The Effect of Per Capita Consumption on Human Demography and Well-being

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Introduction

In the past fifty years, the world's population has nearly doubled to about 7.7 billion people. Much of the population growth can be attributed to the increase in work opportunity and resource accessibility through the Industrial Revolution and the rise of modern medicine which improved overall health conditions. But, an increase in population also gave rise to prominent issues such as waste management, lack of housing, and the rising demand for food production. Though these questions were resolved through the development of the sewer system, clearcutting forests for infrastructure, and a dramatic spike in farming and agriculture, all these solutions produced a much greater problem: the degradation of Earth.

As population rises, so does the demand for resources, and hence the toll on the environment. This creates a vicious cycle that can only be resolved by decreasing the requisition of supplies. Previous research states that decreasing fertility is the primary means of controlling population. However, recent articles by Mont and Plepys (2008) and others propose that lowering consumption per capita will help slow the degradation of the Earth. The equation that addresses the "carrying capacity" of the Earth, which is the total population the Earth can sustain, is described as "population × per capita consumption × technological impact of that consumption" (Low, 2001, p.253). From this, it is clear that consumption per capita and the impact of consumption caused by technology, such as machinery and transportation vehicles, contribute significantly towards environmental degradation. Therefore, **decreasing human consumption per capita would benefit the overall well-being of the Earth's populations and the environment.** By reducing human consumption, Earth's population will be able to proportionately increase without approaching the carrying capacity.

Methods

To collect high quality and reliable resources that explain the impact of consumption per capita on well-being and the environment, the following procedures were followed. First, peer-reviewed articles were searched for using a large variety of key terms including "human demography" and "well-being", through three databases: EBSCOhost, Google Scholar and PubMed. Of these databases, I chose to use the Global Health database on EBSCOhost as it provided a focused journal set that was relevant to my research. This search uncovered two articles published between 2016 and 2018. I chose the article by Cazalis, Loreau, and Henderson (2018) as it spoke directly to my chosen topic. Following this, another search for peer-reviewed articles was conducted using key words including sustainable consumption, industrial, and management. The Academic Search Premier database from EBSCOhost was used and uncovered 121 articles which were published between 2007 and 2019. The article by Mont and Plepys (2008) was selected based on its acknowledgement of the detriments related to overconsumption. Finally, the remaining resources by Ehrlich (2008), Low (2001), Population Research Institute (2009), and The Story of Stuff Project (2009), respectively, were acquired through the Canvas student portal for Simon Fraser University as provided by Dr. Pablo A. Nepomnaschy for the course "Health Sciences 216: Ecological Determinants of Human Growth, Development and Health".

Results

From the research conducted on the increasing world population and per capita consumption, two main theories arose. The first explains that the high consumption per capita will result in the degradation of the Earth, and hence negatively impact the well-being of

humans. This viewpoint recognizes that the Earth is not immortal, and that if we continue to consume resources and produce waste at this rate, eventually it will become unlivable to humans. With this in mind, it is clear that "lowered fertility alone produces no solution to the population-consumption dilemma", but rather the focus should be placed on reducing the volume of consumption (Low, 2001, p.248). Furthermore, this theory does not predict a decrease in population, but instead has projected that the population will continue to grow to an estimated 9.2 billion by 2050, although at a slower growth rate (Ehrlich, 2008).

The second perspective is that overpopulation is a myth (Population Research Institute, 2009). This argument believes that consumption levels do not have to be modified as "the population of earth will peak in 30 years" and then decline, solving the issue of overuse of materials, lack of land, and need for resources (Population Research Institute, 2009). The two contrasting views are both significant in worldwide discussions today.

Discussion

The various studies that have been researched can all be related back to the central idea that decreasing human consumption per capita will benefit the overall well-being of the Earth's populations and the environment. Although the resources have demonstrated two contrasting views, I believe that it is a synthesis of the two that would best address the problem at hand. It is not the surplus of people nor is it the lack of resources that is causing the Earth's degradation but rather it is our inability to manage the resources on Earth. This concept is most evident in developed countries where 15 to 20 times the resources are used toward the development of one child as compared to developing countries (Low, 2001). By reducing such unnecessary usage,

resources can be saved and spent on others, hence significantly increasing the population size the Earth can support.

Moreover, great amounts of land are also being exploited. In fact, in the past 30 years, one third of the Earth's natural resource space has been consumed (The Story of Stuff Project, 2009), and between the years 1961 and 2014, "agriculture area increased by 10% while food production increased by 290%" (Cazalis, Loreau & Henderson, 2018, p.1465). This overexploitation of land can lead to decreased food production which can in turn result in famine and decreased biodiversity. As a result, human well-being will decline.

Furthermore, much of the products that we consume in our everyday lives contain harmful substances and chemicals that have negative impacts on our health and the environment. Through the disposal of these products, the chemicals that are used to create them will get released back into the atmosphere as pollutants (The Story of Stuff Project, 2009). These pollutants affect air quality which result in future health issues, and contaminate waterways and soil creating a negative impact on agriculture and farming. To make matters worse, majority of the products bought are made to have short lifespans to ensure that we are constantly buying new and updated goods. As a matter of fact, only "1% of materials that are harvested and processed are used 6 months" from when they are purchased (The Story of Stuff Project, 2009). If we continue to consume at this rate, we will very quickly deplete the Earth of its resources, hence affecting the well-being of the world's populations.

To combat this, "solutions should be based not only on changing consumption patterns, but also on reducing levels of consumption" (Mont & Plepys, 2008). The promotion of sustainable production and consumption by governments through education and campaigns,

especially targeted at the production side of consumption are the necessary next steps to preventing further environmental impact.

Conclusion

It is evident that increased fertility alone is not the cause for environmental degradation from overpopulation, but rather, it is a combination of heightened fertility and overconsumption per capita. As a result, in order to ensure positive human well-being, measures to protect the environment from overconsumption is crucial. Although there are still "significant gaps in understanding the environmental impacts of alternative [sustainable] consumption", preventative measures such as education, raising awareness, and campaigns led by local governments are the necessary steps in beginning the journey to conserving the Earth's resources (Mont & Plepys, 2008, p.532).

References

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