Collected Papers
of
Lord Soumadeep Ghosh

Volume 32

Non-standard sciences, technologies and industries found in superior economies

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Abstract

In this paper, I describe non-standard sciences, technologies and industries found in superior economies. The paper ends with "The End"

Introduction

There exist many non-standard sciences, technologies and industries found in superior economies, the key feature of which is that they don't adhere to a common standard.

In this paper, I describe non-standard sciences, technologies and industries found in superior economies.

Non-standard sciences

1. Archaeology

   This science is non-standard because it exists only in land-based economies.

2. Anthropology

   This science is non-standard because it exists only in economies with anthropomorphic individuals.

3. Numerology

   This science is non-standard because it exists only in economies with a number system.

4. Futurology

   This science is non-standard because it exists only in economies with both time and at least one future.

5. Information science

   This science is non-standard because it exists only in economies with information.

6. Paranormal science

   This science is non-standard because it exists only in economies with ghosts and spirits.

7. Neuroeconomics

   This science is non-standard because it exists only in economies with individuals having nervous systems.

Non-standard technologies

1. Neural technology

   This technology is non-standard because neuroeconomics is non-standard.

2. Semiconductor technology

   This technology is non-standard because it exists only in economies with large quantities of metalloid elements in the Periodic table.

3. Information technology

   This technology is non-standard because it exists only in economies with both information and technology.

Non-standard industries

1. Neural technology industry

   This industry is non-standard because neuroeconomics is non-standard.

2. Semiconductor technology industry

   This industry is non-standard because semiconductor technology is non-standard.

3. Information technology industry

   This industry is non-standard because information technology is non-standard.

The End

A military-grade poison

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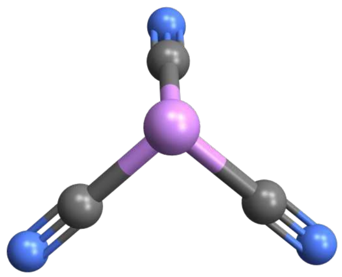
Abstract

In this paper, I describe a military-grade poison.
The paper ends with "The End"

Introduction

A **military-grade poison** is a poison that can be both produced and fielded with ease during a war.
In this paper, I describe a military-grade poison - **arsenic cyanide**.

Arsenic cyanide



Arsenic cyanide is an inorganic poison that acts on orangic matter.
Arsenic cyanide can be produced easily and economically during war.
The advantage of using arsenic cyanide during a war is that it is
easily detectable and thus serves as a **chemical deterrent**.
Arsenic cyanide is **extremely poisonous** and acts even in small doses,
making it an obvious choice for military-grade poison.

Ideal use cases of arsenic cyanide

1. Poisoning the enemy's water supply during war.
2. Poisoning enemy troops using a mist of particles.
3. Causing poisonous rain through cloud seeding.

The End

The mathematics of a normal corporation

Soumadeep Ghosh

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Abstract

In this paper, I describe a corporation and the mathematics of a theoretically important type of corporation called a normal corporation. The paper ends with "The End"

Introduction

In a previous paper, I've described the equation of a company.
In this paper, I describe a special type of company, called a corporation, and the mathematics of a theoretically important type of corporation called a **normal corporation**.

Corporation

A **corporation** is a company whose capital, principal, interest, costs and liabilities follow probability distributions.

Normal corporation

A **normal corporation** is a corporation whose capital, principal, interest, costs and liabilities all follow the normal probability distribution.

The mathematics of a normal corporation

The mathematics of a normal corporation is

1. **The company equation**:

$$C = P + I + c - l$$

2. **The variable distributions**:

$$P \approx \mathcal{N}[\Pi, p]$$

$$I \approx \mathcal{N}[I, \iota]$$

$$c \approx \mathcal{N}[X, \chi]$$

$$l \approx \mathcal{N}[\Lambda, \lambda]$$

Then

$$C \approx \mathcal{N}[\Pi + I + X - \Lambda, \sqrt{p^2 + \iota^2 + \chi^2 + \lambda^2}]$$

3. The definition of risk of the normal corporation:

$$R = \frac{x - (\Pi + I + X - \Lambda)}{\sqrt{p^2 + \iota^2 + \chi^2 + \lambda^2}}$$

4. The equations of normal operation:

$$\Pi + I + X - \Lambda = \Pi + np$$

$$\frac{x - (\Pi + I + X - \Lambda)}{\sqrt{p^2 + \iota^2 + +\chi^2 + \lambda^2}} \leq \frac{p}{n}$$

5. The equations of favourable interest regime:

$$0 \leq I \leq \frac{\Pi}{n}$$

$$0 < \iota \leq \frac{I}{n}$$

6. The normalization of capital:

$$\Pi = 1$$

7. The existence of zero risk:

$$x = \Pi + I + X - \Lambda$$

8. The positivity inequalities:

$$X > 0, \Lambda > 0, \chi > 0, \lambda > 0, p > 0$$

9. The lower bound on the multiple:

$$n > 5$$

Solutions to the mathematics of a normal corporation

There exist at least 14 solutions to the mathematics of a normal corporation, as described above, available upon request.

The End

The standard oliGARCHy

Soumadeep Ghosh

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Abstract

In this paper, I describe an oliGARCHy and a particular type of oliGARCHy called **the standard oliGARCHy**. The paper ends with "The End"

Introduction

In a previous paper, I've described the theory of economic gearing.
In a previous paper, I've described 14 statistical solutions to population.
In a previous paper, I've described the oliGARCH model of an individual's wealth.
Contrary to popular belief, there exists a class of economies called oliGARCHies that has much larger wealth alongwith loss-reserving than is possible through the theory of economic gearing, albeit with higher risk.

In this paper, I describe the oliGARCHy and a particular type of oliGARCHy called the **the standard oliGARCHy**.

The oliGARCHy

An oliGARCHy is an economy with $1 \leq D \leq 14$ **districts**,
each with a number of oliGARCHs and a number of non-oliGARCHs, i.e,

$$\sum_{i=1}^{D} o_i = 729$$

$$\sum_{i=1}^{D} n_i = 48524 - 729$$

$$\sum_{i=1}^{D} (o_i + n_i) = 48524$$

where
o_i is the number of oliGARCHs in the i^{th} district
n_i is the number of non-oliGARCHs in the i^{th} district

The standard oliGARCHy

The standard oliGARCHy is given by $D = 9$.

The value of o_i are

$$o_1 = 85, o_2 = 84, o_3 = 83, o_4 = 82, o_5 = 81, o_6 = 80, o_7 = 79, o_8 = 78, o_9 = 77$$

The value of n_i are

$$p_1 = 5315, p_2 = 5314, p_3 = 5313, p_4 = 5312, p_5 = 5311, p_6 = 5310, p_7 = 5309, p_8 = 5308, p_9 = 5303$$

Self-statistics of a district

We define the **responsibility statistic** of each district as

$$r_i = \frac{p_i}{o_i}$$

where

$$1 \leq i \leq D$$

which are rational constants.

We then define the **sum** ($S = \sum_{i=1}^{D} r_i$) and **mean** ($\mu = \frac{S}{D}$) of the responsibility statistics, both of which are rational constants.
We then define the **standard deviations** ($\sigma_i = \sqrt{\frac{(r_i - \mu)^2}{D}}$) of the responsibility statistics, all of which are real constants.
We then define the **z-scores** ($z_i = \frac{r_i - \mu}{\sigma_i}$) of the responsibility statistics, all of which are real constants.
These self-statistics can be used to find anomalies and risk in the i^{th} district.

Cross-statistics of two non-identical districts

We define the **mobility statistic** of each pair of **non-identical** districts as

$$r_{i,j} = \frac{p_i}{o_j}$$

where $1 \leq i \neq j \leq D$
which are rational constants.
The mobility-statistic can be used to find trade opportunities and risk in the oliGARCHy.
The mobility-statistic can also be used to define many cross-statistics of two non-identical districts (like those for the responsibility statistic) that can be used to find economic opportunities and risk in the oliGARCHy.

The End

Recapitalization of the non-oliGARCHs in the standard oliGARCHy

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe recapitalization of the non-oliGARCHs in the standard oliGARCHy.
The paper ends with "The End"

Introduction

In a previous paper, I've described the oliGARCHy and a particular type of oliGARCHy called the standard oliGARCHy.
In this paper, I describe recapitalization of the non-oliGARCHs in the standard oliGARCHy.

Recapitalization of the non-oliGARCHs in the standard oliGARCHy

The mathematics of recapitalization of the non-oliGARCHs in the standard oliGARCHy is

$$\sum_{i=1}^{D} w_i n_i = T$$

where
$w_i \geq 3$ is the wealth of each non-oliGARCH in the i^{th} district
T is the total wealth supplied to the non-oliGARCHs

14 solutions to the recapitalization of the non-oliGARCHs in the standard oliGARCHy

1. $$T = 4914127, w_1 = 164, w_2 = 164, w_3 = 164, w_4 = 164, w_5 = 149, w_6 = 73, w_7 = 41, w_8 = 3, w_9 = 3$$

2. $$T = 7633323, w_1 = 273, w_2 = 270, w_3 = 197, w_4 = 197, w_5 = 113, w_6 = 113, w_7 = 113, w_8 = 110, w_9 = 51$$

3. $$T = 7798356, w_1 = 275, w_2 = 275, w_3 = 256, w_4 = 187, w_5 = 187, w_6 = 117, w_7 = 69, w_8 = 51, w_9 = 51$$

4. $$T = 9631420, w_1 = 330, w_2 = 330, w_3 = 321, w_4 = 276, w_5 = 205, w_6 = 162, w_7 = 93, w_8 = 93, w_9 = 3$$

5. $$T = 20690713, w_1 = 463, w_2 = 463, w_3 = 463, w_4 = 463, w_5 = 422, w_6 = 422, w_7 = 414, w_8 = 393, w_9 = 393$$

6. $$T = 21392997, w_1 = 615, w_2 = 537, w_3 = 497, w_4 = 435, w_5 = 406, w_6 = 406, w_7 = 406, w_8 = 363, w_9 = 363$$

7. $$T = 35950465, w_1 = 936, w_2 = 891, w_3 = 832, w_4 = 832, w_5 = 753, w_6 = 685, w_7 = 628, w_8 = 606, w_9 = 606$$

8.
$$T = 39431575, w_1 = 845, w_2 = 845, w_3 = 845, w_4 = 845, w_5 = 845, w_6 = 845, w_7 = 785, w_8 = 785, w_9 = 785$$

9.
$$T = 40892650, w_1 = 900, w_2 = 900, w_3 = 900, w_4 = 900, w_5 = 900, w_6 = 845, w_7 = 785, w_8 = 785, w_9 = 785$$

10.
$$T = 42683331, w_1 = 1000, w_2 = 979, w_3 = 979, w_4 = 979, w_5 = 900, w_6 = 845, w_7 = 785, w_8 = 785, w_9 = 785$$

11.
$$T = 45101271, w_1 = 1168, w_2 = 1168, w_3 = 1077, w_4 = 979, w_5 = 900, w_6 = 845, w_7 = 785, w_8 = 785, w_9 = 785$$

12.
$$T = 50063733, w_1 = 1161, w_2 = 1072, w_3 = 1072, w_4 = 1072, w_5 = 1010, w_6 = 1010, w_7 = 1010, w_8 = 1010, w_9 = 1010$$

13.
$$T = 56358065, w_1 = 1274, w_2 = 1274, w_3 = 1267, w_4 = 1256, w_5 = 1216, w_6 = 1130, w_7 = 1065, w_8 = 1065, w_9 = 1065$$

14.
$$T = 63298556, w_1 = 1482, w_2 = 1394, w_3 = 1394, w_4 = 1349, w_5 = 1300, w_6 = 1250, w_7 = 1250, w_8 = 1250, w_9 = 1250$$

The End

The oliGARCHic partition of a natural number

Soumadeep Ghosh

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Abstract

In this paper, I describe the concept of an oliGARCHic partition of a natural number.
The paper ends with "The End"

Introduction

The concept of an oliGARCHic partition of a natural number is paramount to an oliGARCHy.
In this paper, I describe the concept of an oliGARCHic partition of a natural number.

The oliGARCHic partition of a natural number

For a natural number n and a natural number D,
an **oliGARCHic partition of n of length D** exists
if there exist $w_i > 0$ and $p_i > 0$ for $1 \leq i \leq D$ such that

$$n = \sum_{i=1}^{D} \frac{w_i}{p_i}$$

The End

Four oliGARCHic partitions of 5 of length 9 and Ghosh's number

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe four oliGARCHic partitions of 5 of length 9 and Ghosh's number. The paper ends with "The End"

Introduction

In a previous paper, I've described the concept of an oliGARCHic partition of a natural number. In this paper, I describe four oliGARCHic partitions of 5 each of length 9 and Ghosh's number.

Four oliGARCHic partitions of 5 of length 9

For

$$p_1 = 5315, p_2 = 5314, p_3 = 5313, p_4 = 5312, p_5 = 5311, p_6 = 5310, p_7 = 5309, p_8 = 5308, p_9 = 5303$$

and any of

1. $w_1 = 1063, w_2 = 2657, w_3 = 1771, w_4 = 1328, w_5 = 5311, w_6 = 2478, w_7 = 5309, w_8 = 1327, w_9 = 5303$
2. $w_1 = 1063, w_2 = 2657, w_3 = 3542, w_4 = 1328, w_5 = 5311, w_6 = 708, w_7 = 5309, w_8 = 1327, w_9 = 5303$
3. $w_1 = 2126, w_2 = 2657, w_3 = 1771, w_4 = 1328, w_5 = 5311, w_6 = 1416, w_7 = 5309, w_8 = 1327, w_9 = 5303$
4. $w_1 = 3189, w_2 = 2657, w_3 = 1771, w_4 = 1328, w_5 = 5311, w_6 = 354, w_7 = 5309, w_8 = 1327, w_9 = 5303$

we have

$$5 = \sum_{i=1}^{9} \frac{w_i}{p_i}$$

Ghosh's number

The number

$$G = 5 \prod_{i=1}^{9} p_i = 16796886773988739989634052508288000$$

is called **Ghosh's number**.

The End

Ghosh's second number

Soumadeep Ghosh

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Abstract

In this paper, I describe Ghosh's second number.
The paper ends with "The End"

Introduction

In a previous paper, I've described Ghosh's number.
In this paper, I describe Ghosh's second number.

Ghosh's second number

The prime factorization of Ghosh's number is

$$G = 2^{10} \cdot 3^3 \cdot 5^3 \cdot 7^1 \cdot 11^1 \cdot 23^1 \cdot 47^1 \cdot 59^1 \cdot 83^1 \cdot 113^1 \cdot 1063^1 \cdot 1327^1 \cdot 2657^1 \cdot 5303^1 \cdot 5309^1$$

The primes are

$$2, 3, 5, 7, 11, 23, 47, 59, 83, 113, 1063, 1327, 2657, 5303, 5309$$

The powers are

$$10, 3, 3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1$$

The primes raised to their respective powers are

$$1024, 27, 125, 7, 11, 23, 47, 59, 83, 113, 1063, 1327, 2657, 5303, 5309$$

whose sum $G_2 = 17178$ is called **Ghosh's second number**.

The End

Ghosh's third number

Soumadeep Ghosh

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Abstract

In this paper, I describe Ghosh's third number.
The paper ends with "The End"

Introduction

In a previous paper, I've described Ghosh's number.
In a previous paper, I've described Ghosh's second number.
In this paper, I describe Ghosh's third number.

Ghosh's third number

The prime factorization of Ghosh's second number is

$$G_2 = 2^1 \cdot 3^1 \cdot 7^1 \cdot 409^1$$

The primes are

$$2, 3, 7, 409$$

The powers are

$$1, 1, 1, 1$$

The primes raised to their respective powers are

$$2, 3, 7, 409$$

whose sum $G_3 = 421$ is called **Ghosh's third number**.

The End

The relative rate

Soumadeep Ghosh

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Abstract

In this paper, I describe the relative rate.
The paper ends with "The End"

Introduction

Whenever there are two rates and respective risk-free rates, there also exists a fifth **relative rate** between those four rates. In this paper, I describe the relative rate.

The relative rate

The relative rate between two rates $r_B \geq r_A$ and the respective risk-free rates r_{f_B} and r_{f_A} is

$$\rho_{B,A}(r_B, r_A, r_{f_B}, r_{f_A}) = \frac{r_B - \min(r_{f_B}, r_{f_A})}{r_A - \min(r_{f_B}, r_{f_A})}$$

where $min(x, y)$ is the minimum function

The End