

A STUDY OF THE ROLE OF SOCIAL INEQUALITY IN PROMOTING SOCIAL CHANGE



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ABSTRACT

In recent years, there has been a growing concern about the rising income inequalities, with particularly stark rises in inequality in the United States and also a substantial widening of the income gap in Europe. The United States has seen particularly stark rises in inequality, and Europe has seen a substantial widening of the income gap. Because of this, an increasing number of people are speaking out against the current tendencies, and they do not approve of them. The importance of the widening of economic inequality has not only garnered the attention of politicians and scholars, but it is also frequently debated on the streets of the globe today, with the movement known as "Occupy Wall Street" being the most well-known example of such rallies. This movement and its frequently referenced motto, "We are the 99%," alludes explicitly to a rising disparity in the distribution of wealth (see, for example, the coverage of the movement by the New York Times in 2011, as well as the web blog entitled "We are the 99%," published in 2012). This disparity in wealth distribution has been growing over the past several decades. An OECD research that was published not too long ago focused on the recent growth in income inequality that has been noticed across the member states of the EU.

INTRODUCTION

This rise in income disparity has been witnessed throughout the whole of the EU (2011). When one studies the development of income inequality over the course of the previous three decades, a fascinating picture emerges as a result of the examination. It would seem that there has been a general trend, beginning in the 1980s, toward expanding the economic inequality that exists between the various categories of people. The Gini coefficient was determined to be 0.29 in the

1980s, but by the late 2000s, it had dramatically climbed to 0.32. (ibid., p. 22). It is especially shocking to see the increase of economic inequality in countries like Germany and the Nordic countries, which were formerly thought of as being "equal societies." In general, there seems to be a trend that is converging towards a generally greater degree of wealth inequality. This is true both in the United States and globally. [Here's a good example:] [Here's a good example:] [C

MEASURING INEQUALITY

In the previous chapter, "fairness" was brought up as one of the last economic goals to be examined. It is important to note that "equality" is not the same as this objective, which differs in key ways. Even if there is a significant wealth gap within a community, it is possible that the distribution of wealth should be seen as equitable. Few people long for a world in which everybody makes exactly the same amount of money. What exactly does it mean for a society to be described as neither "too equal" nor "too unequal"? We need some objective measurements of inequality before we can even begin to talk about how to establish a decent balance in the distribution of income and wealth. These objective metrics will enable us to make comparisons across time and between different cultures. First, we will evaluate what it is that we are measuring, and then we will examine how we are measuring it.

inequality of what?

The majority of people, when the topic of inequality is brought up, think in terms of differences in wealth or income. These are essential components of any economic study conducted on the subject matter. However, it is also essential to acknowledge that inequality is a more general idea that goes beyond the sphere of monetary disparity. This is very significant. Let us explore a few examples. There is a massive gap between the quality of medical treatment in different parts of the world. The average life expectancy in various tropical nations, such as Malaria, Measles, and Tuberculosis, is much lower compared to that of the United States and other prosperous countries. These illnesses are either preventable or curable. There is also a considerable lack of equity when it comes to health care across various countries. An investigation that was conducted in 2017 found that the median life expectancy in the United States is ten to fifteen years longer for the wealthiest Americans than it is for the poorest Americans. 3 Additionally, there is a significant gender gap in educational opportunities, both domestically and globally. Children in Australia may anticipate spending around 20 years in school, which is the longest amount of time spent in schooling of any country in the world.

measuring inequality

In spite of the fact that there are many different kinds of inequality, for the sake of our economic study, we are going to concentrate largely on the unequal distribution of income and wealth. The two criteria that are most frequently used to quantify the degree of income disparity are:

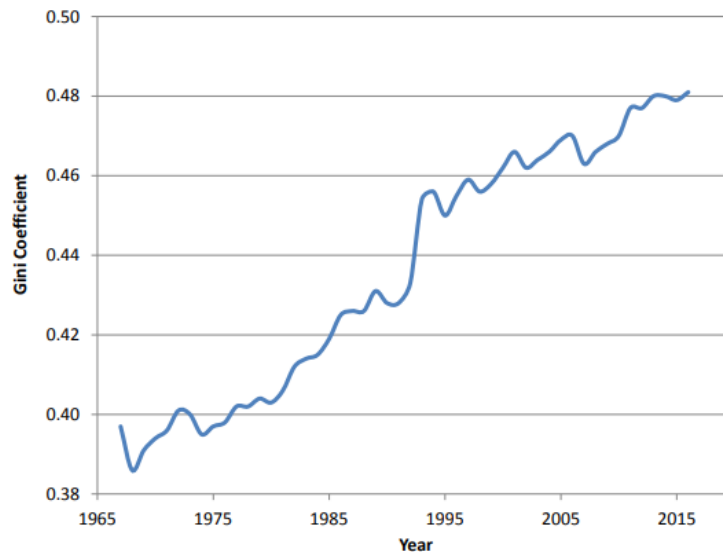
- Measure the income share (percent of all income) held by various groups ordered by income from poorest to richest, such as the bottom 20%, the middle 20%, the top 1%, etc.
- Measure the overall distribution of income in a society, using mathematical and graphical techniques.

INEQUALITY TRENDS AND FURTHER CONSIDERATIONS

We are now in a position to utilise data on inequality to monitor how inequality evolves over time. In this section, we will first examine the changing patterns of income inequality in the United States, and then we will discuss some additional perspectives on inequality, including the inequality of wealth, as well as how inequality is related to factors such as race, age, education, and other aspects of society.

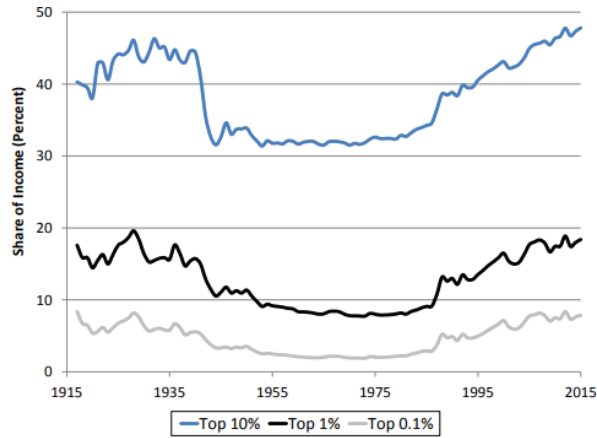
income inequality over time in the United States

Nobody denies the fact that the gap between rich and poor in the United States has widened over the past several decades. This is seen in Figure 10.4, which presents the Gini coefficient for the United States from 1967 to 2016, with the data coming from the United States Census Bureau. We can see this for ourselves. In 1968, the Gini coefficient hit an all-time low of 0.386, setting a new record. Following that, the Gini coefficient went up in 39 out of the subsequent 48 years.



Source: U.S. Census Bureau, Historical Income Tables: Households, Table H-4.

Gini Coefficient in the United States, 1967-2016



Source: Saez, 2016.
 Note: Data exclude capital gains.

Income Shares of Top-Income Groups, United States, 1917-2016

The term "capital gains" refers to a rise in the value of an asset when it is sold in comparison to the price at which the item was initially acquired by the same owner. In spite of the aforementioned disclaimers, acceptable estimations of the Gini coefficient for wealth in the United States have been made. They are much higher than the income Gini coefficient of 0.48, which is located somewhere in the neighbourhood of 0.8. 11 Figure 10.6 demonstrates that the top 10% of families in terms of wealth control 77% of all wealth in the United States, whilst the top 10% of households in terms of income get around 30% of all income. The wealthiest 1% of Americans, defined as individuals with a net worth of more than \$4 million, own 42% of total wealth, which is significantly higher than the wealth held by the poorest 90% of Americans combined. And the top 0.01%, which consists of over 16,000 households with an average of almost \$111 million in assets apiece, owns 11% of the wealth in the United States. 12 For an intriguing look at how people in the United States currently feel about wealth inequality, see this survey.

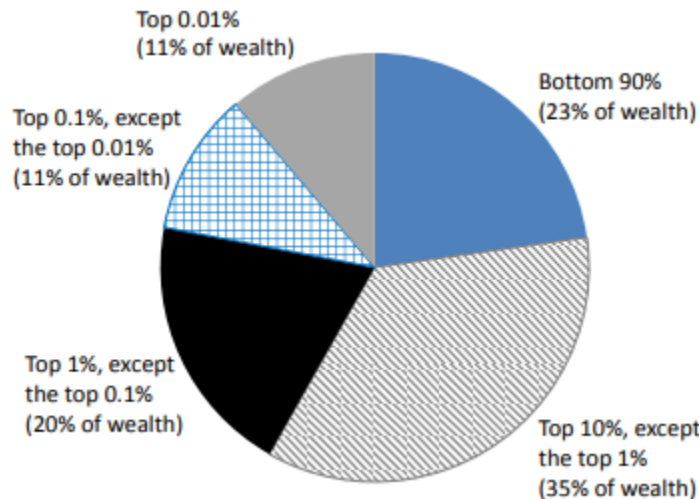


Figure 1. 1 The Distribution of Wealth in the United States

Disparity in both income and wealth has been on the rise in recent decades, mirroring the rise in income inequality. Similar patterns emerge when one plots, across time, the wealth shares possessed by the top groups in the United States in comparison to the income shares seen in Figure 10.5. Before the Great Depression, the wealthiest one percent of the population held more than half of the nation's wealth. By the late 1970s, that proportion had fallen to less than 25 percent, but it has since gradually climbed to roughly 45 percent today. 13 When we think about the tremendous disparity in wealth that exists in the world, we are forced to reconsider the issue of opportunity. Is it possible for people who have very little wealth, or even negative wealth, to reach a satisfactory degree of well-being in their lives? Furthermore, tremendous wealth frequently bestows both economic and political influence upon the individuals who possess it. When wealth is distributed in an extremely unequal manner, power to oversee the operations of enterprises and to influence government policy via contributions to political campaigns and other means may become concentrated in the hands of a relatively small number of individuals. They might then employ this influence to keep current inequities in place or perhaps make them worse. We circle back around to this topic at a later point in the chapter.

LITERATURE REVIEW

Ahmad (1990) carried out research at the micro-level in Bangladesh to investigate the connection between the status of women and their fertility. The goal of this study was to evaluate the potential mechanisms via which the status of women may influence the micro-determinants of fertility. She came to the conclusion that education and employment had a positive influence on the motivation for fertility control, the cost of fertility limits, and the effectiveness of the practise of family planning. On the other hand, she came to the realisation that education above the basic level or improved literacy were not going to be of much use unless they were accompanied with the possibility of making a livelihood in some capacity.

Sweezy (1971) analyses what he calls the "economic explanation" of the fluctuating birth rates that were seen in the United States during the 20th century. According to him, education is not the fundamental factor that influences fertility; rather, the most important factors are economic shifts and the shifting attitudes that accompany them and direct the expenditure of money by households. According to his results, changes in fertility cannot be fully explained by educational or economic factors alone. This is the conclusion that he has come to as a result of his research. According to him, despite the fact that education is recognised as being a factor in change, it is found to enhance reproduction in particular circumstances that are characterised by altering views and expanding wealth. This is especially true in the time period after World War II, which has put the majority of theories for fertility under rigorous scrutiny.

According to Appleton (1996), who focuses on the use of contraceptives, one of the ways in which female education may lower fertility is by improving the frequency or effectiveness of contraceptive usage. This is one of the ways in which education about contraceptives may be improved by female education. [Further citation is required] It is most likely to have an effect on a woman's fertility through the age at which she marries and the amount of time that she breastfeeds her children. There is a chance that furthering your education will interfere with your capacity to continue breastfeeding. Because it cuts down on the overall amount of time that is spent nursing the baby. According to her, the opportunity cost of having children will grow proportionately with

a woman's degree of education, even if the effects of money are taken into account. This is a commonly held belief, independent of the effects of wealth.

According to the findings of a research that was carried out by Harbison (1991) on a collection of Garo villages located in the north central area of Bangladesh, the educational level of these populations is quite poor. According to the findings of the survey, 57 percent of the men who live in these villages have never been to school, and the average number of years that all spouses have spent in school is 2.1. Seventy percent of the wives surveyed stated that they did not have any formal education, and the average number of years that they had spent in school was 1.2. The women reported having an average of 5.5 children who were still living at the time of the survey. The fact that many of them are illiterate and have only had a basic education is one of the factors that contributes to the high birthrate in their population, despite the fact that they have a lot of latitude in terms of the decisions they make.

THE IMPACT OF INEQUALITY ON GROWTH

The new study that will be published below on how inequality affects economic development in OECD countries takes into account the issues that were stated before and that limited prior evaluations in the following ways: Techniques of estimation: This model is comparable to that which is utilised in the vast majority of empirical analyses of growth determinants, and as demonstrated in Annex 3, it can be derived from an enhanced version of the Solow growth model. The empirical equation estimates growth as a linear function of initial inequality, income, human and physical capital. Panel data are used in the estimation process, which results in the baseline regression specification taking the following form:

$$\ln y_{i,t} - \ln y_{i,t-1} = \alpha \ln y_{i,t-1} + X_{i,t-1} \beta + \gamma \ln \text{ineq}_{i,t-1} + \mu_i + \mu_t + \epsilon_{i,t}$$

where I stands for the particular country that is being addressed, and where $(t, t-1)$ indicates a period of time spanning five years. The left-hand side of equation (1) is an estimate of a country's growth over a period of five years, while the right-hand side of the equation reflects the log of a country's real GDP per capita. The variable $\ln y$ represents the log of this value. On the left-hand side, $\ln \text{ineq}$ is a summary measure of inequality (often the Gini index), per capita GDP ($yt1$) is the conventional control for convergence, and the vector X contains a minimum set of controls for human and physical capital. The Gini index is the most common measure of inequality. The conventional control for convergence is denoted by $yt1$ (see Annex 3 for a detailed description of variables and sources). It is possible to take into consideration fixed elements when utilising panel data, such as time and country (I and t). The purpose of include the period dummies is to adjust for global shocks, which may impact aggregate growth in any period but are not represented by the explanatory variables in any other way. The inclusion of the country dummies eliminates the time-invariant omitted-variable bias, and the inclusion of the period dummies eliminates the time-invariant omitted-variable bias introduced by the inclusion of the country dummies.

GMM estimators in growth regressions

As a result of the fact that the majority of empirical growth models are predicated on the notion of conditional convergence, growth equations such as (1) contain some dynamism in lagged output (the independent variable $\ln y_{i,t-1}$) and may be reformulated as a dynamic panel data model.

$$\ln y_{i,t} = (1 + \alpha)\ln y_{i,t-1} + X_{i,t-1}\beta + \gamma \ln eq_{i,t-1} + \mu_i + \epsilon_{i,t}$$

It is highly improbable that the standard panel data procedures that are used to estimate model (1a), such as the Least Square Dummy Variable estimator, can produce unbiased estimates of the factors relevant to consideration (and). In point of fact, making use of the inside transformation or carrying out first differences causes the construction of a correlation between $\ln y_{i,t-1}$ and the error term. This causes the fixed-effect estimator to be intrinsically biased because of the inherent nature of the correlation (Nickell, 1981).

Baseline results

The first portion of the study focuses on net income inequality as defined by the Gini coefficient, and assesses the level of redistribution as the difference between market and disposable (Gini) income inequality.

The Inequality-Growth Nexus InOecd Countries: Baseline Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Net inequality (t-1)	- 0.774* *	- 0.800* *	- 0.809** *	- 1.003* *		- 1.257* *	- 1.207* *	
	(0.319)	(0.306)	(0.282)	(0.376)		(0.517)	(0.473)	
Gross inequality (t-1)					- 0.640	0.138		
					(1.09 2)	(0.595)		
(Gross-Net) ineq. (t-1)							0.064	- 0.365
							(0.706)	(1.47 6)
y (t-1)	- 0.136* *	-0.080	-0.054	-0.079	0.038	-0.070	-0.079	0.133
	(0.054)	(0.051)	(0.057)	(0.106)	(0.17 8)	(0.121)	(0.131)	(0.23 1)
Human Capital (t-1)		-0.005	-0.007	-0.000	0.006	-0.009	-0.010	0.013
		(0.011)	(0.007)	(0.015)	(0.02 1)	(0.011)	(0.012)	(0.02 1)

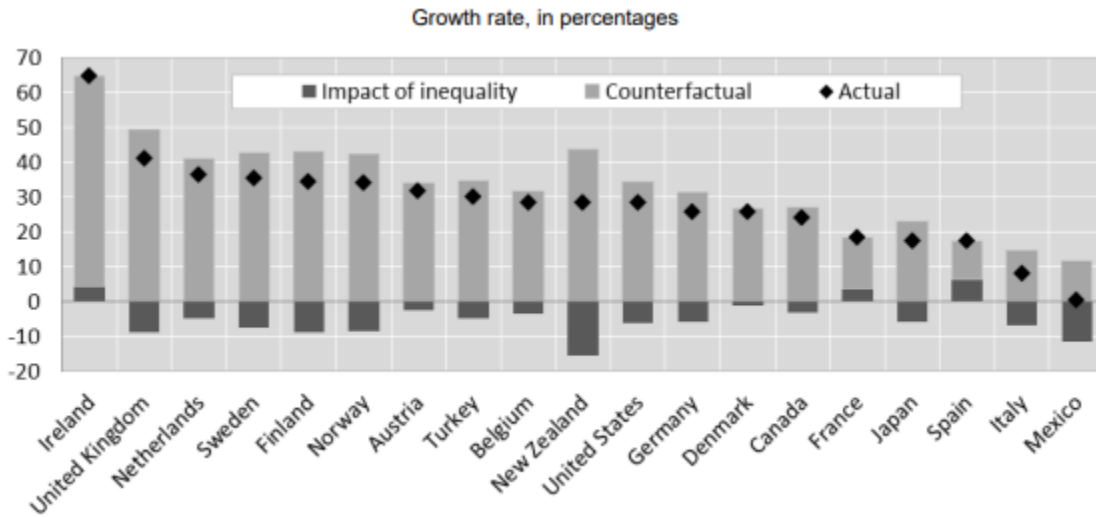
Investment (t-1)		0.197	0.428	0.045	1.545	-0.245	-0.243	2.484
		(0.318)	(0.544)	(1.311)	(1.304)	(1.310)	(1.477)	(2.138)
M2 (p-val)	0.722	0.558	0.623	0.723	0.860	0.606	0.665	0.916
Hansen Statistics (p-val)	0.847	0.614	0.377	0.129	0.471	0.129	0.174	0.535
Observations	127	127	127	127	124	124	124	124
Number of countries	31	31	31	31	30	30	30	30
Number of instruments	27	31	26	16	16	18	18	16

The dependent variable is represented by the symbol $\ln y_t$, where y_t is the GDP per capita and $[t-(t-1)]$ is a period of 5 years. Gini indices are used to determine levels of inequality. A robust, two-step System GMM estimator that incorporates Windmeijer corrections to the standard errors. Every regression takes into account a nation and a time period dummy. Hansen signifies the p-value on the Hansen test of over identifying constraints. M2 denotes the p-values of the tests for second order serial correlation in the differenced error terms. represent statistical significance at the thresholds of 1, 5, and 10%, respectively.

It turns out that inequality has a considerable influence on overall economic growth. If we were to reduce inequality by one Gini point, for instance, we would see an increase in cumulative growth of 0.8 percentage points over the next five years, as indicated by the projected coefficients in column 1. (or 0.15 points per year). As was covered in Annex 3, interpreting the estimated coefficients in light of the Solow model permits recovering the implied effect of changes in inequality over the longer run, as the economy converges to the new steady state. This is possible because the model allows for the recovery of the implied effect of changes in inequality. 17 When considering a time horizon of 25 years, for instance, the estimated coefficients imply that a reduction of one Gini point in inequality would result in an increase in average growth of slightly more than 0.1 percentage points per year, with a cumulative gain in GDP of approximately 3 percentage points at the end of the time period.

Figure 3 offers an alternate illustration of the impacts that are inferred by concentrating on the real-world shifts in inequality that have taken place in specific nations. The figure illustrates the expected influence on the growth rate of GDP between 1990 and 2010 that increases in inequality that happened between 1985 and 2005 had over that time period (the most recent inequality trends are not taken into account as they affect future growth patterns). In addition to this, it gives both the actual rate of growth and a counterfactual figure for each nation. The counterfactual figure is calculated by deducting the projected impact of inequality from the actual rate of growth. This second number should be read as the growth rate that would have been seen in the country had there been no change in the country's inequality (and holding all other variables constant). It is predicted that Mexico's and New Zealand's economies have both experienced slowdowns of more than ten percentage points due to growing inequality. If there had been less of a gap between rich and poor, the pace of economic expansion would have been over one fifth greater in countries such as the United States, the United Kingdom, Sweden, Finland, and Norway. On the other side,

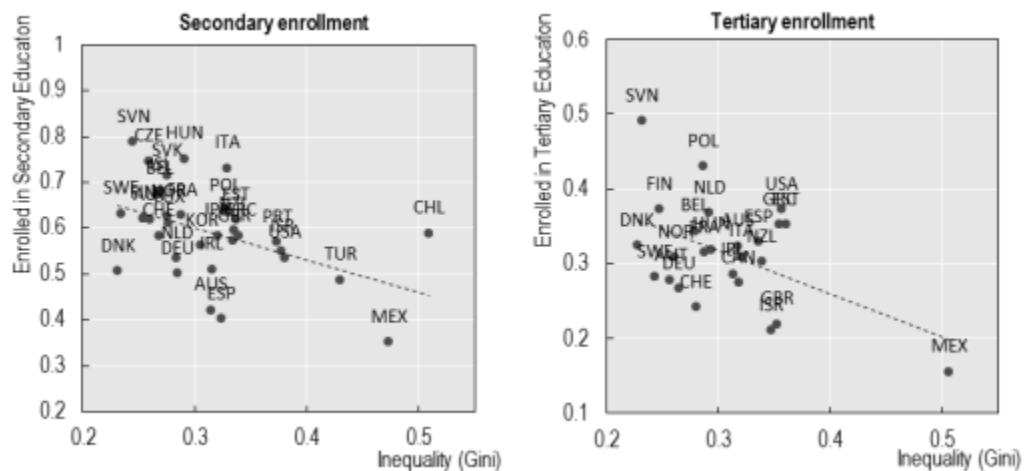
increased equality was one factor that contributed to a higher GDP per capita in Spain, France, and Ireland before the crisis.



Estimated consequences of changes in inequality on cumulative per capita GDP growth (1990-2010)

INEQUALITY, SOCIAL MOBILITY AND HUMAN CAPITAL ACCUMULATION

There is an inverse relationship between the degree of wealth inequality in OECD countries and the average level of educational attainment in those countries. Figure 4 depicts a direct correlation between the percentage of a country's population enrolled in higher education (the panel on the right) and upper secondary education (the panel on the left) and the Gini coefficients, which measure the degree of inequality in a country's overall disposable income.



Inequality and enrolment rates across OECD countries, 2010

This graph was created by combining data on the population broken down by age class with data on the number of students enrolled (by age class and degree of education). The OECD data on the number of students enrolled was broken down by age class and degree of education. Calculations are done in relation to the total population that is 15 to 19 years old to determine the ratio of students that are enrolled in upper-level secondary education (20-24 for the ratio of tertiary enrolled). 2010 is the year used for all computations for both ratios. The Gini coefficient is used to make a comparison between the levels of inequality in 2005 (left panel) and 2000 (right panel) when persons were 10 to 14 years old (right panel). Both regression coefficients indicate statistically significant levels of significance when tested at a confidence level of 1%.

THE LONG-RUN AGGREGATE IMPLIED EFFECTS

According to the study shown above, increasing levels of economic inequality may result in decreased inflows of human capital into an economy since people from disadvantaged backgrounds experience declining educational performance. Therefore, a persistent rise in inequality has the potential to bring about a reduction in the total amount of human capital, albeit this process will take place over time. What kind of effect would these modifications have on the total production in the long run? In order to provide an appropriate response to this inquiry, it is necessary to first assess the influence that lower levels of achievement have on total human capital, which in turn is dependent on the percentage of people in the population who come from disadvantaged backgrounds. According to the findings of the most recent wave of the PISA survey, which focuses on individuals around the age of 15 and whose sample size allows for more precise measurement than PIAAC, the proportion of students classified as having a Low PEB in each OECD country in 2012 was significantly different. It was over 40% in Portugal, Turkey, and Mexico, while it was over 20% in Italy, Spain, and Germany. In the United States, France, and Australia, it was just 10%.

EMPIRICAL RESULTS

The results of this study will be discussed in the next portion of the article. Following a discussion of descriptive statistics and correlations, the results of the regression analysis will next be provided.

Descriptive Statistics

The dependent and independent variables each have their own set of descriptive statistics presented in Table 2. The average value of the Gini Index is 0.46, as can be seen in the table below. This is a large deviation from the standard of zero, which represents complete equality. GDP per capita's mean value averages at roughly 50,000 US dollars. There appears to be a significant amount of fluctuation in GDP Growth, with 65% being the highest figure and -28% being the lowest value. On the other hand, the mean number for GDP comes out to roughly 3% on average. The remaining independent factors are examined in an effort to provide an explanation for any further variances found in the dependent variables.

Descriptive Statistics

Variables	N	Mean	Standard Deviation	Minimum	Maximum
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GDP Growth	357	0.03	0.08	-0.28	0.65
GDP Initial	357	40869	11625	17906	93235
Gini Index	357	0.46	0.02	0.39	0.54
Average Income	357	64214	11005	45141	130074
Population	357	704180	1575080	55375	1.87e+07
Innovation	357	28.27	48.82	0.41	561.57
High School	357	0.17	0.06	0.02	0.37
Human Capital	357	0.25	0.08	0.12	0.57
Crime Rates	318	372.14	164.39	53.40	1057

Correlation Analysis

The dependent and independent variables each have their own set of descriptive statistics presented in Table 2. The average value of the Gini Index is 0.46, as can be seen in the table below. This is a large deviation from the standard of zero, which represents complete equality. GDP per capita's mean value averages at roughly 50,000 US dollars. There appears to be a significant amount of fluctuation in GDP Growth, with 65% being the highest figure and -28% being the lowest value. On the other hand, the mean number for GDP comes out to roughly 3% on average. The remaining independent factors are examined in an effort to provide an explanation for any further variances found in the dependent variables. The findings of the bivariate analysis between the dependent variables and each independent variable are presented in Table 3, which can be seen here. In a single regression analysis, the average income, the total population, and the percentage of the total population that does not have a high school diploma are the factors that are important in predicting the increase of GDP per capita. There is no statistically significant bivariate link between the Gini Index, Innovation, Human Capital, and Crime Rates. Both the High School variable and the Crime Rates variable exhibit indications that are inconsistent with the idea. For GDP Level, all factors except Crime Rates are significant. Gini Index at the level of 5%, with the remainder measured at the level of 1%.

GDP Correlations

Variable	GDP Growth	GDP Level
Gini Index	0.073	0.159**
Average Income	0.122***	0.614***

Population	0.082**	0.422***
Innovation	0.034	0.488***
High School	0.164***a	-0.164***
Human Capital	-0.100a	0.583***
Crime Rates	0.091a	-0.018

As can be seen in, there is a correlation between some of the factors that are independent (Table 8, Appendix). This points to the existence of a multicollinearity issue that may arise. There is a strong relationship between Human Capital and a number of the other regressors, especially Innovation (0.678) and Average Income (0.678). (0.605). Therefore, it is reasonable to anticipate that people with greater levels of education will have better earnings and will submit more patent applications. Additionally, there is a somewhat robust inverse relationship between the High School variable and human capital (-0.546). Aside from Human Capital, there is a correlation between Average Income and Innovation (0.534) as well as Population (0.474). indicating that those living in more populated metros have, on average, a greater income than those living in less popular metros.

CONCLUSION

The purpose of this study was to evaluate, across different regions of the United States, whether or not there is a correlation between economic growth and inequality. The investigation on the nature of this connection included information gathered from 357 metropolitan statistical areas. The theories on the effect that wealth inequality has on the growth of the economy are surrounded by a great deal of disagreement; the majority of the time, these hypotheses produce a cloudy answer. Those who advocate for a negative connection emphasise the ways in which educational attainment among lower socioeconomic classes can suffer when there is inequality, how this can lead to pressure for policies that redistribute wealth, how this can result in sociopolitical instability, and how this can result in excessive rent-seeking. Academics who believe there is a beneficial relationship between the two notions typically draw attention to the incentives afforded by high rewards and technological innovation, which give rise to both inequality and growth. Our results suggest that in the near term, there is a choice to be made between rising economic disparity and expanding the economy. This decision is indicated by the fact that there is a choice. Despite this, the relationship is not strong enough to justify political action being done since it is not sufficiently firm and powerful. Many metropolitan regions have grown at similar rates while having varying degrees of socioeconomic disparity as a consequence of the fact that the bulk of metropolitan areas are dispersed in what is effectively a straight line. When human capital is taken out of the equation of regression, the Gini coefficient loses the significance it had previously had. It is likely that this is the outcome of human capital's strong correlations with the other components that serve as explanations. One potential explanation is that these high correlations were caused by human capital. In addition, there is a downside to the study in the form of a shortage in observation with respect to the method in which inequality changes over the course of a longer prolonged period of time. This is a limitation that is brought about by the lack of observation. As a consequence of this, the research investigates how a city's population grows over time but does not look at how

inequality changes with time. We are unable to identify how a change in the degree of inequality within a metropolitan region might affect growth within that metropolitan area since our study is cross-sectional in nature. This prevents us from being able to answer this question.

REFERENCES

1. Aghion, P., Caroli, E. and Garcia-Penalosa, C. (1999) Inequality and economic growth: the perspective of the new growth theories. *Journal of Economic Literature* 37(4): 1615-1660.
2. Arellano, M. and O. Bover (1995); “Another Look at the Instrumental Variable Estimation of Error- Components Models,” *Journal of Econometrics*, 68(1), 29-51.
3. Barro R. and J. Lee (2013) “A new data set of educational attainment in the world, 1950–2010”, *Journal of Development Economics*, Volume 104, Pages 184-198
4. Arnold, J., Bassanini, A. and S. Scarpetta (2011) "Solow or Lucas? Testing speed of convergence on a panel of OECD countries," *Research in Economics*, Elsevier, vol. 65(2), pp.110-123
5. Bassanini, A. and S. Scarpetta (2002b), “Does Human Capital Matter for Growth in OECD Countries? A Pooled Mean Group Approach”, *Economics Letters*, 74(3), 399-405.
6. Bazzi S. and M. Clemens (2013) "Blunt Instruments: Avoiding Common Pitfalls in Identifying the Causes of Economic Growth," *American Economic Journal: Macroeconomics*, American Economic Association, vol. 5(2), pages 152-86, April.
7. Barro R. and J. Lee (2013) “A new data set of educational attainment in the world, 1950–2010”, *Journal of Development Economics*, Volume 104, Pages 184-198
8. Benhabib, J. (2003) “The trade-off between inequality and growth,” *Annals of Economics and Finance*, Vol. 4(2), pp. 491–507.
9. Checchi D., A. Ichino and A. Rustichini 1999, “More equal but less mobile? Education financing and intergenerational mobility in Italy and in the US” *Journal of Public Economics*, 74(3), 351-393.
10. Clarke, G.R.G. (1995) More evidence on income distribution and growth. *Journal of Development Economics* 47(2): 403-427.
11. Cohen D. and M. Soto (2007) “Growth and human capital: good data, good results” *Journal of Economic Growth*, 12, 51-76.
12. De Mello, L. and E. Tiongson (2006), “Income inequality and redistributive government spending”, *Public Finance Review*, 34(3):282-305. Fershtman, C., K. Murphy and M. Weiss , 1996, "Social Status, Education, and Growth," *Journal of Political Economy*, 104(1), 108-32.

13. Fields, G.S. (1989) A compendium of data on inequality and poverty for the developing world. Cornell University, Department of Economics, March, mimeo.

14. Fitoussi, J.P. and F. Saraceno (2010), "Inequality and macroeconomic performance",