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**Ethnic Inequality, Cultural Distance, and Social Integration: Evidence
from a Native-Settler Conflict in the Philippines**

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Keywords: inequality; cultural distance; intermarriage; ethnic conflict; integration

Abstract

A key debate in studies of native-migrant relations relates to the barriers to integration created by ethno-cultural differences and socioeconomic disadvantage. How do changes in socioeconomic inequality between ethnic groups affect interethnic ties in a divided society? I investigate this question by analysing the effect of ethnic inequality on the evolution of cross-ethnic marriages in a society fractured by conflict between natives and settlers. I find the effect is contingent on the ethnic group. Certain groups intermarry more in response to reductions in socio-economic disadvantage; others, however, remain indifferent. I suggest the difference relates to cultural distance. Specifically, I point to differences between groups in the power of the norms and sanctions regulating members' social interactions outside of the group. These 'closure' norms interpose an ethno-cultural distance. I establish these findings with field interviews and census data on over 6 million marriages in Mindanao, an ethnically diverse region in the southern Philippines and location of an insurgency waged by rebels, drawn from the native Muslim Moro population, resentful of the influx of Christian settlers. I find Moro intermarriage unresponsive to socioeconomic equalisation and suggest the strength of their ethno-cultural norms, derived from their ethno-religious identification, accounts for their distinctive response.

Introduction

It has become a truism to write that modern migration, as a defining characteristic of globalization, has facilitated historically remarkable levels of ethnic pluralism and potential intercultural contact in destination societies. As of 2015 it is estimated over 1 billion individuals have migrant status globally (International Organization for Migration 2015). This striking figure, when disaggregated, yields two important facts. First, since 2015, more migrants now move *within* the Global South than from the Global South to the Global North. Second, the majority of migrants – over 70% - do not cross international borders; they migrate within existing borders. Government-sanctioned resettlement, for instance, has involved the movement of tens of millions of settlers onto the lands of often disadvantaged native groups in Indonesia, China, Ethiopia, Vietnam, Bangladesh, Nepal, and the Philippines. Yet, despite these evolving patterns, much of the scholarly research and policy analysis on migration has examined the movement of people across external borders and from the South to the North. Less is known about internal migration patterns within the Global South and less still about settler migration.

These extraordinary movements of people have posed an integration challenge for social planners in the Global South as they have in the Global North. They have similarly prompted a debate in the public sphere over how to manage the resulting cultural diversification of societies. A key division in this debate relates to whether integration is best achieved through the preservation or elimination of cultural differences. Popular discourse, when anti-migrant in tone, typically presents the cultural differences between natives and migrants as an obstacle to integration. The absence of shared language, religion, norms, values, customs, and tastes, are often cited as reasons for why migrants do not ‘fit in’ or ‘belong’ (Bello 2017; Li 2003; Koopmans and Muis 2009). In scholarly discourse, this eliminationist perspective is implicitly reflected in traditional assimilation theory where

acculturation to the core ethnic group is advocated (Gordon 1964). The preservationist position, in contrast, is more closely-associated with multicultural theory which argues for the protection and promotion of cultural diversity within society (Kymlicka 1995).

Yet it is not only cultural differences that may separate natives from migrants. Important material differences – in education, occupation, and consequently income and wealth – can also distinguish ‘autochtones’ from ‘allochtones’ (Alba and Foner 2016; Kesler 2010). This fact has prompted a second debate over the role of socio-economic disadvantage in integration. This disadvantage can result from simply a weaker endowment in skills, knowledge, and experience - human capital - particularly among first-generation labour migrants. However, it may also result from penalties ethnic groups, whether migrant or native, experience (Alba and Nee 1997; Alanya et al. 2017; Model and Lin 2002). Prejudice and discrimination are well-documented empirical realities facing migrants in the labour market for instance (Wrench, Rea, and Ouali 2016; Gracia, Vázquez-Quesada, and Van de Werfhorst 2016). Bias may also affect attainment levels in education. In this second debate, the emphasis is on the role of socio-economic rather than cultural differences in integration.

The overall social distance separating native and migrants then comprises both ethno-cultural and socioeconomic dimensions. As distinct forms of social identification, ethnicity and socioeconomic status are each powerful barriers in their own right to interaction and tie-formation across group lines. Individuals strongly tend to associate with those similar to themselves. When ethnicity and socioeconomic status coincide, as they often do between natives and migrants, the resulting ethnic inequality constitutes a particularly powerful structural force in society. Ethnic inequality has been associated with a host of normatively undesirable outcomes including civil wars (Cederman, Gleditsch, and Buhaug 2013), democratic break-down (Huber and Suryanarayan 2015), and economic under-development (Stewart 2002).

The role of both ethno-cultural and socioeconomic differences in integration invites the question of what impact a reduction in ethnic inequality would have on native-migrant relations. In this article I consider this question by analyzing how changes over time in socioeconomic differences between ethnic groups affect *intermarriages* in a society divided by conflict between natives and settlers. Intermarriage is a potentially powerful marker of social integration (Alba and Nee 2003; Bugelski 1961; Blau, Becker, and Fitzpatrick 1984). It signifies the closing of the social distance between groups by implying acceptance not only by an individual's partner, but potentially also by their family, community and cultural group (Qian and Lichter 2007). The bond thus brings together not only two individuals but also creates the possibility of establishing ties between two communities that may otherwise rarely interact. The effect of ethnic inequality on intermarriage then is important for understanding the integration of migrants in ethnically-divided societies.

In examining this question I find the effect of ethnic inequality is contingent on the ethnic group. For certain groups, as socio-economic disparities decline intermarriages between them do increase across localities. Insofar as intermarriage is indicative of integration, reducing ethnic inequality has the potential to close the social distance and to promote social relations between these groups. For other groups, however, improvements in their relative socioeconomic status have no effect on their tendency to outmarry. These groups remain indifferent to the equalisation of socioeconomic status and continue to inmarry.

I suggest one possible explanation for these different outcomes across ethnic groups lies in the degree of ethno-cultural distance between them. By ethnic distance I mean the nature and extent of the cultural differences between ethnic groups. This distance is characterized not only by evident differences in language and religion, but also less obviously by differences in norms, customs, values, tastes, and manners. More culturally distant groups

are less responsive to improvements in ethnic equality because these ethno-cultural differences dominate the socioeconomic disparities and continue to impede cross-ethnic interaction. One important component of this ethno-cultural distance, I suggest, are a group's internal norms and sanctions and in particular those that regulate social interaction outside of the group generally and that proscribe outmarriage specifically. I argue these 'closure' norms and sanctions are stronger in some groups than others and their power counters the integrative potential created by improvements in ethnic equality. In the context of native-migrant relations, this finding implies that poor integration may result not only from prejudice held by advantaged ethnic groups constraining the socioeconomic mobility of disadvantaged groups, but also from the internal norms of any group that signify its social closure and interposes an ethno-cultural distance separating it from other groups.

I establish these findings in the context of a region in the Global South that has been the destination for migrants for several generations and whose settlement has contributed to a conflict with the native population that persists today. Mindanao, an ethnically diverse and deeply-divided society in the southern Philippines, has been the location of a long-running insurgency waged by rebel groups, drawn from the native Muslim Moro group, resentful of their minoritization and dispossession by the influx of Christian settlers. Drawing on both field interviews and census data, I analyze and compare marriages first between these Christian settlers and the Muslim Moro, between whom the ethno-cultural distance is high; and second between Christian settlers and the Lumad, Mindanao's other indigenous group, between whom the distance is lower. The article proceeds as follows. Section I presents the theoretical framework; section II describes the research design, data, and methods; section III presents the results; and section IV discusses and concludes.

Section I Theoretical Framework

Ethnicity and Socio-economic Status as Social Categories and Strata

As distinct forms of social identification ethnicity and socio-economic status each represent potential boundaries to interaction and tie-formation across group lines – indicators of integration - in their own right. Consistent with the well-established homophily principle (McPherson, Smith-Lovin, and Cook 2001), individuals from the same socio-economic status and individuals of the same ethnicity generally prefer to associate with each other. Ethnic endogamy and, more recently, educational homogamy for instance, are both well-established empirical regularities (Rosenfeld 2008; Blossfeld 2009). Intra-group ties based on ascriptive characteristics such as ethnicity, race, caste, and religion tend to be stronger than those based on non-ascriptive markers such as class and ideology (Neckerman and Torche 2007), however. As social forces that promote within-group over between-group solidarity then, ethnicity and socio-economic status are potentially sources of social divisions. Cross-group ties by implication hold the potential to moderate these divisions. Such bonds are among the fundamental sources of bridging social capital (Putnam 2000) and in the case of cross-ethnic ties, theories of ethnic cooperation and conflict emphasise their importance to social stability and peaceful coexistence (Varshney 2001; Laitin and Fearon 1996).

Unlike socio-economic status, ethnicity is – in theory - a nominal rather than ordinal social category. As such, ethnic differences represent simply diversity or heterogeneity in society. Macro-sociological theory has argued greater ethnic heterogeneity should, as a matter of structural opportunity, lead to greater interethnic interaction (Blau 1977). In practice, however, a significant body of research suggests the converse is true. Ethnicity often operates as an ordinal or ‘ranked’ parameter and engenders social divisions. Ethnic diversity or fragmentation is consequently linked to lower trust both within and across groups and

more generally to lower social capital in societies (Putnam 2007; Alesina and La Ferrara 2000).

In contrast, socio-economic status is unequivocally an ordinal or graduated social category. The existence of a lower, middle, and upper class indicates ranking or stratification within society. Differences in socio-economic status – marked by education, occupation, or income - create inequalities in societies (Blau 1977). A small upper class and large lower class implies high socio-economic inequality within society. As with ethnic diversity, empirical research suggests an association between rising income inequality and declining social capital, specifically lower trust and lower civic participation (Costa and Kahn 2003; Alesina and La Ferrara 2002).

Applying this to a migration context, the segregative effects engendered by ethnic and socioeconomic differences in societies in general have the potential to be more pronounced in migrant societies where they additionally coincide with insider-outsider perceptions. Existing research suggests socio-economic differences, for instance, have potentially complex effects in migrant contexts. In the US context, while some initially disadvantaged groups have assimilated into the mainstream, others have headed downward and remained trapped in poverty; yet others have experienced rapid economic advancement (Portes and Zhou 1993). Assimilation is segmented. In settler contexts, migrants can have higher socio-economic status than natives. While this still represents an ethnically-stratified society and still poses an integration challenge, the disadvantage pertains to the native ‘insiders’ and it is settlers, as outsiders, who hold the superordinate position in the social hierarchy. Colonial-era settlement of Europeans to Africa, Asia, and elsewhere exemplifies this social system but internal resettlement programs undertaken in the post-colonial era, often by governments in the Global South, creates similar integration challenges. Faced with land shortages and uneven

distribution, governments have moved people, sometimes on a massive scale, into areas inhabited by often already-disadvantaged native groups.

Ethnic Inequality and Intermarriage

Given the adverse effects of both ethnic and socio-economic differences on social relations, an evident question arises as to their effect when these parameters coincide and when they cross-cut. The extent to which ethnicity and socio-economic status reinforce or intersect each other is conceptually equivalent to measuring ethnic inequality. The more the two parameters reinforce each other, the greater the ethnic inequality; the more they cross-cut, the lower the inequality. The concept in fact exists, under different names, across a disparate set of literatures: horizontal inequality in the literature on civil wars and under-development (Stewart 2010; Cederman, Weidmann, and Gleditsch 2011); between-group inequality in relation to public good provision (Baldwin and Huber 2010); and ranked/unranked ethnic groups in one theory of ethnic conflict (Horowitz 1985).

Empirical research on the effect of ethnic inequality (and its conceptual equivalents) on interethnic relations is, however, surprisingly limited. Some evidence suggests racial income inequality is associated with lower levels of trust (Tesei 2017). Other scholars, however, have debated whether the lower trust is attributable to racial diversity rather than racial inequality in society (Putnam 2007; Portes and Vickstrom 2011). I examine the effect of ethnic inequality on another marker of social relations: intermarriage.

Intermarriage is potentially a powerful indicator of the quality of interethnic relations. At the individual-level, it is a readily-observable behavior and is indicative of a clear and stable social preference. At the societal level, intermarriage between two ethnic groups may reflect the social distance between them. Intermarriages also create durable ties at the interpersonal level, often across socially-proscribed boundaries. They bring together not only two individuals, but also potentially two social networks. Furthermore, the children of

intermarriages help blur the sharpness of the boundaries between groups and preserve the integrative potential for the next generation (Stephan and Stephan 1989). Although the link between intermarriage and integration should not be thought of as deterministic (Song 2009), changes in intermarriage levels then are a potentially useful barometer of the state of native-migrant relations.

Social and Cultural Distance

Sociological theory conceptualises intermarriage as a function of individual preferences, social norms and sanctions, and structural opportunities in the marriage market (Kalmijn 1998). Once structural opportunities are taken into account, notably the size and spatial organization of groups, the strength of individual preferences and social norms and sanctions will determine the overall social distance between groups and thereby affect the likelihood of marriages across group lines. Ethno-cultural differences, along with socio-economic disparities, contribute to the overall social distance between groups.

Cultural distance is a well-developed construct in international business research (Shenkar 2001) where specific dimensions of culture believed to affect business relations across national boundaries have been adduced (Hofstede 2003; Schwartz and Sagiv 1995). The construct has also had analytical traction outside of this field. Research on civil wars, for instance, has theorised ethno-cultural distance as a predictor of interethnic conflict and has used the branches on a global language tree to proxy and measure the extent of cultural differences between ethnic groups (Fearon 2003; Montalvo and Reynal-Querol 2010). In migration studies, research has found that as cultural distance increases, the migrant absorption rate (Collier 2013) and intermarriages with the native population decline (Dribe and Lundh 2011). As no index of cultural distance appropriate for intermarriage exists, I define cultural distance broadly as the nature and extent of objectively-verifiable ethno-cultural differences between social groups. These differences may be extrinsic in nature,

observable as differences in language, rituals, and dress for instance. However, they may also be intrinsic in nature relating to the group's values, beliefs, and norms, *inter alia*. The greater the cultural distance, the weaker the social interaction.

Closure Norms and Sanctions

An ethnic group's norms and sanctions are a recognized component of the ethno-cultural distance between groups (Kogut and Singh 1988). Social norms refer to group expectations for attitudes and behaviours that individuals internalize; social sanctions refer to the enforcement of these expectations by co-ethnics. Individuals who defy group expectations risk social stigma and community ostracisation. The norms and sanctions that govern the interaction of group members with non-group members in particular are especially powerful in interposing ethnic distance between groups. These 'closure' norms operate to build strong in-group cohesion and identity by protecting boundaries. In so doing, they also have the effect of socially isolating the group.

Weber's (1978) notion of 'open and closed relations' among groups first inscribed social closure in the sociological lexicon and motivated extensive theorization on its function. Subsequent theorists explained closure in principally materialist terms: groups exclude others in order to maintain control over scarce resources in society (Parkin 1974; Murphy 1984). However, in Weber's original conceptualization closure was not solely economic in nature. Closure need not be driven only by a group's desire to protect its privilege or advantage. Weber explicitly recognized groups may close also in order to protect their values. 'Closure on the basis of value-rational commitment to values is usual in groups sharing a common system of explicit religious belief' (Weber 1978, p.44). Social closure then may also function to protect the cultural distinctiveness of a group. Moreover, closure also need not be instrumental. 'Whether a relationship is open or closed may be determined traditionally, affectually, or rationally in terms of values or expediency' Weber (1978, p.43).

The stronger these closure norms and sanctions are, the greater their impact on interethnic relations. The extent to which groups discourage marriages outside of the group – the endogamy norm - is indicative then of the strength of closure norms and sanctions within the group and consequently also of the social distance between groups. The Yazidis, orthodox Jews, Druze, and the higher castes of Indian society, for instance, are all ethno-religious groups with strong closure norms. Outmarriage is perceived as a threat to the group's cultural survival and closure functions to preserve its identity. The group's distinctiveness is a source of pride and esteem among its members.

Section II Research design

Case selection: Mindanao, the Philippines

I examine the role of ethnicity and socio-economic status in the context of Mindanao, the southernmost of the three major island groups that make up the Philippines. The region is home to nearly 22 million persons who together form a society that is deeply-divided into three dominant ethno-religious groupings: the Moro; the Lumad; and the Christian settler community. Moro refers to the collective identity of the several Muslim tribes native to Mindanao; Lumad is the overarching identity of those indigenous minority groups who do not identify as Moro; and Christian settlers describes the migrants to the region from the two more northern island groups who now form the numerical majority in Mindanao.

Mindanao is a valuable case to study for three reasons. First, it is an example of internal migration, and in particular settler migration, within the Global South. Although internal migration is numerically significant in global terms, it has received far less attention in scholarly research than international migration from South-to-North. Second, there are clear disparities in the socioeconomic status between the groups. Ethnic inequality is significant in Mindanao. Third, there are also clear differences in the cultural distance

between groups. In particular, religion clearly separates the Muslim Moro from the Christian settlers and, to a lesser extent, the Lumad.

Spanish colonial conquest in the 16th century had impressed Catholicism upon the Philippines' two northern island groups, Luzon and Visayas. Mindanao in the south, by contrast, was deeply-influenced by Islam brought by Arab traders starting in the 14th century (Majul 1973). Islamic influence manifested itself not only in the religious conversion of much of the native population, but also in the establishment of several autonomous Islamic political authorities, Sultanates, in the region. Spain's attempts to incorporate Mindanao into the Spanish Philippines encountered resistance in a series of wars with the Moro lasting nearly three centuries. It was only following Spain's military defeat and cession of the Philippines to the United States in 1898 that a period of comparative order prevailed in Mindanao. This was largely due to American accommodation of local Muslim political elites (Abinales 2010). However, the new colonial administration also made the historically consequential decision to launch an ambitious resettlement initiative that would sow the seeds of Mindanao's post-independence wars.

After independence in 1945, the new Philippines' government expanded the resettlement program and encouraged even more inhabitants from the over-populated northern island groups to migrate to Mindanao. The effect was to minoritise Mindanao's native population. It also exacerbated the native sense of dispossession as the government continued the mandatory land registration policy introduced during American colonial rule (McKenna 1998). The Moro and Lumad found themselves increasingly marginalised in their own lands.

It is this diminished status that lies at the heart of Mindanao's native-settler conflict. Resentment of their subordinate position would inspire the Moro to launch several armed separatist movements in the post-colonial era. The Moro National Liberation Front (MNLF)

waged an insurgency, peaking between 1972-76, that claimed between 50-100,000 lives (Ahmad 2000). The war resulted in an agreement to establish the Autonomous Region of Muslim Mindanao (ARMM) in 1991. However, a breakaway rival, the Moro Islamic Liberation Front (MILF), rejected this agreement and continued its armed rebellion against the Filipino state. The MILF separately achieved their own peace deal in 2014 to replace ARMM and to establish the 'Bangsamoro Political Entity'. However, at the time of writing, the future status of the agreement remains uncertain. What is more certain, however, is that the differences between the Christian settler population and minority Moro and Lumad remain unreconciled. Mindanao's ethnic divisions remain deep and persistent.

Data

The project draws on a combination of census and interview data. The quantitative data were drawn primarily from the Philippines national censuses of 2000 and 2010. Unusually for a population census, the data were released for all households in the country providing extraordinarily rich micro-data and eliminating the risk of under-sampling rare events such as marriages across deeply-inscribed social boundaries. For Mindanao this meant data were available on 18.3 million individuals in 2000 and 21.9 million individuals in 2010. Altogether the two censuses recorded 6.2 million marriages. As the data were released at the individual-level, variables could be constructed down to the lowest administrative level. In the year 2000, Mindanao administratively comprised 6 regions, 25 provinces, 430 municipalities, and 10,019 *barangays*. As administrative boundaries changed in the intervening decade, I aligned the 2010 data to correspond with the 2000 boundaries.

The qualitative component comprised 38 semi-structured interviews with married couples – comprising a roughly even number of inmarried and outmarried individuals - and six focused-group interviews involving 30 unmarried individuals in three distinct and demographically significant locales: Zamboanga City; Cotabato City; and Davao City.

Interviewees were identified with the assistance primarily of locally-elected representatives who served as community ‘gatekeepers’ and interviews were conducted, in summer 2015, either in English or with the aid of an interpreter in the homes of the married couples and in *barangay* halls for the focus-group interviewees. Questions were asked to ascertain respondent attitudes towards intermarriage as well as those of third parties, notably respondents’ families, friends, and communities. The interview guide setting out the full range of topics covered appears in the supplementary Appendix. Given the number, selection, and location of respondents, the interviews were intended to be illustrative, not representative of views on intermarriage in Mindanao.

Empirical approach

In addition to simple statistics on absolute and relative frequencies, I draw on two other techniques to examine the change in intermarriages between 2000 and 2010. First, I calculate endogamous odds ratios for both years. Odds ratios, which have been helpfully reported in previous intermarriage studies (Kalmijn 1998; Rosenfeld 2008), indicate the odds of marrying within one’s group relative to the odds of marrying outside the group. A higher odds ratio indicates a higher level of endogamy. Odds ratios offer the advantage over simple proportions of taking into account the relative sizes of groups which affect the structural opportunity to intermarry. Odds ratios are given by the following formula:

$$\text{Odds ratio} = \left[\left(\frac{p_1}{1-p_1} \right) / \left(\frac{p_2}{1-p_2} \right) \right]$$

Second, I conduct a time series analysis to identify the determinants of changes in the proportion of intermarriages between 2000 and 2010 within localities in Mindanao. Changes in intermarriages are examined within the smallest administrative locality possible: the *barangay*. I employ a fixed effects model which minimises bias arising from potentially omitted variables by examining the changes *within* a given locality over time (rather than

across localities), thereby holding constant any locality-specific effects that do not change over time. While such models take care of unobserved heterogeneity attributable to locality characteristics that are time-invariant, two cardinal assumptions are that the model includes all other time-varying determinants and that these determinants do in fact vary over time. Appropriate model specification then is important to ensure unbiased estimates of the determinants. Robustness checks, including other models and specifications, may be found in the supplementary Appendix.

Variable construction

I employ as the dependent variable the number of intermarriages as a proportion of all marriages, both endogamous and exogamous, in a given locality. Strictly, as this is an analysis of longitudinal data, I am examining the *change* in the proportion of intermarriages between 2000 and 2010. The explanatory variable of principal interest is ethnic inequality. To measure inequality between ethnic groups (INEQUAL), I employ the Coefficient of Variation, weighted for the size of each ethnic group, given its simple and intuitive interpretation (Mancini, Stewart, and Brown 2008). It compares the difference between each ethnic group's mean with the population mean on the quantity of interest (socio-economic status here) and takes into account the size of each group. It is given by the following formula.

$$\text{Ethnic inequality} = \frac{1}{\bar{y}} \left(\sum_r^R p_r ((\bar{y}_r - \bar{y})^2) \right)^{\frac{1}{2}}$$

where y is the quantity of the variable of interest; \bar{y}_r is the mean value of y for ethnic group r ; \bar{y} is the mean value of y for the population, R is the number of ethnic groups; and p_r is ethnic group r 's proportion. The variable is scaled from 0 to 1 where 0 represents perfect

equality between groups. I construct both an aggregate measure capturing inequality between all ethnic groups as well as individual measures for each ethnic group separately. Thus, in addition to the aggregate measure, there would be distinct variables capturing inequality for Christian settlers, Muslim Moro, and the Lumad separately.

Consistent with the classic theoretical model of intermarriage in sociology (Kalmijn 1998), I control for the structural opportunities to intermarry provided in the marriage market. Becker (1973) first proposed the idea of a market for marriage in which individuals compete to win partners in accordance with their individual preferences. I include variables to capture two dimensions of the marriage market: first, the pool of available marriage partners from different ethnic groups (POOL) and second, the spatial segregation of ethnic groups (SEGREG). POOL is measured first for all ethnic groups using a well-known heterogeneity measure based on the Herfindahl index and second for each ethnic group separately using simply their proportion of the population. The heterogeneity measure captures the likelihood that two individuals chosen at random would be from different ethnic groups and is given by the following formula where p represents the proportion of ethnic group, i :

$$\text{Ethnic diversity} = 1 - \sum_{i=1}^n p_i^2$$

The spatial segregation of ethnic groups is measured using the well-known index of dissimilarity (Massey and Denton 1988). Conceptually, the index measures the percentage of one group who would have to change their geographic sub-division (Filipino *barangay*) in order to create an even distribution throughout the larger geographical unit (Filipino *municipality*). It is given by the formula:

$$\text{Segregation (dissimilarity index)} = \sum_{i=1}^n [t_i |p_i - P| / 2TP(1 - P)]$$

where t_i and p_i are the total population and group proportion of the geographic sub-division (barangay), i , and T and P are the population size and group proportion of the larger geographical unit (municipality) under comparison. The index is scaled from 0 to 1 where a higher score indicates a higher level of segregation. Given the possibility that individuals move to localities where intermarriages are high (or low), thereby confounding preference and opportunity, I control for such movements by including the proportion of migrants, defined as those who moved into a locality within the last 5 years, in the model (MIGRANT). Lastly, I include as control variables the population density (POPDEN) and two indicators of the locality's socio-economic status: the mean education (EDUC) and poverty (POOR) level. A locality's poverty level is measured by the proportion of households defined as poor using the criteria established in the Philippines National Household Poverty Survey.

Section III Results

Evidence of Social Closure

Insofar as intermarriage is indicative of social integration, Mindanao is a deeply-segregated society. The proportion of intermarriages is small. Only 2.7% of the 2.7 million marriages in existence in 2000 were across ethno-religious boundaries. However, this aggregate statistic obscures important variation between ethnic groups, and also differences between men and women. In ethnic terms, the Muslim Moro are the most socially closed of the three groups. They have the smallest percentage of exogamous marriages (about 1.5% in 2000) and, more tellingly, they have the highest endogamous odds ratios (19,543 in 2000). The odds ratios are the more informative statistic because they take into account the relative size of groups and thus control for some of the group's opportunity to outmarry. In contrast, the Lumad are the socially most open group. Some 13% of all Lumad were married to non-Lumad individuals in 2000 and the endogamous odds ratio was very low (562 in 2000).

Christian settlers occupy a position on a scale of social openness in-between the Muslim Moro and the Lumad with an endogamous odds ratio of 1095 in 2000. Table 1 summarises these simple statistics.

[Table 1 here]

This variation between groups likely reflects the strength of social forces – the closure norms and sanctions – operating within each group. These norms and sanctions expressed themselves in a variety of ways in the context of Mindanao. Table 2 provides an illustrative list of ten such expressions, selected because at least two or more interviewees articulated the core idea behind them. The expressions are numbered for ease of reference. As can be seen, these forces were particularly prominent among the Moro and related primarily to their religious identification as Muslims. Each example provided illustrates a different way in which the closure norms and sanctions operated. These included risks to the physical safety of group members and non-members (expressions #2 and #9); threats from parents to disown their child (#4); the insistence on conversion to Islam before a marriage would be recognized (#6); the threat of community ostracisation (#7, #8, and #9); parental anxiety for the religious identity of children born of mixed unions (#5); and the residential segregation of groups through the expectation couples live within the community after marriage and even that women live within their in-laws' home (#10). In contrast with the Muslim Moro, it is worth noting the Catholic Church also has a formal norm governing marriage to non-Catholics - it requires a dispensation from the Archbishop – but, as one priest reported, compliance was rare (#1).

Although inferences from interviews intended primarily to be illustrative require caution, deeper analysis suggest three additional observations regarding the operation of closure forces in Mindanao. First, they point to the existence of both *norms* that individuals have personally internalized and *sanctions* that third parties - co-ethnics - enforce. Thus, a

Moro woman reported that she could not have stayed in her community if she had wanted to marry a non-Muslim, but she had in any event never considered marrying outside of her faith (#3). At the same time, a Moro man (#8) suggests the Moro community (he uses the collective pronoun 'we') would not tolerate a Muslim woman marrying a non-Muslim man and that she would face community censure if she did so (she would be 'chased' out). Second, the social sanctions appear to be enforced both horizontally – by other co-ethnics within the community – and vertically by community leaders. Thus, not only did an ordinary Moro man warn that a Muslim woman would be chased from the community for marrying outside of Islam (#8), but a Muslim cleric (*Imam*) corroborated she would have to leave the community and warned she may even be the victim of an honour killing by her family (#9). Third, the existence of a closure norm within one group is not only recognized by members of less-closed groups, but it influences their interaction with the closed group's members. Thus, an unmarried Christian settler reported he would not date a Muslim girl because he believed her family would seek to kill him (#2).

More generally, the *strength* of each group's closure norms is likely related to their internal cohesion. For the Moro, powerful religious institutions enforce boundaries and socialise members. The religious leadership (*ulamaa*); religious establishments (mosques), and religious schools (*madrassahs*) all work to protect the distinct identity of the group. In contrast, the Lumad are a more religiously diverse group comprising primarily Christians, but also Muslims and adherents of tribal religions. Among Lumad Christians there is further diversity as this sub-group includes Roman Catholics and followers of numerous Protestant denominations. As such the Lumad lack the unified set of formal institutions enjoyed by the Moro and the group's social borders are, by comparison, weakly-protected. The strength of the Moro's distinctive 'closure' norms, in contrast, interpose an ethnic distance between itself and the other two groups.

There is also important variation in social closure by gender. Women from among the Muslim Moro and Christian settler groups are less likely to marry outside of their group than men. These groups may be more protective of women and strongly sanction outmarriage for them because they wish to preserve the distinctiveness of the group's cultural identity. Thus, a Moro man reports it is acceptable for a Muslim man to marry a non-Muslim provided the woman converts, but it is never acceptable for a Muslim woman to do so, even if her husband converts (#8). It is noteworthy that this sexual policing is much weaker among the Lumad where women are, contrarily, more likely than Lumad men to outmarry. This is consistent with the earlier suggestion that the Lumad have much weaker social norms and sanctions in force within the group. Lumad women consequently may enjoy more freedom in their choice of life-partner.

[Table 2 here]

Descriptive Analysis

The descriptive statistics suggest cause for cautious optimism. Although intermarriage is rare in Mindanao, the trend is positive. Between 2000 and 2010, both in aggregate and across all groups individually, intermarriage has been increasing. In 2000, intermarriages represented 2.7% of some 2.7 million marriages. In contrast in 2010 it had reached 5.1% of some 3.5 million marriages. This amelioration in cross-group ties is confirmed in the improved endogamous odds ratios across all three groups. Again, as with the cross-sectional perspective above, there is variation between ethnic groups. The largest improvement observed is among the Muslim Moro. The odds ratio for the Moro declined from nearly 20,000 to just under 6000 in the intervening decade. Christian settlers had the next greatest gain. Lastly, the Lumad exhibited the smallest change in absolute and relative terms. These differences partly reflect the very different starting points of each group. The Moro were

already very socially closed; the Lumad in contrast were already highly open as a group. The Lumad consequently had comparatively less gain to make in their intermarriage levels.

What then accounts for the improvement in intermarriage levels between 2000 and 2010? Descriptively, the observed overall increase in intermarriages coincides with improvements made in aggregate education, poverty, diversity, and segregation levels in Mindanao in that decade. Table 3 summarises the change over time in these variables. As described previously, theory predicts all four factors should have an effect on intermarriage levels. There are, however, again important differences between the Moro, Lumad, and Christian settlers in several of these areas that reliance on aggregate measures obscures.

[Table 3 here]

In terms of socio-economic status, indicated by educational and poverty levels, Christian settlers enjoy the highest rank of the three groups; the Moro occupy an intermediate status; and the Lumad are at the bottom as the most marginalised group in Mindanao. For instance, on a 5-point educational scale, Christian settlers on average had 2.34 units of education in 2000 whereas the Moro and Lumad had only 1.91 and 1.43 units respectively. The EDUC variable was constructed to reflect substantial and meaningful differences in educational attainment levels where (1) signified no education; (2) some or completed primary education; (3) some or completed secondary education; (4) some or completed post-secondary or vocational education; and (5) some or completed college education or higher academic degree. The differences then in the educational scores for each ethnic group then is suggestive of high between-group inequality in Mindanao. In terms of change *over time* all three groups exhibited improvements in educational levels between 2000 and 2010. However, it is the Lumad who make the largest gains in relative terms. The Lumad educational attainment level increases by 38.5% to an average of 1.98 compared to 19.7% and 15.2% increases for Christian settlers and Muslim Moro respectively. This change goes some way to

equalising educational status in Mindanao and thus reducing between-group inequality. However, in absolute terms the socioeconomic hierarchy of Christian settlers, Muslim Moro, and the Lumad remains unchanged.

The opportunity for outmarriage in Mindanao, indicated by ethnic diversity and spatial segregation levels, also improved between 2000 and 2010. Ethnic diversity, defined here as the probability that two individuals chosen at random would be from different ethnic groups, increased from 0.46 to 0.53. Aggregate segregation levels, taking into account all three groups, conversely decreased from 0.78 to 0.72. Both changes made it more likely that individuals would have contact with persons from a different ethnic background to themselves. Again, there were differences between individual ethnic groups worth noting beyond the aggregate statistic. When segregation is measured in terms of individual ethnic groups – Moro segregation from non-Moro, Lumad from non-Lumad, and Christian settlers from natives – spatial integration indeed improves across each group individually. However, the improvement is smallest for the Moro. In contrast, the advance is substantively larger and of similar magnitude for the Lumad and Christian settlers. We would expect then the Moro to have the smallest increase in outmarriage levels attributable to improvements in their spatial integration levels.

Ethnic inequality, the explanatory variable of principal interest, is unequivocally high in Mindanao. INEQUAL, which is based on the Coefficient of Variation and which measures the difference between each group's mean education level and the population's mean educational level, shows an aggregate score of 0.13 in 2000. A score of 1.00 indicates perfect equality. However, reliance on an *aggregate* measure of inequality again conceals important variation between individual ethnic groups. When individual inequality measures for the Moro, Lumad, and Christian settlers are constructed, it is apparent that ethnic inequality is highest for the Moro, followed by the Lumad, and lowest for Christian settlers. The aggregate

measure also obscures important changes in inequality levels *over time* between groups. In both 2000 and 2010 INEQUAL was 0.13. This statistic, however, captures none of the important changes in the relative educational levels of each group that occurred in the intervening decade. When inequality is examined for each group individually, there is overall a deterioration for Christian settlers and Muslim Moro, but an improvement for the Lumad. This improvement for the Lumad is consistent with the descriptive data that showed a 38.5% increase in the Lumad's average educational attainment level between 2000 and 2010.

Multivariate analysis

The panel data analysis corroborates some but not all the descriptive analysis above. I examine the simultaneous effect on intermarriage of changes over time in education, poverty, diversity, segregation, and ethnic inequality levels using fixed effects models to control for other, unobserved factors specific to individual localities that may also drive the outcome. Table 4 summarises the results.

[Table 4 here]

Improvements in the overall socioeconomic status of Mindanaons between 2000 and 2010 had some positive effect on intermarriage levels. As the proportion of those in poverty declined, the proportion of all intermarriages increased, holding everything else constant (Model 1). Specifically, a 1% increase in the proportion of poor households in a community decreased the proportion of intermarriages in that locality by 16%. The substantive effect and statistical significance of declining poverty levels persisted when intermarriages for men and women of each ethnic group were disaggregated and examined separately (Models 2-7). Poverty hinders intermarriage. Moro men were the one exception for whom improvements in poverty levels had no statistically significant effect on their outmarrying (Model 4). In contrast with poverty, improvements in education had a more ambiguous effect on intermarriage. In the aggregate, that is for all intermarriages, EDUC had no statistically

significant effect (Model 1). However, when disaggregated by gender and ethnicity, EDUC mattered for Moro and Lumad men and women but not for Christians settler women and only weakly for Christian settler men. This finding is consistent with the fact that Christian settlers were, by far, the best-educated ethnic group in Mindanao. A further increase in their average educational level would imply the social distance between them and the Moro and Lumad had become even greater, making outmarriage even more improbable. As Christian settlers were also by far the largest group in numerical terms in Mindanao, it is likely they are also driving the null finding in the aggregate model (Model 1) that examines all intermarriages.

Improvements between 2000 and 2010 in the opportunity for intermarriage in Mindanao also had some positive effect on outmarriage. As ethnic diversity (POOL) increased across individual localities, the proportion of all intermarriages in those localities also increased (Model 1). Specifically, a one unit increase in ethnic fractionalization increases the proportion of intermarriages by 27%. Similarly, when men and women of each individual ethnic group are examined separately (Models 2-7), increases in the proportion of individuals from a different ethnicity resulted in increases in the proportions of outmarriages of individuals from each ethnicity, *ceteris paribus*. The one exception again were the Moro, this time Moro women, for whom increases in diversity had no statistically significant effect on their outmarrying. In contrast with diversity (POOL), spatial segregation (SEGREG) had no statistically significant effect on the outmarriage levels of men and women of individual ethnic groups. This is very likely due to the control for internal migration (MIGRANT) included in the model to account for individuals who move to localities where intermarriage is either already low or high in accordance with their preferences. The implication then is that ethnic settlement patterns may impact intermarriage more through preferences than through opportunities.

Ethnic inequality (INEQUAL), the variable of primary interest, also affects intermarriage. When measured in the aggregate, that is inequality between all three groups, there is a clear and substantial negative effect. As the overall level of ethnic inequality increases across localities in Mindanao, the overall proportion of all intermarriages in these localities declines. Specifically, a one unit increase in ethnic inequality reduces the proportion of intermarriages by 10%. Consistent with the theoretical prediction then, as the social distance between ethnic groups grows smaller the likelihood of marriage between these groups increases.

This picture changes, however, when we disaggregate the aggregate measure by gender and ethnicity (Models 2-7). The effect of ethnic inequality continues to hold, *ceteris paribus*, for Christian settlers and Lumad, both males and females. Declining socioeconomic disparities then do improve the prospects of intermarriage for these groups. The Muslim Moro, however, are once again the exception. There is no statistically significant effect for the Moro. They remain unaffected by the equalisation of socioeconomic status between ethnic groups. This is true of both Moro men and women. As suggested previously, the indifference of Moro marriage tendencies to improvements in ethnic equality may well be due to the strength of the Moro's internal norms and sanctions that ensure the group's social closure. Ethnic inequality matters then, but more so for some ethnic groups than for others.

Section IV Discussion and conclusion

The findings point to differences between ethnic groups in their sensitivity to the factors theorised to encourage or constrain intermarriage and thus differences in their prospects for integration. Reductions in ethnic inequality, the factor of primary interest here, did not automatically result in more intermarriages for every group. Certain ethnic groups were more indifferent to the equalisation of socio-economic status than others. Similarly, an increase in the opportunity to out-marry also did not generate a uniform increase in

exogamous marriages across all groups. I have argued one explanation for why ethnic groups respond differently in such instances may have to do with the nature and extent of the ethno-cultural differences – the cultural distance - between them. An important component of this cultural distance is the strength of the social norms and sanctions that operate to socialise and control group members. Closure norms and sanctions in particular interpose an ethnic distance between groups and the forces behind these norms and sanctions are not equal across these groups.

In Mindanao, the Moro were the only group for whom changes in ethnic inequality did not produce an effect. While caution in interpreting this finding is required given the use of aggregated rather than individual-level data, I drew on qualitative evidence which supports the suggestion that the reason may lie in the existence of powerful norms and sanctions among the Muslim Moro that govern social interaction outside of the group. This evidence also suggests that the Moro's ethno-religious identification may be the source of this power. In particular the strength of their ethno-religious institutions may, in part, account for Moro exceptionalism.

The difference between groups in their responsiveness to socio-economic improvement has an important implication for integration policy. It suggests policies should be tailored for each group in society rather than applied uniformly across all groups. The prescriptions then can be starkly different. If ethno-cultural differences were the impediment to a particular group's integration then social planners could, for instance, design policies to make competence in the national language mandatory; integrate public school systems and proscribe private faith-based schools; promote a sense of national identity through the education curriculum and through civics training; and more generally eliminate rights and special protections for non-core groups. However, if socio-economic disadvantage were the barrier then policy-makers could, for instance, consider in their toolkit education and training

programs to improve migrant skills; affirmative action or other minority promotion programs for employers; and mandatory equality and diversity policies for higher education institutions and associations of liberal professions where non-core groups are under-represented.

Lastly, it is worth noting that between-group inequality underlies and links a diverse set of research fields that share a broad concern with improving societal relations, both within and outside of migration contexts. As already noted, normative theorists (Kymlicka 1995) have argued that eliminating the disadvantages of ethnic minorities may promote social integration. Sociologists have debated the role of racial inequality in the decline of social capital in the United States (Hero 2003; Portes and Vickstrom 2011). Social psychologists (Allport 1958; Hewstone and Swart 2011) have hypothesised that prejudice declines when groups have contact under conditions of equal status. And political scientists have theorised that shifts in the relative socio-economic status of ethnic groups create anxieties that motivate ethnic conflict (Horowitz 1985). Although not exhaustive, this enumeration is indicative of the growing recognition of between-group inequality's power to shape intergroup relations and underscores the importance of further research into its effects and its mechanisms.

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Tables and Figures

Table 1. Marriages in Mindanao by ethnicity and gender in 2000 and 2010

	Year	Christian Settler Male	Christian Settler Female	Muslim Moro Male	Muslim Moro Female	Lumad Male	Lumad Female
All marriages	2000	1,941,128	1,941,065	529,987	526,234	225,519	229,388
	2010	2,269,002	2,258,145	756,940	749,343	442,741	461,392
All endogamous marriages	2000	1,905,738	1,905,738	520,394	520,394	198,150	198,150
	2010	2,178,432	2,178,432	734,643	734,643	379,234	379,234
All exogamous marriages	2000	35,390	35,327	9,593	5,840	27,369	31,238
	2010	90,570	79,713	22,297	14,700	63,507	82,158
Endogamous marriages as % of all marriages within grp.	2000	98.18	98.18	98.19	98.89	87.86	86.38
	2010	96.01	96.47	97.05	98.04	85.66	82.19
Exogamous marriages as % of all marriages within grp.	2000	1.82	1.82	1.81	1.11	12.14	13.62
	2010	3.99	3.53	2.95	1.96	14.34	17.81
Endogamous odds ratio for all marriages	2000	1,095	1,095	19,543	19,543	562	562
	2010	336	336	5733	5733	212	212

FOR INCLUSION IN MAIN TEXT

Table 2. Selected examples of the expression of “closure” norms and sanctions in Mindanao

	Comment from interview	Interviewee
#1	‘There are Catholics who marry Muslims here. They are supposed to apply for a dispensation from the Archbishop. But no-one has ever asked me to get one.’	Christian settler cleric (Catholic priest)
#2	‘I’m afraid of having a Muslim girlfriend. The Muslim tribes will kill you if you do.’	Unmarried Christian settler male
#3	‘If I had fallen in love with a non-Muslim man, I would have had to leave this place. But I have never wanted a non-Muslim for a husband.’	Married Muslim Moro woman
#4	‘If my daughter became Christian when she married, she would not be my daughter anymore.’	Muslim Moro father
#5	‘I would not want my children to marry someone who is not Muslim. Because their children may not be Muslim then either.’	Muslim Moro mother
#6	‘We cannot stop them from marrying. But I will not do the <i>nikah</i> [Islamic marriage ceremony] if the woman has not given the <i>shahadah</i> [Islamic declaration of faith].’	Married Muslim Moro cleric (<i>Imam</i>)
#7	‘You cannot find people who live together but are not married here. They have to leave to go where their families cannot find them.’	Married Muslim Moro community leader
#8	‘It’s okay for Muslim men to marry Christian women; but Muslim women cannot marry Christians. Even if he [the Christian man] converts. We would not accept this. The woman would be chased from the community.’	Muslim Moro husband
#9	As much as possible the Christian one should convert to Islam. Muslims should not leave their faith. That is why the parents have to use their power to influence the other person. But if it does not happen, their parents will find a way to separate them. If not, they will have to leave the community. In some cases, the family will have the Christian killed. This is particularly strong for the <i>Maranao</i> (a Muslim tribe). Their women only marry <i>Maranao</i> . Even if the Christian man converts, it is still not okay. It is a point of pride for the <i>Maranao</i> .’	Muslim Moro cleric (a married <i>Imam</i>)
#10	‘When I married, I moved into my husband’s family’s house in a Muslim area. I still saw my old Christian friends sometimes – when I invited them to <i>Eid</i> - but it was hard because they now lived further away in Christian areas.’	Christian settler female convert to Islam

Table 3. Descriptive statistics on dependent and independent variables for 2000 and 2010

	YEAR	Settler male	Settler female	Moro male	Moro female	Lumad male	Lumad female
INTERMARRIAGE	2000	1.82	1.82	1.81	1.11	12.14	13.62
Intermarriages as % of all marriages	2010	3.99	3.53	2.95	1.96	14.34	17.81
INEQUAL AGG	2000			0.13			
Inequality between all groups	2010			0.13			
INEQUAL	2000	0.12	0.12	0.06	0.06	0.11	0.11
Inequality for groups individually	2010	0.13	0.13	0.07	0.07	0.09	0.09
EDUC AGG	2000			2.18			
Mean education for all groups	2010			2.58			
EDUC	2000	2.34	2.34	1.91	1.91	1.43	1.43
Mean education of each group	2010	2.80	2.80	2.20	2.20	1.98	1.98
POVERTY	2000	12.11	12.11	12.11	12.11	12.11	12.11
% of households in poverty	2010	9.62	9.62	9.62	9.62	9.62	9.62
POOL AGG	2000			0.46			
Ethnic diversity	2010			0.53			
POOL	2000	29.62	29.62	79.21	79.21	89.84	89.84
Size of other groups combined (%)	2010	36.55	36.55	77.70	77.70	85.70	85.70
SEGREG AGG	2000			0.61			
Segregation of all groups	2010			0.56			
SEGREG	2000	0.78	0.78	0.88	0.88	0.77	0.77
Segregation for groups individually	2010	0.72	0.72	0.86	0.86	0.71	0.71
MIGRANT	2000			0.28			
% of migrants within last 5 years	2010			0.94			
POPDEN	2000			179.04			
Persons/sq.km.	2010			218.01			

Table 4. Panel data analysis (fixed effects) of intermarriages in Mindanao, the Philippines, 2000-2010

	All groups Aggregated	Settler Males	Settler Females	Moro Males	Moro Females	Lumad Males	Lumad Females
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
INEQUAL	-0.10 ^{***} (0.03)	-0.30 ^{***} (0.06)	-0.20 ^{**} (0.06)	0.27 (0.20)	-0.06 (0.20)	-0.62 ^{***} (0.17)	-0.52 ^{***} (0.16)
POOL	0.27 ^{***} (0.01)	0.42 ^{***} (0.02)	0.33 ^{***} (0.02)	0.49 ^{***} (0.12)	0.14 (0.11)	0.51 ^{***} (0.06)	0.42 ^{***} (0.05)
EDUC	0.00 (0.01)	-0.02 (0.01)	-0.04 ^{**} (0.01)	0.02 (0.04)	-0.01 (0.04)	0.01 (0.04)	0.03 (0.04)
POOR	-0.16 ^{***} (0.02)	-0.38 ^{***} (0.05)	-0.30 ^{***} (0.05)	-0.25 (0.17)	-0.59 ^{***} (0.17)	-0.35 [*] (0.14)	-0.58 ^{***} (0.14)
POPDEN	-0.00 (0.00)	-0.00 (0.00)	-0.00 ^{**} (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
SEGREG	-0.04 ^{**} (0.01)	0.03 (0.03)	0.04 (0.03)	-0.05 (0.10)	-0.05 (0.10)	-0.11 (0.06)	-0.12 (0.06)
MIGRANT	0.53 ^{***} (0.09)	-0.12 (0.22)	0.04 (0.23)	1.26 (0.68)	2.52 ^{***} (0.68)	2.56 ^{***} (0.63)	2.42 ^{***} (0.60)
Year 2010	0.01 [*] (0.00)	0.02 ^{**} (0.01)	0.03 ^{***} (0.01)	-0.00 (0.02)	-0.02 (0.02)	0.00 (0.02)	0.01 (0.02)
<i>F-test (model)</i>	171.89 ^{***}	102.94 ^{***}	64.89 ^{***}	3.79 ^{***}	4.28 ^{***}	19.28 ^{***}	22.77 ^{***}
<i>DF</i>	2,633	2,606	2,608	2,041	1,846	2,285	2,303
<i>SSM</i>	2.306	6.442	4.405	2.150	2.138	8.053 ^{***}	8.773
<i>SSE</i>	4.416	20.385	22.130	144.798	115.340	119.312	110.924
<i>SEE</i>	0.041	0.088	0.092	0.266	0.250	0.229	0.219
<i>F-test (FE)</i>	2.30 ^{***}	3.29 ^{***}	2.96 ^{***}	2.05 ^{***}	2.40 ^{***}	1.83 ^{***}	1.94 ^{***}
<i>R²</i>	0.90	0.93	0.93	0.88	0.89	0.87	0.88
<i>Adjusted R²</i>	0.67	0.79	0.77	0.59	0.63	0.57	0.60
<i>N</i>	8362	8162	8179	6907	6449	7458	7519

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; standard errors reported in parentheses