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Reducing Population Growth and Urbanization through Education and Public Policy Initiatives in China

The Sleeping Dragon. The Middle Kingdom. People's Republic of China. All of these and more have been used to describe or name the giant of the Far East: China. China is the (disputed) fourth-largest country in the world in terms of landmass, and it has the largest population of any country in the world by a factor of over 100 million people more than the second-most populous country, India ("China" CIA). If China's population continues growing at the rate it has been, and with less than 15% arable land, food security will become less and less attainable.

About 425 million people in China farm or work in agriculture, so subsistence farm families are relatively common. As such, I will tell you about a "typical" example in China. A Chinese family is generally thought of as having the grandparents living with a son and his family. More recently, however, the nuclear family style has become more common (Kung). Based on the one-child policy, which was started in 1979, families are able to have only one child, but this is hard to keep track of this in rural areas, so there are many children, possibly millions, with no legal identities. The official average number of children per family is about two (Hays, "One-Child").

The average Chinese diet consists of basic, standard food. Most of what farmers eat is grown on their own land. A family dinner generally consists of noodle or rice, soup, and a few hot dishes, similar to those that may be found at Chinese restaurants in the United States. At a more formal dinner, there may also be several cold appetizers. Porridge is a common breakfast food ("Food").

Education in rural China is currently lacking, and it grows worse as time goes on. Rural education is not as good as education in urban China for two main reasons. Firstly, their society is putting more emphasis on immediate and visible economic growth rather than the long-term and less obvious growth of educational progress. The second reason is that more resources and attention from the central government are being used in urban schools than in rural school (Fu). Most rural Chinese children are put at a disadvantage when they go off to find a job because they just do not have the same skills that the urban kids do.

China is currently undergoing a health care reform in both urban and rural areas. Since the 1990s, Chinese health care has taken a capitalist, fee-for-service approach. Officials say that this has not worked, and about two years ago began making a project to make health care more accessible and affordable. One major improvement is that 94% of people are currently covered by health insurance. However, there are still many problems. Patients still have to pay out-of-pocket fees, and even if they have the money, they may still have to wait to get in to see a doctor. Some hospitals are so crowded, in fact, that patients may line up early in the morning for a chance to schedule an appointment for the following day. To combat this, many rural and urban health centers are being redone to accommodate everyone ("China Struggles").

Farm size in China is generally about an acre. All land is state-owned, however, and this means that farmers are less likely to try to improve or preserve their land, for it will just go back to the state soon. The most common crops grown are rice, corn, chilies and vegetables, and almost all of those grown are eaten by the family with very little extra for selling (Hays, "Rural"). Many also keep pigs or chickens. Most crops grown by farmers today are raised with pesticides, cheap chemical fertilizers, and sewage sludge. Many farmers overuse these and harm the environment. Also, the United States Food and Drug

Administration has blocked many exports to the U.S. because of unsafe and toxic chemicals used on crops (Hays, "Agriculture").

One big challenge for improving agricultural productivity is the fact that all land is state-owned. Because of this, farmers do not have a good reason to maintain their land in its best possible state, and they do not have much incentive to improve it by building a better storage area, for instance. Another major factor is the limited amount of land that one farmer is able to own. With only one acre, a farmer can barely grow food for his family, let alone for selling to others. If owning larger plots of land was an option, farmers could not only grow food for their own families, but they could grow enough food to sell for a profit which could then be invested into more land to grow more food for our growing world.

As it stands right now, however, earning a living wage for a rural farmer is difficult, for, although food is not an issue, they make very little money for the other life necessities. Hardly any money is left over after basic needs are met and taxes are paid. Adequate nutrition is less of a problem for rural farmers. Since they grow their own food, they grow enough variety for a balanced meal. Getting enough, however, is still a problem.

Population growth and urbanization are two very important subjects in China today. China has such a large population already, and its population can only grow as more babies are born and old people live longer and longer even with its one-child policy in place. Another problem is urbanization. Because rural life is so difficult and unprofitable, many people move to the city to try their luck. However, there are already so many people in cities, and as more people move in, fewer jobs are available and there is less space to live in. Many people who move to the city for a better life only end up in poverty.

While urbanization has little to do with food production, the large population does play a minor role. Because there are so many people and not much land, it is difficult to assure that each person has at least some farmland. To combat this, every farmer has little land. However, this creates problems because farmers cannot produce as much food, and less food production means less income and worse nutrition.

Currently, overpopulation and urbanization are severe in China. However, China already has policies in place to help reduce these two things. The main regulation is the one-child policy, which has helped to reduce the country's official population. However, many second- and third-born children are still born, but many of them are undocumented because their parents cannot afford them. The environment is also being degraded, but that is expected of urbanization. As more people move to live in cities, these cities must grow bigger to fit all these people. This growing causes more and more of the surrounding land to be eaten up by concrete and metal. Also, the amount of water used for certain cities in the north has caused the surrounding lands, from which the water is taken, to become desert (Pocha).

Despite efforts by the government, the population is not declining as well as one would hope. Urbanization, also, is increasing instead of declining or staying constant. China's population continues to grow even with all of the policies in place, and before long the world may run out of room for these soon-to-be billions of people ("China Total"). In addition, if urbanization trends continue as they are now, more than one billion people will be living in cities by 2025 ("China Urbanization"). That is the majority of their current population, so imagine how much larger their population will be if they do not find a way to reduce their population. The trends for this are measured based on what has been happening over the past fifty years or so.

Assuming that these trends continue, rural life will get very difficult for subsistence farmers. For one thing, less and less space will be available for living or farming. This means that the small amount of land farmers are currently allowed to live on and farm will probably become even smaller, limiting food production and making it even harder for farmers to produce sufficient food for their families while

keeping some to sell for the necessary things in life. Farmers will be even more likely to use fertilizers and pesticides to make the most out of the land. This will take a heavy toll on the environment, and it could end up ruining much of China's arable land, stripping it of its ability to produce food.

If there were fewer people in China, or even if population growth decreased, it is probable that the Chinese government would permit more farmers to use (possibly even own) larger amounts of land because they would have fewer people to worry about when making sure everyone has relatively equal amounts of land. If this were to happen, rural farmers could easily produce quite a bit more food than they currently do. In addition, their income would go up, for more land means a larger crop each year, which allows for more to be sold for profit.

The environment could also be preserved in at least two ways if urbanization and population growth lessened. If farmers were allowed larger amounts of land, as discussed above, the money provided by larger crops would allow farmers could invest in better, safer, and more environmentally-friendly pesticides, herbicides, and fertilizers. Also, decreased urbanization means less land eaten up by cities, and more to be preserved in a natural and chemical-free state. Urbanization eats up resources as well, including precious water, from areas outside of the city. This has caused drought and the expansion of deserts such as the Badain Jaran Desert (Pocha).

Economic development and poverty reduction both seem closely linked to a declining population and less urbanization. The main point is this: fewer people means that more jobs are available. Poverty comes from a lack of money, which is usually caused by unemployment or underemployment. Less urbanization can mean smaller cities with fewer people, allotting for more economic opportunity for better payment. The economy can develop more rapidly if people are not crowding space for jobs, and different ideas would be easier to listen to if there were fewer people trying to express their ideas.

The reduction of both China's population growth and its urbanization would benefit many, especially women, smallholder farmers, and urban dwellers. Right now, women are getting more and more opportunities, but it is still difficult, especially in rural places, for them to have a good job and equal options as the men do. Smallholder farmers can definitely benefit from a smaller population and less urbanization, as discussed above. Less urbanization means that cities are less crowded and more accessible for urban dwellers. The same holds true for a smaller population: fewer people will definitely create more living space and opportunities for jobs, sports, and other activities.

Many outside issues will have an effect on reducing urbanization and population growth in China. Luckily, the majority of these will help this process along. One factor that China will probably encounter in the near future is an agricultural breakthrough. If someone, either in China or another country, suddenly discovers a more efficient way to grow crops and feed more people, urbanization in China will most likely lessen as more people will want to move into rural areas to grow food using the new and improved methods. Alternatively, if a breakthrough is not as imminent as it probably should be, a famine could strike China. This would reduce the population, but the long-term effects would be devastating.

Climate change and natural disasters are two major issues that could also have an effect on the growth of China's population and its urbanization. Crops grown in China, as in anywhere in the world, are dependent on the climate of the location they are growing in. If China's climate changes, many of the crops currently grown there would no longer be able to do so, and the diets of the people, especially rural farmers, would have to change or they risk famine. Natural disasters, such as typhoons, can have devastating effects on coastal cities and the countryside, just like earthquakes and suchlike can have similar effects inland. If the disasters are large, they could destroy farmland and contribute to a famine or at least limit the amount of food produced and available in China. This would cause many people, both urban and rural dwellers, to want to move away and start anew. And, more than likely, most of them

would want to go to a nearby city. This moving would drastically increase urbanization and have ill effects for that city and those people who live there.

Water scarcity and urbanization are two issues that directly effect each other, especially in China. A large portion of China is desert, where water is scarce. Few people live in these areas, and still fewer towns exist. Settlements are dependent on a steady source of water, so this has helped to limit urbanization somewhat. However, if cities are not careful with their water management, they can drain the surrounding areas of water and create desert. This has horrible effects on the environment, and it can destroy areas for years to come. Rural farmers are dependent on water to grow their food, so water scarcity, such as drought for any long period of time, can destroy their livelihood and make it necessary for them to leave their area to find a new job.

The energy demand of large populations and cities is enormous. In the year 2000, China used about half as much energy as the United States did. However, by 2009, China has far surpassed our country and has become the top energy user in the world (Liu and Larson). China has been researching renewable energy sources, but they are only going to need more power as their country's population multiplies. Rural farmers have less use for energy than urban dwellers; few can even afford a television, so a few lights are all they require. Their world may be plunged into darkness, however, if officials decide to conserve energy for the more important areas: cities.

Visiting big-city China, tourists are struck by one fact whenever they look toward the sky: smog. Despite their best efforts, smog is a continuing problem in urban China, for it obscures the sun almost every day of the year. It has an ill effect on the health of those residing in big cities, and as urbanization increases, the larger populations of Chinese cities will create more and more smog. Luckily, smog is not as much of a health hazard in the countryside, and it has less effect on the growing of crops in such rural areas. However, as urbanization increases, so does the production of smog and its reach outside of the city.

I believe that there are several ways that China can reduce population growth and urbanization by the year 2015 as well as provide food security for low-income families in both urban and rural areas. Decreasing the birthrate would be a good first step, but China already has such policies in place and their population continues to grow anyway. One may wonder how they can reduce their population growth, but, I think, maybe they do not need to reduce their population growth so drastically. China cannot stop population growth without the complete support of all their people, and that is unlikely. There must be a better alternative. I believe there is one.

I have often discussed above how China seems to have little concern for its environment. Most farmers overuse pesticides and fertilizers harmful to the environment. Cities drain much water from surrounding areas with little concern about the deserts they may be creating. The sky is obscured day and night for the majority of the year by a thick layer of pollution. It is little wonder population control is such a hot topic there; they are destroying the environment they are living in. So maybe, if environmental protection policies are put in place, China will be able to support its millions who are to come.

To do this, China will need its government, people, and possibly even some outside help for support. Policies should be put in place (and reinforced for all of the years to come) as soon as possible: restrictions on the amount of air pollution companies are allowed to produce, bans on harmful chemicals, and better management of resource usage and replenishment. Education of the masses, such as the "going green" ones often seen here in the U.S., would also be beneficial. The general population should try to be conservation-minded. After all, it is not much harder to buy the more natural fertilizer or walk to work instead of drive. Nonprofit organizations can do their part in helping to protect the environment, such as the Sahara Roots initiative in Morocco. If everyone works together, China can be on its way to a greener state.

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