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Structures of Globalization: Evidence from the World-Wide Network of Bilateral Investment Treaties (1959-2009)*

Abstract

15 Existing sociological theories of international relations yield contrasting predictions for their
16 structure that range from an increasingly dense and universally tied network to networks in
17 which ties tend to concentrate within or between certain types of economically, politically or
18 culturally defined blocs. We contribute to this growing body of empirical research by analyzing
19 original data on the complete world-wide network of bilateral investment treaties (BITs) as it has
20 evolved over the course of 50 years since its inception in 1959. We find that the number of BITs
21 increases almost exponentially over time to include nearly all of the world's countries. However,
22 the density of ties between advanced capitalist and others is stronger than for any other dyadic
23 types. We also find patterns of regional homophily, but only in Asia, East Asia, Postsocialist
24 Europe and Eurasia, and North Africa/Middle East. These findings suggest that existing
25 explanations of globalization are more complementary than contending. Theorizing about any
26 particular global outcome thus requires attention to the simultaneity of material and cultural
27 forces and the interplay of transnational and local socio-historical developments. Our analysis of
28 the structure of the BIT network also helps explain the weak link between foreign direct
29 investment and BITs discovered in previous research.
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34 Keywords: globalization, foreign investment, bilateral investment treaties, network analysis,
35 regionalization
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Introduction

Beginning with the work of Snyder and Kick (1979), sociologists have become increasingly interested in understanding both the determinants of international relations and the network structure formed by them (e.g. Beckfield 2003; 2008; 2010; Clark 2008; 2010; Lloyd et al. 2009; Mahutga 2006; Mahutga and Smith 2011; Smith and White 1992; van Rossem 1996; Zhao 2010). This network turn in macro-comparative sociology also expands scholarly attention beyond material flows to the structure of networks formed by cultural flows and co-membership in international organizations. The findings of this research point to seemingly contradictory structures of globalization, ranging from arguments about near universal adoption of global cultural scripts (e.g. Meyer et al. 1997), to clustering around culturally homogenous regions (e.g. Beckfield 2010) to hierarchical structures in which a handful of “core” states occupy positions of high power and status *vis-à-vis* other actors in the network (e.g. Lloyd et al 2009). One obvious question raised by this literature is, to what extent are structures of international relations impacted by universalistic, culturally homophilous and hierarchical processes simultaneously?

To shed light on this question, this article conducts a structural analysis of globalization by focusing on the evolution of the network of states formed by their dyadic adoption of bilateral investment treaties (BITs) over the course of 50 years, beginning in 1959. Studies of the consequences of foreign direct investment (FDI), widely recognized as one of the principal components of contemporary globalization, are common in sociology (e.g. Bornschier, Chase-Dunn and Rubinson 1978; Chase-Dunn 1975; Bornschier and Ballmer-Cao 1979; Evans and Timberlake 1980; Bornschier and Chase-Dunn 1985; Firebaugh 1992; Dixon and Boswell 1996; Kentor 1998, 2001; Alderson and Nielsen 1999; de Soysa and Oneal 1999; Beer and Boswell 2002). The wide interest in FDI is understandable given the surge in FDI around the world, with

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3 world stock reaching almost \$18 billion in 2007. Indeed, in addition to the consequences of FDI,
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5 sociologists have also tried to understand its determinants (Alderson 2004; London and Ross
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8 1995; Bandelj 2002, 2008; King and Varadi 2002; Schofer and Granados 2006).
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11 Yet, it seems surprising that no sociological study examines the structure of BITs, which
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13 provide the institutional infrastructure that accompanies international investment, and are
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15 considered “the principal international investment agreements” addressing issues related to
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17 foreign investment between signatory countries (Sauvant and Sachs 2009: 10). The body of non-
18
19 sociological literature that does examine BITs tends to focus upon the link between BITs and
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21 actual flows of foreign investment, and provides some rather surprising results. Despite the fact
22
23 that BITs are designed to promote dyadic flows of FDI, the empirical literature—studies that
24
25 typically regress aggregate FDI on BIT counts—finds a weak or even insignificant link between
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27 BITs and FDI (Gallagher and Birch 2006, Peinhardt and Allee 2012, Yackee 2008; for summary
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29 review see Sauvant and Sachs 2009). Thus, an examination of the structure of the BIT network
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31 may shed light on this puzzle.
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37 The inconclusive relationship between FDI and BITs is also puzzling because the rise of
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39 bilateral investment treaties around the world is equally phenomenal to the rise of FDI flows.
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41 The first BIT was signed in 1959 between Germany and Pakistan. By 1969, 71 treaties had been
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43 signed, almost exclusively between advanced capitalist countries and African and Middle
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45 Eastern developing countries. The 1990s saw a rapid increase in the number of bilateral
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47 investment treaties, rising from 386 in 1989 to 1,813 in 1999, and reaching 2,678 by 2009.
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49 Figures 1 and 2 show these extraordinary growth trends in BITs, despite regional economic
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51 downturns in the early 2000s and the worldwide economic crisis since the end of 2007, both of
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53 which have influenced stagnation or sharp declines in FDI flows. The number of countries
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3 involved in bilateral investment treaties has also increased to a near universal inclusion: by 2009,
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5 188 sovereign states and the Palestine Authority have signed at least one BIT, out of 192 states
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7 recognized by the United Nations.
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12 [Figures 1 and 2 about here]
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18 In addition to explicating the purportedly weak link between FDI flows and BITs, our
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20 examination of the BIT network allows us to contribute to sociological research on the structure
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22 of international relations in a number of ways. The first is due to the dual nature of BITs. On one
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24 hand, BITs define the terms of investment relations among firms in two specific countries and
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26 are thereby explicitly *not* multilateral agreements. In other words, while the discourse
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28 surrounding BITs implies they are designed to increase transnational interconnectedness, in
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30 practice they are instruments for particularization of state relations. On the other hand, the
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32 amazing growth in the bilateral adoption of BITs implies that institutional arrangements that
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34 govern international investment have begun to diffuse world-wide.
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39 The dual nature of BITs thus allows for a unique re-examination of some of the findings
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41 from previous structural analyses of international relations. Indeed, does the BIT network reflect
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43 a trend toward a universal, flat global world (Friedman 2006)? Or, does it reflect a more
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45 regionalized one that very recent examinations of the structure of the world-polity seem to
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47 suggest (Beckfield 2010)? Or, could it be that the BIT network is structured along the
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49 North/South divide, with only a few core states occupying centers of gravity? Alternatively, is it
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51 possible that globalization reproduces preexisting structural properties while it simultaneously
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53 creates new patterns of international relations that are more universalistic or regional, implying
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3 that multiple structures of international relations can co-exist in a globalized world? These are
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5 the central questions that we attempt to answer in this paper.
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10 **The Governance of Foreign Direct Investment: Bilateral Investment Treaties**

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12 UNCTAD, the principle organization collecting BIT data, defines BITs as follows:
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15 “Bilateral investment treaties (BITs) are agreements between two countries for the
16 reciprocal encouragement, promotion and protection of investments in each other's
17 territories by companies based in either country. Treaties typically cover the following
18 areas: scope and definition of investment, admission and establishment, national
19 treatment, most-favoured-nation treatment, fair and equitable treatment, compensation in
20 the event of expropriation or damage to the investment, guarantees of free transfers of
21 funds, and dispute settlement mechanisms, both state-state and investor-state.”
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26 In short, BITs are designed both to promote greater flows of investment between countries, but
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28 also to establish the terms under which investment takes place and define the rights and
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30 responsibilities of both host governments and private investors.
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33 The aims of BITs have stayed remarkable constant over the 50-year period, since the first
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35 treaty was signed in 1959. This is made evident if we compare the introductory text of one of the
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37 first treaties between Germany and Malaysia (signed in 1960) with that of the BIT between
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39 Germany and Jordan (signed in 2009).
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42 “Agreement Between the Federal Republic of Germany and the Federation of Malaya
43 Concerning the Promotion and Reciprocal Protection of Investments,” states that “The
44 Federal Republic of Germany and the Federation of Malaya, desiring to foster and
45 strengthen economic co-operation between the Federal Republic of Germany and the
46 Federation of Malay, intending to create favourable conditions for investment by
47 nationals and companies of either Contracting Party in the territory of the other
48 Contracting Party, and recognizing that the contractual protection of such investments is
49 likely to promote private business initiative and to increase the prosperity of both nations,
50 have agreed as follows...”(signed in 1960).
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54 “Agreement between the Federal Republic of Germany and the Hashemite Kingdom of
55 Jordan concerning the Encouragement and Reciprocal Protection of Investments,” states
56 that “The Federal Republic of Germany and the Hashemite Kingdom of Jordan
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3 hereinafter referred to as the “Contracting Parties” – desiring to intensify economic co-
4 operation between both States, intending to create favourable [sic] conditions for
5 investments by investors of either State in the territory of the other State, and recognizing
6 that encouragement and contractual protection of such investments are apt to stimulate
7 private business initiative and to increase the prosperity of both nations - have agreed as
8 follows... (signed in 2009).
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11 The almost identical introductory text of the treaty signed between two developing countries
12 from different regions, Guatemala and the Czech Republic in 2001, also attest to the broad
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14 uniformity of these treaties, even though they are bilateral as opposed to multilateral agreements.
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20 Agreement Between The Republic of Guatemala and the Czech Republic for the
21 Promotion and Reciprocal Protection of Investments” states that, “The Republic of
22 Guatemala and the Czech Republic, hereinafter referred to as the Contracting Parties,
23 desiring to develop economic cooperation to the mutual benefit of both, the Contracting
24 Parties, intending to create and maintain favourable conditions for investments of
25 investors of one the Contracting Party, in the territory of the other Contracting Party, and
26 conscious that the promotion and reciprocal protection of investments in terms of the
27 present Agreement stimulates the business initiatives in this field, have agreed as
28 follows...” (signed in 2001).
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33 BITs thus fill a substantial void left by the absence of multilateral investment agreements.
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35 The closest set of policies that might constitute a multilateral investment agreement come
36 in the form of the OECD’s “Codes of Liberalization” and “Guidelines for Multinational
37 Enterprises,” both of which are significantly different from BITs in form and substance.¹ The
38 most glaring differences arise in the ways the two instruments handle disputes. Nearly all BITs
39 contain language that abdicates some of the sovereignty of host states because individual foreign
40 investors, who feel their rights have been violated, can seek international arbitration under the
41 auspices of the International Center for Settlement of Investment disputes, rather than resort to
42 suing in the host country’s national courts (Vandeveld 2009). Indeed, several recent cases of
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55 ¹ The EU has an ongoing process designed to generate a set of policies concerning foreign investment, but these
56 policies stipulate the terms of investment between EU and non-EU member states. In particular, EU governing
57 bodies would like to minimize the likelihood that BITs between existing EU members and non-EU members could
58 undermine the security of EU members who are not parties to the treaties (Eventon 2010).
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3 BIT disputes resulted in significant penalties for host country governments. As Elkins, Guzman
4 and Simmons (2006: 824) write, “BIT arbitrations have given rise to a number of significant
5 awards, including recent decisions against the governments of the Czech Republic ~\$350
6 million, Lebanon ~\$266 million, and Ecuador \$70 million.” Thus, the existence of a BIT
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8 between two countries gives private investors the legal wherewithal to address their grievances
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10 to a transnational institution, which has the authority to ameliorate the grievance by legislating
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12 compensation or other kinds of punitive sanctions.
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20 On the other hand, the provisions on FDI within the OECD’s codes of liberalization are
21 such that “[l]egally, individual citizens or enterprises of member countries can not directly
22 invoke rights resulting from the Codes to invest abroad, move funds or provide cross-border
23 services...” (OECD 2008: 14). Similarly, the provisions under the auspices of the OECD’s
24 Guidelines for Multinational Enterprises are “recommendations addressed by governments to
25 multinational enterprises operating in or from adhering countries. They provide non-binding
26 principles and standards for responsible business conduct in a global context...” (OECD 2011:
27 4). While BITs offer explicit legal protections to firms in signatory countries, these frameworks
28 do not. An even more striking difference between BITs and this multilateral framework exists
29 with respect of enforcement mechanisms in the former. To the extent that grievances arise, the
30 provisions on FDI within the OECD’s codes of liberalization rely on informal enforcement
31 mechanisms such as “peer pressure” and the “possibility of OECD council addressing
32 ‘recommendations’ to offending members” (OECD 2007: 133). Indeed, one OECD commentator
33 summarizes the (lack of) enforcement mechanisms by noting that “the Code does not explicitly
34 refer to the possibility of countermeasures against a Member which would breach its
35 obligations,” and in practice “there have never been such countermeasures.” Instead,
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3 enforcement mechanisms are limited to “peer pressure, political persuasion and compromise
4 solutions” (Poret 1998: 3).
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8 In short, while BITs are legally binding and effectively abdicate a degree of host country
9 national sovereignty by allowing foreign firms to sue nation states under the terms of the BIT,
10 and by shifting the judicial authority from domestic courts to third party transnational arbitrators,
11 the multilateral framework for investment in the OECD is little more than a set of non-binding
12 shared understandings that evolve over time in concert with multilateral discussions, and lack
13 any real enforcement mechanism.
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24 **Theorizing the Structure of the Bilateral Investment Treaty Network**

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27 BITs have proliferated rapidly over time. Germany was the first to conclude a BIT in
28 1959 with Pakistan. Having lost its foreign investment as a result of its defeat in the Second
29 World War, Germany was especially sensitive to the political risks to which foreign investment
30 was exposed (Salacuse and Sullivan 2005). Other Western European countries quickly followed
31 Germany’s lead, including France, signing BITs with the Central African Republic, Chad, and
32 Congo in 1960, and Switzerland, concluding a BIT with Tunisia in 1961. By the end of the
33 1980s, however, BITs became increasingly prominent. Indeed, fewer than 400 BITs were
34 concluded in the thirty years from 1959 to 1989, but more than 2000 BITs were signed during
35 the next twenty years. Several important developments contribute to this rapid growth. Indeed,
36 by 2009, almost all of the world’s countries joined the BIT network (188 out of 192 UN member
37 states, plus the Palestine National Authority). How well do current sociological theories on the
38 structure of international relations explain the structure of the BIT network and its evolution over
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3 time? In order to address this question, we first review the sociological literature on international
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5 relations and globalization.
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10 *The World Society and Universal Globalization*

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12 A prominent sociological perspective on international relations is the world-polity theory,
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14 which suggests that agents of the world polity construct and diffuse a rationalized and
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16 universalistic world culture, and thereby create an increasingly similar and interconnected world
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18 polity (Boli and Thomas 1999; Meyer et al. 1997; Frank et al. 2000; c.f. Beckfield 2010).
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21 According to this perspective, an active and dense network of international governmental (IGO)
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23 and nongovernmental organizations (INGO) diffuse certain principles of action, such as
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25 environmental sustainability or respect for human rights throughout the world-polity (Henisz et
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27 al. 2005; Ingram et al. 2005; Smith and Wiest 2005; Torfason and Ingram 2010). In the world
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29 culture perspective, these principles of action are considered scripts insofar as they are socially
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31 constructed by legitimizing institutions and carrier agents rather than intrinsically rational and
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33 efficient forms of behavior.
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38 Indeed, a chapter of the United Nations, one of the central organizations in the population
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40 of NGOs that shape world-polity, plays a critical role in attempting to both construct and diffuse
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42 BITs as a policy script. UNCTAD, the UN's chapter on trade and development, launched a BIT
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44 initiative supported by its Trust Fund on International Investment Agreement (financed by
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46 contributions from the European Commission, France, Germany, Japan, the Netherlands,
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48 Norway, Switzerland, and the United Kingdom) in the early 1990s. UNCTAD organized
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50 meetings at which interested countries could negotiate BITs, which often led to real treaty
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52 adoptions. At four meetings organized in 1999 and 2000, for example, 35 BITs were signed
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3 (UNCTAD 2000: 2-4). UNCTAD's intervention is a concrete example of a more general process
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5 of institutional isomorphism across countries in which world polity actors frame bilateral
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7 investment treaties as a key feature of responsible state behavior, and promote their adoption to
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9 individual nation-states. In terms of structure of the BIT network, the world-wide diffusion of
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11 legitimate policy scripts should lead to an increasingly dense network of BITs, because countries
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13 world-wide aspire to sign BITs to align with the principles of desirable economic governance.
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15 Thus, the world polity perspective would predict that the BIT network has become increasingly
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17 dense (i.e. every state has a tie to every other state), and decentralized (i.e. every state has the
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19 same number of total ties) over time.
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24 25 26 27 *Materialist Globalization and North/South Relations*

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29 The world-society model of international relations is often framed as either orthogonal to,
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31 or in conflict with, explanations for international relations that prioritize the material and/or
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33 power differentials as the proximate cause of the structure of international relations. One of the
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35 more central perspectives in this vein is the world-systems perspective, which gave birth to the
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37 emergence of formal analyses of the structure of international relations as an explicit substantive
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39 focus in sociology (e.g. Snyder and Kick 1979). Indeed, early world-systems scholars argued that
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41 the hierarchical division among the world's countries and the international division of labor
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43 should have empirical implications for the structure of international relations (Frank 1969;
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45 Galtung 1971). In general, networks of international relations should belie an underlying
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47 structural divide between countries of the global South and those in the global North in which the
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49 former are relationally dependent on the latter (e.g. Babones et al. 2011).
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3 For example, the bulk of the world-systems research on the structure of international
4 relations investigates material flows between countries, such as international trade (Breiger 1981;
5 Clark 2010; Mahutga 2006; Mahutga and Smith 2011; Nemeth and Smith 1984; Smith and
6 White 1992). A defining feature of these investigations is the discovery of a “core/periphery”
7 structure. Core/periphery structures are characterized by a single component to which individual
8 actors are more or less connected. In terms of international trade, the dominant pattern is one in
9 which there is dense interaction between countries in the “core,” or global North, intermediate
10 interaction between “semi-peripheral” countries in the middle of the structure, and no interaction
11 between “peripheral” countries. Moreover, core countries tend to form asymmetrical ties (e.g. a
12 trade surplus) with countries in the other two positions. Semiperipheral countries also form ties
13 with the other two positions, but tend to carry a trade deficit with the core, but a surplus with the
14 periphery. Peripheral countries tend to connect primarily with the core, and experience trade
15 deficits. A recent review of this literature suggests that “a core/periphery interaction pattern
16 appears to be a fundamental feature of cross-national trade data” (Lloyd et al. 2009).

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37 Indeed, the historical emergence and evolution of the bilateral investment treaty provides
38 some insight into how the structure of the BIT network may depart from the flat world of
39 universal globalization. The foremost legal expert of BITs, Kenneth Vandeveld (2009), argues
40 that BITs emerged after WWII as part of a concerted effort among Northern economies to
41 encourage economic liberalization under the assumption that protectionist policies of the pre-war
42 period, such as the Smoot-Hawley Tariff Act intended to protect American business and farming
43 by substantially raising tariffs on import-sensitive products adopted in the 1930 (Eckes 1995),
44 exacerbated the economic downturn before the war (Cooper 1987, Meltzer 1976). Thus, the US
45 lead coalition of Northern economies signed the Bretton Woods Agreement in 1944, created the
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3 IMF and what is known today as the World Bank, and in 1947 established the General
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5 Agreement on Tariffs and Trade (GATT), devoted to the reduction of global trade tariffs, and
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7 general trade liberalization. During the GATT negotiations, there were also attempts to liberalize
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9 foreign investment with a multilateral agreement stipulated in the Havana Charter, but these
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11 negotiations failed.
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15 At the same time, the wave of decolonization after WWII gave rise to newly sovereign,
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17 but economically underdeveloped, countries that were very protective of their independence
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19 (Sornarajah 1994) and resisted foreign control over their productive assets (Gilpin 1987; Hanink
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21 1994). In fact, according to Salacuse and Sullivan (2005), many developing countries closed
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23 their economies to new foreign investment and began to expropriate existing investments,
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25 including the seizure of petroleum assets in Iran (1951) and Libya (1955), and Castro's
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27 expropriation of the private sector in Cuba starting in 1959. One study by the United Nations
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29 identified 875 expropriations occurring in 62 countries between 1960 and 1974 (Salacuse and
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31 Sullivan 2005). Several BIT scholars claim that the threat of expropriation was the primary
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33 reason that developed countries created the bilateral investment treaty, since effective
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35 international law for the protection of foreign investment was lacking (Vandeveldt 2009, Dolzer
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37 and Stevens 1995, Denza and Brooks 1987).
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44 It was against this backdrop—the failed attempt by Northern economies to
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46 institutionalize a multilateral program of investment liberalization that would have secured their
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48 outward expansion and the simultaneous wave of decolonization that gave birth to a host of
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50 Southern countries in which capital was scarce but anti-imperialist sentiment was high—that the
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52 first BIT was signed. That is, BITs emerged when Northern countries wanted to expand by
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54 investing abroad, but faced a population of Southern economies that did not share the same
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3 understanding of property rights as Western democracies even though their lack of capital might
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5 have provided some incentive to attract it. Unsurprisingly, the early pattern of BIT formation
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7 reflects this cleavage between the North and the South insofar as the first BIT was between a
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9 Northern (Germany) and Southern (Pakistan) economy, with many of the immediately
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11 subsequent BITs forming between former colonies and their colonizers.
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15 For scholars who approach the structure of international relations from a materialist
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17 perspective, then, the most important organizing principal for the network arises from the higher
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19 allocation of capital and desire for economic expansion among Northern countries and their
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21 attempts to protect the property rights of their capitalists against state and non-state actors in the
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23 global South. In other words, the world-systems perspective would predict that the BIT network
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25 conforms to a bipartite network with dense ties between the North and the South but sparse ties
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27 within either group. This hypothesis is similar to the core/periphery network in predicting that
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29 countries outside of the North, or “core” of the world-system, should occupy centers of gravity in
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31 the BIT network and sign BITs with most other countries while those in the South should form
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33 the majority of their ties with countries in the North.²
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41 *Relational Homophily and Regionalization*

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48 ² This hypothesis is a departure from a classic core/periphery network, however, in that we do not expect a
49 significant amount of BITs between Northern countries. But, the hypothesis does correspond to studies in this
50 tradition that go beyond trade relations to analyze foreign military interventions, diplomats, other kinds of treaties or
51 the presence of foreign troops, and find that the core/periphery interaction pattern that prevails in trade is less
52 evident in these kinds of relations (Snyder and Kick 1979; van Rossem 1996). For example, Snyder and Kick’s
53 diplomatic network identified a structure in which countries in higher positions tended to send unreciprocated ties to
54 those in lower positions. Their treaty network tended to have as many ties within country groups as between them
55 and little pattern in the off-diagonal ties. Finally, their military intervention network provides an insight into our
56 expectations of the BIT network because it betrayed a fairly unique interaction pattern in which military
57 interventions were entirely missing within the groups of core and peripheral countries but heavily concentrated
58 between these two groups (Snyder and Kick 1979: 1111).
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The third perspective on the global structural form suggests that the world is neither becoming increasingly decentralized nor structuring along the North/South divide. Rather, the world is becoming increasingly regionalized over time as connections *within* regions become stronger than those *between* them. Indeed, the "regionalization thesis" increased in popularity beginning in the 1980s (Bhagwati 1992), during which major regional agreements were created, including the Southern African Development Coordination Conference (SADCC); the Preferential Trade Agreement of Eastern and Southern Africa (since 1981, and continued as Common Market for Eastern and Southern Africa since 1994); South Asian Association for Regional Cooperation (SAARC) founded in 1985; the Canada-US Free Trade Agreement (in 1988, expanding to the North American Free Trade Agreement in 1992); the Asia Pacific Economic Cooperation in 1989; MERCOSUR in 1991, the European Union in 1992 (with its roots in the Treaty of Rome of 1957); and the Greater Arab Free Trade Area (GAFTA) in 1997. Several important regional economic agreements were formulated before 1980, including the OPEC in 1965 and ASEAN in 1967. At its core, the regionalization hypothesis rest on the assumption that bilateral relations cluster along geographical, political and cultural lines so that similar countries are more likely to form bilateral relations than dissimilar ones. This reasoning is consistent with a fundamental premise in network theory, that of homophily, which states that similarity breeds connection (McPherson et al. 2001). While most network research on homophily examines networks of individuals, several scholars have extended this reasoning to the level of countries (Bandelj 2002, Zhou 2011).

The cultural homophily argument can also be linked to Huntington's (1996) clash of civilizations hypothesis. For Huntington "peoples and countries with similar cultures are coming together [and] peoples and countries with different cultures are coming apart" (p. 125),

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3 suggesting that the foremost determinant of international relations is cultural/religious similarity.
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5 Thus, Huntington imagines a world consolidated into nine distinct regional blocks, or
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7 “civilizations” (Western, Latin American, African, Islamic, Sinic (Chinese), Hindu, Orthodox,
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9 Buddhist, and Japanese), which roughly correspond to geographical groupings. While
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11 Huntington’s essentialist understanding of culture is problematic, the regionalization hypothesis
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13 has nevertheless received substantial empirical support. Neil Fligstein, for instance, argues that
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15 political-economic integration in Europe is a more salient trend than globalization (Fligstein and
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17 Merand 2002; Fligstein and Stone Sweet 2002, Fligstein 2010). Similarly, examining the
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19 structure of the world polity using IGO membership data between 1820 and 2000, Beckfield
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21 (2010) finds a trend in the world population of IGOs in which intra-regional ties are especially
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23 dense among European IGOs. Further, in a study of global trade spanning 1950 to 2000, Zhou
24
25 (2010, 2011) finds that countries tend to favor their geographically and culturally proximate
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27 counterparts as partners in global trade, fostering regionalization, and that this trend increases
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29 with time. This is consistent with earlier work by Kim and Shin (2002: 464), whose test of the
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31 regionalization thesis using trade data found that “intraregional density was greater than
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33 interregional density and intraregional ties were stronger than interregional ties” between 1959
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35 and 1996. But, Kim and Shin (2002: 464) also concluded that “regionalization was not an even
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37 process” with some regions showing stronger cohesiveness in trade than others.
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46 Indeed, there are strong reasons to suspect that regionalization would be apparent in the
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48 BIT network, *and* that it would be a more important process in some regions than others. First,
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50 based on the previous work by Fligstein and Beckfield, we might expect a strong European
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52 network. Second, if the legitimacy of FDI as a development strategy is unevenly distributed
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54 worldwide, then some states might be more likely to sign regional BITs to attract FDI than
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3 others. For example, Bandelj (2009) argues that attracting FDI was especially important for the
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5 Soviet bloc countries where economic liberalization would propel market transformations.
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8 Indeed, one report suggests that treaties within the postsocialist European and Eurasian region
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10 rose from 10 to 23 percent of the total between 1993 and 1999 (UNCTAD 2000). Alternatively,
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12 Latin American states have had mixed experiences in their ability to leverage FDI flows into
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14 development outcomes, and therefore might be less inclined to pursue new inflows, and therefore
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16 less likely to sign BITs with other states both inside and outside Latin America (e.g. Frank
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18 1969). In structural terms, then, the regionalization hypothesis implies significantly higher *intra*-
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20 regional than *inter*-regional density, but we expect that some regional clustering will be stronger
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22 than others.
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29 **Data**

30 *Bilateral Investment Treaties*

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32 The data for these analyses come from the online UNCTAD database on BITs, which is
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34 the single most comprehensive source of BITs covering all the world's countries. We present
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36 network statistics (density and centralization) using BIT matrices in every year from 1959 to
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38 2009. We coded each dyad 1 if the two countries signed a BIT on or before the year in question,
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40 and zero otherwise. The regressions we describe below examine a subset of these years: 1969,
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42 1979, 1989, 1999 and 2009. The countries on the rows and columns of our matrices represent the
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44 full list of sovereign UN nations as identified by the United Nations for the year in question, with
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46 the exception of the Palestine Authority. The Palestine Authority was established as an
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48 administrative unit, rather than a sovereign nation, in 1994 and is the only non-country that signs
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50 BITs.
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Country Regional and Bloc Assignments

In order to examine the pattern of investment treaties within and between groups of countries, we created a series of theoretically driven group designations that correspond both to geographical/cultural regions and the North/South divide. In our first analysis, we divide countries into a group of high status “Advanced Capitalist” countries that include the wealthiest 19 members of the Organization for Economic Cooperation and Development (OECD), which together make up the global North, and another group called the global South that includes the rest of the countries. In subsequent analyses, we create two additional classifications. In order to test the regionalization thesis, we begin with regional designations that correspond to the five broad United Nations categories (c.f. Beckfield 2010): Europe, Africa, the Americas, Asia, and Oceania. However, supplementary analyses suggested that these five regions inadequately captured the underlying pattern of homophily in the BIT network, and that an additional three categories were necessary: Postsocialist Europe and Eurasia, North Africa and the Middle East, and East Asia³.

³ We began by regressing the BIT adjacency matrix in five dummy matrices (i.e. $A_{ij}^k = 1$ if i and j are in region k , and zero otherwise) corresponding to the five broad UN categories. We also checked for differences within subregional groupings as defined by the UN. In addition, one reviewer asked us to consider heterogeneity between East Asia and the rest of Asia, and previous research differentiates between North Africa/Middle East (NAME) and postsocialist Europe (Kim and Shin 2002; Mahutga and Smith 2011; Bandelj 2009). We therefore added sequentially dummy matrices for each of these subregions in order to see whether or not they had significantly different patterns of homophily relative to their broad regions. East Asia, North Africa/Middle East and postsocialist Europe and Eurasia indeed had a denser and more significant pattern of homophily than did the broader regions in which they are embedded. Moreover, the introduction of these three additional groups had meaningful impacts on the broader categories defined by the UN classification. A significant tendency toward European homophily in the five-region model became a significant tendency toward heterophily when Postsocialist Europe and Eurasia was introduced, showing that the apparent tendency toward European homophily was driven instead by ties between postsocialist countries and the rest of Europe. Africa displayed a significant tendency toward heterophily when North African countries were excluded, indicating that NAME countries engage in homophilous ties more frequently than the rest of Africa. Similarly, Asia’s within-group density increased when East Asia was introduced and East Asia’s within-group density was nearly twice as large as that for the broad Asian region. These three regional groupings also had significantly different interaction patterns with other regions, as we show below in the

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Finally, our review of the world-polity, world-systems and regionalization perspectives presents them as alternative explanations of the structure of globalization, as they have been treated as such in previous research. However, it is not inconceivable that structures of international relations are impacted by universalistic, regionally homophilous, and hierarchical processes *simultaneously*. Instead of juxtaposing cultural and material factors, theorizing about any particular global outcome may require attention to the simultaneity of material and cultural forces, as well as to the interplay between the transnational and local socio-historical developments. We will therefore also inductively examine the possibility that the structure of the BIT network will exhibit some universalistic, hierarchical and regionalization features simultaneously.

Thus, in order to test whether combining North/South divide and regionalization perspectives may be analytically more powerful than either of the two separately, we created a synthetic “treaty-bloc formation model.” We first disaggregated the global South into a series of regional designations: Europe, Africa, Asia, Latin America, Oceania, Postsocialist Europe and Eurasia, North Africa/Middle East, and East Asia and then reintroduced the Advanced Capitalist distinction. These regional designations are identical to those described above, except that Japan, the US, Canada, Western Europe, Australia and New Zealand are in the Advanced Capitalist group. Tables 1 and 2 display a list of countries by regional and bloc designation, though not all countries are present in all years. The presence or absence of a country corresponds to the date of its proclamation of sovereignty and international recognition as indicated in the CIA Factbook on countries (in the 1959-1989 period) and membership in the United Nations (in the 1990-2009 period, when UN membership becomes synonymous with international recognition).

treaty-bloc models. South and South East Asia had similar BIT profiles (as did other UN subregions) and therefore remain aggregated. Thus, in testing for regionalization patterns we rely on the eight-region model identified above.

[Table 1: Country by Regional Assignments]

[Table 2: Country by Bloc Assignments]

Methods

Our primary concern here is the assessment of the three explanations for the structure of the BIT network described above. The universalist and regionalization hypotheses offer two distinct types of networks. Universalist explanations suggest that a country's regional location or membership in either the North or South should not play a significant role in the pattern of BIT ties it signs with other countries. That is, a country's geographical location or its membership in the global North or South should play a small role in predicting the density of its ties to other countries in the BIT network. Alternatively, the hypothesis derived from the world-systems perspective suggest that the North/South divide structures the pattern of BIT adoption, where BITs should tend to form across the North/South divide but not within the two groups. And, contrary to both these accounts of globalization, the regionalization hypothesis would predict stronger ties within than between geographical regions. In addition, we want to explore whether the existing perspectives on globalization are complementary rather than strictly contending.

In order to test our hypotheses, we implement a block modeling strategy analogous to those pursued in the existing literature on cross-national social networks (e.g. Beckfield 2008; Kim and Shin 2002; Snyder and Kick 1979; Smith and White 1992; Mahutga 2006). In doing so, we regress the observed adjacency matrix on the three blocking strategies described above in five discrete years, at 10-year intervals in the 1969 to 2009 period, omitting 1959 as there was only one treaty signed in that year. The first model regresses the dyadic BIT matrix on two dummy

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3 matrices—one for the North/North ties and one for the South/South ties. North/South ties
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5 constitute the excluded category. The regional homophily model regresses the dyadic BIT matrix
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7 on eight dummy matrices, one for each region. The between-region ties constitute the excluded
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9 category. Our final analysis estimates a treaty bloc formation model. Here we regress the dyadic
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11 BIT matrix on 35 dummy matrices representing all possible undirected combinations of group
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13 assignments except the within group density for the Advanced Capitalist group, which is our
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15 excluded category.
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20 These network regression models allow us to both assess the overall fit of our three block
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22 models, as well as identify whether or not the observed intra or inter-block ties are significantly
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24 larger than we might expect by chance. However, classical hypothesis tests are ill-suited for this
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26 test because we do not have a random sample and dyadic data violate the independence of
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28 observation assumption required for classical hypothesis tests. Thus, we cannot make the
29
30 necessary assumptions that would allow us to use the distribution of ties within and between
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32 groups we observe in our networks to estimate a sampling distribution. We therefore use a
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34 quadratic assignment procedure (QAP), or permutation tests, to simulate a sampling distribution
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36 to which we compare our observed statistics.
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41 The QAP begins by regressing the adjacency matrix on a series of dummy matrices as
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43 described above. Next, we randomly permute the rows and columns of the BIT matrix 5000
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45 times and recalculate the regression statistics with each new permutation. Substantively, these
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47 5000 permutation samples provide the distribution of our statistics under the null hypothesis that
48
49 the observed inter/intra-group densities are not larger (smaller) than would be the case if we
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51 randomly assigned states to groups. Using standard cut off values for significance, then, our
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53 observed comparisons are significant if less than 10, 5, 1 or .1 percent of the permutation
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3 samples yield a statistic larger (smaller) than the one observed. In each of the models we
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5 estimate below, then, the universal globalization model serves as our null hypothesis insofar as it
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7 would predict that dyadic ties are orthogonal to the location of countries across the North/South
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9 divide or geographic region. All the analyses were carried out in UCINET.
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12 13 14 15 **Results**

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17 We begin by examining overall trends in network density, which is measured as the
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19 number of BITs as a proportion of the total possible BITs. The time-trend in density displayed in
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21 Figure 3 suggests that the BIT network became increasingly dense over the period as an
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23 increasing number of countries signed BITs. Moreover, the rate of increase turned dramatically
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25 upward following the collapse of the Soviet Union, as evinced by the rapid increase in density
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27 following 1989. Despite the trend toward increasing density, however, the low overall peak
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29 density in 2009 suggests that just less than 15 percent of the possible number of bilateral
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31 investment treaties have been signed. Clearly, some countries are more likely to sign BITs than
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33 others.
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41 [Figure 3: Density of the BIT Network over time]
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46 Figure 4 displays the trend in network centralization over time. Network centralization
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48 measures how centralized an observed network is relative to a hypothetical network in which one
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50 focal actor is tied to all others, who are only tied to the one focal actor (a star network). A value
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52 of 0 indicates either an empty or fully connected network, and a value of 1 indicates a star
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54 network. The trend in Figure 4 shows the BIT network became increasingly centralized at the
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3 same time that it became increasingly dense. However, the rate of increase in centralization
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5 slows dramatically after 1994, peaking at a level of graph centralization equaling 57.5 percent of
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7 that in an ideal-typical star network.
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10 In sum, then, the BIT network is both increasingly dense and increasingly centralized
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12 over time. Thus, much of the increase in density must be explicable by the tendency of a subset
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14 of countries to sign a disproportionate number of BITs. Moreover, the slowing trend of rising
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16 centralization might indicate either the emergence of new centers of gravity or a trend toward the
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18 universal signing of BITs between all countries. We turn now to our network regression results
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20 to differentiate between these alternatives.
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27 [Figure 4: Centralization of the BIT Network over Time]
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32 Table 3 displays the reduced image density matrices when the BIT adjacency matrix is
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34 partitioned by assigning countries to either the global North or South. For simplicity, we report
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36 only the years 1969, 1989 and 2009. The cells in each matrix report the density within and
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38 between the North and South, with within-group densities located on the diagonal and displayed
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40 in bold, and between group densities reported in the off-diagonal cells. Because the treaty
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42 network is both dichotomous and symmetric by definition (a treaty is either present or absent,
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44 and a treaty from i to j implies a treaty from j to i), the off diagonal entries above and below the
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46 diagonals are identical. Consistent with the materialist, world-systems approach to international
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48 relations outlined above, the BIT network is almost perfectly bipartite in 1969. Moreover, the
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50 North/South density varies from .023 to .255 larger than the largest within-group density over
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52 time. However, and contrary to expectations derived from the world-systems perspective, the
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3 bipartite structure of the BIT network breaks down over time as the density of BITs within the
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5 Southern group increases from virtually zero in 1969 to 9.9 percent of the possible ties in 2009.
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10 [Table 3: North/South Density Matrices, 1969, 1989, 2009]
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15 While Table 3 does support the materialist, world-systems expectations derived above by
16 highlighting that the bulk of BITs bridge the North and the South, it does not *test* whether or not
17 the North/South density is significantly larger than the others. Thus, Table 4 reports the results of
18 our network regression model. The coefficients in Table 4 are counterparts to the densities in
19 Table 3—the significantly negative coefficients on the North-North and South-South groups in
20 1969 (-.022), for example, are simply the inverse of the density for the North-South density (0 -
21 .022 = -.022).
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34 [Table 4: North/South Bipartite Models]
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39 In each year, the coefficient for the North-North density remains both the exact inverse of
40 that for the North-South density, and statistically significant. Similarly, the South-South density
41 remains significantly lower than the North-South density throughout the period, indicating that
42 the density within the South is always significantly smaller than that between the North and the
43 South. However, consistent with Table 3, the coefficient on the South-South density is smaller in
44 absolute size than that on the North-North density because BITs form within the South over time.
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53 The increase in the absolute size of the negative coefficient on the South-South coefficient
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55 overtime indicates that North-South ties form more quickly over time than do South-South ties.
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3 Finally, this model explains a modest but increasing proportion of the dyadic variation in BIT
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5 adoptions over time, ranging from 1.7 percent in 1969 to 7.9 percent in 2009. In short, the
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7 North/South model provides some evidence in support of the materialist, world-systems
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9 expectations for the structure of the BIT network. However, the modest percentage of explained
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11 variance and the growing density within the South suggest that a complete explanation must go
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13 further.⁴ As our early discussion prefigures, much of this could be driven by regionalization, and
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15 we now turn to the results of our analysis of regional homophily.
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22 [Table 5: Regional Homophily Density Matrices]
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27 Table 5 reports reduced image density matrices analogous to those in Table 3, except that
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29 the adjacency matrices are partitioned according to the regional designations in Table 1. To
30
31 reiterate, the cells report the proportion of possible BITs within and between regions, and within-
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33 region ties are located on the diagonal in bold. The matrices in Table 5 suggest that
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35 regionalization may indeed explain part of the rise in density in Figure 3 and the rise in South-
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37 South density in Table 3, as evinced by the increasing size of the diagonal elements. For
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39 example, all regions but Oceania show an increasing within-regional density over time. However,
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41 the increase is more prominent for some than others. In particular, Asia, North Africa and the
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48 ⁴ Two reviewers astutely pointed out that disaggregating the global South into a peripheral and semiperipheral zone
49 may provide more explanatory power because several previous studies have identified the semiperipheral zone as
50 exceptionally upwardly mobile in the world-city network (e.g. Mahutga et al. 2010) and the network of international
51 trade (e.g. Mahutga and Smith 2011). Thus, we also conducted an unreported analysis in which we regressed the
52 adjacency matrix on five dummy matrices corresponding to whether or not each pair of countries belonged to the
53 core, semiperiphery and periphery, as well as the intersection of these groups (core-core was the comparison group),
54 using the world-system designations identified by Babones (2009). The results were entirely consistent with those
55 reported here—the only significant tie densities linked both the semiperiphery and the periphery to the core. There
56 was some evidence of upward mobility insofar as the semiperiphery didn't have significant relations with the core
57 until 1999. However, in each year this more saturated model explained a lower percentage of the variance than that
58 reported in Table 4 and we therefore simply make it available upon request (also see Babones 2012).
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3 Middle East, Postsocialist Europe and Eurasia and East Asia increase from zero within-region
4 ties in 1969 to 33.8, 44.2, 54.5 and 47.6 percent of the possible within-region ties, respectively,
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6 in 2009, and the within-group density is largest for only the first three of these. Are these within-
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8 region densities significantly greater than we might expect by chance?
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15 [Table 6: Regional Homophily Model, 1969-2009]
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20 The coefficients reported in Table 6 answer this question by regressing the adjacency
21 matrix on a series of dummy matrices corresponding to the regions outlined above, with the
22 between region ties for the network as a whole serving as the comparison. The trend toward
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24 homophily implied by Table 5 is supported here by the increasing size of the explained variance
25 of the homophily model over time, and by the increasingly frequency with which regional
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27 homophily is significantly greater than network heterophily in the later periods. However, while
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29 all regions except for Oceana show a trend toward homophily in the sense that later periods show
30
31 higher within-group density than earlier periods, only Asia, North Africa/Middle East,
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33 Postsocialist Europe and Eurasia and East Asia show a *significant* propensity for homophily in
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35 any period. The trend in heterophilous ties (the intercept) also increases over time, moving from
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37 a density of .005 to .133 over the period. Indeed, three other regions—Europe, Africa and
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39 Oceana—show a *significant* propensity toward heterophily in at least one *and* the most recent
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41 period.
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50 In short, the regionalization model uncovers something hidden by the North/South
51 bipartite model insofar as regionalization explains some of the BITs forming within the global
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53 South. However, regionalization plays a modest role in the overall structuring of the BIT
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3 network, as evinced by the lack of a significant homophilous tendency in the Americas, a
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5 significant heterophilous tendency in Oceania and Europe and the modest peak percentage of
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7 explained variance (4.7) for the homophily model. More importantly, we must go beyond the
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9 regionalization thesis in order to understand the formation of BITs within the global South.
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15 [Table 7: Treaty Bloc Density Matrices]
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20 The models presented in Tables 4 and 6 do suggest that the BIT network is structured
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22 both by material differentials in the world-system, and by regional similarity, but also that
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24 neither are complete accounts of the structure of the BIT network. Thus, Table 7 combines them
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26 in a more general model that allows us to observe the pattern of BIT ties within and between the
27
28 Advanced Capitalist group *and* each of the 8 regions in Table 6 simultaneously. Similar to the
29
30 pattern of ties observed in the North/South model of Table 3, most of the higher density blocks
31
32 reside at the intersection of the Advanced Capitalist group and regions from the global South. In
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34 1969 through 89, the highest density for each region of the global South intersects with the
35
36 Advanced Capitalist group. However, this trend breaks down in 2009, when only 4 regions from
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38 the global South (Africa, Latin America, Postsocialist Europe and Eurasia and East Asia)
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40 connect most intensely with the Advanced Capitalist group. Europe connects most intensely with
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42 Postsocialist Europe and Eurasia, Asia and Oceania with East Asia, and North Africa/Middle East
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44 connects most intensely with itself. Thus, Table 7 suggest that the rising density in the BIT
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46 network is driven by a combination of increasing North/South ties, homophily and by an
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48 increasing tendency toward the emergence of new centers of gravity in the network.
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4 In order to identify whether or not these tie densities are larger than we might expect by
5 chance, we report our final set of network regression models. These models test the null
6 hypothesis that *any* within and between group densities are no larger than we would expect by
7 chance. The top eight rows list the possible treaty blocs connecting the Advanced Capitalist
8 group to Southern regions. Consistent with what we observed in Table 3, nearly all of the bloc
9 densities connecting Southern regions and the Advanced Capitalist group are significantly
10 different from zero. The only region that fails to display a significant treaty bloc with the
11 Advanced Capitalist group in any period is Oceana.
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24 [Table 8: Treaty Block Formation Models]
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29 The bottom 13 rows report the significant densities within the global South, of which
30 there are 25. By 2009, five of the seven possible homophilous blocks are significantly different
31 from zero. However, in a surprising departure from each of the three perspectives outlined
32 above, there is a growing tendency toward the formation of significant treaty blocs *between*
33 Southern regions. Moreover, East Asia and Postsocialist Europe and Eurasia are exceptional in
34 their propensity to forge significant treaty blocs with other Southern regions: 25 percent (4/16) of
35 inter-regional blocs within the South involve East Asia, and an equal percent involve
36 Postsocialist Europe and Eurasia. Roughly 19 percent (3/16) involve North Africa/Middle East,
37 and an equal percent involve Asia. Latin America has only one significant treaty bloc. Moreover,
38 each of these regions also has a significant homophilous density. Oceana and Other Europe play
39 relatively minor roles in the BIT network insofar as Other Europe only connects with one other
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3 Southern region (Postsocialist Europe and Eurasia) and neither shows a propensity toward
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5 homophily.
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8 The pattern of significant coefficients in Table 8 provides some sense of both the
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10 explanatory power and limitations of the three alternative sociological perspectives on
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12 international relations outlined in our literature review. Overall, 72.5 percent (29/40) of the
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14 possible treaty blocs between Southern regions and the Advanced Capitalist group are
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16 significantly different from zero. However, the time trend is curvilinear—increasing from 50
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18 percent (4/8) in 1969 to 87.5 percent in 1989 (7/8) before falling to 75 percent (6/8) in 2009. The
19
20 curvilinear trend is driven by Other Europe, which doesn't show a clear trend toward more
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22 intense ties with Advanced Capitalist countries over time. Alternatively, 17.9 percent (25/140) of
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24 the possible treaty blocs within the South are significantly different from zero. Here the trend
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26 increases through time, from 0 percent in 1969 and 1979 to 46.4 percent (13/28) in 2009.
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31 Thus, these models are consistent with the findings reported in Table 4 in that the bulk of
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33 BITs still reside between the North and the South. They are also consistent with the findings
34
35 reported in Table 6 in that there is a tendency toward regionalization in the global South. What
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37 emerges from this analysis is a somewhat surprising tendency toward the formation of treaty
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39 blocs *between* Southern regions. The treaty bloc model combining each of these three factors—
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41 the persistence of dependent North/South relations, region-specific regionalization and the
42
43 emergence of new centers of gravity in the global South—explains more variation than any
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45 model, and rises from 3.2 to 22.5 percent of the variation over time.
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51 52 53 **Conclusion** 54 55 56 57 58 59 60

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3 The structure of the contemporary relations between countries, and how this structure evolves
4 over time, is a fundamental question for scholars of globalization. While few would deny that
5 globalization increases connections between countries over time, many disagree over the extent
6 to which these connections reflect either a universal logic of institutional globalization, or rather
7 are patterned by either the distribution of wealth and power across countries (the north-south
8 divide), or by place-bound political and cultural processes (regionalization).
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17 We use primary data on BITs to address these disagreements and allow for the possibility
18 that the universalistic, bipartite and regional patterns co-exist. Our data have several advantages
19 that the universalistic, bipartite and regional patterns co-exist. Our data have several advantages
20 to those used by other scholars. First, we go beyond the kinds of material relations that are
21 typically of interest to world-systems analysts of international relations. This is important
22 because there are theoretical reasons to expect that structures will vary for substantively different
23 global flows. And, while research using INGO and IGO membership data has contributed much
24 to our understanding of the structure of globalization in this respect, those data usually cover
25 only the period to 2000 and exclude many of the world's countries, especially the poorest
26 African countries or newly established post-communist states. Moreover, these IGO and INGO
27 networks are two-mode networks in which direct relations between states are inferred from
28 common memberships in organizations. This is problematic insofar as there are many states that
29 are co-members of, for example, the United Nations that nevertheless have strained or non-
30 existent bilateral relations (e.g. Lloyd 2005).
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48 Contrarily, we cover the entire population of the world's countries over the whole period
49 from 1959 to 2009. We start in 1959, which marked a true beginning for the specific global
50 phenomenon under investigation. Moreover, rather than inferring bilateral international ties from
51 co-membership in universalist organizations, we analyze true dyadic ties between states by
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3 focusing on one type of bilateral institution. Finally, BITs are an increasingly important
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5 institutional arrangement relevant to one of the defining features of contemporary economic
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7 globalization, foreign direct investment, and linked to the spread of neoliberalism. As such, they
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9 are simultaneously institutional, political, cultural and economic phenomena that capture the
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11 multidimensionality of globalization that some argue is worthy of more research (Guillen 2001,
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13 Bandelj and Sowers 2010).
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17 Based on the evolution of the BIT network data over the past 50 years since its inception,
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19 we find evidence that the supposed contradictory forces of universalism, regionalism and North-
20
21 South divide can co-exist. Universalistic explanations suggest that the BITs are constructed and
22
23 propagated in world models of economic governance, and that the network should become
24
25 increasingly dense and more equal over time, and further that ties should form more or less
26
27 indiscriminately between nation-states. The evidence in Figure 3 is consistent with the first part
28
29 of this expectation, while that in Figure 4 belies the second part. The world-systems account of
30
31 globalization anticipates that, despite the general increase in the world-wide participation in the
32
33 BIT network, network density should be highest *between* the capital rich countries and capital
34
35 poor countries rather than *within* these blocs, creating a bipartite graph connecting the North and
36
37 the South. We find evidence in support of these claims insofar as the BIT network does emerge
38
39 as a nearly perfect bipartite graph with dense interaction between the North and South, nearly
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41 non-existent ties within the two zones, and an increase in North/South density that outpaces tie
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43 formation within the North and South. However, the network departs from an ideal-typical
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45 bipartite graph over time because there are an increasing number of ties that form within the
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47 global South. At its peak, the ideal-typical North/South bipartite graph explains a modest 7.9
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49 percent of the variance in dyadic BIT adoption.
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3 We also find evidence of regionalization that highlights homophilous political and
4 cultural relations between countries, which should induce countries within particular regional
5 blocs to sign BITs with each other more than others. Indeed, we observe a rising rate of within
6 region density over time Table 5, and a significant trend toward regionalization in Table 6.
7
8 However, regionalization is more important for some regions than others. We observe no
9 significant propensity in the Americas, and a significant heterophilous propensity in Europe and
10 Oceania. Indeed, Europe's status as a heterophilous regional block in the BIT network stands in
11 contrast to the strongly homophilous tendency of Postsocialist European countries. In short,
12 regional integration in the BIT network is most pronounced in East Asia, Postsocialist Europe
13 and Eurasia, North Africa and the Middle East and Asia, and by itself provides a relatively weak
14 explanation for the structure of the BIT.
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29 Our final set of models combines the world-systems and regional homophily perspectives
30 and allows for the discovery of new centers of gravity in the global South. Here we find that
31 Advanced Capitalist countries are the clear center of gravity in the network, in which much of
32 the expansion of the BIT network consists of treaties between this group and others over time.
33
34 However, while our final set of models explains the largest percentage of the variance in dyadic
35 BIT ties, they also suggest that all three explanations of global structures that we considered
36 must be qualified to a significant degree. First, the universalistic explanation would predict the
37 rising density of the network but cannot account for either the central position occupied by
38 Advanced Capitalist countries, nor the more recent trend toward regionalization that we observe.
39
40 Second, claims about persistent bipartite hierarchy within the world system cannot account for
41 the rising prominence of the postsocialist European and Eurasian, East Asian or North Africa /
42 Middle East countries in the network. Finally, the regional explanation is insufficient as it does
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3 not help us differentiate between those regions that seem to develop regional investment
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5 coalitions and act as secondary centers of gravity in a way that other regions - Oceania, Other
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7 Europe, Latin America and Africa - do not.
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10 In short, a nuanced socio-historical analysis that takes into account the interaction of
11
12 world-historical processes with more localized ones is necessary to make sense of the overall
13
14 trends in the formation of BITs. Indeed, some research on the postsocialist countries and their
15
16 strong drive to “create demand for FDI” (Bandelj 2009: 471) aligns well with our findings for
17
18 this region here. Moreover, others document a quite similar process in the NAME region, where
19
20 “bilateral investment treaties constitute one of the most important international policy tools used
21
22 by Arab countries to attract foreign direct investment” (El-Kady 2006: 49). What is also notable
23
24 about NAME is that the intra-regional treaties signed often include language by which
25
26 grievances must be handled by third party arbitrators from within the Arab world, such as the
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28 Arab Investment Court and the Regional Center for International Commercial Arbitration in
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30 Cairo, rather than international arbitrators (El-Kady 2006). This may reflect a well-documented
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32 resentment by Arab governments toward international community interference in intra-Arab
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34 disputes (Rubin 1991).
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40 Thus, a more satisfying explanation for the evolution of the network of bilateral
41
42 investment treaties -- compared to either of the three dominant perspectives on globalization --
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44 must consider the simultaneity of cultural and material processes as well as the interplay between
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46 transnational and more local/regional trends. Such a perspective would suggest that universalistic
47
48 processes operating in the world polity are conditioned by the unequal distribution of capital
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50 between countries as well as the idiosyncratic behavior of some regions vis-à-vis others. BIT
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52 trends speak to the rise of near universal economic institutional standards within the world
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3 polity, but also the reproduction of a central structural position for core countries, as well as the
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5 consolidation of a few regional blocks outside of the core as contending centers of gravity.
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8 Overall, our results showcase the multidimensionality of globalization: the formation of a global
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10 economic institutional network is influenced simultaneously by political, economic and cultural
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12 processes. Understanding specific global outcomes requires attention to how the *global*
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14 phenomenon under investigation nevertheless evolves through specific *local* socio-historical
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16 developments.
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20 Finally, our analysis of the structure of the BIT network also sheds light on the mixed
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22 empirical literature regarding the relationship between BITs and actual flows of FDI. Recall that
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24 much of this literature involves regressing aggregate FDI inflows on aggregate counts of BITs,
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26 and suggests that increases in BIT ties bear a weak and/or inconclusive partial association to
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28 increases in FDI. Our network analysis of BITs suggests instead that analyses should consider
29
30 *who* a focal country signs BITs with in addition to *how many* BITs they sign. In particular, our
31
32 analysis identified two trends that help explain the weak link between BITs and FDI. The first is
33
34 the increasing tendency for countries that lack capital to sign BITs with other countries that also
35
36 lack capital. The second is the absence of BITs among Advanced Capitalist countries despite the
37
38 fact that the vast majority of actual FDI flows between them (e.g. Alderson and Nielsen 1999).
39
40 Both trends suggest that any causal link between BIT adoption and FDI inflows must be a
41
42 conditional one. In particular, if FDI flows are unlikely between less developed signatories that
43
44 lack surplus capital and extremely likely between developed non-signatories with large stocks of
45
46 surplus capital, then the BIT-FDI link may depend strongly on the absolute difference in the
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48 availability of capital between countries. That is, BITs are probably most effective for spurring
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3 actual FDI flows when they are adopted between developed and developing countries, where the
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5 absolute difference in the capital stock is largest.
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8 This said, our analysis of the structure of the BIT network may also imply that the very
9
10 purpose of investment agreements is shifting, even if BITs concluded since the 1990s were not
11
12 much changed in content from the BITs of the postwar era. While they still principally address
13
14 the traditional problem of investment protection and promotion (see the content of treaties in the
15
16 beginning of the paper), it would seem that BITs were largely intended to protect the property
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18 rights of developed countries in the postcolonial era, but are increasingly intended to promote
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20 foreign investment flows, or in other words are becoming “instruments of globalization”
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22 (Vandevelde 2009) in the era of neoliberal globalization (Campbell and Pederson 2001; Prasad
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24 2006; Bandelj, Shorette and Sowers 2011). Indeed, the rising propensity with which capital poor
25
26 countries sign BITs with each other makes sense only if countries are trying just to boost their
27
28 count of BITs signed for legitimacy reasons in order to signal their overall desire to attract FDI,
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30 which may be another reason for a weak link between BITs and FDI found in previous research.
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32 Indeed, BITs represent an ideal context in which to investigate the determinants of institutional
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34 decoupling in which the adoption of institutional principles from world-culture does not lead to
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36 the intended outcomes.
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Table 1: Country by Regional Assignments

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6	Afghanistan	6 Dominican Rep	4 Liberia	3 Samoa	5
7	Albania	7 East Germany	7 Libya	6 San Marino	1
8	Algeria	6 Ecuador	4 Liechtensten	1 Sao Tome&Principe	3
9	Andorra	1 Egypt	6 Lithuania	7 Saudi Arabia	6
10	Angola	3 El Salvador	4 Macedonia	7 Senegal	3
11	Antigua and Barbuda	4 Equatorial Guinea	3 Madagascar	3 Serbia	7
12	Argentina	4 Eritrea	3 Malawi	3 Seychelles	3
13	Armenia	7 Estonia	7 Malaysia	2 Sierra Leone	3
14	Australia	5 Ethiopia	3 Maldives	2 Singapore	2
15	Austria	1 Fiji	5 Mali	3 Slovakia	7
16	Azerbaijan	7 Finland	1 Malta	1 Slovenia	7
17	Bahrain	6 France	1 Marshall Islands	5 Solomon Islands	5
18	Bangladesh	2 Gabon	3 Mauritania	3 Somalia	3
19	Barbados	4 Gambia	3 Mauritius	3 South Africa	3
20	Bhutan	2 Georgia	7 Mexico	4 South Yemen	6
21	Belarus	7 Germany	1 Micronesia	5 Spain	1
22	Belgium/Luxembourg	1 Ghana	3 Moldova	7 Sri Lanka	2
23	Belize	4 Greece	1 Monaco	1 Sudan	6
24	Benin	3 Grenada	4 Mongolia	8 Suriname	4
25	Bolivia	4 Guatemala	4 Montenegro	7 Swaziland	3
26	Bosnia & Herzegovina	7 Guinea	3 Morocco	6 Sweden	1
27	Botswana	3 Guinea-Bissau	3 Mozambique	3 Switzerland	1
28	Brazil	4 Guyana	4 Myanmar	2 Syria	6
29	Brunei Darussalam	2 Haiti	4 Namibia	3 Taiwan	8
30	Bulgaria	7 Honduras	4 Nauru	5 Tajikistan	7
31	Burkina Faso	3 Hong Kong	8 Nepal	2 Tanzania	3
32	Burundi	3 Hungary	7 Netherlands	1 Thailand	2
33	Cambodia	2 Iceland	1 New Zealand	5 Timor-Leste	2
34	Cameroon	3 India	2 Nicaragua	4 Togo	3
35	Canada	4 Indonesia	2 Niger	3 Tonga	5
36	Cape Verde	3 Iran	6 Nigeria	3 Trinidad&Tobago	4
37	Central African Rep	3 Iraq	6 Norway	1 Tunisia	6
38	Chad	3 Ireland	1 Oman	6 Turkey	6
39	Chile	4 Israel	6 Pakistan	6 Turkmenistan	7
40	China	8 Italy	1 Palau	5 Tuvalu	5
41	Colombia	4 Jamaica	4 Palestine Authority	6 Uganda	3
42	Comoros	3 Japan	8 Panama	4 Ukraine	7
43	Congo	3 Jordan	6 Papua New Guinea	5 UAE	6
44	Dem Rep of the Congo	3 Kazakhstan	7 Paraguay	4 United Kingdom	1
45	Costa Rica	4 Kenya	3 Peru	4 United States	4
46	Cote d'Ivoire	3 Kiribati	5 Philippines	2 Uruguay	4
47	Croatia	7 Korea, North	8 Poland	7 USSR	7
48	Cuba	4 Korea, South	8 Portugal	1 Uzbekistan	7
49	Cyprus	6 Kuwait	6 Qatar	6 Vanuatu	5
50	Czechoslovakia	7 Kyrgystan	7 Romania	7 Venezuela	4
51	Czech Republic	7 Lao Republic	2 Russian Federation	7 Viet Nam	2
52	Denmark	1 Latvia	7 Rwanda	3 Yemen	6
53	Djibouti	3 Lebanon	6 Saint Lucia	4 Yugoslavia	7
54	Dominica	4 Lesotho	3 St Vincent & Grenadines	4 Zambia	3
55				Zimbabwe	3
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Notes: 1 = Europe, 2 = Asia; 3 = Africa; 4 = Americas; 5 = Oceania; 6 = North Africa/Middle East; 7 = Postsocialist Europe and Eurasia (post-Soviet bloc); 8 = East Asia. Europe excludes post socialist European countries. Asia excludes East Asian countries, West Asian countries in North Africa/Middle East, and Central Asian Countries in Postsocialist Europe and Eurasia. Africa excludes North African countries in North Africa/Middle East. East Germany and North and South Yemen were included from 1969 through 1989. Czechoslovakia and USSR were omitted in 1999 and 2009. Yugoslavia was omitted in 2009.

Table 2: Country by Bloc Assignments

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6	Afghanistan	6 Dominican Rep	4 Liberia	3 Samoa	5
7	Albania	7 East Germany	7 Libya	6 San Marino	9
8	Algeria	6 Ecuador	4 Liechtensten	9 Sao Tome and Prin	3
9	Andorra	9 Egypt	6 Lithuania	7 Saudi Arabia	6
10	Angola	3 El Salvador	4 Macedonia	7 Senegal	3
11	Antigua and Barbuda	4 Equatorial Guinea	3 Madagascar	3 Serbia	7
12	Argentina	4 Eritrea	3 Malawi	3 Seychelles	3
13	Armenia	7 Estonia	7 Malaysia	2 Sierra Leone	3
14	Australia	1 Ethiopia	3 Maldives	2 Singapore	2
15	Austria	1 Fiji	5 Mali	3 Slovakia	7
16	Azerbaijan	7 Finland	1 Malta	9 Slovenia	7
17	Bahrain	6 France	1 Marshall Islands	5 Solomon Islands	5
18	Bangladesh	2 Gabon	3 Mauritania	3 Somalia	3
19	Barbados	4 Gambia	3 Mauritius	3 South Africa	3
20	Bhutan	2 Georgia	7 Mexico	4 South Yemen	6
21	Belarus	7 Germany	1 Micronesia	5 Spain	1
22	Belgium/Luxembourg	1 Ghana	3 Moldova	7 Sri Lanka	2
23	Belize	4 Greece	9 Monaco	9 Sudan	6
24	Benin	3 Grenada	4 Mongolia	8 Suriname	4
25	Bolivia	4 Guatemala	4 Montenegro	7 Swaziland	3
26	Bosnia & Herzegovina	7 Guinea	3 Morocco	6 Sweden	1
27	Botswana	3 Guinea-Bissau	3 Mozambique	3 Switzerland	1
28	Brazil	4 Guyana	4 Myanmar	2 Syria	6
29	Brunei Darussalam	2 Haiti	4 Namibia	3 Taiwan	8
30	Bulgaria	7 Honduras	4 Nauru	5 Tajikistan	7
31	Burkina Faso	3 Hong Kong	8 Nepal	2 Tanzania	3
32	Burundi	3 Hungary	7 Netherlands	1 Thailand	2
33	Cambodia	2 Iceland	9 New Zealand	1 Timor-Leste	2
34	Cameroon	3 India	2 Nicaragua	4 Togo	3
35	Canada	1 Indonesia	2 Niger	3 Tonga	5
36	Cape Verde	3 Iran	6 Nigeria	3 Trinidad&Tobago	4
37	Central African Rep	3 Iraq	6 Norway	1 Tunisia	6
38	Chad	3 Ireland	1 Oman	6 Turkey	6
39	Chile	4 Israel	6 Pakistan	6 Turkmenistan	7
40	China	8 Italy	1 Palau	5 Tuvalu	5
41	Colombia	4 Jamaica	4 Palestine Authori	6 Uganda	3
42	Comoros	3 Japan	1 Panama	4 Ukraine	7
43	Congo	3 Jordan	6 Papua New Guine	5 UAE	6
44	Dem Rep of the Congo	3 Kazakhstan	7 Paraguay	4 United Kingdom	1
45	Costa Rica	4 Kenya	3 Peru	4 United States	1
46	Cote d'Ivoire	3 Kiribati	5 Phillipines	2 Uruguay	4
47	Croatia	7 Korea, North	8 Poland	7 USSR	7
48	Cuba	4 Korea, South	8 Portugal	9 Uzbekistan	7
49	Cyprus	6 Kuwait	6 Qatar	6 Vanuatu	5
50	Czechoslovakia	7 Kyrgystan	7 Romania	7 Venezuela	4
51	Czech Republic	7 Lao Republic	2 Russian Federati	7 Viet Nam	2
52	Denmark	1 Latvia	7 Rwanda	3 Yemen	6
53	Djibouti	3 Lebanon	6 Saint Lucia	4 Yugoslavia	7
54	Dominica	4 Lesotho	3 St Vincent & Gre	4 Zambia	3
55				Zimbabwe	3
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Notes: 1 = Advanced Capitalist; 2 = Asia; 3 = Africa; 4 = Latin America; 5 = Oceania; 6 = North Africa/Middle East; 7 = Post Socialist Europe and Eurasia; 8 = East Asia; 9 = Other Europe. East Germany and North and South Yemen were included from 1969 through 1989. Czechoslovakia and USSR were omitted in 1999 and 2009. Yugoslavia was omitted in 2009.

Table 3: North/South Density Matrices, 1969, 1989, 2009

1969		1	2
North	1	0.000	0.023
South	2	0.023	0.000
1989		1	2
North	1	0.000	0.106
South	2	0.106	0.006
2009		1	2
North	1	0.000	0.354
South	2	0.354	0.099

Notes: North includes all Advanced Capitalist countries as indicated in Table 2. South includes all other countries.

Table 4: North/South Bipartite Models, 1969-2009.

	1969	1979	1989	1999	2009
North-North	-.023***	-.050***	-.106***	-.271***	-.354***
South-South	-.022***	-.048***	-.100***	-.209***	-.255***
Intercept (North-South)	.023***	.050***	.106***	.271***	.354***
R ²	.017	.034	.063	.073	.079
Countries	171	171	171	191	192
Dyads	14535	14535	14535	18145	18336

Notes: North includes all Advanced Capitalist countries as indicated in Table 2. South includes all other countries. Negative signs indicate that the focal density is smaller than the between group density for the North and South. Significance based on 5000 random permutations. +p<.10; *p<.05; **p<.01; ***p<.001. p is the proportion of permutation samples yielding a statistics as large (small) as that displayed.

Table 5: Regional Homophily Density Matrices, 1969, 1989, 2009.

1969	1	2	3	4	5	6	7	8	
Europe	1	0.013	0.016	0.042	0.004	0.000	0.019	0.000	0.006
Asia	2	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Africa	3	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Americas	4	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oceania	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NAME	6	0.019	0.000	0.000	0.000	0.000	0.011	0.000	0.000
PSEE	7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
East Asia	8	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1989		1	2	3	4	5	6	7	8
Europe	1	0.039	0.131	0.080	0.045	0.007	0.106	0.233	0.136
Asia	2	0.131	0.022	0.000	0.002	0.000	0.005	0.022	0.076
Africa	3	0.080	0.000	0.000	0.002	0.000	0.006	0.016	0.006
Americas	4	0.045	0.002	0.002	0.009	0.000	0.004	0.004	0.000
Oceania	5	0.007	0.000	0.000	0.000	0.000	0.003	0.000	0.022
NAME	6	0.106	0.005	0.006	0.004	0.003	0.054	0.042	0.030
PSEE	7	0.233	0.022	0.016	0.004	0.000	0.042	0.000	0.089
East Asia	8	0.136	0.076	0.006	0.000	0.022	0.030	0.089	0.048
2009		1	2	3	4	5	6	7	8
Europe	1	0.043	0.313	0.222	0.314	0.016	0.384	0.513	0.364
Asia	2	0.313	0.338	0.034	0.057	0.034	0.189	0.181	0.412
Africa	3	0.222	0.034	0.062	0.013	0.000	0.074	0.011	0.122
Americas	4	0.314	0.057	0.013	0.189	0.011	0.034	0.082	0.173
Oceania	5	0.016	0.034	0.000	0.011	0.000	0.009	0.015	0.061
NAME	6	0.384	0.189	0.074	0.034	0.009	0.442	0.323	0.274
PSEE	7	0.513	0.181	0.011	0.082	0.015	0.323	0.545	0.321
East Asia	8	0.364	0.412	0.122	0.173	0.061	0.274	0.321	0.476

Notes: NAME = North Africa/Middle East; PSEE = Postsocialist Europe and Eurasia (post-Soviet bloc). Europe excludes post socialist European countries. Asia excludes East Asian countries, West Asian countries in NAME and Central Asian Countries in PSEE. Africa excludes North African countries in NAME.

Table 6: Regional Homophily Model, 1969 – 2009

	1969	1979	1989	1999	2009
Europe ^a	.008	.010	.011	-.054	-.090*
Asia ^b	-0.005	-.012**	-.006	.135*	.205**
Africa ^c	-0.005	-.012**	-.028***	-.087***	-.071*
Americas	-0.005	-.010	-.019	.058	.056
Oceania	-0.005	-.012**	-.028***	-.093*	-.133**
NAME	.006	.013	.026	.157**	.309***
PSEE	-0.005	-.012*	-.028**	.334***	.412***
E Asia	-.005	-.012*	.019	.192*	.343**
Intercept (Between Region Ties)	.005	.012*	.028**	.093	.133
R ²	.001	.002	.003	.037	.047

Notes: Positive (negative) signs indicate that the focal group's density is larger (smaller) than the between group density for the whole network. Significance based on 5000 random permutations. *p<.05; **p<.01; ***p<.001. p is the proportion of permutation samples yielding a statistics as large (small) as that displayed. NAME = North Africa/Middle East; PSEE = Postsocialist Europe and Eurasia (post-Soviet bloc); E Asia= East Asia. a Excludes postsocialist European countries. b Excludes East Asian countries, West Asian countries in NAME and Central Asian Countries in PSEE. c Excludes North African countries in NAME.

Table 7: Treaty Bloc Density Matrices, 1969, 1989, 2009.

1969	1	2	3	4	5	6	7	8	9	
AC	1	0.000	0.020	0.019	0.048	0.005	0.000	0.022	0.000	0.009
EURO	2	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AS	3	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AF	4	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LA	5	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OC	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NAME	7	0.022	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000
PSEE	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EAS	9	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1989	1	2	3	4	5	6	7	8	9	
AC	1	0.000	0.059	0.158	0.096	0.061	0.010	0.129	0.257	0.211
EURO	2	0.059	0.000	0.000	0.000	0.000	0.000	0.010	0.031	0.000
AS	3	0.158	0.000	0.022	0.000	0.000	0.000	0.005	0.022	0.078
AF	4	0.096	0.000	0.000	0.000	0.000	0.000	0.006	0.016	0.007
LA	5	0.061	0.000	0.000	0.000	0.004	0.000	0.000	0.004	0.000
OC	6	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NAME	7	0.129	0.010	0.005	0.006	0.000	0.000	0.054	0.042	0.028
PSEE	8	0.257	0.031	0.022	0.016	0.004	0.000	0.042	0.000	0.104
EAS	9	0.211	0.000	0.078	0.007	0.000	0.000	0.028	0.104	0.000
2009	1	2	3	4	5	6	7	8	9	
AC	1	0.000	0.066	0.387	0.253	0.407	0.022	0.417	0.581	0.518
EURO	2	0.066	0.000	0.051	0.029	0.065	0.000	0.141	0.183	0.125
AS	3	0.387	0.051	0.338	0.034	0.053	0.010	0.189	0.181	0.431
AF	4	0.253	0.029	0.034	0.062	0.009	0.000	0.074	0.011	0.142
LA	5	0.407	0.065	0.053	0.009	0.168	0.000	0.026	0.056	0.204
OC	6	0.022	0.000	0.010	0.000	0.000	0.000	0.000	0.003	0.028
NAME	7	0.417	0.141	0.189	0.074	0.026	0.000	0.442	0.323	0.299
PSEE	8	0.581	0.183	0.181	0.011	0.056	0.003	0.323	0.545	0.363
EAS	9	0.518	0.125	0.431	0.142	0.204	0.028	0.299	0.363	0.400

Notes: AC = Advanced Capitalist; EURO = Other Europe; AS = Asia; AF = Africa; LA = Latin America; OC = Oceania; NAME = North Africa/Middle East; PSEE = Postsocialist Europe and Eurasia (post-Soviet bloc); EAS = East Asia. EURO excludes postsocialist European countries and European Advanced Capitalist countries. Asia excludes East Asian countries, West Asian countries in NAME and Central Asian Countries in PSEE. Africa excludes North African countries in NAME.

Table 8: Treaty Bloc Formation Model, 1969 - 2009.

	1969	1979	1989	1999	2009
Heterophilous					
North-South					
AC-EAS	---	.061**	.211***	.465***	.517***
AC-PSEE	---	.053**	.257***	.485***	.581***
AC-NAME	.022**	.075***	.129***	.279***	.417***
AC-LA	---	---	.061***	.321***	.407***
AC-AF	.048***	.068***	.096***	.165***	.253***
AC-AS	.019*	.071***	.158***	.331***	.387***
AC-EURO	.020*	.033*	.059*	---	---

Notes: The within group density for Advanced Capitalist countries (.000) is the comparison group. Significant densities indicate that the focal pair of groups has a density that is significantly larger than zero, where significance is based on 5000 random permutations. * $p < .05$; ** $p < .01$; *** $p < .001$. p is the proportion of permutation samples yielding a statistics as large as that displayed. Only significant comparisons are displayed. Dashes in cells indicate that the density was not significant in that particular year. AC = Advanced Capitalist; LA = Latin America; PSEE = Postsocialist Europe and Eurasia (post-Soviet bloc); EAS = East Asia; AS = Asia; NAME = North Africa/Middle East; AF = Africa; EURO = Other Europe. Other Europe excludes postsocialist European countries and Advanced Capitalist European countries. Asia excludes East Asian countries, West Asian countries in NAME and Central Asian Countries in PSEE. Africa excludes North African countries in NAME.

Table 8: Treaty Bloc Formation Model, 1969 – 2009 (Continued).

	1969	1979	1989	1999	2009
Heterophilous					
South-South					
EAS-NAME	---	---	---	.181*	.299**
EAS-LA	---	---	---	---	.204*
EAS-AS	---	---	.078*	.304***	.431***
EAS-PSEE	---	---	.104*	.309***	.363***
PSEE-AS	---	---	---	.126*	.181**
PSEE-EURO	---	---	---	.144*	.183*
PSEE-NAME	---	---	---	.194***	.323***
NAME-AS	---	---	---	---	.189**
Homophilous					
AS-AS	---	---	---	.228**	.338**
LA-LA	---	---	---	.129*	.168*
NAME-NAME	---	---	.054*	.250***	.442***
PSEE-PSEE	---	---	---	.427***	.545***
EAS-EAS	---	---	---	.267*	.400*
Countries	171	171	171	191	192
Unique Dyads	14535	14535	14535	18145	18336
R2	.032	.050	.095	.187	0.225
Possible Comparisons			35 each year		

Notes: The within group density for Advanced Capitalist countries (.000) is the comparison group. Significant densities indicate that the focal pair of groups has a density that is significantly larger than zero, where significance is based on 5000 random permutations. *p<.05; **p<.01; ***p<.001. p is the proportion of permutation samples yielding a statistics as large as that displayed. Only significant comparisons are displayed. Dashes in cells indicate that the density was not significant in that particular year. AC = Advanced Capitalist; LA = Latin America; PSEE = Postsocialist Europe and Eurasia (post-Soviet bloc); EAS = East Asia; AS = Asia; NAME = North Africa/Middle East; AF = Africa; EURO = Other Europe. Other Europe excludes postsocialist European countries and Advanced Capitalist European countries. Asia excludes East Asian countries, West Asian countries in NAME and Central Asian Countries in PSEE. Africa excludes North African countries in NAME.

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Figure 1. BITs and World FDI Inflows per Year, 1959-2010

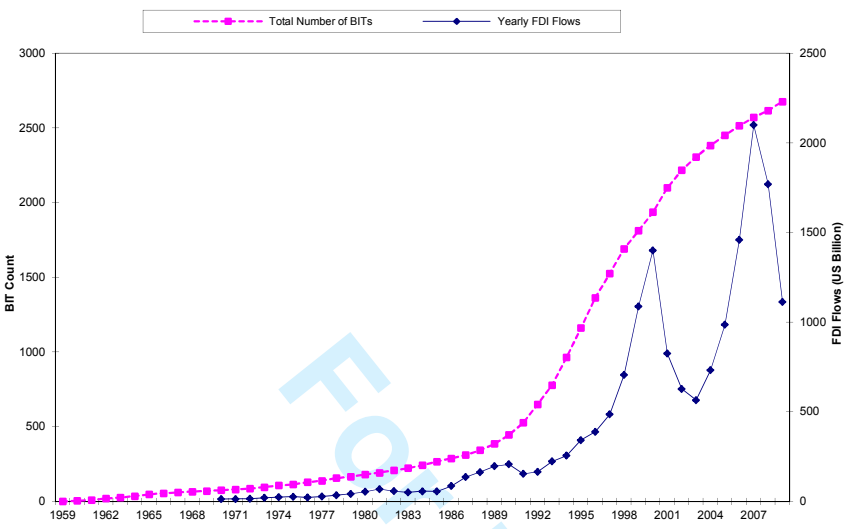


Figure 2. BITs and World FDI Stock per Year, 1959-2010

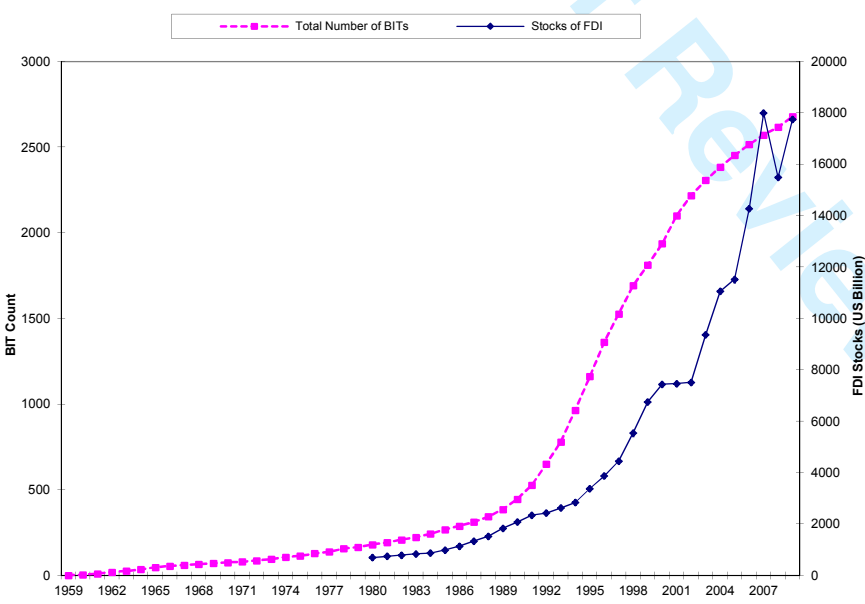
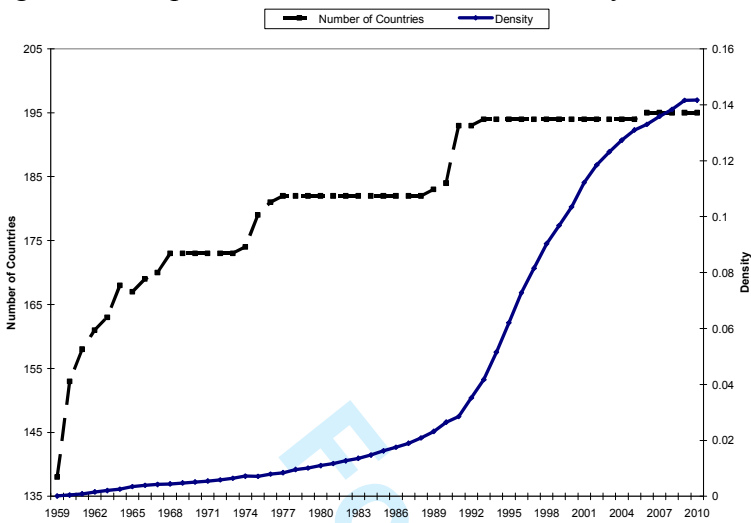


Figure 3: Temporal Variation in Network Density, 1959-2010

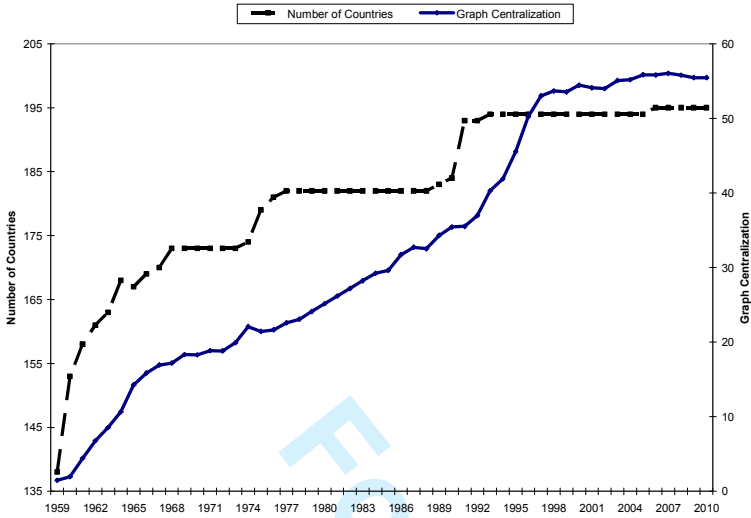


Density measures the proportion of present ties out of the total possible ties with

$$\frac{\sum_{i=1}^N d_i}{\frac{N(N-1)}{2}}$$

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Figure 4: Degree Centralization of the BIT Network, 1959-2010



Degree centralization measures the extent to which the ties in a graph are centralized on one actor, defined by

$$C_d(G) = \frac{\sum_{i=1}^N (\Delta - d_i)}{(N-1)(N-2)}, \text{ where } \Delta \text{ is the maximum degree in the network.}$$