Democracy and Its Unequal Effect on Capital Inflows*

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Abstract: Institutional underdevelopment has been suggested as a solution to the Lucas Paradox, the puzzle that capital does not disproportionally flow to poorer countries as theory would predict. We study the causal effect of democratic regime change on total capital and FDI inflows in a large sample of developing economies over the past four decades using heterogeneous treatment effects estimators. While average treatment effects are positive and large, we find dramatically different outcomes between countries with 'good' and 'poor' geography, but not between countries with differential deep determinants related to culture, legal origin, or colonial history. We rationalise these patterns by demonstrating that 'poor' geography countries suffer from structural deficiencies related to export concentration, commodity market fluctuations, trade costs, and productive complexity. Crucially, the patterns we reveal do not seem to arise from nature *per se*, but from nature shaping history: treatment effect differences between 'good' and 'poor' geography countries disappear if we compare only those with colonial experience. Although geography can equally shape culture or legal origin, analogous investigation does not support their relevance in explaining modern capital flow patterns.

Keywords: capital inflows, economic development, democratic regime change, geography, deep determinants of prosperity, difference-in-differences, interactive fixed effects, heterogeneous treatment effects

JEL codes: F21, F34, O10, O43, P16

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1 Introduction

> *"[Geography] tells an unpleasant truth, namely, that nature like life is unpleasant, unequal in its favours; further, that nature's unfairness is not easily remedied."* (Landes, 1999, 4/5)

In this paper we study the relationship between democratic regime change and capital inflows. We hypothesise that 'nature' (geography), related to characteristics of climate and historical disease environment, plays an important role in this context.[1] Democratic regime change, establishing a bundle of economic, political and legal institutions (Acemoglu et al., 2019), clearly represents the sort of reforms that "curtail the power of entrenched economic interests and liberate the economy's productive potential" (Obstfeld, 2009, 63), while at the same time making "economies safe for international asset trade" (ibid). Democratic regime change should reduce economies' objective or perceived political and economic risk factors, and hence attract higher foreign direct investment and other financial inflows (Li and Resnick, 2003; Papaioannou, 2009; Asiedu and Lien, 2011). Yet, we argue, deep-seated structural factors prevail: Geography determines economic 'structure', e.g. the complexity and diversity of the export basket (Malik and Temple, 2009), or the potential for and speed of structural transformation away from agriculture (Eberhardt and Vollrath, 2018), and this, in turn, determines investment opportunities (opportunities for economic returns). 'Poor geography' is associated with a lack of investment opportunities, poor returns, and hence low capital inflows. Using descriptive analysis we highlight that countries with 'poor geography' (i) have relatively higher export concentration (in terms of goods/products) and hence are more exposed to global commodity market fluctuations, resulting in greater aggregate commodity price volatility; (ii) are characterised by a productive system of lower complexity; and (iii) suffer from higher trade costs.

In our analysis of capital inflows (total inflows or FDI) for a large panel of countries (1975-2015) we use a novel methodology from the heterogeneous treatment effects literature (Xu, 2017; Chan and Kwok, 2022) employing a common factor structure to capture unobserved time-varying heterogeneity (Pesaran, 2006; Bai, 2009; Gobillon and Magnac, 2016). A simple empirical setup enables us to isolate the differential effect of democracy *by geography*: we construct separate sets of treatment and control samples by geography ('good', 'poor') and estimate average treatment effects on the treated (ATET) for democratic regime change using a difference-in-differences estimator (the principal component DID, PCDID, of Chan and Kwok, 2022).[2] Why don't we just estimate the heterogeneous PCDID for *all* countries and then compute averages by geography?

[1] We do not use the term 'natural endowment' employed in some of the literature since this too readily leads to association with 'natural resources' in the form of minerals, oil, etc., which are explicitly not part of our concept of geography. Our proxies for geography are, in terms of climate: (i) some land area in the tropical climate zone; (ii) no land area in the temperate climate zone; and (iii) low absolute latitude. In terms of disease environment: (i) the share of population at risk of malaria in 1965, (ii) malaria ecology, and (iii) the historical prevalence of 7 endemic diseases. Continuous indicators are dichotomised at the full sample median (including countries which democratised and those that were democracies or autocracies throughout the sample period.

[2] Under reasonable assumptions our estimator accounts for selection into regime change and we are able to test a (weaker) form of the parallel trend test required for identification.

This would adopt a control sample made up of countries with good and poor geography, undermining the clean counterfactual setup of our above strategy: 'poor' geography control countries for 'poor' geography treated countries, and 'good' geography control countries for 'good' geography treated countries. Setting a deliberately high bar for our definition of democratic regime change avoids the concern that democracy might 'mean different things' in countries with 'good' versus 'poor' geography: we employ V-Dem data (Coppedge et al., 2021) for 'liberal democracy' and also the indicator devised by Acemoglu et al. (2019) which captures similar institutional building blocks related to electoral democracy and the rule of law (see Appendix Figure A-1 for a visualisation).[3] We also make sure that countries in the poor vs good geography samples spend a similar number of years in democracy and do not have differential rates of reverting to autocracy. If the effect of geography on regime change propensity is thus taken out of the equation, we can separately identify the causal effect of democracy on capital flows in 'good' and 'poor' geography countries, respectively, and can directly compare the economic magnitudes. This analysis answers the question of whether geography is unequal in its favours for the effect of democratic regime change on capital inflows.

Naturally, geography is not the only deep determinant of economic prosperity banded about in the literature (La Porta et al., 1998; Stulz and Williamson, 2003; Rajan and Zingales, 2003; Nunn, 2009; Gorodnichenko and Roland, 2017), hence we demonstrate that alternative explanations related to legal origin (French civil law origins provide lower legal protection for investors), history (colonial experience, extractive colonisation) and culture (individualism emphasizing personal freedom and achievement; linguistic similarity across countries enabling communication and exchange fostering innovation and modern growth) fail to provide manifest differences between groups of countries like the patterns in the case of geography.

Our benchmark results ignoring deep determinants establish that democratic regime change (in this summary we use the liberal democracy definition) has a positive effect on total capital inflows over GDP on the order of 1 to 2 percentage points (depending on the set of controls included) for a sample mean of 3.0% (during the autocratic period of all countries that subsequently experienced democratic regime change). For FDI inflows the effects amount to 0.6 to 1.4 percentage points, for a mean FDI/GDP of 1.4%, indicating sizeable economic effects of democratisation on capital inflows. However, these averages hide substantial heterogeneity by geography: countries with 'good' geography experience 1 to 4 percentage points higher total inflow/GDP following democratic regime change for a mean of 3.8%, whereas those with 'poor' geography experience a 0 to 2 percentage point increase for a mean of 2.6%. For FDI the effects are a 0.5-2.5pp increase (mean 1.7%) and a 0-1.5pp increase (mean 1.2%) in 'good' and 'poor' geography countries, respectively — this summary ignores statistical significance, which is given for virtually all effects in

[3] In additional analysis we take advantage of the hierarchical nature of the V-Dem indices to investigate whether institutions related to electoral democracy (polyarchy) have different implications from those associated with the rule of law and executive constraints (liberal component).

the 'good' geography samples but in fewer 'poor' geography samples. We also consider a form of the parallel trend test to ensure our causal models are not misspecified. When we explore alternative deep determinants related to culture, history and legal origin, treatment effects estimates for democratic regime change are of near-uniform magnitude across the two samples ('good', 'poor').

Revealing patterns of differential democratic regime change effects can offer important insights for academics and policymakers, but cannot elucidate the reasons why we observe them. There are many instances of geography influencing history (Nunn, 2009), most prominently so in the context of the 'extraction' of slaves in Africa (Nunn, 2008) and the patterns of different forms of colonisation (Acemoglu et al., 2001). Similarly, culture can be influenced by geography, where unfavourable nature can create barriers to the diffusion of ideologies, beliefs, ideas, or the means of communication (Gorodnichenko and Roland, 2017), effectively limiting the spread of certain 'culture' or preserving cultural isolation. Our aim in additional analysis is to provide some evidence that the strong geographical patterns we reveal may really be attributable to cultural, historical, or legal factors *shaped* by nature, and to a lesser extent due to nature itself. We answer a very simple question: what are the patterns of capital flow increases following democratic regime change between 'good' and 'poor' geography samples if we focus on different deep determinants *within* the treatment groups? Among the 'good' geography sample, how did countries with French legal origin fare, and are their average treatment effects similar or very different from countries with French legal origin which are endowed with 'poor' geography? Adopting this strategy for an expanded number of proxies for culture, legal origin and history, we find that proxies related to colonial experience appear to consistently eradicate the substantial differences in the 'democratic dividend' we observe when comparing good and bad geography countries. Countries with favourable geography but a history of colonisation experience similar, in the case of FDI flows actually lower, capital inflows after regime change as those countries with the same history but poor geographic endowment.

Background The past fifty years represent a new era of financial globalisation during which international capital flows have increased dramatically and are regarded as drivers of economic growth (due to increased investment, a productivity boost, or reduced misallocation: Prasad et al., 2007; Larrain and Stumpner, 2017; Erten et al., 2021) but also as potential triggers of financial crises (due to capital inflow 'bonanzas': Kaminsky and Reinhart, 1999; Kaminsky, 2019; Reinhart and Reinhart, 2009; Ghosh et al., 2014; Caballero, 2016). Globally, most capital controls impeding capital mobility were removed by the early 1990s in a process which started with Germany and the US after the collapse of the Bretton Woods System in 1973, followed by Japan, the UK and Latin America later that decade and the rest of Europe in the 1980s (Aizenman et al., 2013; Kaminsky, 2019). Some of the existing literature on excessive capital inflows suggests that these are primarily caused by cyclical push factors (Reinhart et al., 2017), with "domestic macroeconomic characteristics... generally less important" (Forbes and Warnock, 2012, 235). Dissenting voices

do not question that global factors are driving global surges to some extent but argue that the incidence and magnitude of a surge for an individual country are largely dependent on domestic factors (Ghosh et al., 2014) and prime among these the quality of institutions (Fratzscher, 2012). Most recently, Cerutti et al. (2019) suggest that the vast majority of variation in capital flow patterns cannot be explained by global factors.

For a long time, many academics, policymakers and development practitioners doubted the economic dividends of democratic regime change: enabling the populace to remove an incumbent government through the power of the electoral process (one of the fundamental definitions of democracy) would drive up (government) consumption and, via the threat of tax increases to finance these redistribution efforts, reduce the rate of investment, to the detriment of economic growth (e.g. Baum and Lake, 2003, 334f). Doubters would further point to the stellar growth rates in autocratic regimes such as China or Singapore to question whether democracy is *necessary* for economic prosperity. While that may not be the case, beyond cherry-picking success stories it is widely recognised that growth outcomes vary substantially across autocracies (Persson and Tabellini, 2009; Knutsen, 2012, 2021; Imam and Temple, 2024), and the strong *average* improvement in economic development in democratising countries established more recently (Acemoglu et al., 2019; Eberhardt, 2022; Boese-Schlosser and Eberhardt, 2024) provided convincing evidence for a positive and large causal effect of democratic regime change. Our definition of democracy (liberal democracy) represents a bundle of institutions, covering both electoral democracy (polyarchy) as well as aspects of individual liberties, equality before the law and secure property rights. Linking capital flows to democracy rather than individual institutions (e.g. Papaioannou, 2009) brings our work in line with the recent 'democracy causes growth' literature and highlights a specific channel through which democratic regime change can lead to greater economic prosperity.

Empirical Strategy We adopt a treatment effects framework (Papaioannou and Siourounis, 2008; Acemoglu et al., 2019), but use an implementation which adds common factors estimated from control sample regressions to the country-specific treatment regression model: the Chan and Kwok (2022) Principal Component Difference-in-Differences (PCDID) estimator.[4] Like any other Difference-in-Differences estimator the PCDID studies treated countries before and after treatment, but there are no control country observations included in our treatment regression: these are instead captured in the form of estimated common factors. The intuition is as follows: our country-specific specification of capital inflows as a function of a democracy dummy, an intercept, and some control variables crucially omits a great deal of unobserved heterogeneity, time-*varying* determinants of capital flows which are also affecting democratic regime change as well as the controls — country-specific productivity or absorptive capacity may be good examples (Eberhardt and Presbitero, 2015; De Visscher et al., 2020). Factor models construct proxies for these omitted factors, either by Principal Component Analysis from regression residuals (Bai,

[4] Existing empirical applications adopting the PCDID include Cho et al. (2022), Eberhardt (2022), and Boese-Schlosser and Eberhardt (2024).

2009) or by use of cross-section averages of all observed variables in the model (Pesaran, 2006). These proxies are then entered into the estimation equation: like a country fixed effect in a pooled panel model solves the problem of unobserved time-*invariant* determinants correlated with the outcome (capital flows) and the independent variables (democracy, controls), these 'interactive fixed effects' solve the problem of unobserved time-*varying* determinants correlated with outcome and independent variables. This is the setup in standard heterogeneous panel models. In the difference-in-differences context, there is a tweak: here, the common factors are estimated from the residuals of *control country regressions* (capital flows regressed on an intercept and the controls, country by country, in the sample of never-democratisers), and then included in the country-specific treatment effects regression as additional controls with country-specific parameters. In standard DID models the parallel trend test can inform us whether treated and control countries were already on different trajectories prior to the treatment. 'Unparallel trends' constitute the single most important challenge to causal identification in the pooled DID. Chan and Kwok's (2022) paper carries the subtitle "Difference-in-Differences When Trends Are Potentially Unparallel and Stochastic", but this still does not mean that the above strategy is guaranteed to work. Instead of a standard parallel trend test, the empirical specification has to satisfy the Alpha test for 'weak parallel trends' (Chan and Kwok, 2022): in essence, this checks that the 'information' about unobserved heterogeneity the PCDID extracts from the control sample is equally 'relevant' in the treatment sample.

Related Literature Our research speaks to three separate strands of literature. First, we contribute to the literature on the determinants of capital inflows, studying the domestic 'pull factors'. Capital inflows are widely suggested to have a positive impact on growth (Alfaro et al., 2004; Durham, 2004; Prasad et al., 2007; Erten et al., 2021). But, where capital does or does not flow and why has, of course, occupied the profession for a long time (the Lucas Paradox, Lucas, 1990). Existing work has suggested that institutions are important determinants of capital inflows (Feldstein, 1999; Li and Resnick, 2003; Alfaro et al., 2008; Papaioannou, 2009; Asiedu and Lien, 2011) and hence a partial solution to these puzzles.[5] We contribute to this literature by highlighting the differential effect of institutional change on capital inflows *by geography*.

Second, our work is related to the empirical literature on democracy and growth, which only recently established a positive and large causal relationship (Madsen et al., 2015; Acemoglu

[5] Like in the literature on financial development (e.g. Law and Singh, 2014; Arcand et al., 2015), recent empirical work on financial flows seems to emphasise the dangers of 'too much of a good thing' much more than the benefits of capital flows *per se*: excessive capital inflows are a primary candidate for increased financial vulnerability (Kaminsky and Reinhart, 1999; Lopez-Mejia, 1999; Reinhart and Reinhart, 2009; Ghosh et al., 2014; Caballero, 2016; Erten et al., 2021), a topic which has seen a wealth of contributions following the Global Financial Crisis (Gourinchas and Obstfeld, 2012; Schularick and Taylor, 2012). In separate analysis (available on request), we study whether democratic regime change has a differential effect on excessive capital inflows (bonanzas or surges) across countries with 'good' and 'poor' geography. We conclude that while democratic regime change is in the majority associated with reduced financial vulnerability (lower propensity of capital inflow bonanzas or surges) in the 'good' geography sample, it is in the majority associated with increased vulnerability in the 'bad' geography sample.

et al., 2019; Eberhardt, 2022; Boese-Schlosser and Eberhardt, 2024). Two important challenges to a better understanding of *how* democracy causes growth remain: (a) existing studies assume that the democracy-growth relationship is common across countries, which makes it difficult to derive policy implications for individual countries (Durlauf, 2020); and (b) the direct transmission mechanisms by which democracy leads to growth have not been studied systematically. Our paper explores geography as an important factor governing the patterns of heterogeneous democracy effects and capital inflows as the conduit for the effect of democratic regime change on prosperity.

Third, we contribute to an older cross-country empirical literature on the deep determinants of comparative development. 2021 marked the twentieth anniversary of the publication of *'The colonial origins of comparative development'* (Acemoglu et al., 2001). Though not the first empirical contribution on the link between institutions and growth (e.g. Hall and Jones, 1999), it is arguably the paper which firmly established the quality of institutions as the most significant 'deep determinant' of long-run economic development. In the years after its publication empirical battles were fought over the supremacy of institutions over geography and trade openness (e.g. Dollar and Kraay, 2003; Easterly and Levine, 2003; Rodrik et al., 2004) as well as over the precise definition of institutional quality which did (or did not) cause development over the long-run (Glaeser et al., 2004). Related work has shifted attention to the study of culture (Stulz and Williamson, 2003; Gorodnichenko and Roland, 2017; Ang, 2019), history (Nunn, 2009) or legal origins (La Porta et al., 1998, 2008; Monnet and Velde, 2021), at times focusing on the determinants of financial development rather than economic prosperity more broadly, including work on the political economy of financial development (Rajan and Zingales, 2003). Most of this work is based on regressions in the cross-section and defines 'institutions' as time-invariant. We contribute to this literature by considering democracy as a time-varying bundle of institutions (in line with recent seminal contributions on democracy and growth), and studying the differential effects of democratic regime change across different sets of country groups defined by immutable characteristics proxying for geography, history, legal origin, or culture.

The remainder of this paper is structured as follows: in the next section, we provide some background on and descriptive analysis of the 'deep determinants' of economic development. In Section 3 we study the causal effect of democratic regime on capital flows. Section 4 first provides descriptive analysis to highlight the 'structural' disadvantage of countries with unfavourable geography along a number of factors determining trade and production. We then explore whether the strong correlations between capital inflows and geography may not hide indirect cultural or historical factors. Section 5 concludes.

2 Deep Determinants of Comparative Development

In this section, we provide an overview of some of the existing literature on deep determinants of economic prosperity, covering empirical work which investigates per capita income, financial

development, or capital flows. We then provide details on the range of proxies we use in the paper to study geography, culture, history, and legal origin. We offer a first glimpse of the deep determinants of capital flows in the context of democratic regime change in descriptive analysis.

2.1 Geography, Legal Origin, Colonial History, and Culture

Geography Arguments supporting a link between geography (climate, disease environment) and contemporary economic development are frequently centred on their impact on land, labour and production technology (Diamond, 1998; Bloom and Sachs, 1998; Gallup et al., 1998), illustrated by the suggestion that in tropical climates people are "enervated by the slightest physical or mental exertion" (a Bangladeshi diplomat cited in Landes, 1999, 15), which makes for a "slow rhythm [of work] with long and frequent pauses" (ibid.: 16);[6] or that (modern) innovations in production technology favour agriculture in temperate versus tropical countries (Diamond, 1998). Yet, these arguments are difficult to uphold given the 'reversal of fortune' (Acemoglu et al., 2002) whereby if climate had such a profound impact then countries which were rich in 1500 should still be rich today (but frequently are not). These authors further convincingly dismiss related explanations that agricultural technology reversed the early advantage of tropical over temperate agriculture. We therefore need to identify distinctly more 'modern' features of growth and development as likely reasons for a democracy-geography-growth link.

Standard gravity arguments for the flow of traded *goods* between countries (Bergstrand, 1985; Anderson and Van Wincoop, 2003) find similar effects of distance and remoteness for capital flows (Portes et al., 2001; Bergstrand and Egger, 2007; Head and Ries, 2008; Lane and Milesi-Ferretti, 2008; Papaioannou, 2009; Pellegrino et al., 2021), suggesting that "the geography of information is the main determinant of the pattern of international transactions" (Portes and Rey, 2005, 269). This speaks to distance as an important factor. Besides geographic predisposition to trade and capital flows, not just in terms of remoteness but also distance from the equator (Frankel and Romer, 1999), nature affects the structure of exports, which can leave countries prone to external (terms of trade) shocks (Malik and Temple, 2009). We provide evidence in Section 4 that trade costs, concentration of exports, aggregate commodity price volatility, and complexity of production strongly correlates with our proxies for climate and disease environment.

Legal origin A sizeable literature has investigated the economic consequences of legal origin, in particular for financial development (e.g. La Porta et al., 1998; Beck et al., 2003). The conceptual arguments for such a link, that legal protection for outside investors is stronger in countries with origins in (British) common law than (French) civil law, are well-known (La Porta et al., 2008), though not without controversy: while post-WWII financial development seems to follow the suggested patterns, history provides many instances of a 'reversal' in the correlation (Monnet and

[6] It is important to emphasise that they speak of local and non-local individuals being affected in this way: there is no suggestion that the people residing in tropical locales inherently exert a lower work effort and productivity.

Velde, 2021), thus undermining a structural link. We consider legal origin since arguments for investor protection seem equally relevant in the context of capital flows, with the legal system further representing a 'meta-institution' (Koyama, 2022).

History One strand of the empirical literature on 'the long arm of history' relates to the 'triangular' global trade system from the 15th century onwards, which connected manufactured goods from European colonisers, raw materials from the Americas, and slave labour from Sub-Saharan Africa (Nunn, 2009). These exploitative connections have been causally linked to prosperity in Europe, underdevelopment in the Americas, and African stagnation. While in our setup of democratic regime change it is prohibitive to study the slave trade corner of this triangle,[7] broader notions of colonial experience (during the 'Columbian exchange' and the 'Scramble for Africa') and within this more extractive colonisation (Acemoglu et al., 2001) can provide insights into the divergent effects of historical contact with Europe (Nunn, 2020).

Culture The origins of a proposed link between culture — typically defined as a shared set of values, beliefs and norms of behaviour — and long-term prosperity are usually found in Max Weber's *protestant work ethic*. While empirical work initially made a link to religion (Landes, 1999; Stulz and Williamson, 2003), it was the study of Gorodnichenko and Roland (2017) which systematically approached the distinction between individualism (said to be fostering personal freedom, achievement, and hence innovation) and collectivism (emphasising embeddedness, group loyalty and discouraging 'standing out') — a distinction suggested to be *the* primary dimension of cultural differences (Heine, 2007).[8] Adopting a range of instrumentation strategies Gorodnichenko and Roland (2017) demonstrate a causal link between individualism and income per worker.

Language "makes information operational" (Ginsburgh and Weber, 2020, 348) and provides a 'social technology' we can use to construct divisions of our sample into those with more similar and others with more dissimilar common language, as a crude proxy for culture: "The various aspects of culture are hard to describe and for the sake of simplicity, language may be, and is often, used as a proxy for culture and/or ethnicity" (ibid, 363). The specific definitions of language we focus on relate to 'intercommunication distances', which have primarily found application in the study of bilateral trade flows (e.g. Melitz and Toubal, 2014) or of lexicographical bias in firm-level exports (Cheng et al., 2020). Although the presence of a *lingua franca* enables communication, it is the notion of common ethnicity and trust captured by intercommunication distance we adopt (Ginsburgh and Weber, 2020) which makes such indices attractive proxies for culture.

[7] The analysis of slavery is limited to 52 African countries, which in samples split by median slave export numbers would amount to only 8 countries with democratic regime change (definition: Liberal democracy), respectively.

[8] Existing research, reviewed in Spolaore and Wacziarg (2013), has focused on the (intergenerational) transmission of culture and also its effect on contract enforcement, fertility choice, regulation, etc.

Proxies Throughout our analysis, we adopt a range of proxies for geography ($\times$6), history ($\times$2) and culture ($\times$3), as well as data on legal origin to capture these different deep determinants.

For the disease environment aspect of geography, we use two datasets related to malaria: (i) from McCord et al. (2017, malpct) the percentage share of population at risk of malaria in 1965 and (ii) from Kiszewski et al. (2004, ME) malaria ecology, an "ecologically-based variable that is predictive of malaria risk" (Sachs, 2003, 7). We further adopt (iii) data on the historical prevalence of parasitic and infectious diseases from Murray and Schaller (2010, hdp_7) — the variable considering seven diseases has the best coverage. For the climate-related aspects of geography we adopt (i) a dummy variable for zero land area in the temperate climate zone constructed from Spolaore and Wacziarg (2013, kgatemp), and (ii) a dummy variable for 'some' land area in the tropical climate zone constructed from Nunn and Puga (2012, tropical), from where we also construct (iii) absolute average latitude (using lat).

For French legal origin we use a dummy from La Porta et al. (2008, legor_fr).

For aspects of history we adopt the Colonial Transformation dataset from Ziltener and Künzler (2013) for 85 countries with colonial experience. Our first indicator is simply whether a country experienced colonialism or not. The second indicator is limited to the 85 countries in the data with colonial experience and uses information on plantations, gold/silver mining and general mining during the colonial period to establish whether colonial institutions were 'extractive' (any of the three measures having a value of '2' indicating 'extensive').

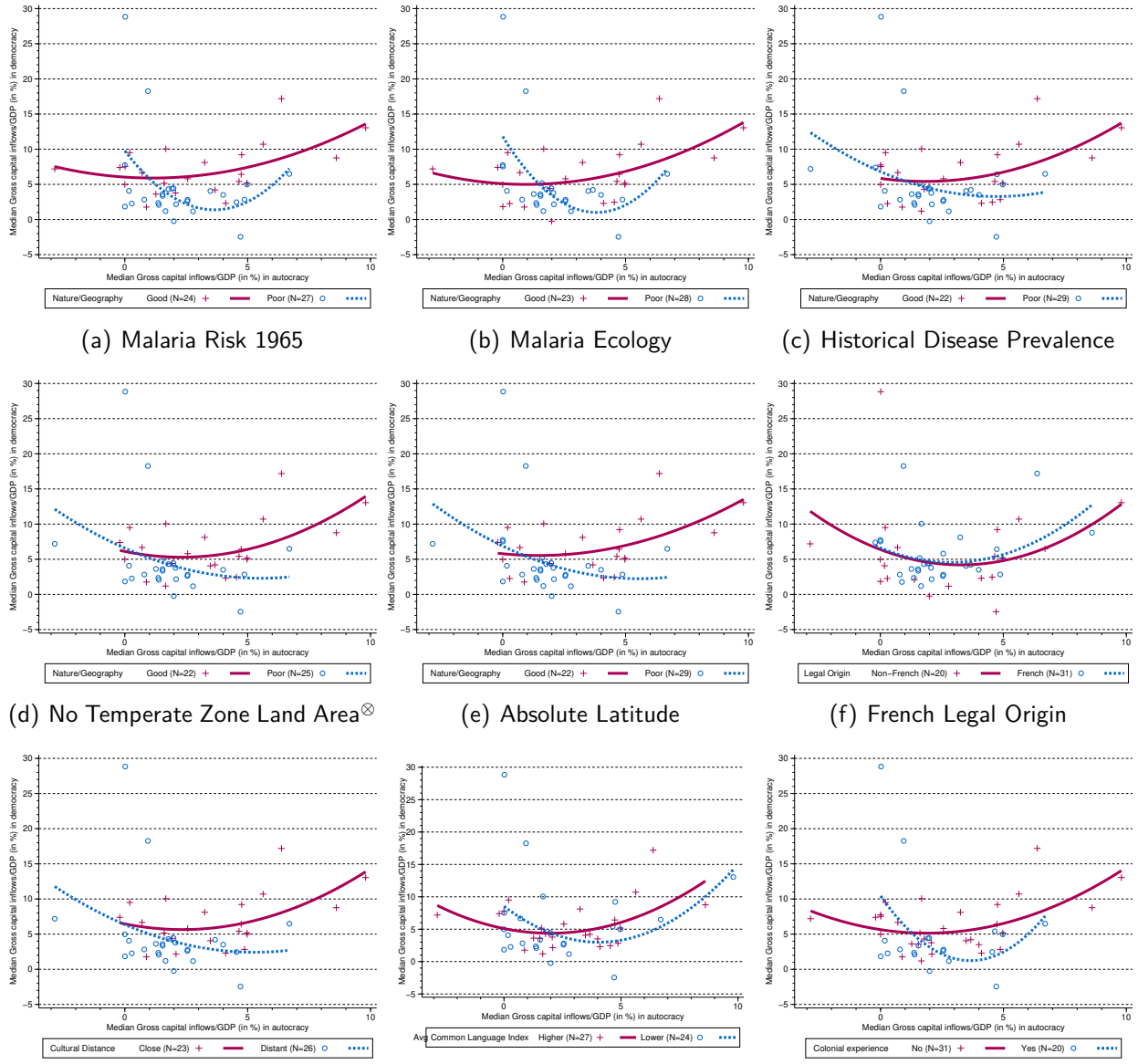
For culture, we use (i) data from Gorodnichenko and Roland (2017, distE_UK) relating to a measure of distance (from the UK, one of the world's most individualist countries) in terms of frequencies of blood types. For the language aspect of culture, we use (ii) data from Gurevich et al. (2021) who compiled the domestic and international common language (DICL) database. Our proxies capture the probability that two individuals picked at random from each pair of countries speak the same native language (cnl) and a population-weighted proximity measure based on 'linguistic trees' which categorise languages (lp). These are dyadic data for country pairs, and we compute the country-specific averages for the average common native language (cnl) index and average language similarity (lp) for country i across all other countries j.

For all of the above: where we do not already indicate that the proxies are dummy variables we dichotomise continuous or categorical variables at the cross-country median (the proxies selected are all time-invariant or in case of malpct for a single year).[9] Throughout our analysis and in the presentation of results a geography dummy value of 0 is for 'good' geography and 1 for 'poor' geography. Similarly for cultural and historical proxies. We provide some maps indicating the distribution of deep determinants across countries in Appendix Figure A-3. The mean (median) pairwise correlation coefficient within the geography proxies is 0.60 (0.58) and within culture proxies 0.44 (0.47). The mean (median) correlation coefficient between geography and

[9] This is for the full sample which includes always-democracies, never-democracies and democratisers.

culture proxies is 0.32 (0.33), between geography and French legal origin 0.03 (0.02) and between French legal origin and culture -0.18 (-0.16) — the latter two comparisons are for merely six and three correlation coefficients, respectively.[10] See Appendix Table A-2 for all pairwise correlations.

Figure 1: Patterns of Capital Inflows before/after regime change by Deep Determinant



(a) Malaria Risk 1965 (b) Malaria Ecology (c) Historical Disease Prevalence

(d) No Temperate Zone Land Area$^{\otimes}$ (e) Absolute Latitude (f) French Legal Origin

(g) Blood type distance to the UK (h) Avg Common Language$^{\otimes\otimes}$ (i) Colonial Experience

Notes: We present scatters and quadratic regression lines for the relationship between median total capital inflows/GDP before (x-axis) and after democratic regime change (y-axis), distinguishing 'deep determinants' in each plot as proxies for geography, Legal Origin or culture. $\otimes$ and $\otimes\otimes$ indicate that we omit the plots for tropical land area and average language similarity, which are qualitatively identical to the temperate land zone and average common language index versions presented, respectively.

[10] These are pairwise correlations for single cross-sections of our treatment and control samples using the liberal democracy definition (between 99 and 109 countries). The correlations are moderately lower than equivalent pairwise correlations for the sample of all (137-147) countries, including 'always democracies'.

2.2 The uneven effect of democracy

In Figure 1 we provide first descriptive evidence that democracy has an uneven effect on capital inflows, and that geography appears to be one good candidate, albeit not the sole candidate, to explain the observed patterns. Each plot is for a proxy for deep determinants relating to geography, legal origin, history, or culture. We plot the country-specific median capital inflow/GDP value during democracy (on the y-axis) against its median value during autocracy (on the x-axis) for two sets of countries: those with 'good' geography (or more individualistic/proximate culture, or non-French legal origin or no colonial experience) using dark pink markers and solid quadratic regression lines, and for countries with 'poor' geography (or more collectivist/distant culture, or French legal origin or colonial history) using blue markers and dashed quadratic regression lines.[11]

The resulting patterns are quite similar across the geography proxies in panels (a) to (e): for similar levels of capital inflows during autocracy, regime change in 'good' geography countries on average leads to higher capital inflows than in 'poor' geography countries. Take the Malaria Risk proxy in panel (a): most blue markers are between 0% and 5% (both in terms of the x- and y-axis), whereas many dark pink markers between 0% and 5% on the x-axis (in autocracy) have post-regime change median inflows in excess of 5%. Equivalently, beyond a pre-regime change inflow of 1%, the fitted quadratic regression lines for 'good' geography countries is to the North of the 'bad' geography one and rising. The divergence between 'good' and 'bad' geography samples is particularly marked for the climate-related measures in panels (d) and (e). In contrast, using the same strategy but distinguishing countries by (French) legal origin in panel (f) yields virtually no differences between the two sets of country results. The proxy for culture based on blood type distance to the UK in panel (g), however, shows a similar deviation to the above geography proxies. The measure for common language (analysis of the alternative language proxy is omitted as results are virtually identical) once again indicates no substantive deviation between the two country groups. Finally, sample split by colonial experience in panel (i) is once again aligned with the geographic splits, with lower regime change effects for colonised countries.

3 Democracy and Capital Inflows

3.1 Data, Methodology and Presentation

Data and Transformations We focus on two indicators for democratic regime change which combine elements of electoral democracy and aspects related to the rule of law and executive constraints: first, we adopt the binary indicator of democratic regime change from Acemoglu et al. (2019, ANRR, ending in 2010). This represents a union, or sorts, of a positive Polity IV polity2 index and a Freedom House index (FHI) coded as 'free' or 'partially free' to "purge

[11] We omit the plots for tropical land area and average language similarity, which respectively are qualitatively identical to the temperate land zone and average common language index versions presented.

spurious changes in each" (50) — panel (b) of Appendix Figure A-1 provides a visualisation of the institutions covered by these indices. ANRR further build on the practice of Papaioannou and Siourounis (2008) and consider each case of democratisation in their data against the historical narrative. Finally, in contrast to the practice in much of the earlier work, they do not retrospectively re-code short episodes of democracy. Second, we take the V-Dem definition of 'liberal democracy' combining the principle of electoral democracy (polyarchy, following the work by Dahl, 1971) with executive constraints and the rule of law (summarised as the 'liberal component' in the V-Dem data, Coppedge et al., 2021) — the latter two institutional factors are seen as the "truly distinctive" feature of liberal democracy (Mukand and Rodrik, 2020, 765). This measure for liberal democracy[12] is an index between 0 and 1, we adopt the cross-country mean for this index as our cut-off for democracy.[13] In additional analysis, enabled by the hierarchical structure of the V-Dem indices (see panel (a) of Appendix Figure A-1 for a visualisation), we ask whether results differ according to the two building blocks of liberal democracy, adopting the sample mean of the polyarchy index and the liberal component as respective cutoffs. This distinction is of interest as political scientists have favoured electoral democracy as the minimal definition whereas economists have typically highlighted the institutional qualities of property rights and executive constraints (see Glaeser et al., 2004; Rodrik et al., 2004, for an earlier debate on whether 'institutions rule').

We study two measures of capital inflows from the IMF Financial Flow Analysis (FFA) database: (1) total capital inflows, excluding the official sector,[14] and (2) FDI inflows.[15] These measures are expressed in percent of GDP although we also employ per capita series in robustness checks. We adopt *gross* capital inflows:[16] net capital flow dynamics may be driven by inflows or outflows and the factors underlying these may be different (Rothenberg and Warnock, 2011; Byrne and Fiess, 2016), an insight which came to prominent attention in the Global Financial Crisis when gross inflows increased dramatically while net flows remained 'subdued' (Kaminsky, 2019; see also Forbes and Warnock, 2012 and Broner et al., 2013).[17] Appendix Figure A-2 charts the median evolution of capital inflows over the past 40 years.

In robustness checks, we include additional controls for export/trade (constructed from IMF DOTS) as well as population growth and per capita GDP growth (from the updated 'Maddison' database, Bolt and van Zanden, 2020).

[12] The similarity in names is unfortunate, but it is important to stress that we do *not* employ the Lührmann et al. (2018) ROW 'liberal democracy' definition.

[13] In robustness checks, we adopt the mean plus $1/4$ or $1/2$ standard deviation of the respective V-Dem index.

[14] Total Non-Official Capital Inflows, defined as `icapfl - iothfg`: Total inflows less other inflows to official sector. Total inflows are made up of `ifdi + ipf + idrvtv + iothf`: FDI inflows, portfolio inflows, derivative inflows and other inflows. The resulting flow is expressed in percent of GDP (`icapflp_gdp`).

[15] FDI inflows, expressed in percent of GDP (`ifdi_gdp`).

[16] Appendix Figure B-10 illustrates the results using net capital flows. While the patterns are similar to those in the analysis of gross flows, virtually none of the ATET estimates are statistically significant and the vast majority of specifications fail the weak parallel trend test — see Appendix Tables B-9 and B-10.

[17] The FFA series start in 1970, however, we do not use the first five years of data: our empirical setup would imply that a mere 1 or 2 control group countries were available for 1970-74 and as a result, virtually all 'weak parallel trend' Alpha tests (see below) reject.

Sample Studying the details of the sample makeup in Appendix Table A-1 it is very clear that our analysis here largely *excludes* advanced economies: 33 High-income economies were always democracies (Liberal Democracy definition), only nine experienced democratic regime change (out of a treated sample of 51 countries) and only six are in the control sample (out of a control sample of 58 countries).[18] The time horizon is 1975-2015.

Principal Component DID We estimate country regressions for treated countries only but augment each country-regression with common factors estimated from the residuals of the same regression model *in the control sample* via Principal Component Analysis (following Chan and Kwok, 2022).[19] The basic intuition of this approach is that the unobserved time-varying heterogeneity driving outcomes (capital flows) and determinants (democratic regime change, controls) in the treated sample of countries (which did democratize at one point) can be proxied by information collected in the control sample (countries which never democratized). If we ignored unobserved time-varying heterogeneity in our treatment regression, then it would suffer from omitted variable bias. Using estimated 'placeholders' for this heterogeneity, we can (under reasonable and testable assumptions) identify a causal treatment effect. Consider a standard fixed effects regression: adding country fixed effects solves the problem that time-invariant heterogeneity could be correlated with the dependent and independent variables, hence biasing any estimates for the latter. The PCDID is part of a suite of empirical estimators exploiting 'interactive fixed effects' (Bai, 2009; Gobillon and Magnac, 2016; Xu, 2017): adding estimated common factors in the treatment regression and allowing each factor to have a country-specific coefficient solves the problem that treatment could be endogenous *and* that treated and control countries may be on different 'trajectories' before the treatment already (non-parallel trends). Like any DID estimator, there is some variant of a parallel trend assumption that needs to be satisfied: for the PCDID, the requirement is that the 'information' captured by the factors in the control sample is 'relevant' for the treated sample — the factor coefficients should on average be equal between treated and control sample regressions, which we can investigate using the Chan and Kwok (2022) Alpha test. We discuss our empirical strategy in more formal terms in the following.

Using potential outcomes, the observed outcome of treatment D_{it} for panel unit i at heterogeneous time T_{0i} can be written as

$$y_{it} = D_{it}y_{it}(0) + (1 - D_{it})y_{it}(1) = \Delta_{it}\mathbf{1}_{\{i\in E\}}\mathbf{1}_{\{t>T_{0i}\}} + y_{it}(0) \tag{1}$$

$$\text{with} \qquad y_{it}(0) = \varsigma_i + \beta_i' x_{it} + \mu_i' f_t + \widetilde{\epsilon}_{it}, \tag{2}$$

where the two indicator variables $\mathbf{1}_{\{.\}}$ are for the treated panel unit and time period, respectively,

[18] The nine treated countries are Croatia, Hungary, Uruguay, Panama, South Korea, Poland, Chile, Spain, and Portugal. The six control countries are Hong Kong, Kuwait, Oman, Saudi Arabia, Singapore, and the Seychelles.

[19] This dimensionality-reducing approach is very popular in the forecasting literature (Stock and Watson, 2002) but has also been employed to proxy productivity in cross-country analysis (e.g. Eberhardt et al., 2013; Eberhardt and Presbitero, 2015; De Visscher et al., 2020).

Δ_{it} is the time-varying heterogeneous treatment effect, x is a vector of control variables with associated country-specific parameters β_i,[20] $\mu_i' f_t$ represents a set of unobserved common factors f_t (which can be nonstationary) with country-specific factor loadings μ_i, and $\widetilde{\epsilon}_{it}$ is the error term.

The treatment effect is assumed to decompose into $\Delta_{it} = \overline{\Delta}_i + \widetilde{\Delta}_{it}$, with $E(\widetilde{\Delta}_{it}|t > T_{0i}) = 0$ $\forall i \in E$ since $\widetilde{\Delta}_{it}$ is the demeaned, time-varying idiosyncratic component of Δ_{it}; we refer to $\overline{\Delta}_i$ as ITET, the treatment effect of unit i averaged over the treatment period. The reduced-form model is

$$y_{it} = \overline{\Delta}_i \mathbf{1}_{\{i \in E\}} \mathbf{1}_{\{t > T_{0i}\}} + \varsigma_i + \beta_i' x_{it} + \mu_i' f_t + \epsilon_{it}, \tag{3}$$

with $\epsilon_{it} = \widetilde{\epsilon}_{it} + \widetilde{\Delta}_{it} \mathbf{1}_{\{i \in E\}} \mathbf{1}_{\{t > T_{0i}\}}$. Given the treatment effect decomposition ϵ_{it} has zero mean but may be heteroskedastic and/or weakly dependent.

The factor structure has a long tradition in the panel time series literature to capture strong cross-section dependence (Pesaran, 2006; Bai, 2009), a form of unobserved, time-varying heterogeneity. Strong correlation across panel members is distinct from weaker forms of dependence, such as spatial correlation, and if ignored can lead to serious bias in the estimated coefficients on observable variables (Andrews, 2005). The combination of common factors and heterogeneous parameters also allows for non-parallel trends across panel units, most importantly between treated and control units. The above setup can further accommodate endogeneity of treatment D_{it} in the form of *inter alia* correlation between treated units and factor loadings, the timing of treatment and factor loadings, or between observed covariates and timing or units of treatment.

The estimation of the country-specific treatment effect (ITET) $\overline{\Delta}_i$ proceeds in two steps: first, using Principal Component Analysis (PCA), we estimate proxies of the unobserved common factors from data in the control group (details below); second, country-specific least squares regressions of treated countries are augmented with these factor proxies as additional covariates.

The main identifying assumptions are that all unobserved determinants of capital inflows are captured by the factors, a standard assumption in the panel time series literature (Pesaran, 2006; Bai, 2009) and related causal panel models (Athey and Imbens, 2022). Since the factors are estimated with error, there is a potential correlation between the errors of treated and control countries, which will bias the treatment estimate. This bias asymptotically disappears if we require that $\sqrt{T}/N_c \to 0$, where T is the time series dimension and N_c is the number of control countries. It is further assumed that conditional on the estimated factors the control variables x are jointly insignificant predictors for the treatment — they do not constitute 'bad controls'.[21] Treated countries further have to satisfy the 'weak parallel trend' test, which we have described above as a way of confirming that the 'information' (the space spanned by the estimated factors) from the control sample on average has the same effect in treatment and control sample — see discussion in the paragraph on Diagnostic Testing below.

[20] We assume $\beta_i = \bar{\beta} + \tilde{\beta}_i$ with $E(\tilde{\beta}_i) = 0$ (Pesaran, 2006). x can be a function of f.

[21] We carry out Wald tests for this assumption — see discussion below and Appendix Tables B-3 and B-5.

The estimation equation for each treated country $i \in E$ is then:

$$y_{it} = b_{0i} + \delta_i \text{Dem}_{it} + a_i' \hat{f}_t + b_{1i}' x_{it} + u_{it}, \tag{4}$$

where $\hat{f}$ are the estimated factors obtained by PCA on the residuals $\hat{e}$ from the heterogeneous regression of $y_{it} = b_{0i} + b_{1i}' x_{it} + e_{it}$ in the control group sample, and δ_i is the country-specific parameter of interest for the democratic regime change dummy Dem_{it}. y is the capital flow measure and x are additional controls we include in robustness checks (export/trade, population growth, per capita GDP growth). We estimate (4) augmented with two to six common factors, given that determining the 'relevant' number of factors is fraught with difficulty and ambivalence. The average treatment effect (ATET, $\hat{\delta}^{MG}$) is simply the average of the country estimates $\hat{\delta}_i$. We follow the practice in the literature and use the robust mean group estimate (Hamilton, 1992) with the associated standard errors based on $\Sigma^{MG} = (N-1)^{-1} \sum_i (\hat{\delta}_i - \hat{\delta}^{MG})$ (Pesaran, 2006).

All of the above is laid out for a sample of N countries. In our analysis we will estimate separate models by deep determinant of development. We do not rule out that geography or culture or history or legal origin may have an effect on the propensity of countries becoming a democracy, but adopting high barriers on our definition of democratic regime change (following Acemoglu et al. (2019) and the V-Dem definition of liberal democracy) in each treatment sample of, say, 'good' and 'poor' geography, we in effect hold the correlation between the deep determinant and democratic regime change constant across samples. This allows us to study the effect of geography on the implications of democratic regime change in isolation between countries with 'good' and 'poor' geography and equivalent distinctions for alternative deep determinants.

Diagnostic testing The validity of standard pooled Difference-in-Differences estimators crucially relies on the parallel trend assumption: treatment and control samples cannot be on different trajectories prior to the treatment. In the context of the PCDID, we can allow for non-parallel trends between treated and control samples by means of a common factor model with heterogeneous factor loadings, but we nevertheless need to confirm the assumption of 'weak parallel trends' via the Alpha test (Chan and Kwok, 2022): we conduct an auxiliary regression for the treated sample

$$y_{it} = \alpha_i + \beta_i \text{Dem}_{it} + \gamma_i \bar{\hat{e}}_t + b_{1i}' x_{it} + \epsilon_{it}, \tag{5}$$

where $\bar{\hat{e}}_t$ is the cross-section average of the residual of the control sample regression $y_{it} = b_{0i} + b_{1i}' x_{it} + e_{it}$ from which in the PCDID we extract the common factors. The null hypothesis of the Alpha test is that treatment and control samples are driven by the same set of common factors and rejection of the null suggests the PCDID model is potentially misspecified. The test is in the form of a t-test for the cross-country average coefficient of γ_i in equation (5) being equal to 1, implemented via the Pesaran and Smith (1995) Mean Group estimator.

A second concern arises if we add controls to the regression model, since these may be 'bad

controls' in the sense of Angrist and Pischke (2008, 64): "[V]ariables that are themselves outcome variables in the notional experiment at hand." In the present case, we assume that conditional on the estimated factors in equation (4) there is no correlation between the treatment variable Dem_{it} and the control variables x. We test this assumption by regressing the democracy dummy on estimated factors and controls in the treated sample and carrying out a Wald test for the joint insignificance of the controls. If the null is rejected we need to conclude that the controls may constitute 'bad controls'. Implementation is via the Mean Group estimator.

Presentation of results The common practice in the treatment effects literature is to report the ATET, $\hat{\delta}^{MG}$. Given the uncertainty over how many estimated factors to include (from Moon and Weidner, 2015, we know that including too many has only minimal effect on consistent estimation in OLS models like ours provided we have sufficient degrees of freedom), the number of democracy indicators and proxies for deep determinants, and alternative specifications with additional controls the reporting of our findings will largely be confined to visual presentation. This enables us to highlight the patterns in the unequal effects of democracy on capital flows, while important diagnostic test results will be reported in an Appendix and described in broad terms in our discussion of the results.

3.2 Main Results

Ignoring Deep Determinants Before we investigate the uneven effect of geography we estimate the full sample PCDID average treatment effects on the treated (ATET) of democratic regime change on capital inflows (total, FDI). Depending on the definition of the democracy dummy the treated samples amount to between 51 and 69 countries, with control samples ranging from 31 to 58 countries.

Table 1 presents the results with different panels referring to the specifications with no controls, export/trade as control and, additionally, population growth and per capita GDP growth as controls. Our diagnostic tests indicate that the assumption of weak parallel trends is typically confirmed, with the notable exceptions of LibDem in model (2) of Panel A. Export/trade (Panel B) is not a 'bad control', while the more elaborate set of controls in Panel C does not pass this test — a pattern that will repeat itself throughout our analysis below. Figure 2 visualises all ATETs for total capital inflows (left panel) and FDI inflows (right panel).

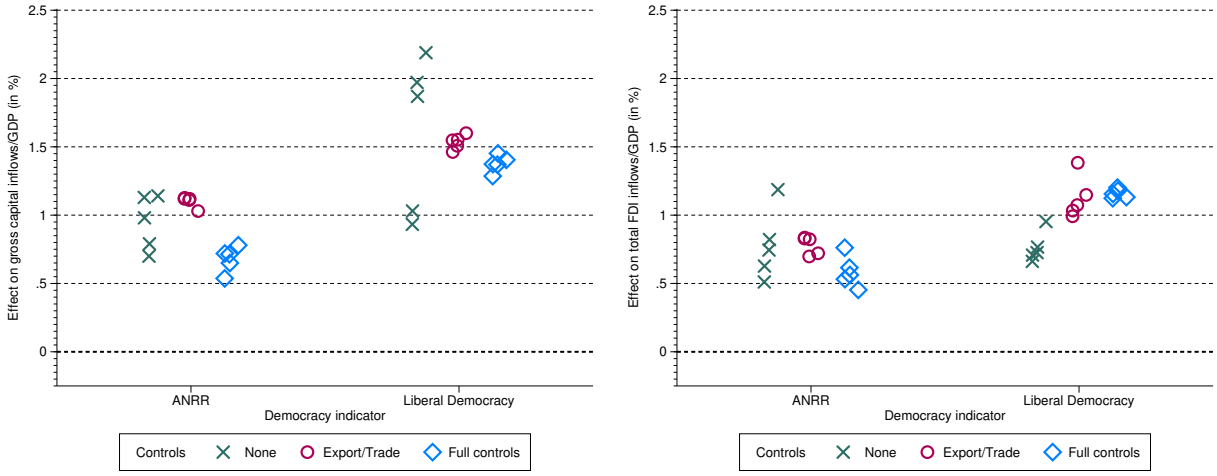
We find ample evidence for statistically significant and economically sizeable effects of democratic regime change: focusing on the specification with exports as additional control (pink circles), regime change has a causal effect of 1 (ANRR) to 1.5 (LibDem) percentage points higher gross capital inflows and 0.75 (ANRR) to 1.25 (LibDem) percentage points higher FDI inflows. These effects are economically large, given the average 3% capital flow/GDP ratio and 1.4% FDI/GDP ratio for treated countries prior to regime change. Although the existing literature primarily fo-

Table 1: Democratic Regime Change and Capital Inflows (1975-2015)

	Total Capital Inflows		**FDI Inflows**	
	(1) ANRR	(2) LibDem	(3) ANRR	(4) LibDem
Panel A: No control variables				
Democratic Regime Change	0.773** [0.388]	1.852*** [0.498]	0.804*** [0.178]	0.749*** [0.245]
Alpha Test (t)	-0.92	-2.08	0.23	0.31
Alternative factor augmentation				
2 factors	1.147***	2.195***	1.193***	0.959***
3 factors	0.707*	1.979***	0.752***	0.733***
4 factors	0.773**	1.852***	0.804***	0.749***
5 factors	0.989**	1.039***	0.636***	0.716***
6 factors	1.127**	0.930**	0.508***	0.659***
Panel B: Export/Trade as control variable				
Democratic Regime Change	1.102*** [0.374]	1.535*** [0.409]	0.806*** [0.196]	1.366*** [0.324]
Alpha Test (t)	-0.53	-0.48	0.25	1.21
chi^2 Test (p)	0.36	0.30	0.78	0.28
Alternative factor augmentation				
2 factors	1.036***	1.606***	0.727***	1.154***
3 factors	1.118***	1.515***	0.705***	1.081***
4 factors	1.102***	1.535***	0.806***	1.366***
5 factors	1.135***	1.471***	0.844***	1.042***
6 factors	1.117***	1.545***	0.826***	0.989***
Panel C: Export/Trade, pop. growth, GDP pc growth as controls				
Democratic Regime Change	0.632* [0.372]	1.435*** [0.483]	0.545*** [0.190]	1.162*** [0.335]
Alpha Test (t)	-0.48	-1.05	0.86	0.29
chi^2 Test (p)	0.00	0.10	0.03	0.07
Alternative factor augmentation				
2 factors	0.786**	1.411***	0.459**	1.138***
3 factors	0.721*	1.377***	0.623***	1.209***
4 factors	0.632*	1.435***	0.545***	1.162***
5 factors	0.728**	1.382***	0.540***	1.164***
6 factors	0.534	1.283**	0.759***	1.121***
Treated Countries	69	51	69	51
Treated Observations	2087	1830	2072	1830
Control Countries	31	58	31	58
Control Observations	825	1800	819	1779

Notes: We present robust mean estimates from PCDID regressions of total non-official capital inflows and FDI inflows and a democracy dummy defined as indicated in each column — these estimates can be interpreted as Average Treatment Effects on the Treated (ATET). The main results and standard errors in square brackets (estimated non-parametrically following Pesaran, 2006) are for the specification augmented with *four* common factors. In a lower part of each panel, we report the ATET estimates for specification with two to six factors. We further provide details of the Alpha test for weak parallel trends (t-ratio reported) and a χ^2 test for the control variables (p-value reported) — in both cases sound diagnostics imply we would not want to reject the null. Sample details are reported in the bottom rows of the table. We use *, **, and *** to indicate statistical significance at the 10%, 5% and 1% level.

Figure 2: Democracy and Capital Inflows



(a) Total Non-Official Capital Inflows

(b) Total FDI Inflows

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows (left) and FDI inflows (right) for two definitions of democratic regime change. Each result 'cloud' (markers are randomly perturbed to aid visualisation) features PCDID augmentations with 2 to 6 estimated factors (hence: 5 markers per 'cloud'). For each democracy definition, we present results for a specification without any controls (x), with export/trade (o), and with all controls (◊). The plots ignore statistical significance or weak parallel trend tests — see Table 1.

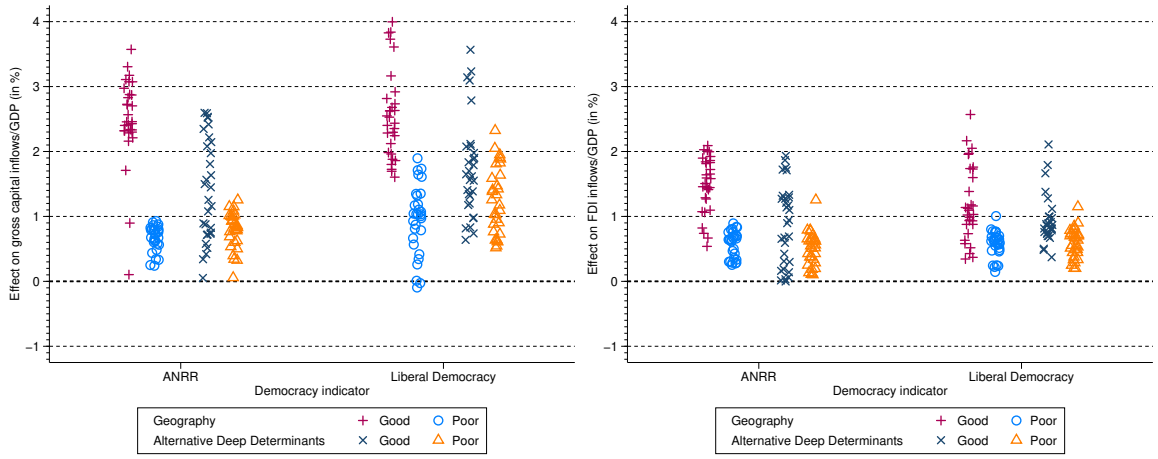
cused on proxies for different institutions instead of an overaching concept of democracy (Alfaro et al., 2008; Papaioannou, 2009), our findings underline the notion that a substantial improvement in institutions is associated with a substantial increase in capital inflows.

Gross Capital Inflows We present ATET results for total non-official capital inflows in Appendix Table B-1 — these are only the results for the specification without any additional control variables, distinguished by geography.[22] Results for the same specification distinguished by alternative deep determinants are presented in Appendix Table B-2. Treated samples typically cover 25 to 35 countries, control samples are more modest in size. The tables report Alpha test results for which a t-statistic in excess of 1.96 indicates the weak parallel trend assumption is violated, suggesting that the PCDID model may be misspecified.

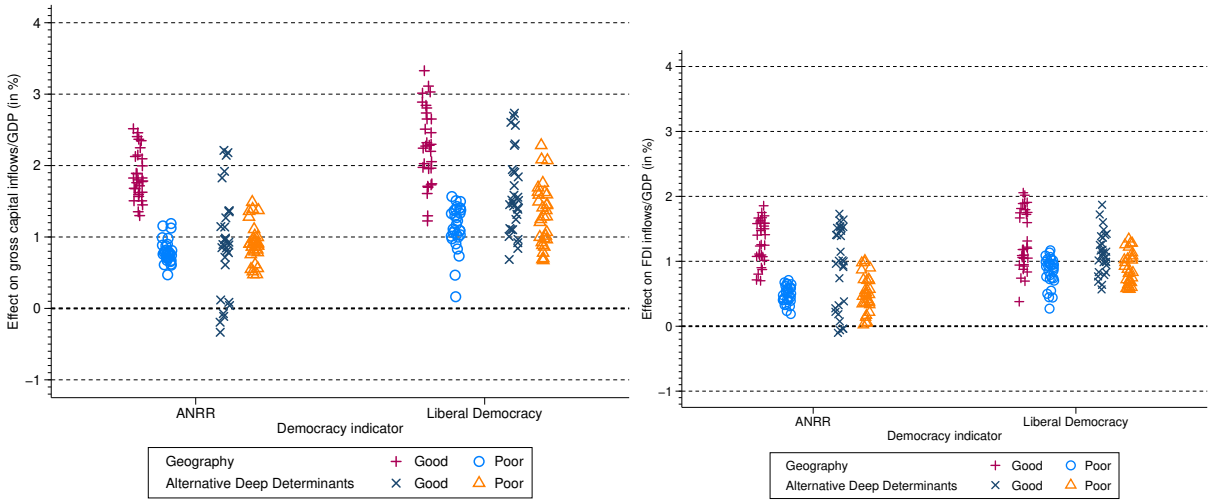
There are a very large number of estimates (120 in each of Tables B-1 and B-2), even though we just present one specifiation (without controls) and we use a visual representation of the results in Figure 3 to highlight the general patterns. The left column of plots is for gross capital inflows, the right column for FDI inflows; in each column the plot in panel (a) is for the specification without additional controls, that in panel (b) with trade/GDP as additional control, and that in panel (c) with full controls. Note that the latter always fail the 'bad controls' test and

[22] In Appendix Table B-11 we report results for four more proxies related to geography: being landlocked, high UV radiation exposure, limited frost days and low suitability for agriculture — with the exception of the latter, the same patterns as discussed below prevail.

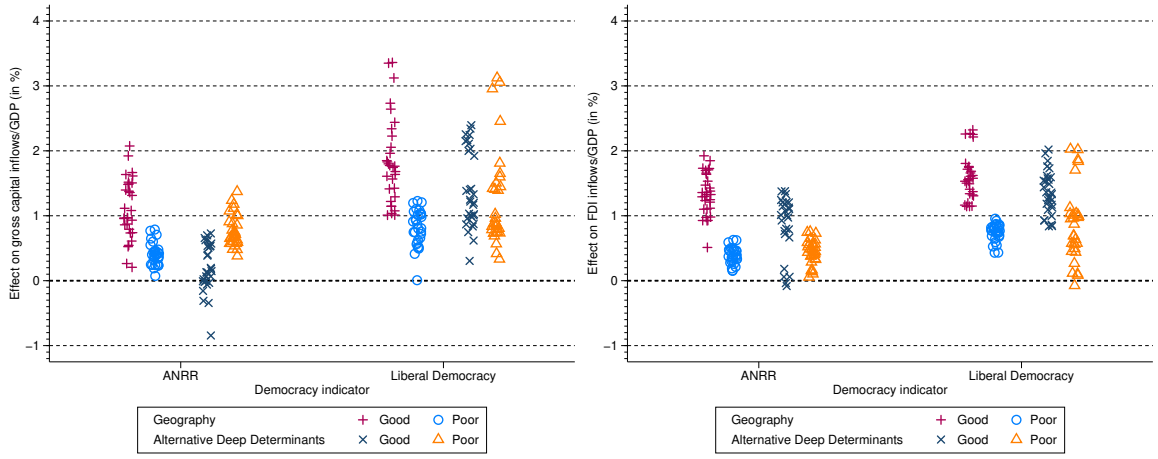
Figure 3: Democracy, Deep Determinants and Capital Inflows



(a) Total Non-Official Capital (left) and FDI (right) Inflows – no controls



(b) dto – export/trade as control (not a bad control)



(c) dto – full controls (bad controls)

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by geography (+ and o for good and poor geography, respectively) and alternative deep determinants (x for non-French LO/proximate culture/no colonial experience and △ for French LO/distant culture/colinial experience). Each result 'cloud' (markers are randomly perturbed to aid visualisation) features 30 estimates: six proxies of good/bad geography or other deep determinants and PCDID augmentations with 2 to 6 estimated factors. The plots ignore statistical significance or weak parallel trend tests (see Appendix Tables B-3 and B-4). Further tests (Appendix Table B-3) indicate exports/trade on its own is not a bad control.

these are just presented for completeness. Each plot is organised by the definition of democracy (x-axis) and markers signifying 'good' versus 'poor' geography (pink + and blue o), or 'good' versus 'poor' alternative deep determinants (navy x and orange $\triangle$). Each marker indicates the effect of democratic regime change on capital inflows; each result 'cloud' of markers is made up of 30 estimates, since we have five alternative PCDID augmentations with estimated factors and six proxies for geography or other deep determinants, respectively. These plots ignore the statistical significance of the ATET estimates and further do not indicate whether individual PCDID models satisfy the weak parallel trends test — we comment on these in broad brushes below and refer to detailed results in Appendix Tables B-3 and B-4.

The left column of Figure 3 is for total capital inflows. Most of the estimates for 'good' geography (pink +) are statistically significant at the 10% level, for 'poor' (blue o) geography only around two-thirds are; and all satisfy the weak parallel trend assumption. These causal effects of democracy on total capital inflows show distinct patterns which are visually striking: in the model without controls, democratising countries with 'good' geography experience a 2-4 percentage point increase in capital inflows, whereas those with 'poor' geography see much more moderate effects, a 0-2 percentage point increase, if that. In the model with trade/GDP as additional control, these magnitudes are somewhat moderated, but the distinct pattern remains: 'good' geography results are substantially larger than those in the 'poor' geography samples.[23] This pattern also does not change in the model with full controls. The sample mean of total capital inflows over GDP for the respective treated sample prior to democratic regime change (i.e. all years in autocracy) is between 2.5% and 3.3%, which indicates that our average treatment effects are economically large.

The distinction between results for 'good' (navy x) and 'poor' (orange Δ) alternative deep determinants (legal origin, culture, colonial history) is presented in the same plots. In broad terms this distinction does not yield evidently systematically different treatment effects (particularly so for the LibDem democracy definition), whether we study democratising countries with French or other legal origins, those with or without colonial experience, or whether we compare more individualistic and more collective societies as well as alternative proxies for cultural 'clustering'.[24] This is best illustrated in the model with export as additional control in panel (b), where for the ANRR definition small clusters of 'good determinant' estimates are respectively larger and smaller than the cluster of estimates for 'poor determinants', while for the Liberal Democracy definition there is very little between the two. Hence, our results for total capital inflows suggest that we see substantial and systemic differences in the effects of democratic regime change by geography but not by alternative deep determinants.

FDI inflows The right column of plots in Figure 3 visualises the ATET estimates for causal effects on FDI inflows in the format introduced above. For the distinction by geography the

[23] The largest estimates for 'good' alternative deep determinant samples are always for colonial experience — see Appendix Figure B-1.

[24] In Appendix Figures B-2 and B-3 we separate out colonialist experience from the other deep determinants.

overwhelming majority of estimates are statistically significantly different from zero, and we have few specifications which reject the weak parallel trend assumption. Compared with the results for total capital inflows the differences in the result patterns are less substantial but still marked: the ATET for countries with 'poor' geography is typically below 1 percentage point, while in countries with 'good' geography, the effect ranges from 0.25 to 2.5 percentage points. The economic effects of democratic regime change are again substantial (in relative terms even more so than for total capital inflows), given that the mean for FDI inflows over GDP is around 1.1-1.4%.

For the distinction by alternative deep determinants[25] the difference in treatment effects is less marked than in the case of gross total inflows. If we again take the model with export/trade as additional control in panel (b) as preferred specification, some of the 'good' alternative deep determinant estimates are clearly of greater magnitude than the 'poor' sample counterparts. It should be noted that in both cases (for ANRR and the liberal democracy definitions) the largest 'good deep determinant' ATET estimates are for the subsamples analysis of countries with colonial experience — see Appendix Figure B-1.

Mechanical explanations Naturally, there would be concerns if 'treated' countries (i.e. democratisers) with one type of deep determinant (say, low absolute latitude) would have a significantly higher propensity to revert to autocracy than those of the other type (high absolute latitude): we'd be comparing 'solid' and 'shaky' democracies. The average 'reversal' probability in treated samples is between 1 and 2.5 percent. Carrying out comparison in means tests between the treated samples of the two 'types' we find that those with 'favourable' deep determinants (e.g. low absolute latitude, legal origin other than French civil law, etc.) typically have lower propensity of reversal (1.2%), but the differences between these and samples for 'unfavourable' deep determinants (1.6%) are typically not statistically significant (results available on request).[26]

Similarly, for the magnitudes of the treatment effects, it is important to check whether the length of time spent in democracy does not differ substantially across treatment samples of the two types, since otherwise a bigger boost to growth may simply be down to having spent many more years in democracy. The average number of sample years in democracy is between 15 and 23, depending on the definition. We find that samples for countries with 'favourable' deep determinants have an advantage, over two-and-a-half additional years of treatment (19.8) compared with countries with 'unfavourable' deep determinants (17.2), though once again the difference is not typically statistically significant (results available on request).[27]

[25] Again, the vast majority of effects are statistically significantly different from zero and most models pass the weak parallel trend test.

[26] The exception is the 'zero land in the temperate zone' proxy for geography, for which ANRR and liberal democracy definitions of democratic regime change indicate statistical significance at the 5% level.

[27] The exception is the 'average common native language' proxy for culture, for which ANRR and liberal democracy definitions of democratic regime change indicate statistical significance at the 5% level.

3.3 Robustness checks and extensions

Alternative definition of capital flows Some researchers in the capital flow surge/bonanza literature (see discussion in Caballero, 2016, footnote 10) maintain that the capital flow to GDP ratio is unsuitable for analysis given potentially differential dynamics/trends of the numerator and denominator, suggesting the use of capital flow *per capita* instead. We repeat the analysis using this alternative definition of the dependent variable and present the findings in Appendix Figures B-4 and B-5. Alpha tests for these specifications frequently reject the weak parallel trend assumption while the analysis of bad controls follows the same patterns as above (see Appendix Table B-5).

We also re-ran the capital flow analysis employing data from the World Bank World Development Indicators to construct control variables, resulting in a substantial reduction in sample size (33% fewer observations in the treated sample, using the liberal democracy definition). Our findings in Appendix Figures B-6 and B-7 show qualitatively similar but weaker patterns to those described in our main results. Due to the smaller sample size the treatment and control samples frequently number only very few countries in the years up to the mid-1990s, with the result that the Alpha test for weak parallel trends typically rejects in more than half the specifications whether we use no controls, only trade/GDP, or the full set of controls (see Appendix Table B-7).

Alternative Definitions of Democracy Our dichotomised regime change indicators for liberal democracy (and in robustness checks its building blocks, polyarchy and the liberal component) are constructed by using the full sample mean as the threshold. The congruence of patterns of results with those based on the Acemoglu et al. (2019, ANRR) definition are an indication that we successfully capture a significant step in the institutional development of our sample countries. Nevertheless, the adopted threshold is arbitrary and to check the robustness of our findings we provide alternative versions where we take the mean plus $1/4$ or $1/2$ of the standard deviation, providing a 'tighter' definition of democracy. This substantially reduces the sample size of treated countries (reductions in the number of countries of 20% and 39%, respectively).[28] Despite this caveat, results presented in Appendix Figures B-8 and B-9 for geography and alternative deep determinants are qualitatively very similar to those we present above using the mean index cut-off.

Building blocks of liberal democracy Our analysis adopts two data proxies (ANRR, LibDem) for a concept of liberal democracy which encompasses (a) polyarchy (electoral democracy), and (b) the rule of law combined with executive constraints. The nature of the V-Dem data enables us separate these two aspects, with the latter referred to as the 'liberal component' (results available on request). Across all specifications we can observe a very clear pattern whereby treatment effects of regime change are *very similar in magnitude* across the two samples of countries with

[28] Using Liberal Democracy (index cut-offs 0.41 for the mean, 0.48 for mean$+1/4$SD, and 0.55 for mean$+1/2$SD) sample size drops from 51 (22 and 29 'good' and 'poor' geography countries, respectively) to 41 (20 and 21) and 31 (16 and 15); for Polyarchy (0.51, 0.58 and 0.65) from 59 (25, 34) to 49 (22 and 27) and 38 (19 and 19); for the Liberal Component (0.61, 0.68 and 0.75) from 57 (24, 33) to 48 (21 and 27) and 44 (21 and 23).

'good' and 'poor' geography when we consider polyarchy. In contrast, the treatment effects are *substantially larger* in good geography countries in the analysis of the liberal component: the differential effects of democratic regime change appear to be driven not by aspects related to clean elections, or freedom of speech, but those related to executive constraints and the rule of law (including property rights and individual freedoms). Distinction instead by culture, history or legal origins again offers no discernible differences in treatment effect size.

4 Geographic Patterns, Historical Reasons?

4.1 Empirical Exploration of Geographic Channels

In this section we illustrate that economies with poor geography suffer from disadvantageous 'structural' characteristics, related to export concentration, aggregate commodity price volatility, trade costs and productive complexity. In all cases we compare these differences based on geography to those when we use proxies for legal origin, culture or colonial history to split the sample. All analysis is limited to countries which experienced democratic regime change (adopting the two definitions for democracy we use throughout as well as the split of liberal democracy into 'polyarchy' (electoral democracy) and the 'liberal component' — see Section 3.3).

4.1.1 Diversity and Quality of Exports

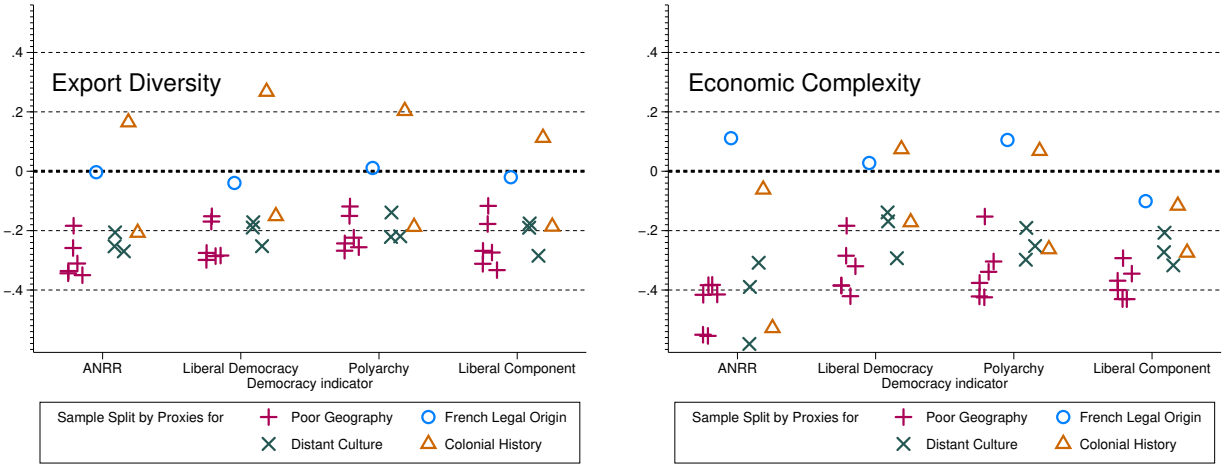
The dominant paradigm for economic development in the second half of the twentieth century places significant emphasis on trade, predominantly labour-intensive manufactured goods for export (such as apparel) to (i) overcome the limits set by domestic markets, (ii) exploit low labour costs, and (iii) initiate a process of moving up the value chain and/or diversifying into higher value-added products. Studying the diversity and quality of exports can provide insights into the scope for structural transformation and the potential for countries to reap the benefits from diversification (Hausmann et al., 2007; Henn et al., 2013).

We adopt data from an IMF database on 'export diversification and quality' covering 1962-2014 (Henn et al., 2013), which is available for all our sample countries. The Theil index we use combines the concentration in the number of export products by a country and the concentration in its export volumes across products actively exported. A *higher* value for this index marks out a country with a *lower* level of diversification.

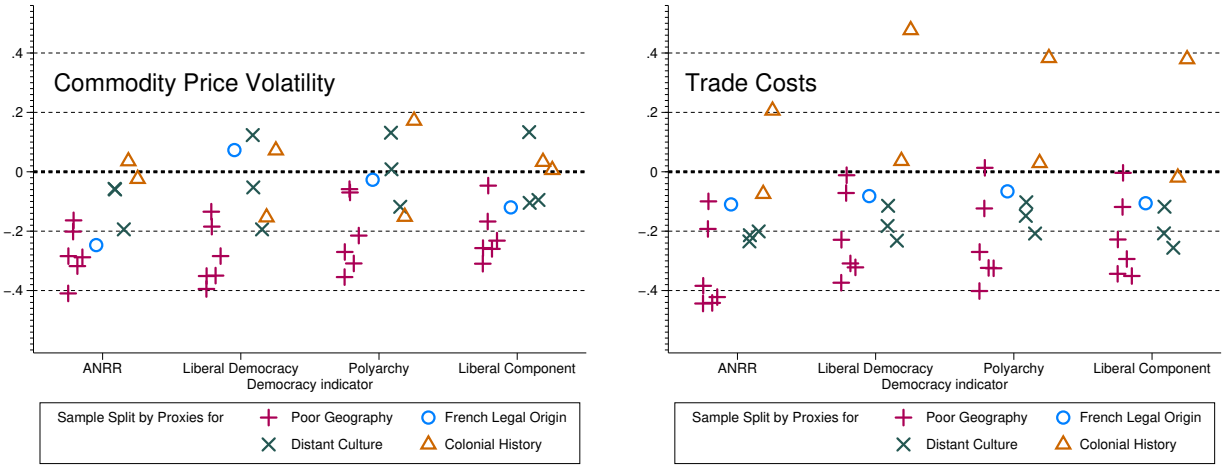
We compute the difference in the level of export diversification for countries with good and poor geography, along with a formal t-test for this difference for each of our six proxies for geography and similarly for the other proxies of deep determinants — in the vast majority of mean differences studied the t-tests and associated p-values indicate that these differences are statistically significant. Results for mean differences are presented in the left plot of panel (a), Figure 4. Across all definitions of democratic regime change, we see that democratising countries

with 'poor' geography have 10-35% worse (lower) export diversity than their 'good' geography peers. For legal origin the differences are negligible, whereas for our cultural proxies they are marginally smaller than those for geography. For the comparison based on colonial history we see mixed results: 'extractive colonialisation' is associated with worse diversity, whereas colonialisation per se correlates with higher diversity.

Figure 4: How Deep Determinants Relate to Economic Structure



(a) Relative Export Diversity (left) and Economic Complexity — negative = lower/worse



(b) Relative Aggregate Commodity Price Volatility (left) and Trade Cost — negative = higher/worse

Notes: We present mean differences for export diversity, economic complexity, aggregate commodity price (ACP) volatility and trade costs between the samples deemed to have 'good' versus 'poor' deep determinants of comparative development. Interpretation: in the left plot of panel (a), a result of -0.2 indicates that export diversity is 20% worse in countries with 'poor' relative to those with 'good' deep determinants. The definition of democracy determines the sample size — we only consider countries which experienced democratic regime change (treated sample).

4.1.2 Economic Complexity

Continuing with the notion of product 'sophistication' we hypothesise that the narrow(er) range of products produced for export in 'poor' geography countries is furthermore of lower complexity.

We take data on economic complexity from Hidalgo and Hausmann (2009), who provide rankings across 133 economies in the level of complexity on the basis of the HS (Harmonized System, 1992) product classification. There is a caveat for these data since the series only start in 1995, and some of the sample sizes for 'treated countries' in 'good' geography locations only feature around 200 observations — these results should be taken with a grain of salt. A higher number implies a lower rank, and hence worse (lower) complexity.

Results for mean differences by deep determinant are presented in the right plot of panel (a), Figure 4. The patterns closely match those of the export diversity analysis above: sample splits by geography and culture show very large differences (lower complexity for 'poor' geography or 'distant' culture), those for legal origin are comparatively small, while only those for 'extractive colonialisation' suggest worse complexity.

4.1.3 Aggregate Commodity Price Volatility

The analysis of export concentration and economic complexity focused on the basket of goods produced and exported by countries with different deep determinants. But what if, through luck or foresight, countries managed to 'pick winners' for their export baskets, goods with advantageous terms of trade and low price volatility? We investigate the economic uncertainty of the basket of primary commodities produced and exported by countries: we ask whether the primary goods exported by countries with 'poor' geography are subject to greater exogenous price movements than those with 'good' geography (and similarly for the other deep determinants).

For primary commodity price (PCP) volatility we use monthly data from Gruss and Kebhaj (2019) which employs 1962-2018 average net export/GDP weights to aggregate 44 global primary commodity prices from the *IMF Primary Commodity Price Database*: the variations captured hence relate to windfall gains and losses due to changes in exogenous world prices — see Ciccone (2018) and Eberhardt and Presbitero (2021). Primary commodity price shocks are defined as the first difference of the monthly PCP index, $\Delta PCP_{it\tau} = PCP_{it\tau} - PCP_{it,\tau-1}$ for month τ of year t in country i. We construct a time-varying measure of PCP volatility following Bleaney and Greenaway (2001): the conditional volatility $\sigma^2_{ACP,it\tau}$ is predicted from a GARCH(1,1) model of the monthly data for 1975-2018 using a regression of the PCP shocks, $\Delta PCP_{it\tau}$, on an intercept term. We convert the monthly estimates to annual frequency by taking the average of monthly volatility within each year.

Results for mean volatility differences by deep determinant are presented in the left plot of Figure 4, panel (b). The patterns match those discussed earlier, although in this instance volatility is frequently substantially higher for the geography split than when we use culture.

4.1.4 Trade costs

Geography in the context of trade is traditionally interpreted as *distance* to or *remoteness* from large markets. We laid out above that the trade gravity literature has a close relation in the capital flow literature (Portes et al., 2001; Bergstrand and Egger, 2007; Head and Ries, 2008; Lane and Milesi-Ferretti, 2008; Pellegrino et al., 2021) and now investigate whether our climatic and disease environment proxies for geography (as well as the proxies for alternative deep determinants) correlate with goods trade costs.

We compute trade costs following the methodology introduced in Novy (2013) using annual bilateral goods trade data from IMF DOTS and GDP data from the World Bank WDI (we adopt $\sigma = 8$). We follow Milner and McGowan (2013) in creating country-specific time-varying trade cost averages from these bilateral estimates.

Results for trade cost differences by deep determinant are presented in the right plot of Figure 4, panel (b). The patterns match those discussed earlier, with sample splits by geography and, to a lesser extent, culture associated with very substantial mean differences. This aside, (i) colonialisation is now commonly associated with lower trade costs, even in the 'exploitative colonialisation' case, and (ii) French legal origin now has a uniformly negative (albeit small) association with trade costs.

4.1.5 Geography vs Alternative Channels

In summary, investigating four channels through which deep determinants can correlate with economic structure we find that across the board the geographic explanation is consistently associated with more substantial differences between country groups ('good', 'poor') than any of the alternative deep determinants offered in the literature.

4.2 Deconstructing Geography

In our treatment analysis we have emphasised that the causal effect we identify is for democratic regime change on capital flows using different samples, but that the striking patterns we reveal are mere correlations between countries with 'good'/'poor' geography and higher/lower inflows. In terms of policy advice, this correlation may suffice, but why do we see these patterns?

We know that geography can affect present-day economic prosperity in direct and indirect ways, the latter by establishing specific cultures or leading to specific historical experiences such as colonialism or slave exports. One of the most prominent examples of 'geography via history' is the study by Nunn and Puga (2012), who demonstrate the negative direct effect of one geographic feature, ruggedness, and its positive indirect effect with historically fewer slave exports from more rugged African countries. On balance, they conclude, history (indirect effect) accounts for about two thirds and their specific geographic feature (direct effect) for only one third of the income

differences across countries. We cannot make such a detailed quantitative assessment, but in the following we study the deep determinants for legal origin, culture and history to get closer to an answer to the question why the patterns we revealed persist.

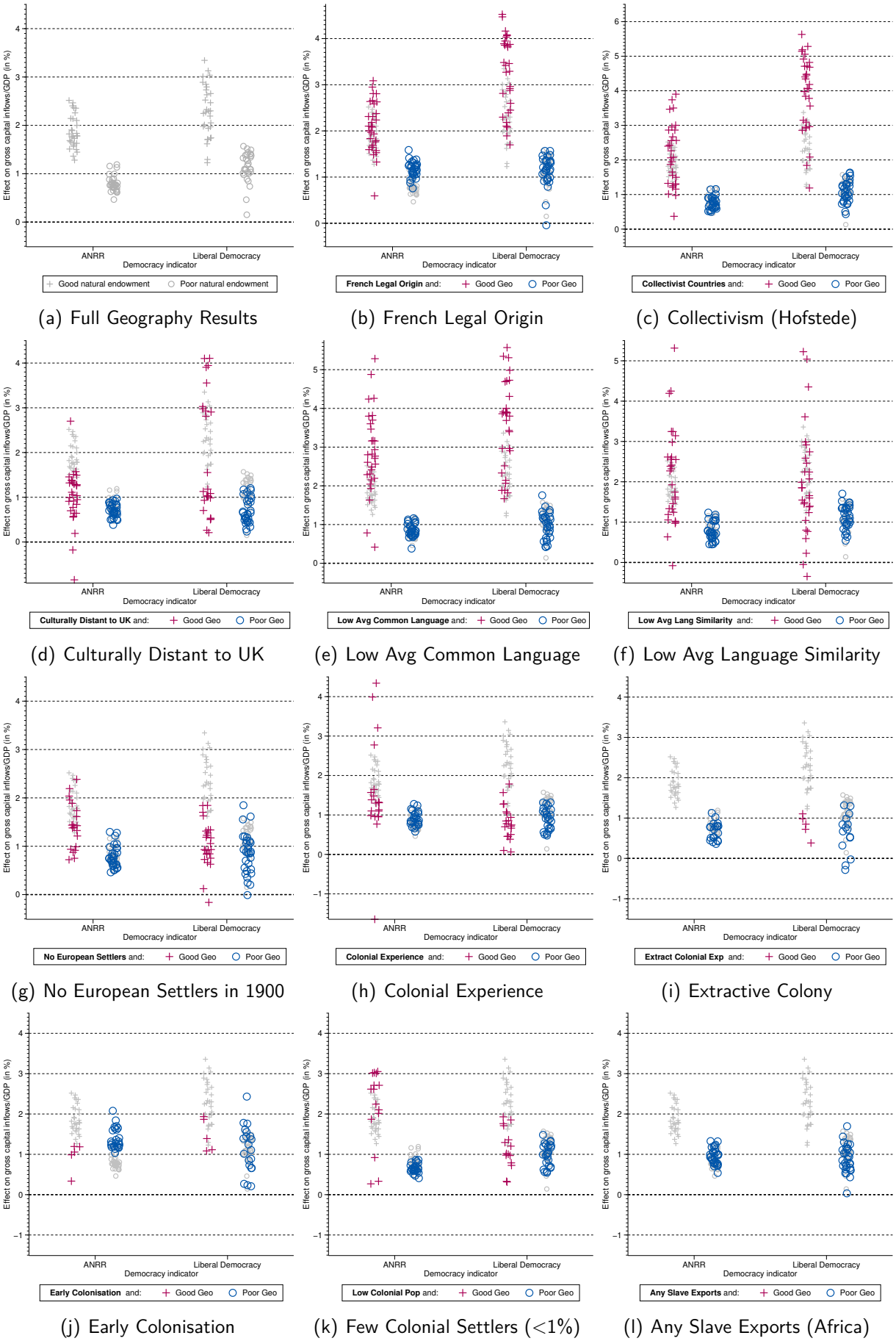
We take the country-specific treatment estimates (ITET, $\hat{\delta}_i$) underlying our main ATET results presented in Figure 3 (the specification including export/trade as additional control) and compute robust mean effects for *specific sub-samples of countries* within these geographical groups. These sub-samples always represent countries with 'unfavourable' deep determinants. Panel (a) of Figure 5 (this time in gray) is a reminder of our above results for total capital flows by definition of democracy (ANRR, liberal democracy) and geography (good, poor). In each of the other plots presented in the Figure, we superimpose (in colour) the robust mean effects of each specification (six proxies for geography times five different factor augmentations) for all countries *within these treated samples* which have the unfavourable deep determinant indicated. For instance, in panel (b) we compute the robust mean effects for all countries by geography which have French legal origin: of the 20 to 26 countries in the samples that make up the thirty ANRR 'good' geography estimates, 11 to 16 are for countries with French legal origin and we compute the robust mean estimates for the latter subgroups (in dark pink +s) within each specification. We proceed analogously for the 'poor' geography sample. The intuition for this exercise is that if French legal origin is a strong drag on economic prosperity (here: capital flows), even following democratic regime change, then we would expect that the effect for treated countries that have French legal origin would be *lower* in magnitude compared with the full sample case including countries with French as well as other, more favourable, legal origins. If results are qualitatively unchanged or better than in the full sample benchmark (in gray), then this is evidence against the hypothesis that the widely-suggested negative effect of French legal origin works through geography in the present context.

Since we are no longer bound by having sufficiently large country samples in the treatment and control groups for a 'good' and 'poor' deep determinant, we can expand our set of proxies. Focusing on culture, we now study (c) Hofstede's index for individualism (from Gorodnichenko and Roland, 2017) and label countries with below median index value as 'collectivist'; we use our previous proxies for distant culture based on (d) blood type distance from the UK, and our measures of (e) language similarly and (f) common language use; in (g) we study countries with no European settlers in 1900, although this could also proxy for 'history' rather than 'culture'.

Panels (h) to (l) focus on history, namely colonial experience and (in the African context) experience of slave exports. In addition to the two proxies for colonial experience in (h) and (i) we focus on 'early colonialisation' (before 1860) in (j), and countries where 'foreigners' from the colonial power made up less than 1% of the population during the colonial period in (k) — both measures are constructed from data in Ziltener and Künzler (2013). Finally, we single out the countries in Africa with any slave exports (41 out of 52 countries in Nunn, 2008) in (l).

Outlier-robust means for these sub-samples are only presented if there are treatment es-

Figure 5: Alternative Deep Determinants 'within' Geography – gross capital inflows



(a) Full Geography Results (b) French Legal Origin (c) Collectivism (Hofstede)

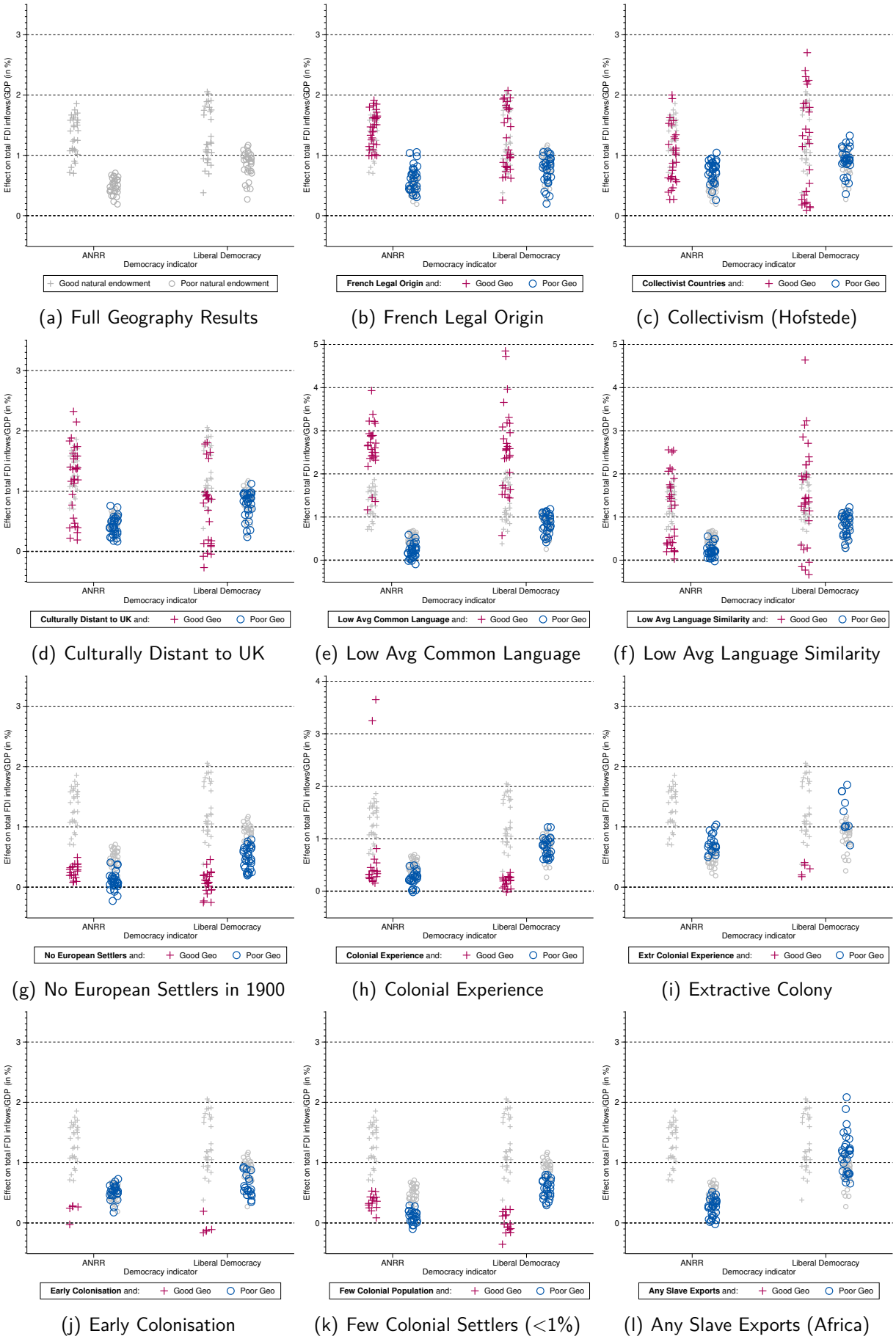
(d) Culturally Distant to UK (e) Low Avg Common Language (f) Low Avg Language Similarity

(g) No European Settlers in 1900 (h) Colonial Experience (i) Extractive Colony

(j) Early Colonisation (k) Few Colonial Settlers (<1%) (l) Any Slave Exports (Africa)

Notes: The plots present robust ATET estimates for the causal effect of democracy on capital inflows by geography (in grey, as in Figure 3) and by alternative deep determinants (in colour) *within* these geographical groupings.

Figure 6: Alternative Deep Determinants 'within' Geography – FDI inflows



(a) Full Geography Results (b) French Legal Origin (c) Collectivism (Hofstede)

(d) Culturally Distant to UK (e) Low Avg Common Language (f) Low Avg Language Similarity

(g) No European Settlers in 1900 (h) Colonial Experience (i) Extractive Colony

(j) Early Colonisation (k) Few Colonial Settlers (<1%) (l) Any Slave Exports (Africa)

Notes: The plots present robust ATET estimates for the causal effect of democracy on FDI inflows by geography (in grey, as in Figure 3) and by alternative deep determinants (in colour) *within* these geographical groupings.

timates for at least four countries. Details of the number of treated countries in the reduced samples are provided in Appendix Table C-1. We present results for gross capital flows and FDI flows in Figures 5 and 6, respectively. Estimates for French Legal Origin in panel (b) are larger or (in the FDI case) qualitatively identical to the full sample results and hence a detrimental effect of geography via French legal origin is not confirmed in the data. Looking at proxies for culture, we clearly see some deviations in our subsample estimates from the full sample results, but in general terms we again see either higher treatment effects or broadly similar effects. The exception here is panel (f) in both figures: having no European settlers in 1900 can be seen to yield lower treatment effects, particularly in countries with good geography. This result is more pronounced in the FDI flows where treatment effects in good and poor geography countries are now on par with each other. All results for colonial experience and slave exports are much less widely available since few if any countries with these characteristics are located in 'good' geography regions. Results for various proxies of colonial experience in 'good' geography samples are thus based on few observations, but the robust means across many proxies show a very clear tendency for treatment effects to be substantially lower than for the full sample case. In some instances, treatment effects are on par with or, in case of the FDI analysis, even lower in 'good' compared with 'poor' geography countries. In the analysis of slave exports in panel (l) we only have estimates for countries in the 'poor' geography grouping — this is the category that across all other analysis of the current type shows relatively limited deviation from the full sample results, whereas those in 'good' geography samples showed at times substantial deviations. Be that as it may, and with a pinch of salt, we might nevertheless point out that the treatment effects of regime change are frequently somewhat higher in this subsample than in the full sample results.

Hence the narrative of a clear distinction in the economic consequences of democratic regime change along geographic lines we have developed in our earlier analysis disappears when we allow for geography to affect outcomes through colonial experience. Geography shapes the patterns of economic consequences, but colonial experience (history) may offer the cause — at least this conclusion is in line with what the data suggest, compared with alternative explanations related to legal origin, culture, or (with the aforementioned caveat in mind) experience of slave exports.

5 Concluding remarks

Why capital flows to some countries but not others has long puzzled economists, until improvements in the quality of institutions were motivated and empirically confirmed as one important factor. In this paper, we have connected this literature with the recent work on democracy and growth, asking whether the democratic dividend observed in the latter literature can be isolated in the patterns of capital inflows as well, one of a range of plausible transmission channels for improved economic prosperity following a shift from autocracy to democracy. Our point of departure from this combination of democracy and capital flows is that we argue for strong heterogeneity

in the relationship *across countries*. Studying and identifying the underlying causes that shape this heterogeneity is important because policymakers and the populace alike may otherwise have unrealistic expectations of the economic effects of regime change.

We motivate and empirically demonstrate across a range of specifications and robustness checks that geography (proxied by measures of climate and disease environment) appears to capture the differential patterns across countries well, much better than alternative structural ('deep') determinants related to culture, history or legal origins. In countries with favourable geography (temperate climate, low disease environment) democratic regime change gives a substantial boost to total capital inflows as well as inflows of foreign direct investment, whereas when geographic endowment is comparatively worse (tropical climate, higher disease environment) the effect is substantially lower.

Why does democracy aid prosperity in some but not other countries? Our motivation suggests that geography represents a structural determinant of the magnitude of capital inflows which dominates and hence partially eradicates the benefits of institutional change: *our definition of geography* (climate, disease environment) correlates with the concentration of the export basket, the complexity of production, goods trade costs, and the volatility of aggregate commodity terms of trade of a country — all these represent risk factors which make 'poor' geography countries disproportionally less attractive for foreign capital inflows. While democracy causes economic prosperity, including higher capital inflows, it does so unequally, and our research suggests that the resulting patterns strongly correlate with geographic characteristics.

Our final consideration is for a causal connection between unfavourable geography and (in relative terms) worse economic performance after democratic regime change. Is it 'nature' itself which leads to these outcomes (a direct effect), or does nature affect other deep determinants which in turn lead to the observed patterns (indirect effect)? Although we cannot apportion relative contributions, and are also not able to make any claims for causality, we provide additional analysis which studies whether alternative unfavourable deep determinants can provide some additional insights related to this question. Adopting a host of unfavourable characteristics, we find that 'good' geography countries often fare even better in terms of the magnitude of effects for capital inflows (e.g. French legal origin, collectivism, other proxies for culture), but that experience of colonialism appears to make the previously substantial differences across geography disappear.

In summary: a significant step change in the quality of institutions unequivocally causes higher rates of capital inflows (total inflows, FDI inflows). However, these benefits are not equally spread across democratising countries. The patterns observed suggest that 'unfavourable' geography can substantially moderate this positive effect of democratic regime change. Yet while geography can provide patterns, a correlation, it appears from our analysis that countries' history, in particular whether they were subject to colonisation, can provide a better candidate for the causes of such unequal outcomes of democratic regime change.

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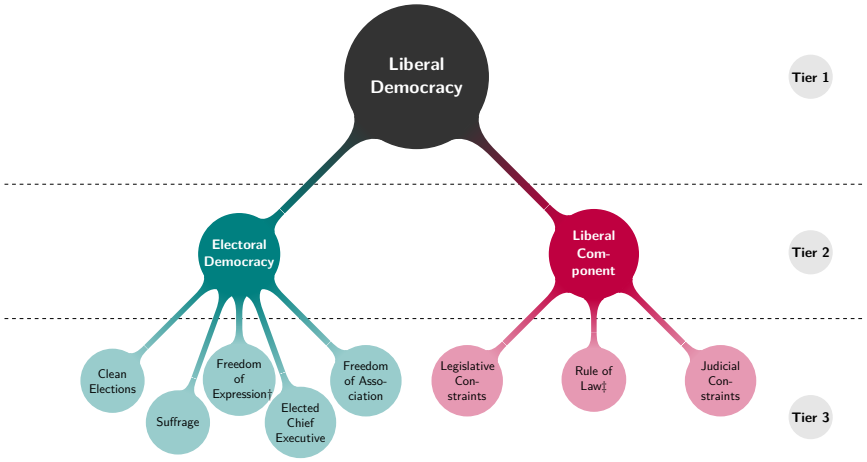
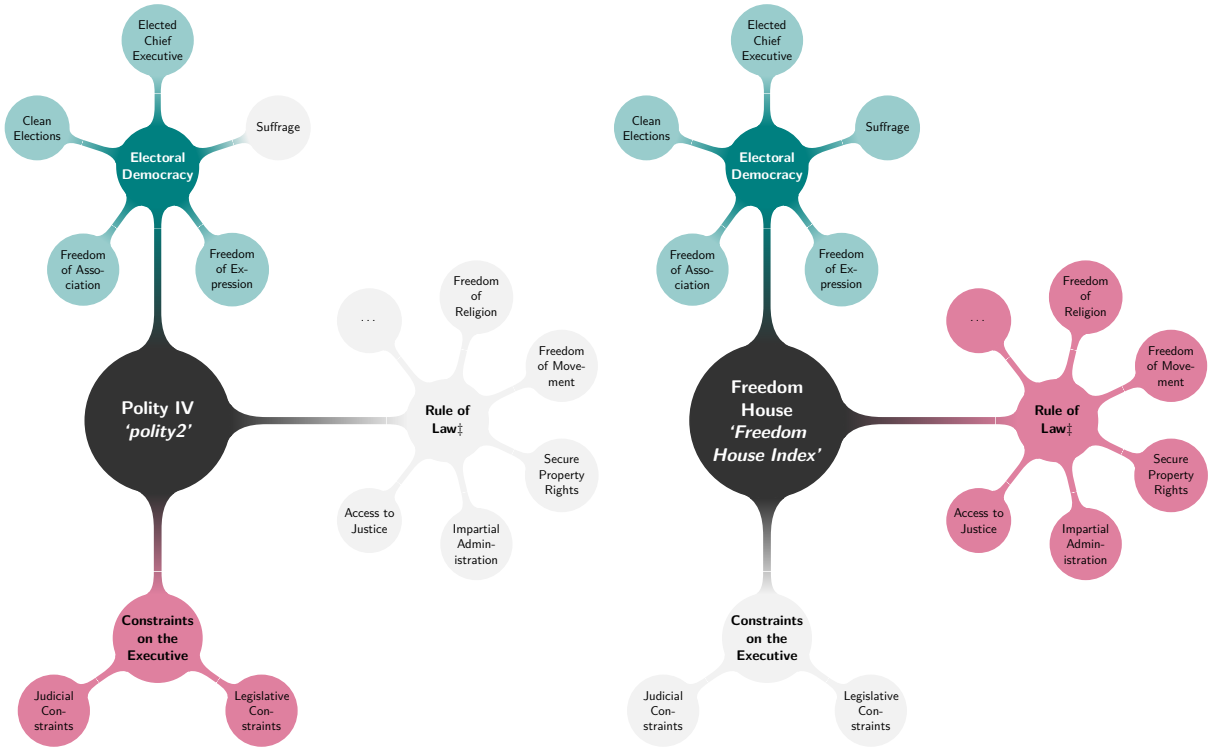
Online Appendix – Not Intended for Publication

A Data, Sample Makeup and Descriptives

Figure A-1: Definitions of Democratic Institutions



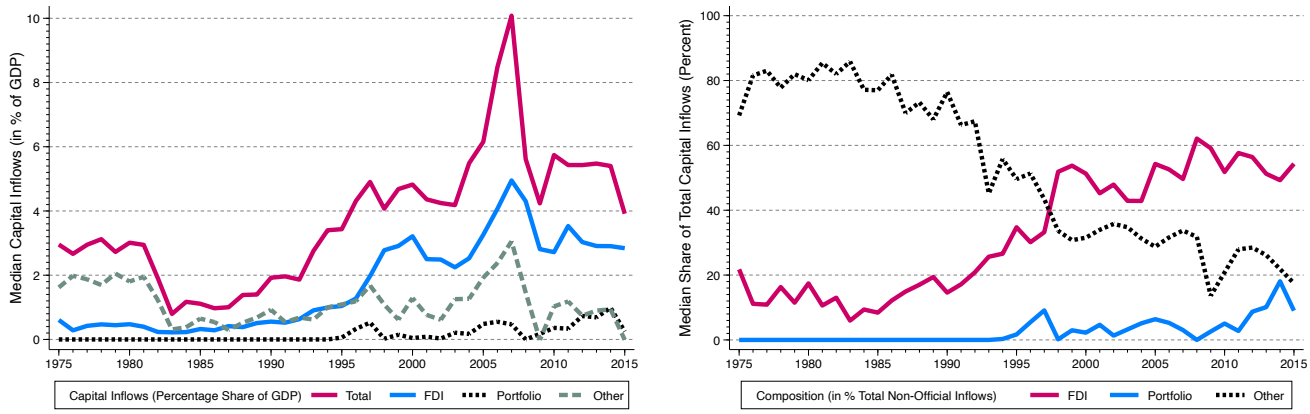
(a) V-Dem Definition of Liberal Democracy and its Components



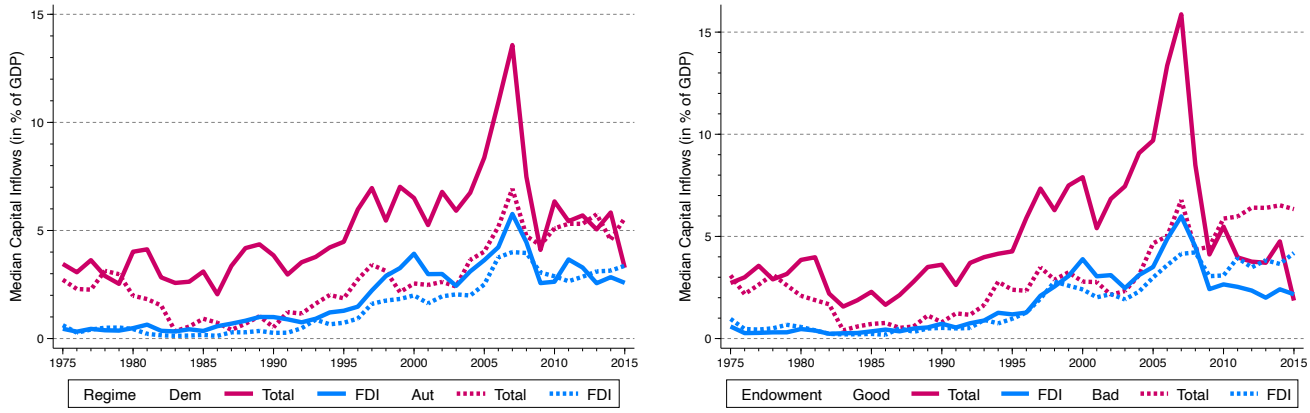
(b) The indices (Polity, FHI) combined in the ANRR definition of Democracy

Notes: The images present (a) the V-Dem conceptualisation of liberal democracy, and (b) an attempt at integrating the Polity IV 'polity2' and Freedom House FHI into the V-Dem framework. The lower panel provides greater distinction within the 'Rule of Law' set of institutions for reference. Institutions, concepts and practices shaded in light grey are not covered by the index in question. † This includes 'alternative sources of information'. ‡ In its entirety this component covers 'Individual Liberties and Equality before the Law.'

Figure A-2: Composition and Evolution of Capital Inflows



(a) Evolution (left) and Composition of Median Capital Inflows across all countries



(b) Evolution of Median Capital Inflows by Political Regime (left) and Geography

Notes: We present median capital flows (in percent of total inflows or in percent of GDP) for all countries in Panel (a) and by political regime and geography in Panel (b). Regime is defined by the V-Dem ERT variable (not countries experiencing democratic regime change), 'poor' geography by being located below the full sample average absolute latitude.

Table A-1: Sample Makeup – Capital Flow Analysis

	ISO	Country	Start	End	Obs	Miss	Income	CapFlow/GDP		ANRR Democracy Definition						Liberal Democracy Definition					
								Start	End	Always	Treat	AbsLat		Ctrl	AbsLat		Always	Treat	AbsLat		Ctrl	AbsLat	
												Hi	Lo		Hi	Lo			Hi	Lo		H	Lo
1	AGO	Angola	1985	2015	31		LMC	3.7	-1.5					26		26					31		31
2	ALB	Albania	1981	2015	35		UMC	0.0	10.5		30	30						35	35				
3	ARG	Argentina	1976	2015	40		UMC	-1.0	1.7		35	35						40	40				
4	ARM	Armenia	1993	2015	23		UMC	-2.1	9.4		18	18									23	23	
5	AUS	Australia	1970	2015	46		HIC	2.8	5.9	41							46						
6	AUT	Austria	1970	2015	46		HIC	3.5	-2.8	41							46						
7	AZE	Azerbaijan	1995	2015	21		UMC	12.9	8.5					16	16						21	21	
8	BDI	Burundi	1985	2015	31		LIC	0.8	8.0		26		26								31		31
9	BEL	Belgium	2002	2015	14		HIC	19.3	0.7	9							14						
10	BEN	Benin	1974	2014	41		LMC	2.4	5.3		37		37					41		41			
11	BFA	Burkina Faso	1974	2014	36	5	LIC	1.6	18.6		32		32					36		36			
12	BGD	Bangladesh	1976	2015	40		LMC	0.0	2.0		35	35									40	40	
13	BGR	Bulgaria	1981	2015	35		UMC	-1.2	4.9		30	30						35	35				
14	BIH	Bosnia & Herzeg	1998	2015	18		UMC	4.0	3.5					13	13			18	18				
15	BLR	Belarus	1993	2015	23		UMC	1.2	4.7		18	18						23	23				
16	BOL	Bolivia	1976	2015	40		LMC	2.1	6.1		35		35					40		40			
17	BRA	Brazil	1975	2015	41		UMC	5.5	5.9		36		36					41		41			
18	BRB	Barbados	1970	2013	44		HIC	15.2	10.6	41							44						
19	BWA	Botswana	2000	2015	16		UMC	1.9	3.9	11							16						
20	CAF	Central Afr Rep	1977	1994	18		LIC	1.4	-0.2		18		18								18		18
21	CAN	Canada	1970	2015	46		HIC	4.4	9.3	41							46						
22	CHE	Switzerland	1977	2015	39		HIC	-0.5	3.8	34							39						
23	CHL	Chile	1975	2015	41		HIC	-1.9	10.0		36	36						41	41				
24	CHN	China	1982	2015	34		UMC	0.2	4.3					29	29						34	34	
25	CIV	Cote d'Ivoire	1975	2013	39		LMC	4.7	3.7		36		36								39		39
26	CMR	Cameroon	1977	2015	39		LMC	1.7	1.3					34		34					39		39
27	COG	Congo, Rep	1978	2007	30		LMC	8.0	10.0		30		30								30		30
28	COL	Colombia	1970	2015	46		UMC	2.4	7.7	41								46		46			
29	COM	Comoros	1981	2012	25	7	LMC	1.0	4.7		23		23								25		25
30	CPV	Cabo Verde	1977	2015	39		LMC	0.1	6.8		34		34					39		39			
31	CRI	Costa Rica	1977	2015	39		UMC	9.6	11.2	34							39						
32	CYP	Cyprus	1976	2015	40		HIC	4.4	27.8	35							40						
33	CZE	Czech Rep	1993	2015	23		HIC	7.6	5.7	18							23						
34	DEU	Germany	1971	2015	45		HIC	2.0	0.9	40							45						
35	DJI	Djibouti	1991	2015	25		LMC	5.0	18.2		20		20								25		25
36	DNK	Denmark	1975	2015	41		HIC	1.7	0.7	36							41						
37	DOM	Dominican Rep	1977	2015	39		UMC	1.6	6.0		34		34								39		39
38	DZA	Algeria	1977	2015	26	13	LMC	9.8	1.1					21	21						26	26	
39	ECU	Ecuador	1976	2015	40		UMC	0.7	1.1		35		35					40		40			
40	EGY	Egypt	1977	2015	39		LMC	-4.4	1.7					34	34						39	39	
41	ESP	Spain	1975	2015	41		HIC	2.7	-1.4		36	36						41	41				
42	EST	Estonia	1993	2015	23		HIC	14.6	7.1	18							23						
43	ETH	Ethiopia	1977	2012	36		LIC	0.1	1.7		34		34								36		36
44	FIN	Finland	1975	2015	41		HIC	10.1	-16.3	36							41						
45	FRA	France	1975	2015	41		HIC	3.0	0.0	36							41						
46	GAB	Gabon	1978	2005	28		UMC	-2.6	1.0					28		28					28		28
47	GBR	United Kingdom	1970	2015	46		HIC	3.5	-0.6	41							46						
48	GEO	Georgia	1997	2015	19		UMC	7.3	11.5	14								19	19				
49	GHA	Ghana	1975	2015	41		LMC	0.5	7.8		36		36					41		41			
50	GIN	Guinea	1986	2013	28		LIC	-0.3	18.6		25		25								28		28
51	GMB	Gambia	1978	2012	30	5	LIC	1.0	-3.0		28		28								30		30
52	GNB	Guinea-Bissau	1982	2013	29	3	LIC	0.0	2.8		26		26								29		29
53	GRC	Greece	1976	2015	39	1	HIC	3.4	-9.8	34							39						
54	GTM	Guatemala	1977	2015	39		UMC	3.1	4.5		34		34					39		39			
55	HKG	Hong Kong	1998	2015	18		HIC	-85.6	64.6	13											18		18
56	HND	Honduras	1974	2015	42		LMC	4.6	7.9		37		37								42		42
57	HRV	Croatia	1993	2015	23		HIC	1.9	2.7		18	18						23	23				
58	HTI	Haiti	1971	2015	45		LIC	0.9	2.2		40		40								45		45
59	HUN	Hungary	1982	2015	34		HIC	0.0	-2.6		29	29						34	34				
60	IDN	Indonesia	1981	2015	35		UMC	0.2	5.1		30		30					35		35			
61	IND	India	1975	2015	41		LMC	0.0	6.9	36								41		41			
62	IRL	Ireland	1974	2015	42		HIC	13.7	76.4	37							42						
63	IRN	Iran	1981	2000	20		UMC	0.2	-0.2					20	20						20	20	
64	ISL	Iceland	1976	2015	40		HIC	1.3	-9.0	35							40						
65	ISR	Israel	1970	2015	46		HIC	5.9	3.1	41							46						
66	ITA	Italy	1970	2015	46		HIC	3.8	0.4	41							46						
67	JAM	Jamaica	1976	2015	40		UMC	-1.4	7.2	35								40		40			
68	JOR	Jordan	1972	2015	44		UMC	0.0	9.8					39	39						44	44	
69	JPN	Japan	1977	2015	39		HIC	0.0	0.5	34							39						
70	KAZ	Kazakhstan	1995	2015	21		UMC	7.3	7.7					16	16						21	21	

(Continued overleaf)

Table A-1: Sample Makeup – Capital Flow Analysis (continued)

	ISO	Country	Start	End	Obs	Miss	Income	CapFlow/GDP		ANRR Democracy Definition						Liberal Democracy Definition					
								Start	End	Always	Treat	AbsLat Hi	AbsLat Lo	Ctrl	AbsLat Hi	AbsLat Lo	Always	Treat	AbsLat Hi	AbsLat Lo	Ctrl	AbsLat H	AbsLat Lo
71	KEN	Kenya	1975	2014	40		LMC	2.4	6.9		36		36								40		40
72	KGZ	Kyrgyz Republic	1993	2015	23		LMC	1.8	8.5		18	18									23	23	
73	KHM	Cambodia	1992	2014	23		LMC	1.6	18.5		19		19								23		23
74	KOR	South Korea	1976	2015	40		HIC	5.2	-0.2		35	35						40	40				
75	KWT	Kuwait	1975	2015	41		HIC	-0.8	2.2					36	36						41	41	
76	LAO	Lao	1984	2015	32		LMC	0.4	9.3					27		27					32		32
77	LBN	Lebanon	2002	2015	14		UMC	10.5	15.5		9	9									14	14	
78	LBR	Liberia	1979	2015	21	16	LIC	0.1	36.5		16		16					21		21			
79	LBY	Libya	1977	2013	37		UMC	-0.1	1.1					34	34						37	37	
80	LKA	Sri Lanka	1975	2015	41		LMC	-0.8	6.1	36								41		41			
81	LSO	Lesotho	2000	2015	16		LMC	5.3	5.0	11								16	16				
82	LTU	Lithuania	1993	2015	23		HIC	-0.7	-0.4	18							23						
83	LUX	Luxembourg	2002	2015	14		HIC	701.0	1327.6	9							14						
84	LVA	Latvia	1992	2015	24		HIC	4.8	10.1		19	19					24						
85	MAR	Morocco	1975	2015	41		LMC	0.8	7.2					36	36						41	41	
86	MDA	Moldova	1994	2015	22		LMC	8.4	7.2	17								22	22				
87	MDG	Madagascar	1974	2013	40		LIC	0.3	8.1		37		37								40		40
88	MEX	Mexico	1979	2015	37		UMC	4.2	7.7		32	32						37	37				
89	MLI	Mali	1975	2014	40		LIC	0.0	3.3		36		36					40		40			
90	MLT	Malta	1971	2015	45		HIC	6.7	42.9	40							45						
91	MMR	Myanmar	1998	2015	18		LMC	4.2	3.2					13		13					18		18
92	MNG	Mongolia	1981	2015	35		LMC	0.0	29.9		30	30						35	35				
93	MOZ	Mozambique	1981	2015	35		LIC	0.0	40.2		30		30								35		35
94	MRT	Mauritania	1981	2015	22	13	LMC	8.4	17.4					18		18					22		22
95	MUS	Mauritius	1976	2015	40		HIC	-2.8	-7.2	35							40						
96	MWI	Malawi	1977	2015	39		LIC	2.5	9.3		34		34					39		39			
97	MYS	Malaysia	1974	2015	42		UMC	5.5	6.7					37		37					42		42
98	NAM	Namibia	2000	2015	16		UMC	7.8	10.5	11							16						
99	NER	Niger	1974	2013	40		LIC	2.1	18.0		37		37					40		40			
100	NGA	Nigeria	1977	2015	38	1	LMC	1.0	4.0		33		33					38		38			
101	NIC	Nicaragua	1977	2015	39		LMC	8.7	12.3		34		34					39		39			
102	NLD	Netherlands	1970	2015	46		HIC	9.4	-18.1	41							46						
103	NOR	Norway	1975	2015	41		HIC	8.1	10.0	36							41						
104	NPL	Nepal	1981	2015	35		LMC	0.3	2.1		30	30						35	35				
105	NZL	New Zealand	1972	2015	44		HIC	2.3	3.1	39							44						
106	OMN	Oman	1974	2015	42		HIC	-5.0	3.5					37		37					42		42
107	PAK	Pakistan	1976	2015	40		LMC	1.5	0.8		35	35									40	40	
108	PAN	Panama	1977	2015	39		HIC	120.0	18.0		34		34					39		39			
109	PER	Peru	1977	2015	39		UMC	0.7	8.6		34		34					39		39			
110	PHL	Philippines	1977	2015	39		LMC	4.3	2.7		34		34					39		39			
111	POL	Poland	1976	2015	40		HIC	8.1	3.2		35	35						40	40				
112	PRT	Portugal	1975	2015	41		HIC	-0.2	-5.9		36	36						41	41				
113	PRY	Paraguay	1975	2015	41		UMC	5.1	2.9		36		36					41		41			
114	RUS	Russian Fed	1994	2015	22		UMC	0.6	2.5		17	17									22	22	
115	RWA	Rwanda	1976	2015	40		LIC	-0.2	3.8					35		35					40		40
116	SAU	Saudi Arabia	1971	2015	45		HIC	-1.0	1.6					40	40						45	45	
117	SDN	Sudan	1977	2015	39		LIC	1.1	3.3		34		34								39		39
118	SEN	Senegal	1974	2014	41		LMC	3.4	7.9		37		37					41		41			
119	SGP	Singapore	1972	2015	44		HIC	19.1	38.2	39											44		44
120	SLE	Sierra Leone	1977	2014	35	3	LIC	1.9	26.6		31		31								35		35
121	SLV	El Salvador	1976	2015	40		LMC	3.6	5.4		35		35					40		40			
122	STP	Sao Tome & Pr	1974	2015	33	9	LMC	4.1	4.9		27		27					33		33			
123	SVK	Slovak Republic	1993	2015	23		HIC	6.9	7.7	18							23						
124	SVN	Slovenia	1993	2015	23		HIC	0.9	2.6	18							23						
125	SWE	Sweden	1970	2015	46		HIC	1.5	-6.0	41							46						
126	SWZ	Eswatini	2000	2015	16		LMC	7.4	0.0					11	11						16	16	
127	SYC	Seychelles	1976	2015	40		HIC	17.2	28.9					35		35					40		40
128	SYR	Syria	1977	2010	34		LIC	2.0	3.8					34	34						34	34	
129	TCD	Chad	1981	1994	14		LIC	-0.2	-2.2					14		14					14		14
130	TGO	Togo	1974	2015	42		LIC	-10.6	6.9					37		37					42		42
131	THA	Thailand	1975	2015	41		UMC	3.1	3.9		36		36					41		41			
132	TJK	Tajikistan	2002	2015	14		LIC	8.7	4.3					9	9						14	14	
133	TTO	Trinidad & Tob	1975	2011	37		HIC	3.5	-13.8	36							37						
134	TUN	Tunisia	1976	2015	40		LMC	8.3	5.2					35	35			40	40				
135	TUR	Turkey	1974	2015	42		UMC	0.7	8.4		37	37						42	42				
136	TZA	Tanzania	1976	2015	40		LMC	-0.4	6.6					35		35					40		40
137	UGA	Uganda	1980	2015	36		LIC	-0.1	5.5		31		31								36		36
138	UKR	Ukraine	1994	2015	22		LMC	6.8	4.4	17								22	22				
139	URY	Uruguay	1978	2015	38		HIC	1.8	10.6		33	33						38	38				
140	USA	United States	1970	2015	46		HIC	-0.3	5.0	41							46						

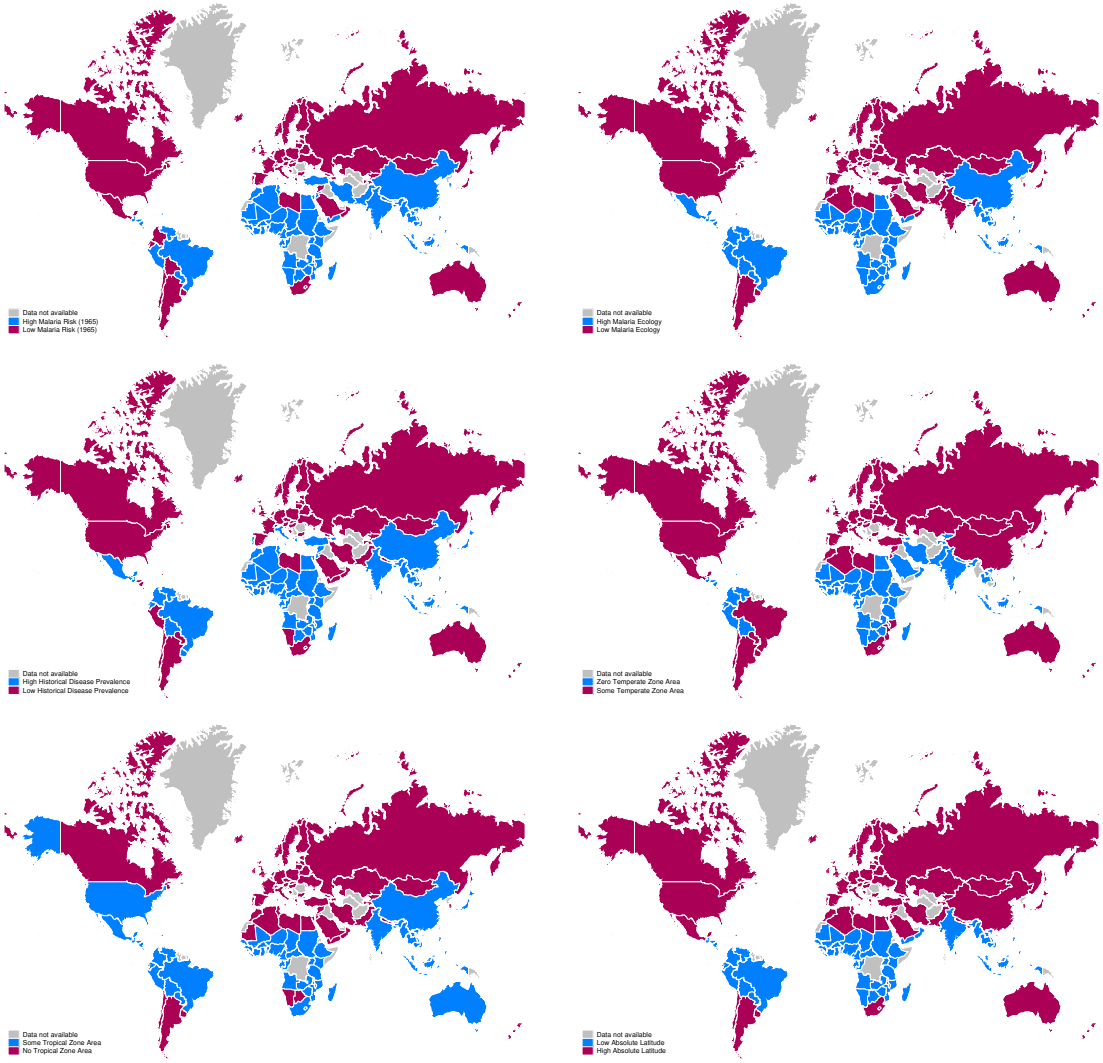
(Continued overleaf)

Table A-1: Sample Makeup – Capital Flow Analysis (continued)

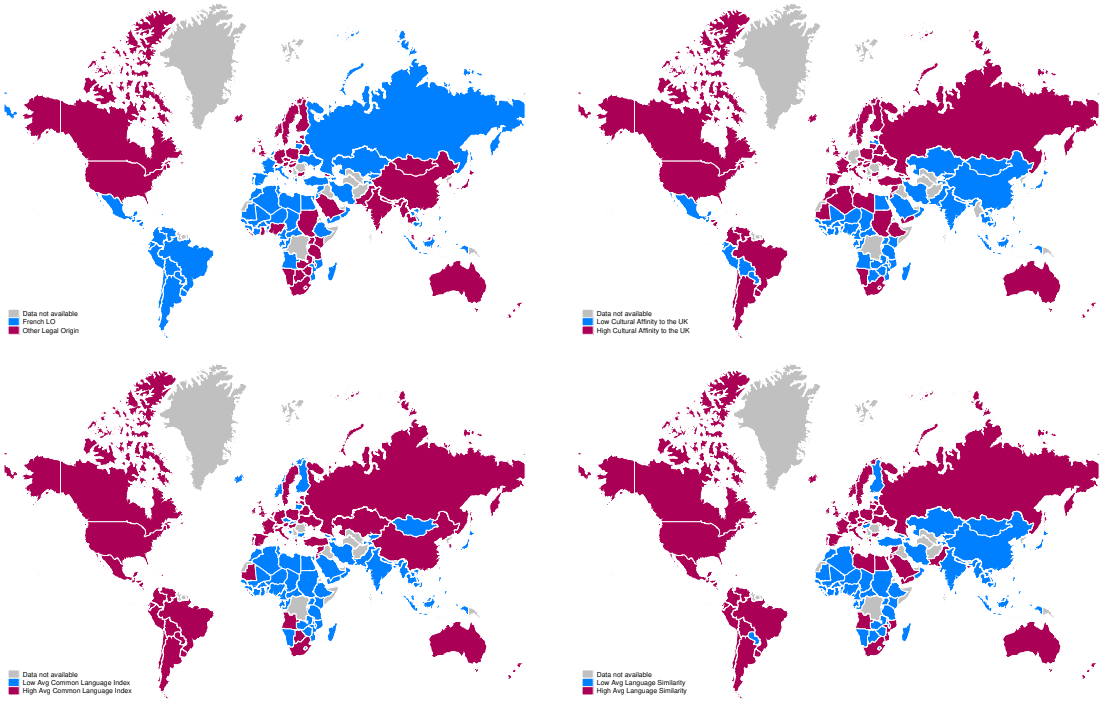
	ISO	Country	Start	End	Obs	Miss	Income	CapFlow/GDP		ANRR Democracy Definition						Liberal Democracy Definition					
								Start	End	Always	Treat	AbsLat		Ctrl	AbsLat		Always	Treat	AbsLat		Ctrl	AbsLat	
												Hi	Lo		Hi	Lo			Hi	Lo		H	Lo
141	VEN	Venezuela	1970	2015	45	1	UMC	0.2	1.7		40		40					45		45			
142	VNM	Vietnam	1996	2015	20		LMC	11.9	6.9					15		15					20		20
143	YEM	Yemen	1990	2015	26		LIC	-0.5	0.7					21		21					26		26
144	ZAF	South Africa	1998	2015	18		UMC	8.5	1.0	13													
145	ZMB	Zambia	1978	2015	33	5	LMC	5.8	10.0		28		28					33		33			
146	ZWE	Zimbabwe	1981	2015	21	14	LMC	1.7	8.5		16		16								21		21

Notes: We present the sample makeup for the capital flow analysis (1975-2015). Income indicates the World Bank Income Level category (Low - LIC, Lower Middle - LMC, Upper Middle - UMC, and High - HIC). We report the gross capital inflow over GDP for the first and last year of the country series, in percent. The remaining columns indicate treated and controls samples (total number of observations, respectively) for two democracy definitions: that by ANRR and the V-Dem Liberal Democracy (sample mean cutoff). 'Always' refers to countries that were democracies throughout the sample period, 'treat' to the treated sample, where absolute latitude ('Abslat') 'Hi' and 'Lo' provide the split for one of the many deep determinants we apply in our analysis. 'Ctrl' is the control sample, again split into 'Hi' and 'Lo' absolute latitude. Absolute latitude is one of the six geography proxies (plus four more in robustness checks) we adopt in the paper, in addition to proxies for culture, history and legal origin.

Figure A-3: Distribution of (Dichotomised) Deep Determinants



(a) Proxies for Geography



(b) French Legal Origin (top left) and Proxies for Culture

Notes: We present the distribution of countries for all deep determinant proxies. Grey indicates data are not available, dark pink (blue) shaded countries are those with supposedly beneficial (detrimental) deep determinants.

Table A-2: Deep Determinants: Pairwise Correlation HISTORY?!

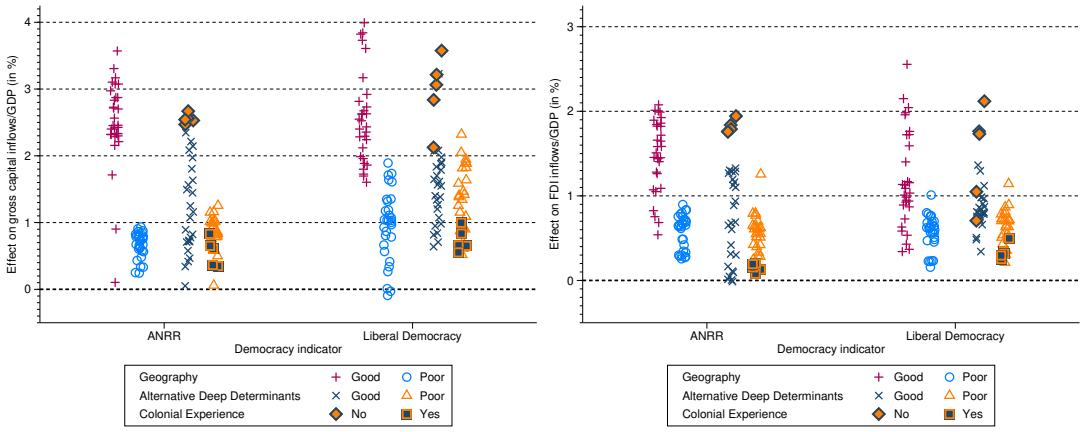
	Geography						LO	Culture		
	Malaria Ecology	Malaria Risk	Disease Prevalence	Zero Temperate	Some Tropics	Absolute Latitude	French Leg.Origin	Cult. Dist. from UK	Common Language	Language Similarity
Malaria Ecology	1.00 108									
Malaria Risk	0.58 108	1.00 109								
Disease Prevalence	0.52 108	0.50 109	1.00 109							
Zero Temperate	0.60 99	0.48 99	0.39 99	1.00 99						
Some Tropics	0.79 108	0.63 109	0.54 109	0.60 99	1.00 109					
Absolute Latitude	0.78 108	0.55 109	0.49 109	0.71 99	0.81 109	1.00 109				
French Legal Origin	0.09 108	-0.04 109	0.03 109	0.02 99	-0.02 109	0.09 109	1.00 109			
Cult. Distance from UK	0.47 102	0.41 102	0.26 102	0.56 99	0.53 102	0.41 102	-0.16 102	1.00 102		
Common Language	0.13 108	0.31 109	0.21 109	0.41 99	0.15 109	0.18 109	-0.15 109	0.38 102	1.00 109	
Language Similarity	0.28 108	0.35 109	0.30 109	0.35 99	0.31 109	0.38 109	-0.24 109	0.47 102	0.48 109	1.00 109

Notes: We present the pairwise correlation coefficients and sample sizes for the time-invariant deep determinants: geography (×6 proxies), French legal origin and culture (×3). This is for the treatment and control samples only, using Liberal Democracy as the regime change definition. Results are virtually identical if we use the full sample (including countries which have been democratic throughout the sample period). The mean (median) for 15 geography correlations is 0.60 (0.58), and for 3 culture correlations 0.44 (0.47). The mean (median) of 18 correlation between geography and culture is 0.32 (0.33), of 6 correlations between geography and legal origin is 0.03 (0.02), and of 3 correlations between legal origin and culture is -0.18 (-0.16).

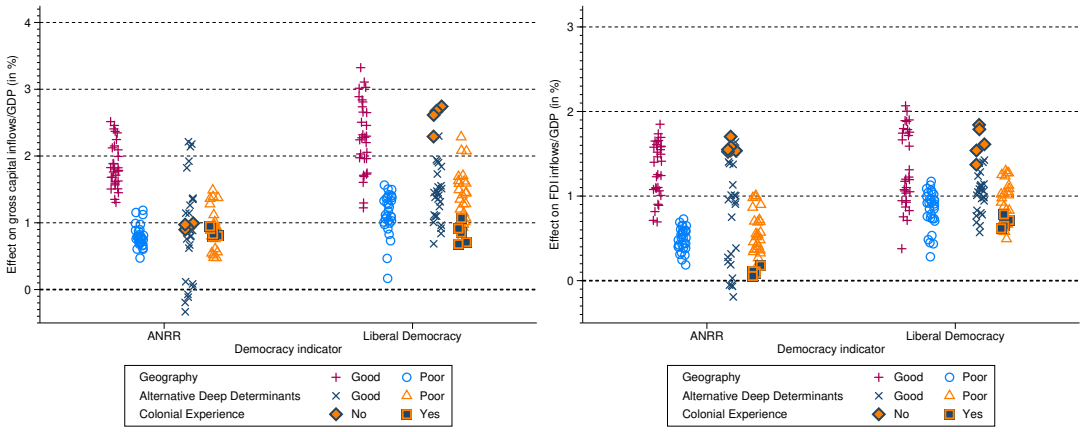
B Results Tables, Diagnostics and Robustness Checks

B.1 Main Analysis — Results highlighting Colonial Experience

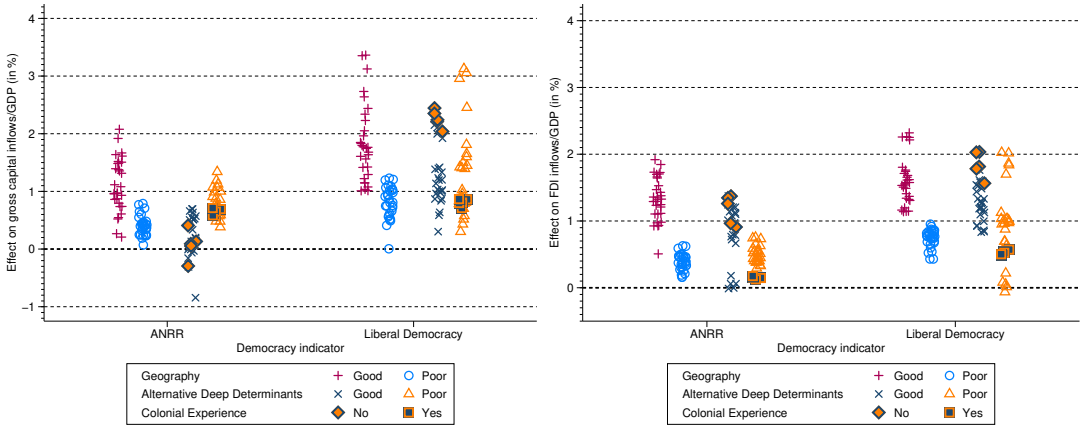
Figure B-1: Democracy, Deep Determinants and Capital Inflows



(a) Total Non-Official Capital (left) and FDI (right) Inflows – no controls



(b) dto – export/trade as control (not a bad control)



(c) dto – full controls (bad controls)

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by geography (+ and o for good and poor geography, respectively) and alternative deep determinants (x for non-French LO/proximate culture/no colonial experience and △ for French LO/distant culture/colonial experience). This set of results further distinguishes colonial experience. For all other aspects see Figure 3 in the maintext.

B.2 Main Analysis — Result tables

Table B-1: Democracy, Geography and Total Non-Official Capital Inflows (1975-2015)

	Disease Environment						Climate					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Malaria Ecology		Malaria Risk		Hist. Disease Index		Tropical Land		No Temperate Land		|Latitude| > MD	
	Low	High	Low	High	Low	High	None	Some	No	Yes	Yes	No
ANRR democracy	2.694***	0.768*	3.551***	0.558	2.405***	0.734*	2.440**	0.760**	1.761**	0.856**	2.894***	0.866**
	[0.883]	[0.416]	[1.076]	[0.381]	[0.876]	[0.412]	[1.095]	[0.378]	[0.867]	[0.371]	[0.956]	[0.435]
Treated Countries	22	47	23	46	26	43	23	46	21	44	23	46
Treated Observations	617	1470	626	1461	763	1324	637	1450	616	1368	650	1437
Control Countries	13	17	10	21	11	20	17	14	9	18	16	15
Control Observations	342	448	265	560	267	558	451	374	252	491	416	409
Alpha test (t)	-1.23	-1.98	-2.56	-0.56	-1.25	-0.84	-0.70	-1.00	-1.07	-5.55	-0.35	-4.63
Alternative factor augmentation												
2 factors	2.219**	0.572	2.826***	0.291	3.084***	0.342	2.476***	0.695*	3.090***	0.636*	2.126***	0.599
3 factors	2.737***	0.874**	3.054***	0.383	3.121***	0.685*	2.684**	0.782**	2.545**	0.637*	2.278**	0.784*
4 factors	2.694***	0.768*	3.551***	0.558	2.405***	0.734*	2.440**	0.760**	1.761**	0.856**	2.894***	0.866**
5 factors	2.330**	0.836*	3.315***	0.612	2.309***	0.781**	2.392**	0.665*	0.959	0.991**	2.411***	0.864*
6 factors	2.970***	0.247	2.870***	0.281	2.293***	0.871**	2.306***	0.452	0.109	0.730**	2.306***	0.645*
Liberal Democracy Index > median	2.605***	1.014*	3.588***	-0.049	2.608***	1.048**	2.224***	0.985	2.035***	1.222***	2.377***	1.375**
	[0.845]	[0.592]	[0.785]	[0.484]	[0.847]	[0.477]	[0.858]	[0.599]	[0.779]	[0.452]	[0.858]	[0.595]
Treated Countries	24	27	23	28	22	29	22	29	22	26	22	29
Treated Observations	801	1029	760	1070	709	1121	718	1112	745	996	716	1114
Control Countries	17	40	16	42	18	40	22	36	11	40	20	38
Control Observations	498	1262	440	1360	551	1249	630	1170	321	1288	588	1212
Alpha test (t)	-0.13	-1.74	-6.72	0.10	0.63	-1.90	-4.53	0.02	-0.91	0.10	0.48	-2.48
Alternative factor augmentation												
2 factors	1.868***	1.618***	3.946***	0.292	2.929***	1.745***	3.228***	0.324	1.712***	1.204**	1.928***	1.862***
3 factors	2.634***	1.357**	3.773***	0.757	2.627***	1.592***	2.715***	0.953*	2.100***	1.299**	1.792***	1.703**
4 factors	2.605***	1.014*	3.588***	-0.049	2.608***	1.048**	2.224***	0.985	2.035***	1.222***	2.377***	1.375**
5 factors	2.559***	0.940**	3.739***	0.019	2.391***	1.032**	2.275**	0.557	1.942**	1.166***	2.483***	0.827
6 factors	2.812***	0.661	3.879***	-0.054	1.599***	1.027**	2.264**	0.385	1.731**	1.037**	2.409***	0.760

Notes: This table is for the analysis by geography. We present robust mean estimates from PCDID regressions of total non-official capital inflows and a democracy dummy defined as indicated in each result panel — these can be interpreted as Average Treatment Effects on the Treated (ATET). These results are for the model *without any additional controls*. The 12 different models in each panel are for sample splits determined by 'disease environment' and 'climate', in each case we use three proxies for these factors of geography, separating 'good' geography in the odd columns and 'poor' geography in the even columns. In a lower part of each panel we report the ATET estimates for specification with two to six factors. See Table 1 for all other details.

Table B-2: Democracy, Alternative Deep Determinants and Total Non-Official Capital Inflows (1975-2015)

	Legal Origin		**Culture**						**History**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	French LO		**Cultural Distance**		**Common Language**		**Language Similarity**		**Colonial Exp**		**Extractive Col**	
	No	Yes	Low	High	Low	High	High	Low	No	Yes	No	Yes
ANRR democracy	0.396	0.918*	1.786*	0.825**	1.425	0.835*	1.955***	0.776*	2.647***	0.585	0.756	0.802
	[0.678]	[0.512]	[1.019]	[0.416]	[0.908]	[0.497]	[0.756]	[0.468]	[0.864]	[0.437]	[0.484]	[0.901]
Treated Countries	23	46	24	42	31	38	30	39	33	36	23	14
Treated Observations	673	1414	722	1281	957	1130	912	1175	1000	1078	694	414
Control Countries	7	24	10	19	9	22	10	21	6	25	11	14
Control Observations	173	652	264	513	241	584	305	520	110	715	334	381
Alpha test (t)	-1.33	-2.22	-2.50	-3.66	-4.22	-2.67	0.26	-5.55	-8.41	-2.19	-2.33	-5.59
Alternative factor augmentation												
2 factors	1.167	1.262***	1.204	0.973**	2.155***	0.839	2.144***	1.068*	2.537***	0.357	0.482	1.051
3 factors	0.588	0.999*	1.444*	0.948**	1.026	0.829*	1.616**	0.482	2.568***	0.373	0.713	1.140
4 factors	0.396	0.918*	1.786*	0.825**	1.425	0.835*	1.955***	0.776*	2.647***	0.585	0.756	0.802
5 factors	0.352	1.163**	1.574	0.953***	0.882	0.675	2.338***	0.755	2.479***	0.662	0.833*	0.879
6 factors	0.048	1.009*	0.755	0.097	0.818	0.319	2.185***	0.755*	2.539***	0.828	0.724	0.599
Liberal Democracy Index > median	1.319*	2.300***	1.364	0.881	1.766**	1.886**	1.861***	1.930**	3.194***	0.814	0.997*	1.200
	[0.773]	[0.704]	[0.939]	[0.624]	[0.767]	[0.773]	[0.613]	[0.760]	[0.753]	[0.625]	[0.575]	[0.779]
Treated Countries	20	31	23	26	27	24	26	25	31	20	10	11
Treated Observations	653	1177	770	989	995	835	927	903	1095	735	360	410
Control Countries	16	42	16	37	18	40	16	42	12	46	25	19
Control Observations	530	1270	495	1163	556	1244	544	1256	336	1464	809	596
Alpha test (t)	-14.03	-0.45	-0.22	-1.29	-8.50	0.20	1.16	-5.94	-2.73	-6.51	-1.77	-0.38
Alternative factor augmentation												
2 factors	1.911*	1.892***	3.183***	0.567	1.988***	1.646**	1.625**	1.874**	3.583***	0.659	1.284	0.923
3 factors	1.844*	2.058***	1.352**	0.826	2.033***	1.419**	1.532**	1.805**	3.072***	1.006*	0.823	1.325
4 factors	1.319*	2.300***	1.364	0.881	1.766**	1.886**	1.861***	1.930**	3.194***	0.814	0.997*	1.200
5 factors	0.827	1.597***	1.710*	0.645	1.638***	1.373**	2.066***	1.397**	2.848***	0.669	1.129**	0.987
6 factors	0.635	1.251**	1.240	0.557	0.976*	1.086*	1.586**	1.391*	2.122***	0.550	0.712	0.702

Notes: This table presents the analysis by alternative deep determinants — French Legal Origin (LO), three measures for cultural clusters, and two for colonial experience. Odd (even) columns are for 'good' ('poor') deep determinants. See Table B-1 for all other details.

B.3 Main Analysis — Diagnostic tests

Table B-3: Diagnostic Tests — PCDID Capital Flow Analysis

Democracy Indicator		ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group		0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows										
Controls: none										
Geography	Alpha $t > 1.96$	0.17	0.50	0.33	0.17	0.67	0.50	0.00	0.00	30
Alternative Deep Det	Alpha $t > 1.96$	0.67	1.00	0.50	0.33	0.67	0.50	0.00	0.00	30
Controls: export/trade										
Geography	Alpha $t > 1.96$	0.17	0.17	0.33	0.00	0.50	0.50	0.17	0.00	30
Alternative Deep Det	Alpha $t > 1.96$	0.67	0.83	0.33	0.33	0.83	0.33	0.00	0.00	30
Geography	$\chi^2(p) < 0.1$	0.00	0.13	0.00	0.17	0.00	0.27	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.17	0.00	0.00	0.00	0.10	0.00	0.10	0.00	30
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha $t > 1.96$	0.17	0.67	0.33	0.00	0.67	0.17	0.33	0.00	30
Alternative Deep Det	Alpha $t > 1.96$	0.67	0.67	0.50	0.33	1.00	0.67	0.33	0.00	30
Geography	$\chi^2(p) < 0.1$	0.67	0.93	0.33	0.93	0.83	1.00	1.00	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.63	0.90	0.27	0.67	0.67	0.80	0.83	1.00	30
Panel B: FDI Inflows										
Controls: none										
Geography	Alpha $t > 1.96$	0.33	0.67	0.00	0.00	0.67	0.17	0.33	0.17	30
Alternative Deep Det	Alpha $t > 1.96$	0.50	0.33	0.33	0.00	0.50	0.00	0.17	0.00	30
Controls: export/trade										
Geography	Alpha $t > 1.96$	0.33	1.00	0.00	0.00	0.50	0.17	0.17	0.00	30
Alternative Deep Det	Alpha $t > 1.96$	0.67	0.33	0.33	0.00	0.83	0.00	0.17	0.00	30
Geography	$\chi^2(p) < 0.1$	0.07	0.13	0.00	0.17	0.00	0.17	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.20	0.07	0.03	0.00	0.03	0.00	0.00	0.00	30
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha $t > 1.96$	0.00	1.00	0.33	0.17	0.50	0.33	0.17	0.17	30
Alternative Deep Det	Alpha $t > 1.96$	0.50	0.33	0.50	0.17	0.83	0.17	0.50	0.00	30
Geography	$\chi^2(p) < 0.1$	0.30	0.83	0.37	1.00	1.00	0.80	1.00	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.43	0.67	0.23	0.77	0.73	1.00	0.83	1.00	30

Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures 3 and B-2 in the maintext). The 'Alpha' test is for weak parallel trends, so if the null hypothesis is rejected the PCDID specification may be misspecified: we want to see very low rejection rates, like for the 'Liberal Component'. The χ^2 test is for bad controls, so if the null hypothesis is rejected ($p < 0.1$) we should not include this (set of) control(s): again, we want to see very low rejection rates, like for the models with export/trade as additional control. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

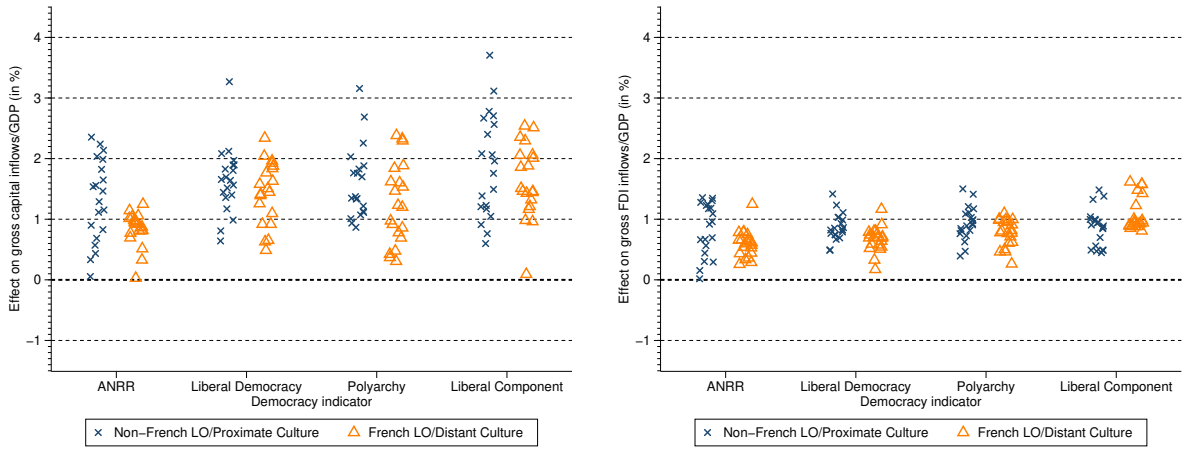
Table B-4: Statistical Significance — PCDID Capital Flow Analysis

Democracy Indicator	ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group	0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows									
Controls: none									
Geography	0.93	0.67	1.00	0.60	0.70	0.80	1.00	0.63	30
Alternative Deep Det	0.67	0.63	0.90	0.63	0.83	0.63	0.73	1.00	30
Controls: export/trade									
Geography	0.97	0.97	1.00	0.80	0.23	1.00	1.00	0.60	30
Alternative Deep Det	0.67	0.57	0.97	0.83	0.90	0.97	0.83	0.97	30
Controls: export/trade, GDP pc growth, population growth									
Geography	0.13	0.00	0.53	0.60	0.30	0.53	0.93	0.10	30
Alternative Deep Det	0.67	0.50	1.00	0.70	0.90	0.83	0.80	0.63	30
Panel B: FDI Inflows									
Controls: none									
Geography	0.93	0.97	0.90	0.73	0.83	1.00	0.83	0.77	30
Alternative Deep Det	0.67	0.63	0.90	0.63	0.83	0.63	0.73	1.00	30
Controls: export/trade									
Geography	1.00	0.97	0.97	1.00	0.87	1.00	0.93	1.00	30
Alternative Deep Det	0.67	0.57	0.97	0.83	0.90	0.97	0.83	0.97	30
Controls: export/trade, GDP pc growth, population growth									
Geography	0.90	0.53	1.00	0.87	0.93	1.00	0.97	0.83	30
Alternative Deep Det	0.67	0.50	1.00	0.70	0.90	0.83	0.80	0.63	30

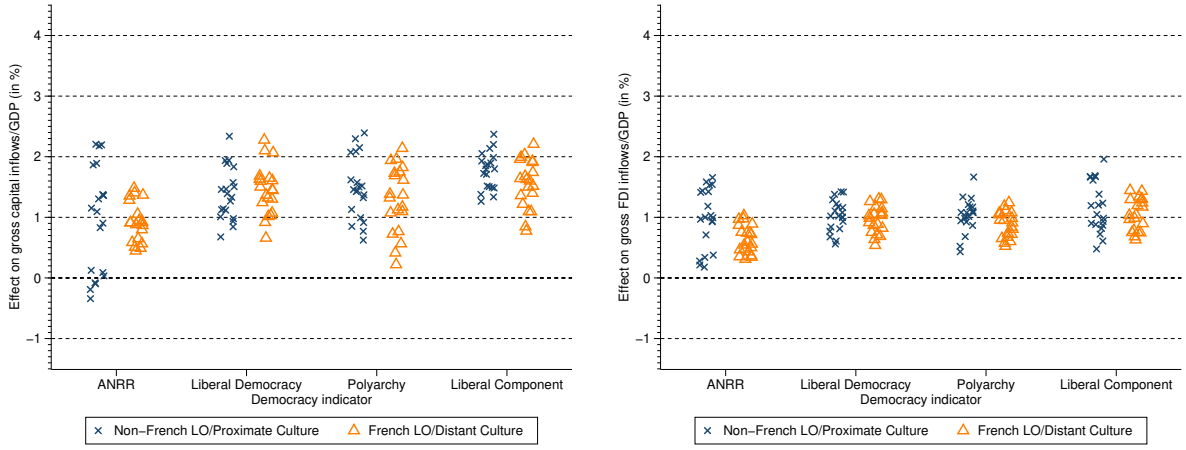
Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures 3 and B-2 in the maintext). These are for the t-tests (10% level) of the robust mean PCDID estimates (computed using the non-parametric variance estimator of Pesaran, 2006): if we see very high rejection rates this equates to statistical significance of the ATET presented in aforementioned figures. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

B.4 Splitting alternative determinants (separate for colonial experience)

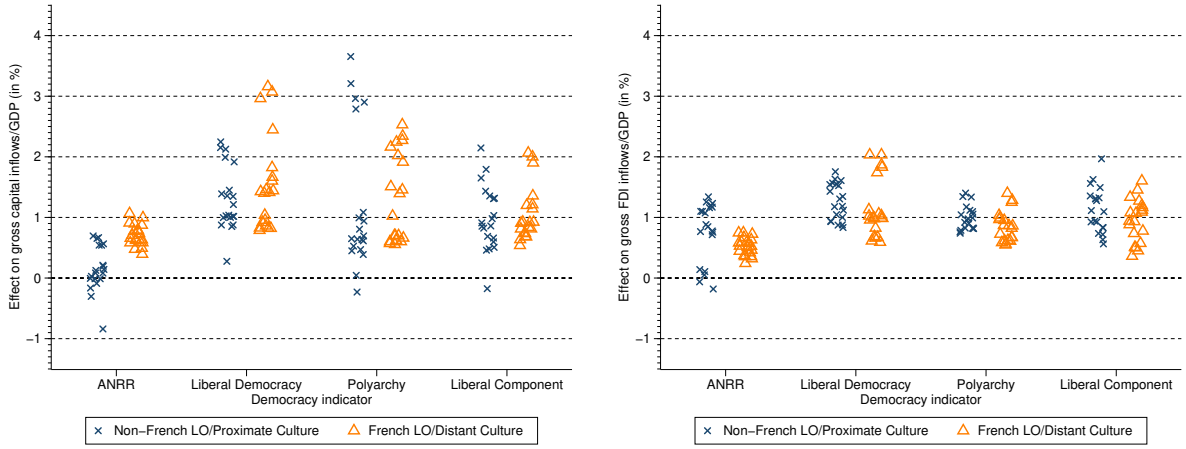
Figure B-2: Democracy, Culture/Legal Origin and Capital Inflows



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



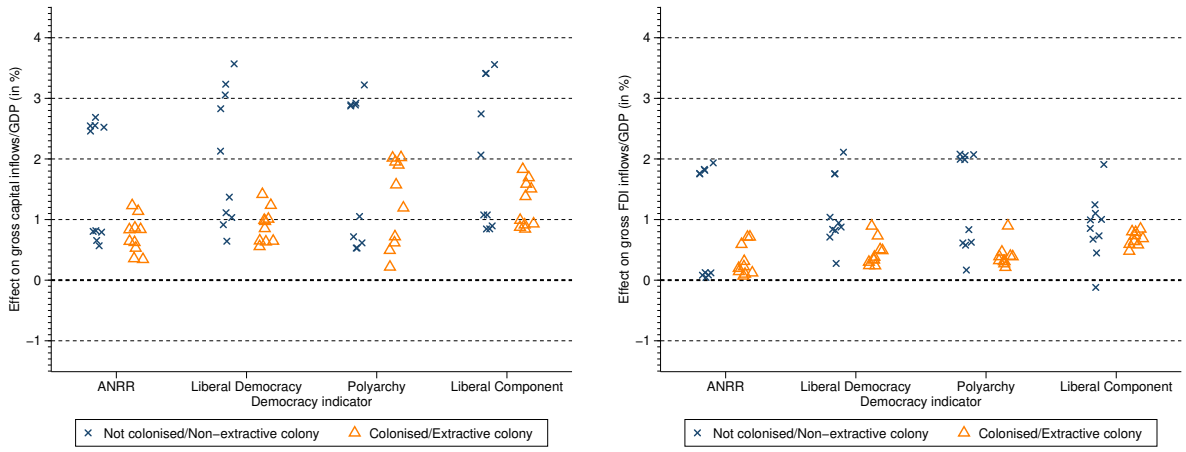
(b) Dto – exports/trade as additional control (not a bad control)



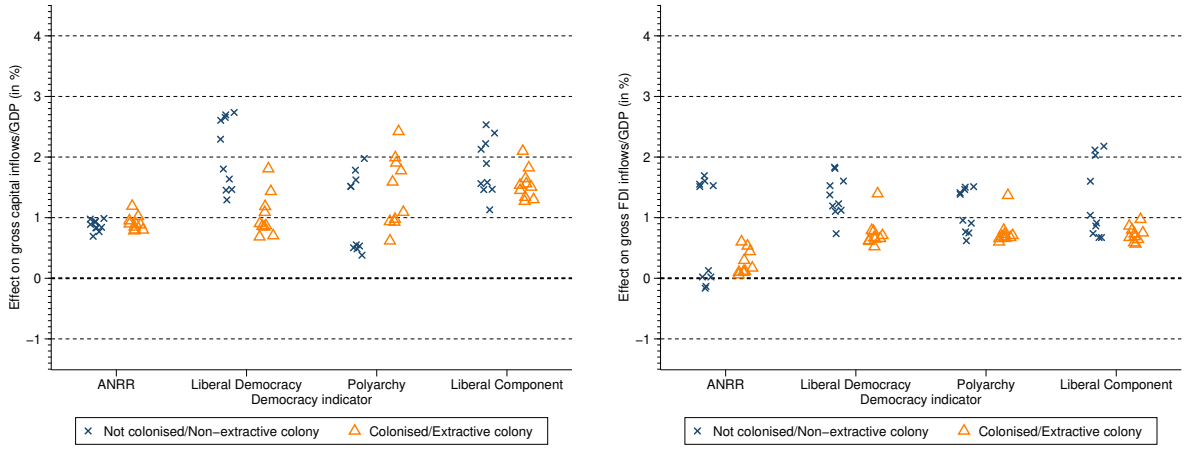
(c) Dto – exports/trade, pop growth and GDPpc growth as controls (bad controls)

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by Legal Origin and Culture (x for non-French LO/proximate culture and △ for French LO/distant culture), using four different definitions of democratic regime change. See Figure 3 for additional details.

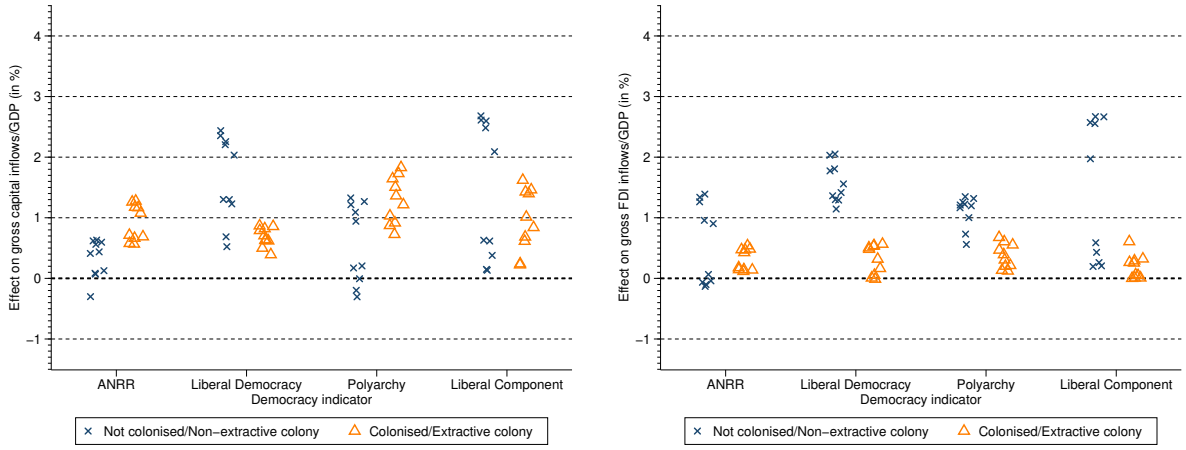
Figure B-3: Democracy, Colonialism and Capital Inflows



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



(b) Dto – exports/trade as additional control (not a bad control)



(c) Dto – exports/trade, pop growth and GDPpc growth as controls (bad controls)

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by Colonial History (x for no colonial history or non-extractive colonialism and △ for colonial history or extractive colonialism), using four different definitions of democratic regime change. See Figure 3 for additional details.

B.5 Analysis using per capita capital flow definition

Table B-5: Diagnostic Tests — PCDID Capital Flow (per capita) Analysis

Democracy Indicator		ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group		0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows										
Controls: none										
Geography	Alpha t $>$ 1.96	0.33	0.67	0.33	0.83	0.50	1.00	0.00	0.00	30
Alternative Deep Det	Alpha t $>$ 1.96	0.25	1.00	0.75	0.50	0.75	0.75	0.50	0.00	20
Controls: export/trade										
Geography	Alpha t $>$ 1.96	0.33	0.67	0.33	1.00	0.50	1.00	0.00	0.00	30
Alternative Deep Det	Alpha t $>$ 1.96	0.50	1.00	0.75	0.50	0.75	0.75	0.25	0.00	20
Geography	$\chi^2(p) < 0.1$	0.07	0.13	0.00	0.07	0.00	0.13	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha t $>$ 1.96	0.33	1.00	0.33	1.00	0.50	1.00	0.00	0.17	30
Alternative Deep Det	Alpha t $>$ 1.96	0.50	1.00	0.50	0.75	0.75	0.75	0.00	0.00	20
Geography	$\chi^2(p) < 0.1$	0.60	1.00	0.53	0.90	0.80	0.93	1.00	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.70	0.95	0.90	0.40	0.90	0.55	1.00	0.75	20
Panel B: FDI Inflows										
Controls: none										
Geography	Alpha t $>$ 1.96	0.33	0.83	0.33	1.00	0.50	1.00	0.00	0.17	30
Alternative Deep Det	Alpha t $>$ 1.96	0.50	0.75	0.50	0.75	0.50	0.75	0.25	0.25	20
Controls: export/trade										
Geography	Alpha t $>$ 1.96	0.33	0.83	0.33	1.00	0.50	1.00	0.00	0.17	30
Alternative Deep Det	Alpha t $>$ 1.96	0.25	0.75	0.50	0.75	0.75	0.75	0.00	0.25	20
Geography	$\chi^2(p) < 0.1$	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.05	0.00	0.00	0.00	0.20	0.00	0.00	0.00	20
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha t $>$ 1.96	0.00	1.00	0.33	1.00	0.50	1.00	0.00	0.17	30
Alternative Deep Det	Alpha t $>$ 1.96	0.25	0.75	0.75	0.75	0.75	0.75	0.00	0.25	20
Geography	$\chi^2(p) < 0.1$	0.17	0.83	0.33	1.00	0.77	1.00	1.00	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.35	0.70	0.15	0.50	1.00	0.75	1.00	0.85	20

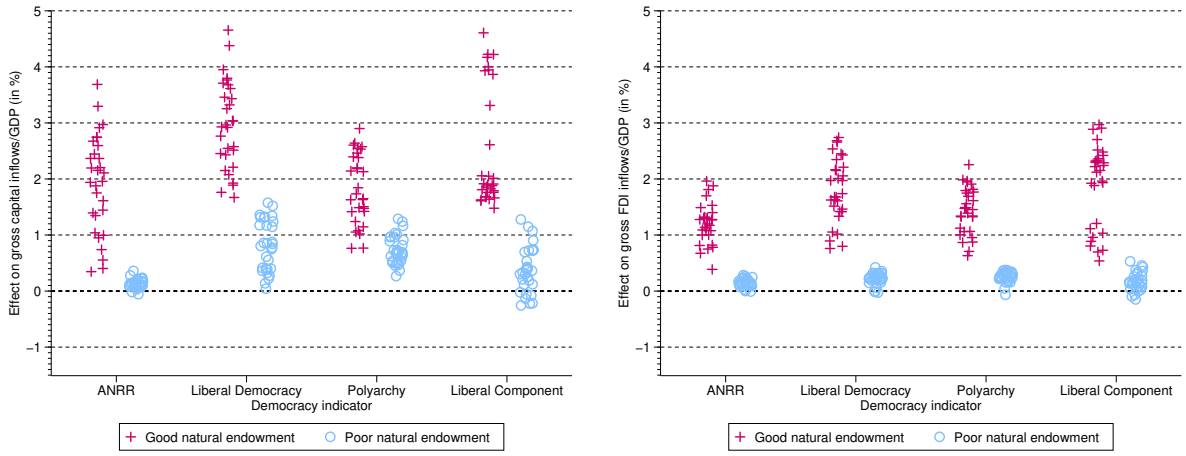
Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures B-4 and B-5 below). The 'Alpha' test is for weak parallel trends, so if the null hypothesis is rejected the PCDID specification may be misspecified: we want to see very low rejection rates, like for some specifications of the 'Liberal Component'. The χ^2 test is for bad controls, so if the null hypothesis is rejected ($p < .1$) we should not include this (set of) control(s): again, we want to see very low rejection rates, like for the models with export/trade as additional control. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

Table B-6: Statistical Significance — PCDID Capital Flow Analysis (per capita)

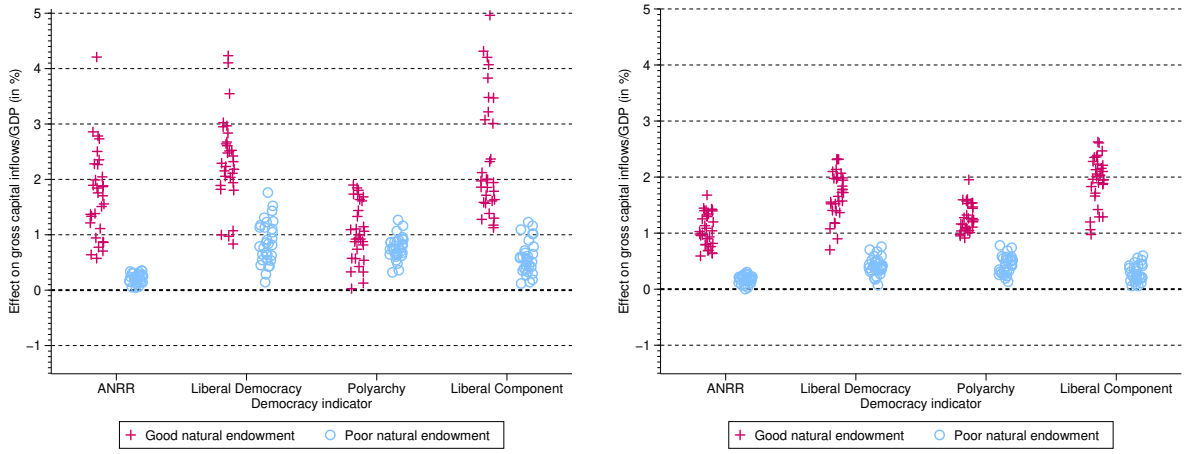
Democracy Indicator	ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group	0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows									
Controls: none									
Geography	0.83	0.27	1.00	0.83	0.90	1.00	1.00	0.70	30
Alternative Deep Det	0.45	0.20	1.00	0.95	0.85	0.85	0.70	0.95	20
Controls: export/trade									
Geography	0.73	1.00	0.87	0.90	0.13	1.00	0.87	0.80	30
Alternative Deep Det	0.65	0.85	0.85	0.90	0.40	0.80	0.85	1.00	20
Controls: export/trade, GDP pc growth, population growth									
Geography	0.00	0.07	0.70	0.80	0.47	0.50	0.70	0.87	30
Alternative Deep Det	0.00	0.25	0.65	0.80	0.20	0.60	0.90	0.65	20
Panel B: FDI Inflows									
Controls: none									
Geography	1.00	0.80	0.97	0.60	0.97	0.80	1.00	0.33	30
Alternative Deep Det	0.70	0.45	0.85	0.75	0.90	0.95	0.70	1.00	20
Controls: export/trade									
Geography	0.90	1.00	1.00	0.97	0.97	1.00	1.00	0.83	30
Alternative Deep Det	0.75	0.65	0.90	1.00	0.90	1.00	0.80	1.00	20
Controls: export/trade, GDP pc growth, population growth									
Geography	0.70	0.07	1.00	0.93	0.97	1.00	1.00	0.90	30
Alternative Deep Det	0.35	0.25	1.00	0.70	0.95	0.60	0.90	0.90	20

Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures B-4 and B-5 below). These are for the t-tests (10% level) of the robust mean PCDID estimates (computed using the non-parametric variance estimator of Pesaran, 2006): if we see very high rejection rates this equates to statistical significance of the ATET presented in the aforementioned figures. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

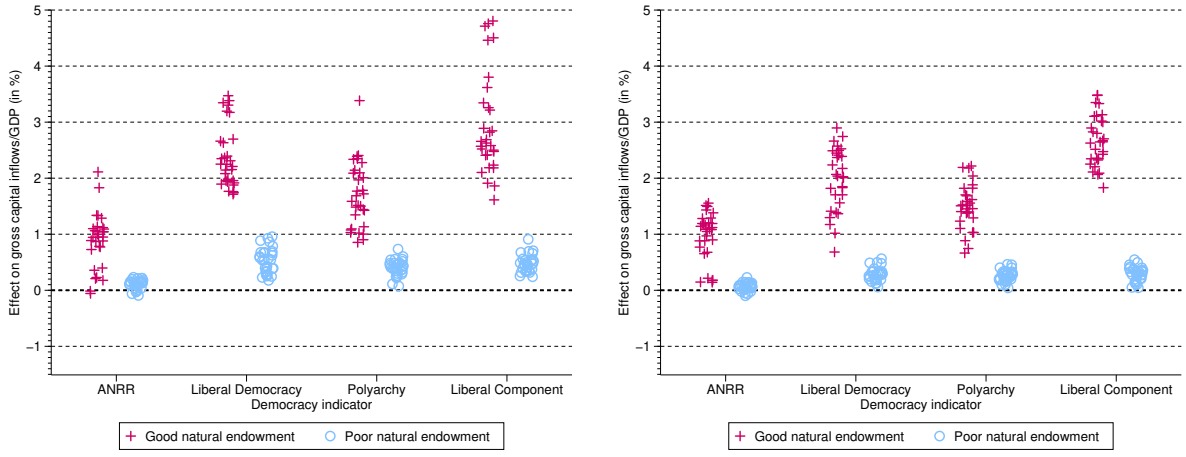
Figure B-4: Democracy, Geography and Capital Inflows (per capita definition)



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



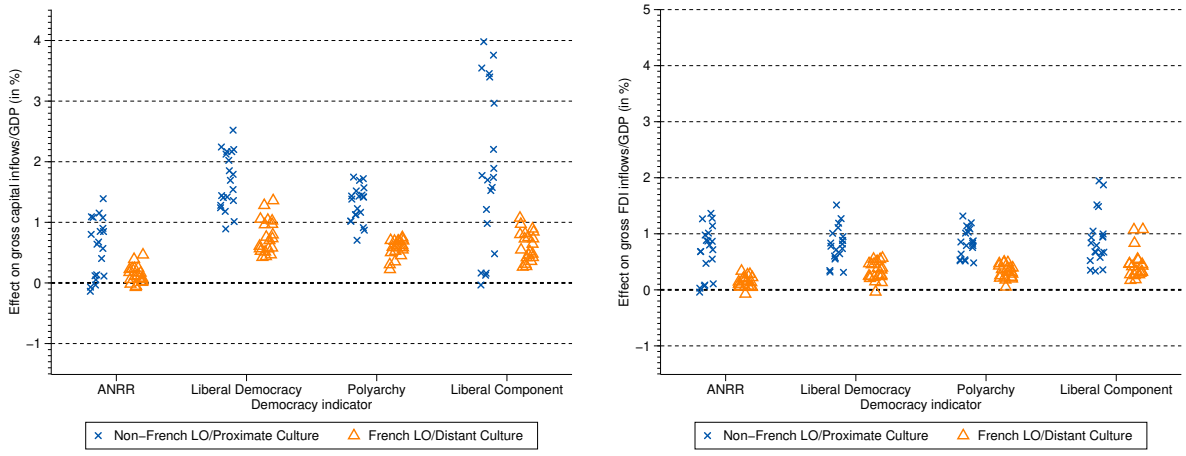
(b) Dto – trade/GDP as additional control



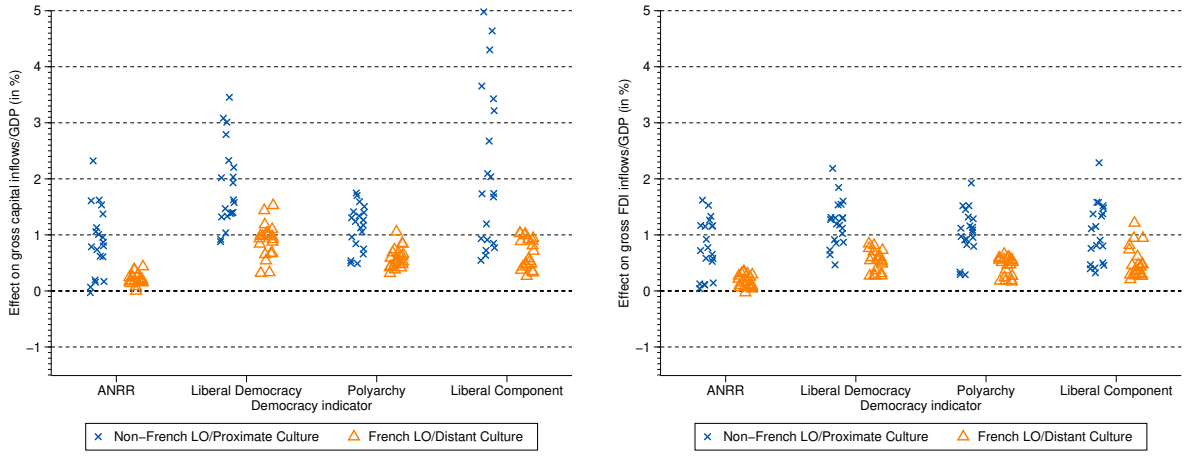
(c) Dto – trade/GDP, pop growth and GDPpc growth as controls

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by geography (+ and o for good and poor geography, respectively), using four different definitions of democratic regime change. These are the results using per capita capital inflows as dependent variable. See Figure 3 in the maintext for all other details.

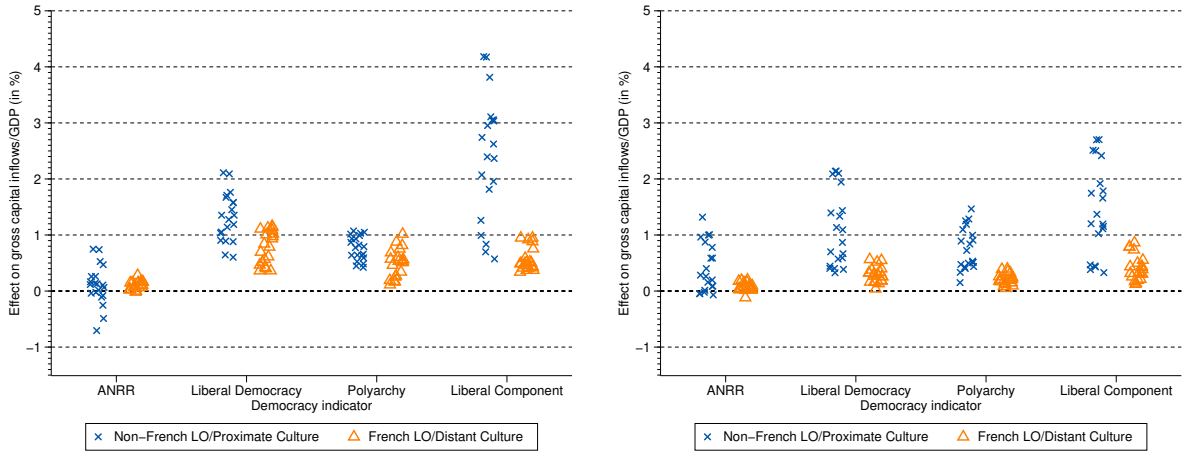
Figure B-5: Democracy, Alternative Deep Determinants and Capital Inflows (per capita definition)



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



(b) Dto – trade/GDP as additional control



(c) Dto – trade/GDP, pop growth and GDPpc growth as controls

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by Legal Origin and Culture (x for non-French LO/proximate culture and △ for French LO/distant culture), using four different definitions of democratic regime change. These are the results using per capita definitions of capital flow measures. See Figure B-2 in the maintext for all other details.

B.6 Capital flow analysis using WDI data and reduced sample size

Table B-7: Diagnostic Tests — PCDID Capital Flow (WDI data) Analysis

Democracy Indicator		ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group		0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows										
Controls: none										
Geography	Alpha t $>$ 1.96	0.67	0.33	0.50	0.50	0.83	0.00	0.50	0.50	30
Alternative Deep Det	Alpha t $>$ 1.96	0.50	0.50	0.83	0.00	0.50	0.50	0.83	1.00	20
Controls: export/trade										
Geography	Alpha t $>$ 1.96	1.00	1.00	0.50	0.67	0.33	0.00	0.50	0.83	30
Alternative Deep Det	Alpha t $>$ 1.96	0.50	0.67	0.33	0.00	0.50	0.83	0.67	0.33	20
Geography	$\chi^2(p) < 0.1$	0.00	0.13	0.00	0.17	0.00	0.27	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha t $>$ 1.96	1.00	0.83	0.67	1.00	0.33	0.83	0.67	1.00	30
Alternative Deep Det	Alpha t $>$ 1.96	0.67	1.00	0.33	0.83	0.67	1.00	1.00	1.00	20
Geography	$\chi^2(p) < 0.1$	0.67	0.93	0.33	0.93	1.00	1.00	0.83	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.70	1.00	0.40	0.50	0.75	0.85	1.00	1.00	20
Panel B: FDI Inflows										
Controls: none										
Geography	Alpha t $>$ 1.96	0.83	0.33	0.33	0.17	0.67	0.50	0.67	0.33	30
Alternative Deep Det	Alpha t $>$ 1.96	0.33	0.17	0.67	0.33	0.50	0.25	0.67	0.50	20
Controls: export/trade										
Geography	Alpha t $>$ 1.96	1.00	0.33	0.17	0.00	0.83	0.50	0.33	0.17	30
Alternative Deep Det	Alpha t $>$ 1.96	0.17	0.00	0.33	0.17	0.83	0.33	0.83	0.50	20
Geography	$\chi^2(p) < 0.1$	0.07	0.13	0.00	0.17	0.00	0.17	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	20
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha t $>$ 1.96	1.00	0.50	0.67	0.33	0.83	0.83	0.83	0.33	30
Alternative Deep Det	Alpha t $>$ 1.96	0.67	0.33	0.83	0.33	1.00	0.33	0.83	0.83	20
Geography	$\chi^2(p) < 0.1$	0.30	0.83	0.37	1.00	0.80	1.00	1.00	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.45	0.75	0.35	0.65	0.85	1.00	1.00	1.00	20

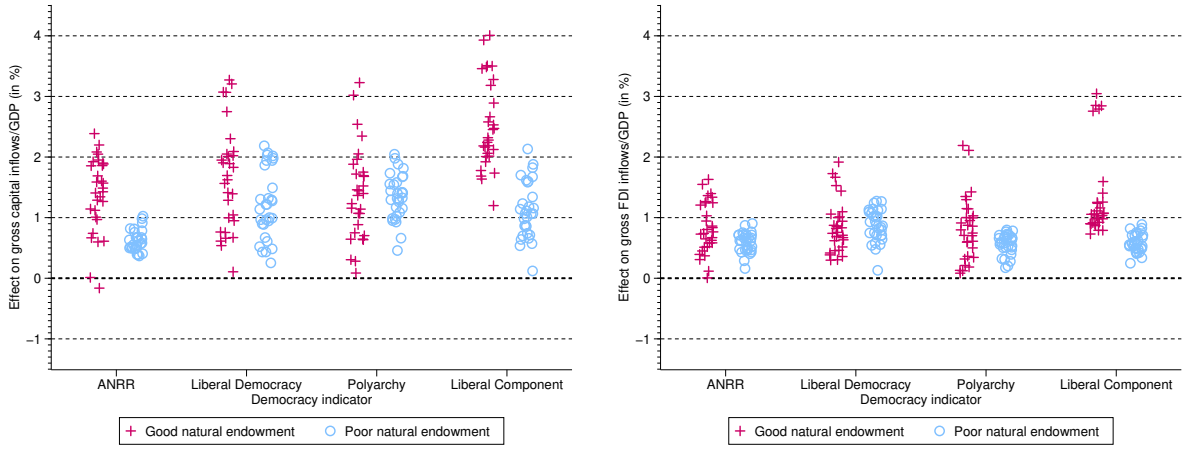
Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures B-6 and B-7 below). The 'Alpha' test is for weak parallel trends, so if the null hypothesis is rejected the PCDID specification may be misspecified: we want to see very low rejection rates, like for some specifications of the 'Liberal Component'. The χ^2 test is for bad controls, so if the null hypothesis is rejected ($p < .1$) we should not include this (set of) control(s): again, we want to see very low rejection rates, like for the models with export/trade as additional control. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

Table B-8: Statistical Significance — PCDID Capital Flow Analysis (WDI data)

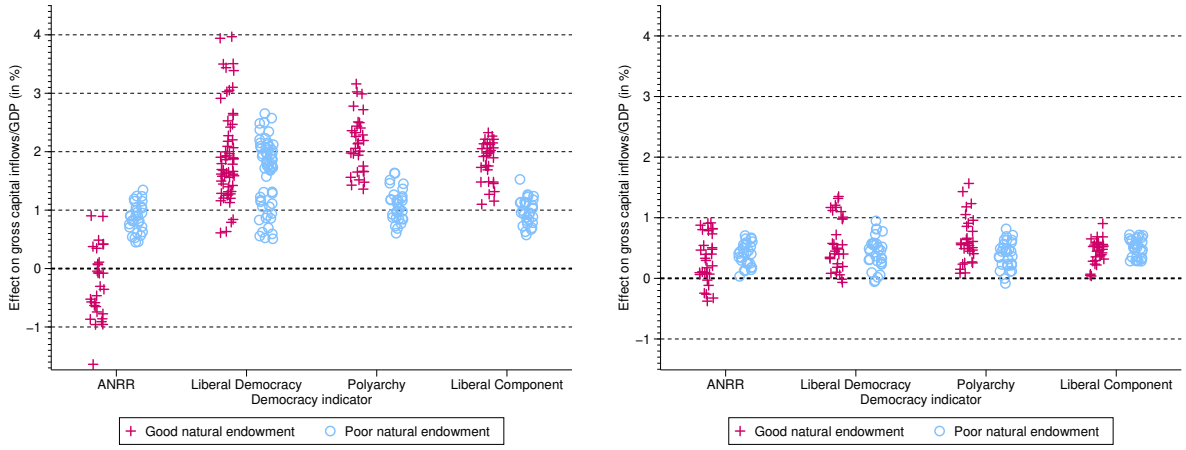
Democracy Indicator	ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group	0	1	0	1	0	1	0	1	
Panel A: Total Non-Official Capital Inflows									
Controls: none									
Geography	0.33	0.33	0.57	0.43	0.40	0.93	0.93	0.73	30
Alternative Deep Det	0.20	0.35	0.75	0.60	0.75	0.40	0.75	0.95	20
Controls: export/trade									
Geography	0.00	0.77	0.57	0.73	0.87	0.83	0.73	0.80	30
Alternative Deep Det	0.00	0.65	0.75	0.65	0.45	0.75	0.70	0.95	20
Controls: export/trade, GDP pc growth, population growth									
Geography	0.00	0.07	0.30	0.10	0.80	0.00	0.17	0.00	30
Alternative Deep Det	0.00	0.05	0.45	0.05	0.50	0.05	0.20	0.05	20
Panel B: FDI Inflows									
Controls: none									
Geography	0.60	0.97	0.57	0.83	0.40	0.63	0.80	0.83	30
Alternative Deep Det	0.50	0.90	0.45	0.50	0.35	0.55	0.30	0.85	20
Controls: export/trade									
Geography	0.10	0.70	0.30	0.13	0.23	0.27	0.03	0.70	30
Alternative Deep Det	0.15	0.90	0.15	0.45	0.00	0.20	0.25	0.60	20
Controls: export/trade, GDP pc growth, population growth									
Geography	0.00	0.13	0.43	0.20	0.33	0.00	0.03	0.00	30
Alternative Deep Det	0.05	0.15	0.60	0.25	0.00	0.00	0.15	0.10	20

Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell (and presented in Figures B-6 and B-7 below). These are for the t-tests (10% level) of the robust mean PCDID estimates (computed using the non-parametric variance estimator of Pesaran, 2006): if we see very high rejection rates this equates to statistical significance of the ATET presented in the aforementioned figures. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively. These 20 or 30 models are represented in each estimate 'cloud' of the aforementioned figures.

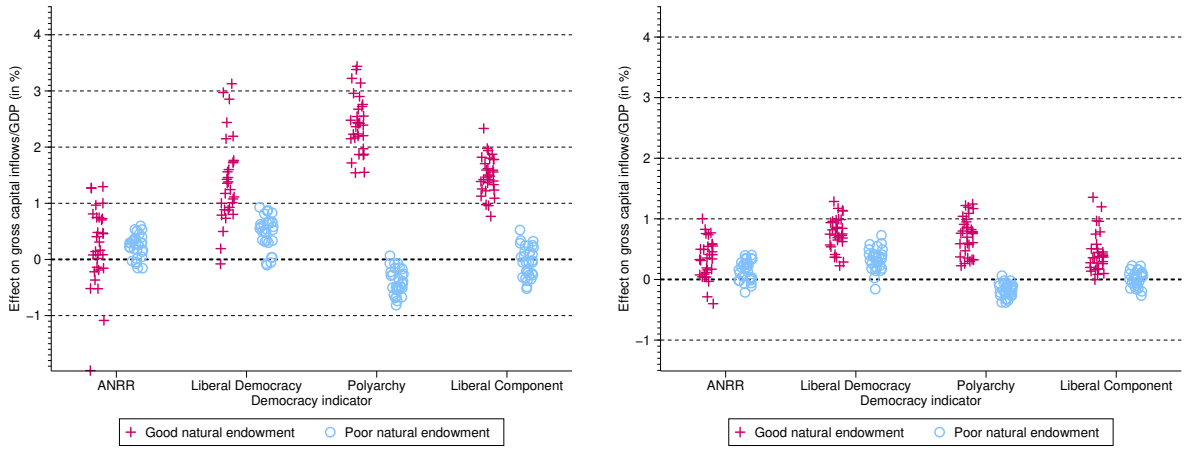
Figure B-6: Democracy, Geography and Capital Inflows (WDI)



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



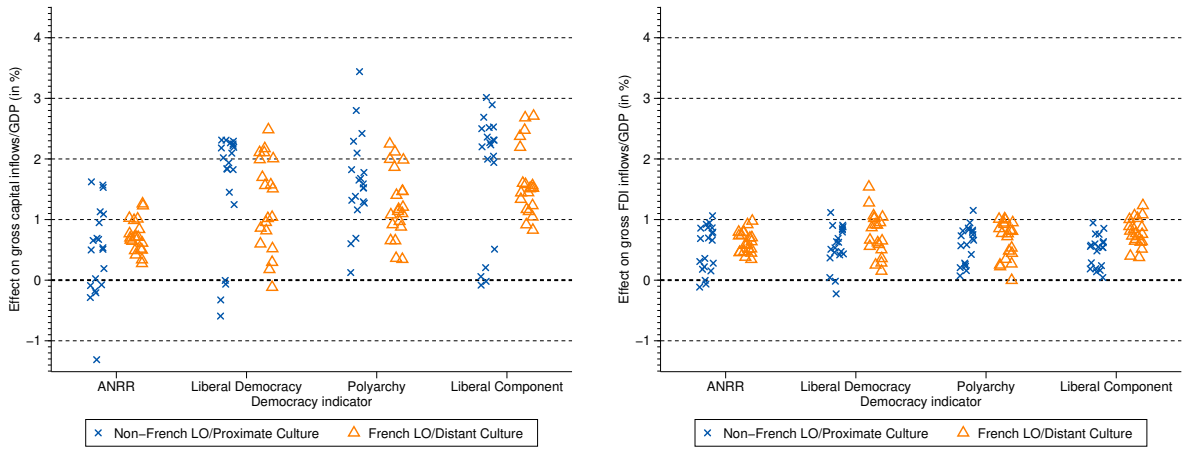
(b) Dto – trade/GDP as additional control



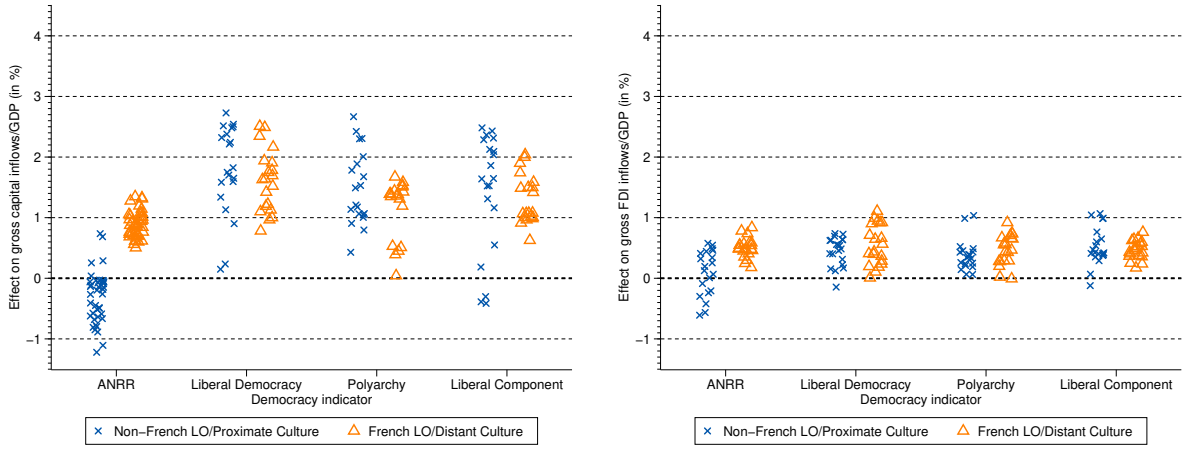
(c) Dto – trade/GDP, pop growth and GDPpc growth as controls

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by geography (+ and o for good and poor geography, respectively), using four different definitions of democratic regime change. These are the results using WDI data/coverage, which reduces the overall sample (treated, controls, discarded 'always' democracies) by approximately 15 percent, and the treated sample by around 30 percent. See Figure 3 in the maintext for all other details.

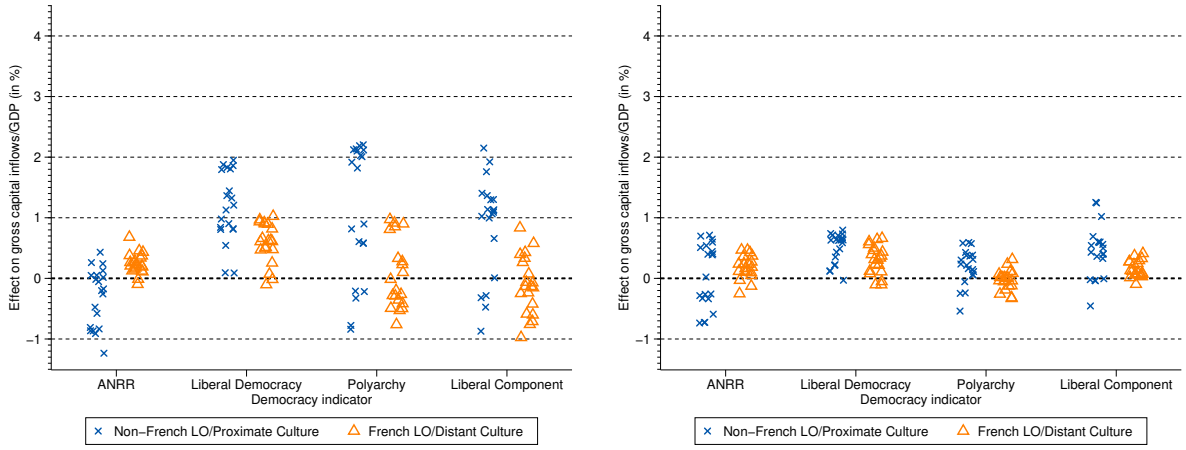
Figure B-7: Democracy, Alternative Deep Determinants and Capital Inflows (WDI)



(a) Total Non-Official Capital Inflows (left) and Total FDI Inflows (right) – no controls



(b) Dto – trade/GDP as additional control

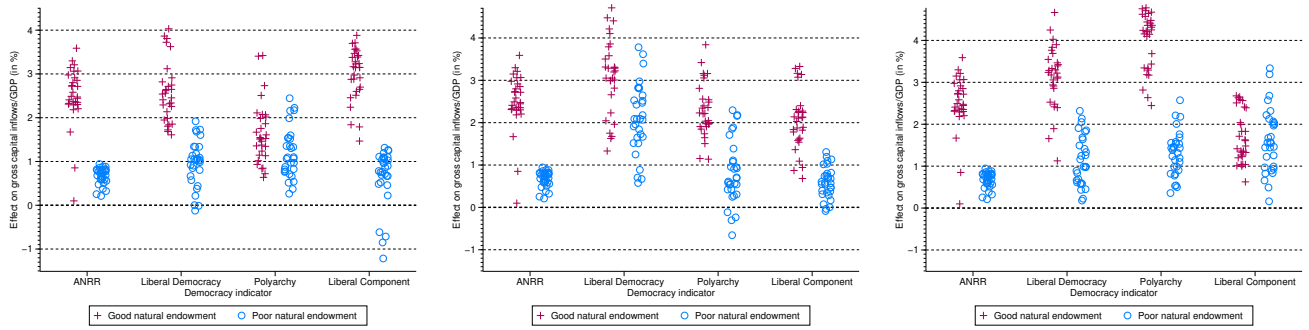


(c) Dto – trade/GDP, pop growth and GDPpc growth as controls

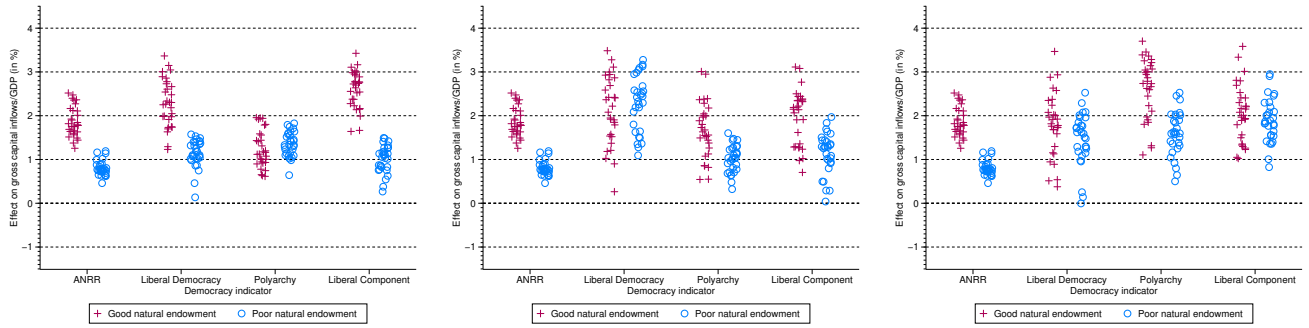
Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by Legal Origin and Culture (x for non-French LO/proximate culture and △ for French LO/distant culture), using four different definitions of democratic regime change. These are the results using WDI data/coverage, which reduces the overall sample (treated, controls, discarded 'always' democracies) by approximately 15 percent, and the treated sample by around 30 percent. See Figure B-2 in the maintext for all other details.

B.7 Capital flow analysis using tighter democracy thresholds (V-Dem data)

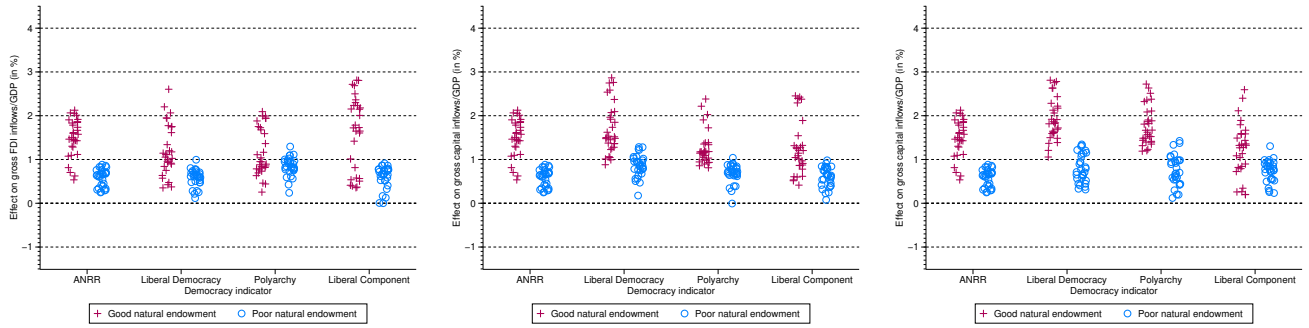
Figure B-8: Democracy, Geography and Total Capital Inflows (a,b) or FDI (c,d)



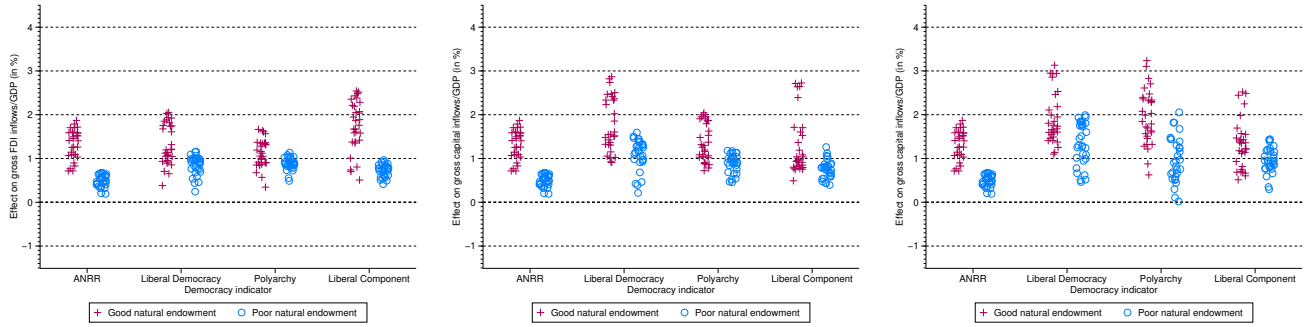
(a) Total Inflows: Benchmark (left), Democracy mean+$1/4$ SD (middle), and mean+$1/2$ SD – no controls



(b) Dto – exports/trade as control



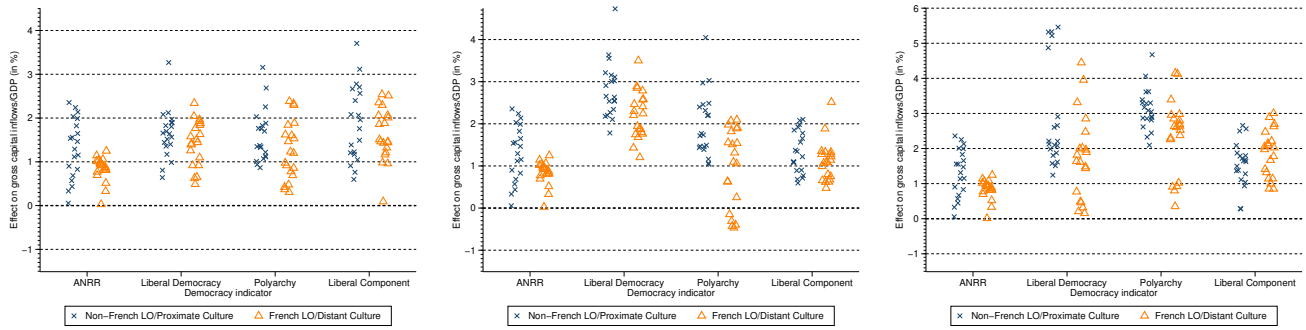
(c) FDI: Benchmark (left), Democracy mean+$1/4$ SD (middle), and mean+$1/2$ SD – no controls



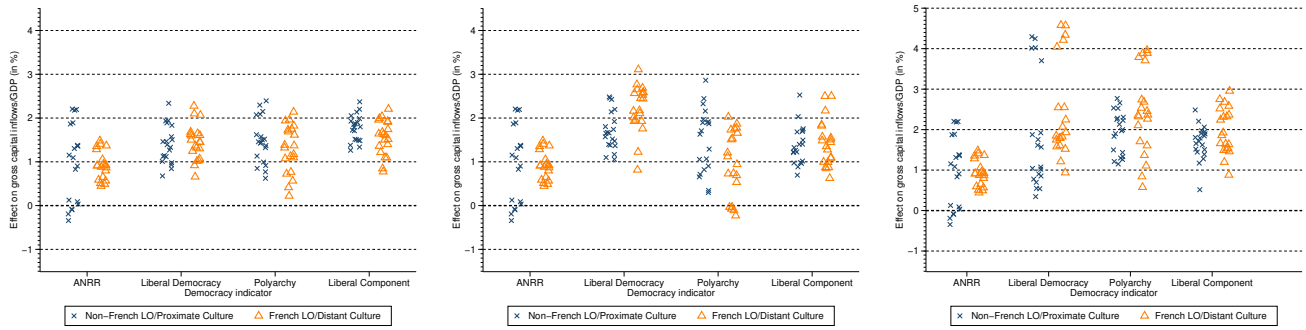
(d) Dto – exports/trade as control

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by geography (+ and o for good and poor geography, respectively), using four different definitions of democratic regime change. Compared with the benchmark results in Figure 3 in the maintext – replicated in the left plot of each panel – we use tighter definitions for the V-Dem democracy dummies: in the middle (right) plot the threshold is defined as the mean plus $1/4$ ($1/2$) of 1 SD. Panels (a) and (b) are for total inflows/GDP, without controls and with export/trade as controls; similarly for Panels (c) and (d), which are for FDI/GDP. Alpha tests are passed in 90+% of specifications with adjusted democracy definition, in 95+% of specifications in panels (b) and (d) exports/trade is not a 'bad control'.

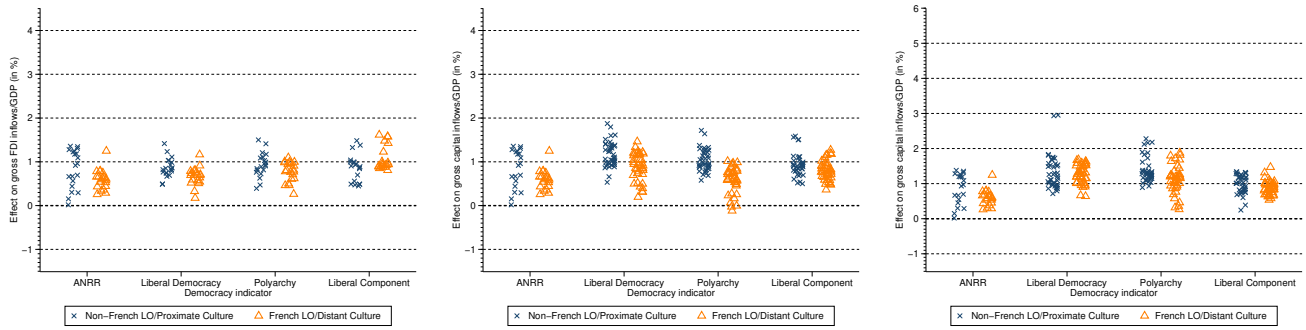
Figure B-9: Democracy, Alternative Deep Determinants and Total Capital Inflows (a,b) or FDI (c,d)



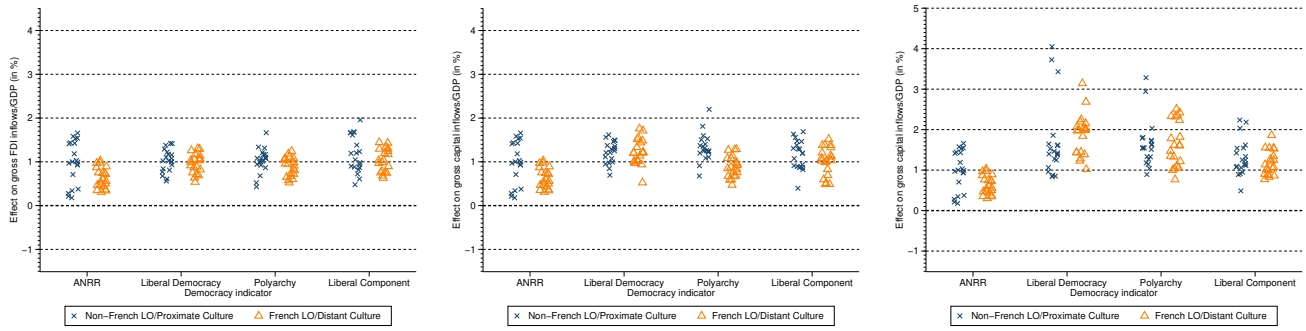
(a) Total Inflows: Benchmark (left), Democracy mean$+1/4$ SD (middle), and mean$+1/2$ SD – no controls



(b) Dto – exports/trade as control



(c) FDI: Benchmark (left), Democracy mean$+1/4$ SD (middle), and mean$+1/2$ SD – no controls

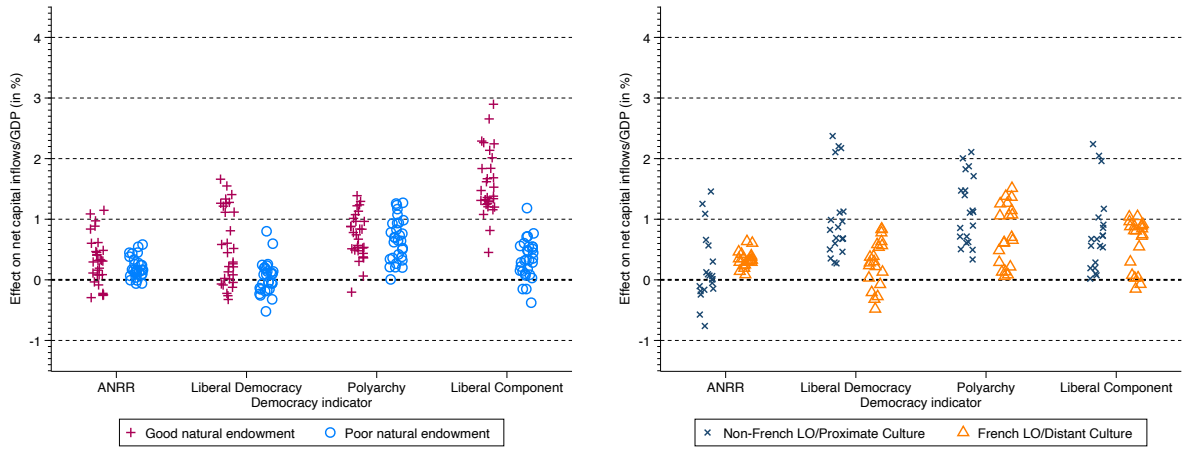


(d) Dto – exports/trade as control

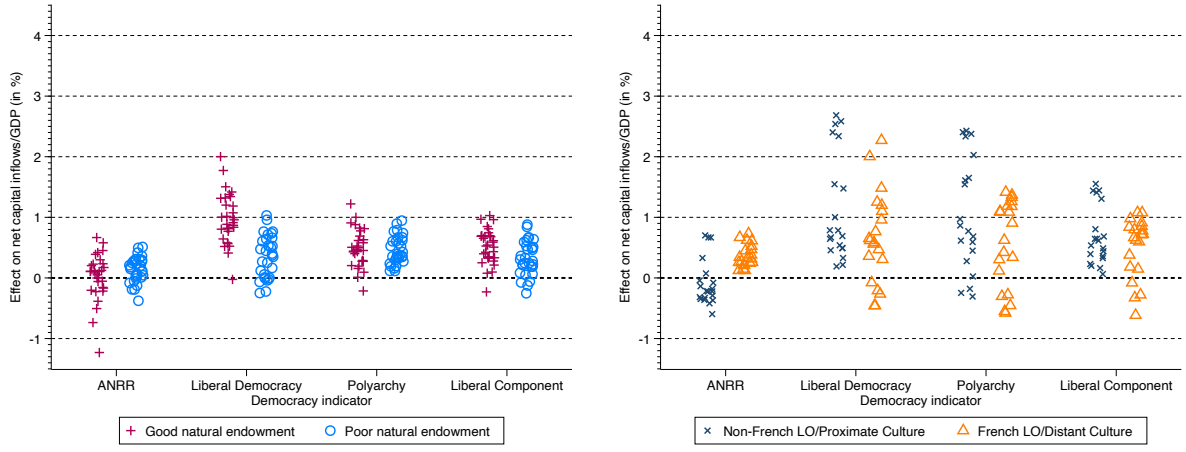
Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on capital inflows by Legal Origin and Culture (x for non-French LO/proximate culture and $\triangle$ for French LO/distant culture), using four different definitions of democratic regime change. See Figure B-8 for all other details.

B.8 Capital flow analysis using net (non-official) capital inflows

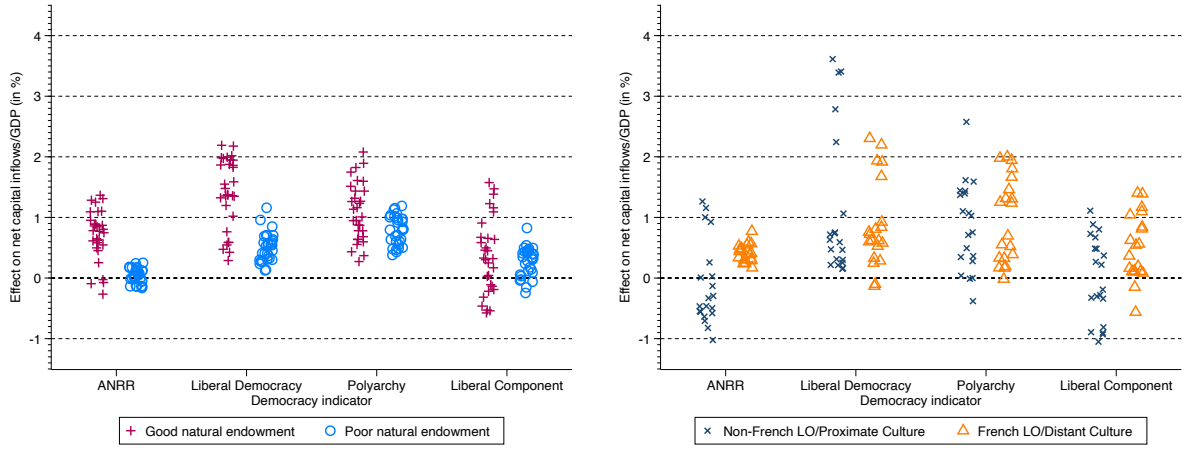
Figure B-10: Democracy and Net (Non-Official) Capital Inflows



(a) Geography (left) and alternative deep determinants (right) – no controls



(b) Dto – trade/GDP as additional control



(c) Dto – trade/GDP, pop growth and GDPpc growth as controls

Notes: The plots present robust ATET (Mean Group PCDID) estimates for the causal effect of democracy on net non-official capital inflows by geography (left column) and alternative deep determinants (right column).

Table B-9: Diagnostic Tests — Net (Non-official) capital flows

Democracy Indicator		ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group		0	1	0	1	0	1	0	1	
Net Non-Official Capital Inflows										
Controls: none										
Geography	Alpha t $>$ 1.96	0.83	1.00	1.00	0.33	1.00	0.00	1.00	0.67	30
Alternative Deep Det	Alpha t $>$ 1.96	1.00	1.00	0.50	0.50	0.75	0.25	0.75	1.00	20
Controls: export/trade										
Geography	Alpha t $>$ 1.96	1.00	1.00	1.00	0.17	0.83	0.33	1.00	0.33	30
Alternative Deep Det	Alpha t $>$ 1.96	1.00	0.75	0.75	0.25	0.50	0.00	1.00	0.75	20
Geography	$\chi^2(p) < 0.1$	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	20
Controls: export/trade, GDP pc growth, population growth										
Geography	Alpha t $>$ 1.96	1.00	1.00	1.00	0.67	1.00	0.50	1.00	1.00	30
Alternative Deep Det	Alpha t $>$ 1.96	1.00	0.75	1.00	0.75	1.00	0.50	0.75	1.00	20
Geography	$\chi^2(p) < 0.1$	0.47	0.73	0.17	1.00	1.00	1.00	0.80	1.00	30
Alternative Deep Det	$\chi^2(p) < 0.1$	0.45	0.85	0.50	0.60	1.00	1.00	0.95	1.00	20

Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell. The 'Alpha' test is for weak parallel trends, so if the null hypothesis is rejected the PCDID specification may be misspecified: we want to see *very low* rejection rates. The χ^2 test is for bad controls, so if the null hypothesis is rejected ($p < .1$) we should not include this (set of) control(s): again, we want to see *very low* rejection rates,. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively.

Table B-10: Statistical Significance — PCDID Net Capital Flow Analysis

Democracy Indicator	ANRR		LibDem		Poly		Liberal		N
Deep Determinant Group	0	1	0	1	0	1	0	1	
Net (Non-Official) Capital Inflows									
Controls: none									
Geography	0.00	0.00	0.00	0.00	0.50	0.00	0.03	0.13	30
Alternative Deep Det	0.05	0.00	0.20	0.00	0.20	0.00	0.25	0.25	20
Controls: export/trade									
Geography	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	30
Alternative Deep Det	0.00	0.00	0.25	0.10	0.25	0.10	0.25	0.15	20
Controls: export/trade, GDP pc growth, population growth									
Geography	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.13	30
Alternative Deep Det	0.05	0.00	0.20	0.25	0.00	0.15	0.05	0.40	20

Notes: The table reports the rejection frequency across the 20 or 30 models analysed for each cell. These are for the t-tests (10% level) of the robust mean PCDID estimates (computed using the non-parametric variance estimator of Pesaran, 2006): if we see *very high* rejection rates this equates to statistical significance of the ATET. There are five alternative factor augmentations and four (alternative deep determinants) or six (geography) proxies for deep determinants, hence 20 or 30 models for each of the two deep determinant groups, respectively.

B.9 Capital flow analysis using alternative geography proxies

Table B-11: Total Capital Inflows – Alternative Proxies of Geography (1975-2015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Landlocked		**High UV Radiation**		**Few Frost Days**		**Low Ag-Suitability**	
	No	Yes	No	Yes	No	Yes	No	Yes
ANRR democracy	1.286***	0.129	1.465*	0.597*	1.915*	0.589*	1.022**	0.461
	[0.390]	[0.700]	[0.799]	[0.339]	[1.039]	[0.333]	[0.465]	[0.495]
Treated Countries	50	18	23	42	21	44	37	28
Treated Observations	1564	500	654	1329	582	1401	1140	843
Control Countries	22	7	15	14	15	14	8	21
Control Observations	663	128	380	397	390	387	177	600
χ^2 test (p)	0.78	0.02	0.45	0.30	0.61	0.65	0.78	0.73
Alpha test (t)	-0.06	-7.23	-0.66	-2.04	-0.50	-3.07	-1.42	-2.20
Alternative factor augmentation								
2 factors	1.262***	-0.012	1.228*	0.573	1.715*	0.620*	1.135**	0.649
3 factors	1.324***	0.063	1.568**	0.631*	1.803**	0.617*	1.021**	0.521
4 factors	1.286***	0.129	1.465*	0.597*	1.915*	0.589*	1.022**	0.461
5 factors	1.112***	0.186	1.909**	0.291	1.984**	0.599	0.683	0.500
6 factors	1.137***	0.186	1.967**	0.441	1.735*	0.704**	0.531	0.664
Liberal Democracy	1.617***	0.848	2.321***	0.794	2.786***	0.827	1.418***	1.693**
Index > median	[0.490]	[0.913]	[0.860]	[0.569]	[1.078]	[0.631]	[0.495]	[0.673]
Treated Countries	37	13	21	27	21	27	32	16
Treated Observations	1380	428	704	1015	678	1041	1117	602
Control Countries	42	14	19	33	18	34	19	33
Control Observations	1405	346	547	1086	517	1116	574	1059
χ^2 test (p)	0.62	0.06	0.97	0.15	0.81	0.40	0.63	0.53
Alpha test (t)	-1.17	-1.32	0.73	0.51	0.34	0.54	0.52	0.52
Alternative factor augmentation								
2 factors	1.853***	1.368**	1.667*	1.093**	1.633*	1.023**	1.497***	2.063***
3 factors	1.714***	0.938	1.510*	0.603	2.372**	0.878*	1.424***	1.679***
4 factors	1.617***	0.848	2.321***	0.794	2.786***	0.827	1.418***	1.693**
5 factors	1.712***	0.910	2.499***	0.848	3.167***	0.734	1.270***	1.850***
6 factors	1.624***	1.130	2.394**	0.500	2.678**	0.715	1.181***	1.519***
Polyarchy	1.891***	0.126	0.276	1.064**	1.684	1.063**	0.903*	1.610***
Index > median	[0.433]	[0.762]	[0.732]	[0.414]	[1.052]	[0.463]	[0.516]	[0.605]
Treated Countries	45	14	24	32	23	33	36	20
Treated Observations	1665	451	800	1209	734	1275	1256	753
Control Countries	34	13	15	28	15	28	14	29
Control Observations	1120	323	433	892	443	882	417	908
χ^2 test (p)	0.38	0.32	1.00	0.14	0.88	0.22	0.45	0.79
Alpha test (t)	-3.12	-1.91	-0.94	0.39	-1.04	0.23	-0.73	-1.62
Alternative factor augmentation								
2 factors	1.858***	0.922	0.716	1.471***	1.063	1.361***	1.018*	1.685**
3 factors	1.541***	0.704	0.942	1.243***	1.446	1.071**	0.881*	1.577**
4 factors	1.891***	0.126	0.276	1.064**	1.684	1.063**	0.903*	1.610***
5 factors	1.830***	0.232	0.574	1.079**	1.513	0.700*	0.939*	1.846***
6 factors	1.743***	0.279	0.976	1.143***	1.601	0.672*	0.954	1.384**
Liberal Component	1.815***	0.574	2.375***	0.816	2.750***	0.881*	1.102*	2.004***
Index > median	[0.669]	[0.907]	[0.872]	[0.531]	[0.925]	[0.534]	[0.668]	[0.567]
Treated Countries	43	13	24	30	22	32	30	24
Treated Observations	1606	449	820	1138	745	1221	1069	897
Control Countries	31	12	15	27	15	27	18	24
Control Observations	1000	287	401	867	412	856	544	724
χ^2 test (p)	0.61	0.01	0.33	0.83	0.41	0.84	0.48	0.92
Alpha test (t)	0.59	-2.81	0.02	0.67	-0.21	0.62	0.67	-0.86
Alternative factor augmentation								
2 factors	2.241***	1.221	2.172**	1.118**	2.456***	1.266**	1.551**	2.051***
3 factors	1.877***	0.676	2.550***	0.727	2.830***	0.93	1.192*	2.097***
4 factors	1.815***	0.574	2.375***	0.816	2.750***	0.881*	1.102*	2.004***
5 factors	1.803***	0.53	2.126**	0.803	2.640***	0.901	1.177*	2.273***
6 factors	1.726***	0.624	2.240**	0.014	2.843***	0.218	1.032*	1.522***

Notes: This table presents the analysis for a number of alternative proxies for geography — whether a country is landlocked, high UV radiation exposure, low number of frost days per year, and low suitability for agriculture. These results are for the model with export/trade as additional control.

C Deep Determinants within Geography Samples

Table C-1: Alternative Deep Determinants within Geography — Sample size

	LO	Culture					History						
N	French	Hofst	Dist UK	CL	LS	No Euro	Col	Extr	Early Col	Few Settl	Slaves	High Slav	Total
Countries with Good Geography													
2	0	0	0	0	0	10	0	20	45	15	0	0	90
3	0	0	5	0	0	10	15	25	20	25	0	0	100
4	0	0	20	5	0	25	15	0	15	25	0	0	105
5	0	0	25	0	5	15	15	25	10	15	0	0	110
6	0	0	35	5	30	25	20	5	0	20	0	0	140
7	0	5	25	30	25	25	20	0	0	5	0	0	135
8	0	50	0	30	30	5	10	0	0	0	0	0	125
9	0	35	5	20	15	5	5	0	0	0	0	0	85
10	5	30	5	20	15	0	0	0	0	0	0	0	75
11	17	0	0	10	0	0	0	0	0	0	0	0	27
12	15	0	0	0	0	0	0	0	0	0	0	0	15
13	23	0	0	0	0	0	0	0	0	0	0	0	23
14	30	0	0	0	0	0	0	0	0	0	0	0	30
15	16	0	0	0	0	0	0	0	0	0	0	0	16
16	14	0	0	0	0	0	0	0	0	0	0	0	14
Sum	120	120	120	120	120	120	100	75	90	105	0	0	1,090
Countries with Poor Geography													
6	0	0	0	0	0	0	0	5	0	0	0	0	5
7	0	0	0	0	0	0	0	0	5	0	0	0	5
8	0	0	0	0	0	0	0	15	0	0	0	30	45
9	0	0	0	0	0	0	0	5	5	0	0	0	10
10	0	0	0	0	0	5	0	30	20	5	30	0	90
11	0	0	0	0	0	0	0	0	5	0	0	35	40
12	0	0	0	0	0	10	0	15	25	10	0	25	85
13	0	0	0	0	0	10	5	5	20	10	30	0	80
14	0	0	0	5	0	5	0	0	10	15	5	0	40
15	0	0	0	5	5	15	10	0	0	5	25	0	65
16	5	20	0	15	0	15	5	0	0	15	0	0	75
17	0	30	0	10	15	5	10	0	0	15	0	0	85
18	10	10	0	10	10	15	5	0	0	5	0	5	70
19	0	0	0	10	10	5	10	0	0	0	0	25	60
20	20	10	5	15	15	5	15	0	0	0	0	0	85
21	10	20	10	10	20	0	5	0	0	5	0	0	80
22	20	15	10	5	10	0	5	0	0	10	0	0	75
23	25	10	5	5	0	0	0	0	0	5	0	0	50
24	0	5	10	0	5	0	5	0	0	0	0	0	25
25	0	0	25	0	0	0	0	0	0	5	16	0	46
26	0	0	15	0	0	10	0	0	0	0	14	0	39
27	0	0	10	0	0	10	0	0	0	0	0	0	20
28	0	0	0	1	0	0	0	0	0	0	0	0	1
29	5	0	0	4	1	5	0	0	0	0	0	0	15
30	10	0	0	10	4	5	10	0	0	0	0	0	39
31	0	0	1	15	10	0	10	0	0	0	0	0	36
32	0	0	4	0	0	0	1	0	0	0	0	0	5
33	5	0	5	0	15	0	4	0	0	0	0	0	29
34	10	0	0	0	0	0	0	0	0	0	0	0	10
35	0	0	20	0	0	0	0	0	0	0	0	0	20
Sum	120	120	120	120	120	120	100	75	90	105	120	120	1,330

Notes: This table presents the number of treated countries N (in rows) in the subsample analysis by Legal origin, culture, and history in Section 5. Cultural proxies: Hofst is the dummy for 'collectivist' countries, Dist UK the dummy for greater dissimilarity in blood type to the UK, CL is low common language and LS low language similarity. Historical proxies: Col indicates any colonial experience, Extr is for extractive colony, Early col is colonisation before 1860, Few Settl indicates that during the colonial period less than 1% of the population were foreigners from the colonial power.