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# Whither the World Polity? A Contribution to the Study of International Organizations Through Survival Analysis of OECD Accession Rates

Kathryn Overton

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**WHITHER THE WORLD POLITY? A CONTRIBUTION TO THE STUDY OF  
INTERNATIONAL ORGANIZATIONS THROUGH SURVIVAL ANALYSIS OF  
OECD ACCESSION RATES**

**BY**

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THESIS

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**ABSTRACT**

Accession to international governmental organizations (IGOs) has become an important corollary of modern international relations. Not only have IGOs proliferated significantly over the past fifty years, but, institutionalist paradigms, such as *World Polity* theory, suggest membership to such entities is inherent to the definition of modern statehood. Although IGO accession is rather commonplace, a full understanding of the motivation and gains associated with such commitments is not fully established. The current project contributes to this scholarly debate by applying World Polity theory to the question of why IGOs actively *invite* certain states into membership negotiations. The author employs a survival analysis in order to better describe factors, including World Polity indicators, that contribute positively to the rate at which this process occurs. By framing the *Organization for Economic Cooperation and Development* (OECD) as an anomalous, selective IGO, the author identifies conditions under which membership invitations are made, and how participation within the World Polity influences accession

outcomes. Results indicate that involvement in the world market economy as well as domestic financial stability are strongly associated with more recent membership activity; however, political factors including World Polity measures prove to be significant as well.

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## CHAPTER ONE

### INTRODUCTION AND THEORETICAL MOTIVATION

The goal this study is to better understand the factors underlying accession proceedings initiated by international governmental organizations (IGOs), specifically those derived from organizations with decidedly non-universal membership such as the Organization for Economic Cooperation and Development (OECD). This work is best situated within the subfield of international relations research that attempts to understand the functions of IGOs within the global community, and the reasons underlying states' involvement with such entities.

The current project expands upon more general theory pertaining to states' interactions within IGOs. Theoretical debates regarding these relations are decidedly mixed and by no means resolved. At first glance, it would appear that the gains from membership within such groups must certainly outweigh the losses from remaining outside the institutions. Yet political theory is rife with contrasting hypotheses regarding not only the reasons underlying such involvement but also rationales under which accession may not be preferable under all circumstances (Doyle 1997; Griego 1988; Keohane 1986; Waltz 1954). A growing body of research suggests that states may accede to international organizations in order to gain legitimacy, to convey and accumulate international norms, and, most importantly, to achieve cooperative outcomes within an anarchic world system. Yet, other research suggests that IGO membership infringes on state sovereignty and is easily circumvented by unmediated negotiations amongst states.

In addition, scholars debate the relative power and ability of IGOs to regulate state behavior. While some would argue that IGOs are merely ‘tools of statecraft’ incapable of autonomous action, others contend that IGOs are fully capable of independent activity that may provide a constraining influence on national leaders. However, despite the apparent theoretical appeal, few quantitative projects, if any, have studied the autonomous behavior of IGOs, and, in particular, the decision to invite states into membership negotiations. Thus, both empirically and theoretically, there is much room for continued research on the role of international organizations with the global system, their potential function(s) as autonomous units, and the politics underlying states’ growing involvement with these spheres of influence.

This study emphasizes the potential importance of *World Polity* theory in terms of contributing to a general understanding of IGO membership patterns. A more detailed description of this approach to international relations is presented below. In brief, however, the World Polity framework takes uniquely sociological and phenomenological approach to understanding the role of culture within international outcomes. Unlike previous theories emphasizing individual agency and the actions of nations as the primary unit of study, the World Polity paradigm highlights the primacy of *institutions*. By bringing institutions- comprised of both state and non-state actors with specified behavioral expectations- to the forefront, the World Polity paradigm opens the door for the study institutional isomorphism within and across international borders over time.

The World Polity represents a cognitive milieu in which nations and international organizations exist. This cognitive context *shapes* and *is shaped by* organizations; thus, it offers a unique lens through which one may better understand the function of such

entities within the international system. Although this theory has been applied to various aspects of the international relations subfield with confirmed success; its application to international organizations, and membership patterns, in particular, has been somewhat limited (Beckfield 2003; Beckfield 2008; Cao 2009; Hughes, et al. 2009; Kelley 2004; Schimmelfennig 2005).

As a result, the current project advances this subfield by focusing on IGO administration in terms of granting membership invitations, rather than depicting the initiation of such processes by potential member states. By studying the accession rates of a single, selective IGO, namely, the *Organization for Economic Cooperation and Development* (OECD), this study also contributes to the broader theoretical debate regarding autonomy and utility of non-state entities within the international system.

The process through which nations accede to the OECD, whose members are listed in Table One, is an ideal *in situ* experiment for several reasons. First, although the organization has been in existence for over fifty years, it is only within the last several decades that its membership has truly begun to grow. This raises questions of factors underlying the recent exponential growth in membership invitations, and characteristics which best predict the likelihood of similar negotiations in the future.

In addition, the OECD, as a prototypical IGO, is relatively understudied. For instance, literature exists regarding membership within other entities such as the European Union, the International Monetary Fund, the International Labor Organization, and the World Trade Organization (Schneider 2007; Strang and Chang 1993). Yet, to date, there is a dearth of quantitative studies focused solely on the history and features of the OECD.

**Table One: Organization for Economic Cooperation and Development (OECD)  
Member Nations** (*Source: OECD 2010*)

<b>Country</b>	<b>Date of Membership Ratification</b>
Finland	January 28, 1961
Canada	April 10, 1961
United States	April 12, 1961
United Kingdom	May 2, 1961
Denmark	May 30, 1961
Iceland	June 5, 1961
Norway	July 4, 1961
Turkey	August 2, 1961
Spain	August 3, 1961
Portugal	August 4, 1961
France	August 7, 1961
Ireland	August 17, 1961
Belgium	September 13, 1961
Germany	September 27, 1961
Greece	September 27, 1961
Sweden	September 28, 1961
Switzerland	September 28, 1961
Austria	September 29, 1961
Netherlands	November 13, 1961
Luxembourg	December 7, 1961
Italy	March 29, 1962
Japan	April 28, 1964
Australia	June 7, 1971
New Zealand	May 29, 1973
Mexico	May 18, 1994
Czech Republic	December 21, 1995
Hungary	May 7, 1996
Poland	November 22, 1996
Korea, South	December 12, 1996
Slovak Republic	December 14, 2000
Chile	May 7, 2010
Slovenia	July 21, 2010
Israel	September 7, 2010
Estonia	December 9, 2010

<b>Enhanced Engagement Nations</b>	<b>Date Negotiations Began</b>
Brazil	May, 2007
China	May, 2007
India	May, 2007
Indonesia	May, 2007
Russia	May, 2007
South Africa	May, 2007

Furthermore, OECD membership is deliberately non-universal. Unlike larger entities such as the United Nations, the World Bank, or the World Health Organization, accession to the OECD is both selective and discretionary. Thus, the rate at which countries will join the organization will necessarily vary; in addition, some nations will remain perpetually outside the group of those receiving invitations. This factor both distinguishes the OECD from other, more-global organizations, and contributes its overall appeal as a subject of statistical analysis. As a result, the choice of the dependent variable is both unique to the extant literature on the history of the OECD, and relatively unstudied in terms of the knowledge base regarding IGO memberships more generally.

This project emphasizes the contribution of World Polity theory, which was originally articulated by John Meyer and his colleagues, to international relations, and attempts to test the relevance of this theoretical orientation for understanding IGO membership. Participation in the World Polity is operationalized as the rate at which national leaders accede to treaty agreements. This choice of indicator is suggested by previous research; yet, to date, variables of this nature have not been applied to quantitative analysis of accession patterns.

Additional covariates within the project include those most closely associated with the mandate of the organization itself. Briefly, OECD leaders describe the organization as one in which membership is most focused on (1) economically developed nations that represent adherence to (2) market mechanisms and (3) democratic governance. As result, these factors are included as key controls with the study.

In addition to its theoretical contributions, this research represents a unique statistical methodology which has not yet been explored within the existing publications

pertaining to IGO memberships. In order to better assess the pattern of OECD accession, the author employs a Cox proportionate hazard rate analysis. Pooled panels of national-level data for 131 countries beginning with the year 1980 are employed to in order to understand the most active period of OECD membership from 1980 until 2010. The time period of interest was selected based on data availability as well as the fact that the majority of new accessions to the OECD have occurred during the last thirty years.

Duration models offer one of the best and most informative methods for analyzing specific rates of change over time. This method stands in distinct contrast with the majority of previous studies of IGO membership patterns, which may be characterized as either (1) qualitative case studies or (2) linear regression analyses. As a result, the choice of survival analysis methodology represents an important contribution of the present study.

In sum, the current project builds upon previous research on IGO membership through several distinct channels. The dependent variable, i.e. OECD accession rates, is both understudied and somewhat counterintuitive. A more complete history of OECD membership and mandate is provided within the body of the document. The author also offers a thorough rationale for the selection of the OECD as a dependent variable.

Furthermore, this project presents a unique application and test of the World Polity paradigm as it applies to the population of IGOs and their respective members. This research articulates the World Polity theory as it historically relates to both domestic and international outcomes. The author also provides an overview of research linking World Polity concepts to international relations, and IGOs, in particular.

The third and final contribution of this work is the unique choice of methodology. A complete description of the Cox Hazard rate as a specific functional form of survival analysis is detailed below. The author underscores selection of this model over other potential alternatives. In addition, this research articulates the more general set-up of the quantitative model, which lays the foundation for discussion of variable selection and analysis. The remaining sections of the document detail the quantitative analysis, supply results, and offer discussion.



## **CHAPTER TWO**

### **BACKGROUND AND LITERATURE REVIEW**

#### **The Organization for Economic Cooperation and Development**

In 1948, representatives from European nations joined together to create the Organization for European Economic Cooperation (OEEC). This entity was formed to execute the Marshall Plan and facilitate European reconstruction in the aftermath of World War II. Over the next decade, however, the economic recovery of European nations proved to be relatively rapid. Thus, whether or not the outcome was a direct result of OEEC action, the organization's initial aims were effectively realized (Ohlin 1968). Yet, rather than dismantle the organization after achieving its founding mandate, national leaders elected to perpetuate the OEEC. Opportunities to further benefit from the established administrative framework and avenues for international cooperation may have contributed to this outcome. Beginning in 1960, the OEEC was expanded to include the United States and Canada; in 1961, it was officially reincarnated as the Organization for Economic Cooperation and Development (OECD).

In the early years after its founding, the administration's operational objectives were primarily economic in nature. Its goals included (1) promotion of economic growth from within underdeveloped non-member nations, and (2) coordination of policy in order to promote 'trade, growth, and stability' from amongst current members (Ohlin 1968). Authors, such as Ohlin (1968), note that economic assistance, including coordination of

capital flows, to developing nations encompassed an increasingly larger portion of OECD operations over time.

Over the past fifty years, the OECD's primary mandate has not deviated dramatically from its foundational aims. The organization's self-proclaimed purpose is to,

“...achieve sustainable economic growth and employment and to raise the standard of living in member countries while maintaining financial stability... in order to contribute to the development of the world economy (OECD 2010).”

Yet, in the present, the OECD administration identifies its primary purpose as the preservation and promotion of not only financial, *but also international political*, aims. More specifically, the contemporary administration identifies the support of market economies *and the encouragement of democratic governance* as key goals for future interactions with developing nations (OECD 2010).

Thus, although the founding of the organization occurred with primarily financial motives, the OECD administration has subsequently adopted political ends as well. This development situates both OECD member nations and non-member affiliates within a new light, and begs further analysis. For instance, observers might question the relative importance of political orientation, in tandem with other economic factors, for OECD membership. Inquiries such as these contribute directly to the objectives of the current project.

Over the past fifty years, OECD membership has nearly doubled and its international relations span the globe. Present membership has expanded from the original group of twenty nations to include thirty-four full members. See also Table One above. In addition, the OECD has extended membership discussions, formally called *enhanced engagement* status, to six additional nations: Brazil, China, India, Indonesia, Russia, and South Africa. Membership negotiation is a lengthy process involving extensive review, examination, and policy adjustment. The sheer volume of correspondence and negotiations between the OECD administration and potential member nations ensures that only a few countries accede at one time (OECD 2010).

Yet, formal accession proceedings only scratch the surface of the organization's extensive international partnerships. The OECD's Global Relations Secretariat (GRS) maintains collaborative relationships with over seventy non-member nations. Thus, explicit OECD membership represents only a fraction of the OECD's international relations and sphere of influence. It is precisely because of such nonmember partnerships, that the OECD accession process holds such theoretical interest for students of international organizations.

The OECD deliberately fosters productive working relationships with nonmember nations, and the accession process often involves pronounced policy adjustments. The tension created by these two factors places the motivation for OECD membership into question. More directly, if cooperation between the OECD and non-member nations is not only probable, but likely, the question remains, why join the organization at all?

It is worth reemphasizing that accession requires extensive amendment of political and economic factors by potential member nations. Politically, domestic

governments are constrained on certain levels by membership criteria; they must relinquish a certain degree of power, even if only superficially, in order to recognize the validity of organizational policy as well as the rights of other members. In addition, membership approval often requires substantial domestic policy changes in order to bring national economies into conformity with organizational guidelines. In light of the more general international relations theory on this topic, the combined loss of power and necessity of economic adjustment required for membership is certainly non-trivial.

However, we observe empirically that national governments not only continue their organizational membership over long stretches of time- the twenty original member nations are still active- but membership has nearly doubled since the OECD's inception in 1961. Since its founding, fourteen other countries, including Chile, Estonia, Slovenia, and Israel- all of whom joined during 2010, have acceded to the OECD. (Please see the complete list of OECD member nations and accession dates presented in Table One.) In addition, several other nations are currently applying for membership status. As of 2007, the OECD invited Russia into membership discussions, while simultaneously allowing five other nations to enter into enhanced engagement. Clearly, national leaders find value in OECD membership. What is less obvious are the reasons underlying the extension of membership invitations to a few nations in particular, to the neglect of other countries from similar geographic locations with parallel political and economic characteristics. This apparent asymmetry in membership invitations is the primary motivation underlying the current analysis.

To further underscore the significance of this incongruence, consider three superficial examples. For instance, take note of the emerging economies within

Southeast Asia. Japan and South Korea acceded to the OECD in 1964 and 1996, respectively. However, only in the last three years have Indonesia, China, and India begun membership negotiations. Arguably, more recent economic growth may contribute to this finding. Yet contemporary economic growth is not capable of fully explaining other patterns within the region.

Of the four *Asian Tigers*, namely Singapore, Hong Kong, Taiwan, and South Korea, only South Korea is a member of the OECD. The three other nations, Singapore, Hong Kong, and Taiwan, lack any current connection with the group. Thus, despite the fact that the OECD has publicly identified Southeast Asia as an area of strategic interest (OECD 2010), few of the dominant economies within the region have either joined or entered negotiations to join the OECD. This apparent contradiction warrants further analysis.

Similar questions may be raised with respect to Central and South American countries. Note that Mexico was admitted into the OECD during May of 1994. This event occurred only a few months after the North American Free Trade Agreement (NAFTA) entered into force in January. It is possible that this proximity is purely circumstantial; however, quantitative analysis may point to a deeper relation. In addition, although Chile recently acceded to the OECD in 2010; the Brazilian administration, which entered into enhanced engagement in 2007, has only just begun the process of membership negotiations.

These countries stand in sharp contrast with other high-income, non-member countries within the region. For example, Argentina has a per capita income exceeding that of OECD members Chile, Turkey, and Mexico, yet the Argentinean government is

*not* currently engaged with the OECD. Similar arguments may be made with respect to Uruguay and Panama; their incomes are intermediate amongst the current OECD population, yet neither has entered into accession dialogue.

It is arguable that because the OECD was founded in France, and originally composed of European nations, combined with a select smattering of countries from other areas, perhaps recent membership patterns may be best articulated in terms of geographic proximity to current members. Yet, analysis of OECD membership patterns amongst European nations is not as straightforward as it might appear. Given the fact that six Eastern European countries (Czech Republic, Poland, Hungary, Slovak Republic, Slovenia, and Estonia) have joined the OECD since 1995, it seems fairly obvious that historical factors have played a direct role in recent membership. After the official end of Soviet dominance throughout the region in 1991, it appears as though numerous former Soviet bloc countries entered into membership negotiations with the OECD over the following decade.

For select countries, it appears as though membership patterns with the OECD closely parallel entry into the European Union in the years following 1991. For example, Estonia, Hungary, Slovak Republic, and Slovenia entered the EU in 2004, and all four countries are now OECD members. (See Table One for accession dates.) However, there are other countries within the Balkan region that have actively sought membership with the European Union (EU), but may or may not be engaged in talks with the OECD. For instance, Romania and Bulgaria both joined the EU in 2007, yet neither country is engaged with the OECD.

It suffices to state that the membership disparities across Eastern Europe, as well as similar patterns with Southeast Asia, Central America, and South America, can not be fully understood through case study alone. As a result, the current endeavor attempts to illuminate more subtle trends that may better explain the apparent inconsistency in membership invitations. The purpose of this project is to employ statistical analysis in order to increase our theoretical understanding of the domestic and international conditions underlying OECD accession patterns.

### **The Political Economy of International Organizations**

The function of international organizations within the anarchic world system remains a key topic of debate among scholars of international relations. Several authors support the notion that these non-state actors facilitate the provision of public goods within the international arena (Abbott and Snidal 1998; Keohane and Martin 1995; Kindleberger 1986). Authors such as Keohane (1984) and Nielson and Tierney (2003) have commented that IGOs are adept at addressing, "...Coase's classic problems of information asymmetries, transaction costs, and the absence of property rights." These types of public goods may be tangible, such as peacekeeping troops or financial aid, or intangible, such as norms of environmental protection or regulated trading (Finlayson and Zacher 1981). Although this justification is certainly logical; it is incomplete. As is the case with most public goods, it is arguable that public services at the international level, or, at a minimum, cooperative multilateral outcomes involving only a few nations, are

subject to inherent *free rider* problems in which states that are not directly involved with particular agreements still receive benefits from such international arrangements.

A case in point is international military stability. States may not be members of organizations designed to provide this outcome, such as the United Nations or North Atlantic Treaty Organization; however, they recoup the benefits of peaceful international relations nevertheless. Similar indirect examples of free rider problems pervasive throughout that international system may be drawn with respect to several other institutions. For instance, aid provided by the international development banks reduces overall economic instability in the international system; thus, preventing international financial and banking crises. Humanitarian health provisions and research initiatives initiated by the World Health Organization offer indirect benefits to nonmember nations by improving the overall health conditions within the world system as a whole and thus reducing the likelihood of the spread of epidemic diseases. Finally, trade regulations fostering greater international interaction with fewer restrictions provided by the World Trade Organization aid the economic relations of all trading nations regardless of whether states are actually members of this group.

As a result, the author argues that while functional arguments may explain the mere existence of IGOs within the international framework, this type of logic is simply insufficient to explicate the incentives driving nations *to join* these entities. Although this point is certainly not novel, it is by no means trivial (Keohane and Martin 1995; Koremenos, Lipson, and Snidal 2001; Moravcsik 1997). Functionalist arguments, such as those propounded by Jacobson, Reisinger, and Mathers (1986), simply can not explain the motivation driving states to relinquish certain elements of sovereignty by acceding to



such groups. Thus, one must rely on more intangible aspects of relevant outcomes that, in a sense, anthropomorphize state action and introduce non-fungible assets associated with IGO membership.

The question of identifying the motivation, especially from the leaders of less powerful states, for pursuing IO membership remains unresolved. As a result, the study of accession and its associated effects has been refined in recent years to focus on two key outcomes (Barkin and Cronin 1994; Checkel 2005; Gheciu 2005; Gray 2009; Hafner-Burton 2005; Hathaway 2007; Kelley 2004; Mansfield and Pevehouse 2006; Schimmelfennig 2005). The primary argument underlying IGO membership patterns is the academic debate regarding the tradeoff between reputation effects and national sovereignty. Increasing international legitimacy through political and economic allegiances as well as productive policy cooperation benefit the reputation of international leaders and domestic governments while offering increasing incentives to IGO membership. It is safe to assume the legitimacy associated purely with membership applies equally to all members regardless of domestic criteria such as financial resources. However, it follows that governments starting from a point of lower perceived legitimacy, such as those of recently founded nations, politically unstable or transitioning nations, or economically underdeveloped nations, may gain more in the way of private utility from such benefits than national governments with well-established international reputations. Additional advantages may include avenues such as the opportunity to acquire policy insights; openness to networking and communication with other diplomats and national leaders; social capital in terms of ensuring the legitimacy of domestic

governments; and indirect credibility in support of domestic receipt of international aid, loans, trading agreements, etc.

However, the loss of sovereignty sustained by acceding nations undergoing ‘socialization’ (Checkel 2005) into IGOs mitigates against incentives to join these organizations. This deficit is commonly operationalized as the domestic policy changes that must occur prior to membership so that countries may align themselves domestically with policies dictated by the organization. In addition, these changes must be perpetuated into the future as nations maintain their status within the IGO. Intuitively, this loss of sovereignty is most likely to be observed in nations that have less control over administration and operations of the organization itself. This may include either non-founding member states or member states excluded from governing bodies such as the United Nations Security Council.

It may be assumed that high income, high military strength countries already maintain a fair degree of influence within the international system as a diffuse whole. Thus, there is little direct gain from joining IGOs unless these types of countries have *controlling influence* over the IGO. This may explain why the United States is a strong participant in organizations such as the Bretton Woods institutions (the World Bank and the International Monetary Fund), but a non-signatory on other treaties such as the Kyoto Protocol and the Rome Statute (International Criminal Court).

A method of testing this proposition might be to include measures such as (a) founding members or (b) governing body members as an indicator in quantitative studies. For instance, the UN Security Council comes to mind a governing body distinct from the

other UN memberships per se. This type of measure might best explain the involvement of very wealthy nations within certain groups and is left for future research.

The primary goal of this study is to better understand the role of legitimacy and similar intangible incentives for less powerful nations to accede to IGOs. As suggested above, benefits inherently linked to control of organizations are simply unavailable to less powerful countries. Thus, for less powerful nations in particular, the debate returns to the trade-off between sovereignty and reputation. Both effects are *magnified* in the case of less powerful, less wealthy nations for all of the reasons detailed above. The current study offers a lens in which we may reassess this debate and, hopefully, contribute to our knowledge of this perplexing dynamic.

Legitimizing factors are non-fungible and, by definition, very difficult to measure. Although several scholars have suggested this aspect in terms of increasing our understanding of IGO participation, empirical studies, and quantitative studies in particular, have made little progress in terms of definitely answering the question of whether reputation effects are strong enough to outweigh the loss of sovereignty that accompanies IGO membership (Abbott and Snidal 1998; Kratochwil and Ruggie 1986; Mansfield and Pevehouse 2006). It goes without saying that if benefits of status always outweighed the loss of national sovereignty, then IGO memberships should be expected to indiscriminately increase. Yet, this is not what one observes within the international system. The author argues that, precisely because OECD membership is so selective, that OECD accession rates provide an ideal in situ experiment with which to test such hypotheses.

OECD accession rates offer an optimal natural experiment with which to test hypothesis regarding incentives underlying IGO accession more generally. The organization has existed for over fifty years. It is safe to assume that bylaws created by founding members have been fairly solidified over time; thus, the organizational administration and mandate is both relatively well-established and less liable to change. In addition, founding membership of the OECD already includes the wealthiest nations in the world- the Western European countries, the United States, Canada, and Japan. Thus, in light of the length of organizational existence and prior membership, one may conclude that new member nations are both (1) less likely to have organizational control, and (2) less financially and militarily well-endowed than existing members. These facts increase the relevance of reputations effects in terms of our comprehension of recent OECD accession. In light of parallel sovereignty losses, it is unclear as to why less powerful nations continue to join an organization in which they have little opportunity for control.

In addition, consider OECD membership in contrast with other IGOs, such as the United Nations, the Bretton Woods institutions, the World Trade Organization, and the World Health Organization. The primary difference between memberships within these organizations, in contrast with the OECD, is that the loss of sovereignty is offset by fungible assets. Benefits such as financial assistance, international development and stability loans, peacekeeping troops, and humanitarian aid accompany membership within these organizations. Yet, the OECD does not offer similar benefits to its members. As detailed above, not only is OECD membership unaccompanied by fungible assets, but any benefits associated with OECD activity are also available to coordinating

nonmember nations. As a result, the OECD is singular amongst IGOs, which only serves to increase the intrigue of its recent membership increases.

The above considerations of plausible gains and losses for membership in IGOs indicate that countries are likely to desire and maintain membership if they have substantial influence within the organization, and if their prestige in the international community is enhanced by membership. Thus:

**H1: Founding nations are likely to maintain their membership within the OECD.**

**H2: Countries with characteristics that parallel the OECD mandate and the interests of OECD founders are more likely to be invited to join the OECD.**

Not only does this project offer a substantive contribution to our general knowledge of IGO accession, but it also propounds a theoretical framework that departs from existing literature within the subfield. More specifically, World Polity indicators have not yet been applied to the academic debate on the loss of national sovereignty versus the gains to international status associated with IGO accession. The World Polity framework, described in detail below, highlights and reinforces the potential role of reputation effects in terms of describing this process. The paradigm suggests that, despite the lack of central governance within the international arena, norms of international relations prevail. In other words, actions by national leaders arise against a backdrop of

precedent and international culture. The World Polity framework suggests that nations operate within a broader contextual environment; one which is prone to isomorphism across multiple substantive fields such as educational systems, environmental policy, child protection laws, and professionalization of academic disciplines. These facts imply that leaders of nations with strong ties to the World Polity may place greater value on the role of reputation associated with treaty accession and IGO memberships, and are, therefore, more likely strengthen this outcome by acceding to other IGOs. Thus, the current project employs World Polity ties as a measurable proxy for the importance of increasing status, and postulates a positive relationship between World Polity linkages and IGO accession. Theoretically, this implies the following proposition:

**H3A: Countries with greater integration into the World Polity are more likely to be invited to join the OECD.**

An extended discussion of the rationale for H3A is discussed below.

### **Overview of the World Polity Paradigm**

The World Polity paradigm is best situated within broader theoretical work on *Neoinstitutionalism and Macro-phenomenology*. Both the Neoinstitutionalism of the 1970s and later work on the World Polity theory originated with thought by John Meyer and a group of his Stanford University colleagues. Meyer articulated his emphasis on social institutions as an effort to counter prominent theoretical trends within American

sociology during that time period and to infuse previous research with a decidedly phenomenological perspective (Jepperson 2002; Meyer 2010).

During the 1970s, contemporary thought had been largely influenced by the importance of individual actors for constructing social outcomes, and the contribution of socialization, or the internalization of behavioral norms, for understanding society. By underscoring the role of individuals, American sociological thought during that time period placed *culture* in the background. The reemphasis of culture in terms of shaping society and understanding human action was the key impetus behind Meyer's seminal contribution to the field.

Drawing on empirical work on educational systems (Meyer 1977; Meyer, et al. 1977; Ramirez and Meyer 1980), Meyer deliberately sought to shift the theoretical emphasis away from the study of individuals and towards the influence of institutions for understanding social outcomes. He articulated *institutions* as collections of norms, behavioral expectations, patterns of activity, and individual roles that work together to form cohesive societal entities. Although Meyer focused primarily on educational structures, the concept is readily generalized to include other large-scale social phenomena such as legal systems, familial arrangements, religious belief systems, or domestic economies.

Meyer recognized, moreover, that these types of socially-generated systems are not only universally recognized, but also possess inherent similarities across seemingly disparate contexts. For instance, despite superficial differences, the terms *government* and *legal system* are easily recognized based on function as well as structural similarities regardless of the national environment in which they are found. In a similar manner, the

institution of *religion* reflects similar properties and inherent structural characteristics that are independent of specific ideology.

Meyer and his colleagues argued that this tacit set of universal definitions called *institutions* both organize and orient societies while providing a flexible fabric in which individual action takes place. His particular focus within this phenomenological perspective included that way in which we define schools as institutions, the standardization of curricula across nations, as well as extensions to the primary institution such as standard definitions of eligibility, subject mastery, degree conference, etc. He stipulated that it was precisely this set of universal denotations that could not be fully understood through recourse to individual action alone.

Furthermore, these concepts of social behavior and connotations had been largely overlooked by contemporary sociologists of the 1970s. Thus, Meyer sought to return the study of education to its roots in Durkheimian *social facts*. While reflecting on his efforts, he wrote, “I did not think individuals were the fundamental units of society, nor did I think they were tightly organized ‘hard-wired’ structures. I thought society was made up of knowledge and culture (Meyer [1999] as quoted in Jepperson 2002).”

Meyer and his colleagues delineated the emerging theory as a form of *neoinstitutionalism* through a series of observations regarding educational systems (see also Benavot, et al. 1991; Frank and Meyer 2007; Meyer, Ramirez, and Soysal 1992; Ramirez and Meyer 1980; Schofer and Meyer 2005). In contrast with earlier work defining formal education merely as a means of socializing individuals, Meyer redefined educational institutions as *systems of legitimation* that serve to *allocate* individuals into social strata (Meyer 1977). In addition, later work by authors such as Benavot, et al.



(1991) and Schofer and Meyer (2005) highlight (1) the global expansion of educational institutions and (2) the growing isomorphism of educational curricula across national environments. Frank and Meyer aptly summarize these findings, “Our view helps explain empirical phenomena that confound standard accounts: the university’s extraordinary expansion and global diffusion, its auricular and structural isomorphism, and its relatively unified structure (2007).” Thus, both theoretically and empirically, Meyer and his colleagues’ research on education shifted the focus away from individuals towards the phenomenology of institutions as constructions that ultimately organize societies and propagate behavioral expectations over time.

Meyer and his colleagues took a deliberately macro-level, phenomenological perspective on the organization of individuals and action within society. Similar to Emile Durkheim’s foundational recognition of *social facts*, Meyer and his colleagues adopted the perspective that social elements are composed of symbolic units that tacitly represent the way in which individuals identify social phenomena. It is the manner in which individuals define concepts such as *states*, *organizations*, *legality*, or *sovereignty* that creates a universal fabric in which social relations are situated. Put simply, it is the solidification of legitimate connotations that both define and organize the world, and yield predictions for the isomorphism of social institutions over time.

Meyer expanded the breadth of his phenomenological framework to encompass global macrosocial phenomena- an orientation that readily addresses the subfield of international relations theory. In a manner similar to his original writings on neoinstitutionalism, Meyer contributed to comparative macrosociology by providing a theoretical alternative to paradigms that dominated contemporary international relations

thinking throughout the 1960s and 1970s. Part of the inspiration for Meyer's seminal contribution grew out of a need to understand the organizational and connotative similarities of cultural elements across countries in light of the decline of *modernization theory* as a development paradigm (Jepperson 2002; Jepperson and Meyer 2000; Meyer, et al. 1975).

Modernization theory postulates that traditional ideologies and belief systems prevent less developed countries from achieving economic growth. In addition, the school of thought predicts that development occurs along a single, convergent path. As growing nations relinquish traditional practices, they will develop over time to represent levels of technology and social organization similar to western industrialized nations. Scholars now recognize that it is both unrealistic and prejudicial to expect economic growth and development to converge to an end point similar to Western nations. As a result, modernization theory was eventually discredited due to its inherent ethnocentricity. However, the need to explain the isomorphism of various sub-national and international institutions across a range of developmental environments remained.

Meyer successfully delineated his phenomenological approach from existing orientations that predicted the invariant convergence of economic growth and development, i.e. modernization theory. In a coauthored work with Jepperson (2000) he remarks,

“It is routinely noted (but as often forgotten) that the Western cultural framework reflects the development, expansion, and secularization of the principally religious models of Western Christendom, a sustained cultural evolution

extending into the human rights movements of the contemporary period... This differentiation is historically associated with the distinctive ongoing "rationalization" of cultural representations of nature, the spiritual domain, and society.... By "rationalization" we refer to the cultural accounting of society and its environments in terms of articulated, unified, integrated, universalized, and causally and logically structured schemes.”

Thus, the *World Polity* paradigm effectively recognizes the global diffusion of practices and institutions originating with potentially common sources. Phenomenological underpinnings are woven throughout this viewpoint. Proponents of this perspective recognize and anticipate an ‘increasing structuring’ of institutions on a global scale. This implies that (1) governmental and non-governmental organizations should reflect various degrees of organizational isomorphism over time, and (2) the concept of membership within such groups should be incorporated into the standard definition of statehood, as domestic actors are increasingly redefined within the international arena. Meyer recognized the presence of parallel cultural connotations across national environments along with the importance of institutions for conveying culture and shaping individual action. Both of these findings are reinforced by the underlying framework of the World Polity.

Drawing on the importance of phenomenological connotations, and the existence of behavioral *scripts*, the World Polity paradigm points to a fluid, evolving cognitive framework in which individuals, domestic organizations and institutions, states, transnational corporations, intergovernmental organizations, and nongovernmental

organizations exist. In addition, this framework provides an avenue for the conveyance of socially legitimate practices. Rather than being overtly normative, World Polity theory provides merely a context in which qualities such as rationalization, professionalization, and legalization drive the diffusion of both institutions and legitimated practices in an international manner.

This framework has generated extensive empirical applications. Numerous scholars have enlarged the scope of institutionalist research and applied this phenomenological perspective to cultural practices worldwide. Salient research includes the study of child protection laws (Boli-Bennett and Meyer 1978); the rise of professionalized psychology (Frank, et al. 1995); growing environmental institutions (Meyer, et al. 1997); the rise of international nongovernmental organizations (INGOs) (Boli and Thomas 1999); expanding scientific professions and research (Schofer, et al. 2000); membership within international organizations such as the United Nations and the International Criminal Court (Lechner and Boli 2005); and the growth human rights institutions (Koo and Ramirez 2009).

On a global scale, the World Polity framework necessarily reorganizes the way in which individuals, organizations, and states are perceived within the international system. For instance, Lechner and Boli (2005) comment on international actors as follows, “...Many states are legitimate players, but none controls the game. It contains rules and assumptions, often unstated and taken for granted, that are built into global institutions and practices....Moreover, no single person, organization, or state chooses the rules it follows; these are, to a large extent, exogenous features of the world polity as a whole.”

One of the more important theoretical contributions has been the way in which Meyer and his colleagues have redefined scholarly views of states and national governments. Strang and Meyer (1993) state,

“For example, rapid diffusion within the world system seems linked to the homogeneous cultural construction of contemporary nation-states. States subscribe to remarkably similar purposes - economic growth, social equality, the political and human rights of the individual. States are also understood as possessing identical legal standing as sovereign, despite extreme disparities in military and economic capacity. And while these cultural definitions can be and are violated, they provide fertile ground for the rapid diffusion of public policies and institutional structures.”

The current project builds upon this perspective while analyzing the nexus between national governments and international organizations. To reiterate, the World Polity paradigm predicts that both organizations and states' actions should reflect varying degrees of isomorphism over time. Thus, it is possible that membership within sets of international organizations, for example, may gradually become both a measure of legitimacy for state actors and a expected standard for international relations.

Meyer and his colleagues provide a unique method of formulating propositions regarding this process. For instance, consider a newly formed nation-state. What types of international relations are expected of such entities? How are concepts such as *state sovereignty*, *boundaries*, or *legitimate governing bodies* defined? How might a state be

expected to interact with other national governments, corporations, non-governmental groups, and international governmental organizations?

Macro-phenomenological views suggest that there are a common set of well-defined actions associated with the definition of statehood. For instance, one may observe that most states are members of the United Nations. This suggests not only that United Nations (UN) membership is a fairly standard international practice, but also that this type of international relation might be expected of newly emerging nations. A case in point is the group of former Soviet bloc countries within Eastern Europe. After gaining independence, each of these countries successively joined the UN. The present research attempts to expand upon this perspective by asking questions such as, is treaty accession a positive factor in terms of invitations to join an IGO? In addition, may one associate this type of agreement with the notion that IGO membership has become a standard practice among states operating within the international arena? An affirmative answer to these puzzles implies that IGO membership may, in fact, be considered part of the way in which one defines modern statehood.

The current analysis frames the World Polity as the force driving states to accede to treaties and join international governmental groups. Thus, the author equates membership within the World Polity as best represented by participation in international protocols. This project attempts to understand the relationship between OECD accession and states' existing treaty agreements, and to test this empirical connection by predicating contemporary membership upon existing participation in the World Polity. A potential linkage between these types of memberships suggests that treaty accession is gradually becoming incorporated into the way in which nation-states are defined within the

contemporary world system. Thus, H3B provides a more specific elaboration of H3A above:

**H3B: Countries with greater participation in international treaties are more likely to be invited to join the OECD.**

**CHAPTER THREE**  
**VARIABLE OPERATIONALIZATION AND MEASUREMENT**

**The Dependent Variable**

In this case, the *explanandum* is the time elapsed until OECD accession occurs. The methodology employed in the study, i.e. proportionate hazard rate analysis, centers upon the time until an event, which is often labeled, *time until failure*. Thus, in terms of the duration analysis, the year of accession is the *failure*, or event of interest.

Whether a failure occurs during a particular time period is by nature a binary measure. Thus, the author constructed the dependent variable as a binary outcome and coded it as one (1) if the country joined the OECD at any point during the current year *t*. Note that this project employs the year of accession, not the specific month, as the discrete unit of time. All time periods previous to membership were coded as zero (0), while all successive time periods following the year of official accession were coded as one (1).

It is worthwhile to observe that the route to accession is fairly complex, and, by analyzing only the official accession date, this project may portray the process in an overly simplified manner. For instance, although future members enter into enhanced engagement status prior to officially becoming members, this data is not consistently available or readily applicable to all nations within the OECD population. As a result, only the 34 full member nations- not countries under *enhanced engagement* status- were coded as positive cases of the dependent variable. For the sake of continuity, given the



temporal dependence of events, *enhanced engagement* nations were coded as non-members.

### **Independent Variables**

Selection of the independent covariates follows directly from the hypotheses articulated above. From a substantive perspective, the author is primarily interested in understanding whether World Polity involvement, *ceteris paribus*, significantly affects the time until accession. However, in order to answer this question in an empirically valid manner, it is necessary to control for other substantial factors that may drive accession outcomes. These concerns suggest the subsequent list of independent variables. Table Two reviews the theoretical direction of influence of each variable upon the rate of accession; while Table Three offers a detailed explanation of each variable with its respective source.

### ***Founding OECD Members***

From a theoretical standpoint, the continued membership of OECD founders within the organization is fairly straightforward. If one assumes that that states were responsible for creating the organization, its mandate, and membership guidelines, then it follows that they would have an interest in continuing their participation into the future. These countries acquire substantial gains in prestige with minimal sovereignty losses by

**Table Two: Overview of Independent Variables**

<b>Substantive Areas and Variables</b>	<b>Hypothesized Relation to Accession</b>
<i>Founding OECD Members</i>	
1. Founding OECD member dummy variable	positive*
<i>Interests Congruent with the OECD Mandate</i>	
2. Per capita GDP	positive
3. Average unemployment	negative
4. Official aid and development assistance	negative*
5. Trade openness	positive
6. Degree of democratization	positive
7. Foreign direct investment	positive
<i>World Polity Linkages</i>	
8. Index of eight international treaties	positive

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\*Note: A *positive* effect implies an acceleration of the time until accession; while a *negative* effect implies a deceleration of the time until accession.

**Table Three: Variable Descriptions and Sources**

<b>Indicator</b>	<b>Variable</b>	<b>Description</b>	<b>Source</b>
<i>OECD Membership</i>	oecd	Dummy variable valued at one (1) if country was a member during time (t)	OECD
<i>Founding Member</i>	founder	Dummy variable indicating whether a country represents one of the founding OECD members	OECD
<i>Per Capita GDP (logged)</i>	l_pcgdp	GDP per capita, PPP (constant 2005 international \$), logged	WB WDI
<i>Average Unemployment</i>	unemploy	Unemployment as percent of labor force averaged over the entire time span (simple mean)	WB WDI*
<i>Financial Stability</i>	aid	Official aid, net of repayments, and development assistance received (percent of GDP)	WB WDI
<i>Openness to Trade</i>	openness	Sum of exports plus imports (percent of GDP)	WB WDI
<i>Degree of Democratization</i>	polity2	Polity score ranging from (-10) complete autocracy to (10) complete democracy	Polity IV
<i>World Market Economy Involvement</i>	fdi	Foreign direct investment, net inflows (percent of GDP)	WB WDI
<i>World Polity Index</i>	wp_index	Composite number of IGO memberships during a given year ranging from (0) to (8)	Generated

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\*WB WDI is the abbreviation for World Bank, *World Development Indicators* Database (2010).

maintaining their membership. As a result, the author proposed hypothesis one above, which is more specifically expressed as:

**H1: Founding nations are likely to maintain their membership within the OECD.**

The author incorporated a dummy variable coded as (1) one for the twenty original members of the OECD. Tables Two and Three summarize this measure. This indicator offers utility on several levels. First, by controlling for the founding population, the author is able to clearly delineate factors contributing to original versus contemporary OECD membership. This answers questions such as whether involvement in the World Polity was important to the original OECD population and whether it is significant for accessions within the last decade.

In addition, the *founder* variable is especially useful given the fact that the data are left censored beginning with the year 1980. The control for founding members diminishes the effect of data lost by left censoring because all of the newer members were admitted after the year 1980.

### ***Interests Congruent with the OECD Mandate***

The majority of other indicators follow directly from goals articulated by the organization itself. Intuitively, the author anticipates that countries displaying characteristics similar to those that the organization directly endorses will be most likely

to receive future membership invitations. This line of reasoning is consistent with the second hypothesis, which is more specifically expressed as:

**H2: Countries with characteristics that parallel the OECD mandate and the interests of OECD founders are more likely to be invited to join the OECD.**

OECD leaders (2010) have articulated the organization's primary mandate through these criteria:

1. Support sustainable economic growth
2. Boost employment
3. Raise living standards
4. Maintain financial stability
5. Assist other countries' economic development
6. Contribute to growth in world trade

Elsewhere, the OECD administration has summarized its purpose as:

7. Encourage democratic forms of governance
8. Foster development of market economies (2010)

Thus, variables chosen for this project highlight key characteristics from the eight points above.

### *Economic Development*

Not only is support of economic development highlighted as a key initiative, but for many years the OECD population was composed of the most developed, highest-earning countries in the world. It follows, therefore, that overall development would be an important property of potential member economies. This characteristic was operationalized as per capita gross domestic product (GDP). Increased domestic earnings are indicative of increased standards of living, sustainable growth, and overall development. Thus, this measure incorporates several of the OECD's stated goals.

Theoretically, the author anticipates that high levels of per capita GDP will be associated with an increase in the rate at which a country receives a membership invitation. This association is summarized in Table Two. Table Three reviews the variable data and its source.

### *Average Unemployment*

Raising the level of employment within domestic economies is highlighted by the OECD administration as an important corollary of overall growth and development. As a result, the author included average unemployment as potential covariate. In this case, the variable represents *a thirty year average*, based on available data, *not* an annual average.

The author constructed the measure in this manner to overcome problems with missing data. A detailed rationale follows. Intuitively the author anticipated that unemployment would be negatively associated with the dependent variable. Tables Two and Three summarize this measure.

An additional word of discussion is warranted regarding data collection and the way in which the unemployment variable was formulated. First, note differences in general types of unemployment and their respective time-dependence. There are two primary types of unemployment: (1) structural, or long-term job loss, and (2) frictional, or short-term, unemployment. An example of structural unemployment might be an economy in which domestic jobs are severely lacking over the course of several decades. For instance, a long-run unemployment rate of sixty-five percent represents a highly underdeveloped economy. Long-term rates of this nature reflect very low income nations lacking in job opportunities for a majority of their citizens, i.e. structural unemployment. This circumstance is a noteworthy contrast to domestic economies with short-term unemployment ranging from two to ten percent. Unemployment numbers in this range may be construed as frictional in nature, i.e. unemployment that arises temporarily due a recession or the lag between ending one job and finding another.

The author was primarily concerned with the long-term level of employment, i.e. the structural level, rather than minute annual fluctuations caused by frictional sources such as workers relocating and searching for new jobs. Thus, a long-term average was preferable to an annual value because not only are short-run numbers susceptible to extraneous fluctuations, but long-run values are more indicative of the qualities that the author wished to measure. As a result, there was a need to smooth the unemployment

numbers both to reflect structural versus frictional sources, and model the overall health of domestic economies over extended periods of time.

There are several methods available to accomplish this goal. For example, employment numbers may be divided into quartiles, or a moving average may be used to smooth minute fluctuations. However, both of these methods require adequate data. As shown in Table Three, this indicator was drawn from the World Bank's *World Development Indicators* database. The data for this indicator were very inconsistent; there were numerous missing values throughout the thirty year time span. In light of this condition, the author chose instead to smooth the data using a simple mean applied per panel for the entire series. This method overcomes the problem with the missing data without resorting to imputation, and performs the necessary smoothing. Because the average unemployment variable is not a true covariate, it should be viewed primarily as a control.

### *Financial Stability*

The author chose to operationalize financial stability as the absence of official aid and development assistance. Thus the variable, *aid*, represents loans, net of repayments, and grants made to national governments. The definition and source for this variable is presented in Table Three. Development assistance and aid is often provided to countries in order to encourage economic growth or to assist in recovery from natural disasters, political regime transition, or internal conflict. Based on its states objectives, the OECD is less likely to invite countries receiving large sums of financial assistance into membership negotiations. Therefore, it follows theoretically that aid as a percentage of



GDP will be negatively associated with both economic stability and the likelihood of a future OECD membership invitation. This hypothesis is summarized in Table Two.

### *Involvement in World Trade*

Trade openness is the sum of national exports plus imports as a percentage of GDP. Because the OECD directly supports the increase in world trade, it follows that countries displaying this variable should be associated with an acceleration in the rate of accession. Table Two reiterates this proposed relation, while Table Three summarizes the variable and its source.

### *Democratization*

In addition, one must consider the role of governance in terms of the potential for OECD membership invitations. While it is fairly obvious that most, if not all, of the founding members have democratic political structures, during recent years, it seems as though the OECD has moved away from its emphasis on one particular type of governance. The 2007 selection of China, an authoritarian regime, and Russia, a tenuously democratic regime, for *enhanced engagement* status may be the most direct evidence of this fact.

This apparent contradiction further supports the inclusion of degree of democratization as an independent variable. Incorporation of this measure yields the opportunity to observe the potential evolution of the organization over time. This

transition may include a redefinition of the OECD mandate; more specifically, a movement away from the importance of democracy towards other characteristics. Thus, the multivariate model may underscore the transition implied by historical descriptions.

To capture the importance of political regime as an *explanans*, the author employed the Polity IV data collected by Jagers and Gurr (2011). This dataset measures key criteria across countries including (1) the regulation, competitiveness, and openness of executive recruitment; (2) the degree of executive constraints; and (3) the level of political competition. For example, executive recruitment is considered along three ranked levels ranging from unregulated/forced seizure of power; designated/transitional accession to power; and regulated/competitive allocation of power. All other categories are similarly coded to reflect relative levels of openness to public participation in the government apparatus and the degree to which political power is subject to varying forms of impartial regulation; a full description is available in the *Polity IV Project: Dataset Users' Manual*. Regime characteristics are transformed into a ranked aggregate ranging from -10 (completely authoritarian) to +10 (completely democratic) and only available for countries with populations greater than 500,000. Table Three summarizes the degree of democratization indicator.

Although the past five years may reflect diminishing support of democratic institutions, the OECD's long standing history reflects this predilection. Thus historical membership patterns imply a positive relation between degree of democratization and increasing rate of accession. Table Two reiterates this proposed direction.

#### *Links to the World Market Economy*

Although, conceptually, linkages to international markets may be operationalized through various avenues, the author chose to capture this type of economic enterprise through inflows of foreign direct investment (FDI). FDI is defined as the process in which investors engage in economic enterprises outside of their country of residence. It may be measured in terms of both inflows and outflows. An example of FDI might entail a factory owned by Canadian citizens that is located in the United States. From the perspective of US citizens, this represents an inflow of investment; whereas, from the Canadian viewpoint the investment is an outflow. The author elected to use only net inflows of FDI. The term *net* refers to new investment less disinvestment (World Bank 2012). Additionally, the FDI variable is formulated as a percentage measure. This obviates the need to standardize the net worth of the investment through inflation adjustment and/or currency conversion. Thus, the final form of the indicator is net inflows of FDI as a percentage of gross domestic product (GDP).

Certain countries may reflect greater inflows of FDI for several reasons. Select characteristics of domestic economies, such as favorable tax rates, contribute positively to net FDI. In addition, some might argue that FDI is tool of growth for developing countries. Here, the primary driver of FDI inflows is presumed to be the overall domestic economic and political climate. Conventional wisdom dictates that investors are generally risk adverse; therefore, the author additionally anticipates that stable governments and economies will be positively associated with FDI inflows. This relationship is summarized in Table Two. FDI, measured as a percentage of GDP, should be associated with an acceleration in the rate at which countries accede to the OECD.

### *World Polity Linkages*

In addition to characteristics of nations that parallel the OECD mandate, the author wished to test propositions regarding the importance of world culture and involvement within international protocols for membership invitations. To review the hypotheses from above:

**H3A: Countries with greater integration into the World Polity are more likely to be invited to join the OECD.**

**H3B: Countries with greater participation in international treaties are more likely to be invited to join the OECD.**

The author chose to operationalize World Polity involvement using accession to international protocols. She chose treaties for this purpose based on two criteria. The first was a desire to create variation within the measure itself. Variation in this instance is the year of accession or the year in which a country becomes a signatory to an international protocol. For example, the majority of membership within the World Trade Organization arose during the years 1995 and 1996, which was shortly after its founding in 1995. The author deliberately attempted to avoid this lack of variation.

The second consideration was the desire to include a range of substantive areas. To accomplish this task, the author selected protocols that represent emerging goals, such

as environmental protection agreements, that have arisen over the last several decades rather than well-established mandates, such as formation of the World Health Organization, within the international system. Substantive areas included in the index represent environmental, legal, human rights, financial, intellectual property, and labor topics. Although the author made every attempt to judiciously select entities for this purpose, it is worth acknowledging the subjectivity of the World Polity measure. The author selected a total of eight treaties, which are presented in Table Four.

Consistent with the survival analysis model, the author created a binary measure for each international treaty. If a country acceded to the protocol during the given year, it was coded with a (1) *one*. Every successive year following accession was also coded as *one*. All years prior to accession, including the years prior to creation of the treaty, were coded as (0) *zero*. The individual scores for each year were summed to generate a World Polity index with values ranging from one through eight. Construction of the index measure is summarized within the variable description in Table Three. As alluded to above, a higher score on the World Polity index is will presumably accelerate the rate at which a country is invited into OECD membership. This theoretical relationship is reviewed in Table Two.

### **Technical Remarks**

Finally, it is useful to comment on the mechanics of data collection and selection of variables to be included in the project. The length of the times series, population of countries, and independent variables were chosen with as much logic and planning

**Table Four: World Polity Indicators**

<b>Variable Name</b>	<b>Treaty or Organization</b>	<b>Year of Establishment</b>	<b>Description</b>
<i>bc1992</i>	Basil Convention	1992	Regulation of hazardous waste transportation and disposal
<i>cat1984</i>	United Nations' Convention Against Torture	1984	Prevention of inhumane treatment or punishment of individuals engaged in conflicts
<i>cedaw1979</i>	United Nations' Committee on the Elimination of Discrimination Against Women	1979	Promotion and enforcement of human rights for women
<i>fcc1992</i>	United Nations' Framework Convention Against Climate Change	1992	Regulation of atmospheric greenhouse gas and related environmental protection measures
<i>icsid1965</i>	World Bank's International Center for the Settlement of Investment Disputes	1965	Resolution of legal disputes regarding financial trade
<i>mac1973</i>	International Labor Organization's Minimum Age Convention	1973	Establishment of minimum age for entrance into employment
<i>rsw2002</i>	Rome Statute of the World	2002	Recognition of jurisdiction of the International Criminal Court
<i>wipo1967</i>	World Intellectual Property Organization	1967	Promotion and enforcement of intellectual property rights

possible. Yet, the selection process was ultimately subjective, and warrants a word of explanation. The author created country-year panels for the years 1980-2010. Although some indicators are obtainable prior to 1980, this year was chosen as the starting point simply because of the greater availability of published measures. In addition, the total population of nations also reflects the availability of information. For instance, the Polity IV data set, which was used to represent the degree of democratization, is published only for nations with populations greater than 500,000. This somewhat limited the countries employed in the study; the greatest impact was the omission of Iceland and Luxembourg, both of whom are OECD members.

Finally, it is necessary to discuss measures omitted from quantitative analysis. The author attempted to control for criteria that reflect important political and economic features of domestic economies. Several measures were initially included and later discarded due to either severe missing data problems or high multicollinearity with other key variables. Although imputation to correct for missing data was an option, it was deemed inappropriate for this project. Measures ultimately omitted from this study include quality of life indicators, such as life expectancy, literacy, secondary school enrollment, and annual gini index score; social indicators, such as ethnic, linguistic, and religious fractionalization; economic variables, such as net capital flows; and political indicators, such as regime duration and investment risk. Thus, the final selection of variables represents the best and most representative measures under limited availability of data.

## CHAPTER FOUR

### THEORETICAL OVERVIEW OF DURATION MODELS

Hazard rate, or survival, analysis is the optimal method for analyzing a binary outcome, OECD member or non-member, over time. The following review is based primarily on discussion of survival models presented by Greene (2008). Ideally, one would like to analyze the effect of several covariates on some non-negative duration of time  $T$ . Because time is explicitly non-negative, one is not able to assume that the data are normally distributed, and must instead identify an appropriate alternative distribution. If the random variable  $T$  has a continuous probability distribution  $f(t)$ , then the cumulative probability is  $F(t)$ , which is equal to  $\text{Prob}(T \leq t)$ . We know that the elapsed length of time prior to the event is at least  $t$ ; thus we may identify the survival function as follows:

$$S(t) = 1 - F(t) = \text{Prob}(T \geq t)$$

From this function we can identify the hazard rate, which is conceptually defined as the probability that the duration of time will end in the next short interval of time  $\Delta t$ :

$$\text{Hazard rate} = \lambda(t) = \lim_{\Delta t \rightarrow 0} [\text{Prob}(t \leq T \leq t + \Delta t \mid T \geq t)] / \Delta t$$

Given the above we see that the hazard rate may be rewritten as:

$$\lambda(t) = f(t) / S(t)$$



where  $S(t)$  is the survival function and  $f(t)$  the continuous PDF. To reiterate, Greene (2008) defines the hazard rate as, ‘the rate at which spells are completed after duration  $t$ , given that they last at least until  $t$ . One can relate the hazard function,  $\lambda(t)$ , the probability density of the data,  $f(t)$ , and the survival function,  $S(t)$ , as follows:

$$\lambda(t) = -d \ln S(t) / dt$$

$$f(t) = \lambda(t) S(t)$$

Essentially, one wishes to estimate the survival function using the hazard rate. Consequently, the area under hazard function (integrated from zero to  $t$ ) may be represented as  $\Lambda(t)$ , where  $\Lambda(t)$  represents the integrated hazard function (Greene 2008). Thus, one may represent the survival function as follows:

$$S(t) = e^{-\Lambda(t)}, \text{ where } \Lambda(t) = \int_0^t \lambda(s) ds$$

Analysis of duration data is most often concerned with estimation of the hazard rate  $\lambda(t)$ . In addition, the majority of analyses assume that this rate is essentially invariant over time. As a result, the conditional probability of the event over a brief interval is constant regardless of when the observation is recorded (Greene 2008).

Survival analysis requires that one make general assumptions regarding the nature of the hazard rate function. Although there are several ways of potentially modeling the hazard function, such as the exponential, Weibull, lognormal, or log-logistic functions, Greene notes that these types of specifications may not fully account for individual

heterogeneity of observations (2008). One of the more popular methods of incorporating sample heterogeneity into the model specification is Cox's (1972) semi-parametric, proportional hazard model. Commonly known as the *Cox proportionate hazard model*, this specification allows for the incorporation of a baseline hazard rate,  $\lambda_0(t)$ , which explicitly reflects the individual heterogeneity (Greene 2008).

The hazard rate function takes the form:

$$\lambda(t) = \exp(x_i' \beta) \lambda_0(t_i)$$

where  $(x_i' \beta)$  represents a vector of covariates. The hazard rate for the current study is as follows:

$$\lambda(t) = \exp(x_i' \beta) \lambda_0(t_i), \text{ where}$$

$$x_i' \beta = \beta_1 \ln_{\text{pcGDP}_t} + \beta_2 \text{openness}_t + \beta_3 \text{polity2}_t + \beta_4 \text{avg\_unem}_t + \beta_5 \text{aid}_t + \beta_6 \text{fdi}_t + \beta_7 \text{wp\_index}_t + \beta_8 \text{founder}_t$$

For the general case in which none of the observations are censored, and only one observation exits during any given time interval, the conditional probability takes the form:

$$\text{Prob}[t_i = T_k \mid \text{risk set}] = \frac{e^{x_i' \beta}}{\sum_{j \in R_k} e^{x_j' \beta}}$$

From the above equation, one may construct the log-likelihood function as follows:

$$\text{Ln } L = \sum_{k=1}^K [x_k' \beta - \ln \sum_{j \in R_k} e^{x_j' \beta}]$$

Presentation of the log likelihood function for the more complex case in which data are censored, and multiple observations simultaneously undergo the event is beyond the scope of the current analysis. Fortunately, STATA statistical software provides a fairly straightforward method of analyzing the likelihood function; the following analysis is based on a more complex version of the above function.

## CHAPTER FIVE

### RESULTS AND DISCUSSION

The author compiled data for a population of 131 nations over the years 1980-2010. The data are organized into panel-years. The *explanandum*, as described above, was constructed as a binary measure coded as one (1) if a country was a member of the OECD during a given year and zero (0) otherwise. The *explanantia* are described in detail through Tables Two and Three.

First it is useful to summarize measures of central tendency with regard to all the variables. Table Five presents the number of observations and descriptive statistics associated with each measure. A few properties of the data are noteworthy. Namely, observe that the World Polity index has a mean of roughly four (4) and a standard deviation of two (2). This finding indicates that the World Polity data are evenly distributed, without skew in the distribution, and contain approximately fifty percent of the index within one standard deviation- both of which point to the utility of the measure from quantitative standpoint.

There are a few caveats as well. The full set of observations totals 4867 units. As reflected in Table Five, most of the indicators have a few missing data points. Because the lost information reflects a relatively small percentage of the full data set, 8.2 percent, the author chose not to correct for the lost material through imputation. For the purposes of this project it is also assumed that the missing data are random, rather than trending, which obviates the need to correct for any underlying selection bias.

**Table Five: Summary Statistics**

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
<i>aid</i>	4257	5.722372	10.1769	-0.6820754	148.4842
<i>avg_unem</i>	4306	9.423447	7.396358	0.5	51.5
<i>fdi</i>	4089	2.876006	6.073011	-82.8921	145.2019
<i>founder</i>	4867	0.1401274	0.3471548	0	1
<i>l_pcgdp</i>	4309	7.468007	1.591619	4.056728	11.02475
<i>oecd</i>	4867	0.1592357	0.3659333	0	1
<i>openness</i>	4217	76.61948	45.67861	0.1814151	445.9111
<i>polity2</i>	4555	1.527113	7.265487	-10	10
<i>wp_index</i>	4867	4.168687	2.552229	0	8
<i>year</i>	4867	1995	8.945191	1980	2010

Note: See Table Two for variable descriptions and sources.

Table Five also presents measures of central tendency for each indicator. Two of the indicators, *per capita GDP* and *trade openness*, have a large range coupled with a high standard deviation. This finding implies high degree of variation across panels and over time. When this type of variability is present, it may lead to heteroskedasticity within the error variance of analytical models. To correct for this problem, the author logged the *per capita GDP* variable. The trade variable was not altered because a log transformation of a percentage is not statistically meaningful.

Table Six presents bivariate correlations for each of the indicators. From a model building standpoint, one would prefer that independent variables both meet theoretical expectations and display certain quantitative properties. For instance, the independent covariates should be closely correlated with the dependent variable, while remaining relatively uncorrelated with one another. However, it is not often that the quantitative properties of all indicators are simultaneously ideal.

Observe the respective correlations between each independent variable with the dependent variable, *oecd*. From the matrix in Table Six, note that the dependent variable is closely related to three indicators: *founder* (0.9332), *l\_pcgdp* (0.6763), and *polity2* (0.4843), but the relationship with the key independent variable of interest, *wp\_index*, is negligible (0.1651). Intuitively, one might anticipate the high association between the dependent variable and the founding member dummy. Similarly, the other two correlations are readily explained if one considers the full OECD population. To this day, the founding members compose the majority of the OECD population, and it is fairly obvious that these countries are highly-developed, democracies. Thus, these numbers seem to parallel prominent characteristics of the historical member population.

**Table Six: Correlation Matrix of All Indicators**

	<i>oeecd</i>	<i>founder</i>	<i>l_pcgdp</i>	<i>avg_unem</i>	<i>aid</i>	<i>openness</i>	<i>polity2</i>	<i>fdi</i>	<i>wp_index</i>
<i>oeecd</i>	1	0.9332	0.6763	-0.1058	-0.3006	-0.0918	0.4843	-0.0335	0.1651
<i>founder</i>		1	0.6677	-0.1076	-0.2817	-0.1305	0.457	-0.0571	0.1256
<i>l_pcgdp</i>			1	0.0184	-0.5954	0.1831	0.4802	0.0245	0.2272
<i>avg_unem</i>				1	0.0528	0.1723	-0.0065	0.0901	-0.0098
<i>aid</i>					1	-0.0078	-0.2849	0.0799	-0.1511
<i>openness</i>						1	-0.0314	0.3644	0.1151
<i>polity2</i>							1	0.0283	0.3716
<i>fdi</i>								1	0.1737
<i>wp_index</i>									1

In addition, compare the results illustrated in Table Six, i.e. the bivariate correlations, with the theoretical relationship to the rate of accession as articulated in Table Two. Table Six highlights that fact that most of the hypothetical conjectures are empirically supported by the correlation coefficients. For instance, observe that the associations of *oecd* with six of the eight indicators: *founder*, *per capita GDP*, *avg\_unem*, *aid*, *polity2*, and *wp\_index* are correctly signed based on theoretical predictions. In contrast, however, the *openness* and *fdi* variables do not reflect signs consistent with theoretical predictions. In this case, both variables are negatively associated with the dependent variable. This sharply contrasts with what one would expect; especially because the OECD overtly endorses these types of economic activities.

Yet, there are several plausible explanations for this finding. First, it is possible that net worth of investment such as FDI is fairly similar across countries; but when normalized as a percent of GDP the significance washes out. This proposition is supported by the fact the FDI is not closely correlated with per capita GDP. Alternatively, it is likely that the bivariate correlations, which incorporate the full OECD population, are dominated by characteristics of the founding OECD members- all of whom are highly developed, democracies, whose GDP may, in fact, be composed primarily of public spending- to the expense of trade- and whose inflows of FDI may be relatively minimal.

Now, consider correlations among the independent predictors. Optimally, one would prefer that none of the independent variables be closely associated with one another. However, this is not entirely what is observed. Additionally, there are several substantial associations that are relatively predictable based on the substantive properties



of the variables under consideration. Consider, for instance, the strong negative correlation between aid and per capita GDP (-0.5957). Given the conventional wisdom regarding aid and development assistance, it follows that countries with high overall GDP would be less likely to receive aid- This fully substantiates the correlation. In a similar manner the founder variable is closely associated with both per capita GDP (0.6677) and degree of democratization (0.457). Again, these characteristics are alluded to above, and are justified given the pervasive characteristics of the OECD founders.

However, there are several correlations that are somewhat more provocative and worthy of mention. Consider the positive association between degree of democratization and the World Polity index (0.3716). Although the following propositions are not specifically addressed within the context of this project; it follows theoretically that democratic governments would be more likely (1) to engage in cooperative international maneuvers, (2) to accede to international protocols, and (3) to embrace, within a domestic context, the norms represented by the World Polity index. These suppositions are consistent with liberal international relations theory- a subfield of political science that is not fully addressed here. However, at least superficially, one might anticipate that democracies, as opposed to other types of governance, would be more likely to demonstrate a high World Polity index score.

In addition, note the positive correlation between trade openness and foreign direct investment (0.3644). This connection is fairly ironic given the fact that, as mentioned above, neither variable is correctly signed (from a theoretical perspective) or correlated with the dependent variable in a substantial way. This result, however, suggests that FDI inflows and openness to trade go hand-in-hand, which may additionally

point to similarities in domestic policy. Although this statistic is certainly noteworthy, its full implications are not explored here.

Although the bivariate correlations hint at a series of potential relationships, one certainly can not begin to draw conclusions without consideration of the complete time series. Now, the author directs the reader to the results of the Cox hazard rate analysis presented in Tables Seven and Eight. Table Seven presents the variable coefficients associated with three alternative models; while Table Eight offers the hazard rates, alternatively called *odds ratios*, associated with the models identical to those in Table Seven. The coefficients for each variable in Table Seven may be interpreted similarly to a multivariate regression. In Table Eight, the hazard rates should be construed as described above. To reiterate, a hazard rate greater than one represents an acceleration in the time to accession; whereas a hazard rate between zero and one reflects a deceleration in the process.

Model one includes all the independent variables with the exception of the *founder* dummy variable. This version analyzes the importance of each indicator for the full population of OECD members, not solely the group of newly admitted nations. Because the contemporary members make up a small portion of the total OECD member body, this model is dominated by characteristics of the OECD founders.

It is necessary to restate that Model (1) most strongly portrays the *full* OECD population- not its recent expansion. In light of this fact, the author will postpone a detailed analysis of the three research hypotheses for the discussion of results from Model (2). However, without delving into too much detail, few remarks are in order. Model (1) offers a portrait of the OECD as it has evolved since 1980. As demonstrated

**Table Seven: Cox Hazard Rate Analysis of Panel Data 1980-2010 (Variable Coefficients)**

Variables	Models		
	(1)	(2)	(3)
<i>Founder control</i>		35.16*** (0.0000)	39.36*** (0.0000)
<i>Log of Per capita GDP</i>	0.674*** (0.1740)	0.3670 (0.2300)	0.399* (0.2060)
<i>Average Unemployment</i>	0.0092 (0.0376)	0.0084 (0.0314)	0.0107 (0.0383)
<i>Official Aid and Development Assistance</i>	-0.933** (0.3860)	-0.861** (0.3990)	-1.157*** (0.2650)
<i>Trade Openness</i>	-0.0034 (0.0036)	-0.0021 (0.0036)	-0.0013 (0.0051)
<i>Degree of Democratization</i>	0.142* (0.0825)	0.0932 (0.0936)	-0.253*** (0.0683)
<i>Foreign Direct Investment</i>	0.0980*** (0.0331)	0.0848** (0.0367)	0.0912*** (0.0241)
<i>World Polity Index</i>	0.224** (0.1020)	0.163* (0.0851)	-0.8420 (0.5730)
<i>Interaction Term between World Polity and Democratization</i>			0.107** -0.0511
Country Clusters	131	131	131
Failures	29	29	29
Observations	2824	2824	2824
Wald Chi Squared Value	48.60	infinite	infinite
AIC	201.3495	196.1375	190.9378

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table Eight: Cox Hazard Rate Analysis of Panel Data 1980-2010 (Hazard Rates)**

Variables	Models		
	(1)	(3)	(4)
<i>Founder control</i>		1.86E+15***	1.24E+17***
		0	0
<i>Log of Per capita GDP</i>	1.963*** (0.3420)	1.4430 (0.3320)	1.490* (0.3070)
<i>Average Unemployment</i>	1.0090 (0.0380)	1.0080 (0.0317)	1.0110 (0.0387)
<i>Official Aid and Development Assistance</i>	0.394** (0.1520)	0.423** (0.1690)	0.315*** (0.0834)
<i>Trade Openness</i>	0.9970 (0.0036)	0.9980 (0.0035)	0.9990 (0.0051)
<i>Degree of Democratization</i>	1.152* (0.0951)	1.0980 (0.1030)	0.776*** (0.0530)
<i>Foreign Direct Investment</i>	1.103*** (0.0365)	1.089** (0.0399)	1.095*** (0.0264)
<i>World Polity Index</i>	1.251** (0.1280)	1.178* (0.1000)	0.4310 (0.2470)
<i>Interaction Term between World Polity and Democratization</i>			1.113** -0.0569
Observations	2824	2824	2824

Robust standard errors in parentheses

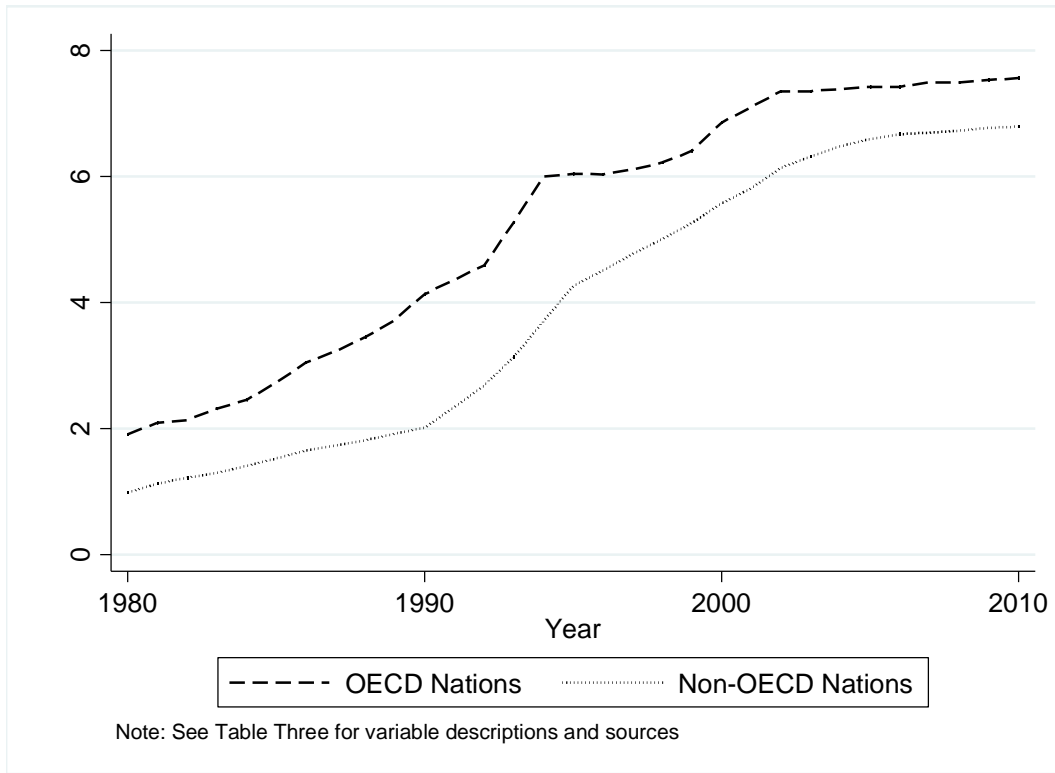
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Note: These data are identical to those presented in Table Seven. All Chi-squared and AIC values are identical as well.

by the statistical significance of the model coefficients and the odds ratios greater than one, in general, member nations are associated with high overall development (*per capita GDP*), financial stability (*aid*), a high degree of democratization (*polity2*), and increased involvement the world market economy (*fdi*) over time. In addition, and most importantly, this model suggests that the full population of OECD nations is closely integrated with the World Polity. The coefficient for the World Polity measure (0.224) is statistically significant, with a probability value of less than five percent ( $p < 0.05$ ). In addition, Table Eight demonstrates that the hazard rate associated with the World Polity measure is greater than one. This finding underscores the fact that, for the most part, OECD members participate in international affairs and accede to international protocols shortly after their inception. Consider the trend lines presented in Figure One. This graph demonstrates that, on average, OECD members maintain a consistently higher participation in international protocols than their non-member counterparts over the entire length of the time series. Without alluding to causality, both Model (1) contained in Tables Seven and Eight as well as the trends in Figure One simply demonstrate that the World Polity contributes to the portrait of OECD membership over time. From a theoretical perspective, this is exactly the result the author desires.

Now, the author turns to the model that highlights the subpopulation of OECD members who acceded after 1993. Consider Model (2) presented in Tables Seven and Eight. This version explicitly isolates the characteristics of more recent OECD members using the *founder* variable as a control. For a description of this variable see Tables Two and Three above. Because seventy-one percent of OECD nations were part of the original population; this control is highly correlated with the dependent variable. Thus,

**Figure One: Comparison of Average World Polity Index Score for OECD Members and Non-Member Nations**



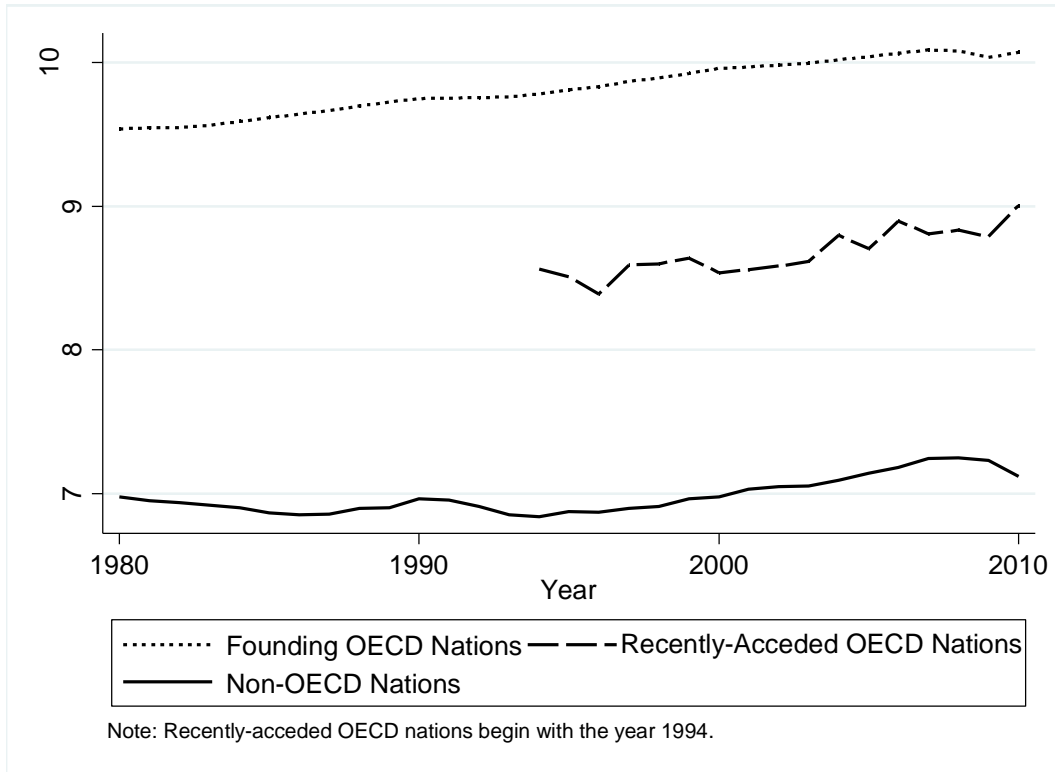
the measure of model fit, the Wald Chi-squared value, is a very large positive number. Ironically, however, the addition of this control does not entirely remove significance from all the other indicators. At this juncture, it is beneficial to analyze Model (2) in light of the research hypotheses.

Hypothesis Two stipulates that nations displaying characteristics consistent with the OECD mandate will be more likely to receive membership invitations. Yet, Model (2) offers mixed support for this proposition. First, observe that overall development, operationalized through the log of per capita GDP (*l\_pcgdp*), was not statistically significant within this Model. This result is interesting on several levels. Not only is this measure highly correlated with the dependent variable (0.6776), but it is statistically significant in Model (1). Yet, Model (2) shows that, after controlling for founding members, recent accessions can not explained on the basis of per capita GDP.

In fact, if we isolate the average income of recent OECD members in contrast with the OECD founders and the overall population, we may magnify this trend. Consider the plots shown in Figure Two below. Although it is obvious that recent OECD members have a higher overall income than the population of non-members, it is also apparent that the per capita variable is significantly reduced for newer members in contrast with the OECD founders. These data suggest that in recent years the OECD administration has begun to look beyond overall development in terms of its membership invitations.

Domestic criteria are key considerations for future membership invitations. As a result, the author chose average unemployment (*avg\_unem*) as additional predictor of future membership invitations based on its consistency with OECD organizational goals.

**Figure Two: Comparison of Average Income for OECD Members and Non-Member Nations**





However, despite its theoretical appeal, this measure was not statistically significant in any of the models. It is possible that the use of a thirty-year average severely limited the usefulness of this measure; however, correction of the substantial missing data problem is left for future research.

Another variable selected to reflect the primary goals of the OECD administration was financial stability. This quality was operationalized through (the absence of) official aid and development assistance (*aid*). Observe that across the three models *aid* is correctly signed, with the expected hazard rate, and statistically significant. Based on the odds ratios presented in Table Eight, one may notice that, if aid is increased by one percent, the *ceteris paribus* likelihood of being invited into the OECD drops by approximately  $(100 - 42.3 =) 57.7$  percent.

This finding regarding official aid and development assistance is certainly nontrivial. Although, from a theoretical standpoint, economic stability tends to be synonymous with overall development, as supported by the high correlation coefficient between *aid* and *l\_pcgdp* (-0.5954), the absence of aid monies simply points to financial self-sufficiency, *not level of income*. This distinction proves to be critical- Here one observes that per capita GDP is *not* a significant predictor of new membership (details below), whereas the absence of aid was one of the most substantial measures.

Another of the measures selected to reflect the OECD mandate was openness to international trade (*openness*). However, similar to the bivariate correlations, this measure also presented surprising results within the survival analysis. In Model (2) of Table Seven, not only was the indicator statistically insignificant, but its value was

negative. The finding is paralleled by a hazard rate of less than one, which is shown in Table Eight.

Despite the fact that this outcome contradicts theoretical expectations, there may be a valid empirical explanation. Consider trade as percentage of domestic GDP. Perhaps other factors, such as public spending, dominate the economies of the OECD members. Alternatively, it is plausible that OECD member nations have moved away from trade in goods and services towards trafficking of capital and financial flows- a feature of economies that is not captured in the current analysis. Areas for future research may involve the inclusion of factors such as government spending and financial trade; however, both these measures are beyond the scope of the current project.

In addition to trade and overall development, the OECD administration has stressed the importance of *degree of democratization* for future membership invitations. Not only are all the founding OECD members unambiguously democratic in nature, but, as recently as 2010, the OECD administration described ‘promotion of democratic governance’ as one of the pillars of its overall mandate. (OECD 2010) These facts are not only supported empirically, but statistically as well. The bivariate correlation between *democratization* and the *OECD* measure is high (0.4841). In addition, Model (1) indicates that *degree of democratization* is a significant characteristic of the full OECD population.

Yet, based on the results of Model (2), this variable is not a significant predictor of *recent* accession patterns. This finding is reaffirmed by the fact that the indicator has a probability of  $p < 0.1$  in Model (1), the framework that does not distinguish contemporary from historical membership, and the significance vanishes in Model (2). In

a broader sense, these data may be purely circumstantial, or, they may point to recent modifications in the OECD mandate. It is worthwhile to observe that almost half of the OECD members who joined after 1993 were former Soviet bloc nations. This implies that the lack of democratization is primarily circumstantial, and may result from the fact that these countries underwent democratic transitions in 1991.

However, it is possible that the statistical outcome has a more deliberate meaning—one that may be associated with a transition in terms of organizational goals. As noted in Chapter Three, the OECD admitted Mexico, a weak democracy with polity scores ranging from 0-8, in 1994 and while inviting Russia, another weak democracy (polity range from 3-6), and China, a state-centered autocracy (polity score of -7), into enhanced engagement status in 2007. If we include the enhanced engagement nations, these three cases comprise approximately twenty percent of the total new membership. Thus, the survival analysis tentatively supports the idea that the OECD administration has placed less emphasis on democratization in recent years. This, in turn, suggests that we may see weakly democratic or non-democratic nations invited into accession negotiations in the future.

Finally, consider involvement in the world market economy, which was operationalized through foreign direct investment (*fdi*). Above, the author noted that this indicator was closely correlated with the trade openness measure. Yet, despite their bivariate association, incorporation of the two covariates into the survival analysis yielded surprisingly different results. Observe that, in contrast with the trade measure, the *fdi* variable was correctly signed, with the expected hazard rate, and statistically significant across both models. If the amount of FDI increases by one percent, the

likelihood of being invited into the OECD increases by roughly 8.9 percent. This statistic suggests that, of the measures intended to depict the OECD mandate, world market economy involvement is one of the stronger predictors of future invitations and eventual accession.

Now, compare and contrast all six variables intended to articulate the contemporary OECD mandate. Although the results regarding world economic market linkages (*fdi*) and financial stability (*aid*) are consistent with what we would expect from a theoretical standpoint, this finding is rather counterintuitive. Observe that only these two measures, not overall income (*per capita GDP*) or degree of democratization (*polity2*), are consistently associated with both the full population of OECD members *and the subpopulation of recently acceded countries*. Furthermore, this quantitative outcome contrasts sharply with the bivariate correlations (see Table Four), which would suggest a strong relationship, through income and democracy, with the dependent variable.

Yet, perhaps this outcome is not quite so surprising when we consider qualities of the recent OECD members. As discussed in detail above, new members display neither the same level of development, nor the same degree of democratization, as the founding population. It follows, therefore, that perhaps the contemporary aims of the OECD administration are centered not purely on overall income or one type of governance, but rather on more nuanced qualities, such as financial self-sufficiency, relative insulation from economic shocks, and favorable international business environments- all of which point indirectly to quality of governance and the long-run health of domestic economies. Thus, the finding that the presence of FDI inflows and absence of official aid is important

for future accession patterns may also articulate a large portion of the Organization's modern mandate.

Finally, recall the last and most critical research hypothesis: that of the contribution of World Polity indicators and treaty accessions towards membership outcomes. These propositions, in particular, depart from domestic criteria and refocus the analysis on international dynamics. The World Polity index reflects a compilation of eight treaties and international protocols. Underlying these initiatives is a set of norms-shared beliefs on topics such as labor, human rights, environmental protection, and international law. Voluntary accession to these protocols symbolically represents adoption of the norms they represent. Thus, the World Polity index attempts to capture a cognitive milieu in which countries exist. It logically follows that countries with shared identities within the international arena would be more likely to become members of similar international organizations. In fact, from a descriptive perspective, the contrast between OECD members and non-members in terms of World Polity index score is fairly obvious. The author directs the reader to Figure Two. Note that the OECD member involvement in international protocols is consistently higher across the entire thirty year time span. It is this property that author attempts to probe in more detail through the survival model.

Now, consider the results of the World Polity measure presented in Table Seven, Model (2). The coefficient for the World Polity index is statistically significant, with a

probability less than 0.1 ( $p < 0.1$ ). In addition, Table Eight demonstrates that as the World Polity index score is increased by one unit, the likelihood of being invited into the OECD increases by 17.8 percent. The statistical importance is not as strong as in Model (1), which combines both recent and founding OECD members, however the configuration in Model (2) demonstrates that this measure is important, nevertheless, for our understanding of more recent OECD accessions.

These findings reinforce theoretical expectations. If we assume that the World Polity represents a general international climate, it follows that participation within this context might result in outcomes such as the invitation to join an IGO. Results of this nature offer empirical support for theoretical research on the role of IGOs and treaties within the international system. As noted in detail above, scholars postulate the IGOs provide intangible assets to their members such as reputation effects, legitimacy, a reduced threshold for cooperative outcomes, networking opportunities, and norm diffusion. Thus, if countries operate within such a collective environment then not only should one be able to observe it in a quantifiable way, i.e. through the World Polity index, but it should also be linked to overt outcomes, such as OECD membership- and this is exactly the author observes.

As a slight extension of the above results the author invites the reader to consider Model (3) from Tables Seven and Eight. This version tests the interaction between the World Polity measure and the degree of democratization. Inclusion of this interaction term is theoretically warranted for several reasons. First, it is a well-known fact that the governments of the founding OECD members are unanimously democratic in nature. Second, as recently as 2010, the OECD administration indicated its support of democratic

governance in terms of its organizational goals. Finally, from a liberal international relations perspective, democratic countries are more likely to embrace international norms and engage in cooperative multilateral negotiations, than their autocratic counterparts. Thus, it follows that World Polity involvement may be increasingly more significant to the international agendas of democratic countries. This, in turn, may have a greater effect in terms of accelerating the rate of accession of highly democratized nations over time.

The modified model is as follows:

$$\lambda(t) = \exp(x_i'\beta)\lambda_0(t_i), \text{ where}$$

$$x_i'\beta = \beta_1 \text{founder}_t + \beta_2 \text{l\_pcGDP}_t + \beta_3 \text{avg\_unem}_t + \beta_4 \text{aid}_t + \beta_5 \text{openness}_t +$$

$$\beta_6 \text{polity2}_t + \beta_7 \text{fdi}_t + \beta_8 \text{wp\_index}_t + \beta_9 (\text{wp\_index} * \text{polity2})_t$$

The results of the proportional hazard rate analysis provide additional support for the above remarks. Note the coefficient for the interaction term presented in Model (3). To interpret this term it is preferable to use the model coefficients in Table Seven, rather than the hazard rates in Table Eight. Conceptually, the interaction terms suggests the following types of research questions: (1) Given a strong degree of democratization (*polity2* score of 10) how does increasing involvement in the World Polity affect the rate at which membership invitations are received? Alternatively, (2) starting from a point of

high involvement in the World Polity (*wp\_index* score of 8), how does increasing degrees of democratization affect the identical process?

Suppose the author sets degree of democratization at 10. Now, she wishes to analyze the role of increasing involvement in the World Polity. In light of Model (3), this implies that the odds ratio is  $e^{(-0.8420 + 10*0.107)} = 1.256$ . This suggests that for strong democracies, increasing the World Polity index score by one point is associated with a 25.6 percent acceleration in the time elapsed until membership.

Now, consider high integration with the World Polity, operationalized through an index score of 8. The interaction coefficient allows the author to calculate the effect of increasing democratization on countries very involved with the World Polity. The hazard rate calculation is:  $e^{(-0.253+ 8*0.107)} = 1.8276$ . This suggests that for countries that are greatly integrated into the World Polity, as the degree of democratization increases by one point, the time elapsed until membership accelerates by 82.76 percent.

Both these findings are consistent with theoretically predicted relationships; however the Model (3) should be interpreted with a degree of caution. Note that the standard error for the World Polity coefficient in Model (3) is nearly one and a half times greater than the error associated with the term in the other two models. Furthermore, observe that, with the addition of the interaction term, the signs of both the *polity2* and *wp\_index* coefficients change from positive (as in Models (1) and (2)) to negative (in Model (3)). Both these features are usually indicative of high multicollinearity amongst the predictors; which, additionally, suggests that Model (3) may not accurately portray the true relationship amongst the data.



As a result, Model (3) is included purely for illustrative purposes. It is worthwhile to note that, Model (2) reflects a more empirically accurate fit for the data, and, therefore, is the better choice for the statistical analysis presented above. Thus, although Model (3) underscores the importance of democracy and World Polity involvement for OECD membership; it may not accurately capture the true relationship. Clearly the connection is suggestive; however, further analysis is beyond the scope of the current endeavor.

Prior to concluding this section, it is beneficial to summarize major trends within the statistical results. Note that although the indicators for overall development (*per capita GDP*) and degree of democratization (*polity2*) reflect strong bivariate correlations with the dependent variable; neither is ultimately significant for the rate at which countries accede to the OECD. In contrast, measures intended to capture connections to the world market economy (*fdi*) and financial stability (*aid*) were revealed to be the most enduring qualities of both founding and more contemporary OECD members. This suggests that both the population of OECD members as well as the organization's mandate may be evolving over time.

Finally, consider the relevance of the World Polity for the rate of accession. The independent variable of interest, the World Polity index, was more critical to the founding OECD members rather than to countries joining after 1993. In addition, interaction of this variable with the *degree of democratization* measure proved to be highly significant. This is not only suggests that democratic governments are most likely to espouse the norms and behavioral expectations represented by the protocols within the World Polity index, but it also implies that strong democracies with high World Polity

involvement are most likely to undergo rapid accession. Overall, the quantitative results support the importance of integration within the World Polity for the rate at which countries accede, yet measures of world market linkages and financial stability proved to be a more robust association.

## CHAPTER SIX

### CONCLUSIONS

The ongoing dynamic between states and non-state institutions, such as international governmental organizations (IGOs), treaties, and protocols, is not fully understood. As a result, the extant literature is riddled with projects analyzing the decisions of national leaders to accede to such entities. Scholars question the autonomy of IGOs within the international arena as well as the advantages of membership within these groups. Although theoretical work abounds, empirical projects placing emphasis on the autonomous behavior of IGOs are rare. Furthermore, studies that model the initiation of membership from within the IGOs themselves are virtually nonexistent.

The current endeavor deliberately attempts to address this void. The author employs thirty years of country-level panel data, spanning 1980-2010, to model the rate at which countries are invited into membership within a single entity, the *Organization for Economic Cooperation and Development* (OECD). Not only does this paper offer commentary on the interaction between nations and IGOs, but additional features, such as (1) selection of the dependent variable, (2) the choice of research methodology, and (3) incorporation of World Polity measures, represent unique contributions of the present work.

As a political and economic institution, the OECD is a provocative research topic. In terms of dependent variable selection, membership within this group is relatively understudied in comparison with that of other more global IGOs such as the World Trade Organization or the World Bank. In addition, OECD membership is both selective and

self-initiated. These properties situate the organization as a true anomaly amongst IGOs. Finally, the historical organizational purpose offers a nontrivial contrast to the organization's contemporary goals. Technically, the group fulfilled its initial aims, to facilitate post-World War II economic development, shortly after its inception. Yet, rather than dismantle the group, the founding members remained relatively quiescent until initiating the several rounds of new membership agreements beginning in 1993. Not only is this recent activity puzzling in and of itself, but it also leaves the question of organizational mandate relatively unanswered. Thus, several features of the OECD's institutional organization and history contribute to its overall research appeal.

In addition to the above, the author argues that characteristics underlying recent membership can not be fully understood by case study alone. Clearly, modeling IGO accession through a population of members and non-members suggests a binary dependent variable. Yet, the author moves beyond cross-sectional analysis, such as a logistic model, in favor of a true longitudinal method, i.e. survival analysis. From a methodological standpoint, this technique allows the author to model the membership process through a slightly more sophisticated lens of organizational evolution. As a result, the proportionate hazard rate analysis represents one of the unique contributions of the study.

Statistics generated by the survival analysis offer a more complete description of both founding and more contemporary OECD members. Included in the quantitative investigation were indicators representing three key hypotheses:

- (1) maintenance of membership by OECD founders,

- (2) conference of membership invitations upon countries displaying properties consistent with the OECD mandate, and
- (3) tests of World Polity involvement, and, its corollary, treaty accession, as substantial factors in terms of accelerating the road to accession.

All three suppositions were proposed to accelerate the time until membership invitations were granted. The author drew panel data to operationalize measures suggested by the second hypothesis. For the final proposition detailing World Polity involvement, she created an eight point index of international protocols. She chose eight treaties based on variability in terms of accession rates and substantive focus. Topics included human rights law, international property protection, environmental law, and resolution of investment disputes.

The quantitative data suggested that rates of accession into the OECD are primarily determined by world market economy involvement (*fdi*) and economic stability [the absence of official aid and development assistance (*aid*)], both of which were robust across both the founding population and contemporary membership models. World Polity involvement was strongly associated with the founding OECD members, but was less influential in terms of shaping the contemporary population.

One of the more surprising results was the fact that neither overall development (*per capita GDP*) nor democratization (*polity2*) was essential for contemporary membership. This outcome was contrary to expectations, in part, because the founding membership was primarily characterized by these two criteria, but also because as recently as 2010 the OECD administration identified its mandate as “promotion of

democracy and the market economy.’’ Thus, the statistical data suggest that perhaps characteristics of more recent members are indicative of a shift in the organizational aims as well. It is possible that the current OECD administration places greater emphasis on world market involvement and financial stability to the neglect of other previous goals such as democratic governance or national income.

Ultimately, however, the question remains, ‘Whither the World Polity?’ What is the future of the World Polity? Does the World Polity matter for IGO membership? Yet, this project provides only a partial answer. Although the hazard rate analysis suggests that World Polity involvement is strong amongst founding OECD members, the connection was not quite as robust amongst more recently acceded nations. In the latter instance, integration within the World Polity placed a close second to other characteristics such as the presence of foreign direct investment or absence of official aid in terms of their effects on rates of accession. This implies that the World Polity, as it is operationalized in the current project, may not be as critical for international relations as proponents of this theory might suggest. Alternatively, it may simply solidify the OECD as a true outlier amongst IGOs, and prevent generalization of the statistical results. Or, perhaps, the quantitative outcome simply suggests that factors such as World Polity involvement work in tandem with other features to create a more holistic picture of accession, which, ironically, may prove to be the most empirically valid conclusion of all.

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