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Analyzing the Effectiveness of OECD Economic Regulation in the Quest for ICESCR Compliance

Blair Kuykendall

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Blair Kuykendall
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Program Mentor: Dr. Otis Stephens
Research Mentor: Dr. Hemant Sharma

I. Introduction

Only in recent times has the international economic community turned its attention to the necessity of respecting human dignity in the pursuit of capitalistic success. Measures like the International Covenant on Economic, Social, and Cultural Rights have been upheld as standards to which all nations should aspire:

> *"Recognizing that, in accordance with the Universal Declaration of Human Rights, the ideal of free human beings enjoying freedom from fear and want can only be achieved if conditions are created whereby everyone may enjoy his economic, social and cultural rights, as well as his civil and political rights...Considering the obligation of States under the Charter of the United Nations to promote universal respect for, and observance of, human rights and freedoms..."* (ICESCR Preamble, 1976)

This covenant reflects the intention that nations of the world have displayed in upholding certain undisputable rights of the modern worker. Most members of the Organisation for Economic Cooperation and Development (OECD) have signed and ratified this covenant; the notable exception is the lack of U.S. ratification. The universal worker rights spelled out in the document are largely held as standardized goals around the world. Developed countries are often the loudest voices for increased worker rights, and have implemented economic regulation to enforce them. A large part of the regulation carried out by state actors around the world are designed to promote the very standards the United Nations has put forth. The OECD nations attempt to fulfill their "obligation of States" with service industry regulation, enforced through their respective governments. These nations would be quick to

assert their intentions in upholding human dignity in economic practice, but are their measures effective? Does more industry regulation actually translate into better employment standards for the citizens of these nations?

The goal of my research is to evaluate possible correlations between the amount of industry regulation implemented by OECD nations and their respective compliance with the provisions of Article 7 of ICESCR. Using statistical surveys supported by the OECD and the United Nations, I endeavor to find a link between government oversight and an increased capacity to guarantee their citizens "the right to the enjoyment of just and favorable conditions of work" (ICESCR Article III).

In general, the OECD nations are leaders in international forums like the United Nations, focusing on spreading policies and practices that uphold basic rights for their citizens. My research will help to determine whether the regulatory policies that OECD nations implement to keep their economic activity reputable are in fact promoting the human rights they eagerly champion on the international stage. Ultimately, I strive to answer the following research question: Are workers in OECD countries actually enjoying the rights and freedoms their leaders cite as non-negotiable when crafting economic regulation?

My work will be carried out with the following methods. I will use the codified data provided by the OECD on relative levels of industry regulation for member nations, and conduct a regression analysis using those statistics as an independent measure of a country's regulatory levels. To focus on the protections guaranteed by Article 7 of ICESCR, I will employ five dependent variables that reveal the extent to which citizens experience fair wages, healthy and safe working

conditions, equal employment opportunities, and adequate rest and leisure. The fair-wage dependent variable will be created from OECD statistics on average annual wage comparison by country. The worker health and safety dependent variable will be derived from OECD statistics on the percentage of out-of-pocket health care expenditure by each nation. The equal opportunity in employment dependent variable will be taken from OECD statistics, and separate analyses will be conducted for male and female unemployment rates by country. Finally, OECD statistics on average annual hours worked across nations will be used to ascertain comparative rest and leisure opportunities across nations.

Ideally, my study will make a strong statement as to the correlation between the extent of industry regulation and results manifested in the quality of life for citizens of OECD nations. This research thesis will fit well into the framework of my College Scholars Program major: International Dimensions of Corporate Litigation. With this project, I will be able to explore comparative legal regulation of industry across OECD nations and its respective effectiveness. I expect to gain a broader perspective on the effect of legal policy on industry across nations, as well as its impact on different citizenries. This thesis project will enrich my curriculum as I apply my legal and economic coursework to conducting an in-depth analysis of a significant international issue.

II. Literature Review

Following World War II, the United States of America emerged as the hegemonic leader in a new system of global economic order. Though America's vast economic and military strength left it veritably unrivaled in global dominance, American policymakers and economic theorists were anxious to promote liberal multilateralism in post-war order. In contrast, Britain was focused on generating full employment and economic stability through imperial preference and bilateral trade. Ikenberry (1992) examined the "watershed" agreement that emerged at Bretton Woods, focusing on the compromise reached between American and British policymakers, economists, and monetary experts. This compromise would eventually create the system of norms that have governed international trade for almost century. Additionally, this framework resulted in the creation of the OECD, and still carries heavy influence over the policies that its members pursue.

According to Ruggie (1982), this embedded liberalism was designed to promote a comparative advantage system on a multilateral scale in order to minimize, simultaneously, adjustment costs to society and political vulnerabilities that might result from national differences. Additionally, both John Maynard Keynes and Harry Dexter White sought to forge a compromise that would protect economic stability against divergences in economic development, interstate power relations, and domestic state-society relations. The Americans and their British counterparts eventually reached a compromise that incorporated overarching norms that would forever change the international economy. Chwieroth (2012) cites multilateral surveillance through international regimes like the World Bank and the

International Monetary fund, along with the non-discrimination in trade policies, as the most formal of these norms. Informal norms included respect for domestic policy autonomy, an emergence of international public finance, and the emergence of inequality institutionalized in the governing systems of international institutions.

Ruggie (1982) argued that, after the collapse of the gold standard in the early 1970's, international economic regimes would continue to develop based on these shared norms instead of through an international hegemon. In turn, the demise of the dollar's gold standard created a dilemma for the world's leading powers. Developed nations reserved their commitment to creating a stable system of exchange that would not allow for the "beggar thy neighbor" policies that followed the First World War. Floating exchange rates were implemented to allow macroeconomic policy discretion to correct for instances of speculative, irrational "herd" behavior. These incentives allowed liberalization of trade regimes to expand. Ruggie used this development to justify his theory that embedded liberalism could endure in an international policy regime based on shared norms across national boundaries, even without a hegemon. Today, the dollar has remained a key currency, more nations continue to commit to multilateralism, and currencies still retain convertibility.

While the Organization for Economic Co-operation and Development (OECD) would not be created until 1961, the Organization of European Economic Order, its predecessor, was created in 1947 to oversee the Marshall Plan (OECD 2012). The formulation of such an institution represented one of the first nods to a collective international economic interest. When the United States and Canada joined the

conference in 1961, the institution increased its influence across continents to streamline policy formation in an increasingly globalized world. In fact, one of the first actions taken by the OECD nations, the Code of Liberalization of Capital Movements and Code of Current Invisible Operations loosened up the flow of capital in international markets and provided some basic ground rules for national open market operations (OECD 2013).

Subsequently, two committees were formed by the organization in 1962: the Trade Union Advisory Committee and the Business and Industry Advisory Committee. TUAC is key to presenting the views of organized labor to policymakers in the OECD; specifically, the committee works to provide a social dimension to the economic analysis that takes place within the body. The committee currently harbors more than 58 trade union centers, representing around 66 million workers worldwide (OECD 2013). BIAC reaches out to OECD delegates to advocate for the interests of the international business community through the work of 38 policy groups. Over 2,100 business representatives work to advance the perspective of industry in the negotiation process (OECD 2013). Furthermore, in 1962, John F. Kennedy's proposal for an OECD Development Center came to fruition. This center brings OECD together to discuss issues of poverty reduction and social development (OECD 2013). The OECD Observer magazine was even created to disseminate the findings of OECD researchers and the progress reached by the body, to build bridges between nations about economic matters.

Several fundamental international policy guides also originated in committees of the OECD. One particularly interesting product of OECD cooperation

has been the Frascati Manual, first published in 1963. This manual is the culmination of a joint effort to guide the statistical methods and R&D presentations of members of the OECD nations. It offers guidelines for the use and collection of international trade and demographic information useful to the OECD in the creation and implementation of new policies (OECD 2013). The OECD Economic Outlook was first published in 1963. From creation, its economic outlooks were designed to update world leaders and research institutes with predictions for future progress or regression. Generally, these outlooks are presented in briefings, often delivered by the OECD's secretary general, and entail a macroeconomic focus for recommendations (OECD 2013).

Beyond regulation of capital markets, the OECD has historically been influential in recommending policies for agriculture and the environment, as well. In 1969, for example, international standards for trade in fruits and vegetables involved in commerce were passed. Beyond addressing agricultural issues, the OECD employs environment ministers who first met to discuss global climate change issues in 1974 (OECD 2013). Through discussion and research, the OECD developed the 'polluter pays principle' to account for unforeseen environmental catastrophes such as oil spills. When major disasters strike, the council stated, the actor responsible for the damage should fund the clean-up effort.

The United States and Britain have historically played major roles in this cooperative body, and thus their ideologies have been strongly reflected in its decision-making processes. In recent decades, the OECD has functioned as a forum for 34 member nations to discuss economic issues and promote solutions.

In particular, OECD nations have proclaimed that the goal of their cooperative efforts serves "to foster prosperity and fight poverty." Undoubtedly, these nations have expressed their belief in both international and state regulations for advancing this aim. The work of Conway and Nicoletti (2006) is among those that have compared national regulation of the professional economies across nations. Conway and Nicoletti's contribution, as to the extent of service industry regulation in various nations, provides a perfect springboard to ascertain which level of regulation most adequately meets the aims of the international community—specifically in regard to the furtherance of ICESCR.

Other researchers have used various methods to explore the extent and the effectiveness of economic regulation across the professional sector, as well. For instance, Iain Paterson, Marcel Fink, and Anthony Ogus (2003) have explored liberal professional regulation and its impacts in the fifteen member nations of the EU. They cite regulation, at least to some degree, as necessary for the normal functioning of a market. Their reasoning concluded that regulation preserves competition, more effectively directs the production of public goods, avoids the negative externalities associated with low-quality services, and resolves informational asymmetries between professionals and clients (Paterson et al., 18). More specifically, they examined the legal, accounting, technical and pharmaceutical industries for presence of product, professional conduct, and market entry regulations. Their study found that even within the realm of the EU, regulation across the professional services varied greatly. Their findings indicated that, in general, strictly regulated professions generally had lower numbers of professionals.

However, the output of each individual professional was much higher. They thus concluded that regulation can promote economic benefit, though often at the expense of consumer welfare. Instead of focusing on economic benefits produced by economic regulation, though, this project will examine the effects of each OECD nation's professional industry regulation on human welfare.

Galligan and Larking (2009), out of the University of Melbourne, suggest a degree of hypocrisy in the way the OECD handles free trade and regulation of economic practices, compared to their handling of human rights adjudication. The authors use their inquiry to highlight the reluctance of the U.S., specifically, to participate in covenants that involve international human rights—even while the nation simultaneously promotes the decisions of the WTO. The article suggested that this reluctance may stem from a U.S. desire to maintain its power status in the realm of human rights (Galligan and Larking 2009, 10). Further, the authors indicated that free trade has been established as critical to the interest of the U.S., while human economic and social rights are, in essence, circumstantially dependent and less suitable for legal regulation. Instead of limiting a critique to the United States, however, this project will attempt to question the human rights improvements delivered by each OECD nation in their professional sectors.

In a similar critical examination of professional regulation, Seibert (2008) analyzed the effectiveness of regulatory boards in promoting public welfare. This analysis concluded that government regulatory agencies essentially had the authority to act as a functioning monopoly over their respective fields. In short, restrictions to entry and other methods used by these boards drive up the cost of

services to consumers while simultaneously eliminating potential sources of rivalry within an industry. Her work also suggested that competition and market forces could prove much more effective in delivering benefits to consumers than those imposed by regulation (Seibert 30). Further, she asserted that decreased regulation would generate a greater level of competition and drive service prices lower.

Seibert (2008) is certainly not the only researcher to examine the effects of economic regulation on the professional sector. Debate over professional regulation has raged since the pioneering work of Friedman and Kuznets (1945), who examined regulation of the medical and dental industries. Also, in an assessment of the dental industry, Kleiner and Kudrle (2000) explored the effects of licensing restrictions. They concluded that licensing offered no gains to consumers in terms of overall dental health, but did increase the cost of service. Kleiner and Krueger (2008) later examined specifically the phenomenon of occupational licensing. Their study indicated that licensing can have a similar effect on the professional sector as a union, driving professional fees up by as much as fifteen percent. They also found that, as of 2006, 29 percent of the labor market was under professional regulation. Their study was limited to the United States, however, while my project will provide commentary on this phenomenon on a broader geographic scale, and across more industries.

In an examination centered on the outlook of human rights in Australia, Mapulanga-Hulston and Harpur (2009) have asserted that the claim of indivisibility in the realm of human rights has been reduced to mere rhetoric (Mapulanga-Hulston and Harpur 49). They further claimed that the economic and social rights

expressed in ICESCR are relatively neglected when compared with political rights. In keeping with the enhancement of cultural rights, state ratification of a treaty such as ICESCR signifies a commitment to comply with its aims domestically. State parties, after all, are required to present reports updating compliance with ICESCR's aims directly to the United Nations. While sometimes treaty ratification can be the first step in a positive direction, though, Hathaway (2002) has concluded that nations commonly skirt their obligations to comply with the tenets of human rights treaties that they have ratified. Mapulanga-Hulston and Harpur (2009) go on to cite the example of Australia, which ratified ICESCR in 1975 but as of today still resists its enforceability in domestic operations. The nation asserts that economic, social and cultural rights are delegated to the people already through common law and other acts of the domestic legislature. Even so, the article itself reiterates that all states that are a party to ICESCR must attempt to deliver basic rights of housing, health care, and sustenance for at risk populations with their domain. Amnesty international, in fact, has called Australia's compliance with these tenets into question (Mapulanga-Hulston and Harpur 61). The authors further suggest that a bill of rights for the Australian people might be the most effective means for ensuring ICESCR compliance. Their study, though, did not generate a greater understanding of the worldwide situation in regard to compliance with ICESCR, which is one of the aims of this project.

Leader (2008) has already called into question the regulatory proceedings of the OECD in human rights protection. His examination of human rights abuses in the Democratic Republic of the Congo has inspired calls for a more effective system of

accountability than the "soft law" provisions of the OECD. In 2000, a UN Panel of

Experts launched an inquiry into the management of the Congo's natural resources,

only to discover vast amounts of exploitation and corporate abuses. The panel

returned findings that corporations had violated even the comparably lax OECD

Guidelines for Multinational Corporations. However, the guidelines are only

voluntary suggestions that protect consumers, organizational transparency,

technology rights, and competition. Leader's study has suggested that these

guidelines are a well-established starting point for creating a system of governing

principles that will be enforceable against the actions of multinational corporations.

   With a focus on the struggle to achieve the Millennium Development Goals

and an attention on the goal of attaining substantive equalities worldwide, Carmona

(2009) produced a commentary on the conduct of the 159 states that have ratified

ICESCR. These states were obligated, under the provisions of Article 11, to create an

adequate standard of living for the peoples they govern. The author focused on the

duty of developed nations to "respect, protect, and fulfill" the guarantees of the

covenant (Carmona 9). Developing states were called upon to comply with the

covenant's aims where possible and to identify and to report areas of need. While

states are legally obligated to comply with these standards, however, the UN is

bereft of an effective way in which to supervise their enforcement. The optional

protocol attached to ICESCR has yet to pass the General Assembly, but it would

supply a system by which nations could lodge human rights complaints.

Consequently, Carmona has called for the ratification of the optional protocol as an

effective means for the Committee on Economic, Social, and Cultural Rights to

ensure state compliance with ICESCR provisions. This mechanism is seen as essential in the eventual realization of economic rights.

The widely debated concept of globalization has been examined as to its effects on the enforcement of economic rights. Payne (2009) has analyzed its impacts on this branch of human rights, specifically on non-OECD member nations. His conclusions indicated strongly that nations must be disaggregated in order to delineate trends in the effects of globalization. The international economic system, he concluded, has had little effect in reversing economic and social inequalities (Payne 415). In fact, his findings demonstrated that foreign direct investment and official direct investment do not significantly influence the respect of these rights, and that portfolio investment actually hinders them. The work also concluded that human rights protection is not often taken into account in investment decision-making processes of multinational corporations in foreign nations. It could be that a shortage of international economic regulation is responsible for these issues.

In research specific to the United States, Scott (2009) examined the ongoing failure of the nation to focus on fulfilling social and economic needs. In the context of the economic catastrophe of 2008, she asserted that health care reform was utterly insufficient in providing the protections needed for the nation's citizens. Her overview of the situation calls into question the continued reluctance of the U.S. to ratify ICESCR, based on the requirements to provide housing, health care, and an adequate standard of living (Scott 22). In fact, all major developed and industrialized nations have ratified the treaty with the exception of the U.S. (While Jimmy Carter signed the treaty in 1977, he did not submit it to the Senate). Drawing

a stinging contrast, her missive questioned the inability of the U.S. to comply with

the provisions of ICESCR while at the same time fielding a defense-spending budget

that outstrips the rest of the world by far. She views the ratification of ICESCR as a

critical step in the journey to enforceable human rights protection. Herein, I assess

the relationship between such regulatory measures and their tangible impact on

day-to-day living conditions of individual citizens across OECD nations.

III. Method and Hypotheses

A. Independent Variable of Theoretical Interest

Thanks to the extensive work of Conway and Nicoletti (2006), the 34 nations

of the OECD have been comparatively scaled in their implementation of licensing,

price, and fee regulations across non-manufacturing sectors. Specific factors of

"state control, barriers to entry, involvement in business operations and, in some

cases, market structure" were codified and weighted (Conway and Nicoletti 2006).

The researchers considered their approach "objective" because it was not survey-

based; instead officials from member nations and OECD experts scaled the relative

rules, regulations and market conditions and market conditions in each country. In

order to weight relative regulatory scores, "individual regulatory items were

aggregated into low-level indicators which were, in turn, aggregated into

intermediate-level indicators by industry" (Conway and Nicoletti 2006).

Information taken from regulatory officials was then compiled into an algorithm

and later aggregated into summary indicators across each nation. Since different

weights were given to different regulatory procedures like licensing requirement,

Conway and Nicoletti admit that there is a certain degree of discretion involved in the weighting of these regulatory schemes. They argue, however, that the transparency resulting from an objective appraisal by governmental and academic officials rises to a level of merit useful in accumulating data otherwise difficult to isolate.

Their system rated each OECD nation's regulatory practices on a scale from zero to six. A scaled score of six, for instance, would mean that a country had an average score of six, indicating that it had the highest regulatory levels for its professionals, pricing of their services, etc. This data was compiled across accounting, architectural, engineering, and legal professions. Adjusted for levels of enforcement, their study makes a substantial statement as to the comparative stringency of each OECD nation's regulatory regime. Their findings regarding the overall regulation in each nation's professional services sector for 2008 serve as the independent variable for our analysis. These statistics are the starting point in determining the effectiveness of different levels of professional regulation in advancing the goals of ICESCR.

B. Dependent Variables

For the purposes of this study, five dependent variables will be used reveal the extent to which citizens experience fair wages, healthy and safe working conditions, equal employment opportunities, and adequate rest and leisure in their respective nations. These criteria were derived from Article 7 of ICESCR. Each dependent variable will yield a unique hypothesis.

The fair-wage dependent variable is derived from OECD statistics on an average annual wage per worker comparison by country. This variable was specifically taken from data tables representing averages from the OECD National Accounts. The figures are representative of every sector in each economy. Taken from the fiscal year 2008, these figures are designed to be reliably constant time-series and cross-country contrasts. The OECD holds that they were reported consistently for each of the member nations. The estimates stem from a division of a nation's wages and salaries figure by an estimate of their total employed citizens. The final product of the calculation estimates average annual wages per full-time equivalent dependent employee. The numbers are reported in U.S. dollars adjusted for purchasing power parity and exchange rates. Based on the perception of industry regulation and increased wages as discussed above, it is likely that higher regulation will lead to higher wages. Thus, *Hypothesis #1* will read as follows: As the scaled regulation score variable increases, the average annual wage for a given country will increase as well.

The worker health and safety dependent variable will be derived from OECD statistics on out-of-pocket health care expenditure of employees in each nation. These figures were taken from an OECD study that partnered with Eurostat and the World Health Organization Health Accounts. They estimate the percentage of total health care costs that are paid out of pocket by private households. Because of the availability of data, these numbers were taken from the year 2007. While this is a departure from the 2008 figures used in the rest of the paper, this was necessary to provide data for the majority of nations. With increased industry regulations, it

seems most likely that workers will pay less out of pocket for their health care. This is due both to the structure of nations that tend to have more regulated industry, being more likely to offer social services. Thus, *Hypothesis #2* will read as follows: As the scaled regulation score variable increases, the employee out-of-pocket healthcare expenditure for a given country's workers will decrease.

The equal opportunity in employment dependent variable will be taken from OECD statistics on male and female unemployment rates by country. They are taken from the OECD's statistics database on the labor force of each nation. For the purposes of this study, the respective unemployment rates for both men and women will be analyzed in regard to the extent of regulation in the economy and are comparatively examined. This process is designed to ascertain the extent of equality in employment based on gender, in each economy. This study submits that an increased level of regulation within an industry will likely promote equal levels of male and female unemployment, considering that greater regulation would involve more equality measures. Thus, *Hypothesis #3* will read as follows: As the scaled regulation score variable increases, the measures of female and male unemployment will be closer.

Finally, OECD statistics on average annual hours worked across nations will be used to understand the differences in comparative rest and leisure opportunities across nations. These data are presented in the total hours worked annually per worker. This average was arrived at by the division of total hours worked in a given year over the number of workers present in an economy. They are reliable as a stepping-stone for comparison between working conditions in differing economies.

These data are consistent with the figures on productivity also reported by the

OECD. It is expected that industries with greater regulation will have higher

averages for hours worked over the course of a year, given that there are more

restrictions to entry and services are often therefore in great demand. *Hypothesis #4*

will therefore read as follows: As the scaled regulation score variable increases, the

average hours worked annually by each worker will increase as well.

C. Control Variables

To better understand statistical significances arising from the collected data,

several control variables were added to the study. Given the overarching

importance of national economic strength in determining both the prevalence of

success of economic regulatory policies, the gross domestic product of member

nations was relevant to control. Countries were thus controlled based on their

annual gross domestic product for 2008. This data was taken from the OECD

Factbook, and measures the size of GDP in billions of US dollars, adjusted for

purchasing power parity. As the introduction of this analysis focused on the

importance of the guarantees made by the world's nations in the ICESCR treaty, it is

useful to examine the importance placed on these principles by member nations

based on their ratification of the treaty itself. Ratification would therefore indicate a

desire to comply with the aims appointed in the treaty. Countries were thus also

codified based on whether their government had ratified ICESCR. The only included

nation that had not ratified was the United States. Statistics were also culled from

the OECD Factbook regarding population size, Gini coefficent, and labor productivity

for each nation. After those data were examined, a third control variable was added to the study: the Gini coefficient. Given the importance of wealth inequality both in the implementation and the effects of regulation, this factor was deemed appropriate to include. Thus to enhance the analysis, the results were also controlled on the basis of their Gini coefficients.

IV. Data and Analysis

This study aims to juxtapose each nation's level of regulation against its ability to promote the values that the majority of OECD nations have aspired to under the United Nations ISCER provisions. By performing a linear regression with the data, it will become transparent as to whether OECD economic regulation of the professional sector helps to deliver concrete results that improve living standards. For instance, it would be expected that if regulation were effective in bettering the lives of a nation's citizens, nations with higher regulatory scores would produce higher scores in areas of worker compensation, leisure, etc.

To perform the regression analysis, data were pooled from their varying locations on the OECD website into a consolidated table. Using STATA, the independent variable regarding the extent of regulation within an economy was fitted against each individual dependent variable. Similarly, regression models were created with control variables for the aforementioned elements.

For the first analysis (see Table 1, Model 1), *Average Earnings per Worker* was regressed on the regulation coefficient for each nation. That regression produced a coefficient of 3,915.77. This indicates the positive relationship between

regulation and the average annual wage of workers. However, this coefficient does not quite rise to the level of statistical significance (p= .200). This means that the data do not indicate that the extent of regulation have a significant influence of the average wage of a worker in a given nation's economy.

In Model 1.2, *Employee Out-of-Pocket Health Expenditure* was also regressed on the regulation coefficient for each nation. A positive correlation was found between out of pocket health expenditure and increased professional industry regulation, with a coefficient of 2.89 (p=.1065). At this point, then, I find no support for the hypothesis that increased industry regulation would produce decreased employee out-of-pocket health expenditure. In fact, my findings would indicate that health care expenditure actually increased with increases in regulation—although this finding only borders statistical significance at the .10 level. This phenomenon is perhaps explained by a link between increased costs to industry in complying with regulations, which are then passed on to employees. Ultimately, additional research is needed to further examine this occurrence.

Analysis of the effects of industry regulation on equal opportunity for women and men in the workplace required a more complex analysis. Both the *Male and Female Unemployment Rates* for each nation's economy were regressed on their respective regulation scaled scores. For female unemployment, the model yielded a coefficient of -66.56. This indicates that female unemployment decreases with more industry regulation. However, the p value is .6781, which means that the effect of regulation on decreasing unemployment is not statistically significant. For the male unemployment variable, the model yielded a coefficient of -72.96. This indicates that

with increased regulation, male unemployment is reduced to an even greater degree than female unemployment. However, male unemployment and professional industry regulation are not statistically significant ($p = .7282$). Even so, while both unemployment values fail to achieve statistical significance, an inference can be drawn from the two models. Specifically, a comparison of the results from Model 1.3 and Model 1.4 fail to support the hypothesis that increased regulation would create greater gender equality in employment.

In Model 1.5, the *Average Annual Hours Worked per Worker* variable was regressed on the professional regulation level of each economy. A coefficient of 75.85 was generated, meaning that workers in more regulated economies generally work more hours. This statistic generated a *p* value of .0934, meaning that the correlation achieves weak statistical significance. Thus, the effect of professional industry regulation on the amount of time workers spend at work is debatable, but worthy of future consideration. Hypothesis #4 indicated that hours worked would likely increase with increased regulation, and is not falsified by these findings. However, it ultimately seems illogical that more regulation would lead to more hours worked. One explanation could be that more regulation might place economic restrictions on employers, and would in turn result in fewer employees entering the workforce; thus, existing employees would be forced to work more hours.

While not every variable in the models achieved statistical significance, the findings were nevertheless telling. The variables that showed the greatest statistical significance were average hours worked and out-of-pocket health expenditures. It can reasonably be assumed that greater government regulation of the professional

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service industry does play an important role in increasing the hours an employee works and increases healthcare expenses paid by employees. Given that these *p* values are on the higher side, though, these data indicate that professional industry regulation is not playing an exceptionally significant role in helping nations meet promises made in ICESCR and similar treaties. Rather, these findings seem to indicate that greater economic regulation does not necessarily lead to improved conditions for workers.

In order to better understand the true effects of professional industry regulation on individual national economies, a series of control variables were used to paint a clearer picture of economic reality. A discussion of the control variables and their effects on the dataset follow.

Controlled Scenario Data and Analysis

To bolster the analysis from Table1, three control variables were used: gross domestic product in billions of dollars, ratification ICESCR and the Gini coefficient. These variables were introduced to create a new set of regression models (See Table 2). As stated previously, ICESCR refers to the International Covenant on Economic, Social, and Cultural Rights passed by the United Nations. Only the U.S. has not ratified this treaty, but controlling for this fact altered the findings greatly. National data were also controlled based on their respective Gini coefficients, which is a measure of income inequality in each economy; the higher the Gini coefficient, the greater income inequality is present within a nation. These three factors were used to take a closer look at the effects of government regulation on economic well-being.

In Model 2.1, the *Average Annual Earnings per Worker* variable was regressed with the control variables added; the regression generated a coefficient for the *extent of industry regulatio*n variable of 1,455. This correlation was positive, as it was in the first regression, but is again statistically insignificant (p =.70). These results would indicate that overall professional industry regulation is not likely to have a significant impact upon raising average annual earnings per worker, even less so when controlled for differences between nations. While it appears from our analysis that worker earnings might be mildly positively correlated with increased regulation, the statistics suggest that this notion is not statistically significant after instituting appropriate controls.

In Model 2.2, *Employee Out-of-Pocket Health Expenditure*, the results were equally surprising. When adjusted for statistical differences across nations, the analysis generated a coefficient of .099. The correlation was positive as in the first analysis, but again, less so than before. The controlled p value, however, was .95, which was significantly higher than the uncontrolled p value. This seems to indicate that when outside factors are controlled for, economic regulation has an even smaller impact on employee health expenditure. While the coefficient would still imply that employee health expenditure increases with increased economic regulation, the p value precludes reliance on this finding. It is interesting to note that when the variable was controlled on the basis of GDP, *p=.095*. This means that GDP weighs heavily as an influence on how much workers spend on health care. Economic regulation, however, cannot be tightly linked to the extent of employee spending on health care, because of a high p value.

When controlled on the basis of GDP, ICESCR ratification, and Gini coefficient, the *Male Unemployment* and *Female Unemployment* variables produced an interesting set of findings (Model 2.3, 2.4). When male unemployment was regressed with the controls, the coefficient for *extent of industry regulation* was 66.97. This output was significantly different from before, indicating a positive relationship between regulation and unemployment instead of a negative one. Also interesting, the *p* value was significantly reduced with the control variables included, and fell at *p=.158*. This means that when control factors are considered, increases in male unemployment could be related to the dependent variable; The *p* value, however, is not strikingly low, so the impact of regulation at all is arguable; future research may wish to re-analyze this relationship. It is interesting to note that GDP was significantly linked to rates of male unemployment, with a controlled *p* value of .000. Whether or not a country had ratified ICESCR also played into the extent of male unemployment, generating a controlled *p* value of .03.

With respect to female unemployment, the coefficient for *extent industry regulation* was 97.10 with the controls added (Model 2.4). This result indicated a positive correlation between economic regulation and female unemployment. For this analysis, *p=.084*, making it statistically significant; economic regulation, then, seemed to increase female unemployment rates. While that *p* value is not highly significant, it can reasonably be concluded that increased industry regulation does increase female unemployment. The GDP control variable also had a significant influence on these findings (*p=.000*).

Overall, this study aimed to determine whether or not economic regulation increased gender equality in the workforce. Given the output of Model 2.3 and Model 2.4, though, it seems that industry regulation increases female unemployment at a more rapid rate than male unemployment. It would be reasonable to conclude, therefore, that industry regulation is definitely not significantly increasing gender equality, and may in fact be decreasing gender equality in the workplace. This finding is more reliable given the lower *p* values generated by a controlled linear regression analysis.

In Model 2.5, the *Annual Average Hours Worked per Worker* was regressed on the extent of industry regulation generating a coefficient of 59.95. This would indicate that increased regulation increases the average hours worked annually by each worker. The extent of this increase was reduced when controlled by various factors that influence each nation's economy. This finding bordered on the generally accepted parameters of statistical significance (*p=.136*). This indicates that while not concretely linked, there is still an important relationship between industry regulation and annual average hours worked per worker. It can be safely stated, then, that increased economic regulation does not reduce the amount of hours each worker works. Furthermore, it is interesting to note that, in regard to the annual hours worked per worker, the control variable for Gini coefficient was statistically significant, with a *p* value of .017. This seems to indicate that a country's income distribution is positively related to the hours worked by its employees.

V. Conclusions

Given the results of the initial analysis and the controlled regression, the most statistically significant result generated by the analysis centered on female unemployment. The model succeeded in finding a link between increased economic regulation and increased female unemployment. Reasons for this connection could be wide ranging, and more studies will be needed in the future to determine the true cause of this phenomenon. However, one possible reason for the increases in female unemployment associated with increased industry regulation could be a connection between economic regulation and the incentive of businesses to hire workers. It could be possible that increased levels of regulation and requirement on private enterprise create a disincentive for the entity to hire a greater number of employees. Since women have been historically underrepresented in industries such as engineering, medicine, and law, firms that are able to hire only a few workers may be more inclined to hire males first. Thus, it seems elementary to assume that additional requirements placed on workers, especially women who may be trailblazers in certain industries, would be detrimental in achieving gainful employment.

As to the broader results of this inquiry, results are varied, as *p* values generated in the controlled analyses were equivocal on the matter of statistical significance. The most significant connections between regulation and working conditions in the uncontrolled analysis implied that health expenditure and hours worked both increased as regulation increased. These findings were weakly significant though, at *p* levels of approximately .10. On the whole, however, this

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analysis generates the conclusion that increased industry regulation is not closely linked to many noticeable increases in ICESCR compliance.

These results are somewhat startling. OECD nations employ various forms of industry regulation on their economies to improve general welfare. Even so, this study, could find no link between increased levels of regulation and improvements experienced by workers in areas of wages, health, equality, or leisure. In fact, the most significant findings actually indicated that increased regulation had a negative influence on the quality of life experienced by workers. Specifically, paying more out of pocket for health care and working longer hours, or perhaps not working at all, are the only phenomenon that seemed to bear a statistically significant link to increased regulation on industry.

This is obviously an area that requires a great deal more research. If anything, these results are most troubling. Global economic hardships are widespread and divaricated. OECD nations claim to be the most advanced, most developed systems in regulating economic activity. It appears, however, that the tools they claim to be effective are instead ineffective, and perhaps even detrimental to the citizens they serve. The requirement of ICESCR, with its basic human rights guarantees, is certainly not an outrageous infringement on national government. It is, rather, a useful guideline in forming goals for developed nations to achieve.

Based on the results of this analysis, it appears that OECD nations are not on the right track to achieving these aims. The economic regulations they employ over industry are simply not bettering the lives of their citizens. In some cases, excessive regulation may in fact make the lives of individual citizens more challenging—

perhaps by inadvertently increasing expenditure on health care, hours worked, and unemployment. It thus appears that those countries with stricter regulations do not deliver positive economic results. Future papers are needed in order to discuss the reasons why regulation is not having a positive effect, and which types of regulation are most effective.

In the end, these findings pose a very sobering question. If those nations that have committed themselves to compliance with ICESCR have thus far been entirely unsuccessful in bringing about its aims, what course should the nations of the world take? Clearly, ICESCR ratification is not linked with better economic outcomes for the world's citizens. The United States has been universally condemned for refusing to ratify the treaty, yet those nations that have are not achieving better results. While ICESCR's aims certainly seem noble, perhaps its weakness lies in a lack of direction as to how nations pursue the achievement of their aims. The treaty seems to exist as an idealized conception of society, without a specific plan of action for the world's nations and without proof that its aims are even attainable. This will undoubtedly be an issue with which the United Nations will grapple over the course of the next decade.

Table 1: Impact of Regulation on Worker Quality of Life (OLS Regression)

Independent Variables	Model 1.1 Annual Average Earnings per Worker		Model 1.2 Employee out of Pocket Health Expenditure		Model 1.3 Male Unemployment		Model 1.4 Female Unemployment		Model 1.5 Average Annual Hours Worked Per Worker	
	Coeff	*P*	Coeff	*P*	Coeff	*P*	Coeff	*P*	Coeff	*P*
Extent of Industry Regulation	3,915.77 (2,965.62)	.20	2.89 (1.73)	.11	-72.96 (208.02)	.73	-66.56 (158.82)	.68	75.85* (43.73)	.09
Constant	.003***		.003***		.123		.100*		.000***	
Number of countries	25		27		33		33		31	
R-squared	.071		.101		.004		.006		.094	
F-ratio	1.74		2.80		.12		.18		3.01	

Standard errors in parentheses; two-tailed test; *p<.10; **p<.05; ***p<.01

Table 2: Impact of Regulation on Worker Quality of Life
(OLS Regression with control variables)

Independent Variables	Model 2.1 Annual Average Earnings per Worker		Model 2.2 Employee out of Pocket Health Expenditure		Model 2.3 Male Unemployment		Model 2.4 Female Unemployment		Model 2.5 Average Annual Hours Worked Per Worker	
	Coeff	P	Coeff	P	Coeff	P	Coeff	P	Coeff	P
Extent of Industry Regulation	1455.85 (3627.984)	.70	.10 (1.57)	.95	66.97 (45.78)	.16	98.0* (54.06)	.08	59.95 (38.64)	.14
GDP (billions)	-.10 (2.49)	.97	-.002* (.001)	.095	.44*** (.04)	.00	.34*** (.05)	.00	-.04 (.03)	.20
Ratified ICESCR	966.38 (34794.43)	.98	-21.14 (16.46)	.22	1287.25 (552.71)	.03**	990.34 (652.76)	.14	-650.38 (466.56)	.18
Gini Coefficient	50967.38 (45545.61)	.28	59.17 (37.09)	.13	851.21 (726.64)	.26	474.61 (858.17)	.59	1591.72** (613.37)	.02
Constant	.775		.242		.009		.08		.001	
Number of countries	18		21		26		26		26	
R-squared	.104		.232		.971		.934		.328	
F-ratio	.38		1.21		174.37***		73.68***		2.56*	

Standard errors in parentheses; two-tailed test; *p<.10; **p<.05; ***p<.01

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Appendix: Data For Key Variables

Country	GDP (billion$)	Parliamentary?	Ratified ICER?	Population (thousands)	Health Expenditures
Australia	831.2	1	1	21016	19.1
Austria	315.6	1	1	8333	16.3
Belgium	377.9	1	1	10517	20.6
Canada	1300.2	1	1	33095	15.5
Chile		0	1		
Czech Republic	256.9	1	1	10262	13.6
Denmark	202.2	1	1	5461	14.6
Estonia		1	1		22.2
Finland	190.8	1	1	5307	20.4
France	2121.7	1	1	61840	7.2
Germany	2909.7	1	1	82772	12.8
Greece	324.7	1	1	11218	
Hungary	198.1	1	1	10035	25.1
Iceland	11.8	1	1	301	16
Ireland	184.4	1	1	4250	
Israel		1	1		29.5
Italy	1871.7	1	1	58851	
Japan	4358.3	1	1	127568	16.4
Korea	1344.4	0	1	48607	37
Luxembourg	41.4	1	1	471	13.4
Mexico	1545.3	0	1	106683	
Netherlands	675.1	1	1	16390	6
New Zealand	116.4	1	1	4188	14.3
Norway	280	1	1	4707	16.1
Poland	659.2	1	1	37927	25.9
Portugal	247.3	1	1	10620	28.2
Slovak Republic	119.7	1	1	5393	27.4
Spain	1434.2	1	1	44311	14
Sweden	340.5	1	1	9159	21.6
Switzerland	329.9	0	1	7584	17.2
Turkey	991.7	1	1	74767	30.7
United Kingdom	2186	1	1	61412	
United States	14369.4	0	0	304228	13.6

Country	Male Unempl.	Female Unempl.	Avg.Hours Worked	Avg.Earnings Per Worker	IndustryReg Index	Gini Coeff.
Australia	243	234	1718		1.2	0.3
Austria	82	81	1631	45464	2.7	0.27
Belgium	170	63	1568	35260	2.2	0.27
Canada	632	487	1727	38506	3.1	0.32
Chile	307	254		40341	2.4	
Czech Republic	103	127	1992		2.3	0.26
Denmark	47	51	1570	17227	1.2	0.23
Estonia	21	18	1969	41166	2.1	
Finland	84	88	1704		1	0.26
France	1023	1044	1560	33489	2.1	0.28
Germany	1687	1451	1430	33802	2.9	0.27
Greece	148	230	2116	32047	2.8	0.34
Hungary	174	155	1986	21693	3.1	0.29
Iceland	3	2	1807	15766	1.8	
Ireland	84	43	1631		0.9	0.3
Israel	91	90	1943	44413	3.1	
Italy	820	872	1807		3.2	0.34
Japan	1600	1050	1772	27099	1.5	0.34
Korea	506	267	2256	32872	2.3	
Luxembourg	5	6	1555	26353	3.5	0.26
Mexico	921	663	1893	49260	1.8	0.51
Netherlands	132	128	1389		1.2	0.28
New Zealand	50	45	1746	38936	1.8	0.34
Norway	38	30	1423		1.7	0.26
Poland	599	612	1969	42565	2.7	0.32
Portugal	195	233	1745	14906	2.5	0.36
Slovak Republic	125	133	1769	16001	2.3	
Spain	1311	1280	1647	9773	2.1	0.34
Sweden	149	147	1625	24818	0.6	0.24
Switzerland	67	80	1640	35736	1.2	0.28
Turkey	1877	734		47269	3.4	
United Kingdom	969	674	1652		0.7	0.37
United States	5031	3893	1796	29633	1.1	0.36