Are the financial inclusion schemes of India developing the nation sustainably?

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**Abstract.** Introduction- India is the world's largest democracy which has a prominent place in the world. It is proliferating and financial inclusion schemes of government as a piece of evidence for that. However, the development of any nation on the planet should not be at the cost of environmental degradation. There are indeed substantial ties between climate change and sustainable development. Evidence has shown over several decades that global temperatures are on the rise, mainly due to fossil fuel burns. Methodology- For meeting research objectives, a pooled data of variables extracted from the review of literature is constructed. Later by applying PLS-Algorithm on the constructed dataset, conclusions are made. Value- This research will develop insight into whether the financial inclusion scheme of government is sustainably developing the economy or not. Result- There exists a significant relationship between financial inclusion and CO2 emissions, which concludes that financial inclusion schemes of government are not doing sustainable development. Conclusion- There is an urge to link financial inclusion schemes with sustainable development.

1 Introduction

India is the second-most populous nation, the seventh biggest by area, and the most populous democracy [1]. In India, 51% of the pollution is generated by industrial pollutants, 27% by cars, 17% by crop burning and 5% by fireworks. Air pollution causes 2 million Indians to die prematurely each year [2]. It is not plausible to undervalue the purpose of efficient financial inclusion services in promoting money creation and economic growth [3]. An adequate financial infrastructure is required for commercial services such as deposit mobilization, trade facilitation, payment processing provision, and risk management [4]. Financial inclusion extends the reach of financial resources and develops savings amongst the have-nots [5]. Financial inclusion is a significant step towards the comprehensive development of the nation[6], [7]. It assists in the overall economic advancement of the impoverished population. In India, efficient financial inclusion must uplift the underprivileged people by equipping them with the transformed financial merchandises and services [8]. There are substantial ties between climate change and sustainable development. Evidence has shown over several decades that global temperatures are on the rise, mainly due to fossil fuel burns

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The emission of carbon into the atmosphere is playing a significant role, and the availability of necessities such as fresh water, food security and energy is projected to impact. Poor and emerging nations will be among those most impacted and unable to deal with projected social, economic and environmental shocks [10].

However, financial inclusion may restrict sustainable development beneath economic globalization and climate change [11]. This research paper attempts to find a piece of statistical evidence that whether financial inclusion is leading to sustainable development or not. It is essential that, as human beings, our economic growth is not leading to environmental degradation. Economic and ecological development should go hand in hand as there is no economy without an environment. This paper will develop an insight into the need to introduce economic reforms, which will lead to sustainable development and economic expansion.

2 Variables

Table 1. Variables used in Research.

| VARIABLE    | SOURCE                                  |
|-------------|-----------------------------------------|
| Savings     | [12], [13], [14], [15], [16]           |
| GDP         | [5], [17], [18], [19], [20]            |
| Savings → GDP| [16], [21], [22], [23]               |
| GDP → Pollution | [24], [25], [26]          |

3 Method

To conclude and meet the research objectives, time-series data of the variables mentioned in table 1 is collected (1991-2019). After collecting data, the significance of the relationship between the variables is analysed with the help of the PLS- Algorithm using Smart PLS software.

Source: Author's Calculation

Fig. 1. Conceptual Model.
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**Fig. 1.** Conceptual Model.

**Fig. 2.** Results of running PLS-Algorithm on conceptual model.

### Table 2. Cross loadings and construct reliability.

| PARTICULARS | CO2 Emmissions | GROWTH | SAVING | AVE |
|-------------|----------------|--------|--------|-----|
| CO2 emissions (kg per 2010 US$ of GDP) | 0.93 | 0.886 | 0.877 |
| CO2 emissions (kg per 2017 PPP $ of GDP) | 0.931 | 0.887 | 0.876 |
| CO2 emissions (kg per PPP $ of GDP) | 0.936 | 0.87 | 0.90 |
| CO2 emissions (kt) | 0.987 | 0.992 | 0.935 |
| CO2 emissions (metric tons per capita) | 0.982 | 0.979 | 0.933 |
| CO2 emissions from gaseous fuel consumption (% of total) | -0.159 | -0.219 | -0.39 |
| CO2 emissions from gaseous fuel consumption (kt) | 0.908 | 0.89 | 0.918 |
| CO2 emissions from liquid fuel consumption (% of total) | -0.031 | -0.004 | -0.305 |
| CO2 emissions from liquid fuel consumption (kt) | 0.967 | 0.981 | 0.853 |
| CO2 emissions from solid fuel consumption (% of total) | -0.202 | -0.175 | 0.036 |
| CO2 emissions from solid fuel consumption (kt) | 0.981 | 0.975 | 0.947 |
| CO2 intensity (kg per kg of oil equivalent energy use) | 0.971 | 0.97 | 0.877 |
| GDP (constant 2010 US$) | 0.891 | 0.899 | 0.821 |
| GDP (constant LCU) | 0.891 | 0.899 | 0.892 |
| GDP (current US$) | 0.879 | 0.896 | 0.93 |
| GDP, PPP (current international $) | 0.891 | 0.899 | 0.932 |
| GDP: linked series (current LCU) | 0.862 | 0.893 | 0.864 |
| Gross savings (% of GDP) | 0.629 | 0.631 | 0.821 |
| Gross savings (% of GNI) | 0.638 | 0.641 | 0.829 |
| Gross savings (current LCU) | 0.874 | 0.867 | 0.906 |
| Gross savings (current US$) | 0.864 | 0.868 | 0.965 |

**Source:** Author's Calculation

### Table 3. Results of HTMT inference on the variables used in research.

| PARTICULARS | HTMTInference | Original Sample (O) | Sample Mean (M) | 2.50% | 97.50% |
|-------------|---------------|---------------------|----------------|------|--------|
| GROWTH $\rightarrow$ CO2 Emissions | 0.976 | 0.98 | 0.959 | 1 |
| SAVINGS $\rightarrow$ CO2 Emissions | 0.989 | 0.989 | 0.945 | 1.025 |
| SAVINGS $\rightarrow$ GROWTH | 0.9 | 0.903 | 0.848 | 0.951 |

**Source:** Author's Calculation
4 Results and discussion

4.1 Cross loadings and AVE

Table 2 represents the values of cross-loadings and AVE of the variables used in research. From the values derived by performing the calculation on the software smart PLS, it can be observed that the AVE of all the construct is an acceptable limit i.e. more than 0.5 [27], [28].

4.2 HTMT inference

By analysing the computations made in Table 3, it can be discerned that mean values lie between the confidence intervals. Hence, the values derived after calculations are acceptable to define the relationship between the variables of the conceptual model.

4.3 Is Financial inclusion leading to Sustainable development?

Table 4 tests the significance of the relation between the variables. There is a significant relationship between the variables from the p-values, t-values and confidence intervals mentioned in Table 4. Thus, it can be interpreted that financial inclusion leads to growth and growth further, resulting in increasing CO2 emissions, degrading the environment.
5 Conclusion

Why invest trillions of dollars in finding life on other planets yet spend trillions of dollars to eliminate life on earth? What is wrong with us? One must understand that this is a magnificent planet — not one or two life-forms have been nourished, but millions. The diversity of life in our world, including mammals, birds, plants, insects, worms and bacteria, is striking. Although we have identified several million types of life, more than 10,000 new species are still identified every year. Nevertheless, someplace else, we believe things will be better.

If human life wants to sustain itself on this planet, sustainable development is the only way of development. The present research shows how with an increase in GDP of India, CO2 emissions are also increasing. This has to be stopped as soon as possible. Considering the present situation of the environment, no further delays by the government can be made to link financial advancement with sustainable development.

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