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Why has the world become more unequal in the past 30 years (1980-2010)?

Introduction

After watching the documentary “The End of Poverty,” as well as reading “Serving the World’s Poor, Profitably,” it is evident that inequality is a worldwide issue that has been increasing since 1980. The map and narrative that follow present some of the complex systems that have evolved over the past 30 years. In addition, possible interventions will be proposed to close the gap.

Narrative of the Map

[Green line] The developing countries’ debt is partly the result of debts imposed on independent states after the Colonial Period. It has replicated itself on a greater scale over time, which increased the need for loans. However, the more loans the poor countries take, the more their debt increases over time, which increases the deficit and therefore the need for loans (positive reinforcing loop). On the other hand, rich countries give loans to poor countries and make profit through interest rates, increasing wealth and making more money available to be re-invested (positive reinforcing loop), which leads to an increase in inequality between rich and poor countries.

[Yellow line] At the individual level, the poor need credit but must pay higher interest rates for loans because they are at a higher risk for default. Their debt increases quickly over time, making it even more difficult for the poor to pay back loans (positive reinforcing loop). In contrast, the rich put their money into savings accounts and investments, which increase over time. The higher the interest rates, the higher the earnings of the rich (positive reinforcing loop).

According to the U.S. Census Bureau, changes in the labor market in 1980 increased income inequality. Industries that focused on producing goods provided high-wage opportunities for low-skilled workers, whose wages were tied to productivity. As the industry evolved due to the dawn of the Information Age, the demand for automated labor and highly-skilled workers increased and altered the nature of the jobs for top managers.

[Purple line] Frydman and Saks maintain that, “differences in pay across executives have widened, the correlation between compensation and aggregate firm size appears to have strengthened, and managerial incentives have gotten stronger.” Travis Waldrons points out that CEO compensation has increased more than 725% from 1978 to 2011 in the United States, while worker compensation grew 5.7% within the same period. As a result, wealth inequality widened as tax rates for the richest Americans fell, and the bottom 95% of the population declined into further debt.

[Light blue line] Political interventions, such as tax cuts, play a significant role in increase of inequality. In theory, through tax cuts, rich people are able to invest more, creating more jobs and increasing economic activity. However, as Nick Hanauer said, “investors are not job creators, middle and low classes are.” He goes on to say that the only way to expand businesses and create jobs is by increasing the demand, and it would not happen if the middle and low classes did not have purchasing power. In addition, by observing the United States economic trends over the past several decades, it is possible to conclude that during prosperous times the nation grew, increasing the wages of those residing in the middle and lower classes. The lower classes were then able to consume more, which resulted in more demand and jobs. In 1981, tax cuts accelerated the US economy (measured by resulting economic growth patterns within the GDP). The reality is that society has become more and more unequal over the last 30 years, even though GDP has increased (Riech), which indicates that GDP might not be the best approach to measure economic growth of a country.

[Red line] When government imposes higher income taxes, tax evasion increases, leading to a higher deficit, which requires further increase in tax by the government (positive reinforcing loop). The lack of enforcement on tax collection lead to even more tax evasion, which increase deficit and negatively affect economic growth.

The archetype “success to the successful” explains one of the reasons why inequality has increased. The resources provided to the rich are directly responsible and contribute to the success of the rich. At the same time, the resources provided to the poor directly contribute to the success of the poor. The allocation of those resources is in fact governed by their success. Whichever one manages to become a bit more successful than the other one will in time become greatly more successful (Bellinger).

[Gray line] Corporations and investors that invest in developed markets, create growth, make profit, increase their wealth, and make more money available for further investments.

[Black dotted line] The poorest people in the world live in complex operating environments, including urban slums, deep rural areas, and conflict zones (Anderson, Makides, Kupp). It is more difficult for companies to invest in these environments because of the lack of functional systems, safety and shortages of skilled people. Companies are also concerned about infrastructure, such as roads and electricity, which are good for commerce, transportation, and therefore, economic growth.

[Pink line] Although it is riskier to invest in emerging markets, it can create new customers in the global market, increase innovation and competitive advantage, and positively affect economic growth of developing areas. There are many companies that instead of establishing local growth through sustainable strategies, have focused on an export-oriented economy (The End of Poverty). These companies are interested in the short-term benefit, exploit as much as they can, and fail to increase internal development. Meadows defines the archetype Tragedy of the Commons as "when there is a commonly shared resource, every user benefits directly from its use, but shares the cost of its abuse with everyone else." She goes on to say that "the consequence is overuse of the resource, eroding it until it becomes unavailable to anyone." Many companies benefit directly from the use of natural resources (mines, soil, oil, water, air) and leave nothing [usable or not polluted] for the ones who live there. In many cases, the government from these poor countries receive money (corruption) from companies not to create regulations that would stop them from exploiting. The lack of sustainable strategies might be related to short-term performance obsession and associated to CEOs and board of directors (the decision-makers) that focus on short-term benefits and compensations (Rappaport). An example of sustainable strategy is to create partnership with local companies, which positively affect economic growth. Additionally, offshore tax loopholes allow large corporations to avoid taxes and shift profits to tax havens, where they then pay little to no taxes. These corporations are operating in developing countries, robbing resources and using offshore tax havens to hide money and avoid taxes. Therefore, it appears as though they are sending aid to developing countries, but in reality they are using it as another form of revenue. This reinforcing loop encourages and allows the rich to get even richer (Brogan).

[Green dotted line] Analysis conducted in 1998 by Sanjeev Gupta, Hamid Davoodi, Rosa

Alonso-Terme shows that rising corruption between 1980 and 1997 increased income inequality and poverty. Corruption allows rich influential people to lobby and bribe the government into making policies that would favour them by decreasing the progressivity of the tax system and increasing asset ownership inequalities. The authors explained that "In a society where asset ownership is concentrated in a small elite, asset owners can use their wealth to lobby the government for favourable trade policies". A positive reinforcement loop is thus created allowing the rich to get richer whereas the poor get poorer. Corruption, through the biased tax system will favour the wealthy population while also "[increasing] the operating cost of government, and, therefore [reducing] the resources available for other uses, including the financing of social spending]. This leads to a lack of access to needs such as education for the poor and increases poverty. The result of the analysis showed, however, that "higher social spending reduces poverty but has no effect on income inequality" (Gupta, Davoodi & Alonso-Terme). Income inequality has increased because "corruption slows the rate of poverty reduction by reducing growth". Corruption increases investments in capital-intensive projects while simultaneously reducing those aimed at labour-intensive projects. The rich get a return on investment while the poor are deprived of income-generating opportunities thus increasing income inequalities. The relationship between corruption and Gini coefficient is shown in *Figure 2* in the appendix and supports the fact that an increase in former leads to an increase in the former. The presence of corruption affects growth and income distribution, because the corruption is usually benefitting the high-income groups in an economy, putting the poor at a disadvantage. This is further amplified because it can result in a reduction in the amount of social services provided to the poor, including health services as well as education. (Gupta, Davoodi & Alonso-Terme)

[Red dotted line] According to Zoltan Acs, there are two different types of entrepreneurial activities: opportunity entrepreneurship and necessity entrepreneurship. The two can be found simultaneously in any country but it is their ratio that determines whether they lead to economic growth or not. Opportunity entrepreneurship is "an active choice to start a new enterprise based on the perception that an unexploited or underexploited business opportunity exists”. This kind of entrepreneurial activity is dominant in developed countries and contributes to economic growth by creating new businesses, which lead to more jobs and more competition. They also bring about technological changes that increase productivity. The increase in local skills and income then leads to economic growth, which in turn stimulates opportunity entrepreneurship leading to a positive reinforcement loop. Necessity entrepreneurship, on the other hand is described as “having to become an entrepreneur because you have no better option”. This happens in less developed countries and/or those that experience a structural change in economy leading to less wage workers such as what happened in Eastern Europe after the Berlin wall fell and uneconomical companies were shut down. Necessity entrepreneurship leads to two negative reinforcement loops since the lack of jobs leads to more necessity entrepreneurship, which then leads to less wage workers. Necessity entrepreneurship also leads to less economic growth, which brings about more necessity entrepreneurship. A country would need to experience a shift towards opportunity entrepreneurship dominance to enter the positive reinforcement loop mentioned previously, creating job opportunities, increasing local skills and income (also decreasing the shortage of skilled people, attracting more investments), and increasing access to basic needs.

[Blue line] The more access people have to education, the more likely they are to find jobs, to have enough food for the families, and to improve their quality of life. Access to healthcare is also important to reduce the deaths due to common diseases such as tuberculosis, measles, pneumonia

(Problems of Poverty). The lack of these resources plays a significant role on the economic and social opportunities they will have. The lack of basic needs also decrease the stability of developing regions and often lead to crime and conflicts, which turn off the interest of companies investments. Since gross national happiness depends on “good governance, sustainable socio-economic development, cultural preservation, and environmental conservation” (Buthan GNH Index), such conditions will lead to a decrease in GNH and prosperity; and the more prosperity, the higher GNH (positive reinforcing loop).

[Yellow dotted line] Aid from developed countries can help the poor and developing countries to grow economically through non-profit organizations, charity and financial aid. Tax deduction is the most common tax incentive. The motivation to reduce taxes by contributing to non-profits or subsidization programs is known in economic terms as a tax incentive. Developed countries will receive economic benefit from a reduction in the amount of paid taxes. The donation is reported on the tax return and used in calculating the ultimate tax liability.

According to OECD (Organization for Economic Co-operation and Development), income inequality has increased in three-quarters of all OECD countries since 2007. It is a consequence of the global financial crisis, which has lead to higher unemployment and lower income, further widening the gap between the rich and the poor. The OECD warns that the levels of inequality could continue to grow if the governments keep on cutting benefits and implementing austerity measures (Mackintosh).

Without the interventions and possible solutions to shrinking inequality, opportunities are not abundant for those living in the developing world. However, opportunity and access are not the only factors affecting poverty. Choice also plays an important role in determining whether a person is indeed poor. If someone chooses to live a certain way, on the street for example, he or she will not be considered poor even if they live under the commonly accepted poverty level. A person provided with an opportunity can gain access to a higher standard of living if he or she chooses to.

Conclusion

Through extensive research and discussion surrounding the detrimental consequences of inequality on a global scale, interventions have been suggested for improvement. The problems presented and the solutions proposed are by no means a representation of the enormous complexity surrounding this complex system.

Interventions

In several sections of our map we have identified reinforcing loops that all point to the theme of “Success to the Successful”. This theme explains the idea that the successful are empowered to become more successful, while the poor are destined to become more poor. This pattern generates inequality as quickly as it draws each respective party to their opposite poles. As a means of intervening, there are several initiatives and ideas that could be implemented to reverse this flow and insert a more balancing loop so that inequality can shrink and restore a more logical flow to the system.

In order to introduce more balance into the system, governments and large multi-national corporations must be removed from the equation. Further over to the right on our map are red arrows that indicate, for one, a balancing loop around economic growth of poor and developing areas. Earlier in our narrative we discussed the importance of opportunity entrepreneurship over necessity entrepreneurship, the former being more productive for economic growth. According to our map, economic growth of poor/developing areas positively impacts opportunity entrepreneurship, which positively impacts competition, innovation and productivity, which positively impact the creation of jobs, which leads to more local skills and income, which returns to positively impact the economic growth of the poor and developing areas. Therefore, we need to connect the rich from the yellow section, to our red loop. Thus, given what we learned in class, individuals are inherently drawn towards compassion, the direct investment of the rich into the developing economies by way of micro-loans or crowdfunding can eliminate the corruption of governments and corporations and provide growth.

We have a mechanism for connecting the rich to the poor. Kiva is a micro-lending site, endorsed by the Clinton Global Initiative, that provides a way for “the rich” to invest directly in “the poor”. Anyone can become a lender by providing a loan of just $25 to a specific cause in a developing area of the world. This loan is not a gift, in fact with a 99.02% repayment rate, it is a much better bet than most investments. These loans help small businesses to grow where it was previously not possible for them to prosper. They create opportunity entrepreneurship.

What we need is an incentive for the rich to engage in this practice. The rich will always want to become richer, and Kiva is not exactly going to make a lender’s portfolio expand. However, if corporations and governments redirected the money they spend on aid to the poor countries into ad campaigns and tax incentives for those who participate in micro lending, then more will know about the program, and more will see the reward in participating.

By removing the aid programs that governments use to shuffle money back and forth, ultimately charging far more than they are giving according to Change the Rules, countries need not rely on another country for help. Therefore they are not burdened by that country's political pressures. Their people can prosper, all the while, not taking any significant amount of money from the rich of the world, and the country’s can operate self-sufficiently. This points to the positive reinforcing loops in light green underneath our yellow section. By removing the loans to poor countries, there is no debt being created, no profit from interest by the rich countries, and no undue toll on the local economy that is supposed to be getting help.

Tax also seems to be an important issue in the economy. Governments needs tax to compensate the deficits but the more they increase the taxes the more they provoke tax evasion. For instance, famous French actor Gerard Depardieu has moved to Belgium because of the recently imposed 75% tax on the yearly incomes over €1 million. This is even more severe for the companies evading taxes via offshore tax havens. This provocation which can be seen in the red loop of the map clearly poses grave problems on the collection of taxes which results in less compensation of the deficit. Interventions should be made in this loop to ensure the tax is feeding the government in a healthy way. Not only the tax rates should be set low enough but also more strict regulations should be made to enforce the collection of the taxes to reduce the tax evasion. This would play a balancing role on the reinforcing loop resulting in more deficit.

Works Cited

Acs, Zoltan. "How is entrepreneurship good for economic growth?" *MIT Press Journals* (2006): 97-107. Web. 21 July 2013.

Anderson, Jamie L., Makides, Constantinos, Kupp, Martin. "The Last Frontier: Market Creation in Conflict Zones, Deep Rural Areas, and Urban Slums." *California Management Review* 52 (2010): 4. Web. 21 July 2013.

Bellinger, Gene. "Success to the Successful Systems Archetype". *Youtube.* Youtube, LCC, 16 Dec 1012. Web. 21 July 2013.

Brogan, Beth. "Anti-Poverty Network: Large Corporations Avoid $150 Billion Per Year Through Tax Loopholes." *Common Dreams.* Breaking News & Views for the Progressive Community, 13 Dec 2012. Web. 21 July 2013.

"Buthan GNH Index." Gross National Happiness. Centre For Buthan Studies, 2013. Web. 21 July 2013.

"Crisis squeezes income and puts pressure on inequality and poverty: New Results from the OECD Income Distribution Database" *OECD.* OECD, n.d. Web. 21 July 2013.

F. Jones Jr., Arthur, H. Weinberg, Daniel. "The Changing Shape of the Nation's Income Distribution 1947-1998 Consume Income." *The US Census Bureau* (2000): p60-204. Web. 21 July 2013.

Frydman, Carola, E. Saks, Raven. "Executive Compensation: A New View from a Long-Term Perspective, 1936–2005." *The Review of Financial Studies* 23 (2010): 5. Web. 21 July 2013.

Gupta, S., Davoodi, H., & Alonso-Terme, R. "Does corruption affect income inequality and poverty?" *Economics of Governance 3* (2002): 23-45. Web. 21 July 2013.

Hanauer, Nick. "A TED Talk on Income Inequality." *Youtube.* Youtube, LCC, 17 May 2012. Web. 21 July 2013.

Meadows, Donella H. *Thinking in Systems: A primer.* Vermont: Chelsea Green, 2008. Print.

Mackintosh, Eliza. "Report: "Income inequality rising in most developed countries." *Washington Post.* The Washington Post, 16 May 2013. Web. 21 July 2013.

"Problems of Poverty." *Poverty.* Poverty, n.d. Web. 21 July 2013.

Rappaport, Alfred. "The Economics of Short-Term Performance Obsession." *Financial Analyst Journal* 61 (2005): 3. Web. 21 July 2013.

Riech, Robert B. "The Limping Middle Class." *New York Times.* New York Times, 3 Sep 2011. Web. 21 July 2013.

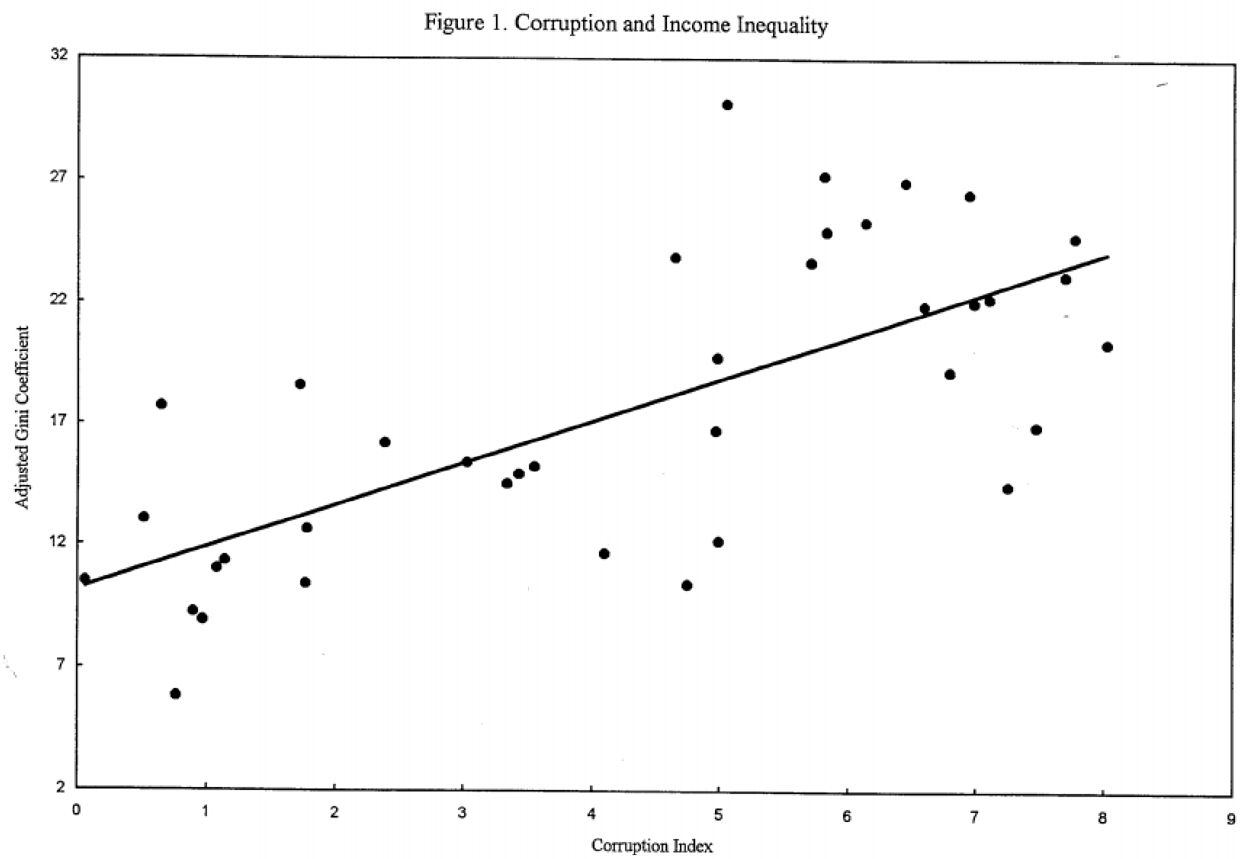
Senge, Peter M. *The Fifth Discipline: The Art and Practice of Learning Organization.* The United

States: DOUBLEDAY, 2006. Print.

Waldrons, Travis. "Study: CEO Pay Increased 127 Times Faster Than Worker Pay Over Last 30 Years." *Think Progress.* Center for American Progress Action Fund, 3 May 2012. Web. 21 July 2013.

Appendix

Figure 1



The Gini coefficient is adjusted using the regression in Table 1, Column 1. A high value of the corruption index means the country has a high level of corruption.

Figure 2