

Plant with Purpose and its Impact on development
A look at the generation of both social and human capital and its impact on development

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Abstract:

A look at how Plant with Purpose builds human and social capital, through the Village Savings and Loan Associations that they establish in rural Tanzania. Human capital is accumulated through investments into both health and education. Social capital is accumulated through investing into social networks and creating lasting connections and social norms. Both of these have an impact on economic growth, which is seen best through the endogenous growth theorem. These impacts however are merely hypothetical because of the lack of information currently available.

Literature Review:

There were several articles that were useful in understanding human capital and how it is formed, as well as what its benefits are. The articles that were useful were: "Health and Income Variation- A Panel Data Study on the Developed and Less Developed Economies." and "Unequal Opportunities and Human Capital Formation.". These articles were helpful in understanding how human capital is formed and what it consists of. They were also useful in illustrating the discrepancies in human capital around the world. These articles were also useful in understanding how human capital impacts development as well as human capital's relationship with social capital.

Robert Putnam was the first to thoroughly look social capital and its development. In his three articles: "Bowling Alone", "The Prosperous Community" and "Social Capital: Measurement and Consequences;" he defines what social capital is and why it is important. These articles were essential in laying the groundwork for what social capital is and its positives and negatives. "The Dynamics of Social Capital and Community Associations in Uganda: Linking Capital and Its Consequences." by Kristof Titeca was also useful in fully understanding social capital and how it forms. This article explains how there are three different types of social capital, and that they all need to build off of one another in order to build a successful society. The last article that was useful in understanding social capital was "A Dark Side of Social Capital? Kinship, Consumption and Savings" this article talked about the dangers of social capital accumulation in sub-Saharan Africa. It warned that increases in social capital can decrease savings, because community members feel obligated to lend to each other rather than

save for themselves. All of these articles were extremely useful in understanding what social capital is and what its positives and negatives are.

In understanding human and social capital's impact on development and which model to use the following article was useful: "An Endogenous Growth Model with Human and Social Capital Interactions." This article described why the endogenous growth model is the best model to study human and social capital's impact on development. It also outlined the relationship between human capital and development and social capital and development. It described how both would fit into the endogenous growth function. I used this article as the base to build my own model.

In understanding what indexes to use in order to see if Plant with Purpose is making an impact I used the following articles: "The Relationship between Human Capital Investment and Economic Growth: A Panel Error Correction Model.", "Human Capital Accumulation, Fertility and Growth: A Re-Anaylsis." and "Institutions, Human Capital, and Growth: The Institutional Mechanism." These articles were very useful in understanding what indexes to study. By looking at these indexes I was able to find that there is an information gap in Tanzania which makes this study solely theoretical. The other use for these articles would be if I took this study further in the future; I would use the indexes they describe as the factors in my regression analysis.

Intro:

World development has been a hot topic for over ten years. The Millennium Developmental Goals, established by the United Nations in 2000, aim to: eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, assure environmental sustainability, and create a global partnership¹. These goals address many of the issues that dominate African countries; such as: lack of good government, health care and education. These issues cannot be fixed by dumping money into countries and expecting them to fix themselves. The money will go into the pockets of corrupt officials and rarely makes it into the hands of the people. Good government is created through civic engagement; leaders need to be held accountable by their people and the populous has to be able to hold them accountable. This is possible through the accumulation of both social and human capital.

Communities that trust each other to follow the law, and are lead by relatively honest and fair leaders become prosperous. Whereas communities that are filled with corruption and deceit are caught in a never ending vicious cycle that is almost impossible to break. The investment in social capital can change a lot of this, because it builds up social trust and creates a more engaged populous that can grow into a prosperous community. Investing in social capital also allows for the investment in human capital which leads to significant economic development. An American nonprofit seeks to help create economic growth in these developing countries. The organization, Plant with Purpose, does this by creating Village Savings and Loan Associations which give rural villagers access to a financial institutions. These institutions serve a multitude

¹ "Resources For Millennium Development Goals." *Africa*. N.p., n.d. Web. 10 Mar. 2013

of purposes; the most obvious being that they act as financial institution where villagers are able to save and take out loans. The loans that they give out go to the improvement of the lives of their members. They are usually taken out to support further education or for health reasons. This gives members the ability to accumulate human capital. Also since the banks are a community organization they generate social capital because they create a social network. This network significantly decreases the information barrier and transactions costs; allowing the village to grow.

This paper will explore how this organization creates human and social capital in these villages. It will also explore how human and social capital are created and the benefits of generating them. This paper will also look at how human and social capital impact development and will look at their impact on economic growth. It will use economic models to model the benefits of this capital as well as it will use the endogenous growth model to explain the effects capital has on growth. Plant with Purpose creates social and human capital through the banks they set up, this capital investment leads to economic growth and development; which is explained through endogenous growth theory model. However due to the lack of information from developing countries, all impacts are theoretical.

Section 1 : Plant with Purpose

Plant with Purpose is a nonprofit organization that was started in 1984 by Tom Woodard. Woodard came up with the idea for Plant with Purpose while he was working with a Christian relief group in the Dominican Republic. He found that despite their best efforts the group was doing little to relieve poverty in the area. Tom Woodard realized that there is a direct connection

between poverty and the environment; so on his return to the United States he founded Plant with Purpose or Floresta USA which takes a three part holistic approach to fighting poverty. The end goal is for that the villages that the organization helps to become both environmentally and economically sustainable so that they will not need Plant with Purpose to return

The three pronged approach that Plant with Purpose employs focuses on environmental, economic and spiritual renewal. This approach is used in developing countries such as: Tanzania, Burundi, Northern Thailand, Dominican Republic, Haiti, and Mexico. Since no two countries are exactly the same the Plant with Purpose team uses different methods in each of the different countries. This paper will specifically focus on the methods used in rural communities in Tanzania in order to give a deeper explanation.

In order to create economic sustainability Plant with Purpose starts Village Savings and Loan Associations (VSLA) in rural villages in Tanzania. These VSLAs operate like banks in which members deposit money and can take out loans which are paid back in interest. Plant with Purpose requires the banks to run for a year, although many continue on after. The bank meets weekly in a local spot in the community and meetings last for about an hour with lunch or coffee afterwards. The banks are small, having no more than thirty members, and are made up entirely of people who live in the surrounding area. They are also run anonymously, each bank member receives a number and during meetings they go by their number instead of their name. This is in order to give the members some privacy so that not everyone knows how much money each person has and to make members feel more comfortable about depositing. When each bank starts the community members elect members into three positions: money collector, key holder and

book stamper². These three people are trained by the Plant with Purpose team and run the bank meetings.

The bank runs on the shares collected each week; a share is a certain monetary amount that is determined by the community. A share is worth about one Tanzanian shilling, member can deposit one, two or three shares at each meeting. VSLAs collect shares and give out loans to bank members, these loans can be for anything and are paid back with interest. When a person wants to take out a loan they have to explain to the group why they want the loan and then the group votes on the loan. This is because the bank is set up so that if one person defaults on their loan the whole group has to pay it back. The goal of this is to make the members financially responsible and to make sure that the bank is sustainable. In addition to the loans that are given with interest many of these banks also have a community fund. A community fund is an extra pool of money that members or visitors may donate too. This fund is used to help families out in case a family member is sick or dies; in order to keep the family running so that way they do not fall behind. Loans given out by the community fund do not need to be paid back nor do they accrue interest; the fund hopes to create a sense of community among the members. The final way that the bank acquires money is through fines, members set what other members can be fined for such as: being late, eating during the meeting or your cell phone goes off. These fines vary in amounts and make the meeting lighthearted since members can fine each other. All fines go into the bank and are divided equally along with interest among members at the end of the year. At the end of each year members receive their share of fines and interest and their savings and can decide if they want to save again the following year.

² Each share is stamped into the book, so that way there is no dispute how many shares a member deposited

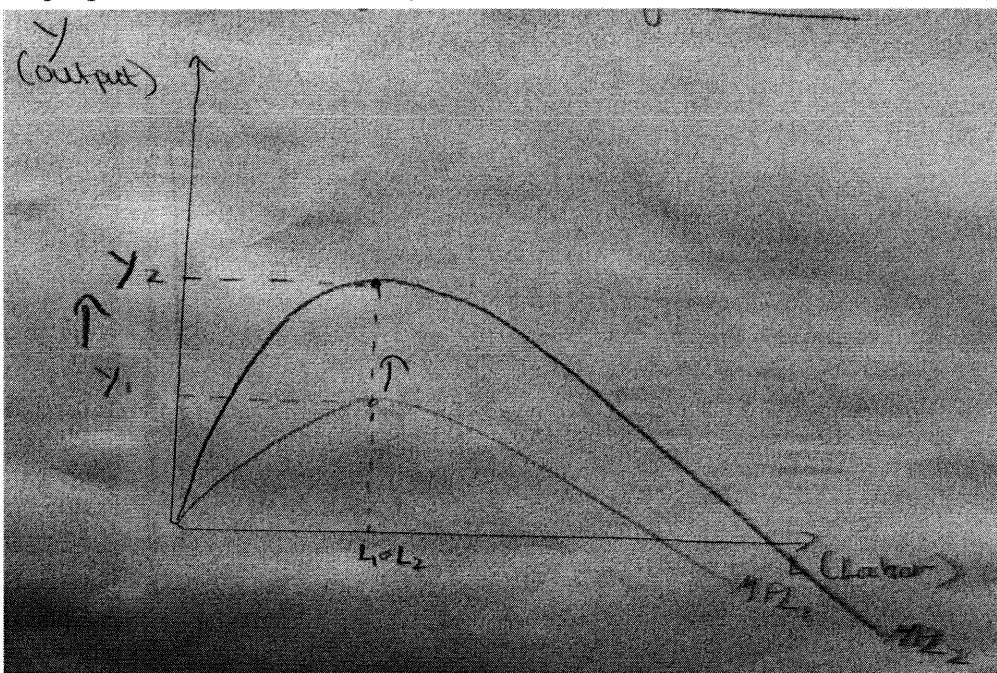
A typical bank meeting starts with the members filing in and taking their seats. After each member is seated the deposit box is opened and each person's savings are passed out. Each member is then called up by number and they deposit an amount of shares in addition to their own savings, it is required that members deposit a share amount each week. After everyone has deposited their savings, loan repayments are called and collected with interest. When the repayments are done new loans proposals are heard and voted on. If approved the member goes up and takes their loan. At the end of the meeting all the fines and shares are collected and the box is locked up and the members file out. Lunch or coffee is served after each meeting and the members stay around and chat, which helps generate social capital. While the extra savings and loans give members the opportunity to invest in human capital.

Section 2: Human Capital

Human capital is the investment of time and energy that person invests into something in order to make themselves better. The two main investments into human capital are: health and education. By investing in these two activities people are improving their marginal productivity. A higher education signals to potential employers that they are hard and dedicated workers because they have taken the extra time and effort to go that extra mile. That extra mile in the United States has become getting a graduate degree; while in developing countries it may be completing elementary or high school. This completion of extra education shows that the person is willing to invest time into making themselves more productive as well as it shows that they are able to excel at higher skilled jobs which leads to higher salaries. The higher wages earned can make a huge difference for a family in a developing country because it allows them to invest

further in human capital as well as invest in real capital. This can lead to significant economic growth and development.

Another way that a person can invest in human capital is by improving their health. This could mean improving their diet or getting to the doctor for an annual check up. Although this is hard for many people to do in the developing world it can make a huge difference in their lives. Improved health will cause a worker to miss fewer days of work which will signal to their employer that they are a productive employee. As well as improved health will cause them to be more productive because better health will allow them to work harder, because they will not be sick or suffering from an inadequate diet. This will allow them to be more productive and increase their marginal productivity. Increases in worker marginal productivity is huge in developing countries because it only takes a little in order for them to become significantly more



productive.

An increase

in a worker's

marginal

productivity

means that

for the same

hour of

work a

worker will be able to produce more because they are acting in a more efficient way. The effects of marginal productivity can best be seen in this model:

The marginal productivity of labor curve is downward sloping because of diminishing returns. Meaning that for each unit of labor added the marginal productivity increases up to a certain point; at that point the additional unit of labor causes the firm to be less productive. The increase in the marginal productivity of the workers due to human capital investment causes the marginal productivity of labor curve to shift up; so for the same amount of labor the firm now produces Q2 units of output instead of Q1. This is significant for the firm because now they are producing more and generating a greater profit. These increases in profit turn into wage increases and economic growth; which in turn leads to economic growth.

Human capital investment is essential to economic growth because it creates a more productive society which allows for the society to advance from basic goods and services to higher value, complex goods and services. Chiu, Yamada, and Chen found in their study on the correlation between human capital investment and development that there is a positive

correlation between human capital accumulation and economic development³. However there is a huge gap in the ability of families to finance investment in human capital. A family in the United States will find it significantly easier to finance an education or better health for themselves and their children. While a poor family in a country like Tanzania who live on a day to day basis will find it a lot harder to finance their children's education or health. This is because many families are credit constrained meaning they have no way to finance the costs of human capital accumulation using future earnings as collateral for a loan to pay the tuition fees and living expenses; because of this they will pass up investing in human capital all together⁴. This can easily lead to an endless cycle of poverty because families can never find the means to improve their situation. Fortunately organizations like Plant with Purpose provide the families with the opportunities by setting up informal loan associations that provide families with easier credit access. Most the loans that are financed by the loan associations, that Plant with Purpose set up, go towards human capital accumulation. The access to loans and the interest that members accumulate on their savings allows the family to invest in human capital. These loan associations are breaking the endless cycle of poverty by enabling families to invest in themselves. Human capital is essential to economic growth and development; the effects of which will be seen later in this paper. A key component of human capital accumulation is accumulation of social capital.

Section 3: Social Capital

³ Chiu, J Ming, Tetsuji Yamada, and Chia-Ching Chen. "Health and Income Variation- A Panel Data Study on the Developed and Less Developed Economies." *International Economics Journal* 25.2 (2011): 305-18. *EconLit*. Web. 10 Mar. 2013.

⁴ Mejia, Daniel, and Marc St-Pierre. "Unequal Opportunities and Human Capital Formation." Harvard University, Mar. 2007. Web. 12 Jan. 2013.

The basic idea of social capital is that it is networks and associated norms of reciprocity have value for the people involved in them and generate externalities⁵. Meaning that it is the gains that people receive from participating in some sort of community. Kristof Titeca in his paper on “The Dynamics of Social Capital and Community Associations in Uganda: Linking Capital and Its Consequences” argued that here are three different types of social capital: bonding, bridging and linking. Bonding social capital is based on exclusive solidarity between people “like us” and only helps to get by. Bridging social capital is a more inclusive solidarity between people of different background and helps people to “get ahead”. Linking social capital is the creation of norms of respect and networks of trusting relationships between people who are interacting across explicit, formal or institutionalized power or authority gradients in society. The key function of linking social capital is the capacity to leverage resources, information and ideas from these formal institutions⁶. Titeca asserts that these three types of social capital need to build off each other in order for it to be successful. He discovered this after studying three different Ugandan organizations that all failed because they were unable to create positive linking social capital. Positive linking social capital exists when members of a community have a trusting relationship with institution leaders and trust is built between both parties. This social trust is a key aspect of social capital⁷ because it incites people to become involved in their community because they believe in their institutions because of their investment in social capital. Robert Putnam in his paper “ Social Capital Measurement and Consequences” points that another characteristic of social capital is altruism. People are more likely to effectuate selfless acts toward others because of the connectedness that they feel with their neighbors. The willingness

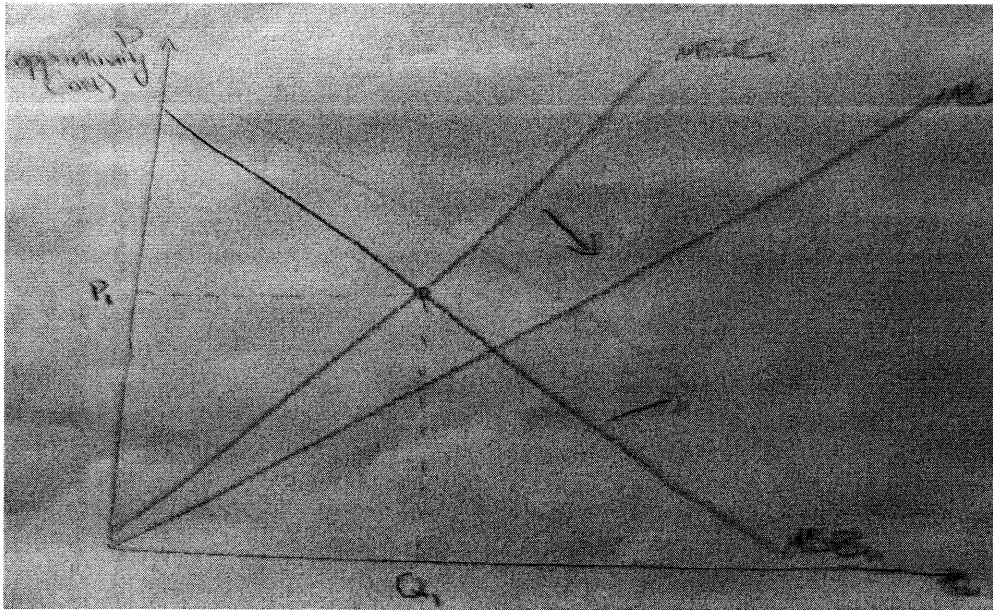
⁵ Putnam, Robert. "Social Capital: Measurement and Consequences.": 1-32. Web. 10 Oct. 2012.

⁶ Titeca, Kristof. "The Dynamics of Social Capital and Community Associations in Uganda: Linking Capital and Its Consequences." *World Development* 36.11 (2008): n. pag. Print.

⁷ Putnam, Robert. "Social Capital: Measurement and Consequences.": 1-32. Web. 10 Oct. 2012.

to help each other facilitates economic growth and development; which is why the creation of social capital is significant.

Investment in social capital is essential to economic growth because it significantly diminishes transactions costs. Social capital investment lowers transactions costs because it lowers the information barrier; members of social networks are able gain information easier because of their connections. Instead of spending hours searching through phonebooks for a good doctor or plumber a person can just ask someone else in their organization and acquire the information much faster and likely find a better person than if they found one themselves. Social capital is reciprocal in nature because by investing in it people are able to access other people's information faster as well as their information can be accessed faster. This is significant because this network of connections helps people's businesses to grow and prosper because they gain business through their social network and do not have to build up their business by scratch. These networks allow information to flow easier and significantly reduce costs because instead of investing in marketing techniques businesses can invest in new developments that will improve society and facilitate economic growth. Society as a whole benefits from social capital accumulation in the form of marginal social benefits. Marginal social benefit is the additional benefits that a society receives when members choose to invest in things like social capital. This is seen in the following model:



With the formation of social networks the opportunity cost of investing in social capital decreases. Therefore when individuals invest in creating social capital the quantity of social capital increases and the marginal social benefit curve shifts up and to the right. The benefits of this increase will lower the marginal social costs and so individuals will continue to invest in social capital until the marginal benefit equal the marginal costs.

Robert Putnam explores the idea of social capital closely in both of his articles and through studying these one can see the effects that social capital has on society. In his paper “The Prosperous Community” Putnam contrasts Northern Italy and Southern Italy with the purpose of proving that the existence of social capital can have a significant impact on societal development. In Northern Italy people engaged in civic engagements through community

organizations that valued “solidarity, civic participation and integrity.”⁸ This created trust in the community where people trusted one another to act fairly and obey the law. The community was engaged by public issues and not patronage and community leader were relatively honest and committed to equality. These communities were prosperous because of the investment in social capital. Conversely in communities in Southern Italy, people did not engage in social and cultural associations. Inhabitants believed that public affairs were the politicians business and not theirs and their laws were made to be broken. However for fear of other people’s lawlessness the community demanded sterner discipline, and the people felt powerless, exploited and unhappy. As a result of this the communities did not prosper and remained stunted. Social capital creates social trust which is necessary for communities to grow and develop. Further civic engagement becomes deeply rooted in society and is repeated in future generations; communities that invested in social capital centuries ago enjoy the positive effects of it today. The reciprocal nature of social capital leads to the development of good government and economic success.

The second example that Putnam uses to show the benefits of social capital is its effects in the United States. In his article “Bowling Alone: America’s Declining Social Capital” Putnam explores the development of social capital in the United States. Similar to Italy Americans were engaged in civic duties and as a result enjoy better schools, faster economic development, lower crime and more effective government.⁹ Putnam believes that it is through this civic engagement that America was able to grow like it did. However as his article title suggests Putnam points out that social capital is declining in the United States. This is evident in the declining level of civic engagement, voter turnout is decreasing along with participation in community organizations. He

⁸ Putnam, Robert. "The Prosperous Community Social Capital and Public Life." *The American Prospect* 1993: 35-42. Web.

⁹ Putnam, Robert. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6.1 (1995): 65-78. National Endowment for Democracy and the Johns Hopkins University Press. Web.

argues that this could be the result of a litany of political tragedies and scandals that could have caused the American people to lose trust in their government. However civic engagement could also have decreased because as America has developed the need for social capital could have decreased since information is more readily available. As well as social networks could have switched from the traditional form to a newer form that involvement in has not been studied yet. Despite the decline, social capital is still a pertinent part of economic growth.

While the accumulation of social capital has proven to be beneficial in European and American societies it could potentially be detrimental in African societies. A study done by Salvatore Di Falco and Erwin Bulte looks at how kinship affects consumption and savings rates in sub-Saharan Africa. A kinship is a form of social capital in that it is a collective institution acquired through bloodlines, marriage or adoption; and is the primary form of social organization¹⁰. A kinship defines the obligations for its members; usually these are financial obligations since members of a kinship are required to share all of their assets. This beneficial for the poorer members of the kinship but costly for the wealthier members since their pockets are always being drained to help out family members. Di Falco and Bulte argue that this kinship system has a negative impact on consumption and savings rates because members are unable to consume or save as much as they normally would because of their financial obligations. This is a significant downside to this form of social capital because although the benefits of lower transactions costs and a wealth of information are still present; wealthy members of a kinship are unable to take advantage of it because they have to take care of the rest of their family. This results in a lower consumption and savings rate which negatively impacts economic growth because money is not going back into the economy. This could be a serious hindrance in

¹⁰ Di Falco, Salvatore, and Erwin Bulte. "A Dark Side of Social Capital? Kinship, Consumption and Savings." *Journal of Developmental Studies* 47.8 (2011): 1128-151. Print.

economic development and should seriously be considered when trying to enact effective policies in sub-Saharan Africa.

While there is a downside of social capital there are still many benefits which outweigh the potential cost. The way that Plant with Purpose generates social capital is by bringing a community together and engaging them in a civic activity. The social network that forms as a result is not a result of the kinship but follows the traditional way that American and European community organizations have followed. The social capital that is formed facilitates the ability for human capital accumulation and together they should generate economic growth. The impact of social and human capital accumulation on development is discussed in the following section.

Section 4: Impact on development

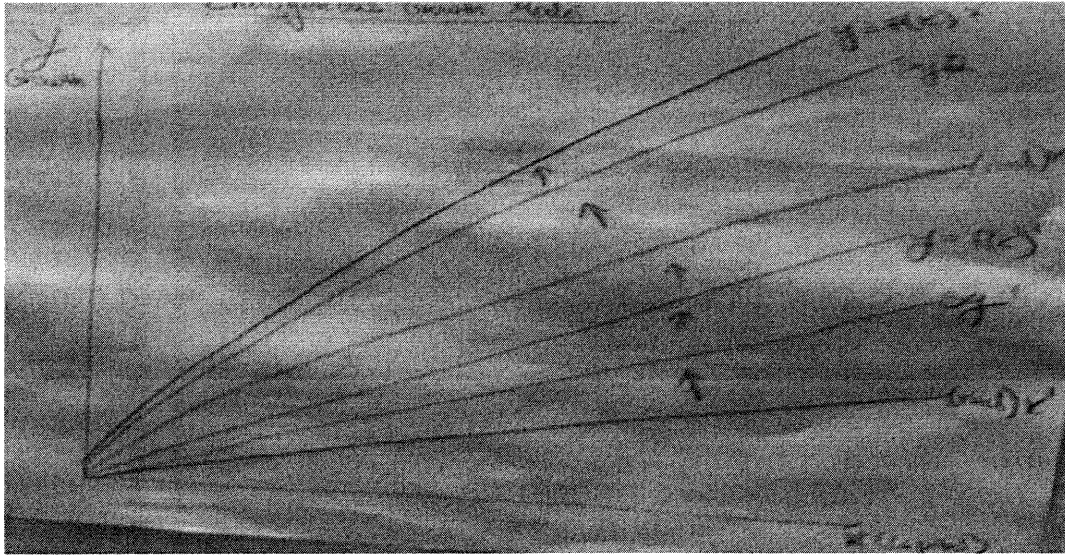
The endogenous growth model is essential to measuring the hypothetical impact that Plant with Purpose will have on the Tanzanian economy. This is because the endogenous growth theory relies solely on capital investments in order for the economy to grow. The model assumes that the economy will grow indefinitely because people are saving more than their capital needs. It also assumes that people will continue to reinvest their savings into the economy in the form of capital investments. Capital investments are not limited only to machinery investment but includes investments into human and social capital as well. These investments will allow the economy to grow indefinitely. Tiago Neves Sequeira and Alexandra Ferreira-Lopes argue that both social and human capital have an impact on growth via the endogenous model. However they believe that the human capital has a larger impact on the economy and that social capital plays a rather small role. Meaning that as the economy grows investment into social capital should

decrease because it will no longer be necessary to continue to invest in creating social networks. They believe that social capital is essential to building the foundation for investments into human capital but does not contribute to large amounts of growth¹¹. This is significant because it proves that although social capital only has a small impact it and human capital both have a significant impact on the Tanzanian economy. The effects of which will be illustrated in the endogenous growth model.

Section 5: Main Model

The endogenous growth model assumes that everyone in the economy will reinvest their savings into capital, and it is through this investment that the economy will grow. In the model it is presupposed that all growth will come internally from the economy and that there are no external factors that alter the growth function. The model factors in: population growth, savings, capital investment and depreciation of capital, which are represented by n , s , k and d . Benefits that result from Plant with Purpose's involvement in the economy should increase the capital input because human capital and social capital are increasing, both of which factor into the capital level. Village Savings and Loan Associations require that each of their members save each week, which increases the level of savings. We will assume that depreciation level of physical capital will remain the same, and therefore it will not cause any shifts. We will assume that it will stay constant because we have no information on how physical will be impacted by Plant with Purpose. The effects can be seen in the following model:

¹¹ Neves Sequeira, Tiago, and Alexandra Ferreira-Lopes. "An Endogenous Growth Model with Human and Social Capital Interactions." *Review of Social Economy* 69.4 (2011): 465-93. Print.



With the investment into human and social capital the potential economic growth will increase exponentially. This is because with the increase in social and human capital this will increase the amount of capital, k , in the economy. This will shift the growth function up and to the left because growth is a function of the amount of capital. The $(n+d)k$ curve will also shift up and to the left. Because even though the growth and the depreciation rate remain constant the level of capital is increasing which will shift the curve up and to the left. Lastly the savings curve will shift up and to the left because there is an increase in savings as well as capital, so that curve will also shift up. This means that the country is expected to see a growth increase because capital and savings are increasing. There are a few ways to see if this is happening which will be discussed in the following section.

Research has shown that there are a few ways to see if growth is being generated due to increases in human capital. Health care is often used as a proxy to measure human capital investment¹², so it and education are good indexes to examine. Indicators that could be used to see if there have been increases in health care investments as well as education investments.

¹² Tatoglu, Ferda Yerdelen. "The Relationship between Human Capital Investment and Economic Growth: A Panel Error Correction Model." *Journal of Economic and Social Research* 13.1 (2011): 75-88. *EconLit*. Web. 10 Mar. 2013.

Indicators to look at would be increases in the literacy rate among adults and children as well as looking at looking at infant mortality rates and overall life expectancy. Increases in both of these would indicate a better health and education system which would show that people are taking the time to invest in human capital. A less obvious thing to look at would be fertility rates and if they are decreasing or increasing. Iyigun argues that if human capital accumulation is increasing then fertility rates should be decreasing because producing and rearing children is a huge time commitment and that people will trade off children in exchange for investing in education¹³. Meaning that people are valuing investments into human capital over reproduction because they think that it is a better investment of their time. This may seem counterintuitive to the growth theorem because it relies on population growth to expand output; however with the increasing in capital the economy should keep growing.

Section 6 Issues:

Although there are indicators to look for it is hard to accurately measure them. Infant mortality rates, literacy rates and other such health and education indexes are readily available in developed countries; it is extremely hard to gain the same information from developing countries. The World Bank which collects various statistics from countries around the world has very little information on the developing countries that Plant with Purpose works with. Tanzania for example, they have very few statistics relating to health and education indexes; this could be because of a couple of reasons: the first is that statistics have only recently begun being collected in Tanzania and because of that there is not enough information available to track developmental progress. The second reason could be that Africa in general is a hard area to gain information

¹³ Iyigun, Murat F. "Human Capital Accumulation, Fertility and Growth: A Re-Anaylsis." International Finance Discussion Papers (1995): n. pag.6 Web.

from in general and because of this an information gap exists. This lack of evidence is important to keep in mind when examining the effects of Plant with Purpose. Because Plant with Purpose only works with a relatively small number of villages in Tanzania they do not have a big enough impact that it would show up in nationwide statistics. It is pertinent to keep in mind that the economic effects that Plant with Purpose has; at this stage are simply hypothetical.

Due to the lack of information it is hard to estimate the impact that Plant with Purpose is having however in the future there could be a couple of ways to take this study further. One such way would be to run a regression to see if there is a correlation between human capital accumulation and economic growth in the countries that Plant with Purpose works with. This analysis would look at human capital indexes such as: literacy rates, infant mortality, life expectancy, etc. along with population growth and government spending. Holding growth and government spending constant the regression would look at how each of these human capital indexes impact GDP growth. This would help to isolate the impacts of human capital on economic development. Another study that could be done would be to compare programs like Plant with Purpose to traditional micro-finance organizations such as Kiva and see which has a greater impact on development as well as to see which more sustainable in the long run. It is important to keep in mind that all of these effects will be seen in the long-run¹⁴. This is because it takes time to build both human and social capital, therefore their effects will not be felt in the short-run. It is essential to see how an organization like Plant with Purpose impacts development because it could be the key to bringing many countries out of the developmental stage.

Section 7 Conclusion:

¹⁴ Dias, Joilson, and Edinaldo Tebaldi. "Institutions, Human Capital, and Growth: The Institutional Mechanism." *Structural Change and Economic Dynamics* 23 (2012): 300-12. *EconLit*. Web. 10 Mar. 2013.

Plant with Purpose through the Village Savings and Loan Associations that they set-up generate both human and social capital. This along with the increase in savings, due to the bank's rules, will generate economic development as theorized through the endogenous growth theory model. However because information has only recently begun being collected from countries like Tanzania, the impact that Plant with Purpose has is only hypothetical. Over time as Plant with Purpose expands into more villages around Tanzania; its effects will be easy to measure. It will be interesting to continue to watch the work of organizations like Plant with Purpose to see if they have a lasting developmental impact.

References:

- 1) Resources For Millennium Development Goals." *África*. N.p., n.d. Web. 10 Mar. 2013
- 2) Information on Plant with Purpose: Cindy Outlaw (Board Member)
- 3) Chiu, J Ming, Tetsuji Yamada, and Chia-Ching Chen. "Health and Income Variation- A Panel Data Study on the Developed and Less Developed Economies." *International Economics Journal* 25.2 (2011): 305-18. *EconLit*. Web. 10 Mar. 2013.
- 4) Mejia, Daniel, and Marc St-Pierre. "Unequal Opportunities and Human Capital Formation." Harvard University, Mar. 2007. Web. 12 Jan. 2013.
- 5) Putnam, Robert. "Social Capital: Measurement and Consequences.": 1-32. Web. 10 Oct. 2012.
- 6) Titeca, Kristof. "The Dynamics of Social Capital and Community Associations in Uganda: Linking Capital and Its Consequences." *World Development* 36.11 (2008): n. pag. Print.
- 7) Putnam, Robert. "Social Capital: Measurement and Consequences.": 1-32. Web. 10 Oct. 2012.
- 8) Putnam, Robert. "The Prosperous Community Social Capital and Public Life." *The American Prospect* 1993: 35-42. Web.
- 9) Putnam, Robert. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6.1 (1995): 65-78. National Endowment for Democracy and the Johns Hopkins University Press. Web.
- 10) Di Falco, Salvatore, and Erwin Bulte. "A Dark Side of Social Capital? Kinship, Consumption and Savings." *Journal of Developmental Studies* 47.8 (2011): 1128-151. Print.

- 11) Neves Sequeira, Tiago, and Alexandra Ferreira-Lopes. "An Endogenous Growth Model with Human and Social Capital Interactions." *Review of Social Economy* 69.4 (2011): 465-93. Print.
- 12) Tatoglu, Ferda Yerdelen. "The Relationship between Human Capital Investment and Economic Growth: A Panel Error Correction Model." *Journal of Economic and Social Research* 13.1 (2011): 75-88. *EconLit*. Web. 10 Mar. 2013.
- 13) Iyigun, Murat F. "Human Capital Accumulation, Fertility and Growth: A Re-Anaylsis." *International Finance Discussion Papers* (1995): n. pag.6 Web.
- 14) Dias, Joilson, and Edinaldo Tebaldi. "Institutions, Human Capital, and Growth: The Institutional Mechanism." *Structural Change and Economic Dynamics* 23 (2012): 300-12. *EconLit*. Web. 10 Mar. 2013.