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An Economic Model on the Concept of Green Social Sciences

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ABSTRACT

Esurient wishes and blind demand for comfortable and luxuries good create the excess burden on the scientific research in the field of Physics, Chemistry and Technology and also on Economic Process. In other words, products are being produced without any testing or checking. Marketing strategy plays a vital role to increase sale of this type of products by providing fiction or one face information and by using Ambassador for its advertising policy. The result is that whole world is facing the problem of sustainability as well as loss of human development now-a-days. Are we ready to pay an increasing opportunity cost that is immoral and impractical, to fulfill our starving wishes and reckless demand? It is time for awaking the dreams. Therefore, the main objective of this paper is to highlights *the solution of the above problem through economic model that are derived on the basis of Green Social Sciences concept.* It is time for awaking the dreams. If we want to save our earth, we must accept the green theories and principle in science and social science in the form of remedial. Green values/pure Values are strictly and compulsory applied in the societies of the whole world. We know that all sciences, social sciences are interrelated and interdisciplinary to each other. Therefore, Innovation, production and consumption are used on the basis of green chemistry, green physics, and green economics. Literatures may play vital role for generating human green/pure values on the basis of awareness and motivational theories.

On the above account, we should compulsory follow these following rules:

– Industries or entrepreneurs should used green chemistry, green physics, green technology and green economics for producing products, allocating recourses and products etc.
– To maintain optimum population in specific area of the world.
– Aggregate supply of production should be equal to minimum comfortable level of aggregate demand and aggregate buffer stock.
– Optimum and ratio theorem should be applied among population, area of land and production.
– Rules should be followed strictly. Institutions and organizations may be developed for supporting on the local, state and central level.
– Above all rules will be worked properly when social values are applied. For it, Plays, Kavi Samelon, posters, Wall paintings, Movies etc. may play vital role to aware and increased human values.
– To keep economical, political, social, cultural and environmental peace at International level.
– This process should be International level.

We should always remember that Excess and scarcity of everything is bad. If optimum density of land will be maintained in the world, Aggregate Supply will always be maintained equal to Minimum comfortable necessary level of Aggregate Demand and Aggregate Buffer Stock due to Optimum Population. The result will be that natural resources will be used at optimum level. Therefore Green Social Sciences concept is a best practice for Sustainable Development and Human Development that can be hold through the above Economic model. This model can be called *"Optimum and Ratio Theorem among population, density and production."*

Key Words : Green social sciences, Sustainable development, Human development

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INTRODUCTION

Human creature is a part of ecology. He affects it and also affected by it. There is a *vise-versa* relationship. Human can only survive when it works properly. But it is also true that ecology system will work properly when human will understand their limit. Human is a bundle of desire and wishes. They wants to fulfill their all demands either it is wanted or unwanted. They think that they can win and control whole universe through their knowledge and wisdom.

Education develops autonomy in the knowledge and views by which human gets aware and understands their rights. Coins have two faces. Same here, People aware their rights through getting education but they started neglecting their duties. Results of this, Disequilibrium generates among society, humanity and environment that are responsible for corruption, environment degradation, biodiversity, low health, pollution, global warming, ozone depletion, GHGs etc. Due to this, sustainable development would a basic requirement for the development of any economy. Various policies, rules penalty and taxes are being applied for reducing or removing it. On the other side, various association or agreement are also made at local, state, centre, National and International Level but it is still found in the world because human development that is as the process of enlarging people's freedoms and opportunities and improving their well-being, increases rights in the world but reduces social values.

. They are started to play master mind game with the environment on the cost of social values because It is human nature when one gets anything without pain or sacrifice, value of the thing do not measured by ones. For reducing above problem, it is necessary to apply a concept in a new form. *Therefore, the concept of Green Social Sciences i.e. High Social Values is given by author that may help to reduce above problems.*

According to N. Srivastava[1], *"Green Social Sciences is described as to follow the purity of group of determine rules in which optimum equilibrium can be maintained among societies itself and the different elements of nature itself. It is also an ideal state between the society and ecology. In other words, to make and follow that pure rules and policies of structure/its ordinance/execution and organization on the level of Natural, Social, Economical, political and Cultural by which social values are extended as in real form."*

Green Social Science's definition is derived by Author and it has been published in the initial part of this paper entitled "Need of Green Social Sciences: Innovative Theory of Humanities for Sustainable Development" in the edited book that is given in reference. Sustainable development is the organizing principle for meeting human development goals while at the same time sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the economy and society depend. The desired result is a state of society where living conditions and resources use continues to meet human needs without undermining the integrity and stability of the natural system and sustainable development can be classified as development that meet the needs of the present without compromising the ability of the future generation.[2]

The term 'human development' may be defined as an expansion of human capabilities, a widening of choices, 'an enhancement of freedom, and a fulfillment of human rights.[3] In other words, Human development is about the real freedom ordinary people have to decide who to be, what to do, and how to live.[4] The human development concept was developed by economist Mahbub ul Haq. At the World Bank in the 1970s, and later as minister of finance in his own country, Pakistan, Dr. Haq argued that existing measures of human progress failed to account for the true purpose of development—to improve people's lives. In particular, he believed that the commonly used measure of Gross Domestic Product failed to adequately measure well-being. Working with Nobel Laureate Amartya Sen and other gifted economists, in 1990 Dr. Haq published the first Human Development Report, which was commissioned by the United Nations Development Programme.

1. Srivastava, N. (Ed. 2018), "Practices for Sustainable Development," edited by Dr. Rajbir Singh, Anu Books, International Publisher, New Delhi, ISBN:978-93-87922-42-6.
2. https://en.wikipedia.org/wiki/Sustainable_development.
3. http://www.economicsdiscussion.net/human-development/human-development-meaning-objectives-and-components/11754
4. http://www.measureofamerica.org/human-development/

METHODOLOGY

Esurient wishes and blind demand for comfortable and luxuries good create the excess burden on the scientific research in the field of Physics, Chemistry and Technology and also on Economic Process. In other words, products are being produced without any testing or checking. Marketing strategy plays a vital role to increase sale of this type of products by providing fiction or one face information and by using Ambassador for its advertising policy. The result is that whole world is facing the problem of sustainability as well as human development now-a-days. Are we ready to pay an increasing opportunity cost that is immoral and impractical, to fulfill our starving wishes and reckless demand? It is time for awaking the dreams.

Therefore, the main objective of this paper is to highlights *the solution of the above problem through economic model that are derived on the basis of Green Social Sciences concept.*

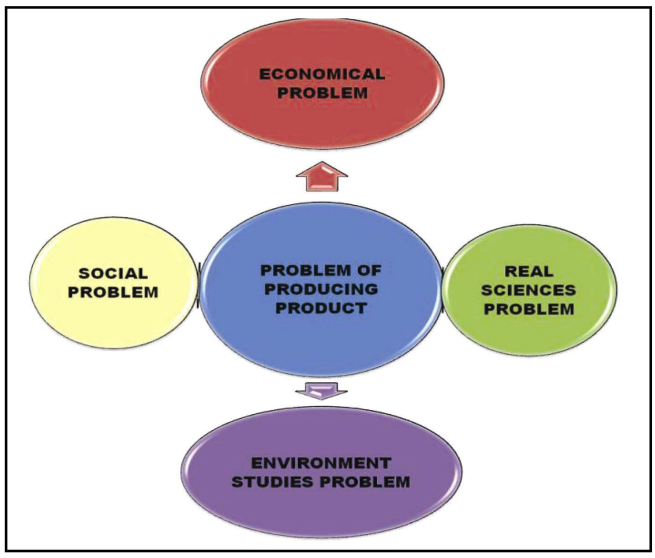
This paper is based on secondary data that are collected from the website of World Development and World Bank Group, CPIA database (worldbank.org/ida).

Model building:

We should produce eco-friendly product for quenching their desire/want/need. Renewable and non renewable natural resources should be used at sustainable level. Renewable natural resources should be used more than non renewable natural resources and should continue produce renewable natural resources from time to time. World development concept should base on sustainable development. Achievement from development should float/sail till long run. All resources (Natural/capital/human heritage) should be preserved for long run and we should be able to provide the same quantity of natural resources to the second generation as we are using now.

In generalized form, we can say that if we want to get sustainable development through economic development that maximizes our wishes or demands, we should give importance of human and follow the social values by compulsory norms/rules *i.e.* humanity theory for producing or generating goods in the economy. It will be maintained human development also. Therefore, we should apply justification rule in the world economy for innovations, development, distributing, allocating and producing the products. In other words, we should apply purity in thoughts for producing products from its innovation to reaching consumer or from developing the products till using it by consumers.

"What will produce? How (technique) will produce? How much will produce? And How will it allocates among the resources?" All questions are related to Economic Problems. "What will the Raw material of the production? Which form of raw material will be used? How much energy will be used? Which form of output will be produced? What will the process of production? What technology will be used for production?" These questions are related to various real sciences- physics, chemistry, technology etc. Problems, that are related to uses of Natural resources and pollution when are generated to throw the waste on the environment from the industries or firm under process or after process of production, are under considered to Environmental Studies. It will be done on the high social values that will belong to social problem.



Natural Resources should be used only to fulfill the limit of the Optimum Average Demand that is equal to Aggregate Supply. Applying this, the environment will could be save for the next generation. We should give attention at the time of producing the product that Recycle and Reuse concept of the environmental protection must be followed by the final product/output.

Steps that followed for producing the product are- First, decision will be taken about what and how much demand of the product.

Projection of the Demand=Demand by Present Population + Demand by Increased Population + Buffer Stock

Second, according to demand, supply will be decided. Therefore process of production starts with Economic Problem then converts into problems of real sciences for deciding the initial process of production. On the other hand, if population is more than optimum level of population, demand for quantity will be high. According to demand, supply will also become high. To fulfill this demand and supply, burden will also became high on natural resources. Since demand depends on population, model should be start on the projection of population.

Population projections are calculations of future birth rate, death rate and migration of population based on their past and present conditions. They are neither predictions, nor forecasts, nor estimates. Rather they are in between predictions and forecasts.

According to a UN Study, "Population projections are calculations which show the future course of fertility, mortality and migration. They are in general purely formal calculations, developing the implications of the assumptions that are made"[5]. The formula of population projection is

$$P_p = P_0 e^{nt}$$

RESULTS AND DISCUSSION

World population[6] and its trend are shown in the pictorial form (Fig. 1). After applying curve fitting line, exponential form of population is found significant. ANOVA Results and coefficient results can be seen in See Table 1 and 2, *i.e.* significant.

Land area of the earth[7] is approximately constant till 1991 but after that it has been declining continuously

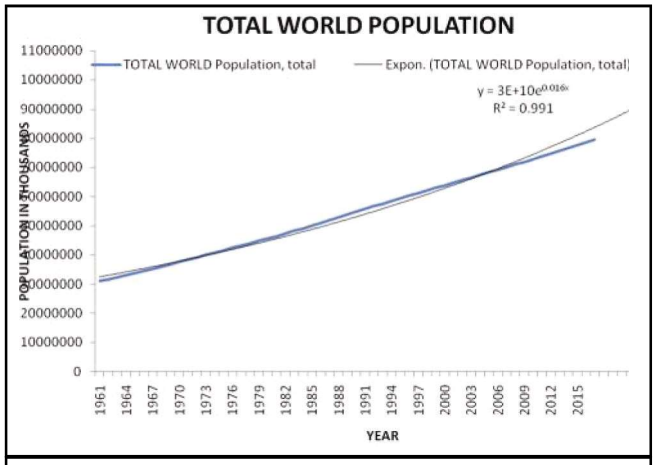


Fig. 1 : World population and its trend

(Fig. 2). After applying curve fitting line, quadratic form of land area is found significant. ANOVA Results and coefficient results can be seen in See Table 3 and 4, *i.e.* significant.

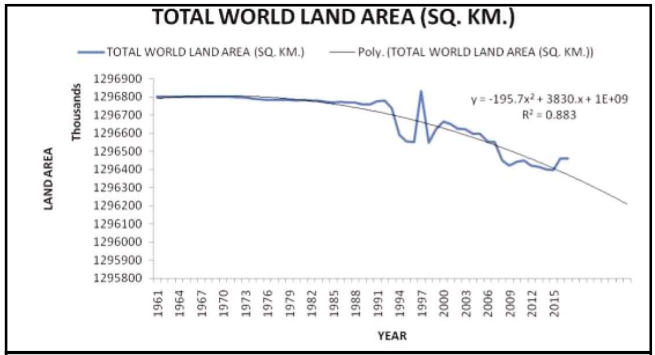


Fig. 2 : World land area and its trend

Table 1: Results of ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.390	1	4.390	6444.686	.000
Residual	.037	55	.001		
Total	4.427	56			

Table 2 : Results of coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Case Sequence	.017	.000	.996	80.279	Case Sequence
(Constant)	32012605768.577	224268620.917		142.742	(Constant)

The dependent variable is ln (Population)

5. http://www.sociologydiscussion.com/demography/population-projections/population-projections-meaning-types-and-importance/3058
6. World Development Indicators
7. World Development Indicators

Table 3 : Results Of ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1001727501194.447	2	500863750597.224	205.006	.000
Residual	131930717709.272	54	2443161439.061		
Total	1133658218903.719	56			

Table 4 : Results of Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Case Sequence	3830.136	1618.905	.447	2.366	.022
Case Sequence ** 2	-195.790	27.056	-1.367	-7.237	.000
(Constant)	1296787385.151	20350.719		63721.944	.000

The result of this, land density[8] increases continuously also (Fig. 3). After applying curve fitting line, linear form of population density is found significant. ANOVA Results and coefficient results can be seen in See Table 5 and 6, *i.e.* significant.

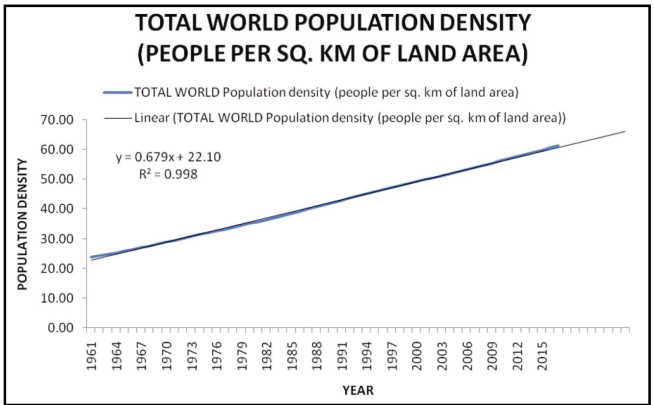


Fig. 3 : World population density and its trend

Table 5 : Results of ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	7126.443	1	7126.443	49459.512	.000
Residual	7.925	55	.144		
Total	7134.368	56			

Table 6 : Results of coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Case Sequence	.680	.003	.999	222.395	.000
(Constant)	22.103	.102		216.923	.000

Therefore burden of population on land has been increasing and environment is not easily absorbing their waste. Pollution, Environment degradation etc. are increasing in the world and environmental sustainability has become low (Table 7).

Table 7 : Environment sustainability rating

Year	CPIA policy and institutions for environmental sustainability rating (1=low to 6=high)
2005	3.11
2006	3.06
2007	3.10
2008	3.10
2009	3.11
2010	3.13
2011	3.12
2012	3.13
2013	3.11
2014	3.14
2015	3.16
2016	3.12
2017	3.10

Source: World Bank Group, CPIA database (worldbank.org/ida).

One sample t-test has been applied as the statistical tool to test the hypothesis. Table 8 and 9 exhibit the results of one sample statics and t-test. It shows the mean value, standard deviation, standard error, t value, degrees of freedom and significant value of the study. The mean value is above 3 and significant value is less than 0.05. Therefore, the alternative hypothesis stands accepted and it can be said that there are significant prospects of environmental sustainability in the world but not very high.

$$H_0 : \mu = \overline{X} = 3$$

$$H_1 : \mu \neq \overline{X}$$

8. World Development Indicators

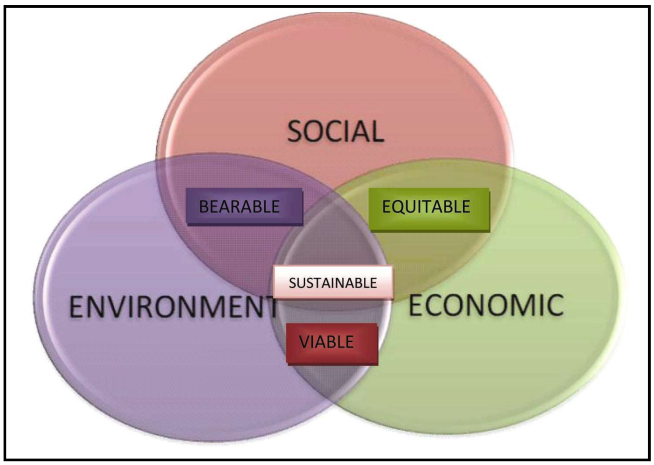
Table 8 : One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Environment sustainability	13	3.1146	.02402	.00666

Table 9 : One-sample of t-test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Environment sustainability	17.205	12	.000	.11462	.1001	.1291

Environment is also not easily providing natural resources to them due to its limitation and increasing corresponding demands. To save the environment, land density should be Optimum.



We are discussing about sustainable development. Therefore, population should also be Optimum. According to Author, "Optimum population is that at which standard of living is equal to minimum comfortable necessary level and also congenial to land area *i.e.* Optimum Density."

According to Author, "Optimum Density can be described in three terms 1) land area easily bears their burden, 2) environment easily absorbs their waste and 3) environments easily provides natural resources to them."

Final production should be equal to *minimum comfortable necessary level* with *buffer stock* in the economy/world. Minimum comfortable necessary level is higher than subsistence level and lower than luxury level. Buffer stock should be for one period. It will be projected whenever Population can be projected. Therefore *minimum comfortable necessary level* can be known as Optimum Average Demand. One thing should be clear in mind that this level can be only projected when there is no any corruption in the economy/world.

Minimum comfortable necessary level of Aggregate Demand + Aggregate Buffer Stock = Aggregate Supply
OR
Optimum Average Demand = Aggregate Supply

Solution:

On Real Sciences level, we should pay attention on the following points-

– In chemical process, atom should be in same number in final product as in input material.

– Generation of waste product or scrap product should be reduced in quantity.

– Inputs and outputs should be eco-friendly.

– Low energy process should be preferred.

– Process should be direct and small.

– Technology should be eco-friendly and should be given less amount of waste product or reducing waste product generation.

– Projection should be corrected for mediatory producing product/chemicals in the process.

– Always pay attention that mediatory producing products should not be harmful for any one.

On Environmental level, we should pay attention on the following points-

– Three R's concept- Recycle, Reuse and Reduce should be followed.

– Waste products should not be directly thrown into water, land and atmosphere.

– Liquid waste product should be poured into lake or river after redemption.

– Gas form of waste product should be freed into air after oxidization.

On Economic level, we should follow following chart 1:

If optimum density of land will be maintained in the world, Aggregate Supply will always be maintained equal to Minimum comfortable necessary level of Aggregate Demand and Aggregate Buffer

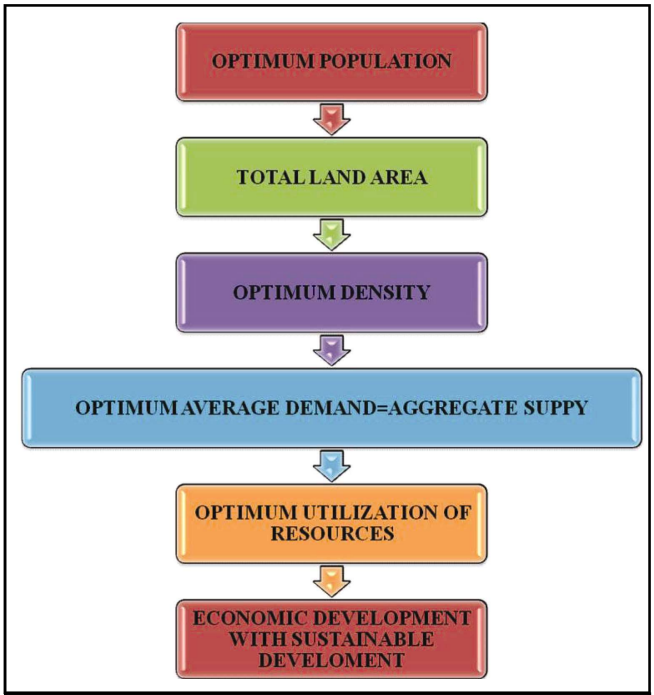


Chart 1 :

Stock due to Optimum Population. The result will be that natural resources will be used at optimum level. Therefore Green Social Sciences concept is a best practice for Sustainable Development and Human Development that can be hold through the above Economic model. This model can be called *"Optimum and Ratio Theorem among population, density and production."*

Suggestions:

If we want to save our earth, we must accept the above solution through economic model that are derived on the basis of Green Social Sciences concept. At last, we should compulsory follow these following rules-

– Industries or entrepreneurs should used green chemistry, green physics, green technology and green economics for producing products, allocating recourses and products etc.

– Maintain optimum population in specific area of the world.

– Aggregate supply of production should be equal to minimum comfortable level of aggregate demand and aggregate buffer stock.

– Optimum and ratio theorem should be applied among population, area of land and production.

– Rules should be followed strictly. Institutions and organizations may be developed for supporting on the local, state and central level.

– Above all rules will be worked properly when social values are applied. For this, Plays, Kavi Samelon, posters, Wall paintings, Movies etc. may play vital role to aware and increased human values.

– To keep economical, political, social, cultural and environmental peace at International level.

This process should be applied at International level.

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