I Do (or Don't): The Impact of Same-Sex Marriage Laws on International Tourism

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Abstract

Economic outcomes of same-sex marriage are widely researched: boosts to local economies, productivity and wage gains to LGBTQ couples, and expanded access to tax benefits and adoption. I expand this analysis by examining the effect of same-sex marriage laws on international tourism from 2000 to 2018. Group-time average treatment effect regressions at the annual level showed a sustained increase in tourism arrivals after a country's passage of a same-sex marriage law, but a reduction in international receipts. Fixed effects regressions confirmed this result at the quarterly level. Robustness checks control for legal and social inclusion of countries, as well as tourism infrastructure. I conclude that same-sex marriage laws had no uniform effect, but heterogeneously impacted certain countries.

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I. INTRODUCTION

Same-sex marriage rights have only been granted legally since the early 2000s. The Netherlands signed the first bill allowing same-sex couples to marry in 2001, followed by Belgium shortly after in 2003. As international beacons of acceptance, these countries signaled to the world that they were not only tolerant of the LGBTQ community, but welcoming and accepting. Yet, an area of same-sex marriage legalization that has yet to be studied in depth is the effect on international tourism. As the first countries to legalize marriage worldwide, tourism markets may be boosted by the increase in same-sex weddings, honeymoons, and personal travel. It is through this framework that I analyze how marriage legalization impacted international tourism industries.

LGBTQ legal acceptance has been shown to be strongly associated with GDP growth. Lee Badgett (2019) found that every additional right granted to the LGBTQ community (marriage, anti-discrimination laws, repeal of anti-sodomy laws) maps to a $2000 increase in GDP per capita. Some of this increase can be explained domestically: workers that were previously uncomfortable with being "out" at work or in public now have greater legal protections. LGBTQ people within a given country benefit by pursuing opportunities that they wouldn't have if they still faced legal roadblocks, such as higher education and employment. However, tourism markets have not been studied with the same depth, specifically on a global scale.

Figure 1. Timing of National Same-Sex Marriage Laws*, 2001-2020

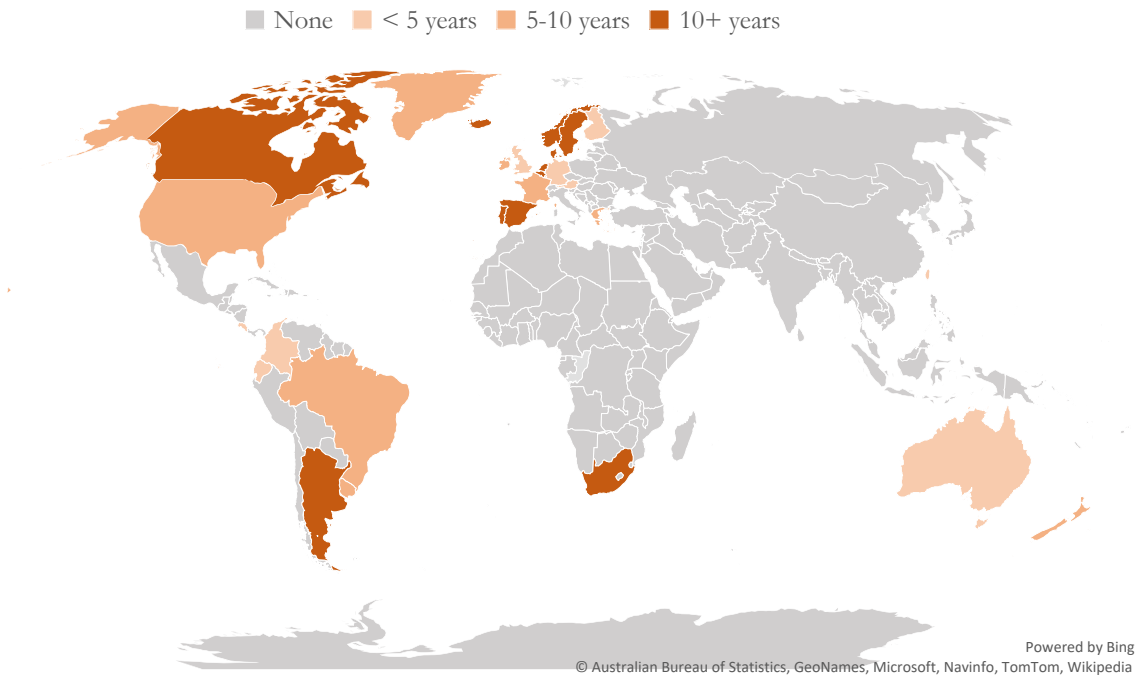


Figure 1 shows the status of marriage equality laws worldwide. Countries that have had laws the longest are highly concentrated in Western Europe. Marriage equality has made gains in the West in recent years, especially in South America. Taiwan became the first country in Asia to legalize same-sex marriage with their constitutional amendment in 2019. South Africa, the only country in Africa to recognize and perform same-sex marriages, has guaranteed marriage since 2006. Though most countries passed same-sex marriage by congressional legislation, several countries guaranteed marriage equality via judicial rulings or public referenda. Figure 2 reflects this information in a table format.

† Note: Map only includes those countries where marriage is legal and recognized in every province. In June 2015, Mexico's Supreme Court ruled same-sex marriage bans unconstitutional. However, this was only considered a "jurisprudential thesis" and did not overturn any individual provincial laws. Nine of 32 states require a lengthy judicial process for same-sex marriages to be performed, so Mexico was not included in this map or subsequent model. Similarly, the United Kingdom is classified in "less than 5 years" since Northern Ireland was the last province to pass gay marriage in 2020.

Figure 2: Same-Sex Marriage Laws

Country	Passage Year	Method
Netherlands	2001	Legislation
Belgium	2003	Legislation
Canada	2005	Legislation
Spain	2005	Legislation
South Africa	2006	Legislation
Norway	2009	Legislation
Sweden	2009	Legislation
Argentina	2010	Legislation
Iceland	2010	Legislation
Portugal	2010	Legislation
Denmark	2012	Legislation
Brazil	2013	Judicial Ruling
England	2013	Legislation
Wales	2013	Legislation
France	2013	Legislation
New Zealand	2013	Legislation
Uruguay	2013	Legislation
Luxembourg	2014	Legislation
Scotland	2014	Legislation
Ireland	2015	Public Referendum
United States	2015	Judicial Ruling
Colombia	2016	Legislation
Greenland	2016	Legislation
Australia	2017	Legislation
Finland	2017	Legislation
Malta	2017	Legislation
Germany	2017	Legislation
Austria	2019	Judicial Ruling
Taiwan	2019	Legislation
Northern Ireland	2019	Legislation
Costa Rica	2020	Judicial Ruling
Ecuador	2020	Judicial Ruling

In order to pin down the effects of marriage on the international tourism industry, I examine changes in tourism statistics for 26 same-sex marriage passing countries over a 21-year period, from 1998 to 2018. After marking the date of marriage legalization, I carried out several group-time average effect regressions using two key outcome variables: the annual tourism receipts within a given country from international visitors, and the total number of international tourists

that visit a country in a given year. I run several robustness checks to control for countries that had previous LGBTQ legislation in place, such as anti-discrimination laws or decriminalization laws. I also use national investments in transportation in an additional robustness check to control for the quality of the tourism industry in a given country.

The data used in this analysis aggregates tourism regardless of sexuality: that is, I am unable to pin down tourism solely by LGBTQ individual or couples. Due to the lack of standardized data collection across countries for LGBTQ communities, tourism and spending by this community is under-reported and under-studied. Therefore, the results I find are for all tourists.

I find that the average group-time treatment effect of marriage is dependent on the tourism variable investigated. For tourism receipts, marriage has significant negative values for countries that passed marriage equality in 2001, 2005, and 2006 (Netherlands, Canada, Spain, South Africa). For international arrivals, marriage resulted in significant increases for several countries, boosting arrivals by upwards of 30%. Not only are the effects of marriage country-dependent, they are also time-dependent: there is a minimum of 2 years before any significant effects can be seen from the passage of a marriage law.

The findings on tourism receipts contradicted initial hypotheses regarding the economic benefits to LGBTQ acceptance. One would anticipate a policy change that welcomes more individuals into society would boost tourism spending from foreigners, particularly among the previously ostracized groups. Many economists have documented the domestic benefits to LGBTQ inclusion (Badgett and Gates, 2006; Martell and Nash, 2020) including the additional income benefits to LGBTQ individuals. The contradiction of these findings, where tourism spending is reduced as arrivals

increase, could be due to a combination of factors, such as increased personal austerity, changing tourism industries, and the size of the LGBTQ community relative to the general population. Reductions in receipts are likely also a function of incomes among the LGBTQ community. Marieka Klawitter (2014) performed a meta-analysis of sexual orientation on earnings, aggregating studies published between 1995 and 2012. Estimates using data 1995 and 2000 showed a wage gap for gay men of 10%, compared to an average of 5% from studies published from 2000 to 2005. Discriminatory income gaps such as those highly prevalent in the early 2000's may have contributed to reductions in receipts, although not at a widespread level.

In addition to regressions at the annual level, I utilized quarterly data for several countries to carry out group-time average treatment effect regressions and fixed-effect regressions. To examine the potential effects of marriage's passage throughout time, I used data from ten countries with similar economies and industries. Four of these countries passed marriage equality: Spain in 2005, Brazil in 2013, the United States in 2015, and Malta in 2017.

I find that Malta is the only country with significant changes in tourism. In the years after Malta passes marriage equality, Malta sees a 32.6% increase in tourism arrivals. Group-time average treatment effect regressions for these countries found that Spain experienced a 23% jump in tourism receipts in the quarter after passing marriage equality. Brazil saw large decreases for a year after they passed marriage equality. However, the parallel trends assumption was not satisfied for Brazil, indicating that other factors may have been influencing these decreases. As mentioned, the data is skewed toward the tourism market in general. With access to an LGBTQ-only dataset, the values on tourism would likely reflect negative changes for homophobic countries and positive changes for accepting countries.

The remainder of this paper proceeds as follows. Section II examines the discusses the questions to be examined. Section III surveys the current literature on tourism, growth, and LGBTQ inclusion. Section IV describes the data sources and transformations. Section V details the empirical methodologies. Section VI analyzes the result of annual and quarterly regressions. Section VII verifies the results with several robustness checks. Section VIII discusses the findings. Section IX concludes. The Appendix follow with relevant figures and tables.

II. DISCUSSION OF QUESTION

There are many ways to understand the behavior of tourists in response to policy changes. The most evident would be where individuals are more or less attracted to a specific country based on that country's history of discriminatory or homophobic views. These views may endure even after the passage of marriage equality or other pro-LGBTQ legislation. Individuals may also be choosing to spend on tourism instead of saving their income. When they do travel, individuals may prefer domestic travel over international travel, or vice versa. In order to study some of these questions, I implement two hypotheses to analyze how overall tourism responds to marriage equality.

Signal

Marriage equality has been one of the more controversial civil rights battles in the past few decades. Increased polarization worldwide and the rise of the religious right have pushed same-sex marriage into the forefront of many culture wars.

Same-sex marriage offers a boost of acceptance and signals the country's acceptance and welcoming attitude of the LGBTQ community. Compared to civil union laws and the repeal of anti-sodomy

laws, marriage strengthens the rights of same-sex and equalizes them with opposite-sex couples. When a country passes marriage equality, LGBTQ couples may increase their travel and purchases. They may also choose to travel to a newly accepting country over traveling domestically, or not traveling at all. As such, the signal hypothesis states that countries with marriage should see increases in tourism receipts and arrivals after the marriage decision.

Diminishing

As the pool of countries that grant same-sex marriage expands, it is possible that there will be a diminishing effect on receipts and arrivals. The first movers on same-sex marriage would reap the majority of the benefits to tourism and LGBTQ visitors, whereas the latest countries would see a positive yet smaller impact on their tourism industries. The diminishing hypothesis states that gains to tourism receipts and arrivals are diminishing.

III. LITERATURE REVIEW

Tourism has quickly become one of the fastest growing industries worldwide. In 2019, tourism and related sectors accounted for over 10% of the world's GDP.[*] The tourism sector continued its trend of fast-paced growth, increasing at 3.5% compared to the average of 2.5% for the global economy. Literature on tourism has grown mainly out of development economics, especially as tourism has expanded to be an influential sector for developing economies to improve growth and attract investment. Tourism has a clear impact on GDP, culture, and society as a whole. The relevant literature spans three key areas: tourism and economic development; tourism changes relative to legal and social landscapes; and the impact of LGBTQ inclusion on domestic wellbeing and economic opportunity.

[*] World Travel and Tourism Council Insight Report 2019, https://wttc.org/Research/Insights

Tourism and Economic Development

Tourism is strongly linked to economic growth. As expected, a more productive tourism sector is an indicator of growth in a country's GDP. In both economically prosperous and developing countries, tourism specialization is a positive determinant of economic growth (Sequeira and Nunes, 2008; Fayissa et al., 2007). It has also been shown to be a robust predictor of higher-than-average growth (Brau et al., 2003). Tourism development literature has provided many channels through which tourism can influence or directly impact the economy. Natural, cultural, and historic aspects of a city or country link tourism with an economy's renewables (Sequeira and Nunes, 2008). Tourism has also been shown to be its own determinant of economic growth, independent of classical economic growth factors (Brau et al., 2003).

For developing nations with vibrant local attractions, tourism is often situated in terms of spatial production. That is, tourism sectors are defined as the export of non-traded services via the movement of consumers. One popular method of analyzing tourism is by utilizing a spatial equilibrium model (Redding, 2016; Ahlfeldt et al, 2015). Economies with a variety of local attractions distributed unevenly across a country, such as beaches, face a variation in economic gains from tourism depending on their attractiveness and manufacturing spillover effects (Faber and Gaubert, 2019). However, with large variation at the regional level, economic gains to tourism are largely muted in the aggregate. Though within-country, spatial equilibrium models are useful for measuring tourism gains based on a fixed set of attractions, they are not as efficient in the analysis of cross-country policy variation.

While domestic tourism makes up over half of all tourism sector revenues worldwide as of 2018, international tourism still generates large revenues through exports and a heavy reliance on manufacturing sectors. A three-dimensional panel analysis of tourist flows between pairs of countries showed that international tourism is better thought of as a single industry itself, rather than as an incorporation into a market equilibrium model (Eilat and Einav, 2004). Eilat and Einav find that exchange rates and the political risk of the travel destination are unique determinants for international travel flows. The latter demonstrates a helpful groundwork for the change in travel risk for subcategories of tourists, specifically the gap in the literature surrounding LGBTQ tourism and changes in anti-discrimination law.

Tourism and Income

Tourism, similar to any luxury good, serves as a function of an individual's income. As disposable incomes rise, the demand for outbound travel rises (Kwack, 1972). There has also been growth in tourism sectors as average disposable income rises. Individuals are also more likely to travel internationally as they gain more income (Glaesser et al., 2017).

The financial power of the LGBTQ community has grown in recent years. As of 2015, Forbes estimated economic impact of the LGBTQ community to be $917 billion in the United States alone.[*] Various subgroups of the LGBTQ community – particularly lesbian women - are shown to earn more on average than their heterosexual counterparts (Klawitter, 2015). The growing "gay market," combined with the popularity of Pride celebrations and inclusive business models, make

[*] Forbes. The $1 Trillion Marketing Executives Are Ignoring https://www.forbes.com/sites/debtfreeguys/2018/08/14/the-1-trillion-marketing-executives-are-ignoring/?sh=22984efda97f

improvement in tourism and travel inclusion financially enticing to both the tourism sector and potential visitors.

Tourism and Social Changes

Tourism, although accepted as an independent growth factor for most countries, is heavily influenced by existing infrastructure. The quality of a country's institutions is important for tourism growth (Brau et al., 2011). Trade restrictions, such as embargoes and strained political relationships are hindrances to current and potential future tourism outcomes (Sharpley, 2009; Jansen-Verbeke, 1995). As these restrictions are lifted and relationships are thawed, however, tourism is one of the first industries to thrive. In the case of Vietnam, the end of the United States' 20-year trade embargo signaled the possibility of economic growth for Hanoi and other tourist havens (Jansen-Verbeke, 1995).

While a country's politics matter, so do the intended tourists and their destination. For several groups, tourism has been both a calculated radical act and a host of discrimination. A spatial analysis of the Green Books, an annual travel guide for Black travelers in the United States from 1938 to 1966, showed the uneven distribution of safe destinations (Cook et al., 2020). While the presence of acceptable accommodations such as hotels was strongly correlated with economic activity, it was not uniform across all economically prosperous states. The analysis extends to legislative changes as well: anti-discrimination laws were found to be positively correlated with all industries relevant to tourists.

Another group facing discrimination in the tourism industry are those with disabilities. A case study in Seoul found that the tourism industry's lack of preparedness for tourists with disabilities resulted in reduced consumption and reinforced monolithic stereotypes. That is, customers with disabilities are similar and grouped into a single type of consumer and are treated as "social protection target[s]" as opposed to members of society (Lim, 2020).

Tourism also influences movements for empowerment. An examination of gender in relation to tourism, specifically the United Nations Development Agenda and women's empowerment, showed that financial intermediaries promote gender parity in school enrollment, employment, and non-agricultural wage sectors (Nassani et al., 2018). Tourism can also promote backlash: several European countries with strong environmentalist factions have actively campaigned against increased tourism, focusing on the costs to nature and the climate (Kousis, 2000).

Legal and social changes evidently create variable conditions for different groups of travelers. However, this section of the literature fails to address the global comparison of a singular, nearly uniform in scope, policy change.

Effects of LGBTQ Inclusion

Policy inclusion for the LGBTQ community has been a relatively recent development. The first countries to ban discrimination on the basis of sexual orientation or gender identity came in the mid-1990s, with New Zealand, Canada, and South Africa. By granting same-sex couples the same tax benefits and social inclusion as opposite-sex couples, countries that pass LGBTQ rights laws are found to benefit economically.

The most visible policy, same-sex marriage, is one of the largest economic signals to an economy. In the case of Hawai'i, a popular wedding and honeymoon destination, same-sex marriage was estimated to increase tourism and tax revenue by $217 million over a three-year period (La Croix and Gabriel, 2013). Written prior to the Obergefell decision, the effects of acting on marriage laws were shown to be time sensitive. Economic activity for marriages and honeymoons was diverted to other states until Hawai'i recognized marriage equality.

For those countries that don't have marriage laws, anti-discrimination laws and civil partnership protections are used as proxies for inclusion. Using legal data for countries over nearly five decades, Lee Badgett shows that an additional legal "right" for LGBTQ people is correlated with a $2000 increase in GDP per capita (2019). While this is an important breakthrough in LGBTQ economic inclusion, Badgett does not focus on tourism or the impacts of marriage on a singular sector, rather the economy and inclusion in the aggregate.

IV. DATA

Data on LGBTQ tourism is virtually non-existent. Community Marketing Insights (CMI), a survey firm aimed at gauging behavior and preferences in the LGBTQ community, produces a yearly report that covers several tourism questions. However, these reports only highlight the top five domestic and international destinations for LGBTQ couples in a given year, making this report insufficient for a more in-depth analysis. Ideal datasets would include longitudinal information on how specific household's tourism preferences change over time. A proper panel dataset would also highlight the

origin country of tourists. This would aid in examining how marriage equality (or other LGBTQ legislation) influences tourism by region, or by a foreigner's origin.

The World Bank collects data on tourism arrivals, international receipts, and exports. The variables of interest are tourism receipts and tourism arrivals. International tourism receipts are the expenditures by international inbound visitors to a given country. Receipts are measured in millions of current USD. International tourism arrivals measure the number of foreign visitors that stayed in a destination country for more than 24 hours. Missing values were imputed based on the mean of two years prior and two years after the missing year's data. If available, missing data was supplemented with international reports from the World Tourism Organization or country-specific reports.

Penn World Tables is a database created by the University of Groningen to measure country-level changes in productivity, income, and economic wellbeing starting in 1950. The variables relevant to this study are real GDP (expenditure side) and population.

The Corruption Perception Index (CPI) was created by Transparency International in 1995 to measure the level of public sector corruption. Countries are scored annually by a weighted index of surveys and risk indices to calculate the level of safety, with 100 being the least corrupt. The CPI is not a perfect measurement of corruption, as it measures perceptions of corruption as opposed to actual levels of corruption. However, since it is the best standardized measure available for all countries, I implement it as a proxy for the safety of the tourism market. Several countries with marriage equality weren't measured in the CPI until 2000, so they have missing values until then. I run regressions with and without the CPI to verify my results.

Due to several countries missing large amounts of data for one or more of the dependent variables, a separate panel dataset was created for each dependent variable. The receipts panel dataset includes 420 observations for 18 countries and the arrivals dataset includes 504 observations for 24 countries. Both panels span the entire time of interest: 1998-2018. Following from Callaway and Sant'Anna (2020), I restrict my regressions to only those countries that have passed marriage equality. To balance the panel data and ensure that all countries were represented equally in terms of economic and social control variables, any country that did not contain values for every year was removed. Figure 3 shows the summary statistics for each panel.

Figure 3: Summary Statistics

Receipts

	N	Missing	Mean	SD	Min	Median	Max
Receipts	420	0	20491.38	36451.98	409.00	8384.50	237726.0
Real GDP	420	0	1611618.03	3573420.15	26505.30	456279.58	20369440.0
Population	420	0	45.15	73.22	0.43	13.61	327.1
Corruption Perceptions Index	379	41	71.70	19.20	25.00	76.00	100.0

Arrivals

	N	Missing	Mean	SD	Min	Median	Max
Arrivals	504	0	18043130.00	21433678.44	255000.00	8878875.50	89300000.0
Real GDP	504	0	1553685.02	3302294.50	8628.34	419712.56	20369440.0
Population	504	0	41.53	68.42	0.28	10.91	327.1
Corruption Perceptions Index	451	53	70.11	18.52	20.00	75.00	100.0

I utilize the group-time average treatment effect proposed by Callaway and Sant'Anna (2020). They use a "first-treated" variable to group treated units by the time they first received treatment. In the context of this analysis, countries that passed marriage were grouped into "first-treated" groups based on the years they passed marriage equality. To carry out a proper group-time average

treatment effect regression, same-sex marriage data was converted into a single variable. The marriage variable is set to the year that a country passed marriage. Figure 4 shows the groups used in the analysis.

Figure 4: Group-Time Average Treatment Effect Groups

Receipts dataset	Arrivals dataset
2001 Netherlands	**2001** Netherlands
2003 Belgium	**2003** Belgium
2005 Canada	**2005** Canada Spain
2006 South Africa	**2006** South Africa
2008 Norway	**2008** Norway
2010 Argentina Portugal	**2009** Sweden
2012 Denmark	**2010** Iceland Portugal
2013 Brazil France New Zealand Uruguay	**2012** Denmark
2015 Luxembourg Ireland United States	**2013** Brazil France Uruguay
2016 Colombia	**2015** Luxembourg Ireland United States
2017 Australia Austria Finland Germany	**2017** Austria Finland Germany

The Global Index on Legal Recognition of Homosexual Orientation (GILRHO) is a panel dataset created by Kees Waaldijk in collaboration with UCLA. It details, from 1966 to 2011, the shifting legal rights granted to LGBTQ populations internationally for 165 countries. The LGBTQ tolerance portions appear as several variables: first as a set of indicator variables for each legal right granted (marriage, anti-discrimination protections) and then as the "GILRHO Index" from 0-8 where 8 indicates the countries with the most LGBTQ rights.

The Organization for Economic Cooperation and Development (OECD) collects economic variables for 44 countries every year. They partner with governments and international organization to produce reports on economic indicators, business confidence, and social issues. As indicated by Assaf and Josiassen (2011), travel infrastructure is crucial in determining a country's tourism performance: therefore, I utilize transportation data as a control for country's tourism infrastructure. I add in the total number of air, road, and railway passengers a country moves internally within a given year.

The GILRHO is used in robustness checks as a proxy for marriage. By including the indicator variables (discrimination laws, decriminalization of same-sex relationships, and any recognition of same-sex partnerships), changes in tourism can be measured against a country's overall legal inclusion of the LGBTQ community, not just marriage equality. In addition, more countries can be included in the primary regressions, particularly those that have anti-discrimination protections but not marriage equality.

V. METHODOLOGY

The primary estimation method utilized in this paper is the event study. A standard event study measures the effect of a single event on a specified value or economic outcome. The event study methodology was first formulated to examine the influence of earnings announcements on stock holdings (Dolley, 1933; Fama et al., 1969). It has since expanded to broad usage among various disciplines within economics, including environmental economics (Marcus and Sant'Anna, 2021) and industrial economics (Danaher et al., 2014).

Event studies have also been used frequently in development economics, specifically within the context of tourism. Mazzocchi and Montini (2001) used an OLS event study model and found that an earthquake eruption in Italy halted the number of foreign tourist arrivals. Dick and Wang (2010) found that stock indices for countries selected to host the Olympic Games increase by about 2% after the hosting announcements were made. Chang, Hsu, and McAleer (2018) run OLS and Generalized Autoregressive Conditional Heteroskedasticity models to examine the impact of political events and disasters on Chinese tourism in Taiwan.

The methodology used for this analysis follows from Callaway and Sant'Anna (2020). They consider a modified difference-in-difference model where treatment time is staggered among units. The Callaway and Sant'Anna model bins treatment units into "groups" depending on their time of first treatment, and then calculates an average treatment effect for the time periods following treatment.

I carry out two regressions per each dependent variable of interest. First, a group-time average treatment effect to examine how marriage's implementation differs by clusters of countries; and an event study regression that looks at the effect of marriage with one-year (or quarter) intervals before and after marriage's implementation.

In addition, the initial "control" countries – the countries that have not passed gay marriage laws – displayed extreme heterogeneity. Following from Callaway and Sant'Anna (2020), these values were dropped. I use the doubly robust estimator for group-time average treatment effect, due to its inferential power. A doubly robust estimation specifies that one of two main working models (propensity score or outcome regression) is specified correctly. I verify that my outcome regression model is correctly specified due to the distribution of the residuals and the parallel trends assumption.

Group-Time Average Treatment Effect

I first verify my identifying assumptions with those from Callaway and Sant'Anna (2020) in order to properly specify my model.

Assumptions

I. Continuity of Treatment

Assumption 1 states that once a unit i is treated, it will remain treated. That is, once a country passes marriage equality, the legal standing of same-sex marriage is not changed, reversed, or repealed. This has not occurred in any country that has passed marriage equality, so Assumption I is satisfied.

II. Identically and Independently Distributed Outcomes Y_i

Assumption 2 requires balanced panel data. Per Callaway and Sant'Anna, this allows us to view all potential outcomes as random.

III. Limited Treatment

Define δ as the anticipation effect of treatment. If a unit anticipates receiving treatment *n* periods beforehand, $\delta = n$. I assume that countries do not anticipate same-sex marriage long enough beforehand (1 year or longer) to warrant an anticipation effect. Therefore I set $\delta = 0$.

IV. Conditional Parallel Trends Based on "Not-Yet Treated" Units

Assumption 3 states that conditional parallel trends must hold. Callaway and Sant'Anna specify two assumptions based on the control groups used for parallel trends: a "never treated" group that never receives treatment and a "not yet treated" group that uses units that will receive treatment in the future as the control groups.

Following from the recommendations of Callaway and Sant'Anna, I utilize the "not yet treated" group for parallel trends. However, due to issues that may arise from only using the not-yet treated groups as a control, I perform the same regressions with the original sample of 35 countries (both marriage and non-marriage countries) as a robustness check. Parallel trends are verified visually using the group-time average treatment effect graphs across groups of countries. Graphs can be found in the Appendix.

Following the difference-in-difference model specified by Callaway and Sant'Anna, I define G as the "group" that a country belongs to. That is, if a country passes marriage in year g, they will belong to group G_g. After verifying the three above assumptions, the causal parameter for the group-time average treatment effect is

$$ATT(g,t) = \mathbb{E}\left[Y_{i,t}(g) - Y_{i,t}(0) \mid G_g = 1\right]$$

where $Y_{i,t}(g)$ is unit i's outcome at time t for the group first treated in period g, and $Y_{i,t}(0)$ is the outcome at time t for the specified untreated group.

In an effort to diversify my results, I perform regressions with and without covariates, such that the group-time average treatment effect expands to

$$ATT^{ny}_{unc}(g,t:\delta) = \mathbb{E}\left[Y_t - Y_{g-\delta-1} \mid G_g = 1\right] - \mathbb{E}\left[Y_t - Y_{g-\delta-1} \mid D_{t+\delta} = 0\right]$$

where δ is the anticipation effect resembling the typical two-period, two-case difference-in-difference model for ATT. The average effect of a treatment, then, is difference between the outcomes experienced by group *g* and differencing by the outcomes of a comparison group.

Event Study

Event study regressions provide an aggregation method for ATT models. Defining θ_{es} as average effect of participating in treatment *e* time periods before and after the treatment was adopted, we have

$$\theta_{es}(e) = \sum_{g \in G} 1\{g + e \leq T\} P(G = g \mid G + e \leq T) ATT(g, g + e)$$

The treatment begins at $e = 0$, such that θ_{es} defines the treatment effect for marriage at yearly time intervals aggregated across countries.

The economic and social controls for regressions are as follows:

Real GDP: Although imperfect, real GDP is a strong standardized measure for a country's economic and social health. Real GDP was selected over other capital variables - such as capital stock – due to its public availability for most countries, and for its evident connection to tourism literature. As the average income of a citizen rises in response to perceived economic growth, the tourism industry may also see a similar rise. Countries with higher real GDP's are expected to have higher values of receipts and arrivals.

Corruption Perceptions Index (CPI): One of the primary indicators of an economically developed tourism sector is the safety of the region (Assaf et al, 2011). I use the Corruption Perception Index as a proxy for trust in government and general social division. Countries with a higher index score (a "safer" country) are expected to have higher values of receipts and arrivals. I run a regression with no covariates, one with just *ln(gdp)*, and a regression with both *ln(gdp)* and the CPI.

Fixed Effects

One common misspecification of group-time average treatment effect models is the case where a "group" contains only one unit. In the case of the quarterly regressions, where the four countries of interest (Spain, Malta, Brazil, and the United States) all passed marriage in different quarters, an event study type of regression would yield biased results.

As such, I implement a two-way fixed effects regression. Fixed effects regressions absorb two types of variation: effects that vary across time within unit (country-fixed effects), and effects that vary across country within a time frame (time-fixed effects). The benefit of fixed effects regressions is that they control for unobserved differences, such as other policy changes and country-specific economic changes. The fixed effects regressions are as follows:

$$\boldsymbol{ln(receipts)_{it} = ln(gdp)_{it} + marriage_{it} + \theta_t + \gamma_i + \varepsilon_{it}}$$

$$\boldsymbol{ln(arrivals)_{it} = ln(gdp)_{it} + marriage_{it} + \theta_t + \gamma_i + \varepsilon_{it}}$$

where $\boldsymbol{ln(gdp)_{it}}$ is the logarithm of real GDP for country $\boldsymbol{i}$ in quarter $\boldsymbol{t}$; $\boldsymbol{marriage_{it}}$ is an indicator variable with a value of 1 if country $\boldsymbol{i}$ guarantees same-sex marriage in quarter $\boldsymbol{t}$, and 0 otherwise; $\boldsymbol{\theta_t}$ absorbs time-fixed effects; $\boldsymbol{\gamma_i}$ absorbs country-fixed effects; and $\boldsymbol{\varepsilon_{it}}$ measures the errors.

Initial regression plots showed that the residuals are uncorrelated with fitted model. The United States and Greece are identified as outliers, but the relationship between the standardized residuals and Cook's distance shows that neither country is heavily influencing regression results. As a precaution, I run regressions with and without these countries. The error term is shown to display heteroskedasticity. Therefore, I run regressions with robust standard errors.

I also add in an interaction term between marriage and country identifiers. This displays the effect that marriage had for a certain country, even if the overall influence of marriage equality was insignificant. The interaction regressions are as follows:

$$\boldsymbol{ln(receipts)_{it} = ln(gdp)_{it} + marriage_{it} + country * marriage + \theta_t + \gamma_i + \varepsilon_{it}}$$

$$\boldsymbol{ln(arrivals)_{it} = ln(gdp)_{it} + marriage_{it} + country * marriage + \theta_t + \gamma_i + \varepsilon_{it}}$$

where $\boldsymbol{country * marriage}$ measures the significance of country $\boldsymbol{i}$ passing marriage equality on their overall arrivals and receipts.

VI. RESULTS

Annual*

Receipts

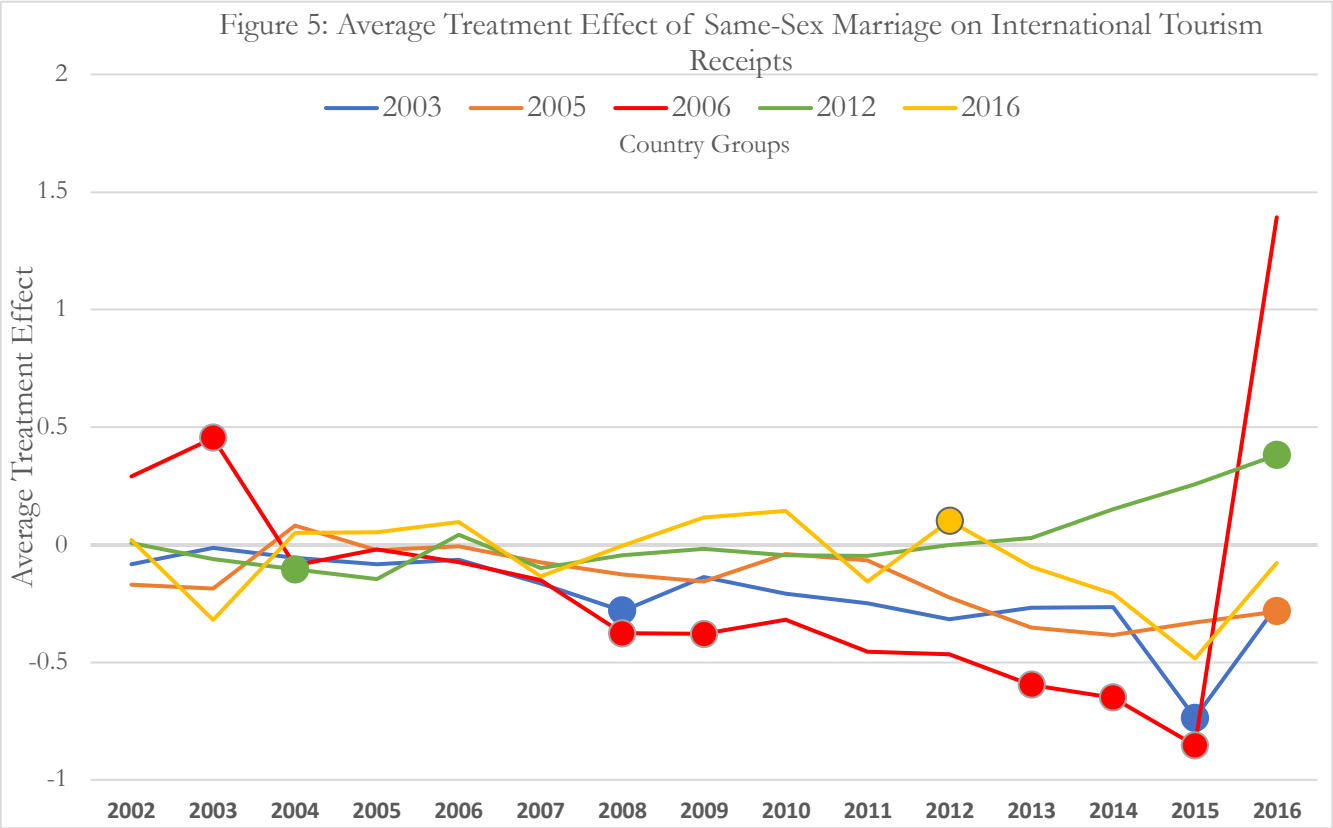
Table 1 shows the doubly robust regression results with no covariates. Nearly all countries' marriage laws negatively impacted tourism receipts. For the 2001 group – comprised of only the Netherlands – marriage's passage resulted in upwards of 80% reduction in tourism with no covariates added. The second country to pass marriage, Belgium in 2003, had a significant reduction in receipts of between 30% and 40% for between 2005 and 2015. Similarly, countries that passed marriage in 2005 and 2006 saw reductions in receipts of 20%. The only significant positive result from marriage on receipts without economic controls is with Denmark in 2012: four years after passing marriage equality, Denmark saw an isolated spike in international tourism receipts of 20%.

* Regression tables for the annual models can be found in the Appendix. The group-time average treatment model is reported in terms of country group (countries that passed marriage in 2003, in 2005, and so on).

Table 2 shows the output for country-year groups with the addition of a GDP covariate. The effect for the Netherlands is reduced in magnitude, but not in significance: the Netherlands saw an international receipt reduction of 50% to 70% in the years following their marriage equality decision. The significance levels for Belgium are reduced, with the country still seeing a significant 29% drop in receipts 5 years after passing marriage. The 2005 group – Spain and Canada – saw similar reductions in receipts with a trough of 47% in 2014. South Africa, the only country to make up the 2006 bin, saw significant reductions in receipts starting two years after marriage's passing.

The addition of the Corruption Perceptions Index in Table 3 further reduces the significance of these negative trends. South Africa still maintained reductions in receipts, especially in the first two years following marriage equality with decreases of 37%. Denmark's receipts became significantly positive four years after marriage equality, with a 38% increase in tourism receipts.

The results for Table 3 are shown graphically in Figure 5. Only those countries that had significant results are reported for ease of visualization. The years where the group-time average effect was significant are shown as full circles.



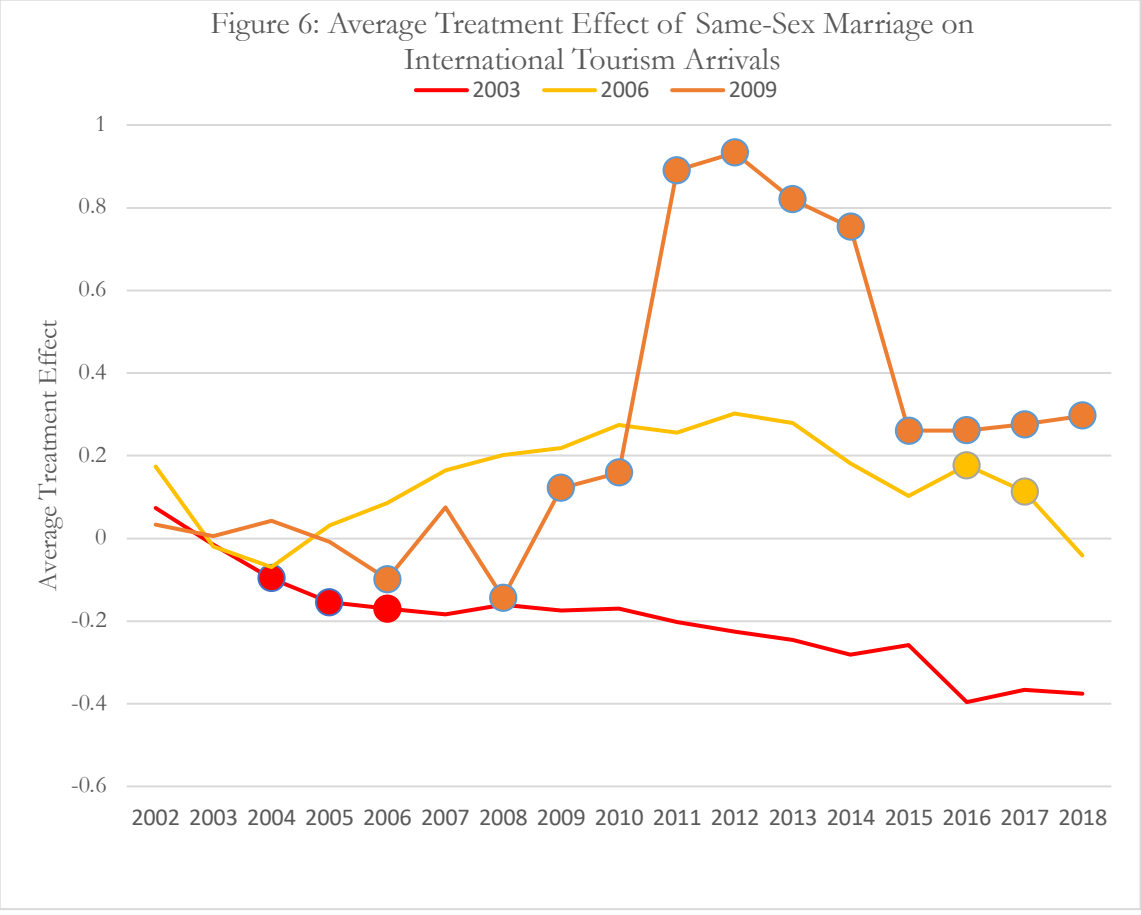
The two event studies (Tables 4 and 5) are only significant starting at 9 years after marriage equality. Both the no-covariate and GDP + safety index models show reductions in receipts of around 45% a decade after marriage's passage. However, since the number of countries with marriage equality laws longer than 9 years is low, it is possible other factors are skewing this data.

Arrivals

Table 6 shows the regression of the logarithm of international arrivals on no covariates in the group-time average treatment effect model. Sweden, the country that composes the 2009 bin, saw significant spikes in arrivals in the year of marriage's passing as well as up to six years after. In 2009, arrivals increased by 11%; in 2012, they increased by 89%.

In Table 7, the addition of GDP maintains Sweden's significance in international arrivals, with similar spikes in the year of marriage equality and several years after. South Africa becomes significant, with international arrivals jumping 30% four years after marriage equality and staying significant and positive for nearly five years after.

Table 8 includes the Corruption Perceptions Index in the arrivals regression. Arrivals to Belgium become significantly negative starting the year after marriage equality with a 9% reduction. Sweden remains significant for every year after it passes same-sex marriage, indicating a high level of significance and potential causality. Countries that pass marriage after 2009 have no significant arrivals effects. The results for Table 8 are shown graphically in Figure 6.



Similar to the receipts results, event studies on international arrivals (Table 9, 10) showed no significance. Regressions with and without economic covariates showed no univariate change in arrivals after marriage laws. This may indicate that all country's tourism industries responded differently to the law.

Quarter

Tables 11 through 14 in the Appendix show the results for quarterly regressions using the group-time average fixed effects model. Since these results may be biased due to low sample sizes per group bin, I only report the results of the fixed effects regressions in this analysis.

Receipts

Figure 7 shows the results of a fixed effects regression on tourism receipts. The baseline fixed effects model shows gains to the years with marriage equality that are significant at the 1% level. An additional year with marriage equality, on average, results in a 15.3% increase in tourism receipts for a given country. This contrasts the group-time average treatment effect model, where nearly all effects of marriage were negative.

Column 2 shows the fixed effects model with an interaction term among marriage countries and the marriage indicator variable. The coefficient for Brazil is omitted to prevent multicollinearity. None of the interaction terms are significant, and the fixed effects terms remain highly significant.

Column 3 shows the fixed effects interaction model with the removal of the United States. Similar to Column 2, none of the individual, country-level interaction terms are significant.

Every country's fixed effects term, as well as the first, second, and third quarters are significant for each fixed effects regression.

Figure 7: Fixed Effects: Tourism receipts and marriage equality

	Dependent variable: log(receipts)		
	Fixed Effects	With Interaction Terms	No United States
	(1)	(2)	(3)
log(gdp)	1.001*** (0.054)	1.010*** (0.054)	0.982*** (0.053)
Country-Fixed Effects (omitted: Brazil)			
China	3.646*** (0.090)	3.626*** (0.095)	3.592*** (0.093)
Cyprus	3.717*** (0.245)	3.727*** (0.248)	3.608*** (0.244)
Greece	3.070*** (0.143)	3.058*** (0.146)	3.047*** (0.290)
Malta	4.125*** (0.290)	4.158*** (0.296)	4.009*** (0.290)
Mexico	1.637*** (0.064)	1.610*** (0.069)	1.596*** (0.068)
South Korea	1.287*** (0.063)	1.259*** (0.068)	1.249*** (0.067)
Spain	2.804*** (0.065)	2.698*** (0.116)	2.687*** (0.113)
United Kingdom	1.478*** (0.062)	1.443*** (0.067)	1.453*** (0.066)
United States	1.504*** (0.126)	1.428*** (0.132)	
Quarter-Fixed Effects (omitted: 1st)			
2	0.219*** (0.038)	0.219*** (0.038)	0.225*** (0.040)
3	0.391*** (0.038)	0.390*** (0.038)	0.408*** (0.040)
4	0.044 (0.038)	0.043 (0.038)	0.066* (0.040)
marriage	0.153*** (0.049)	0.076 (0.080)	0.078 (0.079)
Country-Specific Interaction Terms (omitted: Brazil)			
Malta * marriage		−0.033 (0.141)	- 0.025 (0.138)
Spain * marriage		0.168 (0.136)	0.167 (0.133)
United States * marriage		0.163 (0.119)	
Constant	−6.266*** (0.709)	−6.357*** (0.714)	−6.001*** (0.700)
Observations	638	638	538
R^2	0.954	0.954	0.946
Adjusted R^2	0.953	0.953	0.944
Residual Std. Error	0.328 (df = 623)	0.328 (df = 620)	0.315 (df = 523)
Note:			*p<0.1; **p<0.05; ***p<0.01

Arrivals

Figure 8 shows the regression of the logarithm of international arrivals on no covariates in the fixed effects model. Column 1, the baseline model, shows marriage resulting in a 20% gain to arrivals. The marriage variable is significant at the 1% level.

Column 2 shows the interaction model. In contrast to the receipts regressions, the interaction term between marriage and Malta is significant at the 5% level, with an increase in international arrivals of 32.6%. This significance carries over to the non-outlier model, where Malta experiences a 33.4% increase in tourism arrivals for the years that they implemented a marriage equality law.

Figure 8: Fixed Effects: Tourism arrivals and marriage equality

	Dependent variable: log(arrivals)		
	Fixed Effects	With Interaction Terms	No United States
	(1)	(2)	(3)
log(gdp)	0.571*** (0.061)	0.552*** (0.062)	0.526*** (0.065)
Country-Fixed Effects (omitted: Brazil)			
China	3.233*** (0.109)	3.155*** (0.113)	3.115*** (0.119)
Cyprus	1.863*** (0.277)	1.728*** (0.280)	1.598*** (0.296)
Greece	2.297*** (0.141)	2.207*** (0.144)	2.150*** (0.152)
Malta	1.825*** (0.329)	1.646*** (0.334)	1.507*** (0.354)
Mexico	2.032*** (0.067)	1.972*** (0.072)	1.957*** (0.077)
South Korea	0.957*** (0.066)	0.898*** (0.071)	0.885*** (0.075)
Spain	2.589*** (0.069)	2.581*** (0.118)	2.568*** (0.125)
United Kingdom	1.753*** (0.065)	1.709*** (0.070)	1.717*** (0.074)
United States	1.329*** (0.141)	1.309*** (0.146)	
Quarter-Fixed Effects (omitted: 1st)			
2	0.299*** (0.037)	0.300*** (0.037)	0.333*** (0.042)
3	0.450*** (0.038)	0.451*** (0.038)	0.487*** (0.042)
4	0.135*** (0.037)	0.135*** (0.037)	0.152*** (0.042)
marriage	0.207*** (0.050)	0.083 (0.084)	0.087 (0.089)
Country-Specific Interaction Terms (omitted: Brazil)			
Malta * marriage		0.326** (0.144)	0.334** (0.153)
Spain * marriage		0.065 (0.139)	0.063 (0.147)
United States * marriage		0.158 (0.122)	
Constant	6.223*** (0.805)	6.526*** (0.809)	6.845*** (0.858)
Observations	656	656	588
R^2	0.942	0.943	0.934
Adjusted R^2	0.941	0.941	0.932
Residual Std. Error	0.330 (df = 641)	0.329 (df = 638)	0.347 (df = 572)
Note:			*p<0.1; **p<0.05; ***p<0.01

VII. ROBUSTNESS CHECKS

While the results and models above show promising signs for some tourism responses to marriage equality – specifically, the improvement in international arrivals directly after marriage's passing – there are also various confounding events that could be leading to these increases. Countries that passed marriage equality may have already been welcoming to the LGBTQ community, and marriage equality was a natural evolution of progressive views. Tourists may have also been responding to changes in the tourism infrastructure, such as the quality of inland transportation, to gauge their interest within a country.

To ensure that the results for receipts and arrivals are accurate, I implement three robustness checks. First, I utilize the GILRHO index in a set of regressions to test the relationship between a country's legal tolerance of LGBTQ communities and tourism. Second, I add a transportation variable to my regressions to control for the quality of a country's tourism infrastructure. Finally, I run the group-time average treatment effect regressions with never-treated countries as controls, instead of using not-yet treated countries.

GILRHO

The GILRHO Index measures the legal tolerance of the LGBTQ community. It aggregates the duration of pro-LGBTQ laws – anti-discrimination laws, relationship decriminalization laws, and partnership recognition laws – to produce an index for each country. The dataset also includes indicator variables for whether or not a country has passed each type of law in a given year.

The publicly available GILRHO dataset tracks countries until 2011. As many countries have passed same-sex marriage after then, I change my model to a fixed-effects regression similar to the quarterly

model. This prevents bias due to "group" bins being comprised of single countries, and instead harnesses interaction terms to determine the effect of specific laws on tourism. I run four regressions per dependent variable: one with the GILRHO index as a measure of overall tolerance, and three regressions for each type of law. None of the regressions include the marriage variable used previously, instead relying on the GILRHO index as a whole and its component parts.

The regressions with the GILRHO index on receipts showed significant results under singular fixed effects models but became insignificant when both country and year fixed effects were added. For arrivals, the GILRHO was highly significant but negative when both fixed effects were added. A one-point increase in the GILRHO (that is, an additional "right" granted to the LGBTQ community) reduced arrivals 7.3% on average. The GILRHO regressions can be found on Tables 17 and 18 in the Appendix.

Fixed effects regressions for each law showed highly significant results for specific countries. The passage of decriminalization laws resulted in large increases to tourism receipts, after accounting for GDP, country fixed effects, and year fixed effects. The increases were concentrated in regions that have not passed marriage equality, such as Bulgaria and Kazakhstan, both of which saw increases in receipts of 90%. Anti-discrimination laws had the reverse effect: sizeable reductions in receipts, with significant effects for European and South American countries. Partnership recognition results were mixed – some countries, such as Brazil, saw gains of 50% due to partnership laws, whereas Finland and Austria saw reductions of 35% to 40%.

Arrivals regressions reflect a different pattern. Decriminalization laws, while positive and significant at the 1% level overall, had negative results for interaction term coefficients. The countries that experienced arrival declines were concentrated in Eastern Europe, with Bulgaria and Cyprus seeing

declines of 50% and 61% respectively. Anti-discrimination laws showed negative results for interaction terms, although they showed significant positive increases overall of 117%. Partnership laws were highly significant and positive for countries in North and South America, with an increase in arrivals of 32%. Portugal and Luxembourg, however, saw declines in arrivals of 40% and 27.8% respectively. The individual law regressions can be found in Tables 17 through 19 in the Appendix.

Transportation

The most standardized transportation variable available was the number of passengers a country moves within a given year. I run a group-time model for each dependent variable.

The group-time average treatment model showed all years prior to 2013 as insignificant in terms of receipts. This intuitively makes sense, as those bins (the countries that passed marriage between 2001 and 2012) only had one or two countries each. Countries that passed marriage in 2013 – Brazil, France, New Zealand, and Uruguay – saw an average increase in tourism receipts of 18% in the year after passing marriage equality. Tourism arrivals were only significant for the 2008 bin – Norway – which saw an 8% boost in arrivals the year after passing marriage and a 14.6% boost two years after. All other years were insignificant.

Never-Treated Countries

The initial group-time average treatment model uses not-yet treated countries as the control variables. Per Callaway and Sant'Anna, though this method has additional explanatory power, using not-yet-treated groups may result in smaller sample sizes and biased results. As a robustness check, I add in countries that have similar GDP's and tourism market estimates to those that have passed marriage equality, and rerun the group-time regressions.

The never-treated regressions verify parts of the results from the not-yet treated regressions. For receipts, South Africa saw a 20% decline in the years following their passage of marriage equality in 2006. Countries in the 2013 bin – Brazil, France, New Zealand, and Uruguay – saw declines ranging from 45% two years after marriage's passage to 75% five years after. The arrivals data showed significant positive results for South Africa. Starting 4 years after marriage equality's passage, South Africa saw a jump in arrivals of 25%, which was sustained for 3 years.

VIII. DISCUSSION

The results on tourism receipts do not align with initial expectations. Both initial regressions and the robustness checks showed strong negative correlations between marriage equality's time of passage and receipts by foreigners. Although there were outliers – especially using the GILRHO index and transportation data to control for tourism markets – the consistency of negative receipts is surprising.

There are many possible explanations as to why this negative relationship is appearing. First, it could be that marriage equality isn't as important to LGBTQ communities as discrimination or decriminalization laws. This would indicate that marriage has an insignificant effect on receipts. Second, the movement and behavior of non-LGBTQ tourists is vastly overpowering LGBTQ tourists. Since non-LGBTQ tourists wouldn't be as concerned with the existence of specific sexual orientation or gender identity discrimination laws, tourism would be influenced by external factors such as consumer preferences. Finally, comprehensive data on LGBTQ tourism doesn't exist. Therefore, it is difficult to explain divergences in tourism concentrated within the LGBTQ community when there is no data to attribute to that community.

Arrivals data is more promising. The positive relationships displayed in both the group-time and fixed-effects models make intuitive sense: the more welcoming a country is to foreigners, the greater the number of arrivals. Malta, which saw a 33.4% increase in arrivals, has consistently been ranked #1 tourism destination for LGBTQ people by the International Lesbian, Gay, Bisexual, Trans and Intersex Association.[*]

Receipts and arrivals are significant for countries that passed marriage equality after 2005. This seems to indicate that the Diminishing Hypothesis does not hold – as more countries passed marriage equality, the greater the effect was to arrivals and receipts. The Signal Hypothesis also does not hold, at least for tourism receipts. The Netherlands, Belgium, and Spain – the first three countries to pass marriage equality – do not yield significant results for tourism receipts post-marriage. This seems to indicate that marriage did not impact tourism spending by foreigners.

IX. CONCLUSION

The existing literature on LGBTQ inclusion, tourism, and economic development lacks a cross-sectional analysis of same-sex marriage on tourism. As same-sex marriage is a recent policy progression, it is natural that it may have effects on tourism. A sharp increase in marriage availability could spark more opportunities for travel abroad.

The actual effect of same-sex marriage on tourism is mixed. Tourism receipts are shown to be negatively impacted by marriage decisions, with average reductions of around 30% in the years

[*] International Lesbian, Gay, Bisexual, Trans and Intersex Association "Rainbow Europe" Travel Report 2020, https://www.ilga-europe.org/rainboweurope/2020

following same-sex marriage's passing. International arrivals increased in the years after several countries passed their same-sex marriage laws, with arrivals rising by 25% - 30%. Receipt reductions could be caused by a lack of interest by LGBTQ tourists to visit certain countries, a reduction in non-LGBTQ tourism in protest of marriage decisions, or a combination of both.

Though the mixed results do not align with expectations, this analysis is limited in its causal and inferential power. The data used to measure tourism is not specific enough to gauge the interests and actions of the LGBTQ community. An ideal analysis would utilize tourism data for the LGBTQ community to determine how policy responses affect tourism destination choices. Future analyses may include data on country-specific tourism markets, such as outreach programs designed to market to LGBTQ tourists.

While the findings in this analysis are not necessarily causal, policymakers should strongly consider passing marriage equality laws. Tourism markets may not be affected in the anticipated ways, but the lives of LGBTQ folks are forever changed when they are granted the opportunity to succeed and prosper just as their non-LGBTQ peers have for decades.

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Table 1: Log(receipts) with no covariates, marriage-only countries

Group	Year	ATT(g,t)		Std. Error	Group	Year	ATT(g,t)		Std. Error
2001	1999	-0.0286		0.0300	2005	2013	-0.3751	*	0.1137
2001	2000	-0.1112	*	0.0212	2005	2014	-0.4088	*	0.1107
2001	2001	-0.1224	*	0.0266	2005	2015	-0.4167		0.2263
2001	2002	-0.0907		0.0552	2005	2016	-0.1660		0.1732
2001	2003	-0.0299		0.0693	2006	1999	-0.0779		0.0290
2001	2004	-0.0821		0.0643	2006	2000	-0.0292		0.0215
2001	2005	-0.8235	*	0.0700	2006	2001	-0.0251		0.0232
2001	2006	-0.8073	*	0.0677	2006	2002	0.1118		0.0525
2001	2007	-0.7698	*	0.0672	2006	2003	0.4522	*	0.0267
2001	2008	-0.7400	*	0.0687	2006	2004	-0.0507	*	0.0170
2001	2009	-0.7181	*	0.0743	2006	2005	0.0307		0.0227
2001	2010	-0.8288	*	0.0817	2006	2006	0.0279		0.0330
2001	2011	-0.8715	*	0.0890	2006	2007	-0.0289		0.0395
2001	2012	-0.5935	*	0.0948	2006	2008	-0.2302	*	0.0455
2001	2013	-0.5064	*	0.0970	2006	2009	-0.1986	*	0.0645
2001	2014	-0.5361	*	0.1016	2006	2010	-0.0653		0.0888
2001	2015	-0.5355	*	0.1722	2006	2011	-0.1717		0.1063
2001	2016	-0.2374		0.1770	2006	2012	-0.1665		0.1130
2003	1999	0.2800	*	0.0286	2006	2013	-0.2464		0.1004
2003	2000	0.0117		0.0217	2006	2014	-0.2869	*	0.0975
2003	2001	0.2448	*	0.0187	2006	2015	-0.3561		0.2023
2003	2002	-0.1154		0.0534	2006	2016	-0.2558		0.1572
2003	2003	-0.1273		0.0700	2008	1999	0.0074		0.0303
2003	2004	-0.1700		0.0623	2008	2000	-0.0992	*	0.0216
2003	2005	-0.2074	*	0.0660	2008	2001	-0.0596		0.0237
2003	2006	-0.1782	*	0.0614	2008	2002	0.0639		0.0529
2003	2007	-0.2775	*	0.0622	2008	2003	-0.0184		0.0408
2003	2008	-0.3961	*	0.0617	2008	2004	-0.0077		0.0168
2003	2009	-0.2527	*	0.0585	2008	2005	0.0869	*	0.0230
2003	2010	-0.3225	*	0.0701	2008	2006	-0.0610		0.0239
2003	2011	-0.3595	*	0.0779	2008	2007	0.0580	*	0.0157
2003	2012	-0.4313	*	0.0798	2008	2008	0.0285		0.0272
2003	2013	-0.3771	*	0.0775	2008	2009	-0.0262		0.0562
2003	2014	-0.3711	*	0.0803	2008	2010	-0.0131		0.0742
2003	2015	-0.8024	*	0.1357	2008	2011	0.0570		0.0982
2003	2016	-0.7618	*	0.1619	2008	2012	0.0635		0.1040
2005	1999	0.0148		0.0301	2008	2013	0.1013		0.0616
2005	2000	0.0773	*	0.0213	2008	2014	0.1040		0.0576
2005	2001	-0.0280		0.0237	2008	2015	0.0320		0.1272
2005	2002	-0.0163		0.0519	2008	2016	0.0926		0.1333
2005	2003	-0.2169	*	0.0391	2010	1999	-0.1393	*	0.0307
2005	2004	0.0409		0.0173	2010	2000	-0.0063		0.0228
2005	2005	-0.0122		0.0342	2010	2001	-0.0601		0.0749
2005	2006	-0.0235		0.0419	2010	2002	-0.2549		0.2041
2005	2007	-0.1202		0.0486	2010	2003	0.0637		0.0669
2005	2008	-0.2012	*	0.0594	2010	2004	-0.0328		0.0173
2005	2009	-0.2692	*	0.0816	2010	2005	-0.0006		0.0662
2005	2010	-0.1435		0.1067	2010	2006	0.1225	*	0.0287
2005	2011	-0.2068		0.1248	2010	2007	0.0775	*	0.0210
2005	2012	-0.3948	*	0.1334	2010	2008	-0.0379		0.0231

Table 1: Log(receipts) with no covariates, marriage-only countries

Group	Year	ATT(g,t)		Std. Error	Group	Year	ATT(g,t)		Std. Error
2010	2009	-0.0723		0.0330	2013	2013	-0.0734		0.0410
2010	2010	0.0158		0.0701	2013	2014	-0.0708		0.0816
2010	2011	-0.0204		0.0710	2013	2015	0.0213		0.1487
2010	2012	-0.0808		0.0784	2013	2016	0.0914		0.1245
2010	2013	-0.1063		0.0800	2015	1999	-0.0407		0.0329
2010	2014	-0.0627		0.0803	2015	2000	0.0333		0.0315
2010	2015	-0.0324		0.1399	2015	2001	0.0067		0.0586
2010	2016	0.0934		0.1280	2015	2002	0.1216		0.1132
2012	1999	0.0663		0.0293	2015	2003	-0.0444		0.0771
2012	2000	-0.0154		0.0218	2015	2004	-0.0075		0.0319
2012	2001	0.0925	*	0.0236	2015	2005	-0.0509		0.0379
2012	2002	0.1680	*	0.0518	2015	2006	-0.0128		0.0403
2012	2003	-0.0727		0.0389	2015	2007	-0.0235		0.0272
2012	2004	-0.1103	*	0.0156	2015	2008	0.0008		0.0242
2012	2005	-0.1780	*	0.0202	2015	2009	-0.0273		0.0419
2012	2006	-0.0197		0.0235	2015	2010	-0.0123		0.0600
2012	2007	-0.0952	*	0.0143	2015	2011	-0.0041		0.0339
2012	2008	-0.0526	*	0.0174	2015	2012	0.0193		0.0323
2012	2009	-0.0266		0.0325	2015	2013	0.0246		0.0279
2012	2010	-0.0391		0.0220	2015	2014	0.0403		0.0306
2012	2011	-0.0373		0.0263	2015	2015	0.1485		0.0921
2012	2012	-0.0810	*	0.0287	2015	2016	0.1820		0.1202
2012	2013	-0.0635		0.0316	2016	1999	-0.0871		0.0290
2012	2014	0.0546		0.0304	2016	2000	0.0731	*	0.0211
2012	2015	0.0434		0.0902	2016	2001	0.1296	.	0.0231
2012	2016	0.2006	*	0.0686	2016	2002	-0.2131	*	0.0514
2013	1999	0.1435		0.0873	2016	2003	-0.2139		0.0388
2013	2000	0.0686		0.0749	2016	2004	0.0845	*	0.0162
2013	2001	-0.0702		0.0461	2016	2005	0.1133	.	0.0225
2013	2002	-0.0273		0.1945	2016	2006	0.1683	*	0.0207
2013	2003	0.0020		0.0670	2016	2007	-0.0791		0.0151
2013	2004	0.0650		0.0440	2016	2008	0.0305		0.0181
2013	2005	0.0621		0.0614	2016	2009	0.1340	.	0.0318
2013	2006	-0.0561		0.0364	2016	2010	0.0749	*	0.0205
2013	2007	0.0260		0.0327	2016	2011	-0.0484		0.0262
2013	2008	0.0117		0.0559	2016	2012	0.1430	*	0.0129
2013	2009	0.0583		0.0879	2016	2013	0.0313		0.0197
2013	2010	-0.0191		0.0457	2016	2014	-0.0177		0.0232
2013	2011	0.0739		0.0612	2016	2015	0.1828		0.0686
2013	2012	-0.0101		0.0262	2016	2016	0.2141		0.0803

Table 1: Log(receipts) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2001	1999	-0.0367		0.0335	2005	2013	-0.4348		0.0771
2001	2000	-0.1122	*	0.0200	2005	2014	-0.4710	*	0.0761
2001	2001	-0.0001		0.0178	2005	2015	-0.3601		0.0882
2001	2002	0.0347		0.0508	2005	2016	-0.2341		0.1004
2001	2003	0.1084		0.0628	2006	1999	-0.0786		0.0289
2001	2004	0.0613		0.0637	2006	2000	-0.0291		0.0206
2001	2005	-0.6800	*	0.0707	2006	2001	-0.0241		0.0218
2001	2006	-0.6657	*	0.0700	2006	2002	0.1121		0.0489
2001	2007	-0.6198	*	0.0692	2006	2003	0.4550		0.0262
2001	2008	-0.5852	*	0.0709	2006	2004	-0.0489	*	0.0132
2001	2009	-0.5577	*	0.0686	2006	2005	0.0308		0.0224
2001	2010	-0.6712	*	0.0708	2006	2006	-0.0043		0.0216
2001	2011	-0.7040	*	0.0685	2006	2007	-0.0579		0.0264
2001	2012	-0.4285	*	0.0712	2006	2008	-0.2637	*	0.0315
2001	2013	-0.3715	*	0.0709	2006	2009	-0.2294		0.0442
2001	2014	-0.4020	*	0.0713	2006	2010	-0.0985		0.0628
2001	2015	-0.4428		0.1465	2006	2011	-0.2011		0.0745
2001	2016	-0.1890		0.1485	2006	2012	-0.1852		0.0873
2003	1999	0.2834	*	0.0244	2006	2013	-0.2917		0.0821
2003	2000	0.0108		0.0214	2006	2014	-0.3322	*	0.0759
2003	2001	0.2434	*	0.0189	2006	2015	-0.3892		0.1718
2003	2002	-0.1155		0.0552	2006	2016	-0.3017		0.1120
2003	2003	-0.0131		0.0346	2008	1999	0.0287		0.0258
2003	2004	-0.0569		0.0313	2008	2000	-0.1134	*	0.0319
2003	2005	-0.0910		0.0464	2008	2001	-0.0651		0.0289
2003	2006	-0.0676		0.0468	2008	2002	0.0667		0.0940
2003	2007	-0.1670		0.0526	2008	2003	-0.0220		0.0341
2003	2008	-0.2913	*	0.0560	2008	2004	-0.0234		0.0189
2003	2009	-0.1486		0.0649	2008	2005	0.0892		0.0262
2003	2010	-0.1850		0.0784	2008	2006	-0.0538		0.0236
2003	2011	-0.2236		0.0933	2008	2007	0.0510		0.0163
2003	2012	-0.3115		0.0952	2008	2008	-0.0364		0.0212
2003	2013	-0.2288		0.0798	2008	2009	-0.1040		0.0562
2003	2014	-0.2225		0.0837	2008	2010	-0.1008		0.0752
2003	2015	-0.6816		0.2084	2008	2011	-0.0466		0.0983
2003	2016	-0.5426	*	0.1042	2008	2012	-0.0368		0.1138
2005	1999	0.0020		0.0407	2008	2013	0.0368		0.0578
2005	2000	0.0691		0.0228	2008	2014	0.0396		0.0582
2005	2001	0.0034		0.0146	2008	2015	0.1228		0.0801
2005	2002	-0.0058		0.0394	2008	2016	0.1636	*	0.0192
2005	2003	-0.1767	*	0.0282	2010	1999	-0.1375		0.0283
2005	2004	0.0525	*	0.0119	2010	2000	-0.0070		0.0235
2005	2005	-0.0494		0.0191	2010	2001	-0.0618		0.0758
2005	2006	-0.0585		0.0294	2010	2002	-0.2544		0.2081
2005	2007	-0.1369	*	0.0300	2010	2003	0.0605		0.0696
2005	2008	-0.2174	*	0.0342	2010	2004	-0.0356		0.0166
2005	2009	-0.2781	*	0.0399	2010	2005	-0.0007		0.0710
2005	2010	-0.1633		0.0608	2010	2006	0.1233	*	0.0291
2005	2011	-0.2080		0.0606	2010	2007	0.0763		0.0231
2005	2012	-0.3849	*	0.0786	2010	2008	-0.0390		0.0210

Table 2: Log(receipts) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2010	2009	-0.0741		0.0298	2013	2013	-0.0627		0.0370
2010	2010	0.0885		0.0689	2013	2014	-0.0596		0.0838
2010	2011	0.0494		0.0604	2013	2015	0.0441		0.1355
2010	2012	-0.0085		0.0557	2013	2016	0.0930		0.1519
2010	2013	-0.0404		0.0642	2015	1999	-0.0349		0.0722
2010	2014	0.0036		0.0650	2015	2000	0.0316		0.0573
2010	2015	0.0583		0.1225	2015	2001	0.0066		0.0568
2010	2016	0.1736		0.0877	2015	2002	0.1217		0.1652
2012	1999	0.0854		0.0258	2015	2003	-0.0445		0.0814
2012	2000	-0.0271		0.0310	2015	2004	-0.0072		0.0217
2012	2001	0.0882		0.0298	2015	2005	-0.0496		0.0535
2012	2002	0.1718		0.0957	2015	2006	-0.0158		0.0495
2012	2003	-0.0767		0.0340	2015	2007	-0.0199		0.0325
2012	2004	-0.1274	*	0.0190	2015	2008	0.0026		0.0285
2012	2005	-0.1769	*	0.0265	2015	2009	-0.0248		0.0688
2012	2006	-0.0095		0.0232	2015	2010	-0.0121		0.1059
2012	2007	-0.1056	*	0.0162	2015	2011	-0.0046		0.0381
2012	2008	-0.0641		0.0247	2015	2012	0.0193		0.0352
2012	2009	-0.0461		0.0441	2015	2013	0.0229		0.0292
2012	2010	-0.0391		0.0229	2015	2014	0.0499		0.0729
2012	2011	-0.0609		0.0309	2015	2015	0.1141		0.0817
2012	2012	-0.0387		0.0140	2015	2016	0.1542		0.1242
2012	2013	-0.0404		0.0241	2016	1999	-0.0815		0.0264
2012	2014	0.0768		0.0312	2016	2000	0.0703		0.0231
2012	2015	0.3531	*	0.0115	2016	2001	0.1257	*	0.0238
2012	2016	0.4620	*	0.0094	2016	2002	-0.2132		0.0684
2013	1999	0.1434		0.0709	2016	2003	-0.2181	*	0.0347
2013	2000	0.0713		0.0653	2016	2004	0.0801	*	0.0155
2013	2001	-0.0762		0.0655	2016	2005	0.1136	*	0.0232
2013	2002	-0.0375		0.2489	2016	2006	0.1704	*	0.0212
2013	2003	-0.0049		0.0832	2016	2007	-0.0815	*	0.0149
2013	2004	0.0642		0.0418	2016	2008	0.0288		0.0181
2013	2005	0.0649		0.0714	2016	2009	0.1320	*	0.0298
2013	2006	-0.0555		0.0361	2016	2010	0.0752	*	0.0201
2013	2007	0.0243		0.0291	2016	2011	-0.0501		0.0208
2013	2008	0.0108		0.0561	2016	2012	0.1437	*	0.0104
2013	2009	0.0594		0.0928	2016	2013	0.0317		0.0193
2013	2010	-0.0146		0.0674	2016	2014	-0.0174		0.0238
2013	2011	0.0719		0.0523	2016	2015	0.1956		0.0687
2013	2012	-0.0076		0.0280	2016	2016	0.0353		0.0114

Table 3: Log(receipts) with log(GDP) and CPI covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2003	2002	-0.0811		0.0555	2008	2007	0.0632		0.0164
2003	2003	-0.0124		0.0354	2008	2008	-0.0220		0.0245
2003	2004	-0.0554		0.0312	2008	2009	-0.0674		0.0460
2003	2005	-0.0831		0.0406	2008	2010	-0.0459		0.0520
2003	2006	-0.0642		0.0364	2008	2011	0.0196		0.0679
2003	2007	-0.1631		0.0426	2008	2012	0.0590		0.0809
2003	2008	-0.2801	*	0.0437	2008	2013	0.1109		0.0663
2003	2009	-0.1351		0.0485	2008	2014	0.1188		0.0524
2003	2010	-0.2064		0.0667	2008	2015	0.0789		0.0731
2003	2011	-0.2474		0.0785	2008	2016	0.0679		0.0537
2003	2012	-0.3161		0.0795	2010	2002	-0.1296		0.1805
2003	2013	-0.2680		0.0718	2010	2003	0.0391		0.1221
2003	2014	-0.2641		0.0710	2010	2004	-0.0859		0.0445
2003	2015	-0.7351	*	0.1074	2010	2005	-0.0663		0.0416
2003	2016	-0.2593		0.0993	2010	2006	0.0587		0.0432
2005	2002	-0.1702		0.0714	2010	2007	0.0755		0.0349
2005	2003	-0.1840		0.0495	2010	2008	-0.0908		0.0511
2005	2004	0.0824		0.0198	2010	2009	-0.1556		0.0740
2005	2005	-0.0221		0.0262	2010	2010	0.0969		0.0861
2005	2006	-0.0056		0.0338	2010	2011	0.0289		0.0758
2005	2007	-0.0745		0.0380	2010	2012	-0.0779		0.0757
2005	2008	-0.1259		0.0436	2010	2013	-0.1814		0.1057
2005	2009	-0.1562		0.0590	2010	2014	-0.1360		0.1361
2005	2010	-0.0395		0.0846	2010	2015	-0.2278		0.1860
2005	2011	-0.0659		0.0904	2010	2016	0.6704		0.6144
2005	2012	-0.2237		0.1085	2012	2002	0.0081		0.0628
2005	2013	-0.3510		0.0832	2012	2003	-0.0602		0.0342
2005	2014	-0.3831		0.0842	2012	2004	-0.1040	*	0.0179
2005	2015	-0.3301		0.1007	2012	2005	-0.1453		0.0396
2005	2016	-0.2825	*	0.0343	2012	2006	0.0438		0.0332
2006	2002	0.2918		0.0928	2012	2007	-0.0973		0.0179
2006	2003	0.4544	*	0.0522	2012	2008	-0.0442		0.0364
2006	2004	-0.0862		0.0307	2012	2009	-0.0164		0.0412
2006	2005	-0.0200		0.0199	2012	2010	-0.0448		0.0296
2006	2006	-0.0737		0.0260	2012	2011	-0.0453		0.0258
2006	2007	-0.1486		0.0318	2012	2012	-0.0002		0.0120
2006	2008	-0.3765	*	0.0245	2012	2013	0.0292		0.0230
2006	2009	-0.3789	*	0.0521	2012	2014	0.1528		0.0343
2006	2010	-0.3178		0.1415	2012	2015	0.2587		0.1294
2006	2011	-0.4536		0.1944	2012	2016	0.3824	*	0.0581
2006	2012	-0.4652		0.1844	2013	2002	0.0254		0.2229
2006	2013	-0.5948	*	0.1022	2013	2003	-0.0305		0.1225
2006	2014	-0.6505	*	0.0625	2013	2004	0.0603		0.0419
2006	2015	-0.8532	*	0.0380	2013	2005	0.0526		0.0746
2006	2016	1.3928		0.5566	2013	2006	-0.0831		0.0236
2008	2002	-0.0358		0.0500	2013	2007	0.0183		0.0274
2008	2003	-0.0146		0.0288	2013	2008	0.0123		0.0619
2008	2004	-0.0006		0.0198	2013	2009	0.0569		0.1029
2008	2005	0.1255		0.0398	2013	2010	-0.0259		0.0788
2008	2006	-0.0181		0.0277	2013	2011	0.0798		0.0552

Table 3: Log(receipts) with log(GDP) and CPI covariates, marriage-only countries

Group	Time	ATT(g,t)	Std. Error	Group	Time	ATT(g,t)	Std. Error
2013	2012	-0.0297	0.0304	2015	2014	0.0524	0.0804
2013	2013	-0.0671	0.0378	2015	2015	0.1421	0.0680
2013	2014	-0.0651	0.0875	2015	2016	0.0918	0.0815
2013	2015	0.0269	0.1855	2016	2002	0.0225	0.1822
2013	2016	-0.0619	0.2305	2016	2003	-0.3175	0.0898
2015	2002	0.0564	0.2406	2016	2004	0.0506	0.0377
2015	2003	-0.0339	0.0829	2016	2005	0.0551	0.0264
2015	2004	0.0032	0.0218	2016	2006	0.0980	0.0279
2015	2005	-0.0334	0.0565	2016	2007	-0.1324	0.0248
2015	2006	0.0002	0.0386	2016	2008	-0.0018	0.0427
2015	2007	-0.0152	0.0359	2016	2009	0.1174	0.0485
2015	2008	0.0107	0.0359	2016	2010	0.1449	0.0794
2015	2009	-0.0123	0.0817	2016	2011	-0.1555	0.0955
2015	2010	-0.0109	0.1092	2016	2012	0.1025 *	0.0177
2015	2011	0.0010	0.0468	2016	2013	-0.0932	0.0631
2015	2012	0.0302	0.0480	2016	2014	-0.2061	0.1378
2015	2013	0.0257	0.0272	2016	2015	-0.4830	0.1310
				2016	2016	-0.0777	0.0872

Table 4: Event Study: Log(receipts) with no covariates, marriage-only countries

Event Time	ATT	Std. Error	Lower CI	Upper CI	Significance
-17	-0.0871	0.0300	-0.1654	-0.0088	*
-16	-0.0122	0.0379	-0.1111	0.0866	
-15	0.0574	0.0319	-0.0260	0.1407	
-14	0.0476	0.0662	-0.1251	0.2203	
-13	0.0546	0.0705	-0.1293	0.2386	
-12	-0.0383	0.0299	-0.1163	0.0397	
-11	-0.0186	0.0781	-0.2226	0.1854	
-10	0.0163	0.0405	-0.0894	0.1219	
-9	-0.0036	0.0309	-0.0844	0.0772	
-8	-0.0426	0.0630	-0.2072	0.1220	
-7	-0.0213	0.0257	-0.0882	0.0457	
-6	0.0044	0.0121	-0.0271	0.0358	
-5	-0.0072	0.0236	-0.0689	0.0544	
-4	0.0608	0.0291	-0.0150	0.1367	
-3	0.0451	0.0396	-0.0584	0.1486	
-2	0.0078	0.0273	-0.0635	0.0790	
-1	-0.0010	0.0198	-0.0527	0.0508	
0	0.0079	0.0247	-0.0565	0.0723	
1	-0.0002	0.0363	-0.0950	0.0945	
2	-0.0301	0.0475	-0.1541	0.0939	
3	-0.0272	0.0594	-0.1824	0.1280	
4	-0.1365	0.1051	-0.4109	0.1380	
5	-0.1815	0.1165	-0.4857	0.1226	
6	-0.1341	0.1254	-0.4615	0.1934	
7	-0.3126	0.1198	-0.6255	0.0003	
8	-0.3088	0.1240	-0.6324	0.0149	
9	-0.4621	0.1164	-0.7659	-0.1583	*
10	-0.4371	0.1404	-0.8037	-0.0704	*
11	-0.3062	0.1044	-0.5786	-0.0337	*
12	-0.5466	0.1609	-0.9667	-0.1265	*
13	-0.5151	0.1186	-0.8248	-0.2054	*
14	-0.4569	0.1429	-0.8300	-0.0839	*
15	-0.1829	0.1495	-0.5733	0.2075	

Table 5: Event Study: Log(receipts) with log(GDP) covariate, marriage-only countries

Event Time	ATT	Std. Error	Lower CI	Upper CI	Significance
-17	-0.0815	0.0287	-0.1547	-0.0082	*
-16	-0.0086	0.0685	-0.1834	0.1662	
-15	0.0551	0.0502	-0.0729	0.1831	
-14	0.0475	0.0694	-0.1295	0.2246	
-13	0.0575	0.0752	-0.1345	0.2496	
-12	-0.0428	0.0440	-0.1552	0.0696	
-11	-0.0222	0.0897	-0.2512	0.2068	
-10	0.0145	0.0430	-0.0951	0.1242	
-9	-0.0036	0.0321	-0.0857	0.0784	
-8	-0.0434	0.0656	-0.2109	0.1241	
-7	-0.0217	0.0256	-0.0871	0.0437	
-6	0.0041	0.0193	-0.0451	0.0532	
-5	-0.0091	0.0289	-0.0828	0.0646	
-4	0.0617	0.0306	-0.0164	0.1399	
-3	0.0458	0.0418	-0.0609	0.1525	
-2	0.0093	0.0253	-0.0552	0.0739	
-1	0.0008	0.0213	-0.0535	0.0550	
0	0.0101	0.0260	-0.0564	0.0766	
1	0.0027	0.0388	-0.0963	0.1016	
2	-0.0206	0.0644	-0.1851	0.1438	
3	0.0121	0.0735	-0.1757	0.1998	
4	-0.0989	0.1281	-0.4260	0.2281	
5	-0.1669	0.1183	-0.4690	0.1352	
6	-0.1107	0.1195	-0.4157	0.1943	
7	-0.2648	0.1403	-0.6230	0.0934	
8	-0.2769	0.1282	-0.6042	0.0503	
9	-0.4607	0.1098	-0.7411	-0.1804	*
10	-0.3986	0.1170	-0.6973	-0.0999	*
11	-0.2950	0.0858	-0.5140	-0.0760	*
12	-0.5266	0.1787	-0.9828	-0.0703	*
13	-0.4723	0.0885	-0.6983	-0.2463	*
14	-0.4428	0.1465	-0.8168	-0.0687	*
15	-0.1890	0.1485	-0.5680	0.1901	

Table 6: Log(arrivals) with no covariates, marriage-only countries

Group	Time	ATT(g,t)	Std. Error	Group	Time	ATT(g,t)	Std. Error
2001	1999	0.0198	0.0095	2005	2(	-0.1889	0.0865
2001	2000	-0.0430	0.0220	2005	2010	-0.2409	0.0781
2001	2001	-0.0314	0.0126	2005	2011	-0.2872	0.1071
2001	2002	0.0009	0.0350	2005	2012	-0.2964	0.1091
2001	2003	-0.0513	0.0320	2005	2013	-0.3370	0.1399
2001	2004	-0.0681	0.0318	2005	2014	-0.3504	0.1570
2001	2005	-0.0859	0.0341	2005	2015	-0.3273	0.1397
2001	2006	-0.0527	0.0447	2005	2016	-0.2595	0.1365
2001	2007	-0.0524	0.0633	2005	2017	-0.2866	0.1633
2001	2008	-0.1326	0.0667	2005	2018	-0.3884	0.2071
2001	2009	-0.1036	0.0734	2006	1999	-0.0189	0.0095
2001	2010	-0.0784	0.0680	2006	2000	-0.0608	0.0220
2001	2011	-0.1130	0.0682	2006	2001	0.0047	0.0130
2001	2012	-0.0666	0.0756	2006	2002	0.1312	0.0321
2001	2013	-0.1049	0.0913	2006	2003	0.0018	0.0124
2001	2014	-0.0812	0.1002	2006	2004	-0.0421	0.0168
2001	2015	-0.0670	0.1181	2006	2005	0.0437	0.0161
2001	2016	-0.0490	0.1006	2006	2006	0.0796	0.0138
2001	2017	-0.0545	0.1438	2006	2007	0.1341	0.0406
2001	2018	-0.1212	0.2582	2006	2008	0.1874	0.0420
2003	1999	-0.0106	0.0096	2006	2009	0.2042	0.0467
2003	2000	-0.0426	0.0218	2006	2010	0.3064	0.0335
2003	2001	0.0187	0.0131	2006	2011	0.3021	0.0371
2003	2002	0.0693	0.0322	2006	2012	0.3487	0.0396
2003	2003	-0.0145	0.0119	2006	2013	0.3841	0.0477
2003	2004	-0.0949	0.0249	2006	2014	0.3368	0.0525
2003	2005	-0.1542	0.0329	2006	2015	0.2362	0.0588
2003	2006	-0.1626	0.0347	2006	2016	0.2814	0.0476
2003	2007	-0.1801	0.0585	2006	2017	0.1950	0.0876
2003	2008	-0.1614	0.0632	2006	2018	0.0835	0.1830
2003	2009	-0.1746	0.0691	2008	1999	-0.0520	0.0091
2003	2010	-0.1941	0.0566	2008	2000	-0.0958	0.0208
2003	2011	-0.2243	0.0640	2008	2001	0.0106	0.0130
2003	2012	-0.2462	0.0655	2008	2002	0.0362	0.0320
2003	2013	-0.2619	0.0765	2008	2003	0.0394	0.0123
2003	2014	-0.2978	0.0831	2008	2004	0.0398	0.0166
2003	2015	-0.2883	0.0995	2008	2005	-0.0043	0.0161
2003	2016	-0.4340	0.0847	2008	2006	0.0191	0.0144
2003	2017	-0.4397	0.1463	2008	2007	0.0509	0.0428
2003	2018	-0.4689	0.2516	2008	2008	-0.0122	0.0123
2005	1999	0.0166	0.0243	2008	2009	0.0246	0.0173
2005	2000	-0.0416	0.0226	2008	2010	0.0721	0.0287
2005	2001	0.0485	0.0216	2008	2011	0.0402	0.0410
2005	2002	0.0544	0.0343	2008	2012	-0.0800	0.0399
2005	2003	-0.0813	0.0827	2008	2013	-0.0592	0.0333
2005	2004	-0.0077	0.0295	2008	2014	-0.1053	0.0398
2005	2005	-0.0344	0.0360	2008	2015	-0.0573	0.0498
2005	2006	-0.0717	0.0677	2008	2016	0.0133	0.0442
2005	2007	-0.0997	0.0795	2008	2017	0.0019	0.0873
2005	2008	-0.1368	0.0897	2008	2018	-0.2061	0.1339

Table 6: Log(arrivals) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)	Std. Error
2009	1999	-0.0325		0.0095	2013	2009	0.0399	0.0282
2009	2000	0.3492	*	0.0098	2013	2010	0.0288	0.0364
2009	2001	0.0949		0.0125	2013	2011	0.0478	0.0610
2009	2002	0.0653		0.0319	2013	2012	-0.0211	0.0167
2009	2003	-0.0144		0.0122	2013	2013	-0.0533	0.0224
2009	2004	0.0263		0.0164	2013	2014	-0.0936	0.0565
2009	2005	-0.0141		0.0159	2013	2015	-0.1043	0.0512
2009	2006	-0.0805		0.0136	2013	2016	-0.0817	0.0604
2009	2007	0.0792		0.0433	2013	2017	-0.1017	0.1032
2009	2008	-0.1508	*	0.0097	2013	2018	-0.2390	0.0962
2009	2009	0.1182	*	0.0098	2015	1999	0.0249	0.0155
2009	2010	0.1271		0.0195	2015	2000	-0.0304	0.0273
2009	2011	0.8577	*	0.0325	2015	2001	-0.0517	0.0336
2009	2012	0.8943	*	0.0303	2015	2002	0.0222	0.0472
2009	2013	0.7397	*	0.0240	2015	2003	-0.0216	0.0259
2009	2014	0.6350	*	0.0347	2015	2004	-0.0217	0.0306
2009	2015	0.1068		0.0472	2015	2005	0.0691	0.0670
2009	2016	0.1167		0.0449	2015	2006	-0.0062	0.0296
2009	2017	0.0841		0.0642	2015	2007	0.0277	0.0483
2009	2018	0.0240		0.1194	2015	2008	-0.0248	0.0250
2010	1999	0.0258		0.0251	2015	2009	-0.0243	0.0231
2010	2000	0.0467		0.0443	2015	2010	-0.0496	0.0381
2010	2001	0.0269		0.0136	2015	2011	-0.0045	0.0194
2010	2002	-0.0234		0.0345	2015	2012	0.0143	0.0281
2010	2003	0.0447		0.0339	2015	2013	-0.0055	0.0294
2010	2004	-0.0420		0.0508	2015	2014	0.0104	0.0264
2010	2005	-0.0324		0.0253	2015	2015	0.0181	0.0180
2010	2006	0.0440		0.0229	2015	2016	-0.0149	0.0445
2010	2007	-0.2430		0.0324	2015	2017	-0.0661	0.0553
2010	2008	0.0307		0.0142	2015	2018	-0.1592	0.0757
2010	2009	0.0093		0.0305	2017	1999	-0.0251	0.0186
2010	2010	-0.0281		0.0248	2017	2000	-0.0066	0.0317
2010	2011	-0.0058		0.0242	2017	2001	-0.0308	0.0383
2010	2012	0.0783		0.0626	2017	2002	0.0157	0.0379
2010	2013	0.2165		0.0490	2017	2003	0.0052	0.0157
2010	2014	0.3229		0.0709	2017	2004	-0.0359	0.0267
2010	2015	0.4535		0.1124	2017	2005	-0.0382	0.0214
2010	2016	0.6378		0.1238	2017	2006	-0.0006	0.0363
2010	2017	0.7577		0.1796	2017	2007	0.0405	0.0518
2010	2018	0.6960		0.2198	2017	2008	0.0315	0.0177
2013	1999	-0.0161		0.0243	2017	2009	-0.0249	0.0230
2013	2000	-0.0293		0.0253	2017	2010	0.0368	0.0238
2013	2001	-0.0457		0.0238	2017	2011	-0.0044	0.0248
2013	2002	-0.2420		0.2278	2017	2012	0.0248	0.0162
2013	2003	0.0591		0.0476	2017	2013	-0.0213	0.0223
2013	2004	0.0744		0.0718	2017	2014	-0.0531	0.0269
2013	2005	-0.0119		0.0322	2017	2015	-0.0057	0.0275
2013	2006	-0.0855		0.0333	2017	2016	0.0390	0.0267
2013	2007	-0.0107		0.0483	2017	2017	0.0190	0.0266
2013	2008	0.0286		0.0397	2017	2018	-0.0370	0.0912

Table 7: Log(arrivals) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)	Std. Error	Group	Time	ATT(g,t)	Std. Error
2001	1999	0.0226	0.0077	2005	2009	-0.2335	0.0894
2001	2000	-0.0441	0.0205	2005	2010	-0.2818	0.0829
2001	2001	-0.0244	0.0123	2005	2011	-0.3176	0.1124
2001	2002	0.0029	0.0306	2005	2012	-0.3297	0.1127
2001	2003	-0.0406	0.0281	2005	2013	-0.3988	0.1381
2001	2004	-0.0568	0.0263	2005	2014	-0.4050	0.1564
2001	2005	-0.0870	0.0247	2005	2015	-0.3189	0.1376
2001	2006	-0.0561	0.0326	2005	2016	-0.2545	0.1354
2001	2007	-0.0565	0.0507	2005	2017	-0.2129	0.1916
2001	2008	-0.1351	0.0549	2005	2018	-0.2443	0.1668
2001	2009	-0.1054	0.0604	2006	1999	-0.0178	0.0086
2001	2010	-0.0874	0.0525	2006	2000	-0.0612	0.0216
2001	2011	-0.1161	0.0526	2006	2001	0.0063	0.0127
2001	2012	-0.0703	0.0588	2006	2002	0.1282	0.0276
2001	2013	-0.1193	0.0679	2006	2003	0.0060	0.0115
2001	2014	-0.0911	0.0729	2006	2004	-0.0411	0.0155
2001	2015	-0.0607	0.0763	2006	2005	0.0356	0.0161
2001	2016	-0.0432	0.0642	2006	2006	0.0778	0.0139
2001	2017	-0.0074	0.0931	2006	2007	0.1329	0.0381
2001	2018	-0.0446	0.1223	2006	2008	0.1884	0.0383
2003	1999	-0.0104	0.0093	2006	2009	0.2060	0.0445
2003	2000	-0.0427	0.0218	2006	2010	0.3061 *	0.0314
2003	2001	0.0191	0.0126	2006	2011	0.3043 *	0.0353
2003	2002	0.0682	0.0292	2006	2012	0.3507 *	0.0381
2003	2003	-0.0132	0.0108	2006	2013	0.3810 *	0.0442
2003	2004	-0.0933	0.0231	2006	2014	0.3355 *	0.0490
2003	2005	-0.1544	0.0330	2006	2015	0.2452	0.0529
2003	2006	-0.1637	0.0336	2006	2016	0.2908 *	0.0427
2003	2007	-0.1805	0.0582	2006	2017	0.1874	0.0698
2003	2008	-0.1606	0.0623	2006	2018	0.0685	0.0979
2003	2009	-0.1734	0.0674	2008	1999	-0.0570	0.0107
2003	2010	-0.1941	0.0574	2008	2000	-0.0946	0.0198
2003	2011	-0.2243	0.0633	2008	2001	0.0104	0.0141
2003	2012	-0.2462	0.0647	2008	2002	0.0451	0.0408
2003	2013	-0.2639	0.0809	2008	2003	0.0315	0.0111
2003	2014	-0.2994	0.0863	2008	2004	0.0357	0.0186
2003	2015	-0.2856	0.0856	2008	2005	0.0009	0.0099
2003	2016	-0.4311	0.0700	2008	2006	0.0208	0.0148
2003	2017	-0.4879	0.0788	2008	2007	0.0493	0.0427
2003	2018	-0.5486	0.1182	2008	2008	-0.0142	0.0122
2005	1999	0.0203	0.0250	2008	2009	0.0222	0.0171
2005	2000	-0.0441	0.0154	2008	2010	0.0672	0.0341
2005	2001	0.0736	0.0193	2008	2011	0.0300	0.0471
2005	2002	0.0552	0.0246	2008	2012	-0.0903	0.0440
2005	2003	-0.0647	0.0828	2008	2013	-0.0601	0.0347
2005	2004	-0.0131	0.0272	2008	2014	-0.1088	0.0412
2005	2005	-0.0731	0.0386	2008	2015	-0.0674	0.0454
2005	2006	-0.1126	0.0671	2008	2016	0.0011	0.0410
2005	2007	-0.1507	0.0838	2008	2017	-0.0696	0.0585
2005	2008	-0.1859	0.0935	2008	2018	-0.3866	0.0867

Table 7: Log(arrivals) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)	Std. Error
2009	1999	-0.0327		0.0092	2013	2009	0.0389	0.0295
2009	2000	0.3492	*	0.0097	2013	2010	0.0265	0.0469
2009	2001	0.0950	*	0.0126	2013	2011	0.0496	0.0564
2009	2002	0.0654		0.0308	2013	2012	-0.0215	0.0150
2009	2003	-0.0147		0.0113	2013	2013	-0.0524	0.0228
2009	2004	0.0262		0.0167	2013	2014	-0.0888	0.0598
2009	2005	-0.0156		0.0133	2013	2015	-0.0973	0.0567
2009	2006	-0.0809		0.0137	2013	2016	-0.0732	0.0518
2009	2007	0.0796		0.0425	2013	2017	-0.0955	0.0704
2009	2008	-0.1501	*	0.0087	2013	2018	-0.2128	0.1301
2009	2009	0.1184	*	0.0095	2015	1999	0.0253	0.0115
2009	2010	0.1269		0.0206	2015	2000	-0.0303	0.0280
2009	2011	0.8561	*	0.0318	2015	2001	-0.0518	0.0330
2009	2012	0.8927	*	0.0302	2015	2002	0.0172	0.0813
2009	2013	0.7398	*	0.0252	2015	2003	-0.0181	0.0294
2009	2014	0.6348	*	0.0345	2015	2004	-0.0191	0.0456
2009	2015	0.1067		0.0457	2015	2005	0.0675	0.0602
2009	2016	0.1167		0.0438	2015	2006	-0.0085	0.0289
2009	2017	0.0586		0.0738	2015	2007	0.0329	0.0502
2009	2018	-0.0568		0.1077	2015	2008	-0.0187	0.0446
2010	1999	0.0139		0.0216	2015	2009	-0.0235	0.0232
2010	2000	0.0751		0.0355	2015	2010	-0.0484	0.0540
2010	2001	0.0562		0.0368	2015	2011	-0.0032	0.0212
2010	2002	0.0267		0.0743	2015	2012	0.0141	0.0281
2010	2003	0.0271		0.0341	2015	2013	-0.0028	0.0389
2010	2004	-0.0490		0.0896	2015	2014	0.0127	0.0225
2010	2005	-0.0092		0.0161	2015	2015	0.0161	0.0233
2010	2006	0.0762		0.0360	2015	2016	-0.0155	0.0442
2010	2007	-0.2530		0.0485	2015	2017	-0.0626	0.0721
2010	2008	0.0125		0.0181	2015	2018	-0.1672	0.1315
2010	2009	0.0125		0.0387	2017	1999	-0.0310	0.0211
2010	2010	-0.0450		0.0465	2017	2000	-0.0096	0.0370
2010	2011	-0.0381		0.0494	2017	2001	-0.0370	0.0472
2010	2012	0.0451		0.0472	2017	2002	0.0264	0.0503
2010	2013	0.1922		0.0394	2017	2003	-0.0077	0.0304
2010	2014	0.2894		0.0523	2017	2004	-0.0446	0.0404
2010	2015	0.3962		0.0742	2017	2005	-0.0313	0.0126
2010	2016	0.5584	*	0.0683	2017	2006	-0.0010	0.0367
2010	2017	0.6366		0.1533	2017	2007	0.0382	0.0522
2010	2018	0.2843		0.0993	2017	2008	0.0265	0.0192
2013	1999	-0.0119		0.0315	2017	2009	-0.0301	0.0309
2013	2000	-0.0295		0.0249	2017	2010	0.0398	0.0313
2013	2001	-0.0422		0.0262	2017	2011	-0.0219	0.0352
2013	2002	-0.2420		0.2332	2017	2012	0.0223	0.0226
2013	2003	0.0642		0.0345	2017	2013	-0.0185	0.0290
2013	2004	0.0737		0.0848	2017	2014	-0.0668	0.0299
2013	2005	-0.0230		0.0476	2017	2015	0.0094	0.0351
2013	2006	-0.0879		0.0307	2017	2016	0.0677	0.0534
2013	2007	-0.0099		0.0447	2017	2017	0.0056	0.0189
2013	2008	0.0294		0.0397	2017	2018	-0.1440	0.1087

Table 8: Log(arrivals) with log(GDP) + CPI covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2003	2002	0.0740		0.0379	2006	2018	-0.0412		0.0348
2003	2003	-0.0149		0.0106	2008	2002	0.0164		0.0229
2003	2004	-0.0963	*	0.0231	2008	2003	0.0431		0.0146
2003	2005	-0.1544	*	0.0300	2008	2004	0.0478		0.0200
2003	2006	-0.1698	*	0.0319	2008	2005	0.0086		0.0142
2003	2007	-0.1837		0.0624	2008	2006	0.0081		0.0159
2003	2008	-0.1604		0.0642	2008	2007	0.0477		0.0378
2003	2009	-0.1739		0.0710	2008	2008	-0.0018		0.0207
2003	2010	-0.1691		0.0500	2008	2009	0.0279		0.0226
2003	2011	-0.2021		0.0581	2008	2010	0.1030		0.0460
2003	2012	-0.2256		0.0592	2008	2011	0.0636		0.0646
2003	2013	-0.2450	*	0.0608	2008	2012	-0.0535		0.0596
2003	2014	-0.2809	*	0.0557	2008	2013	0.0183		0.0320
2003	2015	-0.2571	*	0.0504	2008	2014	-0.0032		0.0262
2003	2016	-0.3956	*	0.0439	2008	2015	0.0621		0.0322
2003	2017	-0.3658	*	0.0752	2008	2016	0.1318		0.0364
2003	2018	-0.3756		0.1036	2008	2017	0.1499		0.0392
2005	2002	0.0204		0.0336	2008	2018	-0.0284		0.0362
2005	2003	-0.0554		0.0351	2009	2002	0.0331		0.0211
2005	2004	0.0078		0.0329	2009	2003	0.0058		0.0203
2005	2005	-0.0525		0.0385	2009	2004	0.0431		0.0212
2005	2006	-0.0982		0.0574	2009	2005	-0.0084		0.0175
2005	2007	-0.1274		0.0770	2009	2006	-0.0985	*	0.0130
2005	2008	-0.1507		0.0862	2009	2007	0.0756		0.0328
2005	2009	-0.2009		0.0874	2009	2008	-0.1434	*	0.0119
2005	2010	-0.2453		0.0691	2009	2009	0.1221	*	0.0174
2005	2011	-0.2743		0.0957	2009	2010	0.1588	*	0.0291
2005	2012	-0.2831		0.1007	2009	2011	0.8900	*	0.0435
2005	2013	-0.3538		0.1081	2009	2012	0.9326	*	0.0437
2005	2014	-0.3496		0.1214	2009	2013	0.8197	*	0.0263
2005	2015	-0.2697		0.1142	2009	2014	0.7530	*	0.0253
2005	2016	-0.2101		0.1022	2009	2015	0.2607	*	0.0323
2005	2017	-0.1367		0.0794	2009	2016	0.2611	*	0.0400
2005	2018	-0.1216		0.1034	2009	2017	0.2758	*	0.0323
2006	2002	0.1740		0.0621	2009	2018	0.2966	*	0.0314
2006	2003	-0.0193		0.0167	2010	2002	-0.0154		0.0936
2006	2004	-0.0691		0.0404	2010	2003	0.0258		0.0378
2006	2005	0.0310		0.0167	2010	2004	-0.0407		0.0982
2006	2006	0.0855		0.0312	2010	2005	0.0089		0.0506
2006	2007	0.1651		0.0806	2010	2006	0.0477		0.0323
2006	2008	0.2015		0.0852	2010	2007	-0.2377		0.2351
2006	2009	0.2191		0.0872	2010	2008	0.0313		0.0330
2006	2010	0.2747		0.0704	2010	2009	0.0025		0.0395
2006	2011	0.2569		0.0685	2010	2010	-0.0049		0.0323
2006	2012	0.3024		0.0882	2010	2011	-0.0177		0.0708
2006	2013	0.2790		0.1070	2010	2012	0.0648		0.0748
2006	2014	0.1818		0.0899	2010	2013	0.2585		0.0814
2006	2015	0.1037		0.0573	2010	2014	0.3556		0.1171
2006	2016	0.1768	*	0.0376	2010	2015	0.5226		0.1751
2006	2017	0.1135	*	0.0126	2010	2016	0.7346		0.2471

Table 8: Log(arrivals) with log(GDP) + CPI covariates, marriage-only countries

Group	Time	ATT(g,t)	Std. Error	Group	Time	ATT(g,t)	Std. Error
2010	2017	0.8558	0.2684	2015	2009	-0.0242	0.0264
2010	2018	0.6532	0.1998	2015	2010	-0.0421	0.0527
2013	2002	-0.2592	0.1325	2015	2011	-0.0089	0.0412
2013	2003	0.0521	0.0291	2015	2012	0.0147	0.0298
2013	2004	0.0726	0.0674	2015	2013	0.0099	0.0300
2013	2005	-0.0242	0.0435	2015	2014	0.0353	0.0160
2013	2006	-0.1013	0.0374	2015	2015	0.0310	0.0498
2013	2007	0.0053	0.0744	2015	2016	-0.0019	0.0741
2013	2008	0.0212	0.0372	2015	2017	-0.0506	0.0824
2013	2009	0.0343	0.0265	2015	2018	-0.0953	0.0995
2013	2010	0.0284	0.0523	2017	2002	0.0125	0.0237
2013	2011	0.0441	0.0527	2017	2003	0.0286	0.0206
2013	2012	-0.0204	0.0276	2017	2004	-0.0256	0.0349
2013	2013	-0.0561	0.0169	2017	2005	-0.0391	0.0238
2013	2014	-0.1030	0.0446	2017	2006	0.0238	0.0299
2013	2015	-0.1051	0.0388	2017	2007	0.0170	0.0404
2013	2016	-0.0756	0.0773	2017	2008	0.0490	0.0253
2013	2017	-0.0767	0.0848	2017	2009	-0.0117	0.0323
2013	2018	-0.1783	0.0594	2017	2010	0.0381	0.0262
2015	2002	0.0028	0.0933	2017	2011	0.0128	0.0335
2015	2003	-0.0127	0.0311	2017	2012	0.0411	0.0187
2015	2004	-0.0163	0.0585	2017	2013	-0.0197	0.0160
2015	2005	0.0716	0.0669	2017	2014	-0.0396	0.0269
2015	2006	-0.0150	0.0303	2017	2015	-0.0038	0.0154
2015	2007	0.0316	0.0494	2017	2016	0.0197	0.0405
2015	2008	-0.0141	0.0535	2017	2017	0.0084	0.0075
				2017	2018	0.0024	0.0466

Table 9: Event Study: Log(arrivals) with no covariate, marriage-only countries

Event Time	ATT	Std. Error	Lower CI	Upper CI	Significance
-18	-0.0251	0.0189	-0.0746	0.0244	
-17	-0.0066	0.0315	-0.0890	0.0758	
-16	-0.0069	0.0285	-0.0816	0.0678	
-15	-0.0041	0.0273	-0.0755	0.0673	
-14	-0.0182	0.0158	-0.0596	0.0232	
-13	-0.0165	0.0202	-0.0695	0.0366	
-12	-0.0355	0.0160	-0.0773	0.0064	
-11	-0.0618	0.0576	-0.2126	0.0890	
-10	0.0467	0.0225	-0.0122	0.1056	
-9	0.0487	0.0362	-0.0461	0.1435	
-8	-0.0071	0.0175	-0.0529	0.0387	
-7	-0.0025	0.0192	-0.0527	0.0477	
-6	-0.0125	0.0117	-0.0432	0.0182	
-5	-0.0024	0.0125	-0.0352	0.0303	
-4	0.0196	0.0123	-0.0126	0.0517	
-3	-0.0326	0.0454	-0.1515	0.0863	
-2	0.0051	0.0146	-0.0332	0.0434	
-1	0.0051	0.0155	-0.0356	0.0459	
0	-0.0008	0.0142	-0.0380	0.0364	
1	-0.0230	0.0266	-0.0928	0.0468	
2	0.0239	0.0826	-0.1925	0.2402	
3	0.0230	0.0852	-0.2001	0.2460	
4	0.0553	0.0850	-0.1674	0.2779	
5	0.0310	0.1053	-0.2448	0.3068	
6	0.0916	0.1404	-0.2762	0.4593	
7	0.1155	0.1582	-0.2988	0.5298	
8	0.0916	0.1522	-0.3070	0.4902	
9	-0.1090	0.1089	-0.3942	0.1761	
10	-0.1590	0.1195	-0.4721	0.1540	
11	-0.1377	0.1156	-0.4406	0.1653	
12	-0.1766	0.1290	-0.5146	0.1614	
13	-0.3230	0.1400	-0.6898	0.0438	
14	-0.2533	0.1805	-0.7260	0.2194	
15	-0.2590	0.2184	-0.8312	0.3132	
16	-0.0545	0.1748	-0.5124	0.4035	
17	-0.1212	0.2582	-0.7974	0.5500	

Table 10: Event Study: Log(arrivals) with log(GDP) covariate, marriage-only countries

Event Time	ATT	Std. Error	Lower CI	Upper CI	Significance
-18	-0.0310	0.0204	-0.0850	0.0231	
-17	-0.0096	0.0367	-0.1068	0.0876	
-16	-0.0103	0.0335	-0.0992	0.0786	
-15	0.0021	0.0339	-0.0876	0.0919	
-14	-0.0222	0.0188	-0.0722	0.0278	
-13	-0.0215	0.0335	-0.1104	0.0673	
-12	-0.0306	0.0149	-0.0700	0.0088	
-11	-0.0633	0.0524	-0.2022	0.0756	
-10	0.0512	0.0196	-0.0009	0.1032	
-9	0.0504	0.0368	-0.0472	0.1481	
-8	-0.0026	0.0224	-0.0621	0.0568	
-7	-0.0032	0.0234	-0.0652	0.0587	
-6	-0.0162	0.0125	-0.0493	0.0168	
-5	-0.0006	0.0159	-0.0427	0.0415	
-4	0.0262	0.0139	-0.0106	0.0629	
-3	-0.0366	0.0412	-0.1459	0.0728	
-2	0.0092	0.0156	-0.0323	0.0506	
-1	0.0106	0.0180	-0.0371	0.0584	
0	-0.0094	0.0157	-0.0511	0.0323	
1	-0.0526	0.0351	-0.1455	0.0404	
2	0.0150	0.0830	-0.2052	0.2352	
3	0.0133	0.0853	-0.2128	0.2395	
4	0.0428	0.0933	-0.2046	0.2902	
5	0.0210	0.1018	-0.2487	0.2908	
6	0.0667	0.1302	-0.2786	0.4120	
7	0.0794	0.1332	-0.2736	0.4325	
8	-0.0181	0.1088	-0.3066	0.2703	
9	-0.1464	0.1053	-0.4255	0.1327	
10	-0.1856	0.1226	-0.5108	0.1396	
11	-0.1383	0.1085	-0.4260	0.1495	
12	-0.1524	0.0920	-0.3965	0.0916	
13	-0.2527	0.1056	-0.5325	0.0272	
14	-0.2743	0.1727	-0.7321	0.1834	
15	-0.2959	0.2128	-0.8600	0.2682	
16	-0.0074	0.1160	-0.3150	0.3001	
17	-0.0446	0.1362	-0.4057	0.3160	

Table 11: Monthly: Log(Receipts) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2005.2	2003.2	0.2985		0.2426	2005.2	2015.4	-0.3417	*	0.1397
2005.2	2003.3	0.0578		0.0841	2005.2	2016.1	-0.2953		0.2601
2005.2	2003.4	-0.4284	*	0.1766	2005.2	2016.2	-0.2411		0.2233
2005.2	2004.1	0.0745		0.1628	2005.2	2016.3	-0.0020		0.4808
2005.2	2004.2	0.1154		0.2346	2005.2	2016.4	-0.3279		0.1732
2005.2	2004.3	0.2637	*	0.0924	2005.2	2017.1	-0.2346		0.1963
2005.2	2004.4	-0.3972	*	0.1810	2005.2	2017.2	-0.0840		0.2843
2005.2	2005.1	0.0016		0.1491	2005.2	2017.3	0.0878		0.5195
2005.2	2005.2	0.1516		0.2314	2005.2	2017.4	-0.1819		0.1242
2005.2	2005.3	0.3768		0.3115	2005.2	2018.1	-0.1766		0.1856
2005.2	2005.4	-0.0319		0.1522	2005.2	2018.2	-0.1408		0.2483
2005.2	2006.1	-0.0302		0.0730	2005.2	2018.3	0.0602		0.4374
2005.2	2006.2	0.1817		0.2335	2005.2	2018.4	-0.2679		0.1751
2005.2	2006.3	0.4183		0.3050	2005.2	2019.1	-0.2478		0.2735
2005.2	2006.4	-0.0045		0.1322	2005.2	2019.2	-0.1811		0.3113
2005.2	2007.1	0.0172		0.0514	2005.2	2019.3	-0.0099		0.3474
2005.2	2007.2	0.2175		0.2554	2005.2	2019.4	-0.3689	*	0.1677
2005.2	2007.3	0.4303		0.3300	2013.2	2003.2	-0.1878		0.2100
2005.2	2007.4	0.0355		0.1317	2013.2	2003.3	-0.1297		0.0790
2005.2	2008.1	0.0415		0.0604	2013.2	2003.4	0.3469	*	0.1622
2005.2	2008.2	0.2240		0.2435	2013.2	2004.1	0.3231	*	0.1452
2005.2	2008.3	0.4213		0.3298	2013.2	2004.2	-0.4660	*	0.2084
2005.2	2008.4	-0.1879		0.1661	2013.2	2004.3	-0.2287	*	0.0971
2005.2	2009.1	-0.1476		0.1445	2013.2	2004.4	0.4710	*	0.1478
2005.2	2009.2	0.2019		0.2461	2013.2	2005.1	0.2473		0.1489
2005.2	2009.3	0.4000		0.3166	2013.2	2005.2	-0.3888		0.2668
2005.2	2009.4	-0.0313		0.1223	2013.2	2005.3	0.0051		0.0970
2005.2	2010.1	-0.0665		0.0980	2013.2	2005.4	0.2560		0.1850
2005.2	2010.2	0.0562		0.1731	2013.2	2006.1	0.3722		0.2041
2005.2	2010.3	0.3518		0.3185	2013.2	2006.2	-0.5695		0.3072
2005.2	2010.4	-0.1231		0.1284	2013.2	2006.3	-0.0824		0.1165
2005.2	2011.1	-0.0651		0.1148	2013.2	2006.4	0.2809		0.2101
2005.2	2011.2	0.1621		0.2834	2013.2	2007.1	0.3674		0.1949
2005.2	2011.3	0.3663		0.2996	2013.2	2007.2	-0.4890		0.3139
2005.2	2011.4	-0.1641		0.1430	2013.2	2007.3	-0.1021		0.1053
2005.2	2012.1	-0.1852		0.1622	2013.2	2007.4	0.3049		0.2251
2005.2	2012.2	-0.0293		0.2149	2013.2	2008.1	0.3076		0.2084
2005.2	2012.3	0.2588		0.3356	2013.2	2008.2	-0.5120		0.3112
2005.2	2012.4	-0.2095		0.1207	2013.2	2008.3	0.0112		0.0905
2005.2	2013.1	-0.2016		0.1396	2013.2	2008.4	0.2149		0.2471
2005.2	2013.2	-0.0459		0.2313	2013.2	2009.1	0.2437		0.2535
2005.2	2013.3	0.1785		0.4672	2013.2	2009.2	-0.3930		0.3481
2005.2	2013.4	-0.2308		0.1543	2013.2	2009.3	-0.0402		0.0948
2005.2	2014.1	-0.1389		0.1757	2013.2	2009.4	0.2847		0.2282
2005.2	2014.2	-0.0800		0.2138	2013.2	2010.1	0.2215		0.1735
2005.2	2014.3	0.1265		0.3401	2013.2	2010.2	-0.5736		0.3217
2005.2	2014.4	-0.3448		0.1827	2013.2	2010.3	-0.0404		0.1196
2005.2	2015.1	-0.3098		0.2251	2013.2	2010.4	0.3143		0.2086
2005.2	2015.2	-0.2323		0.1957	2013.2	2011.1	0.3408		0.1629
2005.2	2015.3	0.0544		0.5429	2013.2	2011.2	-0.5080		0.3247

Table 11: Monthly: Log(Receipts) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2013.2	2011.3	-0.1521		0.0883	2015.2	2007.2	-0.2288		0.3893
2013.2	2011.4	0.3550		0.2620	2015.2	2007.3	-0.1342		0.1239
2013.2	2012.1	0.3651		0.1963	2015.2	2007.4	0.2375		0.2723
2013.2	2012.2	-0.6134		0.3342	2015.2	2008.1	0.1454		0.2214
2013.2	2012.3	-0.1055		0.1263	2015.2	2008.2	-0.2133		0.3752
2013.2	2012.4	0.3270		0.2324	2015.2	2008.3	-0.1343		0.1192
2013.2	2013.1	0.3356		0.2310	2015.2	2008.4	0.1015		0.2527
2013.2	2013.2	-0.5847		0.3416	2015.2	2009.1	0.1647		0.2443
2013.2	2013.3	-0.7711		0.5085	2015.2	2009.2	-0.1429		0.3856
2013.2	2013.4	-0.4504		0.2423	2015.2	2009.3	-0.1441		0.1075
2013.2	2014.1	-0.1556	*	0.0265	2015.2	2009.4	0.2102		0.2337
2013.2	2014.2	-0.5068		0.3546	2015.2	2010.1	0.2429		0.1780
2013.2	2014.3	-0.6938		0.4249	2015.2	2010.2	-0.2212		0.2814
2013.2	2014.4	-0.6006	*	0.1579	2015.2	2010.3	-0.0787		0.1233
2013.2	2015.1	-0.2108	*	0.0835	2015.2	2010.4	0.1590		0.2588
2013.2	2015.2	-0.9097	*	0.3168	2015.2	2011.1	0.1897		0.1883
2013.2	2015.3	-0.9365		0.4783	2015.2	2011.2	-0.2592		0.3849
2013.2	2015.4	-0.5969	*	0.1831	2015.2	2011.3	-0.1566		0.0907
2013.2	2016.1	-0.1803	*	0.0697	2015.2	2011.4	0.2025		0.2605
2013.2	2016.2	-1.0070	*	0.3295	2015.2	2012.1	0.2361		0.2140
2013.2	2016.3	-0.9694		0.4731	2015.2	2012.2	-0.2990		0.3667
2013.2	2016.4	-0.7759	*	0.1915	2015.2	2012.3	-0.0778		0.1329
2013.2	2017.1	-0.1815	*	0.0839	2015.2	2012.4	0.2300		0.2546
2013.2	2017.2	-1.0356	*	0.4109	2015.2	2013.1	0.2079		0.2645
2013.2	2017.3	-1.1879	*	0.4944	2015.2	2013.2	-0.4659		0.4687
2013.2	2017.4	-0.6916	*	0.2460	2015.2	2013.3	-0.2061		0.1454
2013.2	2018.1	-0.3028	*	0.0548	2015.2	2013.4	0.3222		0.3581
2013.2	2018.2	-1.1193	*	0.3810	2015.2	2014.1	0.3208		0.3547
2013.2	2018.3	-1.2408	*	0.4837	2015.2	2014.2	-0.5153		0.4702
2013.2	2018.4	-0.8370	*	0.2096	2015.2	2014.3	-0.1522		0.1017
2013.2	2019.1	-0.3911	*	0.0920	2015.2	2014.4	0.3358		0.2866
2013.2	2019.2	-1.1730	*	0.3450	2015.2	2015.1	0.3896		0.3852
2013.2	2019.3	-1.1535	*	0.4461	2015.2	2015.2	-0.4610		0.4195
2013.2	2019.4	-0.8920	*	0.1707	2015.2	2015.3	-0.5478		0.5869
2015.2	2003.2	-0.3235		0.2090	2015.2	2015.4	-0.2944		0.2838
2015.2	2003.3	-0.1092		0.0792	2015.2	2016.1	-0.0873	*	0.0263
2015.2	2003.4	0.2347		0.1592	2015.2	2016.2	-0.5874		0.4329
2015.2	2004.1	0.1620		0.1552	2015.2	2016.3	-0.6735		0.5749
2015.2	2004.2	-0.2487		0.2239	2015.2	2016.4	-0.3767		0.2842
2015.2	2004.3	-0.1518		0.1068	2015.2	2017.1	-0.0937		0.0883
2015.2	2004.4	0.2148		0.1718	2015.2	2017.2	-0.5191		0.5037
2015.2	2005.1	0.1844		0.1489	2015.2	2017.3	-0.7178		0.5871
2015.2	2005.2	-0.1840		0.3147	2015.2	2017.4	-0.3107		0.3388
2015.2	2005.3	-0.1727		0.1325	2015.2	2018.1	-0.2610	*	0.1176
2015.2	2005.4	0.2148		0.2264	2015.2	2018.2	-0.7058		0.4737
2015.2	2006.1	0.1682		0.2118	2015.2	2018.3	-0.8076		0.5765
2015.2	2006.2	-0.2807		0.3092	2015.2	2018.4	-0.5075		0.3024
2015.2	2006.3	-0.0866		0.1233	2015.2	2019.1	-0.3182	*	0.0615
2015.2	2006.4	0.1835		0.2194	2015.2	2019.2	-0.7318		0.4377
2015.2	2007.1	0.1882		0.2002	2015.2	2019.3	-0.8875		0.5388
					2015.2	2019.4	-0.6013	*	0.2645

Table 12: Monthly: Log(Receipts) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)	Std. Error	Group	Time	ATT(g,t)	Std. Error
2005.2	2003.2	0.3335	0.0919	2005.2	2015.4	-0.3163	0.0772
2005.2	2003.3	0.0689	0.0624	2005.2	2016.1	-0.4485	0.0758
2005.2	2003.4	-0.4509	0.0949	2005.2	2016.2	-0.1015	0.0182
2005.2	2004.1	0.0488	0.0993	2005.2	2016.3	0.2385	0.2368
2005.2	2004.2	0.1468	0.0886	2005.2	2016.4	-0.2881	0.1822
2005.2	2004.3	0.2760	0.0743	2005.2	2017.1	-0.3629	0.0354
2005.2	2004.4	-0.4181	0.1075	2005.2	2017.2	0.1115	0.1036
2005.2	2005.1	-0.0226	0.0823	2005.2	2017.3	0.3342	0.2278
2005.2	2005.2	0.1830	0.1259	2005.2	2017.4	-0.1079	0.0400
2005.2	2005.3	0.4199	0.1490	2005.2	2018.1	-0.2614	0.0294
2005.2	2005.4	-0.0130	0.1021	2005.2	2018.2	0.0429	0.0084
2005.2	2006.1	-0.0360	0.0477	2005.2	2018.3	0.3143	0.1913
2005.2	2006.2	0.2143	0.1043	2005.2	2018.4	-0.2083	0.1758
2005.2	2006.3	0.4601	0.1738	2005.2	2019.1	-0.3663	0.0450
2005.2	2006.4	0.0124	0.0757	2005.2	2019.2	-0.0176	0.1436
2005.2	2007.1	0.0097	0.0450	2005.2	2019.3	0.2186	0.1178
2005.2	2007.2	0.2498	0.1121	2005.2	2019.4	-0.3475	0.1617
2005.2	2007.3	0.4742	0.1808	2013.2	2003.2	-0.1000	0.1347
2005.2	2007.4	0.0512	0.1052	2013.2	2003.3	-0.1050	0.0689
2005.2	2008.1	0.0340	0.0503	2013.2	2003.4	0.2834	0.1243
2005.2	2008.2	0.2554	0.1225	2013.2	2004.1	0.2659	0.0846
2005.2	2008.3	0.4629	0.1752	2013.2	2004.2	-0.3830	0.1049
2005.2	2008.4	-0.1724	0.0669	2013.2	2004.3	-0.1993	0.1058
2005.2	2009.1	-0.1579	0.1451	2013.2	2004.4	0.4075	0.1160
2005.2	2009.2	0.2301	0.1564	2013.2	2005.1	0.1880	0.0807
2005.2	2009.3	0.4385	0.1918	2013.2	2005.2	-0.2962	0.1458
2005.2	2009.4	-0.0192	0.1152	2013.2	2005.3	0.0431	0.0678
2005.2	2010.1	-0.0769	0.0820	2013.2	2005.4	0.1813	0.0928
2005.2	2010.2	0.0797	0.1299	2013.2	2006.1	0.3014	0.1186
2005.2	2010.3	0.3862	0.1844	2013.2	2006.2	-0.4577	0.1625
2005.2	2010.4	-0.1144	0.1057	2013.2	2006.3	-0.0539	0.0793
2005.2	2011.1	-0.0775	0.1197	2013.2	2006.4	0.2029	0.1268
2005.2	2011.2	0.1906	0.1734	2013.2	2007.1	0.2953	0.0944
2005.2	2011.3	0.4033	0.2270	2013.2	2007.2	-0.3672	0.1584
2005.2	2011.4	-0.1561	0.0889	2013.2	2007.3	-0.0643	0.0761
2005.2	2012.1	-0.2034	0.1445	2013.2	2007.4	0.2121	0.1327
2005.2	2012.2	-0.0036	0.1722	2013.2	2008.1	0.2343	0.1361
2005.2	2012.3	0.2944	0.2270	2013.2	2008.2	-0.3871	0.1625
2005.2	2012.4	-0.2023	0.1183	2013.2	2008.3	0.0476	0.0660
2005.2	2013.1	-0.2225	0.1426	2013.2	2008.4	0.1180	0.2191
2005.2	2013.2	-0.0111	0.2049	2013.2	2009.1	0.1576	0.1254
2005.2	2013.3	0.2370	0.3107	2013.2	2009.2	-0.2634	0.2369
2005.2	2013.4	-0.2191	0.1110	2013.2	2009.3	-0.0022	0.0715
2005.2	2014.1	-0.1731	0.1396	2013.2	2009.4	0.1873	0.1498
2005.2	2014.2	-0.0406	0.1871	2013.2	2010.1	0.1407	0.1197
2005.2	2014.3	0.1755	0.2591	2013.2	2010.2	-0.4525	0.1610
2005.2	2014.4	-0.3407	0.1155	2013.2	2010.3	0.0032	0.0902
2005.2	2015.1	-0.3517	0.1738	2013.2	2010.4	0.2152	0.1398
2005.2	2015.2	-0.1056	0.0518	2013.2	2011.1	0.2646	0.1014
2005.2	2015.3	0.2880	0.2464	2013.2	2011.2	-0.3533	0.1525

Table 12: Monthly: Log(Receipts) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)	Std. Error
2013.2	2011.3	-0.1209		0.0720	2015.2	2007.2	0.7082	0.3262
2013.2	2011.4	0.2402		0.1559	2015.2	2007.3	0.1087	0.1904
2013.2	2012.1	0.2686		0.1170	2015.2	2007.4	-0.3894	0.3057
2013.2	2012.2	-0.4503		0.1617	2015.2	2008.1	-0.4037	0.2787
2013.2	2012.3	-0.0647		0.0910	2015.2	2008.2	0.7105	0.3496
2013.2	2012.4	0.2128		0.1303	2015.2	2008.3	0.0664	0.0971
2013.2	2013.1	0.2286		0.1212	2015.2	2008.4	-0.5499	0.3380
2013.2	2013.2	-0.4120		0.1561	2015.2	2009.1	-0.4368	0.1916
2013.2	2013.3	-0.5346		0.2439	2015.2	2009.2	0.8111	0.4507
2013.2	2013.4	-0.3389		0.1063	2015.2	2009.3	0.0582	0.1678
2013.2	2014.1	-0.1667		0.0242	2015.2	2009.4	-0.3818	0.3061
2013.2	2014.2	-0.3221		0.1465	2015.2	2010.1	-0.2260	0.2336
2013.2	2014.3	-0.4833		0.2354	2015.2	2010.2	0.5545	0.3043
2013.2	2014.4	-0.5111		0.0874	2015.2	2010.3	0.1778	0.2027
2013.2	2015.1	-0.2434		0.0651	2015.2	2010.4	-0.4408	0.2540
2013.2	2015.2	-0.5670		0.1898	2015.2	2011.1	-0.2675	0.2128
2013.2	2015.3	-0.4330		0.3781	2015.2	2011.2	0.6801	0.3217
2013.2	2015.4	-0.4012		0.1263	2015.2	2011.3	-0.0194	0.1556
2013.2	2016.1	-0.2475		0.0707	2015.2	2011.4	-0.4552	0.2841
2013.2	2016.2	-0.6469		0.1698	2015.2	2012.1	-0.3257	0.2548
2013.2	2016.3	-0.4597		0.2974	2015.2	2012.2	0.6923	0.3288
2013.2	2016.4	-0.5617		0.0668	2015.2	2012.3	0.1578	0.2272
2013.2	2017.1	-0.2102		0.1030	2015.2	2012.4	-0.3951	0.2915
2013.2	2017.2	-0.5886		0.0683	2015.2	2013.1	-0.4122	0.2229
2013.2	2017.3	-0.6649		0.3431	2015.2	2013.2	0.5401	0.3731
2013.2	2017.4	-0.4229		0.0302	2015.2	2013.3	0.1459	0.2370
2013.2	2018.1	-0.2688		0.0503	2015.2	2013.4	-0.4180	0.3001
2013.2	2018.2	-0.6964		0.1518	2015.2	2014.1	-0.3924	0.2843
2013.2	2018.3	-0.7128		0.2575	2015.2	2014.2	0.6185	0.3382
2013.2	2018.4	-0.5955	*	0.0197	2015.2	2014.3	-0.0538	0.1702
2013.2	2019.1	-0.4113		0.1643	2015.2	2014.4	-0.3622	0.4040
2013.2	2019.2	-0.7815		0.0784	2015.2	2015.1	-0.2749	0.2566
2013.2	2019.3	-0.6642		0.2183	2015.2	2015.2	0.5785	0.4301
2013.2	2019.4	-0.7040		0.0794	2015.2	2015.3	0.8750	0.7155
2015.2	2003.2	0.3165		0.2136	2015.2	2015.4	0.3963	0.3348
2015.2	2003.3	0.0715		0.1460	2015.2	2016.1	-0.0219	0.0107
2015.2	2003.4	-0.2284		0.2208	2015.2	2016.2	0.4931	0.3993
2015.2	2004.1	-0.3183		0.1859	2015.2	2016.3	0.7630	0.5923
2015.2	2004.2	0.4146		0.2500	2015.2	2016.4	0.3570	0.2439
2015.2	2004.3	0.0483		0.1708	2015.2	2017.1	0.0630	0.1315
2015.2	2004.4	-0.2426		0.2516	2015.2	2017.2	0.7682	0.3386
2015.2	2005.1	-0.2695		0.1555	2015.2	2017.3	0.7511	0.7264
2015.2	2005.2	0.5554		0.3191	2015.2	2017.4	0.5528	0.1836
2015.2	2005.3	0.0500		0.1027	2015.2	2018.1	0.0445	0.0678
2015.2	2005.4	-0.3206		0.2077	2015.2	2018.2	0.5235	0.3712
2015.2	2006.1	-0.4052		0.2620	2015.2	2018.3	0.6717	0.5313
2015.2	2006.2	0.5933		0.3743	2015.2	2018.4	0.2904	0.1814
2015.2	2006.3	0.1207		0.2278	2015.2	2019.1	-0.1426	0.1061
2015.2	2006.4	-0.3850		0.2896	2015.2	2019.2	0.4222	0.2595
2015.2	2007.1	-0.3668		0.2428	2015.2	2019.3	0.4998	0.4719
					2015.2	2019.4	0.0703	0.2633

Table 13: Monthly: Log(Arrivals) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2005.2	2003.2	0.3651		0.2083	2005.2	2014.3	0.0954		0.2076
2005.2	2003.3	0.0813		0.0640	2005.2	2014.4	-0.2353		0.0979
2005.2	2003.4	-0.4757	*	0.1207	2005.2	2015.1	-0.1726		0.1554
2005.2	2004.1	0.0032		0.1249	2005.2	2015.2	-0.1129		0.1861
2005.2	2004.2	0.2160		0.1899	2005.2	2015.3	0.1069		0.2617
2005.2	2004.3	0.1699	*	0.0529	2005.2	2015.4	-0.2427		0.1186
2005.2	2004.4	-0.3876	*	0.1269	2005.2	2016.1	-0.1961		0.1508
2005.2	2005.1	-0.0532		0.1302	2005.2	2016.2	-0.1232		0.1666
2005.2	2005.2	0.2324		0.2054	2005.2	2016.3	0.0222		0.2797
2005.2	2005.3	0.4312		0.2375	2005.2	2016.4	-0.2897		0.1398
2005.2	2005.4	0.0562		0.1052	2005.2	2017.1	-0.2109		0.1357
2005.2	2006.1	0.0495		0.0276	2005.2	2017.2	-0.0293		0.2134
2005.2	2006.2	0.3008		0.2040	2005.2	2017.3	0.2180		0.3045
2005.2	2006.3	0.4666		0.2550	2005.2	2017.4	-0.1957		0.1044
2005.2	2006.4	0.0699		0.1179	2005.2	2018.1	-0.1607		0.1225
2005.2	2007.1	0.0814		0.0429	2005.2	2018.2	-0.0090		0.2606
2005.2	2007.2	0.2760		0.2045	2005.2	2018.3	0.1292		0.2930
2005.2	2007.3	0.4231		0.2853	2005.2	2018.4	-0.2254		0.1221
2005.2	2007.4	0.0212		0.1364	2005.2	2019.1	-0.1558		0.1616
2005.2	2008.1	0.0361		0.0529	2005.2	2019.2	-0.0522		0.2425
2005.2	2008.2	0.2575		0.2224	2005.2	2019.3	0.0504		0.3009
2005.2	2008.3	0.3541		0.2684	2005.2	2019.4	-0.2996		0.1268
2005.2	2008.4	-0.0405		0.1290	2013.2	2003.2	-0.9416	*	0.1716
2005.2	2009.1	-0.0974		0.0727	2013.2	2003.3	-0.2961	*	0.0681
2005.2	2009.2	0.2408		0.1970	2013.2	2003.4	0.5637	*	0.1127
2005.2	2009.3	0.3170		0.2488	2013.2	2004.1	0.6609	*	0.1106
2005.2	2009.4	-0.0790		0.1327	2013.2	2004.2	-0.8896	*	0.1561
2005.2	2010.1	-0.1128		0.0650	2013.2	2004.3	-0.1470	*	0.0519
2005.2	2010.2	0.1330		0.2068	2013.2	2004.4	0.4581	*	0.1098
2005.2	2010.3	0.2717		0.2633	2013.2	2005.1	0.5775	*	0.0916
2005.2	2010.4	-0.1406		0.1169	2013.2	2005.2	-0.8768	*	0.1765
2005.2	2011.1	-0.1352		0.0791	2013.2	2005.3	-0.0390		0.0550
2005.2	2011.2	0.1347		0.1946	2013.2	2005.4	0.3728	*	0.1402
2005.2	2011.3	0.2848		0.2492	2013.2	2006.1	0.5888	*	0.1259
2005.2	2011.4	-0.1351		0.1132	2013.2	2006.2	-0.9949	*	0.2139
2005.2	2012.1	-0.1453		0.0970	2013.2	2006.3	-0.1864	*	0.0598
2005.2	2012.2	0.1120		0.2124	2013.2	2006.4	0.5100	*	0.1577
2005.2	2012.3	0.2817		0.2624	2013.2	2007.1	0.6193	*	0.1210
2005.2	2012.4	-0.1673		0.1151	2013.2	2007.2	-1.0246	*	0.2019
2005.2	2013.1	-0.1406		0.1161	2013.2	2007.3	-0.0297		0.0687
2005.2	2013.2	-0.0218		0.1754	2013.2	2007.4	0.3615		0.1491
2005.2	2013.3	0.0839		0.2241	2013.2	2008.1	0.6401	*	0.1226
2005.2	2013.4	-0.2142		0.1019	2013.2	2008.2	-1.0621	*	0.2191
2005.2	2014.1	-0.1466		0.1734	2013.2	2008.3	0.0691		0.0567
2005.2	2014.2	-0.0889		0.1459	2013.2	2008.4	0.3434		0.1803

Table 13: Monthly: Log(Arrivals) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2013.2	2009.1	0.6651	*	0.1503	2015.2	2003.3	0.0770		0.0647
2013.2	2009.2	-1.0092	*	0.2431	2015.2	2003.4	0.0297		0.1731
2013.2	2009.3	-0.1177	*	0.0338	2015.2	2004.1	0.0347		0.1254
2013.2	2009.4	0.4389	*	0.1631	2015.2	2004.2	-0.1045		0.2060
2013.2	2010.1	0.6969	*	0.1105	2015.2	2004.3	0.0163		0.0583
2013.2	2010.2	-1.0761	*	0.2062	2015.2	2004.4	0.0159		0.1552
2013.2	2010.3	-0.0392		0.0534	2015.2	2005.1	0.2939	*	0.1169
2013.2	2010.4	0.5036	*	0.1579	2015.2	2005.2	-0.1047		0.2361
2013.2	2011.1	0.5133	*	0.1120	2015.2	2005.3	-0.0094		0.0581
2013.2	2011.2	-0.8837	*	0.2320	2015.2	2005.4	0.0691		0.1447
2013.2	2011.3	-0.1459	*	0.0484	2015.2	2006.1	0.0666		0.1410
2013.2	2011.4	0.5689	*	0.1630	2015.2	2006.2	-0.1146		0.2417
2013.2	2012.1	0.5032	*	0.1291	2015.2	2006.3	0.0658		0.0599
2013.2	2012.2	-0.9659	*	0.2457	2015.2	2006.4	0.0477		0.1681
2013.2	2012.3	-0.0831		0.0554	2015.2	2007.1	0.0416		0.1408
2013.2	2012.4	0.5426	*	0.1707	2015.2	2007.2	-0.0684		0.2570
2013.2	2013.1	0.5195	*	0.1505	2015.2	2007.3	0.0331		0.0657
2013.2	2013.2	-1.0165	*	0.2497	2015.2	2007.4	0.0844		0.1564
2013.2	2013.3	-1.1113	*	0.2898	2015.2	2008.1	0.0137		0.1373
2013.2	2013.4	-0.5495	*	0.1380	2015.2	2008.2	-0.1188		0.2923
2013.2	2014.1	-0.3674	*	0.0380	2015.2	2008.3	0.0328		0.0520
2013.2	2014.2	-0.6904	*	0.2443	2015.2	2008.4	0.0319		0.1458
2013.2	2014.3	-0.9763	*	0.2910	2015.2	2009.1	-0.0402		0.1758
2013.2	2014.4	-0.4973	*	0.1065	2015.2	2009.2	-0.0514		0.3258
2013.2	2015.1	-0.0006		0.0307	2015.2	2009.3	0.0585		0.0446
2013.2	2015.2	-1.2252	*	0.2658	2015.2	2009.4	0.0906		0.1759
2013.2	2015.3	-1.3750	*	0.3321	2015.2	2010.1	-0.0058		0.1612
2013.2	2015.4	-0.5632	*	0.1299	2015.2	2010.2	-0.1003		0.2452
2013.2	2016.1	-0.0619	*	0.0219	2015.2	2010.3	0.0224		0.0551
2013.2	2016.2	-1.3799	*	0.2971	2015.2	2010.4	0.0424		0.1825
2013.2	2016.3	-1.2535	*	0.3778	2015.2	2011.1	0.0183		0.1270
2013.2	2016.4	-0.9250	*	0.1505	2015.2	2011.2	-0.0967		0.2609
2013.2	2017.1	-0.1595	*	0.0307	2015.2	2011.3	0.0510		0.0502
2013.2	2017.2	-1.3809	*	0.3144	2015.2	2011.4	0.0204		0.1752
2013.2	2017.3	-1.2622	*	0.4831	2015.2	2012.1	0.0847		0.1491
2013.2	2017.4	-0.8205	*	0.2491	2015.2	2012.2	-0.1790		0.2942
2013.2	2018.1	-0.1534		0.1012	2015.2	2012.3	0.0785		0.0556
2013.2	2018.2	-1.4407	*	0.4184	2015.2	2012.4	0.0648		0.2067
2013.2	2018.3	-1.3313	*	0.4715	2015.2	2013.1	0.1115		0.1594
2013.2	2018.4	-0.9317	*	0.2441	2015.2	2013.2	-0.4062		0.3242
2013.2	2019.1	-0.3360	*	0.0957	2015.2	2013.3	0.0217		0.0574
2013.2	2019.2	-1.3645	*	0.3943	2015.2	2013.4	0.1934		0.1808
2013.2	2019.3	-1.4147	*	0.4541	2015.2	2014.1	0.1548		0.2127
2013.2	2019.4	-1.0302	*	0.2255	2015.2	2014.2	-0.4212		0.3376
2015.2	2003.2	-0.0958		0.2244	2015.2	2014.3	0.0437		0.0584
2015.2	2014.4	0.1774		0.2099					

Table 13: Monthly: Log(Arrivals) with no covariates, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2015.2	2015.1	0.1544		0.1480	2017.3	2009.1	-0.2598		0.1797
2015.2	2015.2	-0.3606		0.3081	2017.3	2009.2	0.5190		0.3053
2015.2	2015.3	-0.3031		0.3575	2017.3	2009.3	0.1729	*	0.0288
2015.2	2015.4	-0.2152		0.1553	2017.3	2009.4	-0.4313		0.1783
2015.2	2016.1	-0.1524	*	0.0364	2017.3	2010.1	-0.2017		0.1405
2015.2	2016.2	-0.5279		0.3379	2017.3	2010.2	0.5170		0.3641
2015.2	2016.3	-0.4969		0.4087	2017.3	2010.3	0.1831	*	0.0390
2015.2	2016.4	-0.3734		0.1831	2017.3	2010.4	-0.4351	*	0.1717
2015.2	2017.1	-0.2745	*	0.0462	2017.3	2011.1	-0.0631		0.1293
2015.2	2017.2	-0.5409		0.3398	2017.3	2011.2	0.2914		0.3191
2015.2	2017.3	-0.4072		0.5157	2017.3	2011.3	0.1401	*	0.0427
2015.2	2017.4	-0.3096		0.2818	2017.3	2011.4	-0.4083		0.1832
2015.2	2018.1	-0.2315		0.1338	2017.3	2012.1	-0.2112		0.1553
2015.2	2018.2	-0.4974		0.4511	2017.3	2012.2	0.4649		0.3364
2015.2	2018.3	-0.4666		0.5042	2017.3	2012.3	0.1716	*	0.0489
2015.2	2018.4	-0.3995		0.2767	2017.3	2012.4	-0.3982		0.1963
2015.2	2019.1	-0.3007	*	0.1106	2017.3	2013.1	-0.1893		0.1790
2015.2	2019.2	-0.5605		0.4270	2017.3	2013.2	0.3520		0.3118
2015.2	2019.3	-0.5308		0.4867	2017.3	2013.3	0.0546		0.0506
2015.2	2019.4	-0.4614		0.2582	2017.3	2013.4	-0.2222		0.2116
2017.3	2003.2	0.4273		0.2006	2017.3	2014.1	-0.1702		0.2307
2017.3	2003.3	0.1317		0.0694	2017.3	2014.2	0.2763		0.3367
2017.3	2003.4	-0.4721	*	0.1313	2017.3	2014.3	0.1270	*	0.0508
2017.3	2004.1	-0.1931		0.1270	2017.3	2014.4	-0.2968		0.2347
2017.3	2004.2	0.4080		0.2023	2017.3	2015.1	-0.1151		0.1494
2017.3	2004.3	0.2060	*	0.0529	2017.3	2015.2	0.2247		0.3751
2017.3	2004.4	-0.4265	*	0.1237	2017.3	2015.3	0.2006		0.1033
2017.3	2005.1	-0.3161	*	0.1222	2017.3	2015.4	-0.3315		0.2773
2017.3	2005.2	0.4981		0.2780	2017.3	2016.1	-0.1419		0.1592
2017.3	2005.3	0.2401	*	0.0381	2017.3	2016.2	0.2236		0.3482
2017.3	2005.4	-0.4585	*	0.1518	2017.3	2016.3	0.1083		0.0706
2017.3	2006.1	-0.2795		0.1535	2017.3	2016.4	-0.1756		0.2327
2017.3	2006.2	0.4538		0.3420	2017.3	2017.1	-0.0175		0.1673
2017.3	2006.3	0.2234	*	0.0509	2017.3	2017.2	0.2411		0.3887
2017.3	2006.4	-0.4308	*	0.1511	2017.3	2017.3	0.0969		0.0664
2017.3	2007.1	-0.1845		0.1496	2017.3	2017.4	-0.0841		0.1676
2017.3	2007.2	0.4407		0.3824	2017.3	2018.1	-0.1288		0.3156
2017.3	2007.3	0.2422	*	0.0543	2017.3	2018.2	0.0784		0.0611
2017.3	2007.4	-0.3836		0.1732	2017.3	2018.3	0.1548		0.0807
2017.3	2008.1	-0.1796		0.1473	2017.3	2018.4	-0.0763		0.1726
2017.3	2008.2	0.4117		0.4106	2017.3	2019.1	-0.1329		0.3394
2017.3	2008.3	0.1359	*	0.0475	2017.3	2019.2	0.0598		0.1052
2017.3	2008.4	-0.4573	*	0.1537	2017.3	2019.3	0.1448		0.0748
					2017.3	2019.4	-0.0560		0.1912

Table 14: Monthly: Log(Arrivals) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std Error	Group	Time	ATT(g,t)		Std. Error
2005.2	2003.2	0.4872	*	0.1670	2005.2	2014.3	0.2242		0.1609
2005.2	2003.3	0.1022		0.0900	2005.2	2014.4	-0.2171		0.1145
2005.2	2003.4	-0.5595	*	0.1124	2005.2	2015.1	-0.2248		0.1445
2005.2	2004.1	-0.0667		0.1120	2005.2	2015.2	0.0973		0.1309
2005.2	2004.2	0.3290		0.1405	2005.2	2015.3	0.4291	*	0.1340
2005.2	2004.3	0.1966	*	0.0473	2005.2	2015.4	-0.1783		0.1693
2005.2	2004.4	-0.4648	*	0.1051	2005.2	2016.1	-0.2763		0.1948
2005.2	2005.1	-0.1401		0.0892	2005.2	2016.2	0.0942		0.1920
2005.2	2005.2	0.3505		0.1450	2005.2	2016.3	0.3133		0.1955
2005.2	2005.3	0.5801	*	0.1617	2005.2	2016.4	-0.2029		0.1779
2005.2	2005.4	0.1216		0.0906	2005.2	2017.1	-0.2485		0.1787
2005.2	2006.1	0.0372	*	0.0142	2005.2	2017.2	0.2552	*	0.0783
2005.2	2006.2	0.4147	*	0.1505	2005.2	2017.3	0.4567	*	0.1102
2005.2	2006.3	0.6043	*	0.2014	2005.2	2017.4	-0.1249		0.0968
2005.2	2006.4	0.1245		0.1143	2005.2	2018.1	-0.2021		0.1508
2005.2	2007.1	0.0679	*	0.0247	2005.2	2018.2	0.1910		0.0994
2005.2	2007.2	0.3871		0.1673	2005.2	2018.3	0.3667	*	0.1182
2005.2	2007.3	0.5660	*	0.2097	2005.2	2018.4	-0.1545		0.1561
2005.2	2007.4	0.0767		0.1253	2005.2	2019.1	-0.2103		0.1947
2005.2	2008.1	0.0268		0.0363	2005.2	2019.2	0.1360		0.1482
2005.2	2008.2	0.3766		0.1739	2005.2	2019.3	0.2782		0.1140
2005.2	2008.3	0.4922	*	0.1897	2005.2	2019.4	-0.2413		0.1592
2005.2	2008.4	0.0130		0.1180	2013.2	2003.2	-0.8114	*	0.1353
2005.2	2009.1	-0.1235		0.0713	2013.2	2003.3	-0.2787	*	0.0758
2005.2	2009.2	0.3528		0.1794	2013.2	2003.4	0.4717	*	0.1327
2005.2	2009.3	0.4492		0.1824	2013.2	2004.1	0.5876	*	0.0448
2005.2	2009.4	-0.0378		0.1364	2013.2	2004.2	-0.7647	*	0.0832
2005.2	2010.1	-0.1342		0.0604	2013.2	2004.3	-0.1187		0.0504
2005.2	2010.2	0.2427		0.1887	2013.2	2004.4	0.3679	*	0.1272
2005.2	2010.3	0.4061		0.1976	2013.2	2005.1	0.4781	*	0.0323
2005.2	2010.4	-0.0960		0.1221	2013.2	2005.2	-0.7213	*	0.0896
2005.2	2011.1	-0.1404		0.0725	2013.2	2005.3	0.0094		0.0484
2005.2	2011.2	0.2463		0.1740	2013.2	2005.4	0.2518	*	0.0887
2005.2	2011.3	0.4174		0.2027	2013.2	2006.1	0.4880	*	0.0621
2005.2	2011.4	-0.0929		0.1135	2013.2	2006.2	-0.8312	*	0.1051
2005.2	2012.1	-0.1752		0.1024	2013.2	2006.3	-0.1548	*	0.0592
2005.2	2012.2	0.2237		0.1905	2013.2	2006.4	0.3937	*	0.1190
2005.2	2012.3	0.4191		0.2044	2013.2	2007.1	0.5337	*	0.0517
2005.2	2012.4	-0.1303		0.1194	2013.2	2007.2	-0.8618	*	0.1100
2005.2	2013.1	-0.1796		0.1052	2013.2	2007.3	0.0217		0.0671
2005.2	2013.2	0.0862		0.1427	2013.2	2007.4	0.2298	*	0.0906
2005.2	2013.3	0.2152		0.1793	2013.2	2008.1	0.5590	*	0.0538
2005.2	2013.4	-0.1807		0.0991	2013.2	2008.2	-0.8911	*	0.1064
2005.2	2014.1	-0.2092		0.1250	2013.2	2008.3	0.1042		0.0528
2005.2	2014.2	0.0128		0.1163	2013.2	2008.4	0.2099		0.1242

Table 14: Monthly: Log(Arrivals) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2013.2	2009.1	0.5575	*	0.0903	2015.2	2003.3	0.2107		0.1079
2013.2	2009.2	-0.8170	*	0.1544	2015.2	2003.4	-0.3996		0.2387
2013.2	2009.3	-0.0878		0.0469	2015.2	2004.1	-0.3322		0.1871
2013.2	2009.4	0.2972	*	0.1072	2015.2	2004.2	0.4689		0.2646
2013.2	2010.1	0.6167	*	0.0525	2015.2	2004.3	0.1524		0.0864
2013.2	2010.2	-0.8906	*	0.1182	2015.2	2004.4	-0.3880		0.2028
2013.2	2010.3	0.0032		0.0486	2015.2	2005.1	-0.0686		0.1782
2013.2	2010.4	0.3637	*	0.1064	2015.2	2005.2	0.5830		0.2609
2013.2	2011.1	0.4467	*	0.0439	2015.2	2005.3	0.1784	*	0.0552
2013.2	2011.2	-0.7122	*	0.1193	2015.2	2005.4	-0.4260	*	0.1671
2013.2	2011.3	-0.1149		0.0476	2015.2	2006.1	-0.3870		0.1717
2013.2	2011.4	0.4282	*	0.1131	2015.2	2006.2	0.6157		0.3062
2013.2	2012.1	0.3964	*	0.0557	2015.2	2006.3	0.2434		0.1238
2013.2	2012.2	-0.7540	*	0.1218	2015.2	2006.4	-0.4512		0.2343
2013.2	2012.3	-0.0406		0.0707	2015.2	2007.1	-0.3615		0.2002
2013.2	2012.4	0.3821	*	0.1045	2015.2	2007.2	0.6718		0.3086
2013.2	2013.1	0.4045	*	0.0611	2015.2	2007.3	0.2444	*	0.0871
2013.2	2013.2	-0.7866	*	0.1269	2015.2	2007.4	-0.4248	*	0.1576
2013.2	2013.3	-0.8486	*	0.1547	2015.2	2008.1	-0.3785		0.1932
2013.2	2013.4	-0.4270	*	0.0702	2015.2	2008.2	0.6248		0.3212
2013.2	2014.1	-0.3838	*	0.0299	2015.2	2008.3	0.1628		0.0696
2013.2	2014.2	-0.4705	*	0.0926	2015.2	2008.4	-0.4791		0.2039
2013.2	2014.3	-0.7176	*	0.1355	2015.2	2009.1	-0.5505	*	0.1893
2013.2	2014.4	-0.3976	*	0.0222	2015.2	2009.2	0.7816		0.3337
2013.2	2015.1	-0.0025		0.0403	2015.2	2009.3	0.2078	*	0.0207
2013.2	2015.2	-0.8584	*	0.1036	2015.2	2009.4	-0.4368		0.1896
2013.2	2015.3	-0.8654	*	0.1762	2015.2	2010.1	-0.3976		0.2267
2013.2	2015.4	-0.3831	*	0.0180	2015.2	2010.2	0.6693		0.3233
2013.2	2016.1	-0.0648		0.0345	2015.2	2010.3	0.1830	*	0.0513
2013.2	2016.2	-1.0061	*	0.1261	2015.2	2010.4	-0.4964	*	0.1781
2013.2	2016.3	-0.7873	*	0.1498	2015.2	2011.1	-0.2829		0.1447
2013.2	2016.4	-0.7166	*	0.0358	2015.2	2011.2	0.5836		0.2829
2013.2	2017.1	-0.1096	*	0.0189	2015.2	2011.3	0.1980	*	0.0563
2013.2	2017.2	-0.9178	*	0.1553	2015.2	2011.4	-0.5302	*	0.1858
2013.2	2017.3	-0.7303	*	0.2353	2015.2	2012.1	-0.3232		0.1444
2013.2	2017.4	-0.5355	*	0.0856	2015.2	2012.2	0.6211		0.2860
2013.2	2018.1	-0.0318		0.0668	2015.2	2012.3	0.2663	*	0.0356
2013.2	2018.2	-0.9693	*	0.1262	2015.2	2012.4	-0.5285	*	0.1326
2013.2	2018.3	-0.8046	*	0.1723	2015.2	2013.1	-0.3116		0.1658
2013.2	2018.4	-0.6493	*	0.0228	2015.2	2013.2	0.3456		0.2766
2013.2	2019.1	-0.2357	*	0.0689	2015.2	2013.3	0.1713		0.0701
2013.2	2019.2	-0.9128	*	0.0649	2015.2	2013.4	-0.3003		0.1709
2013.2	2019.3	-0.9035	*	0.1368	2015.2	2014.1	-0.3478		0.2071
2013.2	2019.4	-0.7663	*	0.0177	2015.2	2014.2	0.3550		0.3095
2015.2	2003.2	0.5075		0.3216	2015.2	2014.3	0.2302	*	0.0673
2015.2	2014.4	-0.4083		0.1942	2017.3	2009.1	0.3652		0.3491

Table 14: Monthly: Log(Arrivals) with log(GDP) covariate, marriage-only countries

Group	Time	ATT(g,t)		Std. Error	Group	Time	ATT(g,t)		Std. Error
2015.2	2015.1	-0.1958		0.1310	2017.3	2009.2	-0.4942		0.5446
2015.2	2015.2	0.3987		0.2742	2017.3	2009.3	0.1132		0.0863
2015.2	2015.3	0.7285		0.3582	2017.3	2009.4	0.1514		0.3013
2015.2	2015.4	0.1849		0.1057	2017.3	2010.1	0.2977		0.2368
2015.2	2016.1	-0.1041	*	0.0326	2017.3	2010.2	-0.4286		0.4071
2015.2	2016.2	0.2459		0.3021	2017.3	2010.3	0.0835		0.1064
2015.2	2016.3	0.4535		0.3511	2017.3	2010.4	0.1341		0.3089
2015.2	2016.4	0.0811		0.1602	2017.3	2011.1	0.4228		0.1928
2015.2	2017.1	-0.1272		0.0547	2017.3	2011.2	-0.7136		0.4182
2015.2	2017.2	0.4027		0.3430	2017.3	2011.3	0.0428		0.0870
2015.2	2017.3	0.9260		0.4439	2017.3	2011.4	0.1986		0.3214
2015.2	2017.4	0.4365	*	0.1694	2017.3	2012.1	0.3800		0.2176
2015.2	2018.1	0.1266		0.1064	2017.3	2012.2	-0.6401		0.4216
2015.2	2018.2	0.6915		0.2782	2017.3	2012.3	0.0520		0.1260
2015.2	2018.3	0.8535		0.3479	2017.3	2012.4	0.3090		0.3095
2015.2	2018.4	0.3403	*	0.1226	2017.3	2013.1	0.4556		0.2236
2015.2	2019.1	0.0066		0.0479	2017.3	2013.2	-0.6573		0.3227
2015.2	2019.2	0.5806	*	0.1848	2017.3	2013.3	-0.0852		0.0794
2015.2	2019.3	0.7521	*	0.2939	2017.3	2013.4	0.3754		0.2139
2015.2	2019.4	0.2342	*	0.0912	2017.3	2014.1	0.4714		0.2602
2017.3	2003.2	-0.3851		0.3957	2017.3	2014.2	-0.8081	*	0.3161
2017.3	2003.3	0.0531		0.1087	2017.3	2014.3	0.0122		0.1072
2017.3	2003.4	-0.0893		0.2432	2017.3	2014.4	0.3364		0.2695
2017.3	2004.1	0.3420		0.2345	2017.3	2015.1	0.3519		0.1503
2017.3	2004.2	-0.3757		0.3327	2017.3	2015.2	-0.9014	*	0.1152
2017.3	2004.3	0.1470		0.0844	2017.3	2015.3	-0.1057	*	0.0381
2017.3	2004.4	-0.0496		0.2436	2017.3	2015.4	0.4797	*	0.1038
2017.3	2005.1	0.2807	*	0.0857	2017.3	2016.1	0.3493	*	0.0303
2017.3	2005.2	-0.3016		0.3997	2017.3	2016.2	-0.8515	*	0.0759
2017.3	2005.3	0.1300		0.0966	2017.3	2016.3	-0.1093	*	0.0165
2017.3	2005.4	0.0063		0.2725	2017.3	2016.4	0.5347	*	0.0533
2017.3	2006.1	0.2884		0.2486	2017.3	2017.1	0.5049	*	0.0302
2017.3	2006.2	-0.4761		0.4318	2017.3	2017.2	-0.9341	*	0.1050
2017.3	2006.3	0.1697		0.1380	2017.3	2017.3	-0.1000	*	0.0244
2017.3	2006.4	0.0606		0.3090	2017.3	2017.4	0.4068	*	0.0706
2017.3	2007.1	0.3745		0.2403	2017.3	2018.1	0.8162	*	0.1041
2017.3	2007.2	-0.4874		0.4353	2017.3	2018.2	0.0521		0.0292
2017.3	2007.3	0.1211		0.1414	2017.3	2018.3	-0.0253	*	0.0093
2017.3	2007.4	0.1978		0.3024	2017.3	2018.4	0.4233	*	0.0812
2017.3	2008.1	0.3545		0.2457	2017.3	2019.1	0.8725	*	0.1273
2017.3	2008.2	-0.5908		0.4109	2017.3	2019.2	0.0903		0.0582
2017.3	2008.3	0.0559		0.1128	2017.3	2019.3	0.0088		0.0248
2017.3	2008.4	0.0360		0.3285	2017.3	2019.4	0.4954	*	0.0927

Table 15: Fixed Effects: Tourism receipts and GILRHO Index

	Dependent variable: log(receipts)		
	(1) Country FE	(2) Year FE	(3) Country and Year FE
log(gdp)	1.376*** (0.033)	0.773*** (0.019)	0.642*** (0.047)
gilrho	0.060*** (0.010)	0.185*** (0.019)	0.004 (0.010)
Observations	1,216	1,216	1,216
R^2	0.986	0.707	0.991
Adjusted R^2	0.985	0.703	0.990
Residual Std. Error	0.268 (df = 1136)	1.174 (df = 1197)	0.224 (df = 1120)

Note: No countries were excluded, thus no constant term. Only those countries with significant interaction terms are shown.

*p<0.1; **p<0.05; ***p<0.01

Table 16: Fixed Effects: Tourism arrivals and GILRHO Index

	Dependent variable:		
	log(arrivals)		
	(1) Country FE	(2) Year FE	(3) Country and Year FE
log(gdp)	1.014*** (0.031)	0.683*** (0.023)	0.631*** (0.046)
gilrho	-0.025*** (0.008)	0.094*** (0.023)	-0.073*** (0.009)
Observations	1,216	1,216	1,216
R^2	0.980	0.701	0.984
Adjusted R^2	0.976	0.694	0.980
Residual Std. Error	0.254 (df = 1136)	1.174 (df = 1197)	0.224 (df = 1120)

Note: No countries were excluded, thus no constant term. Only those countries with significant interaction terms are shown.

*p<0.1; **p<0.05; ***p<0.01

Table 17: Fixed Effects: Tourism receipts, arrivals and same-sex decriminalization laws

	Dependent variable:	
	log(receipts)	log(arrivals)
	(1)	(2)
log(gdp)	0.620*** (0.047)	0.670*** (0.046)
decriminalization	−0.334*** (0.105)	0.382*** (0.100)
Country-Specific Interaction Terms		
Australia * decrim		-0.488** (0.173
Azerbaijan * decrim	-0.291* (0.168)	
Bulgaria * decrim	0.925*** (0.153)	-0.499***(0.136)
Burundi * decrim	0.451* (0.177)	
Cyprus * decrim		-0.611*** (0.157)
Ecuador * decrim		-0.302* (0.174)
Georgia * decrim	0.639*** (0.193)	
Kazakhstan * decrim	0.869*** (0.178)	
South Africa* decrim	0.577*** (0.171)	0.285* (0.156)
Observations	1,216	1,216
R^2	0.991	0.990
Adjusted R^2 Residual Std.	0.990	0.989
Error	0.221 (df = 1110)	0.194

Note: No countries were excluded, thus no constant term. Only those countries with significant interaction terms are shown.

* p<0.1; **p<0.05; ***p<0.01

Table 18: Fixed Effects: Tourism receipts, arrivals, and anti-discrimination laws

	Dependent variable:	
	log(receipts)	log(arrivals)
	(1)	(2)
log(gdp)	0.595*** (0.046)	0.594*** (0.041)
anti-discrimination	2.188*** (0.183)	1.170*** (0.132)
Country-Specific Interaction Terms		
Australia * anti-disc		-1.286*** (0.220)
Austria * anti-disc		-1.377*** (0.155)
Belgium * anti-disc		-1.421*** (0.155)
Botswana * anti-disc	-0.565* (0.227)	
Bulgaria * anti-disc		-1.323*** (0.156)
Canada * anti-disc		-1.433*** (0.222)
Colombia * anti-disc		-0.538*** (0162)
Costa Rica * anti-disc		-0.977*** (0.174)
Croatia * anti-disc		-1.133*** (0.156)
Cyprus * anti-disc	-0.697*** (0.188)	-1.609*** (0.155)
Ecuador * anti-disc	-0.341* (0.207)	
El Salvador * anti-disc	-0.796*** (0.223)	
Estonia * anti-disc		-1.440*** (0.166)
France * anti-disc	-0.369* (0.200)	-1.422*** (0.188)
Germany * anti-disc		-1.115*** (0.158)
Greece * anti-disc		-1.254*** (0.187)
Hungary * anti-disc		-1.669*** (0.184)
Italy * anti-disc	-0.372* (0.199)	-1.359*** (0.156)
Luxembourg * anti-disc		-1.510*** (0.184)
Mexico * anti-disc	-0.427* (0.189)	-1.601*** (0.156)
Poland * anti-disc	-0.585** (0.189)	-1.921*** (0.157)
Portugal * anti-disc		-1.903*** (0.158)
Spain * anti-disc		-1.189*** (0.219)
United Kingdom * anti-disc		-1.335*** (0.156)
Uruguay * anti-disc	0.421* (0.195)	-1.456*** (0.156)
Observations	1,216	1,216
R^2	0.991	0.992
Adjusted R^2	0.990	0.991
Residual Std. Error	0.213	0.172

Note: *No countries were excluded, thus no constant term. Only those countries with significant interaction terms are shown.*

*p<0.1; **p<0.05; ***p<0.01

Table 19: Fixed Effects: Tourism receipts, arrivals and same-sex partnership recognition laws

	Dependent variable:	
	log(receipts)	log(arrivals)
	(1)	(2)
log(gdp)	0.642*** (0.047)	0.692*** (0.045)
partnership	0.230* (0.126)	−0.115 (0.108)
Country-Specific Interaction Terms		
Argentina	-0.298* (0.174)	0.313* (0.151)
Austria	-0.431* (0.192)	
Brazil	0.501** (0.172)	0.319* (0.154)
Colombia		0.318* (0.150)
Ecuador	-0.369* (0.184)	
Finland	-0.332* (0.166)	
Luxembourg		-0.278* (0.141)
Portugal		-0.402** (0.147)
Switzerland	-0.441** (0.169)	
United States		0.450* (0.179)
Observations	1,216	1,216
R^2	0.991	0.990
Adjusted R^2	0.990	0.989
Residual Std. Error	0.221	0.189

Note: No countries were excluded, thus no constant term. Only those countries with significant interaction terms are shown.

*p<0.1; **p<0.05; ***p<0.01