
Economic Rights Working Paper Series

**Securing Economic and Social Rights:
Obstacle or Handmaiden to Growth?**

Elizabeth Kaletski
Ithaca College

Susan Randolph
University of Connecticut

Working Paper 26
May 2018

Human Rights Institute
University of Connecticut
Thomas J. Dodd Research Center
405 Babbidge Road, U1205
Storrs, CT 06269
Telephone: 860-486-8739
Fax: 860-486-6332
<http://www.humanrights.uconn.edu>
humanrights@uconn.edu

Securing Economic and Social Rights: Obstacle or Handmaiden to Growth?***Draft: April 2018****By Elizabeth Kaletski & Susan Randolph****University of Connecticut**

Countries that ratify the International Covenant on Economic, Social and Cultural Rights commit to devote the maximum of available resources to progressively realize the economic and social rights (ESRs) enumerated therein. A question arises as to whether countries that do so necessarily grow more slowly and accordingly whether there exists an inter-temporal trade-off between current and future ESR fulfillment. To address this question, we compare countries' performance on the Index of Social and Economic Rights Fulfillment (the SERF Index) and component right indices with countries' per capita income growth. Our analysis allows us to look individually at the rights to education, health, housing, food and work as well as overall ESR performance. The results are consistent with two distinct ideas. First, there exist policy contexts in which ESR and economic growth are mutually reinforcing, and second, the most promising path to realizing these synergies entails prioritizing ESR over economic growth.

April 2018 Draft

JEL Codes: O, K, I

*This paper is based upon work supported by the National Science Foundation under Grant Number 1061457. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

I. Introduction

Countries that ratify the International Covenant on Economic, Social and Cultural Rights (ICESCR)¹ commit to progressively realize the full extent of the rights articulated there-in and to devote the “maximum of [their] available resources” (Article 2.1) to this end. However, it is unclear whether the policies that best promote robust growth simultaneously promote the maximum feasible fulfillment of economic and social rights (ESRs). This raises the question of whether a tradeoff exists between current and future enjoyment of ESRs. More specifically, do countries that more fully meet their commitments to fulfill ESR under the ICESCR do so at the cost of lower growth and hence reduced resources to increase the enjoyment of ESR in the future? Further, if a country prioritizes growth over their commitment to fulfill ESRs today, is future enjoyment of ESRs likely to be greater than if they had prioritized ESRs over growth? Does the answer to these questions depend on the right concerned such that there are synergies between some rights, for example education, and growth, but trade-offs between other rights, for example housing, and growth.

In order to explore these issues, this paper expands on Ranis, Stewart, and Ramirez’s (2000) research regarding economic growth and human development, and the papers that have since followed in its spirit. This body of research focuses on the relationship between the rate of per capita income growth on the one hand and the level of human development, and particularly the enjoyment health and education, on the other. The level of human development is typically measured using some variation of the Human Development Index (HDI) or its individual components and their shortfall from some optimal level. This research finds important synergies between human development and economic growth.

However, the principle of progressive realization under the ICESCR implies that the level of rights enjoyment countries are obligated to fulfill varies with their per capita income level. Thus some countries with low per capita income levels may be fully meeting their obligations under the ICESCR despite low levels of human development or limited improvement in human development, while other countries with high per capita income levels may be failing to meet their obligations despite relatively high levels of human development or notable improvement in human development. Thus the finding

¹ As of March 2018 there are 167 countries party to the Covenant. See https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=IV-3&chapter=4&clang=en

that human development and growth can be synergistic cannot be extrapolated to imply that there is no trade-off between the extent to which countries fulfill their economic and social rights obligations with regard to the rights to health and education today and their rate of per capita income growth. Nor, does it shed any light on whether resources devoted to fulfilling other economic and social rights enumerated in the ICESCR impede growth. This paper adapts the empirical approach pioneered by Ranis, Stewart and Ramirez (2000) in two ways. First, rather than considering a country's level of human development, as assessed by the HDI, its components, or other indicators of the level of health and education, we consider a measure of the extent to which a country is fulfilling its substantive ESR obligations under the ICESCR, specifically, the Social and Economic Rights Fulfillment Index, SERF Index (Fukuda-Parr, Lawson-Remer and Randolph, 2009; Randolph, Fukuda-Parr, Lawson-Remer, 2010). Second, because the SERF Index is an aggregation of five component right indices, by using the SERF Index, we are able to look beyond the rights to health and education and consider the full complement of the ESR enumerated in the ICESCR both jointly and individually.

The paper's organization is as follows. Section II of this paper discusses the relevant literature regarding the relationship between ESRs and growth, including what we know about potential synergies and potential tradeoffs. Section III describes the basic Ranis, Stewart and Ramirez (2000) methodology, its adaptation to the task at hand and details the data. It then presents the broad results of the analysis and identifies countries according to their transition pattern over time with regard to growth and the extent to which they meet their obligations under the ICESCR to fulfill ESR. Section IV is left for conclusions and discussion of future research.

II. Literature Review

As discussed above, Article 2.1 of the *International Covenant on Economic, Social and Cultural Rights*, ICESCR, commits countries to take steps "...to the maximum of [their] available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant...."(United Nations, 1966). Implicit in this directive is a requirement that fulfilling economic and social rights, ESRs, takes priority over other uses of resources even if other uses of resources might more optimally promote per capita income growth and hence the capacity to fulfill ESR in the future.

There are a number of reasons to believe the resource allocation optimally promoting growth differs from the allocation necessary to improve ESR fulfillment. There is now an extensive literature using cross-country regressions to identify those factors promoting (or impeding) economic growth.

Among the many factors identified as promoting growth in cross-section empirical analyses, physical capital investment stands out as the most robust (Levine & Renelt, 1992). Shifting resources to prioritize ESRs over growth likely entails changing the composition of investment and may require or induce a reduction in physical capital investment in order to augment current consumption. Investments financing large scale capital intensive industry and the physical infrastructure to support industry (ports, export processing zones, highways linking major cities, etc.) may well generate more growth than investments financing small scale, geographically disbursed, or labor intensive industry and rural infrastructure (improved water sources, feeder roads, local irrigation systems, rural electrification, etc.), at least in the short-run. It is the latter sorts of investments that most directly support ESRs. Further, capital account liberalization and other policies attracting foreign capital flows promote growth through augmenting domestic investable funds and other mechanisms (Levine 2001), but may lead to income concentration and other adverse effects that undermine the fulfilment of economic and social rights.

Endogenous growth models (Romer 1986, 1990, Lucas 1988, Fagerberg 1994) identify technological change as the most critical force for economic growth. Researchers prioritizing the promotion of technical change over investment argue, as hypothesized long ago by Cairncross (1955), that the existence of profitable technological innovations calls forth the necessary investable funds to bring them to fruition. There exists empirical evidence to back this stance. Easterly and Levine's (2001) empirical study persuasively documents the dominance of technological change over capital accumulation as a force for long run growth. In this regard, policies and institutional arrangements that foster the development of a highly trained cadre of technical experts capable of both adapting foreign technologies and innovating new technologies (Vandenbussche, Aghion and Meghir 2006), along with policies promoting investment in research and development (as well as direct public investment in research and development) may better foster technological change, than policies and institutional arrangements ensuring universal primary and secondary education, or promoting small investments and innovations by small-scale producers. Further, given that international trade and direct foreign investment (DFI) are key conduits for new technologies, the implementation of policies promoting trade and DFI should accelerate growth and there is some empirical evidence that bears this out (Dollar 1992, Borenstein, deGregorio and Lee 1998). Multinationals are not known for their support of workers' rights and many instances of their active suppression of the right to work can be cited (Deva 2003); trade liberalization creates losers as well as winners, often resulting in the violation of ESR (OHCHR 2002).

The General Comments of the Committee for Economic, Social, and Cultural Rights, the treaty monitoring body for the ICESCR, specify and elaborate seven distinct substantive economic and social

rights, the rights to education, health, housing, food, work and social security and water (United Nations CESCR 1999a & 1999c, 2000, 1991 & 1997, 1999b, 2006, 2008, and 2003 respectively). While there are reasons to believe some policies fostering growth are unlikely to promote these ESRs, there are certainly reasons to believe the fulfillment of some ESRs can stimulate growth, providing additional resources to increase ESR enjoyment and potentially creating a virtuous cycle. This concept is backed empirically by Qureshi (2009) who finds that in Pakistan higher public expenditure focused directly on economic growth may not translate into improvements in economic growth or human development indicators, but higher public expenditure on human development factors improves both aspects. One possible explanation for this empirical finding can be found in the endogenous growth literature which suggests that human capital accumulation increases productivity, leads to an overall higher skilled workforce, and encourages the use of new technology. All of these factors can then lead to higher output, exports, and in turn higher GDP per capita (Cracolici, Cuffaro, & Nijkamp, 2010). As examples, there exists substantial empirical evidence that as individuals improve their health (Weil 2007; Bloom, Canning & Serville 2004) and education (Krueger and Lindahl 2001) they contribute more productively to the economy. Additionally, empirical studies have found that investment in primary education and basic health are important on their own (Sala-i-Martin, Doppelhofer and Miller 2004, Behrman 1993) as they may foster the ability to exploit new opportunities that arise as growth occurs. Other empirical studies find health and education augment the effectiveness of other policies supporting economic growth (see for example Miller and Updhyay 2000 regarding trade and education).

Additionally, fulfilling the right to decent work lowers income inequality, and the new conventional wisdom is that income inequality impedes growth (Aghion, Caroli and Garcia-Penalosa 1999, Perry, Arias, Lopez, Malony, and Serven 2006). This fall in income inequality also has the potential to facilitate the fulfillment of other ESRs. For example, when income inequality is lowered for a given income per capita, more families are able to send their children to school or provide them with basic health services. The overall impact of inequality on growth occurs most obviously through its impact on investment in physical and human capital, which then affects the long run growth rate as discussed above. Additionally, inequality impedes individuals' access to credit and thus reduces investment opportunities, particularly for the poor whose marginal productivity of investment is relatively high, but who do not have the resources necessary to invest (Aghion, Caroli, & Garcia-Penalosa, 1999). This fall in investment opportunities subsequently decreases aggregate productivity and growth. Higher inequality also worsens borrowers' effort incentives since the more an individual needs to borrow, the larger the fraction of the marginal returns that must be shared with lenders. Thus higher inequality decreases

effort and incentives which potentially leads to a further fall in growth. Higher inequality is also thought to generate macro-economic volatility either through political instability (Alesina & Perotti, 1996) or through the inequality in access to investments (Aghion, Caroli, & Garcia-Penalosa, 1999).

Further, the relationship between growth and trade liberalization, financial liberalization, and capital flows is far from a settled question (see Rodriguez and Rodrik 2001 and Baldwin 2003 regarding trade, Burnside and Dollar 2000 and Easterly 2003 regarding AID flows, Levine 2001 and Edwards 2001 regarding financial openness). The precise design of policies promoting liberalization and capital flows and how these policies are managed clearly play a role, and in this context fulfilling ESR obligations may prove to be a handmaiden of growth rather than an obstacle to growth.

The importance of the relationship between current ESR fulfillment and economic growth lies in growths' contribution to overall resource capacity and the impact on future ESR improvements. It has been argued both theoretically and empirically that the effect of GDP growth on ESRs, will be greater with a more equitable distribution of income², the more educated females are and the greater their household bargaining power³, and the more efficient the human development improvement function (HDIF⁴) (Ranis, Stewart, & Ramirez, Economic Growth and Human Development, 2000). Ranis and Stewart (2000) find that female education is the most robust and dominant aspect in this relationship. However, having one weak link can be compensated for by strengthening the other important pieces that contribute to improvements in economic and social rights fulfillment. For example, they argue that even weak economic growth can be compensated for if the government prioritizes human development and establishes solid institutions (Ranis and Stewart, 2000).

There is growing empirical evidence that countries that prioritize human development may not only enjoy robust growth, but may enjoy a virtuous cycle whereby higher levels of human development lead to higher economic growth, which in turn leads to even higher human development in the future. On the other hand, the failure to foster human development impedes growth locking countries into a vicious cycle where by low human development leads to low growth and then further lower levels of human development. Ranis, Stewart, and Ramirez (2000) were the first to document these outcomes. They separate countries into four categories by comparing their performance on improving an adjusted Human Development Index (HDI) and economic growth with the average performance of all developing

² A disproportionate distribution of income is to blame for the poor human development outcomes in an empirical study of 28 Indian States (Mukherjee & Chakraborty, 2010).

³ It is well established that females tend to allocate more household resources to family improvement, including education and better nutrition.

⁴ The HDIF relates inputs to actual human development.

countries for the period 1960-1992⁵. Countries performing above average on both aspects fall into the virtuous category, while those performing below average on both aspects fall into the vicious category. Countries with above average scores on human development and below average scores on economic growth are categorized as HD-lopsided, while countries with the opposite performance scores are considered growth-lopsided. The human development (HD) measure used includes only the non-income components of the UNDP's HDI measure, namely educational attainment as measured by a combination of adult literacy and average years of schooling (2/3 weight), and longevity measured by life expectancy at birth (1/3 weight). The authors find that most developing countries fall into either the vicious or virtuous quadrant, while a large number also fall into the high human development, low growth, their so-called HD-lopsided category and only a few the growth-lopsided category (high growth, low human development). Their regional divide indicates that East Asia is heavily skewed towards the virtuous category, while, unsurprisingly, most Sub-Saharan African countries and some Latin American ones tend to fall into the vicious category. Overall they find that countries that foster economic growth over human development subsequently tend to fall into the vicious category, while those that foster human development over growth are most likely to achieve the virtuous cycle. This leads them to conclude that prioritizing human development over growth provides a more reliable conduit to the desired outcome (Ranis, Stewart, and Ramirez, 2000).

Subsequent studies have extended and tested the robustness of these findings. Ranis and Stewart (2001) repeat the exercise focusing solely on adult literacy and life expectancy in Latin American countries over the period 1960-1992 and conclude growth alone is not sustainable without a focus on human development and the best path from the vicious to virtuous cycle is through the HD-lopsided category. Accordingly, they argue that resource allocation should favor education and health investments over investments more directly targeting growth. Suri, Boozer, Ranis, and Stewart (2011) do a similar study using the infant mortality rate, life expectancy, and gross secondary enrollment rate as indicators of human development for 79 countries. Their results suggest that human development is essential for sustained economic growth. Ranis and Stewart (2005) similarly find that economic growth is not sustainable without prior or simultaneous human development improvements and conclude, in contradiction to the dictates of the Washington Consensus that human development cannot be deferred until economic growth has occurred. Using a large macro panel dataset, Shahbaz, Iqbal, and Butt (2011) corroborate this finding using a different approach, an econometric test of causality. Their results show

⁵ In particular they compare the % HDI Shortfall Reduction to % GDP per capita growth.

human development always leads to economic growth, but economic growth does not always lead to human development. They look at this relationship by using HDI, as well as the UNDP's education index (EI), life index (LI), and per capita income index (PI).

The findings of the above studies suggest there is no inter-temporal tradeoff between promoting the rights to education and health in the short-run and the long-run. However, the level or rate of improvement in health and education indicators or reduction in their shortfall from some common target level is not the same as the level or rate of improvement in the extent to which a country is fulfilling its obligations with regard to the right to education or health. This is because the principle of progressive realization implies that the level of a country's obligation differs depending on its per capita income level and that as this level changes, so too, does its level of obligation. That is, the target level differs for each country and for a given country over time. Thus a country can suffer a relatively low score on a human development indicator or improvement therein—a low HDI Index or life expectancy or literacy rate—and yet be nearly or fully meeting its commitment to fulfill ESRs if its current resource capacity is low. In a parallel manner, high human development achievement or substantial improvement in human development achievement does not guarantee a country is substantially meeting its commitment if the country enjoys abundant resources. Further, as noted earlier, in addition to the rights to education and health the ICESCR commits countries to ensure five other substantive economic and social rights, the rights to food, housing, work, social security, and water. A recently developed index, the SERF Index,⁶ assesses countries fulfillment of five of the substantive ESR guaranteed under the ICESCR—the rights to education, health, food, housing, and work—individually and overall, and allows us to assess whether there is a trade-off between the fulfillment of ESR and growth. The right to water is intrinsic to the right to housing and is incorporated into the right to housing component of the SERF Index. Data are not currently available to fully separate available indicators of the right to work from those relevant to the right to social security and so elements of the right to social security are incorporated into the right to work component of the SERF Index.

The SERF Index uses an innovative methodology to specify a country's level of obligation relative to its per capita income level and assesses compliance with the ICESCR on the basis of a country's

⁶ See (Randolph, Fukuda-Parr, & Lawson-Remer, *Economic and Social Rights Fulfillment Index: Country Scores and Rankings*, 2010); (Fukuda-Parr, Lawson-Remer, & Randolph, *An Index of Economic and Social Rights Fulfillment: Concept and Methodology*, 2009); (Fukuda-Parr, Lawson-Remer, & Randolph, *SERF Index Methodology Version 2011.1 Technical Notes*, 2011) for additional information.

enjoyment of ESRs relative to the country's level of obligation⁷. Given that the right to water is incorporated into the right to housing, and the right to work covers elements of the right to social security, the SERF Index also provides the opportunity to incorporate all the substantive ESRs, rather than just the rights to health and education. The historical variant of the SERF Index (Randolph and Guyer, 2012b), allows one to track country performance on their obligations to fulfill the substantive ESRs across decades.

Randolph and Guyer (2012a) adapt the Ranis, Stewart, and Rameriz (2000) methodology and use the Historical SERF Index to explore the transition paths of countries between the decade of the 1900s and 2000s between the four quadrants—virtuous, vicious, SERF-lopsided and growth-lopsided. They find that countries that start in the virtuous quadrant are likely to remain there, and those that start in the SERF-lopsided quadrant are likely to transition to the virtuous quadrant while those starting in the Growth-lopsided quadrant are likely to transition to the vicious quadrant from which escape is difficult. They conclude that there clearly exist policy regimes that enable countries to meet their commitments under the ICESCR to fulfill their substantive ESR obligations and that their fulfillment tends to foster robust growth. What is unclear, however, is whether their findings can be generalized across decades and across the individual substantive rights enumerated in the ICESCR.

III. Meeting Commitments under the ICESCR and Per Capita Income Growth: Is there a Conflict?

In this section we explore the robustness of Randolph and Guyer's (2012a) findings across different decades and across the individual substantive rights. Additionally, we explore whether prioritizing growth, prioritizing ESR fulfillment or following a balanced approach offers the best chance of attaining a virtuous cycle whereby growth and the fulfillment of ESRs reinforce each other.

a. Data and Methodology

Following the Ranis, Stewart and Ramirez (2000) methodology as adapted by Randolph and Guyer (2012a), we categorize countries according to their performance along two dimensions—the extent to which they meet their commitments to fulfill the substantive economic and social rights enumerated in the ICESCR, and the extent to which they secure per capita GDP growth. Data on the per

⁷ The SERF Index benchmarks a country's obligation level as the evidence based, best practice, feasible level of rights enjoyment achievable at a country's per capita GDP level.

capita GDP growth rate are extracted from The World Bank's on-line *World Development Indicators*. As in the case of the Randolph and Guyer (2012a) study, we utilize the Historical SERF Index as our broad indicator of the extent to which countries meet their commitments to fulfill the substantive economic and social rights (Randolph and Guyer 2012b & 2012c). However, unlike Randolph and Guyer (2012a), we expand the analysis to cover all four decades for which the data are available, the 1970s, 1980s, 1990s, and 2000s, and consider indices of the extent to which countries meet the individual substantive economic rights enunciated in the ICESCR, specifically, the component right indices that comprise the SERF Index measuring country fulfillment of the individual rights to education, health, food, housing and work (Randolph and Guyer 2012b & 2012c).

Countries are then categorized for each of the decades—1970s, 1980s, 1990s, 2000s—according to whether their SERF or Right Index score and per capita income growth rate are above or below the median score for the decade⁸. The medians are calculated for the decade concerned based on the sample of countries for which data are available for both the per capita income growth rate and the SERF Index or Right Index concerned. So for example, concerning the relationship between per capita income growth and countries' overall fulfillment of their ESRs obligations, countries with a SERF Index score and an average annual per capita GDP growth rate⁹ that are both above the median in the decade concerned are categorized as being in a virtuous cycle. On the other hand, countries with a SERF Index score and average annual per capita GDP score that are both below the median are classified as being in a vicious cycle. Countries with a SERF Index score above the median, but a GDP per capita growth rate below the median are classified as SERF-lopsided whereas those with a GDP per capita growth rate above the median and a SERF score below the median are classified as growth-lopsided. Analogously, when examining the relationship between per capita income growth and countries' fulfillment of their obligations with regard to a specific right, countries whose performance is above the median with regard to both per capita income growth and the Right Index concerned are classified as falling into the virtuous category, those with scores below the median on both are classified as falling into the vicious category, those with above median growth but below median scores on the right index concerned are classified as falling into the growth-lopsided category, while those with below median growth, but above median scores on the right index concerned are classified as relevant into the education-lopsided, health-lopsided, food-lopsided, housing-lopsided, or work-lopsided category.

⁸ 1970 data is limited to only looking at the education, health and housing components of the Historical SERF Index due to data availability.

⁹ The growth rates are calculated as the average annual growth rate from 1971-1980, 1981-1990, 1991-2000, 2001-2010 for the SERF Index in years closest to 1975, 1985, 1995 and 2005, respectively.

We then evaluate each country's transition from their initial position to their position in the subsequent decade. Specifically we look at the transition path from the 1970s to 1980s, 1980s to 1990s, and 1990s to 2000s separately. The transition patterns enable us to learn whether fulfilling economic and social rights obligations to a greater extent tends to impede or promote growth. To the extent that countries starting in the virtuous category tend to remain there, or countries starting in the SERF or right lop-sided category tend to transition to the virtuous category, there is no necessary conflict between countries meeting their commitments to fulfill ESR obligations and per capita income growth. The two are mutually reinforcing and there is no trade-off between fulfilling ESRs in the short- and long-run. Further evidence that fulfilling economic and social rights obligations is a handmaiden to growth is revealed to the extent that countries starting in the vicious category tend to remain there, or countries that start in the growth-lopsided category tend to transition to the vicious category. On the other hand, if fulfilling economic and social rights obligations serves as an obstacle to growth then countries that start in the SERF/right lop-sided category or virtuous category will tend to transition to the vicious category, while those that start in the growth lop-sided category will tend to remain there or transition to the virtuous category.

Countries that remain in the virtuous category across the decades are in the enviable position of having identified development strategies that yield rapid per capita income growth that fosters the enjoyment of economic and social rights. In a future work we examine the policies followed by countries that succeeded in remaining in the virtuous category across the decades. However, in this paper we also seek to learn what the best approach is to achieve the virtuous cycle; specifically, are countries more likely to achieve the virtuous cycle by prioritizing growth or by prioritizing economic and social rights or by following a balanced path? The transition patterns offer insights here as well. To the extent that countries in the SERF or right lop-sided category are more likely to transition to the virtuous category than those in the growth-lopsided category, prioritizing economic and social rights fulfillment over growth offers the best prospects. To the extent the results show that countries in the vicious category are more likely to transition to the virtuous category than either the growth or right lopsided categories, a balanced approach offers the best prospects.

b. Results: Transition Patterns

The results are presented in Tables 1-15 by decade below. Tables 1-6 show the transition patterns between the decade of the 1990s and the 2000s for the rights to education, housing, health, food, work and overall, respectively. The first column in each table shows the transition from the SERF-

lopsided¹⁰ category in the 1990s to each of the four categories in the 2000s. In the case of the rights to education, housing, health, work and the overall SERF Index (Tables 1-3 and 5-6), the majority of countries (more than 50%) that begin in the SERF-lopsided category in the 1990s end up in the virtuous category in the subsequent decade. The only exception occurs for the right to food; here although countries are more likely to remain in the food-lopsided category (44%), those that don't are most likely to transition to the virtuous category (37%). Countries that begin in the SERF-lopsided category are far less likely to transition to either the growth-lopsided or vicious category—fewer than 11% transition to either of these categories. Thus, countries that fulfilled their commitments to ensure economic and social rights to a relatively greater extent in decade of the 1990s tended to enjoy a growth benefit in the subsequent decade. Over the decades of the 1990s and 2000s, this result held for ESRs as a group and for the rights to housing, food, and work, as well as the rights to education and health. These results indicate that fulfilling economic and social rights obligations and growth tend to be synergistic.

The second column in each table shows the transition path of countries in the growth-lopsided category in the 1990s. For every component and the overall SERF Index, over 80% of all countries that begin in the growth-lopsided category either stay in that category or move to the vicious one. In the case of the rights to health and work, and the overall SERF Index, countries were more likely to fall into the vicious category than remain in the growth lopsided category in the 2000s. Further, those that did not transition to the vicious category were far more likely to remain growth lopsided than transition to either the SERF-lopsided or virtuous categories. Fewer, for most rights, many fewer, than 12% of countries transitioned from the growth-lopsided category in 1990s to the virtuous category in the 2000s. These results indicate that countries that prioritize growth over meeting their economic and social rights obligations are unlikely to meet their obligations in the future. Further the results indicate that in absence of attention to fulfilling economic and social rights obligations, there is a high likelihood that growth will falter in the future.

The third column shows the transition patterns from the vicious category in the 1990s. For the education, housing, health components as well as the overall SERF Index, by far the majority of countries remain in the vicious category in the subsequent decade. In the case of the rights to work and food, a larger percentage of countries remain in the vicious category (43% and 30%, respectively) than in any other category. Thus, escape from a vicious cycle whereby low growth limits expanding enjoyment of ESRs and low levels of ESRs impede growth proved difficult in the decade of the 1990s. Those that did

¹⁰ Here SERF-lopsided is used as a general term to include education-lopsided, health-lopsided, housing-lopsided, food-lopsided, work-lopsided, and SERF-lopsided.

escape were most likely to do so by prioritizing growth. However, as the second column showed, countries finding themselves in the growth-lopsided category are more likely than not to slip back into the vicious category in the subsequent decade.

Further evidence that growth and fulfilling economic and social rights obligations were mutually reinforcing in the 1990s is found in the fourth column of the tables. Countries that found themselves in the virtuous category with regard to the overall SERF Index or the rights to health and food in the 1990s were more likely to remain there than to transition to any other quadrant in the 2000s. In the case of the rights to housing and work, they were equally likely to remain in the virtuous quadrant or transition to the SERF-lopsided category. Transition to either the growth-lopsided or vicious category was unlikely. In fact, depending on the right anywhere between 65-94% of countries in the virtuous category in the 1990s either remained there or transitioned to the SERF-lopsided category in the 2000s. In view of the fact that countries starting in the SERF-lopsided category in the 1990s only rarely fell into the vicious category, meeting economic and social rights obligations appears to offer protection against falling into the vicious cycle.

Tables 7-12 show the transition paths from 1980s to 1990s for all five components and the overall SERF Index while Tables 13-15 show the transitions paths for the rights to education, health and housing from 1970s to 1980s¹¹. The patterns that emerge are broadly consistent with those found between the 1990s and the 2000s.

IV. Summary and Conclusions

To date, 167 countries have ratified the International Covenant on Economic, Social and Cultural Rights. In doing so, they committed to devoting the “maximum of [their] available resources” (Art. 2.1) to progressively realize the full extent of the rights enumerated therein. The Committee on Economic, Social, and Cultural Rights (CESCR) is the United Nations treaty monitoring body vested with oversight of the ICESCR. General Comment 3 of the CESCR defines this “progressive realization” clause to mean moving as expeditiously and effectively as possible toward the full implementation of the rights enumerated in the Covenant. That is, to the extent there might be conflicts, the Covenant requires countries to prioritize expanding economic and social rights over other goals. A question arises as to whether countries that more fully meet their commitments by using the “maximum of [their] available resources” to expand the enjoyment of economic and social rights end up reducing their rate of

¹¹ The food, work and SERF components have too few observations in 1975 to produce any results.

economic growth and as a result reduce their potential to expand the enjoyment of economic and social rights in the future. This paper has sought to shed additional light on this question.

There exists a rich literature identifying potential tradeoffs as well as potential synergies between the extension of economic and social rights and economic growth. Although there continues to be debate over many of the specifics, this literature indicates there is no necessary trade-off between growth and expanding the enjoyment of especially education and health. What is less clear is whether devoting the maximum of available resources to the expansion of economic and social rights today is consistent with bringing about the robust growth that will be required by most countries to fully secure economic and social rights for their residents. Here we expand on the work of Randolph and Guyer (2012a) to learn whether their finding that economic growth and a broad index of the extent to which countries fulfill their substantive economic and social rights obligations of result, the SERF Index, holds across the individual rights and over a longer time frame than they considered.

Our analysis allows us to look individually at the extent to which countries meet their obligations to fulfill the rights to education, health, housing, food, and work individually, as well as overall, and to examine transition patterns between three separate decades. In particular, we ask where countries that fall into a particular category—above median performance with regard to both growth and meeting their ESR obligations (virtuous), below median performance with regard to both growth and meeting their ESR obligations (vicious), above median performance with regard to growth but below with regard to ESR obligations (growth-lopsided), and below with regard to growth but above with regard to ESR obligations (SERF-lopsided)—in one decade, end up in the subsequent decade. Our findings are robust. Considering the entire time frame, the 1970s through the 2000s, and all five rights individually and jointly, our results are consistent with two distinct ideas. First, there is no necessary conflict between countries meeting their obligations under the ICESCR to fulfill the substantive ESRs in the short-run and long-run. Fulfilling ESR commitments and per capita income growth are mutually reinforcing. That is, securing economic and social rights is a handmaiden, not an obstacle, to growth. The findings that countries that fall into the SERF-lopsided category are most likely to transition to the virtuous category in the subsequent decade while those that fall into the growth-lopsided category are most likely to fall into the vicious category suggest the best approach to achieving the virtuous cycle is to prioritize fulfilling economic and social rights obligations over growth. The question of what policy regimes tend to maximize the potential synergies between fulfilling ESRs commitments and per capita income growth is a topic that bears exploration in future work.

REFERENCES

- AGHION, P., E. CAROLI, and C. GARCIA-PENALOSA. (1999) Inequality and Economic Growth: The Perspective of the New Growth Theories. *Journal of Economic Literature* 37(December):1615-1660.
- ALESINA, Alberto and Roberto PEROTTI. (1996) Income distribution, political instability and investment. *European Economic Review* 40 (6): 1203-1228.
- BALDWIN, Robert. (2003) Openness and Growth: What's the Empirical Relationship? Working Paper 9578, National Bureau of Economic Research, March. <http://www.nber.org/papers/w9578>
- BEHRMAN, Jere. (1993) The Economic Rationale for Investing in Nutrition in Developing Countries, *World Development*, 21(11): 1749-72.
- BLOOM, David E., D. CANNING, and J. SEVILLE. (2004) The Effect of Health on Economic Growth: A Production Function Approach. *World Development*, Vol. 32 (January) pp. 1-13.
- BORENSTEIN, E., J. deGREGORIO, and J. LEE. (1998) How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics* 45:1:115-35.
- BURNSIDE, C. and David DOLLAR. (2000) Aid, Policies, and Growth. *The American Economic Review* Vol. 90, pp. 847-68.
- CAIRNCROSS, A.K. Cairncross (1955) The Place of Capital in Economic Progress, pp. 235-48 in L.H.Dupriez (ed.) *Economic Progress, Papers and Proceedings of a Roundtable held by the International Economic Association*. (Louvain: Institut de Recherches Economiques et Sociales)
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (2008) General comment 19: The Right to Social Security (art. 9). (39th Session CESCR, 2007) U.N. Doc. E/C.12/GC/19, 4 February. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (2006) General Comment 18: The Right to Work (art. 6). (35th Session CESCR, 2005) U.N. Doc. E/C.12/GC/18, 6 February. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (2003) General Comment 15: The Right to Water (arts. 11 & 12). (29th Session CESCR, 2002). U.N.Doc. E/C.12/2002/11, 20 January. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (2000) General comment 14: The Right to the Highest Attainable Standard of Health (art. 12). (22nd Session CESCR, 2000). U.N. doc. E/C.12/2000/4, August 2000. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1999a) General Comment 13: The Right to Education (art. 13). (21st Session CESCR, 1999). U.N. Doc. E/C.12/1999/10, 8 December. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>
- COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1999b) General Comment 12: The Right to Adequate Food (art. 11). (20th Session CESCR, 1999). U.N. Doc. E/C.12/1999/5, 12 May. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>

COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1999c) General Comment 11: Plans of Action for Primary Education (art. 14). (20th Session CESCR, 1999). U.N. Doc. E/C.12/1999/4, 10 May. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>

COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1997) General Comment 7: The Right to Adequate Housing (art. 11.1): Forced Evictions. (16th Session CESCR, 1997). U.N. Doc. E/1998/22, 20 May. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>

COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1991) General Comment 4: The Right to Adequate Housing (art. 11.1). (6th Session, 1991). U.N. Doc. E/1992/23, December 13. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>

COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. (1990) General Comment 3: The Nature of States Parties' Obligations (art. 2.1). (5th Session CESCR, 1990) U.N. doc. E/1991/23, 14 December. <http://www2.ohchr.org/english/bodies/cescr/comments.htm>

CRACOLICI, M. F., Cuffaro, M., & Nijkamp, P. (2010). The Measurement of Economic, Social and Environmental Performance of Countries: A Novel Approach. *Social Indicators Research*, 95, 339-356.

DEVA, Surya. (2003) Human Rights Violations by Multinational Corporations and International Law. *Connecticut Journal of International Law*, Vol. 19, No. 1, pp. 1-57.

DOLLAR, David. (1992) Outward-oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-1985. *Economic Development and Cultural Change* Vol. 40. No. 3 pp. 523-544.

EASTERLY, William. (2003) Can Foreign Aid buy Growth? *Journal of Economic Perspectives* 17:3 (Summer 2003):23-48. <http://www.nyu.edu/fas/institute/dri/Easterly/File/can%20foreign%20aid%20buy%20growth.pdf>

EASTERLY, William, and Ross LEVINE. (2001) It's not Factor Accumulation: Stylized Facts and Growth Models. *World Bank Economic Review* 15:2:177-219. <http://www.nyu.edu/fas/institute/dri/Easterly/File/its%20not%20factor%20accumulation.pdf>

EDWARDS, Sebastian. (2001) Capital Mobility and Economic Performance: Are Emerging Economies Different? Working Paper #8076, National Bureau of Economic Research.

FAGERBERG, J. (1994) Technology and International Differences in Growth Rates. *Journal of Economic Literature* 32(September):1147-1175.

FUKUDA-PARR, Sakiko, Terra LAWSON-REMER and Susan RANDOLPH. (2011) SERF Index Methodology Version 2011.1 Technical Notes. *Economic and social Rights Empowerment Initiative*.

FUKUDA-PARR, Sakiko, Terra LAWSON-REMER, and Susan RANDOLPH. (2009) An Index of Economic and social Rights Fulfillment: Concept and Methodology. *Journal of Human Rights* 8:195-221.

KRUEGER, Alan and M. LINDAHL. (2001) Education for Growth: Why and for Whom. *Journal of Economic Literature*, Vol. 29, No. 4 (December):1101-36.

LEVINE, Ross. (2001) International Financial Liberalization and Economic Growth. *Review of International Economics*, Vol 9, Issue 4, pp. 688-702.

LEVINE, Ross, and David RENELT. (1992) A Sensitivity Analysis of Cross-Country Growth Regressions. *American Economic Review*, vol 82, No. 4 (September):942-63. LEWIS, Arthur. (1954) Economic Development with Unlimited Supplies of Labour *Manchester School* 22: 132-191.

LUCAS, Robert (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics* 22(January):3-42. http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6VBW-47N61RY-3-1&_cdi=5937&_user=10&_pii=0304393288901687&_orig=na&_coverDate=07%2F31%2F1988&_sk=999779998&view=c&wchp=dGLzVlz-zSkzV&md5=ec9c20276745295eb2675c7284e3e04c&ie=/sdarticle.pdf

MILLER, Stephen. and Mukti UPDHYAY (2000) The Effects of Openness, Trade Orientation, Openness, and Human Capital on Total Factor Productivity. *Journal of Development Economics*, Vol. 63, No. 2, pp. 399-423.

MUKHERJEE, S., and CHAKRABORTY, D. (2010) Is there any relationship between Economic Growth and Human Development? Evidence from Indian States. *Munich Personal RePEc Archive Paper No. 22997*.

OFFICE OF THE HIGH COMMISSIONER FOR HUMAN RIGHTS (OHCHR). (2002) Globalization and its Impact on the Full Enjoyment of Human Rights. UN Doc. E/CN.4/2002/54, 15 January. <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G02/101/08/PDF/G0210108.pdf?OpenElement>

PERRY, G., O. ARIAS, J. LOPEZ, W. MALONY, L. SERVEN. (2006) *Poverty Reduction and Growth: Virtuous and Vicious Circles*. (Washington D.C.: The World Bank).

QURESHI, M. A. (2009). Human development, public expenditure and economic growth: a system dynamics approach. *International Journal of Social Economics*, 36(1/2), 93-104.

RANDOLPH, Susan, Sakiko FUKUDA-PARR, and Terra LAWSON-REMER. (2010) Economic and Social Rights Fulfillment Index: Country Scores and Rankings. *Journal of Human Rights, forthcoming*.

RANDOLPH, S. and GUYER, P. (2012a). Tracking the Historical Evolution of States' Compliance with their Economic and Social Rights obligations of Result: Insights from the Historical SERF Index, *Nordic Journal of Human Rights* 30: 3, pp. 297-323.

RANDOLPH, S. and GUYER, P. (2012b). International SERF Index historical trends: Technical note Version 2012.1 <https://serfindex.uconn.edu/overview/>.

RANDOLPH, S. and GUYER, P. (2012c). The International SERF Index Historical Trends Dataset Version 2012.1. <http://www.serfindex.org/serf-index-historical-trends-downloads>.

RANIS, G., and STEWART, F. (2000) Strategies for Success in Human Development. *QEH Working Paper Series No. 32*.

RANIS, G., and STEWART, F. (2001). Growth and human Development: Comparative Latin American Experience. *Yale Economic Growth Center Discussion Paper No. 826*.

RANIS, G., and STEWART, F. (2005). Dynamic Links between the Economy and Human Development. *United Nations Development of Economic and Social Affairs Working Paper No. 8*.

RANIS, Gustav, Frances STEWART, and Alejandro RAMIREZ. (2000) Economic Growth and Human Development. *World Development*, Vol. 28, No. 2, pp. 197-219.

RODRIGUEZ, Francisco and Dani RODRIK. (2001) Trade policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence, pp. 261-338 in NBER *Macroeconomic Annual 2000*, Volume 15. (Cambridge: National Bureau of Economic Research, Inc.) <http://www.nber.org/chapters/c11058.pdf>

ROMER, Paul. (1990) Endogenous Technological Change. *Journal of Political Economy* 98(October):S71-S102. <http://artsci.wustl.edu/~econ502/Romer.pdf>

ROMER, Paul. (1986) Increasing Returns and Long-Run Growth. *Journal of Political Economy* 94(October):1002-37.

SALA-I-MARTIN, Xavier, Gernot DOPPELHOFFER and Ronald MILLER. (2004) Determinants of Long-term Growth: A Bayesian Averaging of Classical Estimates (BACE) Approach. *American Economic Review*, Vol. 94, No. 4 (September):813-835.

SHAHBAZ, M., IQBAL, A., and BUTT, M.S. (2011). Testing causality between human development and economic growth: a panel data approach. *International Journal of Education Economics and Development*, 2(1).

SURI, T., BOOZER, M.A., RANIS, G. and STEWART, F. (2011). *Paths to Success: The Relationship Between Human Development and Economic Growth*. *World Development*, 39 (4): 506-522.

UNITED NATIONS. (1966) International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966. Adopted 16 Dec. 1966, G.A. Res. 2200 (XXI), U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (1966), 993 U.N.T.S. 3 (entered into force 3 Jan. 1976).
<http://www2.ohchr.org/english/law/cescr.htm>

VANDENBUSSCHE, AGHION and MEGHIR. (2006) Growth, Distance to Frontier and Composition of Human Capital. *Journal of Economic Growth*, Vol. 11, No. 2 ,pp. 97-127.

WEIL, David. (2007) Accounting for the Effect of Health on Economic Growth. *The Quarterly Journal of Economics*, Vol. 122, No. 3, pp. 1265-1306.

World Bank Group. (2012) *World Development Indicators on-line*, viewed September 2012 at <http://databank.worldbank.org/ddp/home.do?Step=2&id=4&DisplayAggregation=N&SdmxSupported=Y&CNO=2>.

Table 1: Education		1995 Frequency							
		Education-lopsided 26		GDP-lopsided 26		Vicious 35		Virtuous 35	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
2005 Result	Education-lopsided	7	26.92	3	11.54	3	8.57	16	45.71
	GDP-lopsided	2	7.69	15	57.69	5	14.29	7	20
	Vicious	1	3.85	8	30.77	23	64.71	0	0
	Virtuous	16	61.54	0	0	4	11.43	12	34.29

Table 2: Housing		1995 Frequency							
		Housing-lopsided 32		GDP-lopsided 33		Vicious 34		Virtuous 34	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
2005 Result	Housing-lopsided	11	34.38	1	3.03	0	0	16	47.06
	GDP-lopsided	0	0	18	54.55	10	29.41	1	2.94
	Vicious	1	2.13	13	39.39	23	67.65	1	2.94
	Virtuous	20	62.5	1	3.03	1	2.94	16	47.06

Table 3: Health		1995 Frequency							
		Health-lopsided 30		GDP-lopsided 30		Vicious 27		Virtuous 27	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
2005 Result	Health-lopsided	10	33.33	2	6.67	0	0	8	29.63
	GDP-lopsided	3	10	9	30	8	29.63	0	0
	Vicious	0	0	16	53.33	19	70.37	2	7.41
	Virtuous	17	56.67	3	10	0	0	17	62.96

Table 4: Food		1995 Frequency							
		Food-lopsided		GDP-lopsided		Vicious		Virtuous	
		27		27		20		20	
2005 Result	Food-lopsided	frequency	percent	frequency	percent	frequency	percent	frequency	percent
	GDP-lopsided	12	44.44	2	7.41	4	20	5	25
	Vicious	2	7.41	12	44.44	7	35	2	10
	Virtuous	3	11.11	10	37.04	6	30	5	25
		10	37.04	3	11.11	3	15	8	40

Table 5: Work		1995 Frequency							
		Work-lopsided		GDP-lopsided		Vicious		Virtuous	
		20		19		21		21	
2005 Result	Work-lopsided	frequency	percent	frequency	percent	frequency	percent	frequency	percent
	GDP-lopsided	5	25	1	5.26	3	14.29	8	38.1
	Vicious	2	10	8	42.11	6	28.57	2	9.52
	Virtuous	2	10	9	47.37	9	42.86	3	14.29
		11	55	1	5.26	3	14.29	8	38.1

Table 6: SERF		1995 Frequency							
		SERF-lopsided		GDP-lopsided		Vicious		Virtuous	
		16		16		11		11	
2005 Result	SERF-lopsided	frequency	percent	frequency	percent	frequency	percent	frequency	percent
	GDP-lopsided	5	31.25	1	6.25	1	9.09	3	27.27
	Vicious	1	6.25	6	37.5	2	18.18	1	9.09
	Virtuous	1	6.25	8	50	7	63.64	1	9.09
		9	56.25	1	6.25	1	9.09	6	54.55

Table 7: Education		1985 Frequency							
		Education-lopsided 21		GDP-lopsided 21		Vicious 25		Virtuous 25	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	Education-lopsided	5	23.81	2	9.52	2	8	6	24
	GDP-lopsided	1	4.76	8	38.1	6	24	0	0
	Vicious	6	28.57	8	38.1	14	56	3	12
	Virtuous	9	42.86	3	14.29	3	12	16	64

Table 8: Housing		1985 Frequency							
		Housing-lopsided 23		GDP-lopsided 22		Vicious 26		Virtuous 26	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	Housing-lopsided	10	43.48	0	0	2	7.69	8	30.77
	GDP-lopsided	3	13.04	8	36.36	7	26.92	1	3.85
	Vicious	1	4.35	10	45.45	15	57.69	3	11.54
	Virtuous	9	39.13	4	18.18	2	7.69	14	53.85

Table 9: Health		1985 Frequency							
		Health-lopsided 14		GDP-lopsided 14		Vicious 20		Virtuous 20	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	Health-lopsided	5	35.71	1	7.1	3	15	6	30
	GDP-lopsided	2	14.29	7	50	5	25	1	5
	Vicious	1	7.14	6	42.86	12	60	0	0
	Virtuous	6	42.86	0	0	0	0	13	65

Table 10: Food		1985 Frequency							
		Food-lopsided 12		GDP-lopsided 12		Vicious 13		Virtuous 12	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	Food-lopsided	7	58.33	2	16.67	0	0	3	25
	GDP-lopsided	0	0	7	58.33	4	30.77	1	8.33
	Vicious	1	8.33	3	25	9	69.23	0	0
	Virtuous	4	33.33	0	0	0	0	8	66.67

Table 11: Work		1985 Frequency							
		Work-lopsided 11		GDP-lopsided 11		Vicious 14		Virtuous 14	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	Work-lopsided	4	36.36	0	0	1	7.14	5	35.71
	GDP-lopsided	0	0	5	45.45	3	21.43	2	14.29
	Vicious	2	18.18	2	18.18	8	57.14	3	21.43
	Virtuous	5	45.45	4	36.36	2	14.29	4	28.57

Table 12: SERF		1985 Frequency							
		SERF-lopsided 5		GDP-lopsided 5		Vicious 7		Virtuous 7	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1995 Result	SERF-lopsided	2	40	0	0	0	0	2	28.57
	GDP-lopsided	0	0	2	40	1	14.29	1	14.29
	Vicious	2	40	1	20	5	71.42	0	0
	Virtuous	1	20	2	40	1	14.29	4	57.14

Table 13: Education		1975 Frequency							
		Education-lopsided 12		GDP-lopsided 12		Vicious 23		Virtuous 23	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1985 Result	Education-lopsided	7	58.33	0	0	3	13.04	6	26.09
	GDP-lopsided	0	0	6	50	6	26.09	4	17.39
	Vicious	1	8.33	3	25	14	60.87	1	4.35
	Virtuous	4	33.33	3	25	0	0	12	52.17

Table 14: Housing		1975 Frequency							
		Housing-lopsided 12		GDP-lopsided 12		Vicious 10		Virtuous 11	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1985 Result	Housing-lopsided	7	58.33	2	16.67	0	0	6	35.29
	GDP-lopsided	0	0	4	33.33	8	47.06	3	17.65
	Vicious	1	8.33	4	33.33	8	47.06	1	5.88
	Virtuous	4	33.33	2	16.67	1	5.88	7	41.18

Table 15: Health		1975 Frequency							
		Health-lopsided 6		GDP-lopsided 6		Vicious 10		Virtuous 11	
		frequency	percent	frequency	percent	frequency	percent	frequency	percent
1985 Result	Health-lopsided	3	50	1	16.67	0	0	1	9.09
	GDP-lopsided	0	0	2	33.33	2	20	0	0
	Vicious	1	16.67	2	33.33	8	80	1	9.09
	Virtuous	2	33.33	1	16.67	0	0	9	81.82