Putting Countries on the Map? Pastoral Visits of John Paul II and International Trade*

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Abstract

During his reign from 1979 to 2005, Pope John Paul II visited 129 countries, more than the 263 Popes before him combined. I document a significant increase in exports to trading partners with a relatively high share of Catholics following a Pastoral visit. The biggest beneficiaries in terms of increased trade are visited countries that are at lower stages of economic development and have relatively few Catholics and weak trade links. The effect is absent for global sports events and for visits by a US President or by Queen Elisabeth II, and it is non-negligible in the aggregate.

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1 Introduction

Do leaders—through their personality and their actions—matter for growth and development? Or are famous historical figures nothing but accidental actors in events entirely beyond any individual's influence? As old as this question is, philosophers and historians are still sharply divided in their views. One school of thought has maintained that a small number of leaders have played a decisive role in shaping certain landmark episodes, and perhaps history as a whole (Carlyle, 1859; Keegan, 2003). The opposite view maintains that national leaders are labels that society uses ex post to rationalize and commemorate transformative events that are in essence mere stages of the unstoppable march of history (Tolstoy, 1869; Gemmill and Oakley, 1992). Because a leader's ascent to power is rarely a random event, economists have made a limited contribution to this debate, and I am aware of very few empirical studies that have documented a causal effect of leaders on growth.[1]

The empirical challenges involved in providing evidence for or against the ability of leaders to shape economic development are even sharper in the case of religion. On the one hand, various studies have tentatively documented that religious beliefs and practices may be a fundamental determinant of economic growth (Acemoglu et al. 2001, 2005; Barro and McCleary 2003, 2005; Guiso et al., 2006). On the other hand, the slow-moving nature of religion makes identification particularly challenging. Religious doctrine—i.e., the set of principles that guide the faithful in their day-to-day activities—is fairly constant over time. For example, during the two millennia of its existence, Christianity has experienced only two major shocks: the Great Schism in 1054, whereby the Eastern Orthodox church split from the Roman Catholic church, and the Reformation in 16th-century Europe which gave birth to Protestantism. The spread of one or another religious denomination in different countries is also a gradual process that takes decades, if not centuries. For these reasons, researchers have typically resorted to studying the long-term impact of religion on slow-moving fundamentals, such as social norms and literacy.[2]

In this paper, I study whether the actions of a famous religious leader, Pope John Paul II, had a short-

[1] Jones and Olken (2005) use leaders' death in office as a source of exogenous variation in leadership and show that GDP growth increases when a new leader assumes power. Besley et al. (2011) use an expanded version of the same dataset to show that growth is higher when national leaders are more highly educated. Blinder and Watson (2016) document a significantly better performance of the US economy when the president is a Democrat rather than a Republican.

[2] For example, Protestantism appears to be superior to Catholicism in supporting long-run economic growth, either because it encourages a more robust work ethic (Weber, 1905) or because it favors universal schooling (Becker and Woessmann, 2009).

term effect on countries' economic development. To do so, I employ an empirical test that rests on three conceptual building blocks. First, the Pope is the undisputed leader of a well-defined institution, the Roman-Catholic church. Moreover, the Catholic dogma of Papal supremacy posits that "[...] the Pope enjoys, by divine institution, supreme, full, immediate, and universal power in the care of souls."[3] Among else, this implies that his words and actions should be followed by all Catholics around the world and taken as a signal and an impetus to behave in a certain way. Second, between 1979 and 2004, Pope John Paul II made 104 foreign trips, known as "Pastoral visits", more than the 263 Popes before him combined, and in the process visited a total of 129 countries, many of them more than once. Third, thanks to a combination of his global profile and the advent of television, his visits were widely followed, with hundreds of millions around the globe watching him give a sermon or hold mass.

I find that in the years following a Pastoral visit to a foreign country by Pope John Paul II, exports by that country increased in a meaningful and significant way, more so to trading partners with a relatively large share of Catholics in the population. Numerically, exports to a trading partner with 54.3% (75th percentile), relative to a trading partner with 1.1% (25th percentile) Catholics in the population were higher by between 13.1% and 28.7% during years 1 to 4 after a visit by the Pope. This result is attained in specifications saturated with interactions of visited country dummies, trading partner country dummies, and linear trends, which allows me to hold constant country-specific trends, as well as unobservable background forces that are constant at the country-pair level. I show that the result I document is not a continuation of a pre-visit trend. Furthermore, the effect disappears when I examine similar events that put a country in the news, such as a visit by the US President, a visit by Queen Elisabeth II, and the hosting of Summer Olympics or a Football World Cup, and when I distinguish among the size of the Protestant population in the trading partners. The evidence thus suggests that Catholics around the world respond to their leader's actions, and that they are not simply more attuned to the news than others. Finally, I document a non-negligible percentage-wise, but small relative to income, increase in aggregate exports in the five years after the Pope's visit.

What explains this effect? I examine three non-mutually exclusive hypotheses. The first hypothesis is that during a foreign visit, the Pope explicitly asked Catholics around the world to engage with the host country on economic terms. I analyse 633 speeches given during the Pope's 129 visits and I find rare occasions when he mentioned the words "trade", "economic", or "globalization". In contrast his speeches

[3]See Paragraph 937 of the Catechism of the Catholic Church.

were dominated by messages related to "life and love", "humans and society", "church and faith", "unity", "sickness and suffering", and "school and education". The second hypothesis is that by simply visiting a country, the Pope "puts it on the map" for the global Catholic family, especially if Catholics around the world are for cultural or economic reasons less familiar with the visited country. I look at the heterogeneous impact of the Pope's visits, and I find that the effect on exports of a Pastoral visit to a country is stronger if this country is not an OECD member, if it has a relatively smaller share of Catholics, and if it has relatively weaker bilateral trade with the partner country. The third hypothesis is that Catholics around the world are buying souvenirs to commemorate the Pope's visit. I analyse data on bilateral trade at the product level, for 10 different sectors, and I find that after a Pastoral visit, the increase in exports I detect takes place in half of them. I conclude that the second hypothesis is the only one for which there is tangible support in the data.

My paper speaks to the literature on the impact of religion on economic development and growth. Researchers have found that religion can have an effect on the provision of public goods (Benjamin et al., 2016; Cantoni et al., 2018), state legitimacy (Chaney, 2013; Rubin, 2017; Auriol and Platteau, 2017), institutions (Greif, 1994; Kuran, 2011; Pascali, 2016; Belloc et al., 2016; Platteau, 2017; Bisin et al., 2019), intolerance (Becker and Pascali, 2019), generalized trust (Putnam, 1993; Inglehart, 1999; La Porta et al., 1997), human capital and income (Valencia Caicedo, 2019; Botticini and Eckstein, 2005; Waldinger, 2017; Becker and Woessmann, 2009), and economic growth (Barro and McCleary, 2003; Campante and Yanagizawa-Drott, 2015). I contribute to this literature in three distinct ways. First, I look at international trade, a factor overlooked in this line of research. Second, while the literature has mostly focused on long-term trends,[4] I look at the short-term implications of the Pope's foreign travels. Third, this literature either looks at associations between religious intensity and another variable, or argues for causation by placing cause and effect far apart in time (e.g., intensity of the Reformation in the 16th century and growth and literacy in 19th-century Prussia). In contrast, I am able to look at the contemporaneous effect of a religious act.

My paper also relates to the recent literature on the cultural and institutional determinants of bilateral trade. For example, Anderson and Marcouiller (2002), Berkowitz et al. (2006), Nunn (2007), Guiso et al.

[4]Notable exceptions are Bassi and Rasul (2017) who show that persuasive messages related to fertility that were present in the Pope Jon Paul II's speeches during his visit to Brazil in October 1991 shifted short-run beliefs such as intentions to use contraception and long-term fertility outcomes such as the timing and total number of births, and Montero and Yang (2022) who show that the timing of religious festivals in Mexico can be causally linked to long-term economic outcomes, such as income and agricultural productivity.

(2009), and Elfenbein et al. (2023) have documented a significant effect of country- and state-level factors, as well as of pair-specific institutional factors that are slow moving over time—such as trust, religious affiliation, or political behavior—on long-term bilateral trade. I extend this literature by looking at the short-run fluctuations in bilateral trade induced by the Pope's travels. Finally, my work is reminiscent of the analysis in Fuchs and Klann (2013) who find that countries officially receiving the Dalai Lama at the highest political level are punished through a reduction of their exports to China.

2 Pope John Paul II: The Pilgrim Pope

During his reign from 1978 to 2005, Pope John Paul II made 104 foreign trips, more than all previous Popes combined. In total he logged more than 1,167,000 kilometers (725,000 miles).[5] He consistently attracted large crowds during his travels, which were often among the largest ever assembled. While some of his trips (such as to the United States and Israel) were to places that were previously visited by Paul VI (the first Pope to travel internationally), the vast majority were to countries that no Pope had previously visited. His extensive travel itinerary and persistence in bringing his message to all corners of the globe earned him the moniker "The Pilgrim Pope".

John Paul II often visited countries with large Catholic populations, which he intended to uplift spiritually. This was especially visible during his visits to predominantly Catholic countries that were living under authoritarian or totalitarian regimes. For example, in 1979 he visited his native Poland, which was ruled by a Communist dictatorship; in 1982 he visited Argentina, which was run by a military junta; and in 1987, he visited Chile, which was run by the dictator Augusto Pinochet. Each time, he attracted large crowds, but also the hostility of the local government.

Even more noteworthy is the fact that during his travels, the Pope cultivated friendly relations with members of religious denominations other than the Catholic church. For example, during his visit to the United Kingdom in 1982 (the first ever by a reigning Pope), as a gesture of friendship between the Roman Catholic Church and the Anglican Churches, he knelt down along with the Archbishop of Canterbury.[6] During his visit to Greece in 2001 (first by a Pope in 1291 years), he met Archbishop Christodoulos, the

[5] See $https://en.wikipedia.org/wiki/List\_of\_pastoral\_visits\_of\_Pope\_John\_Paul\_II$.

[6] See $https://www.nytimes.com/1982/05/30/world/after-a-rift-of-450-years-2-church-heads-embrace-excerpts-from-speeches-page-18.html$

head of the Church of Greece. During their public appearance after their private meeting, Christodoulos read a list of "13 offences" of the Roman Catholic Church against the Eastern Orthodox Church since the Great Schism of 1054, including the pillaging of Constantinople by crusaders in 1204, and bemoaned the lack of any apology from the Roman Catholic Church, saying "Until now, there has not been heard a single request for pardon" for the "maniacal crusaders of the 13th century." Pope John Paul II responded by saying "For the occasions past and present, when sons and daughters of the Catholic Church have sinned by action or omission against their Orthodox brothers and sisters, may the Lord grant me forgiveness," to which Christodoulos immediately applauded.[7]

I therefore consider it reasonable to hypothesize that a visit by the Pope serves multiple purposes. These include providing spiritual guidance to the local Catholic population, lending his support to local democratic processes, and explicitly encouraging cooperation among countries, including on economic terms. Moreover, by simply visiting a country, the Pope may be "putting it on the map" for the world's Catholic family. To the extent that a Pastoral visit has any economic effects, countries where the share of Catholics in the population is relatively larger will be more likely to engage with a country visited by the Pope, and the benefits of such engagement should be larger if the visited country is less familiar, economically and culturally, to the global Catholic family.

3 Empirical model and data

The goal of this paper is to study the evolution of bilateral trade in the immediate aftermath of a Pastoral visit by Pope John II. To analyze this effect, I specify the following regression equation:

$$Log(1+Exports)_{i,j,t} = \sum_{n=1}^{5} \beta_n Share\,Catholics_j \times Year_n + \Psi_{i,j} + \Phi_{i,t} + \Theta_{j,t} + \varepsilon_{i,j,t} \quad (1)$$

The dependent variable, $Log(1+Exports)_{i,j,t}$, denotes the natural logarithm of total exports by visited country i to trade partner country j in year t, where I am adding 1 to exports to avoid losing observations with 0 exports when taking logs.[8] $Share\,Catholics_j$ denotes the share of Catholics in trading partner country j. $Year_n$ is a dummy variable equal to 1 in year n after Pope John Paul II visited country i (where n equals

[7] See $http://www.hri.org/news/greek/mpa/2001/01-05-04\_1.mpa.html$

[8] In a later robustness test, I also calculate the dependent variable as $Log(Exports)_{i,j,t}$.

1, 2, 3, 4, and 5), and to zero otherwise.

I saturate the model with an interactions of country i and country j dummies ($\Psi_{i,j}$), an interaction of country i dummies and a linear time trend t ($\Phi_{i,t}$), and an interaction of country j dummies and a linear time trend t ($\Theta_{j,t}$). $\Psi_{i,j}$ captures the impact on bilateral trade of factors pertinent to the relationship between visited country i and trading partner country j that are fixed over time. These include some of the standard components of gravity: physical distance, difference in size, common border, common language, religious similarity, and somatic and genetic distance, among others. This is important as any such variation at the country-pair level can explain differences in bilateral trade without any panel variation existing. $\Phi_{i,t}$ controls for time-varying factors at the level of visited country i that affect all of country i's trading partners equally at the same point in time. Similarly, $\Theta_{j,t}$ controls for time-varying factors at the level of trading partner country j that affect all of country j's trading partners equally at the same point in time. Including these in the regression allows me to net out the independent effect on trade of important time-varying determinants of bilateral trade, such as GDP growth and population growth in countries i and j.

The coefficients β_1, β_2, β_3, β_4, and β_5 measure the change in exports in years 1, 2, 3, 4, and 5 after the year of the Papal visit, respectively, relative to the pre-visit period and to never-visited countries. The interactive nature of the main variables of interest allows me to test the hypothesis that the increase in exports from a country visited by Pope John Paul II was particularly strong to trading partners with a relatively high share of Catholics in the population.[9]

Pope John Paul II visited many countries multiple times (e.g., he recorded nine visits to Poland, seven to France and United States, five to Spain and Mexico, etc.). To avoid assigning years between visits to both the post- and the pre- period, I restrict the sample to Pope John Paul II's 129 first visits, and exclude observations beyond the fifth year after a first visit (in the case of visited countries). All non-visited countries are included in the control group during the full sample period. Given that the Pope's last "first visit" took place in 2002 (Bulgaria), I end the sample period in 2007. To make it symmetric, given that Pope John Paul II's very first visit took place in 1979 (Dominican Republic), I start the sample period in 1975. In robustness tests, I run a specification where I look at all 207 Pastoral visits without restricting the end period, and I also exclude visits that were merely stopovers.

Data on the share of Catholics in the population come from the CIA World Factbooks or from the Pew Re-

[9]Because the dependent variable is in logs and the main explanatory variable is a dummy variable, the interpretation of, e.g., β_1 is that one year after a visit by the Pope, exports were higher by e^{β_1}-1 percent.

search Center report on the Global Catholic population, and I take the value of the variable $Share\,Catholics_j$ for the earliest date for which information is available. Data on bilateral trade come from the IMF's Direction of Trade Statistics (DOTS) dataset, which is based on data from the World Trade Organization (WTO). I also utilize data on product-level bilateral trade, for 10 product classes, from the UN Comtrade database. Both datasets contain underlying data on bilateral exports and imports in current USD, and I deflate the data using the US CPI, converting the series into constant 2010 USD.

I retrieve information on the year of each of Pope John Paul II's Pastoral visit from the official website of the Vatican. Figure 1 summarizes the Pope's travels visually, by decade, grouped according to the first time he visited a country. During the 1970s, the Pope visited 7 countries, all of them in 1979: Dominican Republic, Mexico, the Bahamas, Poland, Ireland, the USA, and Turkey. The 1980s was his busiest period, with 104 visited countries (of which 79 were first visits), mostly in Western Europe, Africa, the Americas, South and South-East Asia, and Australia and Oceania. During the 1990s, Pope John Paul II visited a further 73 countries (of which 32 were first visits), mostly in Africa and the post-Soviet Bloc. Finally, between 2000 and 2004, he visited another 23 countries in Eastern Europe, Central Asia, the Middle East, and North Africa, of which 11 were first visits.

Finally, in later tests where I look at heterogeneity, endogeneity, and aggregate effects, I make use of country-specific data on the share of Protestant believers, GDP per capita, population, exchange rates, the timing of trade liberalization, and an index of democratization.[10]

4 Pastoral visits and international trade: Empirical evidence

4.1 Main result

Figure 2 visualizes the empirical estimates from a version of Equation (1) which includes dummies for the year of Pope John Paul II's visit and for the five years prior to the visit, in interaction with the share of Catholics in the trading partner. It is complemented by Appendix Table 4 where I report point estimates from the basic version of Equation (1). In both cases, the evidence strongly suggests that in the five years after a Pastoral visit, exports from the visited country to the rest of the world increase, more so for trading partners with a larger Catholic share of the population. This effect is statistically significant in years 1-4

[10] See Appendix Table 2 for all data sources, and Appendix Table 3 for summary statistics.

after the visit in question. Taking the point estimates from Appendix Table 4 (0.2196, 0.2868, 0.4335, and 0.2896) imply that exports were higher by 13.1%, 17.7%, 28.7%, and 17.9% in year 1, 2, 3, and 4 after the visit, for trade between the visited country and a trading partner at the 75th percentile (0.543), relative to a trading partner at the 25th percentile (0.011), of the distribution of Catholic population shares.[11]

4.2 Falsification

4.2.1 Endogeneity of visits

I now address four significant concerns with my identification strategy. The first one is that a Pastoral visit is not a random event. It is entirely possible that Pope John Paul II chose to visit countries that already traded a lot with the rest of the world, or were characterized by factors that in themselves may stimulate trade, such as a robust democracy. To test for this possibility, I run a Cox Proportional Hazard model where I measure the time to a Pastoral visit from the start of the Pope's tenure in 1979 until his last visit in 2002, and assign the full period to countries that were never visited. As potential explanatory variables, I employ the share of Catholics, exports/GDP, Log (GDP per capita), Log (Population), and a Liberal Democracy Index.

The evidence presented in Appendix Table 8 shows that the Pope was more likely to visit earlier countries that had a relatively higher share of Catholics in the population and were relatively poor and relatively large. Importantly, the incidence or timing of a visit is not related to the country's trade pattern or to the country's democratization pattern. The model as a whole is statistically significant. This evidence gives me confidence that Pope John Paul's visits, while not entirely non-random, were not driven by the visited country's trade or its level of democracy at the time of the visit.

[11] Appendix Table 5 confirms that the effect of a Pastoral visit still obtains and is significant at the 1-percent statistical level for each of the five post-visit years when the dependent variable is $Log(Exports)_{i,j,t}$ instead of $Log(1+Exports)_{i,j,t}$. Appendix Table 6 shows that the estimates of Equation (1) are similar when I look at all 207 Pastoral visits without restricting the end period to 5 years after the visit (column (1)), and I when I do not code as 1 the three first visits that were merely stopovers (Bahamas in 1979, Pakistan in 1981, and Guam in 1981; column (2)). Appendix Table 7 shows that the effect is restricted to exports from the visited country and does not obtain in the case of imports.

4.2.2 Pre-trends

The second concern is that I may simply be capturing a long-term trend which is in place independent of the Pope's itinerary. For example, the Pope may only be visiting countries that are on an economic upswing, meaning that international trade is increasing because of good macro and trade policies even before the Pope arrives. If so, the evidence on the economic impact of a Pastoral visit by the Pope will be compromised, and I can no longer claim a causal effect going from the Pope's visit to a more significant economic engagement with the visited country by the international Catholic community.

To tackle this criticism, I specify the following regression model:

$$Log(1+Exports)_{i,j,t} = \sum_{n=-5}^{-1} \beta_n Share\,Catholics_j \times Year_n + \Psi_{i,j} + \Phi_{i,t} + \Theta_{j,t} + \varepsilon_{i,j,t} \quad (2)$$

As before, the dependent variable, $Log(1+Exports)_{i,j,t}$, denotes the natural logarithm of 1 plus exports from country i to country j in year t, and $Share\,Catholics_j$ denotes the share of Catholics in country j. This time, $Year_n$ is a dummy variable equal to 1 in year n *before* Pope John Paul II visited country i, where n equals 1, 2, 3, 4, and 5, and to zero otherwise. I include the same fixed effects as in Equation (1). If the Pope's visit coincides with a trend whereby a country is already increasing its trade with the rest of the world, and especially with Catholic countries, I should be able to see this in the data.

The estimates from this test are reported in column (1) of Table 1. The data reject the notion that trade between a country which the Pope visited and predominantly Catholic trading partners was increasing already before the visit. This is fully consistent with the graphical evidence in Figure 2 where no apparent pre-trend can be discerned.

4.2.3 Catholic countries versus Western countries

The third concern is that a high share of Catholics captures a particular national profile: an industrialized country with a democratic political organization and a Western value system. If it is Western countries in general, and not predominantly Catholic countries, that are more likely to respond to a Pastoral visit, this would point to a different mechanism than the one whereby the Pope's "target audience" responds to his actions. To test for this possibility, I run a version of Equation (1) where I employ the share of the Protestant population in a trading partner instead of the share of the Catholic population. The estimates from this

regression are reported in column (2) of Table 1. While positive and even significant at the 10% statistical level in the case of the third year after the Pope's visit, the point estimates are nowhere near the economic and statistical magnitude of those reported in Appendix Table 4.

4.2.4 Other global events

The final concern regarding the identification strategy is that countries with a large Catholic population are more sensitive than others to events that put another country in the news. Events other than the Pope's visit may be raising a country's profile, or may be perceived as having the potential to increase the country's GDP growth, and Catholics may be more likely to respond to such shocks. If so, then visits by the Pope may not be unique. They might be one possible event that increases a country's popularity, but if other events also make it more likely that exports to predominantly Catholic countries increase, then my estimation strategy would be compromised.

To address this concern, I re-estimate Equation (1) on a number of other events that have a similar publicity effect to a visit by the Pope. I collect three such sets of events. The first is international visits by the US President between 1979 and 2002. US Presidents are widely traveled: there were a total of 91 "first" visits by five US Presidents (Jimmy Carter, Ronald Reagan, George H. W. Bush, Bill Clinton, and George W. Bush) during this period. The second is visits by Queen Elisabeth II, who has also made many "first" foreign visits during her reign (35 during the period in question). Finally, I look at two major global sports events: Summer Olympic Games and Football World Cups. 10 such events were organized "for the first time" during the period in question (5 Summer Olympics and 5 Football World Cups). All of these are events that are widely covered by global news networks, generating large global viewership. If the Pope's visits are not unique in any way, I should observe a similar pattern around these alternative events.

Columns (3)-(5) of Table 1 suggest that this is not the case. Not in a single year are exports more likely to increase—in the statistical sense—to trading partners with a larger share of Catholics after a visit to the country by the US President (column (3)), after a visit to the country by Queen Elisabeth II (column (4)), or after the country organizes a Summer Olympiad or a Football World Cup (column (5)). I conclude that by and large, the pattern I observe is specific to a visit by the head of the Catholic Church.[12]

[12]At the same time, in Appendix Table 9 I present evidence that after a visit to a foreign country by the US President (Queen Elisabeth II) during the period in question, exports from the visited country to the US (UK) increased, in the latter case significantly so during the first and the second year after the visit. This suggests that the target audience of a powerful

4.3 Mechanisms

What explains the increase in exports from countries visited by the Pope to the rest of the world, and in particular to countries with relatively more Catholics? I identify three potential mechanisms:

1) The Pope is explicitly asking Catholics around the world to engage with the visited country on economic terms.

2) The Pope is not asking Catholics around the world to engage with the visited country on economic terms, but by simply visiting it, he is "putting it on the map".

3) Catholics around the world are buying souvenirs to commemorate the Pope's visit.

In an attempt to distinguish between the three possibilities, I employ a textual analysis of the speeches the Pope gave during his visits, I study the role of visited country heterogeneity, and I look at bilateral trade across different product categories.

4.3.1 Economic messages in Pope John Paul II's speeches

The first possibility is that during his visit, Pope John Paul II used the occasion to encourage Catholics around the world to engage more forcefully with the country, not just on cultural and spiritual, but also on economic, terms. An increase in bilateral trade would then be a tangible outcome of a targeted message. If this was the case, then the Pope would be employing in his speeches keywords capturing an economically globalist message.

I have analysed 633 speeches given during the Pope's 129 first visits. The word "economic" appears in 163 speeches, the word "trade" appears in 23 speeches, and the word "globalization" appears in 4 speeches. 460 of the speeches do not have a single mention of any word related to economic or trade issues. At the same time, there are 7 other topics that clearly dominate the Pope's narrative. These are "life and love", "humans and society", "church and faith", "greetings to the people of the visited country", "unity", "sickness and suffering", and "school and education". This evidence is graphically summarized in Figure 3.

The analysis of Pope John Paul II's speeches is thus largely inconsistent with the idea that he was sending a direct message of economic cooperation to the Catholics around the world. On the strength of the evidence, I conclude that during his visits, the Pope primarily pursued a classical religious agenda of love, compassion,

leader does respond to their actions, and this effect may not be limited to Pope John Paul II.

and humanity, combined with messages encouraging spiritual ecumenism and scholastic aptitude, but not necessarily economic integration.

4.3.2 Visited country heterogeneity

The second possibility is that when the Pope visits a country, he "puts it on the map". For economic and cultural reasons, predominantly Catholic countries are likely to already have close trade ties with a particular set of trading partners, such as wealthy industrialized economies and other predominantly Catholic countries. Consequently, poorer countries and countries with fewer Catholics will be more likely to benefit from a Pastoral visit that raises their global visibility. Moreover, as mentioned already, travelling so widely around the world was a marked departure from the practice of previous Popes, and it is possible that the Pope's power to raise a country's profile was stronger initially and waned over time.

To investigate this hypothesis, I now analyse the heterogeneous impact of the Pope's visits. In essence, I check whether the effect of a Pastoral visit varies over time and across visited countries, depending on observable factors that capture their global influence, degree of pre-existing trade integration, and cultural similarities with their trading partners. This evidence is summarized visually in Figure 4, where similar to Figure 2 I include dummies for pre-visit years and for the year of the visit, and in Appendix Table 10, which recreates faithfully Equation (1).

The evidence strongly suggest that the effect on exports of a visit by John Paul II to a country is stronger if this country is not an OECD member, if it has a relatively low share of Catholics (i.e., less than 50%), and if it has relatively weaker bilateral trade with the partner country (i.e., exports to the trading partner are outside the 10th percentile as a share of total trade). This strongly suggests that the effect on trade is larger when the Pope is visiting a country that Catholic trading partners are less likely to have strong economic relations with at the time of the visit. As for the timing of the Pastoral visit, the increase in exports following a visit by Pope John Paul II was observed throughout his Pontificate, but was more immediate during visits that took place before 1990.

I conclude that the mechanism whereby the Pope raises a country's profile by visiting it appears plausible. The power of the Pope to deepen economic interactions with Catholic trading partners seems stronger when he visits a particular type of country (poorer, culturally dissimilar, less trade-integrated) and appears to be uncorrelated with the novelty of his pilgrimage around the world.

4.3.3 Types of exports

The third mechanism is one whereby the Catholic faithful around the world are commemorating the Pope's visit. For example, after a Pope's visit, the visited countries would send souvenirs to the destination countries, e.g. through the church network, and obviously larger amounts would be sent where there are more Catholics. Moreover, Catholic pilgrims are likely to come more to the countries previously visited by the Pope, so export of tourist services might also be concerned. While this would be a salient economic effect, it would also be both small and temporary, not to mention qualitatively insignificant.

To investigate this possibility, I now turn to analysing data on bilateral trade at the product level, from Comtrade. In this dataset, bilateral trade is split across 10 different product categories: 1) Animal and vegetable oils, fats, and waxes; 2) Beverages and tobacco; 3) Chemicals and related products; 4) Commodities and transactions n.e.c.; 5) Crude materials, inedible, except fuels; 6) Food and live animals; 7) Machinery and transport equipment; 8) Manufactured goods classified chiefly by material; 9) Mineral fuels, lubricants, and related materials; and 10) Miscellaneous manufactured articles.

I once again employ Equation (1), for each of these 10 categories. The results from this analysis are reported in Table 2. I find strong evidence for an across-the-board increase in exports, following a visit by Pope John Paul II. In the case of all visits, the increase in trade takes place in large and important sectors such as 'Crude materials, inedible, except fuels' (Panel A). In the case of visits to non-OECD and low-Catholic countries (Panels B and C), exports of other products ('Animal and vegetable oil, fats, and waxes', 'Beverages and tobacco', 'Mineral fuels, lubricants, and related materials', and 'Miscellaneous manufactured articles') are affected, too. This suggests that the trade benefit to a visited country goes beyond the mere purchase of souvenirs related to the Pope's visit.

4.4 Aggregate effect

The evidence so far is consistent with the idea that Catholics around the world follow the Pope not only in matters of the dogma, but in economic matters, too. But how important is this effect in the aggregate? The median country in my dataset had 12.9% Catholics during the sample period. Even assuming they speak as one on matters of economics and politics, this is a respectable, but not a decisive consumer or voting bloc. The possibility thus exists that my results are driven by a few trading partners with a large Catholic population, but the aggregate effect is negligible.

I now take this hypothesis to the data. I first estimate the following model:

$$Log(Total\,Exports)_{i,t} = \sum_{n=1}^{5} \beta_n \times Year_n + \gamma X_{i,t} + \Psi_i + \Theta_t + \varepsilon_{i,t} \quad (3)$$

Hereby I no longer distinguish trading partners based on the share of Catholics in their population. Instead, Equation (3) estimates the effect of a Pastoral visit on a visited country's total exports to the rest of the world. I also estimate Equation (3) on the subsets of countries that benefit the most, according to the evidence in Figure 4 and in Appendix Table 10: non-OECD countries and countries with a relatively low share of Catholics (less than 50%). The model includes country fixed effects Ψ_i and year fixed effects Θ_t. The former allows me to hold constant background forces that are fixed at the country level over time, such as land area, distance to main trading partners, and access to sea. The latter allows me to net out the confounding effect of trends which are common to all countries at a point in time, such as the global business cycle or global risk aversion.

Because I can no longer include interactions of visited country and time fixed effects, I include on the right-hand side the vector $X_{i,t}$, whereby I control for the independent effect on trade of a number of time-varying factors at the level of the visited country. It includes Log (GDP per capita), Log (Population), the real exchange rate vis-a-vis the USD, a dummy equal to one the country is trade-liberalized, and a Liberal Democracy Index.

The point estimate from Equation (3) are reported in Table 3. Column (1) suggests that total exports from a country visited by the Pope to the rest of the world are significantly higher during each of the five years after a Pastoral visit. The data therefore reject the hypothesis that the relative effects I documented in Figure 2 and Appendix Table 4 are washed out in the aggregate (for example, because exports to countries with large Orthodox or Muslim populations decline). The effect is similar in the case of visited countries that were not OECD members at the time of the visit (column (2)), and equally significant and numerically larger in the case of visited countries with a relatively low Catholic population (column (3)).

The overall effect is economically non-negligible percentage-wise, yet small relative to income. For example, the point estimate on Year 3 after Pope's visit to a country reported in column (1) is 0.1916, which implies that exports to the rest of the world are higher by 21.1%. Median total exports by a visited country during the sample period are USD 3.5 bln., and the median visited country had a population of 8.6 mln.

and GDP per capita of USD 7,571.5. Therefore, the estimates imply an increase of USD 85.9 per person, or 1.13% of GDP per capita. In the case of visited countries with relatively few Catholics (column (3)), the point estimate on Year 3 after the Pope's visit is 0.2534, which implies that exports to the rest of the world are higher by 28.9%. With median total exports by a visited country in this sub-sample during the sample period of USD 3.4 bln., population of 9.8 mln. and GDP per capita of USD 6,234.4, my estimates imply an increase of USD 100.3 per person, or 1.61% of GDP per capita.

At the same time, I consider this evidence as merely suggestive, because the structure of the test does not allow me to control for unobservabe country-specific trends. Therefore, the model is not as tightly identified as Equation (1), and the results need to be taken with caution.

5 Conclusion

Because of the slowly moving nature of organized religion, it has proved challenging in practice to detect a causal relationship between religion and short-term economic development. To circumvent this challenge, I study the contemporaneous effect of Pope John Paul II's foreign visits on international trade. The Catholic dogma of Papal supremacy posits that the Pope is the unchallenged sovereign of the Catholic church. Therefore, his words and actions carry significant weight with, and send unequivocal signals to, all Catholics around the world. Moreover, between 1979 and 2002, Pope John Paul II made 104 foreign trips and visited 129 countries, more than all Popes before him combined, and his visits were televized and widely followed. I hypothesize that a visit to a foreign country by the Pope raises the global profile of the visited country, putting it on the map for the global Catholic family, with tangible economic side effects in the shape of increased bilateral trade.

The evidence suggests that in the years following a visit to a foreign country by the Pope, trade between that country and its trade partners with a large Catholic share of the population increased in a meaningful and significant way. This effect is much stronger for visited countries that are at lower stages of economic development and have relatively few Catholics and weaker ties with their trading partners. Moreover, there is suggestive evidence that this effect is not fully washed out in the aggregate. In all, my results provide tentative support for the notion that the actions of powerful global leaders, including religious ones, can have a strong short-term effect on growth through the channel of economic integration.

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Figure 1. First Pastoral visits by John Paul II, by decade

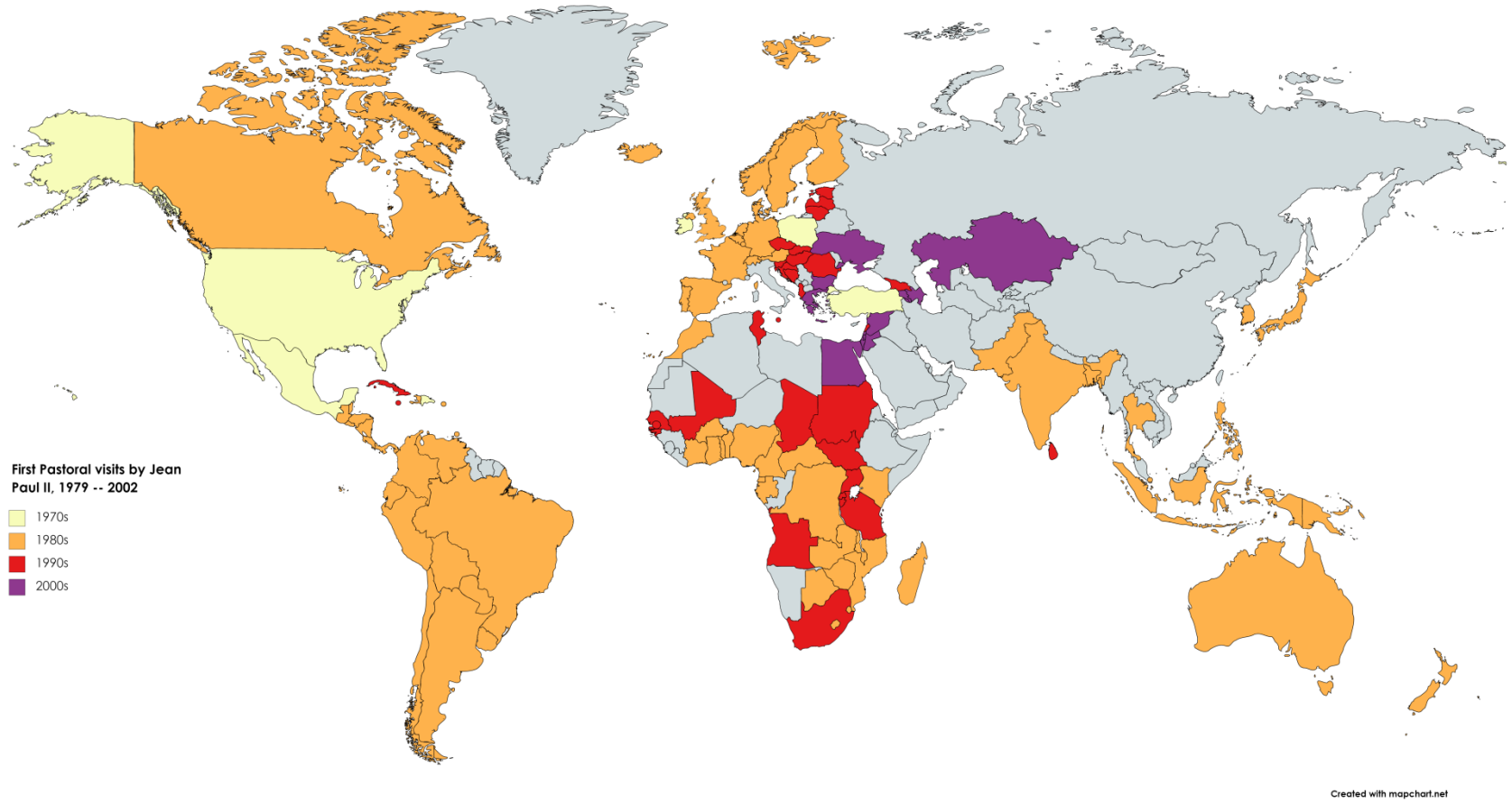
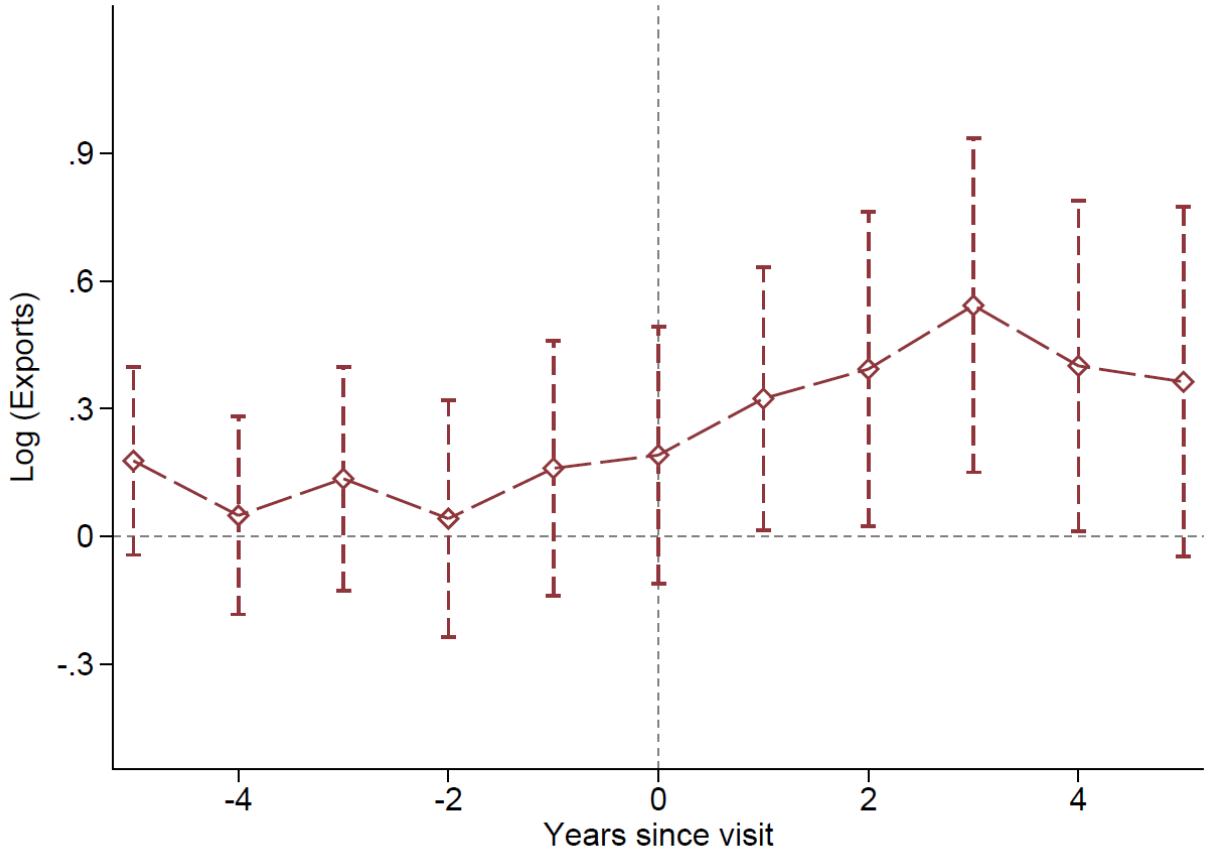
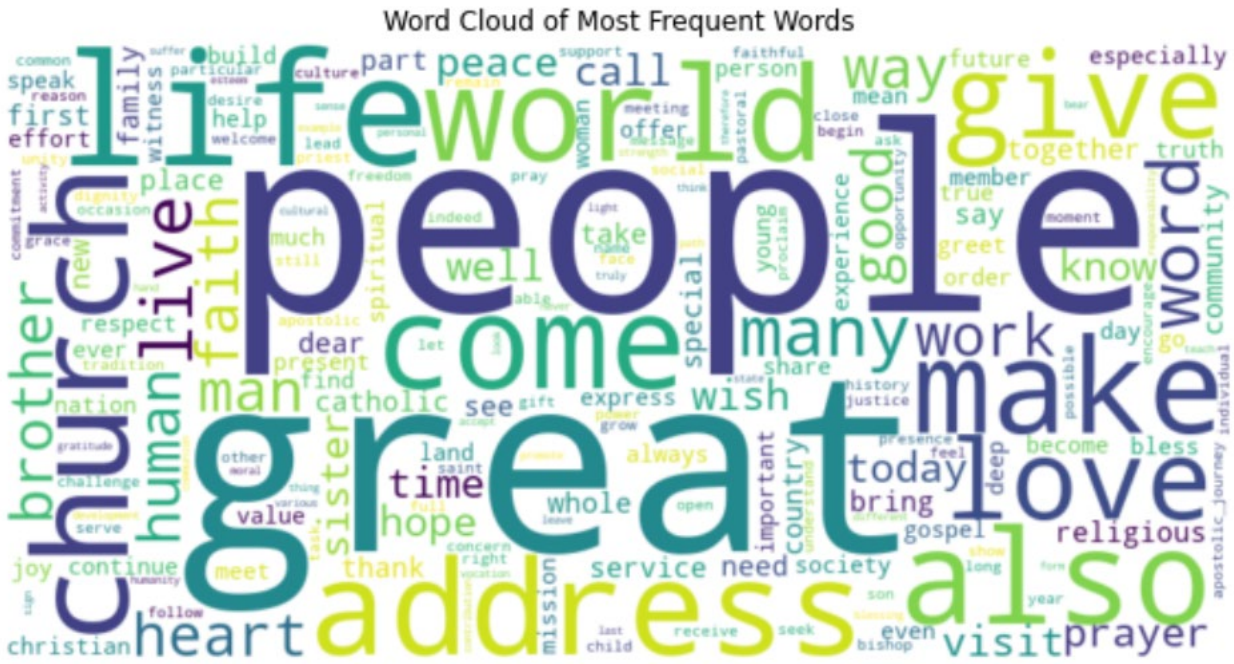


Figure 2. Pastoral visits by Pope John Paul II and bilateral exports: All first visits



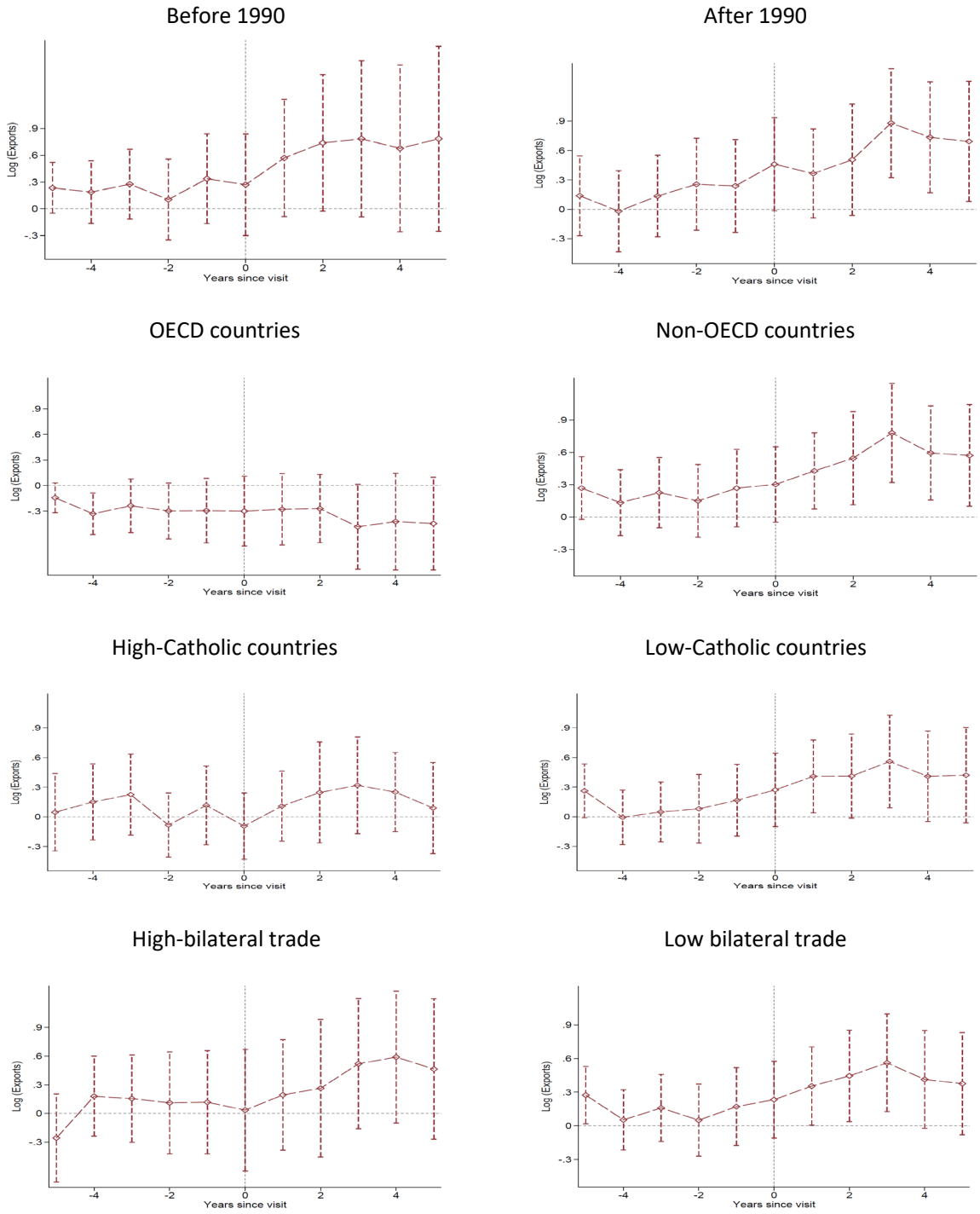
Notes: The Figure plots points estimates and a 90-percent confidence interval for a version of Equation (1) which also includes dummies for the year of the Pastoral visit and the 5 preceding years.

Figure 3. Textual analysis of 633 speeches related to the Pastoral visits of Pope John Paul II's



Notes: The Figure plots the most frequent word in 633 speeches by Pope John Paul II given during 129 foreign visits between 1979 and 2002. The frequency of each word is represented by its relative size.

Figure 4. Pastoral visits by Pope John Paul II and bilateral trade: Time periods and visited countries



Notes: The Figure plots points estimates and a 90-percent confidence interval for a version of Equation (1) which also includes dummies for the year of the Pastoral visit and the 5 preceding years, for different sub-samples: visits before and after 1990, visits to countries that were and to countries that were not OECD

members, visits to countries with more and to countries with less than 50% Catholics, and for trading partners in and for trading partners outside the top 10% of bilateral trade vis-à-vis the visited country.

Table 1. Pastoral visits by Pope John Paul II and bilateral trade: Falsification

	Log (1+Exports)				
	Pre-trend	Share Protestants	Visit by US President	Visit by Queen Elisabeth II	Global sports event
	(1)	(2)	(3)	(4)	(5)
Share Catholics × Year -5	-0.0004				
	(0.1051)				
Share Catholics × Year -4	-0.1496				
	(0.1115)				
Share Catholics × Year -3	-0.0809				
	(0.1025)				
Share Catholics × Year -2	-0.1917*				
	(0.1054)				
Share Catholics × Year -1	-0.0929				
	(0.1068)				
Share Protestants × Year 1		0.0727			
		(0.1809)			
Share Protestants × Year 2		0.2674			
		(0.1713)			
Share Protestants × Year 3		0.3272*			
		(0.1767)			
Share Protestants × Year 4		0.0469			
		(0.1937)			
Share Protestants × Year 5		0.0422			
		(0.2167)			
Share Catholics × Year 1			-0.0225	-0.2135	0.2050
			(0.1280)	(0.1736)	(0.2005)
Share Catholics × Year 2			-0.0448	-0.1520	0.0329
			(0.1262)	(0.1532)	(0.1495)
Share Catholics × Year 3			-0.1160	-0.1128	0.0623
			(0.1443)	(0.1920)	(0.1934)
Share Catholics × Year 4			0.1392	-0.2780	0.2089
			(0.1491)	(0.2070)	(0.2071)
Share Catholics × Year 5			0.1078	-0.1119	0.1180
			(0.1661)	(0.2235)	(0.1273)
Visited country × Partner country FE	Yes	Yes	Yes	Yes	Yes
Visited country × Linear trend	Yes	Yes	Yes	Yes	Yes
Partner country × Linear trend	Yes	Yes	Yes	Yes	Yes
Observations	288,822	268,833	364,351	429,531	484,506
R-squared	0.78	0.78	0.77	0.78	0.78

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by John Paul II to a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Share Protestants' is the share, out of the total population, of citizens that identify as Protestants in a trading partner country. 'Year -5', 'Year -4', 'Year -3', 'Year -2', and 'Year -1' are dummy variables equal to one in the respective year before the Papal visit, and to zero otherwise. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all first visits to a foreign country during the sample period by Pope Jean Paul II (columns (1) and (2)); by the US President (column (3)); by Queen Elisabeth II (column (4)); and all first Summer Olympic Games and football World Cups (column (5)); between 1979 and 2004. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Table 2. Pastoral visits by Pope John Paul II and bilateral trade: Product results

Panel A. All countries

	Log (1+Exports)						
	Share Catholics × Year 1	Share Catholics × Year 2	Share Catholics × Year 3	Share Catholics × Year 4	Share Catholics × Year 5	#	R^2
Animal and vegetable oils, fats,	0.0895	0.0214	-0.0071	0.0748	0.0334	37,714	0.82
and waxes	(0.1366)	(0.1481)	(0.1782)	(0.1844)	(0.1998)		
Beverages and tobacco	0.0653	0.1296	0.1242	0.1683	0.0794	60,190	0.83
	(0.1066)	(0.1213)	(0.1288)	(0.1483)	(0.1525)		
Chemicals and related products	-0.0078	-0.0050	0.1291	0.0958	-0.0003	100,690	0.86
	(0.0587)	(0.0715)	(0.0802)	(0.0860)	(0.0902)		
Commodities and transactions n.e.c.	0.0512	-0.0496	-0.0070	-0.0175	-0.0479	57,764	0.79
	(0.1163)	(0.1398)	(0.1511)	(0.1827)	(0.1916)		
Crude materials, inedible, except	0.1657**	0.1061	0.0710	0.1800**	0.1630*	94,026	0.84
fuels	(0.0734)	(0.0775)	(0.0869)	(0.0905)	(0.0933)		
Food and live animals	-0.0057	-0.0067	-0.0212	-0.0712	-0.1136	108,239	0.83
	(0.0772)	(0.0795)	(0.0848)	(0.0975)	(0.1065)		
Machinery and transport equipment	-0.0117	0.0613	0.0697	0.0535	-0.0616	114,136	0.87
	(0.0700)	(0.0802)	(0.0774)	(0.0863)	(0.0858)		
Manufactured goods classified	0.0243	0.0837	0.1138	0.1315	0.0402	122,548	0.87
chiefly by material	(0.0639)	(0.0732)	(0.0855)	(0.0955)	(0.0994)		
Mineral fuels, lubricants, and related	0.1066	0.1321	0.0892	-0.0285	0.2484	49,575	0.82
materials	(0.1819)	(0.2003)	(0.2181)	(0.2145)	(0.2147)		
Miscellaneous manufactured articles	-0.0380	-0.0095	-0.0202	0.0244	0.0438	118,535	0.88
	(0.0602)	(0.0698)	(0.0707)	(0.0783)	(0.0803)		

Panel B. Non-OECD countries

	Log (1+Exports)						
	Share Catholics × Year 1	Share Catholics × Year 2	Share Catholics × Year 3	Share Catholics × Year 4	Share Catholics × Year 5	#	R^2
Animal and vegetable oils, fats, and waxes	0.3888	0.1809	0.1856	0.4099	0.1654	18,368	0.86
	(0.2795)	(0.2621)	(0.3021)	(0.2694)	(0.3175)		
Beverages and tobacco	0.0537	0.2303	0.1577	0.1417	0.1116	33,843	0.81
	(0.1725)	(0.1853)	(0.2041)	(0.2120)	(0.2314)		
Chemicals and related products	0.0510	-0.0427	0.1598	0.1379	-0.0467	64,569	0.83
	(0.0913)	(0.1138)	(0.1185)	(0.1166)	(0.1257)		
Commodities and transactions n.e.c.	0.1629	0.1525	0.1081	0.0601	0.0231	37,373	0.80
	(0.1717)	(0.1910)	(0.2272)	(0.2694)	(0.2746)		
Crude materials, inedible, except fuels	0.1463	0.1779	0.1467	0.2447**	0.2813**	64,464	0.83
	(0.1098)	(0.1089)	(0.1211)	(0.1211)	(0.1238)		
Food and live animals	0.1020	0.1581	0.0730	0.0740	-0.0322	73,526	0.81
	(0.0987)	(0.0994)	(0.1129)	(0.1197)	(0.1364)		
Machinery and transport equipment	0.0389	0.0609	0.0593	0.1557	-0.0436	75,437	0.83
	(0.1152)	(0.1173)	(0.1241)	(0.1397)	(0.1440)		
Manufactured goods classified chiefly by material	0.0317	0.0534	0.1356	0.1470	0.0598	84,131	0.84
	(0.0967)	(0.1059)	(0.1257)	(0.1407)	(0.1494)		
Mineral fuels, lubricants, and related materials	0.2660	0.3135	0.3270	0.1917	0.5868**	28,362	0.84
	(0.1967)	(0.2427)	(0.2549)	(0.2431)	(0.2504)		
Miscellaneous manufactured articles	0.0507	0.0839	0.1245	0.2048**	0.2050*	80,877	0.86
	(0.0823)	(0.0969)	(0.0983)	(0.0961)	(0.1071)		

Panel C. Low-Catholic countries

	Log (1+Exports)						
	Share Catholics × Year 1	Share Catholics × Year 2	Share Catholics × Year 3	Share Catholics × Year 4	Share Catholics × Year 5	#	R^2
Animal and vegetable oils, fats,	0.3930	0.3276	0.4802	0.7567**	0.3201	18,091	0.84
and waxes	(0.3144)	(0.2818)	(0.3716)	(0.3309)	(0.3102)		
Beverages and tobacco	0.2913	0.3825*	0.3225	0.5370**	0.2627	26,829	0.83
	(0.1988)	(0.2137)	(0.2264)	(0.2401)	(0.2756)		
Chemicals and related products	0.0677	-0.0052	0.1387	0.0643	0.1020	47,510	0.85
	(0.1160)	(0.1000)	(0.1118)	(0.1325)	(0.1505)		
Commodities and transactions n.e.c.	0.0416	0.1164	0.0834	0.3004	0.2075	26,928	0.81
	(0.2100)	(0.2254)	(0.2353)	(0.3980)	(0.3658)		
Crude materials, inedible, except	0.1753	0.2338**	0.0596	0.1026	0.1680	44,570	0.86
Fuels	(0.1194)	(0.1032)	(0.1257)	(0.1385)	(0.1291)		
Food and live animals	0.0650	0.1416	0.1181	0.0644	-0.0838	49,877	0.83
	(0.1549)	(0.1413)	(0.1601)	(0.1892)	(0.1965)		
Machinery and transport equipment	-0.0867	0.0038	0.0391	-0.0871	-0.1542	54,815	0.87
	(0.1259)	(0.1274)	(0.1349)	(0.1431)	(0.1515)		
Manufactured goods classified	0.0133	0.1467	0.1319	0.1600	0.0402	57,496	0.87
chiefly by material	(0.1161)	(0.1320)	(0.1444)	(0.1435)	(0.1366)		
Mineral fuels, lubricants, and related	-0.1367	0.2938	0.3216	0.2632	0.6633**	23,833	0.83
Materials	(0.3131)	(0.3134)	(0.3256)	(0.3637)	(0.2727)		
Miscellaneous manufactured articles	0.0632	0.1241	0.0302	0.1548	0.2722**	56,722	0.88
	(0.1022)	(0.0990)	(0.1062)	(0.1262)	(0.1172)		

Notes: The dependent variable is the natural logarithm of 1 plus total exports of 1 of 10 product categories from a country visited by John Paul II to a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all visited countries (Panel A); visited countries that were not members of the OECD at the time of the visit (Panel B); and visited countries where Catholics are less than half of the population (Panel C). The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include Visited country × Partner country fixed effects, Visited country × Linear trend, and Partner country × Linear trend. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Table 3. Pastoral visits by Pope John Paul II and bilateral trade: Aggregate effect

	Log (1+Exports)		
	All countries	Non-OECD countries	Low-Catholic countries
	(1)	(2)	(3)
Year 1	0.1018**	0.1161**	0.1619**
	(0.0479)	(0.0554)	(0.0659)
Year 2	0.1748***	0.1910***	0.2275***
	(0.0608)	(0.0706)	(0.0787)
Year 3	0.1916***	0.1846***	0.2534***
	(0.0690)	(0.0785)	(0.0887)
Year 4	0.1238*	0.1130	0.1648*
	(0.0704)	(0.0791)	(0.0924)
Year 5	0.1627**	0.1493*	0.2208**
	(0.0799)	(0.0896)	(0.1043)
Log (GDP per capita)	1.3816***	1.3816***	1.3552***
	(0.3403)	(0.3499)	(0.3760)
Log (Population)	0.5577	0.7732*	0.7479*
	(0.3885)	(0.4353)	(0.4294)
FX rate	0.0001***	0.0001***	0.0001***
	(0.0001)	(0.0001)	(0.0001)
Trade liberalized	-0.1451	-0.1195	-0.1542
	(0.1269)	(0.1391)	(0.1542)
Liberal Democracy Index	0.2008	0.2878	0.1602
	(0.3114)	(0.3495)	(0.5653)
Visited country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	2,816	2,456	2,092
R-squared	0.96	0.94	0.94

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by John Paul II to the rest of the world. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. 'Log (GDP per capita)' denotes the natural logarithm of real GDP per capita in the visited country. 'Log (Population)' denotes the natural logarithm of total population in a visited country. 'FX rate' denotes the real exchange rate in a visited country vis-à-vis the USD. 'Trade liberalized' is a dummy variable equal to one if the visited country has liberalized its trade with the rest of the world at the time of the visit. 'Liberal Democracy Index' is an index of the extent to which a visited country is a liberal democracy. The sample includes all visited countries (column (1)); visited countries that were not members of the OECD at the time of the visit (column (2)); and visited countries where Catholics are less than half of the population (column (3)). The sample includes all visits between 1979 and 2004. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Tables

Appendix Table 1. Pastoral visits by Pope John Paul II, by country and year

Visited country	Year of visit	First visit	Stopover
Dominican Republic	1979	Yes	
Mexico	1979	Yes	
Bahamas	1979	Yes	Yes
Poland	1979	Yes	
Ireland	1979	Yes	
United States of America	1979	Yes	
Turkey	1979	Yes	
Congo	1980	Yes	
Kenya	1980	Yes	
Ghana	1980	Yes	
Burkina Faso	1980	Yes	
Ivory Coast	1980	Yes	
France	1980	Yes	
Brazil	1980	Yes	
German Federal Republic	1980	Yes	
Democratic Republic of the Congo	1980	Yes	
Pakistan	1981	Yes	Yes
Philippines	1981	Yes	
Guam	1981	Yes	Yes
Japan	1981	Yes	
United States of America	1981		Yes
Nigeria	1982	Yes	
Benin	1982	Yes	
Equatorial Guinea	1982	Yes	
Gabon	1982	Yes	
Portugal	1982	Yes	
United Kingdom	1982	Yes	
Brazil	1982		
Argentina	1982	Yes	
Switzerland	1982	Yes	
San Marino	1982	Yes	
Spain	1982	Yes	
Portugal	1983		Yes
Costa Rica	1983 (twice)	Yes	
Nicaragua	1983	Yes	
Panama	1983	Yes	
El Salvador	1983	Yes	
Guatemala	1983 (twice)	Yes	

Honduras	1983	Yes	
Belize	1983	Yes	
Haiti	1983	Yes	
Poland	1983		
France	1983		
Austria	1983	Yes	
United States of America	1984		Yes
South Korea	1984	Yes	
Papua New Guinea	1984 (twice)	Yes	
Solomon Islands	1984	Yes	
Thailand	1984	Yes	
Switzerland	1984		
Canada	1984	Yes	
Spain	1984		
Dominican Republic	1984		
Puerto Rico	1984	Yes	
Venezuela	1985	Yes	
Ecuador	1985	Yes	
Peru	1985	Yes	
Trinidad and Tobago	1985	Yes	
Netherlands	1985	Yes	
Luxembourg	1985	Yes	
Belgium	1985	Yes	
Togo	1985	Yes	
Ivory Coast	1985		
Cameroon	1985	Yes	
Central African Republic	1985	Yes	
Democratic Republic of the Congo	1985		
Kenya	1985		
Morocco	1985	Yes	
Switzerland	1985		
Liechtenstein	1985	Yes	
India	1986	Yes	
Colombia	1986	Yes	
St. Lucia	1986	Yes	
France	1986		
Bangladesh	1986	Yes	
Singapore	1986	Yes	
Fiji	1986	Yes	
New Zealand	1986	Yes	
Australia	1986	Yes	

Seychelles	1986	Yes
Uruguay	1987	Yes
Chile	1987	Yes
Argentina	1987	
German Federal Republic	1987	
Poland	1987	
United States of America	1987	
Canada	1987	
Uruguay	1988	
Bolivia	1988	Yes
Peru	1988	
Paraguay	1988	Yes
Austria	1988	
Zimbabwe	1988	Yes
Botswana	1988	Yes
Lesotho	1988	Yes
Swaziland	1988	Yes
Mozambique	1988	Yes
France	1988	
Madagascar	1989	Yes
Reunion	1989	Yes
Zambia	1989	Yes
Malawi	1989	Yes
Norway	1989	Yes
Iceland	1989	Yes
Finland	1989	Yes
Denmark	1989	Yes
Sweden	1989	Yes
Spain	1989	
South Korea	1989	
Indonesia	1989	Yes
Mauritius	1989	Yes
Cape Verde	1990	Yes
Guinea-Bissau	1990	Yes
Mali	1990	Yes
Burkina Faso	1990	
Chad	1990	Yes
Czechoslovakia	1990	Yes
Mexico	1990	
Curacao	1990	Yes
Malta	1990	Yes

Tanzania	1990	Yes
Burundi	1990	Yes
Rwanda	1990	Yes
Ivory Coast	1990	
Portugal	1991	
Poland	1991 (twice)	
Hungary	1991	Yes
Brazil	1991	
Senegal	1992	Yes
Gambia	1992	Yes
Guinea-Bissau	1992	
Angola	1992	Yes
Sao Tome and Principe	1992	Yes
Dominican Republic	1992	
Benin	1993	
Uganda	1993	Yes
Sudan	1993	Yes
Albania	1993	Yes
Spain	1993	
Jamaica	1993	Yes
Mexico	1993	
United States of America	1993	
Lithuania	1993	Yes
Latvia	1993	Yes
Estonia	1993	Yes
Croatia	1994	Yes
Philippines	1995	
Papua New Guinea	1995	
Australia	1995	
Sri Lanka	1995	Yes
Czech Republic	1995	
Poland	1995	
Belgium	1995	
Slovakia	1995	
Cameroon	1995	
South Africa	1995	Yes
Kenya	1995	
United States of America	1995	
Guatemala	1996 (twice)	
El Salvador	1996	
Nicaragua	1996	

Venezuela	1996	
Tunisia	1996	Yes
Germany	1996	
Slovenia	1996	Yes
Hungary	1996	
France	1996	
Bosnia and Herzegovina	1997	Yes
Czech Republic	1997	
Lebanon	1997	Yes
Poland	1997	
France	1997	
Brazil	1997	
Cuba	1998	Yes
Nigeria	1998	
Austria	1998	
Croatia	1998	
Mexico	1999	
United States of America	1999	
Romania	1999	Yes
Poland	1999	
Slovenia	1999	
India	1999	
Georgia	1999	Yes
Egypt	2000	Yes
Jordan	2000	Yes
Israel	2000	Yes
Palestine	2000	Yes
Portugal	2000	
Greece	2001	Yes
Syria	2001	Yes
Malta	2001	
Ukraine	2001	Yes
Kazakhstan	2001	Yes
Armenia	2001	Yes
Azerbaijan	2002	Yes
Bulgaria	2002	Yes
Canada	2002	
Guatemala	2002	
Mexico	2002	
Poland	2002	
Spain	2003	

Croatia	2003
Bosnia and Herzegovina	2003
Slovakia	2003
Switzerland	2004
France	2004

Notes. All visits, first visits, and stopover visits by Pope John Paul II. Source: Vatican.

Appendix Table 2. Data sources

Variable	Source
Exports	IMF DOTS, Comtrade
Imports	IMF DOTS
Year of Pastoral visit	Vatican
Year of visit by US President	Department of State
Year of visit by Queen Elisabeth II	Royal family
Year of Summer Olympic Games or Football World Cup	IOC, FIFA
Share Catholics	CIA, Pew
Share Protestants	CIA, Pew
GDP per capita	Penn Tables
Population	Penn Tables
FX rate	Penn Tables
Trade liberalized	Wacziarg and Welch (2008)
Exports / GDP	IMF DOTS, Penn Tables
Liberal Democracy Index	V-Dem

Notes. 'Exports' denotes total or product-level bilateral exports by a visited country to a trading partner, in USD. 'Imports' denotes total bilateral imports by a visited country from a trading partner, in USD. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics. 'Share Protestants' is the share, out of the total population, of citizens that identify as Protestants. 'GDP per capita' denotes the real GDP per capita in the visited country. 'Population' denotes total population in a visited country. 'FX rate' denotes the real exchange rate in a visited country vis-à-vis the USD. 'Trade liberalized' is a dummy variable equal to one if the visited country has liberalized its trade with the rest of the world at the time of the visit. 'Exports / GDP' denotes the ratio of total exports to GDP in a visited country. 'Liberal Democracy Index' is an index of the extent to which a visited country is a liberal democracy. '*IMF DOTS*' denotes the IMF's Direction of Trade Statistics dataset on total bilateral trade, https://data.imf.org/?sk=9D6028D4-F14A-464C-A2F2-59B2CD424B85. '*Comtrade*' denotes the UN Comtrade database on product-level bilateral trade, https://comtradeplus.un.org/. '*Vatican*' denotes the official Vatican archive of Pastoral visits, https://web.archive.org/web/20111101084344/http://www.vatican.va/holy_father/john_paul_ii/travels/index.htm. '*Department of State*' denotes the archive of US Presidents' foreign visits maintained by the Office of the Historian of the State Department, https://history.state.gov/departmenthistory/travels/president. '*Royal family*' denotes the archive of the state visits of Elisabeth II, maintained by the Royal family https://www.royal.uk/sites/default/files/media/outbound_state_visits_since_1952_0.pdf. '*IOC, FIFA*' denotes the official archive of Olympic Games and Football World Cups maintained by the International Olympic Committee, https://olympics.com/ioc/celebrate-olympic-games, and by the International Federation of Association Football, https://www.fifa.com/tournaments/mens/worldcup. '*CIA*' denotes CIA's World Factbooks. '*Pew*' denotes the Pew Research Centre2010 Survey of the Global Catholic Population, https://www.pewresearch.org/religion/2011/12/19/table-christian-population-as-percentages-of-total-population-by-country/. '*Penn Tables*' denotes the Penn World Tables version 10.01, https://www.rug.nl/ggdc/productivity/pwt/?lang=en. '*V-Dem*' denotes the Varieties of Democracy Dataset, https://v-dem.net/data/the-v-dem-dataset/country-year-v-dem-fullothers-v13/.

Appendix Table 3. Summary statistics

	Mean	Median	St. dev	Min	Max
Variable	(1)	(2)	(3)	(4)	(5)
Log (1+Exports), IMF DOTS	12.4853	14.3485	6.6822	0	26.5780
Log (1+Exports), Comtrade	13.2942	13.3092	3.3895	0	24.8962
Log (1+Imports)	13.2226	14.5984	6.0038	0	26.6029
Share Catholics	0.3088	0.129	0.3595	0	1
Share Protestants	0.1842	0.0425	0.2574	0	1
Log (GDP per capita)	8.8941	8.9725	1.2338	5.6670	12.0939
Log (Population)	1.4821	1.8605	2.2059	-5.4205	7.2049
FX rate	218.638	3.6271	1052.121	0	16,105.13
Trade liberalized	0.3727	0	0.4836	0	1
Exports / GDP	0.1301	0.0585	0.2477	0	3.6737
Liberal Democracy Index	0.3276	0.2065	0.2780	0.005	0.896

Notes: 'Log (1+Exports)' denotes the natural logarithm of 1 plus total bilateral exports from a country visited by Pope John Paul II to a trading partner, in USD, at the aggregate ('IMF DOTS') or at the product ('Comtrade') level. 'Log (1+Imports)' denotes the natural logarithm of 1 plus total bilateral imports by a country visited by Pope John Paul II from a trading partner, in USD, at the aggregate level. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics. 'Share Protestans' is the share, out of the total population, of citizens that identify as Protestants. 'Log (GDP per capita)' denotes the natural logarithm of real GDP per capita in the visited country, in USD. 'Log (Population)' denotes the natural logarithm of total population in a visited country, in million. 'FX rate' denotes the real exchange rate in a visited country vis-à-vis the USD. 'Trade liberalized' is a dummy variable equal to one if the visited country has liberalized its trade with the rest of the world. 'Exports / GDP' denotes the ratio of total exports to GDP in a visited country, in USD. 'Liberal Democracy Index' is an index of the extent to which a visited country is a liberal democracy. For variable sources, see Appendix Table 2.

Appendix Table 4. Pastoral visits by Pope John Paul II and bilateral trade: Main result

	Log (1+Exports)
Share Catholics × Year 1	0.2196*
	(0.1124)
Share Catholics × Year 2	0.2868**
	(0.1442)
Share Catholics × Year 3	0.4335***
	(0.1579)
Share Catholics × Year 4	0.2896*
	(0.1481)
Share Catholics × Year 5	0.2511
	(0.1595)
Visited country × Partner country FE	Yes
Visited country × Linear trend	Yes
Partner country × Linear trend	Yes
Observations	288,822
R-squared	0.78

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by John Paul II to a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Table 5. Pastoral visits by Pope John Paul II and bilateral trade: Robust exports

	Log (Exports)
Share Catholics × Year 1	0.1578***
	(0.0575)
Share Catholics × Year 2	0.2443***
	(0.0670)
Share Catholics × Year 3	0.3376***
	(0.0722)
Share Catholics × Year 4	0.3434***
	(0.0776)
Share Catholics × Year 5	0.3337***
	(0.0842)
Visited country × Partner country FE	Yes
Visited country × Linear trend	Yes
Partner country × Linear trend	Yes
Observations	229,371
R-squared	0.87

Notes: The dependent variable is the natural logarithm of total exports to a country visited by John Paul II from a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Table 6. Pastoral visits by Pope John Paul II and bilateral trade: Robust visits

	Log (1+Exports)	
	All visits	First visits excluding stopovers
	(1)	(2)
Share Catholics × Year 1	0.1352**	0.2449**
	(0.0637)	(0.1124)
Share Catholics × Year 2	0.1951**	0.2891**
	(0.0792)	(0.1456)
Share Catholics × Year 3	0.2936***	0.4424***
	(0.0823)	(0.1595)
Share Catholics × Year 4	0.2150***	0.3118**
	(0.0726)	(0.1481)
Share Catholics × Year 5	0.1418**	0.2373
	(0.0717)	(0.1610)
Visited country × Partner country FE	Yes	Yes
Visited country × Linear trend	Yes	Yes
Partner country × Linear trend	Yes	Yes
Observations	498,651	288,822
R-squared	0.78	0.78

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by John Paul II to a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all visits (column (1)) and first visits excluding stopovers (column (2)). The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Table 7. Pastoral visits by Pope John Paul II and bilateral trade: Imports

	Log (1+Imports)
Share Catholics × Year 1	-0.0437
	(0.1106)
Share Catholics × Year 2	-0.0940
	(0.1177)
Share Catholics × Year 3	-0.1726
	(0.1162)
Share Catholics × Year 4	-0.0985
	(0.1230)
Share Catholics × Year 5	-0.2532*
	(0.1334)
Visited country × Partner country FE	Yes
Visited country × Linear trend	Yes
Partner country × Linear trend	Yes
Observations	288,822
R-squared	0.77

Notes: The dependent variable is the natural logarithm of 1 plus total imports to a country visited by John Paul II from a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Table 8. Pastoral visits by Pope John Paul II and bilateral trade: Endogeneity

	Visit by Pope John Paul II
Share Catholics	5.7833
	(1.6757)
	(6.06)
Exports / GDP	0.6969
	(0.2858)
	(-0.88)
Log (GDP per capita)	0.8370
	(0.0835)
	(-1.78)
Log (Population)	1.2120
	(0.0716)
	(3.25)
Liberal Democracy Index	1.3580
	(0.6317)
	(0.66)
Observations	152
Log likelihood	-466.0142

Notes: The dependent variable 'Visit by Pope John Paul II' is a dummy equal to 1 if the country was visited by Pope John Paull II. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics. 'Exports / GDP' denotes the ratio of total exports to GDP, in USD. 'Log (GDP per capita)' denotes the natural logarithm of real GDP per capita, in USD. 'Log (Population)' denotes the natural logarithm of total population, in million. 'FX rate' denotes the real exchange rate in a visited country vis-à-vis the USD. 'Liberal Democracy Index' is an index of the extent to which the country is a liberal democracy. All variables are measured during the year of a visit, if the Pope ever visited the country, or in 2002, if the Pope never did. The regression is estimated using a Cox Proportional Hazard model. The coefficient is a hazard ratio corresponding to a one-unit change in the respective variable. Standard errors are reported in the first parentheses, and z-statistics are reported in the second parentheses, below the coefficient.

Appendix Table 9. Visits by US President and Queen Elisabeth and bilateral trade with US and UK

	Log (1+Exports)	
	Visits by US President	Visits by Queen Elisabeth II
	(1)	(2)
Year 1	0.2983	0.9258***
	(0.3008)	(0.3171)
Year 2	0.3240	0.7815***
	(0.3079)	(0.2999)
Year 3	0.3470	0.2131
	(0.2615)	(0.6043)
Year 4	0.3641	0.3425
	(0.2756)	(0.6143)
Year 5	0.4600	0.2997
	(0.2875)	(0.6273)
Visited country × Partner country FE	Yes	Yes
Visited country × Linear trend	Yes	Yes
Partner country × Linear trend	Yes	Yes
Observations	4,153	4,661
R-squared	0.68	0.68

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by the US President (columns (1) and (2)) or by Queen Elisabeth II (columns (3) and (4)). 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. In column (1), the US is the only trading partner. In column (2), the UK is the only trading partner. The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.

Appendix Table 10. Pastoral visits by Pope John Paul II and bilateral trade: Heterogeneity

	Log (1+Exports)							
	Before 1990	After 1990	OECD countries	Non-OECD countries	High-Catholic countries	Low-Catholic countries	High-bilateral trade countries	Low-bilateral trade countries
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share Catholics × Year 1	0.2549**	0.2144	-0.0102	0.2515*	0.0744	0.3050**	0.1414	0.2255*
	(0.1277)	(0.2101)	(0.1292)	(0.1415)	(0.1482)	(0.1496)	(0.2109)	(0.1251)
Share Catholics × Year 2	0.3908**	0.3581	0.0195	0.3664**	0.2141	0.3044*	0.2119	0.3135**
	(0.1817)	(0.2607)	(0.1458)	(0.1790)	(0.2402)	(0.1687)	(0.2981)	(0.1575)
Share Catholics × Year 3	0.4081**	0.7314***	-0.1732	0.5981***	0.2852	0.4488**	0.4659	0.4271**
	(0.2009)	(0.2661)	(0.1872)	(0.1983)	(0.1960)	(0.2052)	(0.2887)	(0.1754)
Share Catholics × Year 4	0.2731	0.5877**	-0.1055	0.4100**	0.2136	0.2968	0.5340*	0.2764*
	(0.1235)	(0.2548)	(0.2470)	(0.1787)	(0.1735)	(0.1880)	(0.3072)	(0.1639)
Share Catholics × Year 5	0.3516	0.5459*	-0.1071	0.3653*	0.0530	0.3088	0.4104	0.2375
	(0.2648)	(0.2830)	(0.2381)	(0.1978)	(0.2065)	(0.1968)	(0.3491)	(0.1767)
Visited country × Partner country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Visited country × Linear trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Partner country × Linear trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	95,094	193,690	48,741	239,768	56,013	232,657	48,747	239,278
R-squared	0.81	0.76	0.85	0.76	0.84	0.77	0.84	0.77

Notes: The dependent variable is the natural logarithm of 1 plus total exports from a country visited by John Paul II to a trading partner country. 'Share Catholics' is the share, out of the total population, of citizens that identify as Catholics in a trading partner country. 'Year 1', 'Year 2', 'Year 3', 'Year 4', and 'Year 5' are dummy variables equal to one in the respective year after the Pope's visit, and to zero otherwise. The sample includes countries visited between 1979 and 1989 (column (1)); countries visited between 1990 and 2002 (column (2)); countries that were members of the OECD at the time of the visit (column (3)); countries that were not members of the OECD at the time of the visit (column (4)); countries where Catholics were more than half of the population at the time of the visit (column (5)); countries where Catholics were less half of the population at the time of the visit (column (6)); trade partners that are in the top 10% of bilateral trade vis-à-vis the visited country (column (7)); and trade partners that are outside of the top 10% of bilateral trade vis-à-vis the visited country (column (8)). The sample includes all first visits between 1979 and 2002. The sample period is 1975–2007. All regressions are estimated using OLS and include fixed effects as specified. Standard errors clustered at the visited country level, where ***, **, and * indicate significance at the 1, 5, and 10 percent statistical level, respectively.