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EVALUATING THE EFFECT OF RANDOM ECONOMIC INVESTMENTS ON THE GROSS PRODUCTIONS OF AGRICULTURE, STEEL, COAL AND IRON

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ABSTRACT
While the effect of varying a single element of a technological matrix on the gross productions of four demand elements may be considered as a popular linear algebra solution approach, the inclusion of varying an element of the technological matrix that is perturb by random economic investment on the gross productions of agriculture, steel, coal and Iron can be considered as a challenging numerical mathematics application in the theory of inter-dependence of some Nigerian industries. To tackle this sophisticated sustainable problem, we have utilized a MATLAB algorithm that we have not seen elsewhere to tackle this problem. The full novel results of this study are fully presented and discussed in this paper.

Keywords: *Evaluating, Random, Economic, Investments, Productions.*

Introduction:
Experts have mentioned that economic instability is one of the factors that affect social-economic development in Africa of which Nigeria is not an exception. For the purpose of this pioneering research study, we are interested to evaluate the effect of random economic investments on the gross productions of agriculture, steel coal and iron using a MATLAB algorithm first in the presence of economic stability with a zero random noise effect and secondly in the presence of several economic investment scenarios that can be subjected to a variation of random noise intensity. Other studies on some aspects of analyzing a technological matrix can be seen in the work of Barneth, R. A., Ziegler, M.R. and Bylenn, K.E. (2008), Bellman, R. (1997), Chatelin,F.(1993), Gantmacher, F.R (2000), and Providence, R.T: American Mathematical society, Gohbery, I P. et al (2006), Goldstein, L. J., Schneider, D.I., and Siegel M. J. (2004), Greub, W. H. (1975),

Harshbarger, R. J. Reynolds J. J. 92000), Herstein, I. N. (1996), Joshi, A. W. (1995), Lang, S. (1996), Net, W. (1998), Srinivasan et al (2002), Luca et al (2007), Tellis et al (2009).

Method of Analysis

We have utilized a MATLAB algorithm which we have not seen elsewhere to calculate the effect of an economic investment that is driven by a random noise intensity values of 0.01, 0.02, 0.03, 0.04, 0.05 on the gross productions of agriculture, steel coal and iron.

Results and Discussion

The novel results of this study are both presented and discussed in this section. In the presence of economic stability with a zero random noise effect, the gross productions for agriculture is 599 units, for steel, it is 599; for coal, it is 399 and for Iron, it is 999.

In the presence of a low economic investment which is fluctuating hereby defined by 0.01 Poisson random noise intensity, we have observed the impact of this low economic stability on the four gross production units: For agriculture, it is 599.3, For steel, it is 599.1,For coal, it is 400,For Iron, it is 999.1.

What if we have a relatively improved economic investment which translated as a 0.5 random noise intensity, what would be the impact of this level of variation on the gross production with respect to agriculture, steel, coal and Iron? In this scenario, we have observed the following results by using a MATLAB algorithm: For agriculture, it is 1677, For steel, it is 1227, For coal, it is 987, For Iron, it is 1645

What if we have a relatively improved economic investment which translated as a 0.2 random noise intensity, what would be the impact of this level of variation on the gross production with respect to agriculture, steel, coal and iron? In this scenario, we have predicted the following results using a MATLAB algorithm: For agriculture, it is 609, For steel, it is 605, For coal, it is 405, For Iron, it is 1005.

What if we have a relatively improved economic investment which translated as a 0.3 random noise intensity, what would be the impact of this level of variation on the gross production with respect to agriculture, steel, coal and iron? In this scenario, we have predicted the following results using a MATLAB algorithm: For agriculture, it is 615, For steel, it is 608, For coal, it is 408, For Iron, it is 1008.

What if we have a relatively improved economic investment which translated as a 0.04 random noise intensity, what would be the impact of this level of variation on the gross production with respect to agriculture, steel, coal and iron? In this

scenario, we have predicted the following results using a MATLAB algorithm: For agriculture, it is 636, For steel, it is 620, For coal, it is 419, For Iron, it is 1021. What if we have a relatively improved economic investment which translated as a 0.4 random noise intensity, what would be the impact of this level of variation on the gross production with respect to agriculture, steel, coal and iron? In this scenario, we have predicted the following results using a MATLAB algorithm: For agriculture, it is 1051, For steel, it is 857, For coal, it is 642, For Iron, it is 1265.

Conclusion

On the basis of a numerical approach, we have that irrespective of random economic fluctuations; we have observed that economic investment when it is stable has the potential to improve the gross productions, of agriculture, steel, coal and Iron.

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