (2012) for reviews of literature on the imprint on historical events on cultural norms and their persistence over time.

overtook men in formal education, and increased their attachment to the labor force during the 1970s and 1980s (Goldin, 2014, 2021), social norms, occupational gender segregation, and differences in traits and psychological dispositions (chief among which competition and risk preferences)⁹ play increasingly important roles as drivers of unequal economic outcomes between women and men. While the existing literature in economics has almost exclusively focused on gender roles norms and attitudes towards women's roles,¹⁰ our findings highlight the importance of masculinity norms. Our results show that adherence to masculinity norms, and especially the importance given to winning, are key drivers of male risk and competitive preferences, while norms about gender roles play no, or an opposite role. This suggests that enduring masculinity norms may hinder further progress in terms of gender equality. Indeed, we document that masculinity norms are far more conservative compared with views about gender equality in Western countries. Our focus and findings also echo with concerns, including in Western countries, about masculinist agendas fueling a backlash against feminism and liberal values in many countries (Blais and Dupuis-Déri, 2012; Roose et al., 2022).¹¹ In organizations, too, excessively competitive behavior, "masculinity contests" (Berdahl et al., 2018), and harassment and violence against women (see e.g. Folke and Rickne 2022 and Adams-Prassl et al. 2024) have been singled out as major obstacles to women's progression and gender equality.

Our comprehensive cross-cultural data collection also allows us to complement the social psychology and sociology literatures that seeks to understand the implications of masculinity norms for decision making and societal outcomes. This literature has so far typically relied on highly selective samples, almost exclusively in Western countries.¹² Our analysis —which

⁹See Bertrand (2011) and Niederle and Vesterlund (2011) for reviews.

¹⁰Two exceptions: Baranov et al. (2023) discuss the role of masculinity norms to explain aggregate outcomes in Australia and Matavelli (2024) shows how communication can decrease misperceptions of masculinity norms among Brazilian teens.

¹¹Masculinism refers to the belief that men should have more rights, power, and opportunities than women in society.

¹²A recent review documented that among 78 masculinity studies in psychology, 65 took place in the US, four in Australia, and three in Canada (Wong et al., 2017). A notable exception is Vandello et al. (2023), which documents precarious manhood beliefs—the idea that manhood is difficult to earn but easy to lose—across 62 countries, but does so in a highly selective sample of college students answering an online survey.

reveals a consistent relationship between adherence to masculinity norms and economic, health, and political outcomes across Europe, Central Asia, the Middle East, and Africa not only provides the first evidence outside of such selective samples, but also validates the usefulness of the CMNI scale to meaningfully measure norms that consistently correlate with behavioral manifestations of masculinity, even outside selected Western samples.

The rest of the paper is organized as follows. The next section provides more background on our measures of masculinity norms. Section 3 then describes our cross-cultural evidence, after which Section 4 discusses individual-level evidence on masculinity norms, and how they explain individual economic, health, and political decision making and outcomes within countries. Section 5 draws on the history of convict transportation to Australia and provides evidence on the historical roots of masculinity norms and their persistent effect on individual outcomes. Section 6 concludes. We provide a detailed Appendix with more information on all relevant survey questions and on survey implementation.

2 Eliciting Masculinity and Gender Roles Norms

This section provides information on the 2022–2023 Life in Transition Survey (LiTS) and on how this face-to-face survey elicits both masculinity and norms about women's roles.

2.1 The Life in Transition Survey

The LiTS is a nationally representative sociodemographic survey of adults conducted jointly by the European Bank for Reconstruction and Development and the World Bank every four years since 2006. It is a repeated cross-section that, at its inception, took place in former Communist Europe and the former USSR, with some Western Europe comparator countries. It has since expanded to North Africa, the Middle East, and Sub-Saharan Africa (see Table

Previous cross-cultural studies date back to the 1990's and were also undertaken among university students only (Williams and Best, 1990).

B1 for a list of all 43 countries and national sample sizes).¹³

Survey respondents are drawn randomly via two-stage sampling, with probability proportional to size, and with census enumeration areas as Primary Sampling Units (PSUs) and households as secondary sampling units. The LiTS survey covers about 1,000 observations per country, and interviews are conducted face-to-face. The questionnaire contains rich modules on socioeconomic conditions, work choices, and societal and political attitudes. Table B2 presents descriptive statistics on key socio-demographics. The average respondent is 45 years old, and 58% of respondents are married. Most respondents have achieved secondary education (65%) and 21% have some tertiary education. The sample is religiously diverse, with 35% Christian (including 17% Catholic), 37% Muslim, and 9% atheist.

We focus on the subsample of men only since the questions about masculinity norms, which have been validated in the literature almost exclusively in male samples, were only asked for this group.¹⁴ Men constitute 41.3% of the LiTS sample. They are similar compared to the whole sample in terms of average age, education, or religious orientation (see Table B2). Men are more likely to be employed (i.e. declare some paid work in the week preceding the interview; 59% of men against 40% of women). There are significant differences across genders in employment sectors. Men are much more likely to be employed in construction compared to women (15% vs. 02%), while women are overrepresented among public sector employees (31% vs. 15%) and in retail trade (16% vs. 08%).¹⁵

2.2 The Conformity to Masculinity Norms Index in LiTS

A key innovation of the 2022–2023 LiTS wave was the inclusion by the authors of specific questions to capture individual men's adherence to masculinity norms. An extensive scholarship in psychology measures masculinity norms through masculinity scales, the most widely used and accepted scale of which is the *Conformity to Masculinity Norms Inventory* (here-

¹³At the time of writing this draft, the data collection in Sub-Saharan Africa was ongoing.

¹⁴We did not include these questions for women given the cost of face-to-face surveys in such a wide range of countries and the lack of extensive validation of the CMNI questions for female samples.

 $^{^{15}}$ All differences in employment are statistically significant at the 1% level.

after, CMNI) (Mahalik et al., 2003). This scale has been thoroughly validated through focus groups, pilots, and clinical studies and has been shown to correlate with other normative measures of masculinity, with measures that assess conflict and stress associated with masculine norms, and with measures of attitudes toward psychological help-seeking, psychological distress, and social desirability. The CMNI has become a standard tool in clinical psychology and in leading public health initiatives around male mental health.¹⁶

The CMNI is a multi-dimensional scale that measures the extent to which an individual man's actions, thoughts, and feelings conform to dominant masculinity norms. It contains 22 questions that capture the following 11 distinct masculinity norms:¹⁷ conformity to winning; conformity to emotional control; risk-taking; violence; dominance; playboy; self-reliance; primacy of work; power over women; disdain for homosexuals; and pursuit of status.¹⁸

Until recently, the CMNI had remained mostly a clinical or research tool based on small, non-representative samples drawn from Western countries.¹⁹ A first breakthrough came with the implementation of the CMNI in a nationally representative survey of boys and men in the Australian *Ten to Men* survey. The *Ten to Men* survey also includes individual level data in health behaviors, physical and mental health outcomes, suicidal ideation and

¹⁶Since 2010, the Australian government, for example, has been conducting a national research initiative to monitor and understand male mental health and drivers of depression and suicide. The key monitoring tool of this initiative consists of the CMNI, which is regularly measured in a nationally representative survey known as Ten to Men: https://aifs.gov.au/research_programs/ten-men.

¹⁷The 22 factors subscale was extracted from 144 original items following a factor analysis (Mahalik et al., 2003).

¹⁸Conformity to Winning relates to wanting to be admired and respected, successful/powerful/competitive, performing competently, and being physically adequate. Conformity to Emotional Control concerns measures of emotional restriction. Risk-Taking relates to measures of toughness and adventure. Violence relates to measures of toughness and violence. Power Over Women relates to anti-femininity and the subordination of women. Dominance relates to wanting to be admired and respected, tough, successful/powerful/competitive, and subordinating women. Playboy relates to adventure, anti-femininity, concealing emotions, and subordinating women. Self-Reliance relates to disconnecting from others, and in terms of disconnection as measured by the other masculinity scales, this should relate to emotional disconnection. Primacy of Work relates to being a breadwinner, enduring work like a machine, pursuing success, and experiencing conflict between work and family/school obligations. Disdain for Homosexuals relates to being a breadwinner, admired and respected, successful/powerful/competitive, successful/powerful/competitive, and performing well (Mahalik et al., 2003, p.14)).

¹⁹The CMNI is most widely used in the United States but has been validated in several other countries such as Canada (including French-speaking) (Jbilou et al., 2021), Australia (Pirkis et al., 2016), and Germany (Komlenac et al., 2023).

suicidal attempts, and experiences of violence, including as perpetrators. This allowed for further validation of the CMNI with behavioral outcomes related to violence, risk taking, unhealthy behavior, suicidal tendencies and suicide attempts, and help avoidance in a large, nationally representative sample. Table B4 in Appendix provides correlations between the overall CMNI-22 index, its 22 sub-dimensions and health and violence. Correlations in the raw data confirm positive and significant relationships between the CMNI and depression, suicide attempts, and perpetration of domestic and sexual violence. The *Ten to Men* survey does not include any outcome in terms of political preferences, but it includes a few economic outcomes. Table B4 displays positive correlations between the CMNI and willingness to supply longer working hours as well as employment in a traditionally male sector.²⁰

The key innovations of LiTS are thus to provide the first nationally representative crosscountry evidence on thoroughly-validated questions on masculinity, as well as to expand outcomes to more varied and detailed economic, social, and political outcomes. Given the cost of face-to-face surveys and so as not to compromise on the measurement of socioeconomic conditions and social and political attitudes, we were limited in the number of questions we could include in the questionnaire. Given these limitations, we chose the five questions (henceforth, CMNI-5) that correlated most strongly with the overall CMNI score in the *Ten to Men* survey.²¹ The resulting module to elicit men's adherence to masculinity norms is:

"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

²⁰We define masculine sector of employment as an ordinal variable that takes value 1 for employment in traditionally feminine sectors (e.g. "Health care and social assistance", "Education and training", "Personal and other services", ranked by relative importance of employment); 2 for employment in gender neutral sectors (e.g. "Public administration and safety", "Accommodation and food services", "Information media and telecommunication",); and 3 for employment in masculine sectors (e.g. "Construction", "Manufacturing", "Transport, postal and warehousing", "Mining").

 $^{^{21}}$ As shown in Table B4, in the *Ten to Men* data, the resulting CMNI subscore has a correlation with the overall CMNI score of 0.76. It alone explains 57% of the variation in the total CMNI score. The raw correlations of the CMNI subscore with willingness to work more, masculine employment sector, suicide attempts and intimate partner violence are all statistically significant at the 1% level and similar in magnitude with the correlations with the CMNI overall scores and these outcomes.

the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering."

- "Winning is the most important thing" (Importance of winning)
- "Sometimes violent action is necessary" (Violence)
- "It bothers me when I have to ask for help" (Help avoidance)
- "I love it when men are in charge of women" (Control over women)
- "It is important to me that people think I am heterosexual" (Disdain for homosexuals)

Answers were provided on a four-point Likert scale, from 1 ("Strongly disagree") to 4 ("Strongly agree"), with the possibility of refusing to answer or answer that they did not know, which we coded as missing values. We rescaled all responses so a higher score indicates stronger adherence to masculinity (that is, more help avoidance, more importance of winning, more justification of violence, more control over women, and more disdain for homosexuals). In accordance with the literature using the CMNI, these questions were only asked of men. To calculate the CMNI, we take the average across the five domains, creating a score ranging from one to four. We only average over non-missing answers and create dummy variables that indicate, for each question, whether the respondent provided an answer. The CMNI has a mean of 2.47 in the LiTS sample and a standard deviation of 0.64, compared to a mean and standard deviation of 2.18 and 0.41 in Australia. The dimensions with the highest mean in the LiTS sample are *help avoidance* (2.69) and the dimension with the lowest mean is textitviolence (1.86)—see Table B3.

Data Quality and Sensitivity. Like all other questions in LiTS, the CMNI questions were back-translated,²² validated by the contracted survey firm (IPSOS), their local in-country

²²Translations were managed by cApStAn. Translations were completed by professional translators who produced the first-line translations. They were then passed to verifiers who were responsible for verifying the work done by the translators and producing the first draft final translations. These translations were systematically reviewed by IPSOS and local country managers before passing them to EBRD. EBRD carried out their own review of the translations and flagged any concerns for verifiers to resolve. The translations were further tested during trainings and the pilots in every country before being fielded.

representatives, as well as EBRD local representatives in each country, and piloted in every country prior to survey implementation. The CMNI was developed in a Western country context, raising the question of whether the scale is valid in the diverse group of countries we study. Piloting revealed that only in one country, Algeria, one of the questions on the CMNI, the one related to homosexuality, was too sensitive. It consequently was dropped from the survey in that country.

More generally, one way to assess the extent to which each of these questions represented a particular challenge for respondents is to examine non-response rates. Figure A1 in the Appendix provides an overview of non-response rates for each question across regions. The question with the highest response rate is the one related to help-seeking behavior. As documented by Baranov et al. (2023), this is also the most predictive question, across all CMNI questions, of overall masculinity norms and of related behavioral outcomes. Nonresponse rates for this question are 7.69% on average across countries.

Overall non-response rates are lowest in Germany: around 2-3% across all questions. In North Africa, the Middle East and South Eastern Europe overall non-response rates are also low, hovering below 5% for all questions except the one related to homosexuality. This question appears to be the most sensitive one, with non-response rates around 25% in Central Asia and 15% in North Africa (and 16.05%, on average, across the whole sample). To address potential issues related to the relatively high non-response rate for the "disdain for homosexuals" dimension of the CMNI-5 index, we also define a CMNI-4 scale that excludes this dimension.

2.3 Norms about Gender Roles and Women's Social Roles in LiTS

The LiTS survey also included several questions about gender roles norms and attitudes towards women. These questions cover various domains, from household labor allocation to labor force participation and representation in politics. These questions were taken from standard questionnaires (e.g. World Values Survey) and previous rounds of LiTS. Respondents were asked:

"To what extent do you personally agree or disagree with the following statements?"

- "A woman should do most of the household chores even if the husband is not working" (Division of household chores)
- "Men should take as much responsibility as women for the home and children" (Responsibility for the home)
- "It is better for everyone involved if the man earns the money and the woman takes care of the home and children" (Contribution to household income and household chores)
- "Both the man and woman should contribute to household income" (Contribution to household income)
- "If a man and a woman have dinner together in a restaurant, the man should always pay the full bill" (Roles in sharing bills)
- "On the whole, men make better political leaders than women do" (Political leadership)
- "Women are as competent as men to be business executives" (Business leadership skills)
- "Men are as competent as women to be nurses" (Job suitability)

Following the same approach as used to elicit the CMNI questions, 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 social gender roles. We build a summary *Traditional Gender Roles Norms Index* (hereafter, TGRI) as the mean of these variables over the eight questions, normalized on a 1-4 scale in order to be directly comparable to the CMNI. Among male respondents, the TGRI has a mean of 2.32 and a standard deviation of 0.45. This compares to a mean of 2.19 and a standard deviation of 0.46 among women (see Table B3). We further refine our measures by distinguishing an index of attitudes towards gender roles *per se* (items "Division of household chores" to "Roles in sharing bills") ("TGRI Gender Roles") vs. attitudes about women's competence and their accepted socio-economic roles (last three items) ("TGRI Norms").

2.4 Masculinity Norms and Gender Norms as Distinct Belief Sets

An important question is whether masculinity norms and gender norms about women's social roles are distinct sets of beliefs, which only partially overlap, or instead two sides of the same conceptual coin? To help answer that question, we first present in Figure 1 a pair-wise correlation matrix between the CMNI-5, the TGRI and their respective individual items. The correlation coefficients range from -0.13 to 0.95, with warmer shades indicating stronger positive correlations. We find that the CMNI-5 is only moderately correlated with the TGRI ($\rho = 0.29$). The correlations of the two sub-indices of the TGRI to the CMNI-5 are comparable (0.20 and 0.28), which is unsurprising given near prefect correlation of the two sub-indices of the TGRO with one another ($\rho = 0.92$). For these reasons, we only consider the global TGRI henceforth.

Among the individual components of the CMNI, the "Control over Women" and "Importance of winning" dimensions correlate strongest with the overall TGRI, but with still moderate correlation coefficients of 0.29 and 0.23 respectively. The other masculinity dimensions correlate less strongly with attitudes towards women's social roles, with "disdain for homosexuals" being the least strongly correlated dimension ($\rho = 0.06$). Likewise, the TGRI items related to the role of women inside the household are not always linked to a stricter adherence to masculinity norms: while the dimensions "Women Take Care of Household" and "Household Chores" are modestly correlated with the CMNI-5, the correlation between the CMNI-5 and other TGRI items such as "Responsibility for the Home" or "Contribute to Household Income" is close to zero.

In contrast, the individual dimensions correlate reasonably strongly *within* their respective index. The Cronbach's alpha, a measure of reliability and consistency between items in a scale, is 0.62 for the CMNI-5 and 0.58 for the TGRI. These values reflect acceptable reliability, meaning that the items within each index cohesively measure the underlying construct of conformity to masculinity norms or traditional gender roles, respectively. We also note that the CMNI-5 items are more related to each other compared to the TGRI items, as indicated by the higher average inter-item covariance 0.245 for the CMNI-5, compared to 0.124 for the TGRI.



Figure 1: Correlation Matrix Between Masculinity and Gender Roles Norms

Notes: This figure displays the pair-wise correlation matrix between the five-item Conformity to Masculinity index (CMNI) and the Traditional Gender Roles Index (TGRI). Source: LiTS. Sample of males only.

Overall, the rather modest cross-correlation between the CMNI-5 and the TGRI suggests that, while adherence to masculinity norms and traditional gender roles might be related, a substantial part of their variation remains unexplained by either one dimension taken inidvidually. In other words, our data does not support the notion that traditional gender attitudes are a sufficient statistic for masculinity norms. This highlights the importance of studying masculinity norms as a distinct concept, separate from men's attitudes about women's roles in society.

To further illustrate and validate this point, we conduct a K-means cluster analysis as a data-driven approach to categorize men on the basis of the specific set of masculinity and traditional gender roles norms they adhere to. K-means clustering is a type of unsupervised machine learning that has recently gained traction in economics to study empirical settings with latent heterogeneity (Bonhomme et al., 2022). We use it to ask the data whether clusters of "progressive" (with both low CMNI-5 and low TGRI) and "conservative" (with both high CMNI-5 and high TGRI) individuals naturally emerge based solely on the individual dimensions of both indices, without relying on any demographic or socioeconomic variables.

We implement the K-means clustering as follows. First, we let the data cluster on the subcomponents of both the CMNI-5 and TGRI, forming three separate clusters within each country.²³ Second, we classify the country-specific clusters into three separate groups according to the averages for both the CMNI-5 and the TGRI within the cluster. Specifically, we label a cluster as progressive (conservative) if the within-cluster averages for both indices are 0.25 s.d. below (above) the CMNI-5 and TGRI cross-country averages. The rest of the clusters are labelled as intermediate ones. All countries have at least one intermediate cluster, but the existence of progressive and conservative clusters varies across the sample. Only 50% (85%) of countries have one progressive (conservative) cluster. In 40% of the countries, both progressive and conservative clusters emerge from the data.

Figure 2 presents the results of this clustering exercise, showing three distinct clusters for each country. We plot the standardized CMNI-5 (x-axis) and TGRI (y-axis) scores within each cluster. While relatively progressive clusters (grey circles) and conservative clusters (grey squares) emerge, accounting for 21% and 35% of the sample, respectively, many respondents (44%) belong to intermediate clusters (blue triangles).²⁴ These intermediate

²³As is customary in K-means cluster analysis, we first standardize all items within country to avoid arbitrary scaling effects (Everitt et al., 2011).

²⁴The size of the circles, squares and triangles is proportional to the number of individuals in a cluster.

clusters contain men whose profile in terms of their adherence to masculinity norms does not point in the same direction as their views about the social roles of women. They may, for example, adhere strictly to most or all masculinity norms but hold quite progressive views about the roles of women in society.

In all, the results of this cluster analysis reinforce the idea that adherence to traditional masculinity norms and attitudes towards gender roles are related but distinct. While there are groups of men who can be classified as either "progressive" or "conservative" based on scoring low or high on both measures, a substantial proportion fall into an "intermediate" cluster. These intermediate groups represent men whose levels of adherence to masculinity norms and traditional gender attitudes diverge, further highlighting that the two constructs cannot be used interchangeably or viewed as perfectly overlapping. This underscores the importance of studying masculinity norms as a distinct set of beliefs, separate from general gender attitudes.





Notes: This figure shows the average standardized CMNI-5 and TGRI scores within each cluster generated from the K-means clustering analysis. The clustering is performed separately within each country using only the individual subcomponents of the CMNI-5 and the TGRI. The resulting clusters are then classified as "progressive", "conservative". or "intermediate" based on whether their average standardized CMNI-5 and TGRI scores fall below, above, or within 0.25 s.d. of the cross-country means, respectively.

3 Cross-Country Evidence

In this section, we discuss cross-country patterns of masculinity and how they relate to norms about women's roles as well as to basic economic, health, and political indicators, such as GDP, inequality, life expectancy, and political populism.

3.1 Masculinity Norms versus Norms about Women's Roles

Figure 3 plots the correlation between the CMNI and TGRI indices across countries. Masculinity norms and norms about women's roles are positively correlated, but far from perfectly so, with a raw correlation of less than 0.5.



Figure 3: Cross-country Correlation Between Masculinity and Norms about Women's Roles

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. Source: LiTS. Sample of males only.

As shown in Appendix Figure A2, which breaks down this relationship for each dimension of the masculinity index, the overall correlation is primarily driven by the strong and positive link between traditional norms towards women's roles and the importance of winning (0.74) and, to a lesser extent, help avoidance and control over women (respectively 0.35 and 0.23). The least predictive dimensions are the justification of violence (-0.04) and disdain for homosexuals (-0.08), with a correlation close to zero. These patterns remain when we remove from the sample countries where the share of non-responses or refusals is higher than 20% (see Appendix Figure A3).

Regional patterns are investigated further in Figure 4, which maps average values of the CMNI across the 43 countries included in LiTS and Figure 5, which plots the average values of the CMNI and TGRI across regions (left) and individual countries (right), ordered by CMNI aggregate scores. While Germany emerges as an outlier and, by far, the most progressive country when it comes to norms about women's roles, it is around the sample average of the masculinity score. Germany is not an outlier among Western countries in terms of men's adherence to masculinity norms. Its average score on the five CMNI dimensions is similar to Greece's (2.5), also included in the LiTS sample. Countries in North Africa, Sub-Saharan Africa, and the Middle East score highest both on the CMNI (with Benin, Ghana, and Tunisia the most "masculine" countries) and the TGRI (with West Bank & Gaza, Algeria, and Jordan the most conservative for women's roles). Men in South Eastern European countries such as Slovenia, North Macedonia, and Kosovo adhere the least strongly to traditional masculinity norms and the least traditional countries along both dimensions considered together are Estonia and Slovenia. These descriptive statistics confirm a larger degree of heterogeneity in masculinity norms within regions, with a stark contrast between Estonia and Slovenia and their neighbors, Latvia and Bosnia and Herzegovina, respectively, which are among the most masculine countries in the sample. These cultural differences also manifests in terms of feminicides. Latvia is the European country with the highest rate of intentional feminicides, at 3.58 per 100,000 women in 2021, compared to an average of 1.09 in the European countries included in the LiTS sample and 0.57 in Estonia (according to World Bank estimates).²⁵

²⁵These cultural differences coincide with linguistics (with Estonian being a Finnic language whereas Latvian is part of the Indo-European language family) as well as differences in religious composition between these pairs of neighboring countries.

Figure 4: Masculinity Norms and Norms about Women's Roles across LiTS countries Panel A: Masculinity Norms



Panel B: Norms about Women's Roles



Notes: Panel A shows a map of the average five-item Conformity to Masculinity index (CMNI) across countries. A higher number indicates more conservative masculinity norms. Panel B shows a map of the average seven-item Traditional Gender Roles Norms Index (TGRI) across countries. A higher number indicates more conservative gender roles norms. Source: LiTS. Panel A is the sample of males only.



Figure 5: Masculinity and Norms about Women's Roles Across Regions and Countries

Notes: This figures displays the mean values of the Conformity to Masculinity index (CMI) and the Traditional Gender Roles Index (TGRI) across countries and regions. Higher scores indicate more conservative norms. Source: LiTS. Sample of males only.

Our individual analysis in Section 4 discusses more ample evidence on the distinctive characters of masculinity norms and norms about women's roles. Before that, we show that the two sets of norms relate also very differently to broad country-level indicators.

3.2 Correlations with Country-Level indicators

GDP Per Capita. The literature has long highlighted a negative feedback between conservative norms about women's roles and economic development (see, for example, Duflo 2012). The right panel of Figure 6 confirms such a strong negative correlation between GDP per capita (PPP-adjusted) and conservative norms about women's social roles. The figure shows binscatter plots²⁶ of the relationship between GDP per capita and either masculinity norms (left) or norms about women and gender roles (right), partialling out the relationship with the other set of norms and controling for region fixed effects. While the relationship between GDP and conservative norms about women's roles is unambigiously negative, the correlation between GDP per capita and masculinity norms is instead positive. In Section 4, we discuss within-country evidence on the ambivalent economic role of masculinity norms that supports this aggregate relationship.

 $^{^{26}}$ Binscatter methodology has recently received criticisms, see e.g. Cattaneo et al. (2024). Using the *binsreg* package instead of binscatter reveals identical patterns, as shown in Appendix Section 6.



Figure 6: Masculinity Norms, Norms about Women's Roles, and GDP Per Capita

Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available PPP adjusted GDP per capita and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). Source: World Bank and LiTS.

Inequality. Figure 7 again reveals deeply contrasting patterns in how the two sets of gender norms, masculinity and gender roles norms, relate to another macroeconomic outcome: economic inequality. Inequality is proxied by the Gini coefficient, which measures inequality on a scale from 0 to 100, where higher values indicate higher inequality. The partial correlation plot, which accounts for the influence of norms about women and GDP per capita, reveals a positive correlation between masculinity norms and aggregate inequality (although not statistically significant). By contrast, countries with more conservative norms towards women tend to be economically more equal. The magnitudes of these two opposite relationships are comparable. Conparing countries at the 10th vs. 90th percentile of the CMNI (typically, Montenegro vs. Algeria) implies an increase in inequality of 20 percent, comparable to a 20 percent lower inequality between countries at the 10th and 90th percentile of the TGRI (typically, Romania vs. the Kyrgyz Republic).²⁷

²⁷Including GDP per capita as an extra control does not affect the nature of the relationship but makes the estimates slightly more precise.



Figure 7: Masculinity Norms, Norms about Women's Roles, and Economic Inequality

Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available Gini index and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) and PPP adjusted GDP per capita is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5 and GDP per capita. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). The Gini index is a proxy for country-level income inequality. It ranges between 0 and 100, where higher values indicate higher inequality. Source: World Bank and LiTS.

Life expectancy. Masculinity is often discussed as conducive to excessive male risk-taking, emotional restraint, help avoidance, as well as depression and suicidal ideation. These behaviors have detrimental consequences for male health outcomes and shorten their lives. The negative relationship between masculinity norms and male life expectancy is illustrated in Panel A of Figure 8. On the horizontal axis, we show the CMNI-5 masculinity index and on the vertical one the difference between a country's male and female life expectancy (a negative number since women live longer lives). The panel on the right does the same for the TGRI instead of the CMNI-5 index.

The relationship between the gender life expectancy gap and masculinity norms is negative (although not statistically significant), and goes in the opposite direction to the positive (and statistically significant) relationship with gender roles norms (right panel).²⁸ These results suggest that men live even shorter lives compared to women in countries where men

 $^{^{28}}$ By looking at the gender gap in life expectancy within the same country, we hold constant the quality of the healthcare system and other institutional differences. As before, we also control for GDP per capita in PPP terms and the TGRI index. Moreover, we control here for cross-country variation in the population's age structure by including both the male and female shares of the population aged 18-25, 26-40, 41-60, 61-75 and +75 for the year 2021. Alternatively, one could control for age structure by including birth rates by historical cohort, but these data are only available for a small subset of countries.

profess to adhere more strongly to traditional masculinity norms, while they live relatively longer lives compared to women in countries that hold more conservative gender roles norms (indicating longer lives for men and/or shorter lives for women). The estimates indicate that a one standard deviation increase in the CMNI is associated with a reduction in male life expectancy (relative to women in the same country) by .48 years. Alternatively, they imply that comparing countries at the 90th vs. 10th percentile of the CMNI score (equivalent to moving from Algeria to Montenegro while keeping GDP per capita constant) is associated with a reduction in the gender mortality gap by 21 percent.

Motivated by the literature on the relationship between masculinity and male mental health (Pirkis et al., 2017; Coleman et al., 2020; King et al., 2020; River and Flood, 2021), Panel B of Figure 8 shows gender gaps specifically for mortality due to suicide. On average, men commit suicide at a higher rate compared to women (average gap: 12.8). Again, taking the gender gap in suicide in a country alleviates issues related to variation in the quality of health statistics and the accounting of mortality due to suicide specifically across the countries in our sample. Consistent with a clinical literature highlighting negative consequences of strict adherence to masculinity norms for male mental health, we observe a strong, positive, and statistically significant relationship between masculinity norms and the difference between male and female suicide rates in a country, while the correlation between suicide gaps and traditional gender roles norms run in the opposite direction and is statistically insignificant. Specifically, moving from the 10th to the 90th percentile of average masculinity norms is associated with an increase in the gender gap in suicide mortality rates of 53 percent.



Figure 8: Masculinity Norms, Norms about Women's Roles, and Male Life Expectancy

Panel A: Gender gap in life expectancy

Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available country-level male life expectancy and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI), PPP-adjusted GDP per capita, and population age structure is accounted for. The right panel shows the same for the TGRI after accounting for the CMNI-5, PPP-adjusted GDP per capita, and population age structure. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). Source: World Bank and LiTS.

Populism. The expansion of liberal democratic systems in the last decades of the 20th century went hand in hand with women's empowerment and gender equality. This progress, however, has come to a halt in recent years, with far-right populism gathering momentum in tandem with the progression of anti-feminism, anti-LGBTQ attitudes, and masculinist ideals. The decline of democracy and civil liberties under Orban in Hungary, Duda in Poland, Putin in Russia, and Trump in the United States has systematically been associated

with the tendencies of these countries' leaders to emphasize masculinity in their politics. These leaders have all, in various degrees, endorsed aggression, justified violence, taken pride in controlling women, justified or endorsed anti-LGBTQ and anti-abortion legislation, and mocked or politicized preventative health measures during the COVID 19 pandemic (Lombardo et al., 2021; Roose et al., 2022; Ajzenman et al., 2023).

Figure 9 displays partial correlation plots of the populism supply by political parties, coded in the V-Party dataset of the V-Dem institute (Lindberg et al., 2022). We use a variable that captures the extent to which representatives of each party use populist rhetoric, defined as anti-elite or "glorifying the ordinary people and identifying themselves as part of them" (variable $v2xpa_popul$), which we average across all parties active in each country since 2010. Figure 9 reveals a positive and significant correlation between adherence to masculinity norms among male citizens and the supply of populism by political parties. More specifically, the underlying regression indicates that when ranking countries by their CMNI scores and examining those at the bottom and top of the distribution, those at the 90th percentile of the CMNI score have populism indices that are about 72% higher than those of countries at the 10th percentile. By contrast, the relationship with conservative norms about women (right) is close to zero.²⁹ Analyses for each subitem of the CMNI reveal that the positive relationship between masculinity norms and supply of populism is primarily driven by importance of winning and control over women.

²⁹These relationships are robust to using other indices of populism, for example from the Manifesto project.



Figure 9: Masculinity Norms, Norms about Women's Roles, and Supply of Populism

Notes: The left panel shows a binscatter plot of the country-level relationship between the Populism Index from the V-Dem Institute and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) and PPP adjusted GDP per capita is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5 and GDP per capita. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa).

To sum up, we observe substantial and robust correlations between the extent to which a country's male citizens adhere to masculinity norms and several broad economic and political outcomes. Importantly, the correlations between several outcomes, including GDP, inequality, gender gaps in life expectancy and masculinity norms are distinct, and sometimes run in opposite directions as correlations between these outcomes and more traditionally measured norms about women and gender roles.

While suggestive, these empirical patterns could nevertheless be driven by other characteristics such as education, religion, or omitted country-level institutional and cultural factors—which may influence both masculinity norms and economic and political developments.

We now turn to within-country regression analyses to shed light on how individual characteristics influence masculinity norms, and on whether masculinity norms still remain robust predictors of economic, health, and political decision-making once these individual characteristics, as well as country-level unobserved heterogeneity, are fully accounted for.

4 Within-Country Evidence

This section presents within-country regressions documenting the relationship between individual men's adherence to masculinity norms and outcomes related to economics, health and wellbeing, and political preferences, while controlling for the influence of norms about women's roles and various individual covariates, such as age, rurality, religion, and education. We start by discussing the roles of individual covariates as predictors of adherence to masculinity norms.

4.1 Empirical specification

We estimate the following equation:

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

where Y_{ic} are economic, health, and political outcomes for respondent *i* in country *c*; $CMNI_{ic}$ is *i*' CMNI score; X_{ic} are individual characteristics; and δ_c are country fixed effects.³⁰ We correct for heteroskedasticity and cluster standard errors at the country level.

A man's age and life stage may be major determinants of his adherence to and upholding of masculinity norms (Connell, 2020). The strength of masculinity norms, as well as the importance of particular dimensions of masculinity, may also systematically vary across urban and rural areas because of differences in social structures and contexts (Silva, 2022). We therefore control for age and urban vs. rural location of the respondent in all specifications. Religion and religiosity are other important potential covariates to consider, especially across our religiously heterogeneous sample. Education is another important correlate of masculinity norms and of our outcomes of interest (Connell, 1989). A potential issue arises when specific educational choices, such as whether to attend a single-sex school or pick a specific

³⁰Table B5 defines the outcome variables and Table B2 presents summary statistics for all outcomes and control variables.

field of study, may be endogenous to gender identity norms. We therefore only control, in our extended set of control, for broad education categories (primary, secondary, tertiary) as well as religious denomination and religiosity. Lastly, to account for non-responses on some of the CMNI dimensions and for potential unobserved heterogeneity across respondents who do not answer specific subitems on the scale, we control in all specifications for a set of dummy variables that indicate whether the respondent answered each specific subdimension.

Masculinity is relational, to other men but also to women. As such, hegemonic masculinity is instrumental to defining a hierarchy among men but also encompasses the subjugation of women. This raises the empirical concern that any relationship between the CMNI and outcomes of interest captures the unobserved influence of norms about women's social roles, which are correlated with masculinity norms and whose omission may hence bias our estimate of β in Equation (1). Teasing apart the influence of each subitem of the CMNI is a first attempt to distinguish among the different dimensions of masculinity, some of which explicitly relate to the relationship to women ("Control over women"). A more direct approach is to control for norms about women's roles in X_{ic} . In order to to compare the relative influences of masculinity norms and more traditionally measured gender roles norms, we systematically discuss estimations that regress outcomes on (i) masculinity norms alone; (ii) norms about women's roles alone; and (iii) masculinity norms while controlling for norms about women's roles.

4.2 Correlates of Masculinity and Gender Norms

To understand the relationship between individual characteristics and men's adherence to masculinity norms, and whether this relationship is similar to the one with traditional gender roles, Figure 10 presents coefficient estimates from linear regressions of either the CMNI-5 or the TGRI index on a range of demographic and socioeconomic characteristics (while including country fixed effects). For the CMNI-5, the absolute coefficients are generally smaller in magnitude, suggesting that individual characteristics do not predict adherence to masculinity norms as well as they predict traditional gender roles norms. For example, while older individuals are clearly more conservative in terms of gender roles norms, adherence to masculinity norms does not significantly vary by age cohort. Specifically, the TGRI in older age groups is between 0.11 and 0.19 s.d. higher than in respondents aged below 30, while the estimated coefficients for the CMNI-5 are statistically insignificant and close to zero. Likewise, while urban men tend to me less conservative in terms of traditional gender roles norms as compared to urban ones, there is no such difference in terms of their adherence to strict masculinity norms.

More educated men tend to adhere less strictly to masculinity norms and to be more progressive with respect to gender norms roles, but the gradient is noticeably steeper for the TGRI. While every additional education category is associated with a statistically significant lower TGRI, only a masters degree and above is statistically significantly associated with a lower CMNI (the excluded category is primary education or below). The magnitude of the coefficients for each education category is also much larger for the TGRI. For instance, the TGRI score for men with a graduate degree is 0.55 s.d. lower than that of men with at most a primary education. The equivalent comparison for the CMNI reveals a difference of only 0.15 s.d.

Religion tends to be significantly associated with both masculinity and gender role norms. Muslim respondents have CMNI-5 and TGRI scores that are 0.16 and 0.4 standard deviations higher, respectively, than those who identify as atheist, agnostic, or do not follow any religion. Catholics are also more likely to hold conservative gender views compared to non-religious respondents, with a TGRI score 0.15 standard deviations higher, but do not hold statistically different masculinity norms. Across all other religious groups, we generally find positive point estimates for both the CMNI-5 and the TGRI, although these associations are not statistically significant. Again, overall, religious affiliation thus appears a less consistent and less important driver of masculinity norms than of norms about women and gender roles. This contrast is even starker for religiosity. While religiosity is a robust predictor of traditional gender role attitudes, it plays no role as a predictor of masculinity norms. The coefficients associated with the importance of religion are positive and statistically significant for traditional gender roles norms, but insignificant and close to zero for masculinity norms.



Figure 10: Individual Correlates of Masculinity and Gender Roles Norms

Notes: This figure displays a coefficient plot showing the results from OLS regressions of the five-item Conformity to Masculinity Index (CMNI) or the Traditional Gender Roles Index (TGRI) on a range of covariates including age group, sex, level of education, urbanity, household income decile, employment status, religion, religion importance, and country fixed effects. Spikes show 95% confidence intervals based on standard errors clustered at the country level. Source: LiTS.

4.3 Economic outcomes

A recent sociological literature describes work as an arena of "masculinity contests", emphasizing how a strive for dominance and winning may create hostile and excessively competitive work environments³¹ that, in particular, normalize the supply of long working hours. The

³¹Berdahl et al. (2018) describes elements of such a culture at Uber: "A video showed CEO Travis Kalanick boasting about Uber's tough company culture and telling an Uber driver who suffered financial losses to take responsibility for his own problems; the CEO and other executives visited an escort bar in South Korea and board member David Bonderman notoriously commented that having more women on Uber's Board of Directors would just lead to 'more talking'." Among other examples, "Silicon Valley as a whole has been

prediction is thus that masculinity norms should be positively associated with labor supply at the intensive margin. The prediction for labor supply at the extensive margin is more ambiguous. While one still expects more masculine men to supply more labor, the economics literature has also stressed how gender identity influences occupation and industry choice, with masculinity norms driving male specialization in sectors such as agriculture, construction and manufacturing (Akerlof and Kranton, 2010; Baranov et al., 2023). In turn, such initial specialization can become a driver of unemployment when male-dominated industries are displaced or suffer negative economic shocks (Autor et al., 2019; Katz, 2014), implying an overall ambiguous relationship between masculinity norms and employment status.

To assess the relationship between masculinity norms and the supply of male labor on the extensive and intensive margins, we estimate Equation (1), using as a dependent variable a dummy indicator for currently being employed.³² Results are displayed in columns 1 (with the baseline set of controls) and 2 (with the extended controls) of Table 1 (Panel A). We find no statistically significant relationship between a respondent's CMNI score and employment status. Panels B and C show that a man's norms about women's socioeconomic roles are also uncorrelated with his labor market participation at the extensive margin.

under attack for its "bro" culture, rule-breaking, and sexism. Recent examples in other sectors include Fox News, the Weinstein Company, and the Trump Administration; all have received considerable negative press for toxic leadership, bullying, and sexual harassment." (Berdahl et al., 2018)[p.423]

³²Appendix Table 6 includes details on each variable used in the analysis.

	Working		Would Work More		Masculine Sector		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms	3							
CMNI-5 Score	-0.002	0.001	0.021^{***}	0.019^{***}	0.023^{***}	0.018^{**}	0.021	0.030^{*}
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.017)	(0.016)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.06	0.10	0.11	0.14
Observations	$15,\!974$	$15,\!974$	9,231	9,231	9,231	9,231	$15,\!974$	$15,\!974$
Panel B: Gender Norms								
TGRI Score	-0.003	0.005	0.004	0.000	0.043^{***}	0.028^{***}	-0.041^{***}	-0.022
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.00	0.00
R-squared	0.13	0.15	0.11	0.12	0.06	0.10	0.11	0.14
Observations	$16,\!343$	$16,\!343$	9,428	$9,\!428$	9,428	$9,\!428$	$16,\!343$	$16,\!343$
Panel C: Masculinity and Gender Norms								
CMNI-5 Score	-0.001	0.001	0.020^{***}	0.019^{***}	0.013^{*}	0.011^{*}	0.033^{*}	0.037^{**}
	(0.007)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.017)	(0.016)
TGRI Score	-0.002	0.006	-0.001	-0.004	0.039^{***}	0.024^{***}	-0.048^{***}	-0.030**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.16	0.11	0.12	0.07	0.10	0.11	0.14
Observations	$15,\!896$	$15,\!896$	9,196	9,196	9,196	9,196	15,896	15,896
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table 1: Masculinity (CMNI-5) and Gender Roles Norms - Economics

Notes: The dependent variables Working (columns 1-2), Would Work More (columns 3-4), and Masculine Sector (columns 5-6) are defined as dummies, whereas Competitiveness (columns 7-8) is standardized. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

In contrast with employment at the extensive margin, the relationship between masculinity norms and on-the-job labor supply at the *intensive* margin is unambiguously positive. This can be seen in columns 3 and 4 of Table 1, where we regress male labor supply at the intensive margin, using answers to a question on whether the respondent would like to work more in his current job, on the CMNI (Panel A), the TGRI (Panel B), or the CMNI and TGRI together (Panel C). We control for the baseline or for the extended set of controls in columns 3 and 4, respectively. The question on willingness to work more is only asked of men that are currently employed, explaining why the number of observations drops in these specifications. The results show a positive, robust, and statistically significant (at the 1% level) relationship between the CMNI and labor supply at the intensive margin. By contrast, as shown in Panel B, norms about women's roles are not significantly associated with labor supply. Panel C confirms that the relationship between masculinity norms and labor supply at the intensive margin remains robust and unchanged in magnitude, even after controlling for norms about women's roles (themselves insignificant). The estimates indicate that a one standard deviation increase in the CMNI is associated with a 12% increase in the desire to work more at one's current job.

Following gender identity theories of occupational choice, columns 5 and 6 of Table 1 show that men who adhere more to hegemonic masculine values are more likely to be employed in a masculine sector (Agriculture, Forestry and Fishing; Mining; Construction; Manufacturing; Transportation and Public Utilities). While a respondent's views on women's social roles also correlate positively with being employed in these sectors (Panel B), the association between masculinity norms and employment in a masculine sector remains statistically significant when controlling for norms about women's roles (Panel C).

The economics literature suggests that a gender gap in competitiveness is an important driver of unequal gender outcomes in education, occupational choice, and labor market earnings (see Bertrand (2011) and Niederle and Vesterlund (2011) for reviews and Reuben et al. (2017) and Cortés et al. (2023) for recent contributions). We test the relationship between adherence to masculinity norms and competitiveness using a question that asks respondents "*how competitive* [they] *consider themselves to be*", with answers on a 1 to 10 scale. Answers to this question has been shown to robustly predict actual competitive choices in incentivized tasks (see e.g. Dohmen et al. 2011; Buser et al. 2014)

The results in columns 7 and 8 provide some evidence that men who adhere more strongly to masculinity norms are more competitive. While the overall relationship between masculinity norms and competitiveness falls short of statistical significance in Panel A, results in Panel B reveal an opposite and *negative* relationship between norms about women's roles and competitiveness. When considering masculinity norms and norms about women's social roles together (Panel C), we find that men who adhere more to masculinity norms are more
competitive—a relationship statistically significant at the 5% level in our fully controled regression—but that men who hold more traditional views about women's roles are less competitive. The magnitudes of these two opposite relationships are comparable, with a one standard deviation increase in the CMNI score is associated with a 0.03 standard deviation increase in the competitiveness score. Appendix Table B7 show that these results are similar when using the CMNI-4 scale as a measure of masculinity.

	Working		Would W	ork More	Masculin	ne Sector	Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity - Impo	ortance of	Winning	()	()		()	()	
CMNI Winning	-0.012**	-0.009*	0.023***	0.022***	0.017^{**}	0.013^{*}	0.044***	0.049***
-	(0.005)	(0.006)	(0.005)	(0.005)	(0.007)	(0.007)	(0.016)	(0.016)
TGRI Score	0.000	0.008	-0.002	-0.006	0.040***	0.024***	-0.048***	-0.030*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.02	0.02
R-squared	0.13	0.15	0.11	0.11	0.07	0.10	0.11	0.13
Observations	15,176	$15,\!176$	8,806	8,806	8,806	8,806	$15,\!176$	$15,\!176$
Panel B: Masculinity - Viol	ence							
CMNI Violence	-0.003	-0.002	0.010^{*}	0.009^{*}	-0.003	-0.006	-0.011	-0.008
	(0.006)	(0.006)	(0.005)	(0.005)	(0.007)	(0.007)	(0.014)	(0.014)
TGRI Score	-0.002	0.006	0.002	-0.002	0.043^{***}	0.028^{***}	-0.039**	-0.020
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.014)	(0.014)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.13	0.15	0.10	0.11	0.07	0.10	0.11	0.13
Observations	15,314	15,314	8,874	8,874	8,874	8,874	$15,\!314$	$15,\!314$
Panel C: Masculinity - Help	Avoidanc	e						
CMNI Help Avoidance	0.005	0.005	0.008^{*}	0.008	0.011^{*}	0.012^{**}	0.010	0.009
	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.005)	(0.016)	(0.015)
TGRI Score	-0.002	0.006	0.003	-0.001	0.040^{***}	0.024^{***}	-0.042^{***}	-0.023
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.07	0.10	0.11	0.13
Observations	15,267	15,267	8,849	8,849	8,849	8,849	15,267	15,267
Panel D: Masculinity - Con	trol Over	Women						
CMNI Control Over Women	0.002	0.004	0.020***	0.019^{***}	0.013^{*}	0.010	0.037^{**}	0.041^{***}
	(0.008)	(0.007)	(0.006)	(0.007)	(0.007)	(0.008)	(0.015)	(0.015)
TGRI Score	-0.003	0.005	0.000	-0.003	0.039^{***}	0.024^{***}	-0.048^{***}	-0.030**
	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.07	0.10	0.11	0.13
Observations	15,267	15,267	8,807	8,807	8,807	8,807	15,267	15,267
Panel E: Masculinity - Disd	ain for Ho	mosexuals						
CMNI Against Homosexuals	0.002	0.001	0.000	0.001	0.000	0.003	0.010	0.009
	(0.007)	(0.006)	(0.006)	(0.006)	(0.009)	(0.009)	(0.018)	(0.017)
TGRI Score	-0.006	0.003	0.003	-0.001	0.047^{***}	0.031^{***}	-0.049^{***}	-0.028^{*}
	(0.005)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)	(0.015)	(0.015)
Mean of outcome	0.60	0.60	0.16	0.16	0.44	0.44	0.03	0.03
R-squared	0.13	0.15	0.11	0.12	0.07	0.10	0.11	0.13
Observations	13,475	$13,\!475$	8,020	8,020	8,020	8,020	$13,\!475$	$13,\!475$
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table 2: Masculinity dimensions - Economics

Notes: The dependent variables Working (columns 1-2), Would Work More (columns 3-4), and Masculine Sector (columns 5-6) are defined as dummies, whereas Competitiveness (columns 7-8) is standardized. Standard errors are clustered at the country level and shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Table 2 breaks down these relationships across the different dimensions of the CMNI, controlling for individual characteristics and for men's norms about women's social roles. "Importance of winning" is, consistently, the most robust predictor of economic outcomes across the three major dimensions of on-the-job labor supply, occupational choice, and competitiveness. A one s.d. increase in "importance of winning" answers is associated with a 13% increase in the willingness to supply longer hours, a 4% increase in the probability of being employed in a stereotypically masculine sector, and a 0.05 s.d. increase in competiveness (all relationships statistically significant). "Help avoidance" is significantly correlated with labor supply and occupational choice but not competitiveness; while "control over women" is significantly correlated with labor supply and competitiveness. "Violence" only plays a significant role as a predictor of on-the-job labor supply while "disdain for homosexuals" does not correlate with any outcome.

4.4 Risk-Taking, Health Behaviors, and Mental Health

Masculinity is often discussed as conducive to excessive risk-taking, emotional restraint, and help avoidance behavior. Emotional restraint and help avoidance are contributing factors to depression and poor mental health, while risk-taking and help avoidance are associated with lower take up of preventative health measures, including routine doctors' visits (Dell et al., 1989; Springer and Mouzon, 2011; Baranov et al., 2023).

We measure risk-taking in LiTS through both stated and revealed preferences. We assess respondents' self-reported risk preferences with a standard question, which has been shown to correlate positively with risk-taking behavior in incentivized tasks and real-world risk taking (see e.g., Eckel (2019)).³³ We also gauge revealed risk-taking by asking whether respondents usually wear a seatbelt in the car.³⁴

³³The question (which is also part of the German Socio-Economic Panel) asks "Please rate your willingness to take risks, in general, on a scale from 1 to 10, where 1 means that you are not willing to take risks at all, and 10 means that you are very much willing to take risks." The average among men is 5.2 (s.d.: 2.9), while the average for women is 4.5 (s.d.: 2.9). Average willingness to take risk is highest in Kosovo (6.7) and lowest in Bosnia and Herzegovina (4.3).

 $^{^{34}}$ We assess seatbelt wearing by whether respondents usually wear a seatbelt, either as a driver (91% for

We measure willingness to take up preventative health measures by asking whether respondents skipped a medical visit even after falling ill in the last two years. On average, 14.5% of respondents (s.d.: 0.35) skipped a medical visit. The shares are highest in the Middle East (highest in Jordan: 43.2%) and lowest in Poland (3.6%). Lastly, we assess mental health by including the standard PHQ4 questions—a valid ultra-brief tool for detecting both anxiety and depressive disorders—in the survey. These questions ask how often (from 1: never to 5: daily) respondents feel: (i) "anxious, nervous, or worried", (ii) "very sad", (iii) "depressed", and (iv) how often they have "little interest or pleasure doing things". We build a *Depression score* index as the sum of the responses to these questions.³⁵

men; 85% for women), passenger in the front seat (89% for men; 90% for women), or passenger in the back seat (42% for men and women) – see Table B2.

³⁵The mean is 2.4 (s.d.: 1.15). Average rates of mental distress are highest in the Middle East and North Africa (highest country-level average in Lebanon: 3.5) and lowest in Western Europe (lowest country-level average in Germany: 1.4).

	Risk Taking		Uses S	eatbelt	Skip Visi	t to Doctor	Depressi	on Score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms	3							
CMNI-5 Score	0.048^{***}	0.052^{***}	-0.070***	-0.067^{***}	0.008	0.007	0.105^{***}	0.100^{***}
	(0.015)	(0.015)	(0.014)	(0.014)	(0.005)	(0.005)	(0.018)	(0.018)
Mean of outcome	0.01	0.01	-0.00	-0.00	0.12	0.12	-0.00	-0.00
R-squared	0.10	0.11	0.21	0.21	0.08	0.09	0.26	0.27
Observations	$15,\!889$	$15,\!889$	$15,\!452$	$15,\!452$	$15,\!974$	15,974	15,738	15,738
Panel B: Gender Norms								
TGRI Score	-0.011	0.001	-0.070***	-0.064^{***}	0.001	-0.002	0.059^{***}	0.049^{***}
	(0.013)	(0.012)	(0.014)	(0.015)	(0.003)	(0.003)	(0.014)	(0.014)
Mean of outcome	0.00	0.00	-0.00	-0.00	0.12	0.12	-0.00	-0.00
R-squared	0.10	0.11	0.20	0.21	0.08	0.09	0.25	0.26
Observations	$16,\!253$	$16,\!253$	$15,\!806$	$15,\!806$	$16,\!343$	16,343	$16,\!074$	$16,\!074$
Panel C: Masculinity and G	ender No	orms						
CMNI-5 Score	0.053^{***}	0.055^{***}	-0.057^{***}	-0.056^{***}	0.008	0.008	0.094^{***}	0.092^{***}
	(0.016)	(0.015)	(0.014)	(0.014)	(0.006)	(0.006)	(0.018)	(0.018)
TGRI Score	-0.024^{*}	-0.013	-0.057^{***}	-0.052^{***}	-0.001	-0.004	0.036^{**}	0.026^{*}
	(0.012)	(0.012)	(0.014)	(0.015)	(0.004)	(0.004)	(0.014)	(0.014)
Mean of outcome	0.01	0.01	-0.00	-0.00	0.12	0.12	-0.00	-0.00
R-squared	0.10	0.11	0.21	0.21	0.09	0.09	0.26	0.27
Observations	$15,\!815$	$15,\!815$	$15,\!378$	$15,\!378$	$15,\!896$	$15,\!896$	$15,\!677$	$15,\!677$
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table 3: Masculinity (CMNI-5) and Gender Roles Norms - Risk and Health

Notes: The dependent variable *Skip Visit to Doctor* (columns 5-6) is defined as a dummy, whereas *Risk Taking* (columns 1-2), *Uses Seat-belt* (columns 3-4) and *Depression Score* (columns 7-8) are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 3 shows that masculinity norms are positively, significantly and robustly associated with all the (normalized) measures of revealed and stated risk-taking (columns 1 to 4), under-investment in preventative health (columns 5 and 6), and depression (columns 7 and 8). In stark contrast, Panels B and C reveal an overall much weaker, and sometimes reversed, relationship with norms about women's social roles. Norms about women's roles appear significantly associated with depression on their own, but, as shown in Panel C, this relationship is no longer statistically significant and much reduced in magnitude when masculinity norms are controlled for, while the point estimates associated with remain statistically significant and unchanged in magnitude. Norms about women are uncorrelated with men's preventative health behaviors and, in sharp contrast with masculinity norms, they are, if anything, *negatively* correlated with their stated risk preferences. Results in Appendix Table B8 show that the results are robust to using the CMNI-4 as the independent variable of interest.

Table 4 shows that all dimensions of the CMNI contribute to these results, albeit in different ways. Across all dimensions, help avoidance is the most robust and economically meaningful predictor of health and wellbeing related outcomes, correlating positively with stated and revealed risk-taking, negatively with preventative health investments, and positively with depression. All but one dimensions ("disdain for homosexuals") of masculinity are significantly associated with depression. In terms of magnitude, violence is the strongest predictor of depression, followed by control over women, help avoidance, and winning.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Risk Taking		Uses S	eatbelt	Skip Visit	t to Doctor	Depression Score		
Panel A: Masculinity - Importance of Winning -0.016 -0.016 0.002 0.001 0.057*** 0.055*** CMNI Winning (0.015) (0.014) (0.013) (0.003) (0.005) (0.014) (0.013) TGRI Score -0.018 -0.007 -0.063*** 0.002 -0.011 0.014 (0.014) (0.010) (0.004) (0.004) (0.019) (0.018) (0.018) (0.018) (0.018) (0.018) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.013) (0.012) <td< td=""><td></td><td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td><td>(5)</td><td>(6)</td><td>(7)</td><td>(8)</td></td<>		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
CMNI Winning 0.051*** 0.054*** -0.018 -0.016 0.002 0.001 0.055*** 0.0055 TGRI Score -0.018 -0.007 -0.063*** 0.002 -0.001 0.014 (0.013) Mean of outcome 0.01 0.01 -0.01 -0.02 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.01 0.01 -0.01 -0.12 0.12 0.12 -0.00 -0.00 R-squared 0.01 0.01 44.678 14.678 15.166 15.176 15.176 14.900 14.900 14.900 Observations 15.104 15.104 14.678 14.678 10.04 0.004 0.004 0.004 0.004 0.004 0.004 0.019 0.018 0.018 0.011 0.010 0.001 0.004 0.004 0.013 0.013 TGRI Score -0.014 -0.004 -0.054*** 0.054** 0.007 0.063*** 0.031 Mean of outcome 0.01	Panel A: Masculinity - Imp	ortance of	Winning							
(0.015) (0.014) (0.013) (0.005) (0.005) (0.014) (0.013) TGRI Score -0.018 -0.007 -0.069*** -0.063*** 0.002 -0.001 0.051** 0.043*** Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 0.02 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.02 0.02 0.02 0.02 Panel B: Masculinity - Violence (0.012) (0.021) (0.010) (0.010) (0.004) (0.004) (0.019) (0.018) TGRI Score -0.014 -0.004 -0.064*** -0.054*** 0.001 -0.002 0.041*** 0.031* Mean of outcome 0.01 0.01 -0.00 -0.001 0.001 -0.002 0.021* 0.02 0.013* 0.013* Mean of outcome 0.10 0.11 0.21 0.22 0.09 0.26 0.27* Observations 15,244 15,244 14,817 14,817 <	CMNI Winning	0.051^{***}	0.054^{***}	-0.018	-0.016	0.002	0.001	0.057^{***}	0.055^{***}	
TGRI Score -0.018 -0.007 -0.063*** 0.002 -0.011 0.012 (0.012) (0.014) (0.015) (0.003) (0.004) (0.014) (0.014) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.02 -0.00 14,990 Panel B: Masculinity - Violence -0.053*** -0.054*** 0.004 0.004 0.094*** 0.094*** CMNI Violence 0.021 0.022* -0.054*** 0.001 -0.002 0.041*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031**** 0.031**** 0.031*** 0.031*** 0.031*** 0.031*** 0.031**** 0.031**** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031*** 0.031**** 0.031**** 0.031**** 0.031****		(0.015)	(0.014)	(0.013)	(0.013)	(0.005)	(0.005)	(0.014)	(0.013)	
(0.012) (0.012) (0.014) (0.013) (0.003) (0.004) (0.014) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.21 0.08 0.09 0.26 0.27 Observations 15,104 15,104 14,678 15,176 15,176 14,990 14,990 Panel B: Masculinity - Violence -0.021 0.022* -0.054*** 0.004 0.004 0.004 0.019 (0.019) TGRI Score -0.014 -0.004 -0.065*** 0.001 0.001 (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.013) (0.014) (0.014) (0.014) (0.014) (0.014) (0.014) (0.014) (0	TGRI Score	-0.018	-0.007	-0.069***	-0.063***	0.002	-0.001	0.051***	0.043***	
Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.21 0.08 0.09 0.26 0.27 Observations 15,104 15,104 14,678 14,678 15,176 15,176 14,990 14,990 Panel B: Masculinity - Violence (0.012) 0.022* -0.054*** -0.004 0.004 0.004 0.004 0.094*** 0.094*** CMNI Violence 0.012 0.012 0.010 (0.010) (0.010) (0.004) (0.013) (0.013) Mean of outcome 0.01 0.01 -0.00 -0.00 0.00 1.002 0.013 (0.013) Mean of outcome 0.01 0.01 -0.01 -0.02 0.09 0.26 0.27 Observations 15,244 15,244 14,817 14,817 15,314 15,314 15,313 15,131 Panel B: Masculinity - Help Avoidance 0.017 -0.027*** 0.047*		(0.012)	(0.012)	(0.014)	(0.015)	(0.003)	(0.004)	(0.014)	(0.014)	
R-squared 0.10 0.11 0.21 0.21 0.08 0.09 0.26 0.27 Observations 15,104 15,104 14,678 14,678 15,176 14,900 14,990 Panel B: Masculinity - Vioence 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.001 0.007 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037 0.0037	Mean of outcome	0.01	0.01	-0.01	-0.01	0.12	0.12	-0.00	-0.00	
Observations 15,104 15,104 14,678 14,678 15,176 14,990 14,990 Panel B: Masculinity - Viole-ne CMNI Violence 0.021 0.022* -0.054*** 0.003 0.004 0.094*** 0.094*** CMNI Violence 0.012 0.013 0.010 (0.010) (0.004) (0.004) (0.019) (0.013) (0.011) (0.015) (0.003) (0.004) (0.013) (0.012) Mean of outcome 0.012 (0.011) (0.014) (0.014) (0.004) (0.012) (0.012) GRI Score -0.012 -0.001 -0.025*** -0.047*** 0.007 0.063*** 0.053*** 0.010	R-squared	0.10	0.11	0.21	0.21	0.08	0.09	0.26	0.27	
Panel B: Masculinity - Violence CMNI Violence 0.021 0.022^* -0.054^{***} -0.004 0.004 0.094^{***} 0.094^{***} TGRI Score -0.014 -0.004 -0.054^{***} 0.001 (0.004) (0.019) (0.014) Mean of outcome 0.01 0.01 0.01 0.000 -1.22 -0.00 -0.12 -1.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.26 0.27 Observations $15,244$ $15,244$ $14,817$ $14,817$ $15,314$ $15,131$ $15,131$ Panel C: Masculinity - Help Avoidance (0.012) (0.014) (0.014) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.065^{***} -0.059^{***} 0.001 (0.012) (0.012) TGRI Score -0.012 -0.001 -0.012 0.12 0.12 -0.00 -0.02 R-squared 0.10	Observations	15,104	$15,\!104$	14,678	$14,\!678$	$15,\!176$	15,176	14,990	14,990	
CMNI Violence 0.021 0.022* -0.054*** -0.033*** 0.004 0.094 0.094*** 0.094*** IGRI Score -0.014 -0.004 -0.060*** -0.054*** 0.001 -0.002 0.011*** 0.031** IGRI Score -0.014 -0.004 0.010* (0.013) (0.012) 0.026 0.27 Observations 15,244 15,244 14,817 14,817 15,314 15,131	Panel B: Masculinity - Viol	ence								
(0.012) (0.013) (0.010) (0.014) (0.004) (0.014) (0.013) (0.014) TGRI Score -0.014 -0.004 -0.064*** -0.054*** 0.001 -0.002 0.041*** 0.031 Mean of outcome 0.01 0.01 -0.00 -0.00 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,244 15,244 14,817 15,314 15,313 15,131 Panel C: Masculinity - Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.007 0.063*** 0.063*** (0.012) (0.011) (0.014) (0.014) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.05*** -0.039** 0.0002 0.052*** 0.043*** Mean of outcome 0.01 0.11 0.21 0.22 0.90 0.90 0.26 0.27 Observations	CMNI Violence	0.021	0.022^{*}	-0.054***	-0.053***	0.004	0.004	0.094***	0.094***	
TGRI Score -0.014 -0.004 -0.066*** -0.054*** 0.001 -0.002 0.041*** 0.031** Mean of outcome 0.01 0.011 0.015 (0.003) (0.004) (0.013) (0.013) Mean of outcome 0.01 0.01 -0.00 -0.00 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,244 15,244 14,817 15,314 15,314 15,313 15,313 15,313 15,313 15,313 15,314 0.037** CMNI Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.007 0.063*** 0.033** GO.12 (0.011) (0.014) (0.014) (0.004) (0.012) (0.012) (0.012) TGRI Score -0.012 -0.01 -0.01 -0.01 0.12 0.26 0.27* Mean of outcome 0.01 0.01 0.22 0.09		(0.012)	(0.013)	(0.010)	(0.010)	(0.004)	(0.004)	(0.019)	(0.018)	
(0.012) (0.011) (0.014) (0.015) (0.003) (0.014) (0.013) (0.013) (0.013) Mean of outcome 0.01 0.01 -0.00 -0.00 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15.244 15.244 14.817 14.817 15.314 15.314 15.131 15.131 Panel C: Masculinity - Help Avoidace 0.027** 0.026** -0.047*** 0.007 0.063*** 0.032** CMNI Help Avoidance 0.027** 0.001 -0.014 (0.014) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.015 (0.033) (0.004) (0.015) (0.015) (0.014) (0.014) (0.014) (0.014) (0.014) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015)	TGRI Score	-0.014	-0.004	-0.060***	-0.054***	0.001	-0.002	0.041***	0.031**	
Mean of outcome 0.01 0.01 -0.00 -0.00 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,244 15,244 14,817 14,817 15,314 15,314 15,131 15,131 Panel C: Masculinity - Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.007 0.063*** 0.063*** (0.012) (0.011) (0.014) (0.014) (0.004) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.065*** -0.039** 0.001 -0.002 0.052*** 0.047** Mean of outcome 0.01 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050*** -0.019 -0.017 <td></td> <td>(0.012)</td> <td>(0.011)</td> <td>(0.014)</td> <td>(0.015)</td> <td>(0.003)</td> <td>(0.004)</td> <td>(0.013)</td> <td>(0.013)</td>		(0.012)	(0.011)	(0.014)	(0.015)	(0.003)	(0.004)	(0.013)	(0.013)	
R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,244 15,244 14,817 14,817 15,314 15,314 15,131 15,131 15,131 Panel C: Masculinity - Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.007 0.063*** 0.063*** 0.063*** 0.063*** 0.063*** 0.063*** 0.063*** 0.063*** 0.0012 (0.012) (0.014) (0.014) (0.004) (0.012) (0.012) (0.013) (0.012) (0.014) (0.003) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.01 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050** -	Mean of outcome	0.01	0.01	-0.00	-0.00	0.12	0.12	-0.00	-0.00	
Observations 15,244 15,244 14,817 14,817 15,314 15,314 15,131 15,131 Panel C: Masculinity - Help Avoidance 0.027** 0.026*** -0.047*** -0.047*** 0.007 0.007 0.063*** 0.063*** CMNI Help Avoidance 0.027** 0.026*** -0.047*** -0.047*** 0.007 0.007 0.063*** 0.063*** 0.012 (0.012) (0.012) (0.012) (0.012) (0.012) (0.012) (0.013) (0.012) (0.013) (0.012) (0.013) (0.013) (0.012) (0.013) (0.014) (0.015) (0.003) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.02 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,067 15,086 15,086 Panel D: Masculinity - Control Over Women	R-squared	0.10	0.11	0.21	0.22	0.09	0.09	0.26	0.27	
Panel C: Masculinity - Help Avoidance CMNI Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.063*** 0.063*** (0.012) (0.011) (0.014) (0.014) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.065*** -0.059*** 0.001 -0.002 0.052*** 0.043*** (0.013) (0.012) (0.014) (0.015) (0.003) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012*** 0.066*** 0.063*** (MII Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.01	Observations	15,244	15,244	14,817	14,817	15,314	15,314	15,131	15,131	
CMNI Help Avoidance 0.027** 0.026** -0.047*** 0.007 0.007 0.063*** 0.063*** IGRI Score -0.012 -0.001 -0.065*** -0.059*** 0.001 -0.002 0.052*** 0.043*** IGRI Score -0.012 -0.001 -0.065*** -0.059*** 0.001 -0.002 0.052*** 0.043*** Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27* Observations 15,194 15,194 14,766 14,766 15,267 15,086 15,086 Panel D: Masculinity - Contro Over Women 0.048*** 0.050*** -0.017 0.013*** 0.012** 0.066*** 0.061*** IGRI Score -0.021 -0.010 -0.06*** -0.021 -0.005 0.001*** 0.005 0.025*** 0.06**** IGRI Score -0.010 0.01 -0.011	Panel C: Masculinity - Help	Avoidand	e							
(0.012) (0.011) (0.014) (0.014) (0.004) (0.012) (0.012) TGRI Score -0.012 -0.001 -0.055*** -0.003) (0.003) (0.004) (0.015) (0.013) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.01 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** CMNI Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** G0.016 (0.015) (0.015) (0.015) (0.004) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.015) (0.016) (0.015) (0.015)	CMNI Help Avoidance	0.027**	0.026**	-0.047***	-0.047***	0.007	0.007	0.063***	0.063***	
TGRI Score -0.012 -0.001 -0.065*** -0.059*** 0.001 -0.002 0.052*** 0.043*** Mean of outcome 0.01 0.01 -0.01 -0.01 0.013 (0.013) (0.014) (0.015) (0.003) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women CMNI Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012*** 0.066*** 0.063*** (0.016) (0.015) (0.015) (0.015) (0.005) (0.000) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.06*** -0.061*** -0.002 -0.05 0.046*** 0.037** Mean of outcome 0.01 0.11 0.21 0.21<	-	(0.012)	(0.011)	(0.014)	(0.014)	(0.004)	(0.004)	(0.012)	(0.012)	
(0.013) (0.012) (0.014) (0.015) (0.003) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** (0.016) (0.015) (0.015) (0.015) (0.005) (0.005) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.066*** -0.061*** -0.002 -0.005 0.046*** 0.037** (0.013) (0.012) (0.014) (0.015) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.11 0.21 0.21 0.12 0.12 0.	TGRI Score	-0.012	-0.001	0.001 -0.065*** -0.059*** 0.001 -0.		-0.002	0.052***	0.043***		
Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 -0.00 -0.00 R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations $15,194$ $15,194$ $14,766$ $14,766$ $15,267$ $15,267$ $15,086$ $15,086$ Panel D: Masculinity - Control Over WomenCMNI Control Over Women 0.048^{***} 0.050^{***} -0.019 -0.017 0.013^{***} 0.012^{**} 0.066^{***} 0.063^{***} (0.016) (0.015) (0.015) (0.015) (0.005) (0.005) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.066^{***} -0.002 -0.005 0.046^{***} 0.37^{**} (0.013) (0.012) (0.014) (0.015) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 0.00 0.00 R-squared 0.10 0.11 0.21 0.21 0.09 0.26 0.27 Observations $15,193$ $15,193$ $14,763$ $14,763$ $15,267$ $15,078$ $15,078$ Panel E: Masculinity - Disdain for Hornosexuals -0.024^{*} -0.026^{*} -0.003 -0.002 0.001 0.000 (0.015) (0.014) (0.014) (0.014) (0.006) (0.006) (0.017) (0.016) TGRI Score -0.014 -0.002 -0.086^{***} <		(0.013)	(0.012)	(0.014)	(0.015)	(0.003)	(0.004)	(0.015)	(0.015)	
R-squared 0.10 0.11 0.21 0.22 0.09 0.09 0.26 0.27 Observations 15,194 15,194 14,766 14,766 15,267 15,267 15,086 15,086 15,086 Panel D: Masculinity - Cover Voren Voren 0.013*** 0.013*** 0.013*** 0.013*** 0.012** 0.066*** 0.063*** CMNI Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** (0.016) (0.015) (0.015) (0.015) (0.015) (0.005) (0.005) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.066*** -0.061*** -0.002 -0.005 0.046*** 0.037** Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 0.00 0.00 R-squared 0.10 0.11 0.21 0.21 0.09 0.99 0.26 0.27 Observations 15,193	Mean of outcome	0.01	0.01	-0.01	-0.01	0.12	0.12	-0.00	-0.00	
Observations 15,194 15,194 14,766 14,766 15,267 15,267 15,086 15,086 Panel D: Masculinity - Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** CMNI Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** (0.016) (0.015) (0.015) (0.015) (0.005) (0.005) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.066*** -0.061*** -0.002 -0.005 0.046*** 0.037*** Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 0.00 0.00 R-squared 0.10 0.11 0.21 0.21 0.09 0.09 0.26 0.27 Observations 15,193 15,193 14,763 14,763 15,267 15,078 15,078 Panel E: Masculinity - Disdur for Homosexuals -0.009 <	R-squared	0.10	0.11	0.21	0.22	0.09	0.09	0.26	0.27	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Observations	15,194	15,194	14,766	14,766	15,267	15,267	15,086	15,086	
CMNI Control Over Women 0.048*** 0.050*** -0.019 -0.017 0.013*** 0.012** 0.066*** 0.063*** (0.016) (0.015) (0.015) (0.015) (0.005) (0.005) (0.020) (0.019) TGRI Score -0.021 -0.010 -0.066*** -0.061*** -0.002 -0.005 0.046*** 0.037** (0.013) (0.012) (0.014) (0.015) (0.004) (0.004) (0.015) (0.015) Mean of outcome 0.01 0.01 -0.01 -0.01 0.12 0.12 0.00 0.00 R-squared 0.10 0.11 0.21 0.21 0.09 0.09 0.26 0.27 Observations 15,193 15,193 14,763 14,763 15,267 15,078 15,078 Panel E: Masculinity - Disdain for Hornosexuals -0.009 -0.024* -0.026* -0.003 -0.002 0.001 0.068*** (0.015) (0.014) (0.014) (0.014) 0.004 0.001 0.06	Panel D: Masculinity - Con	trol Over	Women							
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	CMNI Control Over Women	0.048***	0.050***	-0.019	-0.017	0.013***	0.012**	0.066***	0.063***	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(0.016)	(0.015)	(0.015)	(0.015)	(0.005)	(0.005)	(0.020)	(0.019)	
	TGRI Score	-0.021	-0.010	-0.066***	-0.061***	-0.002	-0.005	0.046***	0.037**	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(0.013)	(0.012)	(0.014)	(0.015)	(0.004)	(0.004)	(0.015)	(0.015)	
R-squared 0.10 0.11 0.21 0.21 0.09 0.09 0.26 0.27 Observations 15,193 15,193 14,763 14,763 15,267 15,267 15,078 15,078 Panel E: Masculinity - Disdain for Homosexuals -0.008 -0.009 -0.024* -0.003 -0.002 0.001 0.000 CMNI Against Homosexuals -0.008 -0.009 -0.024* -0.026* -0.003 -0.002 0.001 0.000 ITGRI Score -0.014 -0.002 -0.086*** -0.080*** 0.004 0.001 0.068*** 0.060*** Iter International Internatinternatinteremodel International International Internatinteremo	Mean of outcome	0.01	0.01	-0.01	-0.01	0.12	0.12	0.00	0.00	
	R-squared	0.10	0.11	0.21	0.21	0.09	0.09	0.26	0.27	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Observations	15,193	15,193	14,763	14,763	15,267	15,267	15,078	15,078	
CMNI Against Homosexuals -0.008 -0.009 -0.024* -0.026* -0.003 -0.002 0.001 0.000 (0.015) (0.014) (0.014) (0.014) (0.006) (0.006) (0.017) (0.016) TGRI Score -0.014 -0.002 -0.086*** -0.080*** 0.004 0.001 0.068*** 0.060*** (0.014) (0.014) (0.015) (0.004) (0.004) (0.015) (0.015)	Panel E: Masculinity - Disd	ain for He	omosexuals	,	,	,	,	,	,	
(0.015) (0.014) (0.014) (0.014) (0.006) (0.017) (0.016) TGRI Score -0.014 -0.002 -0.086*** -0.080*** 0.004 0.001 0.068*** 0.060*** (0.014) (0.014) (0.015) (0.004) (0.015) (0.014) (0.014) (0.015) (0.004) (0.015) (0.015)	CMNI Against Homosexuals	-0.008	-0.009	-0.024*	-0.026*	-0.003	-0.002	0.001	0.000	
TGRI Score -0.014 -0.002 -0.086^{***} -0.080^{***} 0.004 0.001 0.068^{***} 0.060^{***} (0.014) (0.014) (0.015) (0.004) (0.004) (0.015) (0.015)		(0.015)	(0.014)	(0.014)	(0.014)	(0.006)	(0.006)	(0.017)	(0.016)	
(0.014) (0.014) (0.014) (0.015) (0.004) (0.004) (0.015) (0.015)	TGRI Score	-0.014	-0.002	-0.086***	-0.080***	0.004	0.001	0.068***	0.060***	
		(0.014)	(0.014)	(0.014)	(0.015)	(0.004)	(0.004)	(0.015)	(0.015)	
Mean of outcome 0.02 0.02 0.01 0.01 0.11 0.11 -0.05 -0.05	Mean of outcome	0.02	0.02	0.01	0.01	0.11	0.11	-0.05	-0.05	
R-squared 0.10 0.11 0.23 0.23 0.09 0.10 0.24 0.24	R-squared	0.10	0.11	0.23	0.23	0.09	0.10	0.24	0.24	
Observations 13,422 13,422 13,087 13,087 13,475 13,475 13,335 13,335	Observations	13,422	13,422	13,087	13,087	13,475	13,475	13,335	13,335	
Country FEs x x x x x x x x x	Country FEs	, ×	, ×	×	×	×	×	×	×	
Age Urban X X Y Y Y Y Y Y	Age Urban	×	×	~	~	×	×	~	×	
Education. Religiosity × × × ×	Education, Religion, Religiosity		×	~	×	~	×	~	×	

Table 4: Masculinity (CMNI-5) and Gender Roles Norms - Risk and Health

Notes: The dependent variable *Skip Visit to Doctor* (columns 5-6) is defined as a dummy, whereas *Risk Taking* (columns 1-2), *Uses Seatbelt* (columns 3-4) and *Depression Score* (columns 7-8) are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

4.5 Politics

Many of the countries in our dataset, from the former Soviet Union to North Africa, underwent major political and economic transitions. Most of the respondents in our survey, or their parents, lived at some point under non-democratic regimes that practised a form of central economic planning. Most experienced more or less violent major revolutionary events, transitions to market economies, and –albeit, for some, only short-lived– great advances in democratic freedoms. Some countries in the region have also witnessed major democratic backsliding in recent years, in particular Hungary under Viktor Orban and Russia under Russia.

The LiTS survey includes a set of questions about men's adherence to democratic values, support for a market economy, and their support for various dimensions of authoritarian leadership, including by the army (see Table B5 for variable descriptions). Panel A of Table 5 reveal clear negative relationships between adherence to masculinity and support for liberal political and economic systems. Columns 1 to 4 show that more masculine men are less supportive of a democratic system and a market economy. Instead, they are more supportive of strongman leadership and army rule (columns 5 to 8). All these results are statistically significant at the 1% level. The magnitudes are large, with a one standard deviation increase in adherence to the CMNI being associated with a 5 percentage point (pp) decrease in the support for a democratic regime, a 3.5 pp decrease in the support for a market economy, and a 3 to 4 p.p. increase for strongman leadership and army rule.

	Pro Dei	nocracy	Pro M	Iarket	Support fo	or Strong Leader	Support	for Army
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms	3							
CMNI-5 Score	-0.050^{***}	-0.047^{***}	-0.034^{***}	-0.031***	0.032^{***}	0.030***	0.038^{***}	0.036^{***}
	(0.008)	(0.008)	(0.009)	(0.009)	(0.006)	(0.005)	(0.009)	(0.009)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.08	0.09	0.05	0.06	0.16	0.16	0.21	0.23
Observations	$14,\!828$	$14,\!828$	$12,\!938$	12,938	$13,\!586$	13,586	$13,\!634$	$13,\!634$
Panel B: Gender Norms								
TGRI Score	-0.060***	-0.054^{***}	-0.028**	-0.021^{*}	0.036^{***}	0.032^{***}	0.039^{***}	0.030***
	(0.008)	(0.008)	(0.012)	(0.012)	(0.007)	(0.007)	(0.008)	(0.008)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.08	0.09	0.05	0.06	0.17	0.17	0.22	0.23
Observations	$15,\!134$	$15,\!134$	$13,\!234$	$13,\!234$	$13,\!856$	13,856	13,908	$13,\!908$
Panel C: Masculinity and G	ender No	rms						
CMNI-5 Score	-0.037^{***}	-0.036***	-0.028^{***}	-0.028^{***}	0.024^{***}	0.024^{***}	0.029^{***}	0.029^{***}
	(0.008)	(0.008)	(0.008)	(0.008)	(0.006)	(0.006)	(0.009)	(0.009)
TGRI Score	-0.050^{***}	-0.044^{***}	-0.020	-0.014	0.029^{***}	0.025***	0.031^{***}	0.022^{***}
	(0.008)	(0.008)	(0.012)	(0.012)	(0.008)	(0.007)	(0.008)	(0.008)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.09	0.10	0.05	0.06	0.16	0.16	0.22	0.23
Observations	14,768	14,768	$12,\!885$	12,885	$13,\!540$	$13,\!540$	$13,\!587$	$13,\!587$
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table 5: Masculinity (CMNI-5) and Gender Roles Norms - Politics

Notes: All dependent variables are defined as dummies. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

When considering the role of norms about women's roles, either in isolation in Panel B or together with masculinity in Panel C, we confirm previous scholarship and commentary discussing the political role of attitudes towards gender equality. Overall our results strongly point to both negative attitudes towards gender equality and adherence to hegemonic masculinity explaining anti-democratic attitudes and support for strongman leadership, which often goes hand in hand with performative masculinity played out by populist leaders or embodied by the army (Lombardo et al., 2021). The results are consistent if we define masculinity using the 4-item CMNI (see Appendix Table B9).

Breaking apart different dimensions of masculinity, Table 6 shows that violence, control over women, and importance of winning are the most important dimensions of the CMNI in driving opposition to democracy and a market-based economy as well as support for strongman leadership and army rule. Help avoidance and disdain for homosexuals play a lesser role.

	Pro Dei	nocracy	Pro M	Iarket	Support fo	or Strong Leader	Support	for Army
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norm	8							
CMNI-5 Score	-0.050***	-0.047^{***}	-0.034^{***}	-0.031***	0.032***	0.030***	0.038^{***}	0.036^{***}
	(0.008)	(0.008)	(0.009)	(0.009)	(0.006)	(0.005)	(0.009)	(0.009)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.08	0.09	0.05	0.06	0.16	0.16	0.21	0.23
Observations	$14,\!828$	$14,\!828$	$12,\!938$	12,938	$13,\!586$	13,586	$13,\!634$	$13,\!634$
Panel B: Gender Norms								
TGRI Score	-0.060***	-0.054^{***}	-0.028^{**}	-0.021^{*}	0.036^{***}	0.032***	0.039^{***}	0.030^{***}
	(0.008)	(0.008)	(0.012)	(0.012)	(0.007)	(0.007)	(0.008)	(0.008)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.08	0.09	0.05	0.06	0.17	0.17	0.22	0.23
Observations	$15,\!134$	$15,\!134$	$13,\!234$	$13,\!234$	13,856	13,856	$13,\!908$	$13,\!908$
Panel C: Masculinity and G	ender No	rms						
CMNI-5 Score	-0.037***	-0.036^{***}	-0.028^{***}	-0.028^{***}	0.024^{***}	0.024^{***}	0.029^{***}	0.029^{***}
	(0.008)	(0.008)	(0.008)	(0.008)	(0.006)	(0.006)	(0.009)	(0.009)
TGRI Score	-0.050^{***}	-0.044^{***}	-0.020	-0.014	0.029^{***}	0.025^{***}	0.031^{***}	0.022^{***}
	(0.008)	(0.008)	(0.012)	(0.012)	(0.008)	(0.007)	(0.008)	(0.008)
Mean of outcome	0.59	0.59	0.44	0.44	0.47	0.47	0.33	0.33
R-squared	0.09	0.10	0.05	0.06	0.16	0.16	0.22	0.23
Observations	14,768	14,768	$12,\!885$	12,885	$13,\!540$	$13,\!540$	$13,\!587$	13,587
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table 6: Masculinity dimensions - Politics

Notes: All dependent variables are defined as dummies. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

5 Insights from a natural historical experiment

We leverage a historical natural experiment to provide preliminary evidence on the causal link between masculinity norms and socioeconomic outcomes. Baranov et al. (2023) argue that historically male-biased ratios induced by convict transportation of a large number of male convicts relative to female between 1787 and 1868 durably shaped masculinity norms in Australia. In the convict era, the argument goes, areas that had more male-biased sex ratios experienced more male-male competition for scarce females. The authors hypothesize that male competitive behavior crystallised into masculinity norms, which have persisted to present day despite the fact that sex ratios have equalized since the turn of 20th century. In support of this argument, the authors show that historically male-biased (convict) sex ratios are associated with elevated rates of a number of proximal outcomes related to masculine gender identity, such as voluntary recruitment during WWI, present-day violent behavior and crime, suicide, bullying, COVID-19 vaccine hesitancy, voting against same-sex marriage in a national referendum, and stereotypically male occupational choice.

Identification stems from the quasi-random nature of assignment of convicts to locations throughout Australia, conditional on the local ecology and labour needs (Grosjean and Khattar (2019); Baranov et al. (2023)). However, even if local convict sex ratios were entirely random, they may affect present-day outcomes through channels other than male-male competition and subsequent masculinity norms. Indeed, Grosjean and Khattar (2019) show that male-biased sex ratios in convict Australia also improved women's bargaining positions and influenced gender norms pertaining to women's work and homemaking roles. Nevertheless, the male-female bargaining channel is unlikely to explain the impacts on present-day male behavior, particularly for outcomes not related to the labor market, such as violence, bullying, mental health, help avoidance, and suicide, which are detrimental to women's wellbeing and should therefore be attenuated by favorable bargaining positions for women. For a more detailed discussion of identification, balance and placebo tests, readers are directed to Baranov et al. (2023).

In this section, we build on the results in Baranov et al. (2023) by providing evidence that historically male-biased sex ratios predict greater adherence to masculinity norms at the individual level, as measured by the CMNI-5, and predict labour market, mental health, and help avoidance outcomes in a way that aligns with LiTS-based evidence discussed so far. We rely on the *Ten to Men* nationally representative survey, which provides information on hours worked, willingness to work more, whether the respondent has experienced depression, and whether they display healthcare avoidance.³⁶ The survey also administered the CMNI.

 $^{^{36}}$ We focus on outcomes that were not already reported in Baranov et al. (2023). As already documented based on more comprehensive data from the census, higher convict sex ratios lead to increased occupational gender segregation.

Analysis is restricted to self-declared heterosexual males.

To mirror the results from the LiTS, we first show associations between the CMNI-5 and our outcomes of interest. Table 7 shows that the CMNI-5 strongly predicts the willingness to work more (but not labor supply at the extensive margin), depression (as measured by the PHQ-9), and healthcare avoidance (as measured by whether the respondent endorses the statement "I only go to the doctor when pushed to do so"). The magnitudes of the associations are generally similar to those found in the LiTS: a one standard deviation increase in the CMNI-5 is associated with a 0.018 percentage point increase in the willingness to work more (compared to 0.02 in LiTS) and a 0.13 standard deviation increase in the depression score (0.10 in LiTS).

Next, we evaluate the impact of male-biased historical (convict) sex ratios on the CMNI-5, and economic and health outcomes for men. We estimate the following Equation:

$$y_{ics} = \alpha + \beta ConvictSexRatio_{cs} + X_{cs}^{H'}\Pi + X_{ics}^{C'}\Theta + \delta_s + \varepsilon_{ijcs}$$
(2)

Where y_{ijcs} are outcomes for man *i* in historical county *c* in state *s*. ConvictSexRatio_{cs} is the number of male convicts to female convicts in historical county *c* in state *s* (the historical sex ratio), standardized so as to interpret the coefficient β as the impact of a one standard deviation increase in sex ratio. δ_s is a vector of state dummies. Standard errors are clustered at the historical county level. As there are 11 clusters represented in the Ten to Men survey, we report p-values using the Wild Bootstrap clustering procedure.

 X_{cs}^{H} is a vector of time-invariant historic characteristics that may correlate with the convict sex ratio and might still influence present-day outcomes. We include the historical characteristics as in Grosjean and Khattar (2019) and Baranov et al. (2023), which capture total historical population and initial economic specialization.³⁷

 X_{ics} is a vector of individual-level covariates that may be correlated with masculinity

³⁷Historic controls are: the historical county population, convict population, as well as the proportion of residents working historically in agriculture, domestic service, manufacturing and mining, and government services and learned professions.

norms and the outcomes of interest, including age, language spoken at home as a proxy for cultural origins, and Aboriginal or Torres Straight Islander status. We also control for a 5-level measure of remoteness and population size for i's area of residence (Modified Monash Model).

The results showing the impact of male-biased sex ratios on masculinity norms and economic and health outcomes are presented in Table 8. The convict sex ratio strongly predicts stricter individual adherence to masculinity norms as measured by CMNI-5. A one standard deviation increase in convict ratio increases adherence to masculinity norms by 0.044 standard deviations (p-value=0.066). The impact of male-biased sex ratios on male employment outcomes: a one standard deviation increase in sex ratio increases the likelihood of wanting to work more by 0.037 percentage points (with, no impact on labor supply at the extensive margin). Lastly, turning to health outcomes, the impact of skewed sex ratios on health, showing that male-biased sex ratios resulted in higher rates of depression and lower likelihood of attending doctors visits.

Overall the results indicate that historical conditions shaped masculinity norms and related health and economics outcomes of men in line with the associations between CMNI-5 and outcomes documented in the LiTS and Ten to Men surveys.

	(1)	(2)	(3)	(4)
Dep. Var.	Working	Would Work More	Depression Score	Doctor's Visit Pushed
CMNI-5	-0.00252	0.0177^{***}	0.130***	0.0548^{***}
	(0.00194)	(0.00405)	(0.0103)	(0.00491)
Observations	7,989	8,484	9,829	9,634
R-squared	0.003	0.061	0.037	0.027
Dep. Var. Mean	0.969	0.154	-0.00780	0.351

Table 7: Relationship between Masculinity (CMNI-5) and Economic and Health Outcomes (*Ten to Men Survey*)

Note: Table reports results for a linear regression of outcomes listed in the heading on the CMNI-5. Standard errors appear in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)	(5)
Dep. Var.	CMNI-5	Working	Would Work More	Depression Score	Doctor's Visit Pushed
Convict Sex Ratio	0.0443	-0.00105	0.0366	0.153	0.0317
	(0.00356)	(0.00821)	(0.0142)	(0.0223)	(0.00633)
Observations	3,191	2,332	2,480	3,191	2,907
R-squared	0.024	0.008	0.062	0.025	0.011
Wild p	0.0660	0.922	0.116	0.0240	0.286
Dep. Var. Mean	0.0586	0.0648	0.0653	0.0586	0.0595

Table 8: Historical (convict) Sex Ratios present-day impacts on Masculinity (CMNI-5), Economic and Health Outcomes (*Ten to Men Survey*)

Note: Standard errors are clustered at the historical county level and shown in parentheses. Wild bootstrap p-values, adjusting for small number of clusters (11) are reported for inference.

6 Conclusion

Drawing on the 2022–2023 Life in Transition Survey (LiTS), encompassing nearly 40 countries, this paper provides the first large-scale, cross-cultural, and nationally representative evidence on individual men's adherence to masculinity norms and how they relate to male economic and health outcomes and their political attitudes. In doing so, we have broken new ground by shifting the focus from traditional examinations of gender norms about women and gender roles to a comprehensive exploration of the multifaceted influence of masculinity norms on male decision-making and several related outcomes at the societal level.

Integrating the Conformity to Masculine Norms Inventory (CMNI) scale in our survey has created a reliable and well-validated tool for measuring masculinity norms. While prior studies have predominantly focused on selective Western samples, our analysis extends the understanding of masculinity norms to a much broader context—demonstrating consistent relationships between masculinity norms and a battery of economic, health, and political outcomes. Our country-level analysis reveals that while Western nations lead in progressive attitudes towards women, their adherence to masculinity norms is on par with less economically and politically advanced economies. We uncover a nuanced relationship between the intensity of masculinity norms and aggregate outcomes in the economic, health and political domains. At the level of individual men, our results indicate that adherence to strict masculinity norms shapes health and risk-taking behaviors; the supply of male labor at the intensive margin and in specific industries; as well as male support for strongman political leadership. Overall, while our analysis reveals ambiguous, potentially positive consequences of adherence to traditional masculinity to economic growth through a labor supply channel, the health and political consequences are unambiguously negative.

By shifting the scope to masculinity norms, we hope to widen the ongoing discourse on gender equality. Our research suggests that entrenched masculinity norms, particularly those emphasizing the importance of winning, may impede further progress in achieving gender equality within countries and organizations, including those with relatively egalitarian norms concerning the role of women in society.

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Online Appendix for

Masculinity Norms: International Evidence and Implications for Economics, Health, and Politics

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Online Appendix A: Supplementary Figures



Figure A1: Non-response rates across regions and CMNI questions

Notes: This figure displays the proportion of respondents (males only) across LiTS regions who refused to answer or answer they do not know to each item of the Conformity to Masculinity Norms Index. Source: LiTS.

Figure A2: Correlations Between Dimensions of Masculinity and Gender Roles Norms, Across Countries



Notes: This figure displays scatter plots and fitted linear regressions of each subdimension of the CMNI and the Traditional Gender Roles Index (TGRI) across countries. Source: LITS. Sample of males only.

Figure A3: Correlations Between Masculinity (CMNI-5) and Gender Roles Norms, Across Countries – Excluding Non-responses



Notes: This figure displays a scatter plot and fitted linear regressions of the 5-item Conformity to Masculinity index (CMNI-5) (top panel), as well as the 4-item Conformity to Masculinity index (CMNI -4) on the Traditional Gender Roles Index (TGRI) across countries. We keep countries with average response rates to all 4 or 5 items above 20%. Source: LITS. Sample of males only.

Online Appendix B: Supplementary Tables

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Country Code	Country	N (Total)	N (Men)
AL	Albania	1,039	472
DZ	Algeria	1,000	352
AM	Armenia	1,001	315
AZ	Azerbaijan	1,012	482
BY	Belarus	1,002	393
BJ	Benin	421	250
BA	Bosnia and Herz.	1,003	502
BG	Bulgaria	1,008	415
HR	Croatia	1,006	426
CZ	Czech Rep.	1,055	527
\mathbf{EE}	Estonia	1,009	415
GE	Georgia	1,003	315
DE	Germany	1,020	514
GH	Ghana	566	262
GR	Greece	1,001	451
HU	Hungary	1,000	409
JO	Jordan	1,019	358
ΚZ	Kazakhstan	1.028	370
KE	Kenva	675	299
XK	Kosovo	1.004	425
KG	Kyrgyz Rep.	1,002	403
LV	Latvia	1,004	372
LB	Lebanon	1,010	438
LT	Lithuania	1,005	452
MD	Moldova	1,002	327
MN	Mongolia	1,001	434
ME	Montenegro	1,006	444
MA	Morocco	1,000	318
NG	Nigeria	530	274
MK	North Macedonia	1,002	411
PL	Poland	1,005	420
RO	Romania	1.010	470
RU	Russia	1.017	346
SN	Senegal	451	204
RS	Serbia	1.001	456
SK	Slovak Republic	1,002	462
SI	Slovenia	1,004	461
TJ	Tajikistan	1,034	337
TN	Tunisia	1,036	364
TR	Turkev	1,020	521
UZ	Uzbekistan	1,006	334
PS	West Bank and Gaza	1,012	343
Total		40.032	16 543
TOTAL		40,002	10,010

Table B1: Country List and Sample Size

	Full s	ample		Men		Women			
	Mean	SD	N	Mean	SD	N	Mean	SD	
Age	45.19	17.25	16543	44.41	16.83	23489	45.90	17.58	
Primary Education (=1)	0.09	0.29	16543	0.08	0.27	23489	0.11	0.31	
Secondary Education $(=1)$	0.65	0.48	16543	0.67	0.47	23489	0.64	0.48	
Tertiary Education $(=1)$	0.21	0.40	16543	0.20	0.40	23489	0.21	0.41	
Household Income Decile	5.65	2.83	13776	5.92	2.81	19820	5.41	2.83	
Single $(=1)$	0.24	0.43	16480	0.28	0.45	23392	0.20	0.40	
Married $(=1)$	0.58	0.49	16480	0.62	0.49	23392	0.55	0.50	
Widowed $(=1)$	0.09	0.29	16480	0.04	0.19	23392	0.14	0.35	
Divorced $(=1)$	0.08	0.28	16480	0.06	0.23	23392	0.10	0.31	
Christian $(=1)$	0.35	0.48	16001	0.33	0.47	22553	0.36	0.48	
Catholic $(=1)$	0.17	0.37	16001	0.16	0.37	22553	0.17	0.38	
Muslim $(=1)$	0.37	0.48	16001	0.38	0.49	22553	0.37	0.48	
Atheist $(=1)$	0.09	0.28	16001	0.10	0.30	22553	0.08	0.26	
Other Religion $(=1)$	0.03	0.17	16001	0.03	0.17	22553	0.03	0.17	
Seatbelt in Front Seat $(=1)$	0.87	0.33	15882	0.87	0.34	22044	0.88	0.32	
Seatbelt in Back Seat $(=1)$	0.41	0.49	15235	0.41	0.49	21399	0.42	0.49	
Seatbelt in Driver Seat $(=1)$	0.88	0.33	13637	0.90	0.30	14047	0.85	0.36	
Risk-Taking Self-Assessment (1-10)	5.00	2.93	16440	5.39	2.91	23256	4.64	2.90	
Skips Doctor's Visit After Income Shock $(=1)$	0.14	0.34	16543	0.12	0.33	23489	0.15	0.35	
Depression Score	2.32	1.12	16206	2.21	1.11	23119	2.42	1.13	
Competitiveness Self-Assessment (0-10)	5.59	2.81	16543	5.94	2.75	23489	5.27	2.83	
Would Like to Work More in Current Job $(=1)$	0.17	0.37	9523	0.18	0.38	9089	0.15	0.36	
Working (=1)	0.49	0.50	16543	0.59	0.49	23489	0.40	0.49	
Work Agriculture (=1)	0.06	0.23	9523	0.07	0.25	9089	0.04	0.19	
Work Mining $(=1)$	0.01	0.08	9523	0.01	0.10	9089	0.00	0.04	
Work Construction $(=1)$	0.10	0.29	9523	0.15	0.36	9089	0.02	0.14	
Work Manufacturing $(=1)$	0.10	0.30	9523	0.11	0.32	9089	0.08	0.28	
Work Transportation $(=1)$	0.06	0.24	9523	0.09	0.29	9089	0.02	0.14	
Work Wholesale Trade $(=1)$	0.04	0.19	9523	0.04	0.19	9089	0.04	0.19	
Work Retail Trade $(=1)$	0.12	0.32	9523	0.08	0.27	9089	0.16	0.37	
Work Finance $(=1)$	0.03	0.18	9523	0.03	0.17	9089	0.04	0.20	
Work Services $(=1)$	0.23	0.42	9523	0.22	0.42	9089	0.25	0.43	
Work Public Sector (=1)	0.22	0.41	9523	0.15	0.35	9089	0.31	0.46	
Pro-Democracy (=1)	0.57	0.50	15256	0.58	0.49	21101	0.55	0.50	
Pro-Market (=1)	0.42	0.49	13353	0.44	0.50	17674	0.39	0.49	
Having a Strong Leader is Good $(=1)$	0.49	0.50	13946	0.48	0.50	18592	0.49	0.50	
Having the Army Rule is Good $(=1)$	0.35	0.48	14000	0.35	0.48	18463	0.36	0.48	

Table B2: Summary Statistics - Demographics and Outcome Variables

	Full s	ample		Men		Women		
	Min	Max	Ν	Mean	SD	N	Mean	SD
CMNI Score (1-4)	1	4	15974	2.51	0.64	0		
Masculinity Importance of Winning (1-4)	1	4	15239	2.62	0.99	0		
Masculinity Violence (1-4)	1	4	15375	1.89	0.96	0		
Masculinity Control Over Women (1-4)	1	4	15333	2.65	1.01	0		
Masculinity Help Avoidance (1-4)	1	4	15328	2.72	0.97	0		
Masculinity Disdain for Homosexuals (1-4)	1	4	13521	2.64	1.08	0		
Traditional Gender Norms Index (TGRI) (1-4)	1	4	16343	2.39	0.46	23272	2.24	0.49
TGRI Competence Business Executives (1-4)	1	4	15965	1.97	0.83	22813	1.73	0.76
TGRI Political Leaders (1-4)	1	4	15741	2.74	0.92	22269	2.49	0.96
TGRI Household Chores (1-4)	1	4	15900	2.56	0.96	22857	2.39	1.00
TGRI Responsibility for the Home (1-4)	1	4	16019	1.82	0.76	22893	1.70	0.73
TGRI Contribute to Household Income (1-4)	1	4	15997	1.81	0.74	22816	1.72	0.71
TGRI Split Restaurant Bills (1-4)	1	4	15754	2.96	0.90	22374	2.93	0.93
TGRI Competence Nurses (1-4)	1	4	15751	1.98	0.84	22457	1.90	0.82
TGRI Women Take Care of Household (1-4)	1	4	15745	2.87	0.92	22513	2.73	0.98

Table B3: Summary Statistics - Masculinity and Gender Norms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Dep. Var.	CMNI-22	CMNI-5	Control	Disdain	Violence	Importanc	e Help	Working	Would	Gendered	Masculine	Depression	Major	Suicide	Doctor's	IPV	Rape
			Over	for Ho-		of Win-	Avoid-		Work	sector	sector	Score	Depres-	Attempt	Visit		
			Women	mosexu-		ning	ance		More				sion		Pushed		
				als													
CMNI	1.00																
CMNI-5	0.75^{*}	1.00															
Control Over Women	0.47^{*}	0.59^{*}	1.00														
Disdain for Homosexuals	0.39^{*}	0.59^{*}	0.24^{*}	1.00													
Violence	0.41^{*}	0.55^{*}	0.14^{*}	0.06^{*}	1.00												
Importance of Winning	0.49^{*}	0.53^{*}	0.24^{*}	0.15^{*}	0.09^{*}	1.00											
Help Avoidance	0.35^{*}	0.49^{*}	0.09^{*}	0.08^{*}	0.11^{*}	0.14^{*}	1.00										
Wrking	-0.00	-0.01	0.01	-0.01	-0.04*	0.02	-0.00	1.00									
Would work more $(=1)$	0.08^{*}	0.08^{*}	0.04^{*}	0.01	0.06^{*}	0.04^{*}	0.07^{*}	-0.07*	1.00								
Gendered sector	0.09^{*}	0.08^{*}	0.06^{*}	0.06^{*}	0.01	0.04^{*}	0.06^{*}	0.01	-0.01	1.00							
Masculine sector	0.05^{*}	0.07^{*}	0.05^{*}	0.07^{*}	0.00	0.01	0.05^{*}	0.00	-0.02	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	0.01	1.00					
Major Depression	0.04^{*}	0.08^{*}	-0.01	0.00	0.05^{*}	-0.03*	0.19^{*}	-0.04*	0.08^{*}	0.01	-0.00	0.69^{*}	1.00				
Suicide attempt	0.03^{*}	0.05^{*}	0.00	0.02	0.03^{*}	-0.01	0.09^{*}	-0.02	0.08^{*}	0.01	0.01	0.25^{*}	0.21^{*}	1.00			
Doctor's visit pushed	0.16^{*}	0.12^{*}	0.05^{*}	0.03^{*}	0.04^{*}	0.06^{*}	0.16^{*}	-0.00	0.04^{*}	0.04*	0.02	0.15^{*}	0.09^{*}	0.03^{*}	1.00		
IPV	-0.00	-0.01	0.02	-0.06*	0.01	-0.01	0.02	-0.01	0.00	-0.01	-0.00	0.04^{*}	0.01	0.05^{*}	0.00	1.00	
Rape	0.06^{*}	0.07^{*}	0.05^{*}	0.02	0.04*	0.02	0.05^{*}	-0.01	0.03^{*}	0.01	0.01	0.05^{*}	0.03^{*}	0.05^{*}	0.02	0.13^{*}	1.00

Table B4: Correlations between CMNI and Outcome Variables from Ten to Men Survey

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

D :	37 . 11		
Domain	Variable Name	Li1S Question(s)	Variable Description
Economics	Working	= 1 if declared working positive hours, conditional on being employed	How many hours do you work in your main job during a typical week?
Economics	Would Work	= 1 if would like to work more hours in main job	Would you like to work more hours in
Economics	More 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 State; Services; Public Sector	your main job: Answers: les of ivo =1 if employed in Agriculture, Forestry, and Fishing, Mining, Construction, Manufacturing or Transportation and Public utilities
Economics	Skewed Gen- der Suitabil- ity	How suitable are the following occupations for men or women? (a) Engineer; (b) Nurse; (c) Software Developer; (d) Primary School Teacher; (e) Surgeon; (f) Pilot; (g) Cleaner; (h) Business Manager; (i) Sales Person. Answers: Definitely most suitable for men, Somewhat more suitable for men, Equally suitable for both men and women, Somewhat more suitable for women, Definitely most suitable for women.	Average score for skewed gender suitability with respect to different jobs, on a Likert scale from -2 to 2, meaning the larger, the more gendered skewed. For engineer, software developer, surgeon, pilot, business manager we coded as -2 if answered <i>Definitely most</i> suitable for women and as 2 if answered <i>Definitely most suitable for men</i> ; and reversed it for the other categories. We removed the sales person category since it is less clear whether this profession is gendered toward men or women.
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 LiTS 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	Skip Visit to Doctor	In the past two years, have you or anyone else in your household had to take any of the following measures as the result of a decline in income or other economic difficulty? Please select all that apply. (a) Reduced consumption of staple foods such as milk, fruits, vegetables, or bread; (b) Reduced consumption of luxury goods; (c) Postponed or withdrew from university or other training; (d) Enrolled in further education because of lack of job opportunities; (e) Postponed or skipped visits to the doctor after falling ill; (f) Stopped buying regular medications; (g) Stopped or reduced help to friends or relatives who you helped before; (h) Delayed payments on utilities, gas, water, electric; (i) Had utilities cut because of delayed payment; (j) Cut TV or phone or internet service; (k) Delayed or defaulted on a loan installment; (l) Sold an asset or forced to move	= 1 if postpones or skips visits to the doctor in the face of a negative economic shock
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 LiTS questions on mental health, coded on a Likert scale from 1 to 5, meaning the larger the score, the more depressed
Politics	Pro- Democracy	Which one of the following statements do you agree with most? Answers: Democracy is preferable to any other form of political system; Under some circumstances, an authoritarian government may be preferable to a democratic one; For people like me, it does not matter whether a government is democratic or authoritarian	= 1 if agrees that Democracy is preferable to any other form of political system
Politics	Pro-Market	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 <i>Having a strong leader</i> 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

Table B5: Outcomes Description - LiTS

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. Var.	CMNI-5 Score	CMNI Winning	CMNI Violence	CMNI Help Avoidance	CMNI Control Over Women	CMNI Against Homosexuals	TGRI Score
Age	0.00147^{**}	-0.000196	-1.28e-05	0.00333***	0.00152**	0.000664	0.00330^{***}
	(0.000623)	(0.000692)	(0.000670)	(0.000561)	(0.000598)	(0.000774)	(0.000601)
Urban (=1)	-0.0112	-0.00127	-0.00814	-0.0193	-0.00984	0.0258	-0.0715^{***}
	(0.0315)	(0.0258)	(0.0241)	(0.0293)	(0.0320)	(0.0408)	(0.0252)
Secondary Education (=1)	0.00491	-0.0511	-0.0101	0.112**	-0.0434	0.0270	-0.0887
	(0.0428)	(0.0454)	(0.0588)	(0.0534)	(0.0432)	(0.0807)	(0.0595)
Tertiary Education $(=1)$	-0.101**	-0.157^{***}	-0.114**	0.0779	-0.132**	-0.0134	-0.124*
	(0.0483)	(0.0509)	(0.0553)	(0.0617)	(0.0486)	(0.101)	(0.0664)
Christian (=1)	0.0610	0.0648	-0.0219	-0.00938	0.0827	0.0859	0.0793
	(0.0622)	(0.0581)	(0.0595)	(0.0571)	(0.0591)	(0.0673)	(0.0565)
Catholic (=1)	0.0853	0.0690	0.0521	0.0348	0.0984	0.0299	0.105
	(0.0604)	(0.0535)	(0.0565)	(0.0631)	(0.0590)	(0.0617)	(0.0734)
Muslim (=1)	0.182***	0.110	0.0614	0.121	0.291***	0.00988	0.210^{***}
	(0.0626)	(0.0822)	(0.0806)	(0.0781)	(0.0670)	(0.0899)	(0.0689)
Other Religion $(=1)$	-0.0162	-0.0755	-0.0198	-0.159	0.0400	0.158*	-0.0219
	(0.182)	(0.177)	(0.147)	(0.257)	(0.111)	(0.0799)	(0.111)
Religiosity (1-5)	0.00618	0.000606	-0.0451**	-0.00778	0.0394**	0.0195	0.0497**
/	(0.0211)	(0.0190)	(0.0177)	(0.0150)	(0.0166)	(0.0296)	(0.0204)
Observations	14,137	13,478	13,593	13,568	13,539	11,842	14,503
R-squared	0.151	0.110	0.069	0.074	0.238	0.149	0.080

Note: All variables are standardized. Standard errors clustered at the country level in parenthesis. *** p<0.01, ** p<0.05, * p<0.1.

Table B7: Masculinity (CMNI-4) and Gender Roles Norms - Economics

	Working		Would Work More		Masculine Sector		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norm	s							
CMNI-4 Score	-0.003	0.001	0.023***	0.022^{***}	0.025^{***}	0.018^{***}	0.019	0.028^{*}
	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.016)	(0.016)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.06	0.10	0.11	0.14
Observations	15,965	15,965	9,227	9,227	9,227	9,227	$15,\!965$	15,965
Panel B: Gender Norms								
TGRI Norms Score	-0.003	0.005	0.004	0.000	0.043^{***}	0.028^{***}	-0.041^{***}	-0.022
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.00	0.00
R-squared	0.13	0.15	0.11	0.12	0.06	0.10	0.11	0.14
Observations	$16,\!343$	$16,\!343$	9,428	$9,\!428$	9,428	$9,\!428$	$16,\!343$	16,343
Panel C: Masculinity and Gender Norms								
CMNI-4 Score	-0.002	0.000	0.023^{***}	0.022^{***}	0.015^{**}	0.011^{*}	0.031^{*}	0.035^{**}
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.016)	(0.015)
TGRI Norms Score	-0.002	0.006	-0.002	-0.005	0.039^{***}	0.023^{***}	-0.048^{***}	-0.030**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.015)	(0.014)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.16	0.11	0.12	0.07	0.10	0.11	0.14
Observations	$15,\!887$	15,887	9,192	$9,\!192$	9,192	$9,\!192$	15,887	$15,\!887$
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Notes: The dependent variables *Working* (columns 1-2), *Would Work More* (columns 3-4), and *Masculine Sector* (columns 5-6) are defined as dummies, whereas *Competitiveness* (columns 7-8) is standardized. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

	Working		Would Work More		Masculine Sector		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms	3							
CMNI-4 Score	-0.003	0.001	0.023^{***}	0.022^{***}	0.025^{***}	0.018^{***}	0.019	0.028^{*}
	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.016)	(0.016)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.06	0.10	0.11	0.14
Observations	15,965	15,965	9,227	9,227	9,227	9,227	$15,\!965$	15,965
Panel B: Gender Norms								
TGRI Norms Score	-0.003	0.005	0.004	0.000	0.043^{***}	0.028^{***}	-0.041^{***}	-0.022
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.00	0.00
R-squared	0.13	0.15	0.11	0.12	0.06	0.10	0.11	0.14
Observations	$16,\!343$	16,343	9,428	$9,\!428$	9,428	$9,\!428$	$16,\!343$	16,343
Panel C: Masculinity and Gender Norms								
CMNI-4 Score	-0.002	0.000	0.023^{***}	0.022^{***}	0.015^{**}	0.011^{*}	0.031^{*}	0.035^{**}
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.016)	(0.015)
TGRI Norms Score	-0.002	0.006	-0.002	-0.005	0.039^{***}	0.023^{***}	-0.048***	-0.030**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.015)	(0.014)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.16	0.11	0.12	0.07	0.10	0.11	0.14
Observations	$15,\!887$	$15,\!887$	9,192	$9,\!192$	9,192	$9,\!192$	$15,\!887$	15,887
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table B8: Masculinity (CMNI-4) and Gender Roles Norms - Risk and Health

Notes: The dependent variable *Skip Visit to Doctor* (columns 5-6) is defined as a dummy, whereas *Risk Taking* (columns 1-2), *Uses Seatbelt* (columns 3-4) and *Depression Score* (columns 7-8) are standardized. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

	Working		Would Work More		Masculine Sector		Competitiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Masculinity Norms	3							
CMNI-4 Score	-0.003	0.001	0.023^{***}	0.022^{***}	0.025^{***}	0.018^{***}	0.019	0.028^{*}
	(0.007)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.016)	(0.016)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.15	0.11	0.11	0.06	0.10	0.11	0.14
Observations	$15,\!965$	$15,\!965$	9,227	9,227	9,227	9,227	15,965	15,965
Panel B: Gender Norms								
TGRI Norms Score	-0.003	0.005	0.004	0.000	0.043^{***}	0.028^{***}	-0.041^{***}	-0.022
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.015)	(0.015)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.00	0.00
R-squared	0.13	0.15	0.11	0.12	0.06	0.10	0.11	0.14
Observations	$16,\!343$	$16,\!343$	$9,\!428$	9,428	$9,\!428$	9,428	16,343	$16,\!343$
Panel C: Masculinity and Gender Norms								
CMNI-4 Score	-0.002	0.000	0.023^{***}	0.022^{***}	0.015^{**}	0.011^{*}	0.031^{*}	0.035^{**}
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.016)	(0.015)
TGRI Norms Score	-0.002	0.006	-0.002	-0.005	0.039^{***}	0.023^{***}	-0.048^{***}	-0.030**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.015)	(0.014)
Mean of outcome	0.58	0.58	0.17	0.17	0.43	0.43	0.01	0.01
R-squared	0.14	0.16	0.11	0.12	0.07	0.10	0.11	0.14
Observations	$15,\!887$	$15,\!887$	9,192	9,192	$9,\!192$	9,192	$15,\!887$	15,887
Country FEs	×	×	×	×	×	×	×	×
Age, Urban	×	×	×	×	×	×	×	×
Education, Religion, Religiosity		×		×		×		×

Table B9: Masculinity (CMNI-4) and Gender Roles Norms - Politics

Notes: All dependent variables are defined as dummies. Standard errors are clustered at the country level and shown in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

Online Appendix C: Robustness to Using binsreg



Figure C1: Masculinity Norms, Norms about Women's Roles, and GDP Per Capita: binsreg

Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available PPP adjusted GDP per capita and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). Source: World Bank and LiTS.

Figure C2: Masculinity Norms, Norms about Women's Roles, and Economic Inequality: binsreg



Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available Gini index and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) and PPP adjusted GDP per capita is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5 and GDP per capita. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). The Gini index is a proxy for country-level income inequality. It ranges between 0 and 100, where higher values indicate higher inequality. Source: World Bank and LiTS.

Figure C3: Masculinity Norms, Norms about Women's Roles, and Female-to-Male Labor Force Participation binsreg



Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available country-level ratio of female-to-male labor force participation for population aged 15-64 and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) and PPP adjusted GDP per capita is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). Source: World Bank and LiTS.

Figure C4: Masculinity Norms, Norms about Women's Roles, and Male Life Expectancy: binsreg



Panel A: Gender gap in life expectancy

Panel B: Gender gap in suicide mortality rates



Notes: The left panel shows a binscatter plot of the country-level relationship between the latest available country-level male life expectancy and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI), PPP-adjusted GDP per capita, and population age structure is accounted for. The right panel shows the same for the TGRI after accounting for the CMNI-5, PPP-adjusted GDP per capita, and population age structure. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa). Source: World Bank and LiTS.



Figure C5: Masculinity Norms, Norms about Women's Roles, and Populism binsreg

Notes: The left panel shows a binscatter plot of the country-level relationship between the Populism Index from the V-Dem Institute and the standardized Conformity to Masculinity Norms Index (CMNI-5) once the influence of the Traditional Gender Roles Index (TGRI) and PPP adjusted GDP per capita is accounted for. The right panel shows the same for the TGRI after partialling out the CMNI-5 and GDP per capita. Both binscatters account for the influence of continent fixed effects (Europe, Asia and Africa).