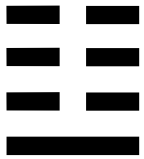

MathDIY

- Democracy (D) and Internet (I) are Yours (Y) stands for a macroeconomic value system
- MathDIY is a simple mathematical notation for describing business and political decision making, capturing its motivation, tensions, processes and context
- MathDIY makes recommendations and suggestions for how determinants – macroeconomic and microeconomic – can be incorporated into an Account System (IAS, NAS) or Balanced Scorecard (BSC)
- MathDIY includes cost accounting and calculation (e.g. Revenues = Sales - Costs etc.)
- its scope extends inevitably to people, nature, democracy and the Internet without Frontiers (IwF), which are to be embedded as variables next to other units
- new determinants assimilate old doctrines, example given:
  [Y (Yield) = C (Consumption) + S (Save); Y =C + I (Investment);] because Yield (Y) is thus influenced by D + I = Y (Yours) and by constraints (interaction, growth, stability, sustainability, resources, culture)
- MathDIY finalizes and reflects the balance of Fair External Trade Agreement (FETA) and fundamentally changes the requirements for Diplomatic International Relations (DIR)
- determinants need a well-formed Syntax or Document Type Definition (e.g. MathML, SVG text)
- first, let's look at a small introduction to set theory and markup language

Mathematical Syntax in MathDIY

℮	ℰ	∈	∉
Estimated Symbol UNICODE: &#212E;	**Euler Constant** UNICODE: ࠻	**Element of** UNICODE: ࢠ	**not Element of** UNICODE: ࢡ
∧	∨	∏	∑
Logical AND UNICODE: ࢳ	**Logical OR** UNICODE: ࢴ	**n-ary PRODUKT** UNICODE: &#220F;	**n-ary SUMMATION** UNICODE: &#220F;
<	>	≤	≥
less than UNICODE: &#003C;	**greater than** UNICODE: &#003E;	**less than or equal to** UNICODE: ࣘ	**greater than** UNICODE: ࣙ
⊂	⊃	⊆	⊇
Subset of UNICODE: ࣪	**Superset of** UNICODE: ࣫	**Subset of or equal to** UNICODE: ࣮	**Superset of** UNICODE: ࣯
∴	∵	:	::
therefore UNICODE: ࢺ	**because** UNICODE: ࢻ	**ratio** UNICODE: ࢼ	**proportion** UNICODE: ࢽ

Mathematical Syntax in MathDIY

÷

devision sign
UNICODE: &#00F7;

×

multiplication sign
UNICODE: &#00D7;

$\int$

integral
UNICODE: &#222B;

$\fint$

finite part integral
UNICODE: &#2A0D;

α

alpha
UNICODE: &#03B1;

β

beta
UNICODE: &#03B2;

Ω

omega (Ohm)
UNICODE: ࡎ

∂

partial differential
UNICODE: ࢚

π

pi sign
UNICODE: &#03C0;

μ

micro sign
UNICODE: &#00B5;

(i)

i (interest)
UNICODE: &#24A4;

(t)

t (time)
UNICODE: &#24AF;

( )

(sub)script for determinant
empty parenthesis
UNICODE: &#0028;&#0029;

{ }

set theory
curly brackets
UNICODE: &#007B;&#007D;

[ ]

square brackets
UNICODE: &#005B;&#005D;

| |

amount, size, value for unit
vertical dividers
UNICODE: &#239C;&#239F;

a/c

address to
UNICODE: ࠴

c/o

care of
UNICODE: ࠹

Mathematical Syntax in MathDIY

(D)

D (Democracy)
UNICODE: &#1F113;

(N)

N (Nature)
UNICODE: &#1F11D;

$(A) = (A)_1 + (A)_2$

A (Area)
built up + undeveloped
UNICODE: &#1F110;

(Y)

Y (Yours)
UNICODE: &#1F128;

(P)

P (Product)
factor of production
UNICODE: &#1F114;

$°(F) \leq 360°$

Level of Freedom
foreign trade
UNICODE: &00B0; &#1F115;

$°(C) \leq 100°$

Level of Constitution
domestic economy
UNICODE: &00B0; &#1F121;

$Y = (D) \times [(N) - (A)]$

Yield = Yours (Y)
factor of ecosystem

(G)

G (Ground)
factor of production
UNICODE: &#1F116;

(C)

C (Capital)
factor of production
UNICODE: &#1F112;

(W)

W (Work)
factor of production
UNICODE: &#1F126;

F4F

Fridays for Future

(S)

S (State)
UNICODE: &#1F114;

(H)

H (Household)
UNICODE: &#1F117;

(E)

E (Enterprise)
UNICODE: &#1F114;

V4V

V for Vendetta

$H_{(C)}$

Human Capital

$H_{(R)}$

Human Resources

$H_{(O)} = H_{(D)}$

Full Employment
offers = demands

$H_{(C)} > H_{(R)}$

unexploited
Human Development

Mathematical Syntax in MathDIY

Y_{1st}

Yours
DETERMINANT FOR QUALITY

Y_{2nd}

Yield
DETERMINANT FOR QUANTITY

I_Y

Internet
ELEMENT OF YOURS

D_Y

Democracy
ELEMENT OF YOURS

Y_T

Total Yield
DETERMINANT FOR QUANTITY

$Y_{(i)} = Y_T - Y_{1,2}$

Interest Yield
DETERMINANT FOR QUALITY

I_g

Gross Investment
ELEMENT OF INVESTMENT

I_n

Net Investment
ELEMENT OF INVESTMENT

$V_Y = Y_{1st} \geq Y_{2nd}$

Value for Citizen
DETERMINANT FOR QUALITY

$I_t = I_g - I_n$

VAT on Investment
ELEMENT OF INVESTMENT

$I_{(t)}$

Amortization Duration
DETERMINANT FOR QUALITY

I_Q

Return on Investment
DETERMINANT FOR QUALITY

$V_Y = Y_{1st} \leq Y_{2nd}$

Value for State
DETERMINANT FOR QUANTITY

C

Consumption
ELEMENT OF 2ND YIELD

$S = Y_{2nd} - C$

Save
ELEMENT OF 2ND YIELD

$I = Y_{2nd} - C$

Investment
ELEMENT OF 2ND YIELD

$I_{(i)} = S_{(Y)}$

Balanced Budget
IN A CLOSED ECONOMY
(WITHOUT FOREIGN TRADE)
WHEREBY i = INTEREST

$S = I_n$

Identity Equation
economy without
foreign trade

$Y_{2nd} = C + S$

IS-function 1
APPROACH TO FORMATION

$Y_{2nd} = C + I_n$

IS-function 2
APPROACH TO USE

Mathematical Syntax in MathDIY

$S = Y - C - G$

Economic Savings

$Y = C+I + OC$

OC = (Ex-Im)
outside contribution

$Y_1+Im_1=C_2+I_2+ Ex_2$

CB ≠ (Ex-Im)
current balance

$N_x = Ex - Im$

Net Export

$S = I + N_x$

Identity Equation
open economy with foreign trade

G

Government spending

D

Depreciation

$Y_2-Y_1 > 0$

YIELD creation

R_m

row materials

$R_{s,a}$

resources by supplies/additives

R_p

resources by plant materials

R_q

rare materials
WITH PARTICULARLY HIGH REQUIREMENTS OR RISKS

R_e

resources by excipients

$R_{x,y,z}$

recyclable, renewable, refurbished resources

Mathematical Syntax in MathDIY

$°P$

level of the PRICE

$°P = [(M) \times CS_{(M)}] \div Y$

level of the PRICE

$°P_2 - °P_1 > 0$

Inflation

(M)

MONEY supply
UNICODE: &#1F11C;

$(M)_2 - (M)_1 > 0$

MONEY creation

$Cs_{(M)}$

CIRCULATION SPEED

$(M)_2 - (M)_1 >$
$[Y_2 - Y_1] - [Cs_2 - Cs_1]_{(M)}$

Inflation Equation
SHOWING THE CHANGE RATES OF
THE REPORTING PERIODS

$Y \times °P = (M) \times Cs_{(M)}$

Quantity Equation

$[Cs_2 - Cs_1]_{(M)} \geq 0$

CIRCULATION SPEED
INCREASES OR
REMAINS CONSTANT

Mathematical Syntax in MathDIY

$7S_{(E)}$

7-S-Modell BY MCKINSEY
STRATEGY, ORGANIZATIONAL **STRUCTURE**, **SYSTEMS** AND ITS PROCESSES, CULTURAL **STYLE**, **STAFF**, **SKILLS**, **SUPERORDINATE** GOALS WHEREBY (E) = ENTERPRISE

$12S_{(E)}$

12-S-Model (Molecule) BY JENS T. HINRICHS
SUPPLY CHAINS (has effects on STRATEGY), **STORAGE** OF ENERGY (reserves, savings, surplus, renewables), ORGANIZATIONAL **SEGMENTATION** AND CHANGE (business units and assets, SWOT), **SLACKS** (Project management and planning), **SYNERGIES** (opt-in/opt-out; Make or buy, USP, workflow), **STACKS** (foreign expertise vs your experiences), **SHAREHOLDERS** (also investors, suffrages), INTERCULTURAL **SYSTEMS** (obstacles, environment, markets, fiscal), **STYLE AND STACK** (foreign expertise vs given experiences), **SOCIAL BENEFITS** (Image, integrity, absolute economics, exploration), **STAKEHOLDERS** (also public interests, Lobbyism and policies), OWN **SKILLS AND** CREATIVE **STAFF** (talent stack, human capital, S.W.A.T., experiences, patents), **SHARE-ABILITY** (evaluable usage, participation, performance, scales), **SUPERSET/SUBSET** OF … OR EQUAL TO SUPERORDINATE GOALS (profiteering, social engineering, utility maximization, lobbyism, market leadership, branding, cultural of concealment)
WHEREBY (E) = ENTERPRISE

$|\ iP^{2}_{(Y)}\ |$

iPotency
VALUE FOR UNIT OF A USER IN A DATING PORTAL OR MATCHING PROCESS
WHEREBY $_{(Y)}$ = YOURS

$E://mc^{n}$

Expansion of the Internet
INTERACTION THEORY OF RELATIVITY
BY JENS T. HINRICHS
DERIVED MEASURE OF EVOLUTION;
m = MASS OF EXPRESSION MULTIPLIED BY c = CONTENT EXPOTENTIATED WITH n = UNKNOWNS WHEREBY E:// = EXPANSION OF INTERNET

$R://\Omega$

Resistance of the Internet
INTERACTION THEORY OF COUNTERACTION
BY JENS T. HINRICHS
DERIVED MEASURE OF ACCEPTANCE;
R:// = RESISTANCE OF INTERNET,
Ω = USER-GENERATED-CONTENT (UGC) AND OTHER EXTERNAL MEDIA (OEM) ÷ VALUE FOR TOTAL UNIT OF INTERACTION (SHARE, LIKES, COMMENTS, FOLLOWERS ETC.) WHEREBY
$(R_2 - R_1) > R_1$ (ACCEPTANCE),
$(R_2 - R_1) < R_1$ (RESISTANCE)

Mathematical Syntax in MathDIY

$7Ps + \sum P_x$

Politics-Mix

BY JENS T. HINRICHS

PRODUCTION, PRICING, PROMOTION, PLACEMENT, PHYSICAL EVIDENCE, PEOPLE, PROCESS

(MARKETING-MIX BY JOBBER)

+ PARTNERS, POLITICAL OBSTACLES, PLC, PROJECTION, PLANNING, PLAYER AND PARADIGM SHIFT, PARTICIPATION, PERFORMANCE ETC.

$4Pm + \sum P_y$

Player-Model

BY JENS T. HINRICHS

MOVER, BYSTANDER, OPPOSER, FOLLOWER

(4-PLAYER-MODEL BY KANTOR)

+ PROCLAIMER, OBSERVER, SPECTATOR, GAWPER, INFLUENCER, PARTNERS STEREOTYPES, STAKEHOLDERS (ALSO CONTRIBUTERS, COUNTERFEITS) ETC.

$4S \in 7Ps + \sum P_{x,y}$

Strategy-Model

BY JENS T. HINRICHS

STRENGTH, WEAKNESS, OPPORTUNITIES, THREATS

(S.W.O.T.-ANALYSIS)

ARE ELEMENTS OF POLITICS-MIX

$4Pm + \sum P_{x,y} \in 4F \times 3F$

Forces-Model

BY JENS T. HINRICHS

PLAYER-MODEL IS ELEMENT OF (OR DRIVEN BY) S.W.A.T.-ANALYSIS: SKILLS, WILLINGNESS TO CHANGE SOMETHING, ACTION TO BE TAKEN, TEAM OR TECHNIQUE (4F) PAIRED WITH FAITH OR FAIRNESS, FAMILY AND FREEDOM **(3F)** OR DRIVEN BY FRIDAYS FOR FUTURE **(F4F)** OR SOMETIMES MULTIPLIED WITH FINANCIAL RISK AND CROWD FUNDING **(2F)**

$|PERFORM| \in 7Ps + \sum Px,y$

Value for PERFORM-factors

PURPOSE AND VALUES, EMPOWERMENT, RELATIONSHIP AND COMMUNICATION, FLEXIBILITY, OPTIMIZATIONS OF PRODUCTIVITY, RECOGNITION AND APPRECIATION, MORAL AND MOTIVATION

(P.E.R.F.O.R.M.-ANALYSIS)

ARE ELEMENTS OF POLITICS-MIX

$|PEST| + |LE| \in 7Ps + \sum Px,y$

Value for PEST-factors

POLITICAL DECISION-MAKING, ECONOMIC ECOSYSTEM, SOCIOCULTURAL VALUES, TECHNICITY + LEGAL LOOPHOLES, ENVIRONMENTAL CONSCIOUSNESS

(P.E.S.T.L.E.-ANALYSIS)

ARE ELEMENTS OF POLITICS-MIX

$|PERSONAS\ ARK|$

Value for target audience or potential customer

CUSTOMER PROTOTYPING, PREFERENCES, RESEARCH, BUYING BEHAVIOR, PRICE SENSITIVITY ETC.

ARE ELEMENTS OF POLITICS-MIX

Mathematical Syntax in MathDIY

$5F_{(E)}$

Enterprise (E) by 5 Forces

(5-FORCES-MODELL BY PORTER)
BARGAINING POWER OF THE SUPPLIERS **(low presence of substitutes, high participation in the value chain, low risk of backward integration)**, BARGAINING POWER OF CUSTOMERS **(institutional customer concentration, bulk goods/orders at low prices, high presence of substitutes, high risk of backward integration)**, THREAT OF NEW COMPETITORS AND STARTUPS **(market entry/market exit barriers, Economies of scales, high gross yields are associated with high debts)**, THREAT OF SUBSTITUTES OR PATENT TROLLS **(physical and immaterial competitors)**, COMPETITIVE INTENSITY OF THE INDUSTRY OR BRANCH **(driven by product innovation or fundamental changes of customer buying behavior, protectionism of key industries by nationalization of companies, common ownership, social engineering)**

$5F_{(S)}$

State (S) by 5 Forces

(5-FORCES-MODELL BY JENS T. HINRICHS)
FORTUNE MEANS YIELD GROWTH **(that keep sustainability and sovereignty in mind)**. POLITICIANS DRIVEN BY FORTUNE **(make decisions that guarantee them political survival)** FAME GROWS OUT PRESTIGE THAT CAN BE SEEN **(driven by knowledge and lobbyism that are hidden under the surface).** PEOPLES DRIVEN BY FAMOUS WORDS **(make choices that are approved to give politicians more audience, not to gain own attention for themselves)**. FREEDOM MEANS THAT YIELD GROWTH WEIGHS MORE THAN INDIVIDUAL FAILURE **(driven by less responsibility of the decision makers, but always depends on the misconduct of others or was dependent on other circumstances, e.g. Terrorism, Global Climate, Financial Crisis)**

$5F_{(H)}$

Household (H) by 5 Forces

(5-FORCES-MODELL BY JENS T. HINRICHS)
FORTUNE MEANS INVESTMENT IN PEOPLES AND THEIR FAMILIES AND FRATERNITY **(that helps to keep self-determination and self-realization to achieve a stable income)**. PEOPLES DRIVEN BY FORTUNE WRESTED FROM A SUSTAINABLE ENVIRONMENT **(make decisions that guarantee them recognition and confirmation and a big standard of living)** FAME MEANS PARTICIPATION FROM FELLOWSHIP AND IDENTIFYING WITH FAME MONSTERS AND OTHER INFLUENCERS **(driven by status symbols, individual taste and fragile principles and rights).** PEOPLES INFLUENCED BY ALGORITHMS FROM A COLLECTIVE THAT REPLACES INDIVIDUAL NEEDS **(make decisions that are designed to generate more personal data and business traffic for the benefit of others)**. FREEDOM NEEDS A HIGH DEGREE OF DEMOCRACY AND AN INTERNET WITHOUT FRONTIERS **(shaken by a single person or a single event to touch many hearts or to set a whole crowd in motion, e.g. Edward Snowden, Cum-Ex-Files, Fridays for Future)**

Mathematical Syntax in MathDIY

$°(L)\equiv$

level of media literacy (satisfaction)

UNICODE:
P&#1F11B;ࣕ

$°(L)\approxeq$

level of currency liquidity (stability)

UNICODE:
P&#1F11B;&#224B;

$D_x = A_{Ex} - H_{Im}$

Democracy Deficit

EXPORT OF ARMAMENTS MINUS IMPORT OF HUMANITY WHEREBY

$\mathbf{D_{X2}-D_{X1} < 0}$

$D_{x2}-D_{x1} > 0$

Democracy Benefit

Mathematical Syntax in MathDIY

$$Y_{(E)} = R_g - C_g$$

Yield of Enterprise (E)
GROSS REVENUES – GROSS COSTS

$$C_{(E)} = C_v + C_f$$

Cost of Enterprise
VARIABLE COSTS + FIXED COSTS

$$C_{(Y)} = C_v + C_f$$

Yours of Consumption (Y)
VARIABLE COSTS (electricity, gas etc.) + FIXED COSTS (rent, compulsory fee, basic fees, tax prepayment, progress payments) WHEREBY STEP-FIXED OR VARIABLE-FIXED COST INCLUDED IN BOTH (subsequent payments, tariffication by volumina)

$$Y_{(S)} + C_{(S)} = q[(E)_{T1} + (H)_{T1}] - p[(E)_{T2} + (H)_{T2}]$$

Yield of State (S)
TAX INCOMES – TRANSFER BENEFITS WHEREBY q = INPUT, p = OUTPUT, T_1 = TAX INCOMES, T_2 = TRANSFER BENEFITS AND $\mathbf{C}_{(S)}$ = COST/CONSUMPTION OF STATE (raising, lending, redemption of credits or paying interests or international contribution, tax refund, salary to officials)

$$C_{(E)} \div x = C_f \div x + c_v$$

cost on average
WHEREBY $\mathbf{c_v}$ = q = INPUT PRICE (PRODUCTION) PER UNIT

$$x^* = C_f \div (px - c_v)$$

Break Even
WHEREBY **px** = OUTPUT PRICE (RETAIL PRICE) PER UNIT

Mathematical Syntax in MathDIY

$f(x) => y = mx + n$

general form of linear equation

$m = (y_2-y_1)\div(x_2-x_1)$

difference quotient of linear equation

$n = [(y_1 \times x_2)-(y_2 \times x_1)]\div(x_2-x_1)$

point of intersection of linear equation

$c = ax + bx$

coordinate form of linear equation

WHEREBY x_0, $y_O > 0$

$y_1 = -(y_0\div x_0)x_1 + y_0$

intercept form of linear equation

WHEREBY $y_O = n$

$y = ax^2 + bx + c$

general form of quadratic function

WHEREBY $f(x) => y$

$y = ax^3 + bx^2 + cx + d$

general form of polynomial function third degree

WHEREBY $f(x) => y$

$y = ax^4 + bx^3 + cx^2 + dx + e$

general form of polynomial function fourth degree

WHEREBY $f(x) => y$