THE PRODUCTION OF QUANTITATIVE BUDDHIST ECONOMICS

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ABSTRACT

This paper aims to summarize the crucial details of the production of Quantitative Buddhist Economics, QBE. The new price model and mathematics are methodologies. The Buddha's doctrines taught in Thai Theravada schools for people living with family and money following the law of action and the Heart of Millionaires are data. The investigation found that wage, rent, interest rate, profit, fixed cost, variable cost, concession, and other prices as data and a subset of the price in the real-world markets. The optimum production of BE is self-reliance with modern development, not profit maximization, and avoiding harmful economic activities. BE is a "unique" mixed economic system where the government supports people to make money. Production in BE shows positive and negative money results for people and countries in the long run. The objective of the economic development of mainstream economists is to serve the capitalist's benefit but BE for all people and government. BE advises many different administrating directions for a government to reach the wealth and happiness of nations compared to mainstream economics. If Buddhist economists analyze the high national income of mainstream economists, three possible results will appear: zero wealth, significant problems, and high wealth because mainstream economists have never considered the quality of investment or production.

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Introduction

The four economic activities of mainstream economics consist of production, consumption, exchange, and distribution. As a result, the production of Quantitative Buddhist Economics has to be explained. The production looks like a compass to point out how to reach the nation's wealth. If it indicates the straight direction, the nations will get rich quickly. In contrast, inaccuracies in production, which come from theoretical economics, will cause many enormous disasters for people.

Alfred Marshall commented that time is one of the difficulties of theoretical economics.[1] At that time, economists followed Minkowski's 4D model that explained time as the fourth dimension, separating from three principal axes: the x-axis, y-axis, and z-axis with the mathematical model as (x, y, z, and t). Minkowski's model shows that time values float between three principal axes.[2] However, in 2002, new time characteristics were found and presented in the royal journal of Thailand. Also 2019, the time values match all numbers in the three principal axes with the mathematical model (x_t, y_t, z_t) presented in an international journal. The conclusion is that a particular time value matches a number in all three axes.

The finding concerns three main subjects: physics, mathematics, and economics. In physics, many discoveries have been made: (1) time as a vector with advanced mathematics compared to the paper in 2002, (2) the law of time directions, (3) the prediction of the existence of the poles of gravity force,[3] and (4) the existence of the time directions at the subatomic level.[4] About mathematics, the time equation reveals that it is a one-inch equation that can explain physics and economics simultaneously[5]. About economics the time equation can prove inaccuracies in economics: (1) the nonexistence of the equilibrium condition because the supplied amount is happening before the demanded amount, (2) the nonexistence of price adjusting to the equilibrium point in cases of excess supply and demand if considering time directions in demand and supply

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[1] Redvers Opie, "Marshall's Time Analysis," *The Economic Journal* 41 (2022): 199-215.

[2] Space-time, *Encyclopedia of Mathematics*, Accessed October 25, 2016, https://www.encyclopediaofmath.org/index.php/Space-time.

[3] Poramest Boonsri, "Discovery in Time as a Vector Plus Polarity of Gravitational Force," *Palarch'S Journal of Archaeology Of Egypt/Egyptology* 17 (2020): 957-966.

[4] Poramest Boonsri, "Discovery in Five Fundamental Angles at the Subatomic Level Plus a Three Dimensional Body," *Palarch'S Journal Of Archaeology Of Egypt/Egyptology* 17 (2020): 978- 992.

[5] Poramest Boonsri, "The Time Equation Explaining Equations in Physics and Economics," *International Journal of Engineering and Advanced Technology(IJEAT)* 8 (2019): 165-168.

curves at the moment of exchange. In other words, we find the instability of an equilibrium point, (3) an improper demand definition because it shows two unreasonable situations as True and False at the same time, which shows that economists cannot use it to create their price theory, (4) new price model.[6], (5) demand and supply as cross-section data because each point coincides at different lines and different drawing speeds, and (6) a unified economics model that unites micro- and macroeconomics in one coherent picture[7].

The new price model, $P_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$, was created to correct poverty in theoretical economics. The model was also used to explain Buddha's doctrines concerning Quantitative Buddhist economics, QBE, with two centres: the law of action (or the law of Karma) and the Heart of Millionaires[8].

The wealth of people and nations is the goal of studying economics. The different production between mainstream economics, ME, and BE can be revealed on micro and macro levels. While mainstream economists explain how capitalists maximize profit, Buddhist economists reveal how individuals and government get wealth by using Buddha's doctrines taught in Thai Theravada schools.

In mainstream microeconomics, production concerns three main costs: average cost or AC, marginal cost or MC, and total cost or TC. Three main costs consist of these relationships: first, total cost consists of total variable cost and total fixed cost or TC = TVC +TFC, average cost consists of average variable cost and average fixed cost or AC =AVC+AFC, marginal cost is equal to marginal variable cost because of marginal fixed cost as zero or MC = MVC with MFC = 0. The classical production theory shows a factor as labour or Q = f (l) to produce a product. The classical theory shows that the producer must produce at the top of the total product in the second stage, TP.[9] When TP is the largest, the marginal product or MP will be zero. The modern theory

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[6] Poramest Boonsri, "Discovery in Reasons Economics is not an Exact Science Plus New Price Model," *International Conference on Mathematical and Statistical Physics, Computational Science, Education, and Communication (ICMSCE 2022)* 12616 (2023).

[7] Poramest Boonsri, "Discovery in Demand as Cross-Section Data Plus Unified Economic Model," *International Conference on Mathematical and Statistical Physics, Computational Science, Education, and Communication (ICMSCE 2022)* 12616 (2023).

[8] Poramest Boonsri, "The Genesis of Quantitative Buddhist Economics," *Journal of International Buddhist Studies* 14 (2023): 1-20.

[9] Economics, *Costs of Production*, Accessed June 24, 2023, https://www.learn-economics.co.uk/Costs.html.

explains using two factors to produce a product, or Q = (k, l), where k represents capital and l represents labour. The producer must produce when the isoquant curve touches the isocost one. The producers in a perfect competition market who want to maximize profit will produce above the average cost curve or AC curve and begin to produce the product at the lowest point of the average variable cost curve or AVC. They will get excess profit if they make the product's price at MR=MC and TR > TC. The producers in imperfect competition markets: monopolies, monopolistic competition, and oligopolies receive their profits in different details in the short and long run.[10] The mainstream theory contributes to the invisible hands of Adam Smith and the price mechanism.

In macroeconomics, production concerns an investment expenditure of the private sector that depends on the private income, or I = f (PI or Y), where PI represents Personal income which is investors' income before paying personal income tax. The most straightforward model concerns getting the national income equilibrium of I = S, or the investment is equal to money-saving of people. This model explains two sectors without government and international trade (or export and import)[11]. In international trade, the investors will sell their products to other countries following Adam Smith because of comparative advantage. If country A can produce agricultural products well, and country B is good at producing industrial products, it is reasonable for the countries to exchange products. For example, many high-technology industrial products in the USA are produced for people in other countries to reduce producers' costs and make capitalists wealthy. Economists believe that investment makes economic growth increase. With this concept, policymakers support the private sector to produce many products, including weapons, to sell to other countries.

However, BE shows different views compared to mainstream economics, ME. Although mass products will make the low price, which buyers can buy with a little money, investors need to use enormous natural resources for production. Using huge natural resources makes people in the next generation face high opportunities for the scarcity of natural resources. Besides, natural resources are properties of all people in the countries, and the government must manage how to use them. Politicians and civil officers with corruption always try to support a firm to get the right to dig vast natural resources until the resources run out. The next generation needs more opportunities to have low-price resources, which is a long-run problem. Capitalists getting direct

[10] Economics, *Price Discrimination*, Accessed June 24, 2023, https://www.learn-economics.co.uk/Price-discrimination.html.

[11] Economics, *National Income Equilibrium*, Accessed June 24, 2023, https://www.learn-economics.co.uk/National-income-equilibrium.html.

benefits from natural resources will be richer and have more power in societies, but most people in countries are still poor. Notably, only small groups of people will be wealthy, which shows the failure of economic development concerning distribution. These phenomena have been happening with capitalism until now. In the past, leading economists, especially Karl Mark, saw this weak point. He created communism to solve economic problems with different paradigms. Another hybrid financial system, socialism, was developed in which private and government sectors worked together to solve economic problems.

BE is not capitalism or communism, or a mixed economic system, so the paradigm of solving financial problems differs from others. Besides, many economic-theory inaccuracies were found and proved mathematically, such as the nonexistence of the equilibrium condition and the price adjusting to the equilibrium point; as a result, Adam Smith's concepts, such as invisible hands and the price mechanism, are imaginary to contribute to capitalism, not real-world price that must be developed to answer what the price is.

Data and Methodology

Mathematics, the new price model, and new time characteristics, especially the time equation, are methodologies to create BE. Buddha's doctrines taught in the Thai Theravada schools concerning people living with their families and making money are data.

Result

1. Costs of Production of BE

Production of BE consists of many costs: wage, rent, and interest rate, but not concerning profit. In addition, many other real-world costs include fixed and variable costs, including natural resources. Prices as data are the centre of economic activities. They are the universal set that consists of many subsets such as interest, rent, wage, profit, and others as follows:

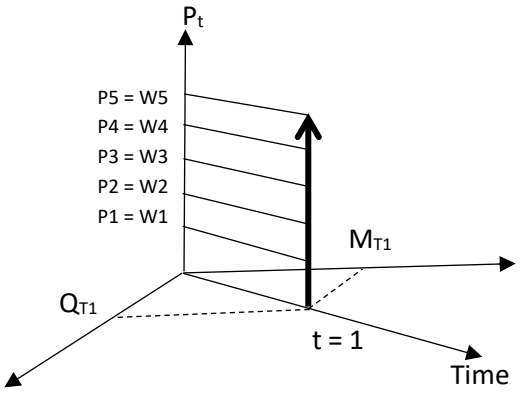
1.1 The Average Wage with Time

Wage as data is one of the prices that an employer tells an employee how much money the employee will get for working time, which the employer is an owner. The average wage can be explained with the mathematical model with time as follows:

$$w_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where "w" represents wage per unit, the M_T represents the employer's money (or buyer's money) transferred to the employee with a total value called "accumulated values." The Q_T

represents the hours the employee work for the employer's product (or transferred to the buyers) with "accumulated values." Also, the subscript "t" represents a time value matching these three values.



M_{Tt}, The accumulation of buyer's money transferred.

Q_{Tt}, The accumulation of product quantities transferred.

Fig 1. general figure explaining the average wage with the time of many employees

For example, the working hours of three employees can be shown. See Figure 2 on the left axis Q_{Tt}. Three employees, Q, O, and M, earned 84,000, 60,000, and 36,000 dollars annually. The total wage of them is 180,000 $ per year. See Figure 2 on the right axis M_{Tt}. The average wage is 60,000 dollars per capita per year. The time value t is one year. See Figure 2 on the vertical axis P_t.

Table 1. The calculation to get the average wage of three persons

	Wage per year	Average wage per man per year
Q	84,000$	Average of $(P_M+P_O+P_Q) = (P_M+P_O+P_Q)/3 = 60{,}000$ $
O	60,000$	Average of $(P_M+P_O) = (P_M+P_O)/2 = 48{,}000$ $
M	36,000$	$P_M = 36{,}000$ $
	180,000$ = Average wage = 60,000 $ each	

(1) P_M = 36,000 $ per man per year
(2) P_M+P_O = 96,000 $ per 2 men per year
= 48,000 $ per man per year
(3) $P_M+P_O+P_Q$ = 180,000 $ per 3 men per year
= 60,000 $ per man per year
(4) P_O = (2) - (1)
= 12,000 $ per man per year
(5) P_Q = (3)-(2)
= 12,000 $ per man per year

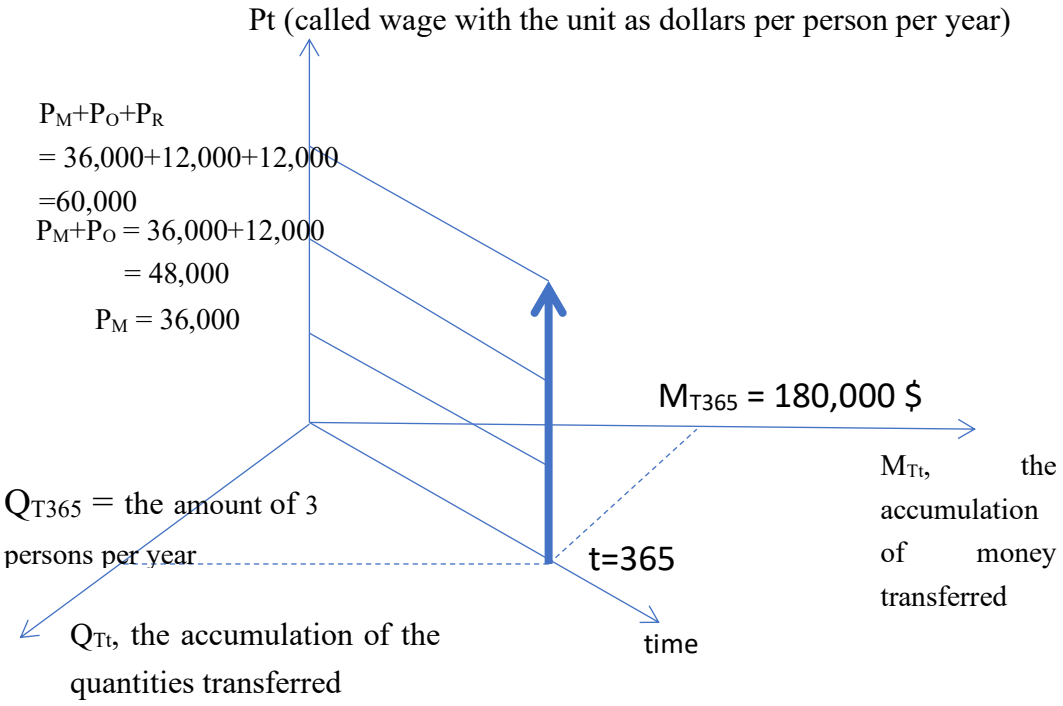


Fig 2. The specific figure explains the average wage with the time of three employees.

Similarly, the other average costs can be concluded as follows:

1.2 The Average Rent with Time

Rent is data, one of the prices, that owners of properties, such as landlords, tell tenants (or renters) how much money the tenants have to pay for using the landlords' properties with time. The average rent can be explained with the mathematical model with time as follows:

$$rent_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where "rent" represents rent per unit, the M_T represents the renter's money (or buyer's money) transferred to the landlord with a total value called "accumulated values." The Q_T represents the number of the landlords' **rooms** with time (or the rooms temporarily transferred to the buyers) with "accumulated values." Also, the subscript "t" represents a time value matching these three values.

For example, three tenants, L, J, and H, get three rooms in the building. See Figure 3 on the left axis Q_{Tt}. They pay 1,500, 1,000, and 500 dollars per month, respectively. In other words, they pay 18,000, 12,000, and 6,000 dollars per year, respectively; the total rent is 36,000 $ per year (The average rent is 12,000 dollars per room per year. See Figure 3 on the vertical axis P_t. The time value as t is one year.

Table 2. The calculation to get the average rent of three tenants

	Rent per year	Average rent per room per year
L	18,000$	Average of $(P_H+P_J+P_L) = (P_H+P_J+P_L)/3$
J	12,000$	$= 12{,}000$ $
H	6,000$	Average of $(P_H+P_J) = (P_H+P_J)/2 = 9{,}000$ $
	36,000$ = Average Rent = 12,000 $ per room	$P_H = 6{,}000$ $

(1) P_H = 6,000 $ per room per year
(2) P_H+P_J = 18,000 $ per 2 rooms per year
= 9,000 $ per room per year
(3) $P_H+P_J+P_L$ = 36,000 $ per 3 rooms per year
= 12,000 $ per room per year
(4) P_J = (2) - (1)
= 3,000 $ per room per year
(5) P_L = (4)-(2)
= 3,000 $ per room per year

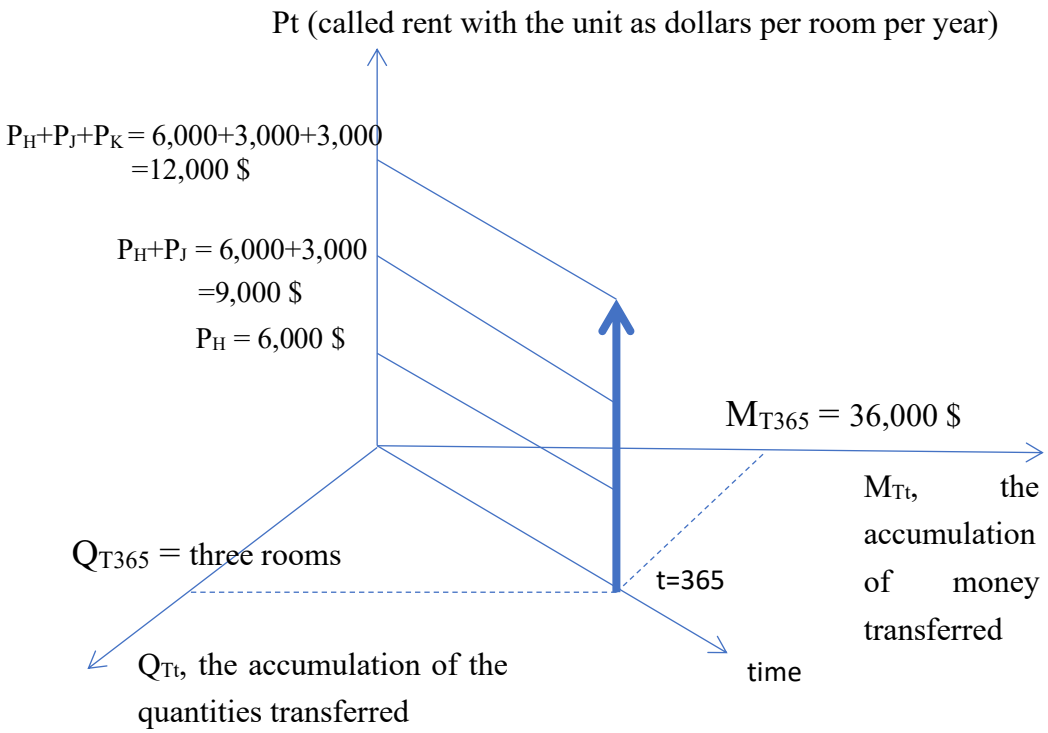


Fig 3. The specific figure explaining average rent with the time of three tenants

1.3 The Average Interest Rate with Time

An interest rate of a loan is data, one of the prices, that bankers or money owners tell their customers how much money called “interest rate” the borrowers have to pay for using the loan with time. The average interest rate can be explained with the mathematical model with time as follows:

$$\text{interest}_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where “interest” represents interest per unit, the M_T represents the borrower's money (or buyer’s money) transferred to the money owner with a total value called "accumulated values." The Q_T represents the number of hours the borrower uses the loan with "accumulated values." Also, the subscript “t” represents a time value matching these three values.

For example, three borrowers, F, D, and B, borrowed money from banks as 100,000 dollars each; as a result, the total loan was 300,000. See Figure 3 on the left axis Q_{Tt}. Each of them had to pay their interest rates for their banks as 12%, 11%, and 10%, respectively. The average interest rate of the three borrowers was 11%. See Figure 4 on the vertical axis P_t. The sum of the interest that they paid was 33,000 dollars. See Figure 4 on the right axis M_{Tt}. The time value t is one year.

Table 3. The calculation to get the average interest rate of three borrowers

Borrowers	Loan per year	Interest rate and money due to pay	Average interest rate per man per year
F	100,000$	12% = 12,000$	Average of (P_B+P_D+P_F) = (P_B+P_D+P_F) /3 = 11 %
D	100,000$	11% = 11,000$	Average of (P_B+P_D) = (P_B+P_D) /2 = 10.5%
B	100,000$	10% = 10,000$	P_B = 10%
	300,000$	Average interest rate = 11% = 33,000$	

We can see P_B, P_D, and P_F as data. The lowest interest rate of the loan, 100,000 dollars, P_B, was 10%. The average interest rate of the two loans, 200,000 dollars, P_B+P_D, was 10.5%. Similarly, the average interest rate of the three loans of 300,000 dollars, P_B+P_D+P_F, was 11%. (However, mainstream economists often use the symbol "r" in macroeconomics.)

(1) P_B = (10,000 $ / 100,000 $) x100 per year
= 10 % of 100,000 $ per year

(2) P_B+P_D = (21,000 $ / 200,000 $) x100 per year
= 10.5 % of 100,000 $ per year

(3) P_B+P_D+P_F = (33,000/ 300,000 $) x 100 per year
= 11 % of 100,000 $ per year

(4) P_D = (2) - (1)
= 0.5 % of 100,000 $ per year

(5) P_F = (4)-(2)
= 0.5 % of 100,000 $ per year

Notably, there are three dimensions in the average interest rate as 11% (or $P_B + P_D + P_F$ =10 + 0.5 + 0.5% = $r_B + r_D + r_F = r = P_t$).

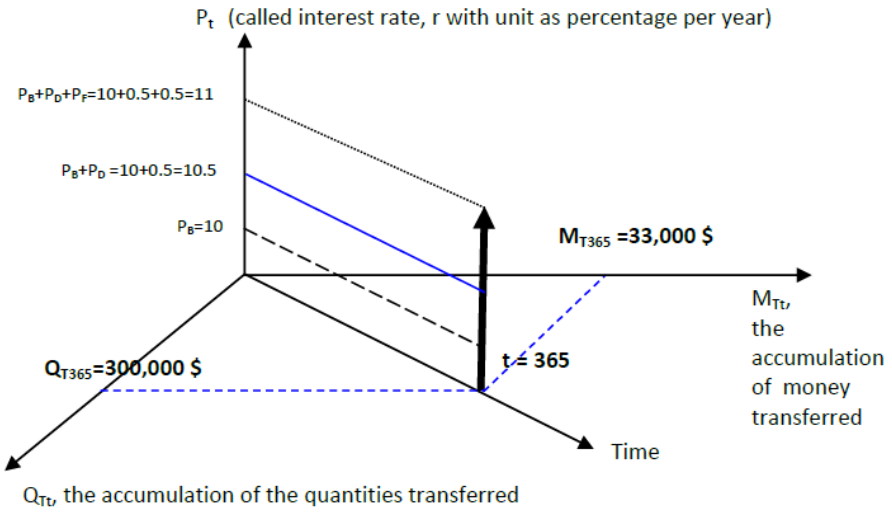


Fig 4. The average interest rate with the time of three borrowers.

1.4 The Average Profit with Time

Profit is data, one of the prices, that entrepreneurs tell themselves how much money their customers have to pay for the entrepreneur's time to produce a product (or a service). The average profit can be explained with the mathematical model with time as follows:

$$\text{profit}_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where "profit" represents profit per unit, the M_T represents the customer's money (or buyer's money) transferred to the entrepreneur with a total value called "accumulated values." The Q_T means the number of hours the entrepreneur works for their product (or sells goods to the buyers) with "accumulated values." Also, the subscript "t" represents a time value matching these three values.

For example, three entrepreneurs, C, B, and A, earn 360,000, 240,000, and 120,000 dollars annually, respectively. The total profit is 720,000 $ per year. See Figure 5 on the right axis M_{Tt}. The average profit per capita is 240,000 dollars per capita per year. See Figure 4 on the vertical axis P_t. They spent their working hours running their businesses. The time value, t, is one year. See Figure 5 on the left axis Q_{Tt}. As a result, the relationship among the four dimensions can be calculated as follows:

Table 4. The calculation to get the average profit with the time of three entrepreneurs

Entrepreneurs	Profit per year	Average profit per man per year
C	360,000$	Average of (P_A+P_B+P_C) = (P_A+P_B+P_C) /3
B	240,000$	= 240,000 $
A	120,000$	Average of (P_A+P_B) = (P_A+P_B)/2
	720,000$ = Average Profit = 240,000$ each	= 180,000 $
		P_A = 120,000 $

(1) P_A = 120,000 $ per man per year

(2) P_A+P_B = 360,000 $ per 2 men per year

= 180,000 $ per man per year

(3) P_A+P_B+P_C = 720,000 $ per 3 men per year

= 240,000 $ per man per year

(4) P_B = (2) - (1)

= 60,000 $ per man per year

(5) P_C = (4)-(2)

= 60,000 $ per man per year

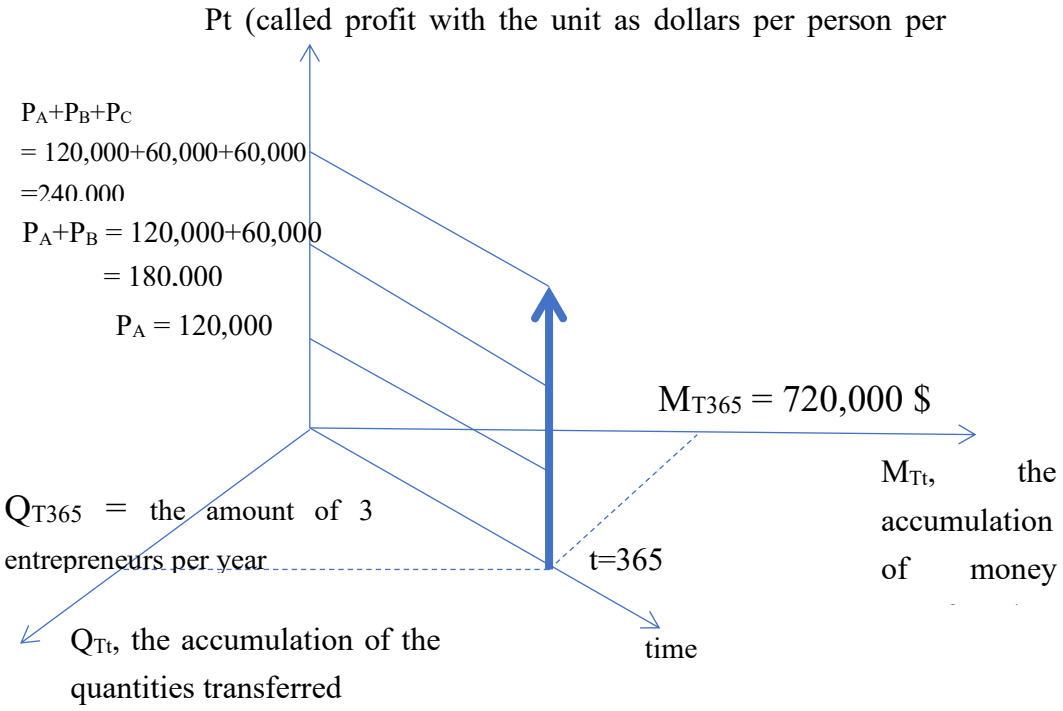


Fig 5. Average profit with the time of three entrepreneurs

1.5 The Average Tax with Time

There are many kinds of taxes in the real world, such as Advolatorem tax, specific tax, value-added tax, export tax, import tax, property tax, travelling tax, inheritance tax, estate taxes, gift taxes, property taxes, sales taxes, and payroll taxes or tariffs.

Tax is data, one of the prices, that government tells people called taxpayers how much money the people have to pay when buying goods and services in the country. The average tax can be explained with the mathematical model with time as follows:

$$tax_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where "tax" represents tax per unit, the M_T represents the people's money (or buyer's money) transferred to the government with a total value called "accumulated values." The Q_T represents the number of tax bases with time the people use the government's "services" (or transferred to the buyers) with "accumulated values." Also, the subscript "t" represents a time value matching these three values.

For example, at t = 365, people pay two kinds of taxes, a direct tax of 12% and an indirect tax of 10 %, to their government. The total money the government gets is 33 million dollars. The total tax base is 300 million dollars. The average tax rate is 11% of the tax base. See Figure 6.

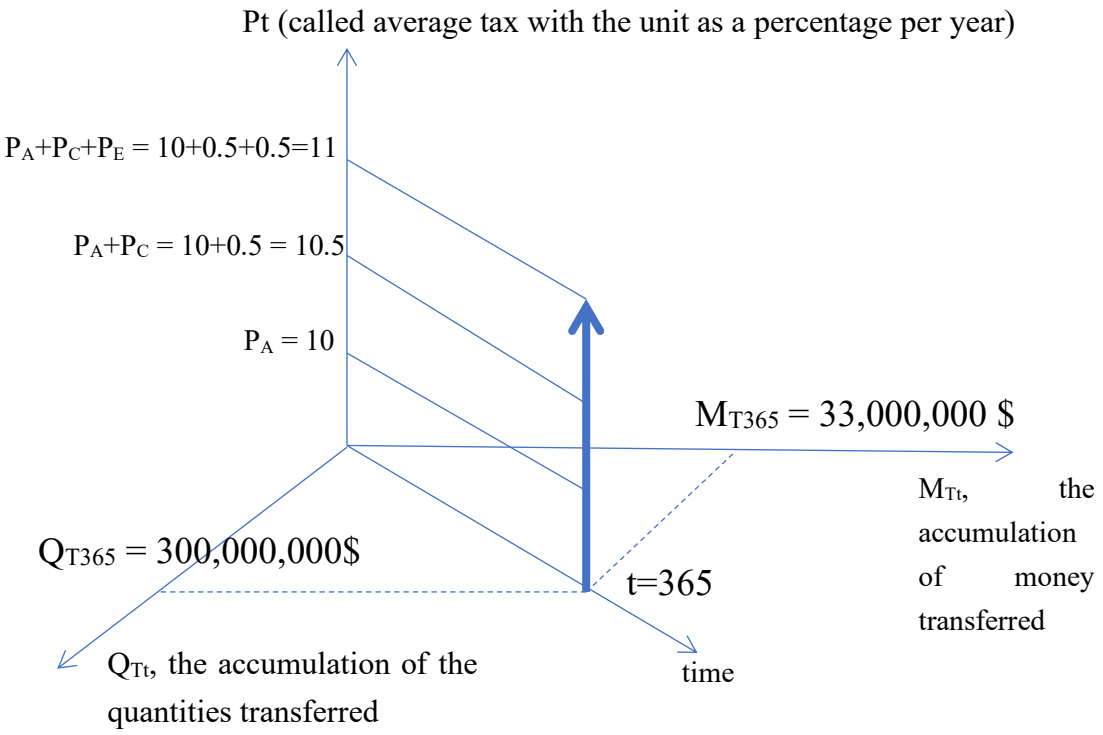


Fig 6. Average tax rate with time

Table 5. The calculation to get the average tax rate

People in a country	Tax bases per year	tax rate and money due to paying as tax	Average tax rate per man per year
$Taxpayers_{direct}$		12%	Average of $(P_{intax}+P_{ditax})$ = $(P_{intax}+P_{ditax})/2$ = 11% P_{1ntax} = 10%
$Taxpayers_{indirect}$		10%	
	300,000,000 $	Average tax rate = 11% =33,000,000$	

Besides, the model can explain many prices of other product parts, including costs of technology or innovation that mainstream-theoretical economists should have emphasized in their production theories.

1.6 The Average Price of Natural Resources with Time

Natural resources consist of two different kinds: (1) being controlled by the government and (2) being not controlled by the government, called "public goods." However, the new model can add other costs, such as energy, technology and innovation, as well as pollution and damaged natural resources into consideration.

For example, government policy about a country's natural resources is unique. If the government believes in the way of capitalism, the government will give the right of digging called "the concession," such as the concession of gold for the private sector. In the private sector, the concessionaire pays money, called a "concession", to get the right to dig legally in case of the government lacks money or technology. As a result, the average natural-resource price is one of the prices that civil officers or government tell concessionaires how much money the concessionaires must pay in case to get a concession. In other words, the average natural-resource price is data that a government tells people called concessionaires how much money the people have to pay when buying natural resources of people of the country. The average price of natural resources can be explained with the mathematical model with time as follows:

$$concession_t = f(M_{Tt}, Q_{Tt}) = \frac{M_{Tt}}{Q_{Tt}}$$

Where "concession" represents concession per unit, the M_T represents the concessionaire's money (or buyer's money) transferred to the government with a total value called "accumulated values." The Q_T represents the number of natural-resource quantities with the

concessionaire digging from the ground when the government's services are being done (or transferred to the buyers) with "accumulated values." Also, the subscript "t" represents a time value matching these three values.

Consumerism of neoclassical economics directly affects mass production that rapidly consumes enormous natural resources without thinking of the next generation. Capitalists focus on making profit maximization at low costs. Government policies control how to use natural resources. Corruption of government officers or politicians generally deteriorates the country's income, so the country's benefit will be channelled to government officers, politicians, and the private sector. The private sector offers the government two kinds of benefit rates: flat and progressive. With a flat rate, certain benefits will be offered to the government. See Figure 7. With a progressive rate, the private sector pays more money when increasing the selling prices, see Figure 8.

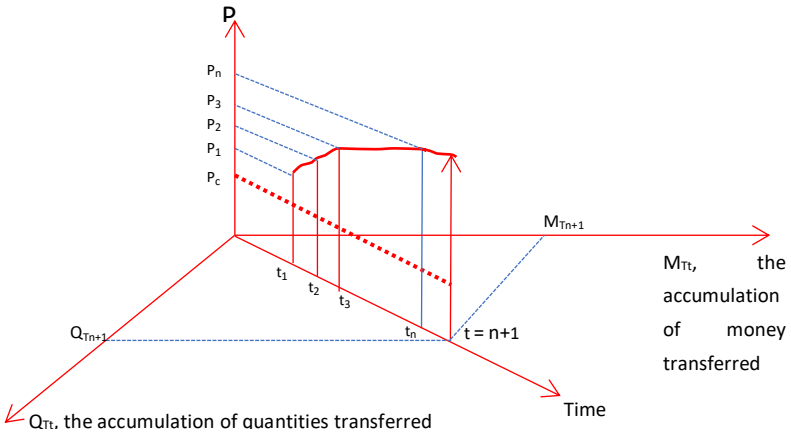


Fig 7. The constant price of concession, P_c, with different selling prices (P_1 to P_n) of the natural resource in an area

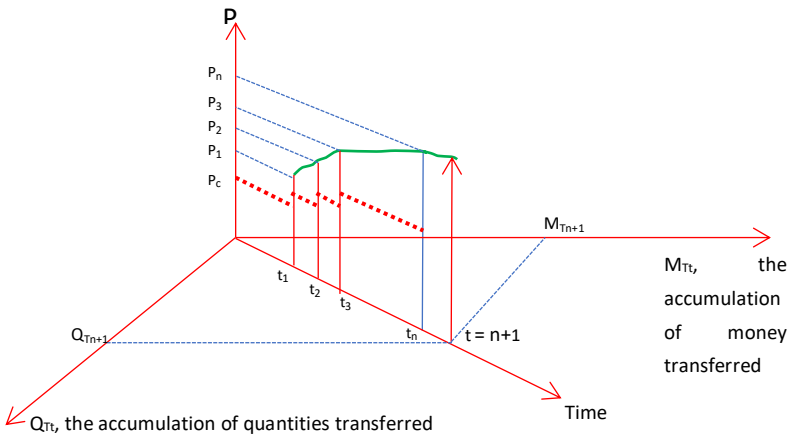


Fig 8. The increasing price of concession, P_c, with different selling prices (P_1 to P_n) of the natural resource.

The figures show four kinds of progressive rates that the private sector offers the countries. The rates are one of the firm's costs. Consequently, firms profit more if they sell the resources to their customers at higher prices.

Figure 8, during t_0 to t_1, the concessionaire will get profit with P_1-P_c. Similarly, during t_1 to t_2, and t_2 to t_3, the concessionaire will get profit with P_2-P_c, and P_3-P_c, respectively.

With a mixed economy system, the government may nominate an organization, or state enterprise, to work with the private sector. However, increasing costs, decreasing revenue, or cheating the organization's profit may deteriorate the country's benefits. Notably, corruption comes from a weak government system comprising dishonest people. For example, in 1988, after heavy rain in two provinces in Thailand, Nakornsritummaraj and Surajtani, a lot of legal and illegal logs with enormous mud killed 359 people. The country lost approximately 258 million dollars. People then asked the Thai government to stop giving "concession of logs" in all areas. This example indicates that concessionaires usually think of profit maximization without caring about public benefits.

Moreover, some natural resources called "public goods", like water in rivers, air, and soil, are damaged by dishonest investors who drain their waste into rivers, air, and soils. The people's tax has to be used to solve the pollution problems. As a result, the country loses natural resources and income because of weak government-controlling measures. Notably, keeping the country's natural resources without pollution for the next generation is one of the government's duties for all in every country.

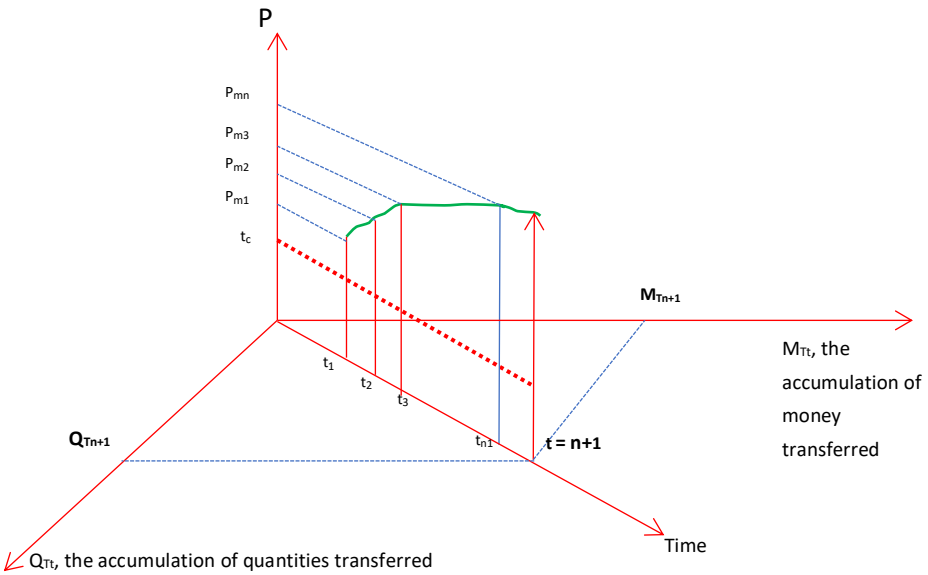


Fig 5.Constant rate of tax, t_c, with different prices (P_{m1} to P_{mn}) of machines the government paying for solving pollution in the area

In the figure, the government gets a small amount of constant tax from dishonest investors making some pollution (t_c). Still, it pays large taxes (P_{m1} to P_{mn}) to solve the pollution problems because of weak government control.

In capitalism, entrepreneurs are the crucial key of society in microeconomics to distribute their products to customers and money from selling to people concerning four factors: rent, wage, interest rate, and profit. Notably, the distribution of entrepreneurs' capital to use natural resources, energy, and technology should be considered seriously. In contrast, these factors and others, such as advertising, money transferring, marketing, and polluted or damaged natural resources, especially water, air, and soils, are explained in BE.

2. Production of BE at the Micro-level

2.1 "Unique" Mixed Economic System

Once, Buddha answered a king who questioned how to get wealth in society, and the king had to give rice seeds for people to produce their products. This doctrine indicated that increasing the economic growth rate of the society needs two kinds of "hands" working together: the private sector, which now are people who want to run businesses, and civil officers under policymakers' control which now are the government. BE is not the neoclassical mixed economic system, capitalism, or communism. As a result, the system may be called a "unique" mixed economic system."

The three main actors solving the economic problems of mainstream economic theory are as follows: (1) capitalism uses the private sector or entrepreneurs, (2) communism uses the government sector, and (3) a hybrid economic system uses both the private and government sectors. The difference between the mixed economic system of mainstream economics, ME, and BE is the status of the government. In ME, if the government sector runs businesses, the government will be the majority shareholder of companies. The objectives of running businesses consist of enormous profit and constructing infrastructure that gets break-even in the long term; no private sector wants to invest. However, in BE, the government sector will support people in solving financial problems.

For example, in Thailand, King Bhumibol the Great taught mountain people to grow many kinds of fruits that are suitable for each area, gave experts in many disciplines to work with people in the areas to solve economic problems together, contributed to the government to construct infrastructure for living and selling, such as hospitals and schools, supported transportation, including developed a marketing system for sellers to buy products in city markets.

The unique key to the king's development emphasizes the “special group” of people trying to increase their income. The phrase "blowing within" is a crucial key to solving problems.[12] Only people who want to eliminate their poverty cycle: low education, poverty, and illness, will be contributed first. Notably, people who realize the necessity of their making-money ways will be supported first. It looks like a rat lifestyle. If a rat does not want to eat, it will not try to find a way to get food. In other words, if a government spends expenditures to help people without their attempt. As a result, the development will not achieve because the people wish to keep their life the same, and people's taxes in the country will be recovered without any change.

2.2 The Optimum Production of BE: Self-reliance with Modern Development

The goal of people and a country in terms of production in BE is self-reliance, or Attahi Attanonato in Pali. This means that people and the country should produce enough to meet their own needs, so they do not have to rely on others. This is important because when people are dependent on others, they are more vulnerable to economic problems. For example, if the price of food rises, people who are dependent on others for food will suffer. However, if people are self-reliant, they will be able to weather the storm and continue to provide for themselves.

Attahi Attanonato is a important concept that can help people and countries to be more resilient in the face of economic challenges. For example, in Thailand, King Bhumibol Adulyadej, also known as Rama IX, promoted self-sufficiency among farmers. He encouraged them to produce their own food and shelter, so they would be less affected by fluctuations in the market price of food and other necessities. This strategy helped farmers to maintain a low cost of living and to be more resilient to economic shocks. In addition to growing food, farmers also planted trees in forests to provide them with additional benefits. These trees provided them with building materials, firewood, and income. They also helped to improve the environment by providing shade and reducing erosion.

At the national level, Thailand also focused on producing its own necessities, such as food, clothing, shelter, and medicine. This helped to ensure that the country would be self-sufficient in the event of a natural disaster or other emergency.

In addition, the king taught them a new agricultural method called the New Theory, which involved dividing their land into four parts: 30% for rice, 30% for vegetables and fruits, 30% for

[12] The Chaipattana Foundation, *Philosophy of Sufficiency Economy*, Accessed April 1, 2023, https://www.chaipat.or.th/eng/concepts-theories/sufficiency-economy-new-theory.html.

fish and chickens, and 10% for a house. This diversification system helped farmers to reduce their dependence on others and to live with lower living costs. If they produced more than they needed, they could sell or give the excess to their neighbors. This helped to create a more self-sufficient community.

At the macro level, governments can also support farmers to achieve self-sufficiency in food production. For example, the government of Saudi Arabia provides farmers with zero-interest loans and access to new technology. This has helped to increase agricultural production in the country, making it less reliant on imports. China has also invested heavily in agricultural development, using desert land to grow crops. This has increased the country's food security and provided jobs for millions of people. Russia has also supported agricultural production, providing farmers with subsidies and tax breaks. This has helped to make the country more self-sufficient in food production, which has been a major advantage during the recent economic sanctions imposed by the United States and European Union.

In BE, production is not primitive. It needs to be based on sound economic principles. The lack of fundamental knowledge about production can lead to a "modern without development, or MOD" problem, where countries have modern technology but are not able to develop their economies. In ME, exporters and economists from exporting countries try to persuade people in importing countries to buy their goods and services. For example, in Thailand, farmers must pay enormous amounts of money to purchase expensive products, such as machines, tools, instruments, equipment, weapons, and natural resources to develop their production ability in the short and long run. Although technology from abroad may help people to produce their products faster, people still have high costs and low profits and need to depend on technology from abroad eternally. If the exporting countries do not sell their products because of political policies, people in Thailand will face problems with production immediately as well.

The leading countries, such as the United States, Great Britain, Germany, and Japan, had their technology roots before they reached higher levels of technology. They avoided to sell the best technology to buyers in other countries, as well as buy raw materials and sell expensive final products. Mainstream economists argue that international trade can help importing countries acquire technology from exporting countries. However, the reality is that exporting countries are more likely to transfer maintenance technology rather than the technology needed to produce goods. With the root of technology, such as cutting solid lasers, making high-end cars, planes, and submarines, and making high-end jet engines, importing countries can reach the status of self-reliance.

In contrast, if a country can develop economic growth that is "modern with development" (MWD), society will reap the benefits in the long run. The N lines of production represent the N dimensions of time. According to the law of time, different time directions have different time values (and characteristics or details). For example, a fish on a plate on a table involves hundreds of businesses and people in the supply chain. In conclusion, more than a thousand businesses were created to support the fish from its source to the buyer's hands. In the long run, producers who can produce a bicycle wheel will also be involved in the production of many other products that use wheels, such as motorcycles and large vehicles.

For example, the production of a harvesting machine, which requires 100 parts, will stimulate the growth of 101 industries. If the government first develops agricultural machinery using low technology, it can then develop middle and high technology in the following steps. The government of countries with modern without development (MOD) can change to those with modern with development (MWD) in many ways to stimulate their substantial power of production. These ways include asking for help from excellent friends to transfer technology of production, supporting co-working groups of production to produce a new product, linking many cooperatives together, and constructing internet infrastructure and markets for farmers to sell their products to others.

In BE, the government should support the development of systems that allow people to invent their own technology at low cost. This would lead to higher yields of agricultural products, which would in turn make people more prosperous and generate more tax revenue for the government. In the long run, this would lead to a significant increase in government income from taxes on a variety of industries.

In addition, if importing countries can develop their own production capabilities, they will be able to produce goods at lower prices. This would increase people's opportunities to make money from the careers they want, which is one of the main drivers of economic growth.

To help people become more prosperous, the government should also work to reduce the cost of four essential necessities of life: food, clothing, housing, and healthcare. This would immediately make people more affluent and reduce the burden on the government to provide these services. In addition, it would create hundreds of new industries related to these sectors.

In short, by giving people what they want, the government will get what it wants. By supporting the development of new technologies and reducing the cost of living, the government can create a more prosperous and equitable society for all.

Capitalism and BE differ in the beneficiaries. Capitalism is created for capitalists, while BE is created for everyone, including the government. In ME, only a small number of people benefit significantly from economic development. Some wealthy people try to avoid paying taxes. In contrast, a large group of people will benefit from BE. Many people will be able to accumulate wealth by increasing their earning opportunities with the government's support. The government is constructing many "channels" for each person to reach the "economic river." These channels are supporting systems that help people make money. These supporting systems include education, business opportunities, seeds for cultivation, business technologies, and interest-free loans. For example, the government can reduce the cost of living, especially for four necessities: food, clothing, housing, and healthcare. The government can also control the quality of food ingredients, the prices of clothing, the interest rates on home loans, the prices of healthcare, and the cost of infrastructure for businesses. Ultimately, the nation's wealth will be created by teaching people how to fish, not by giving them fish. Finally, all members of society will become money-making machines and will not be a burden on the country or the government because they can find their four necessities through their own efforts.

In BE, the government should focus on two directions to create good people in society: (1) increasing the number of people who are grateful for the benefits they receive and reciprocate them, known in Pali as "Katannåkataveditã" and (2) increasing the number of people who live without the six vices and practice the five moralities of humans, known in Pali as "Kusalakammapatha." It is important to develop people's minds as well as their material well-being, as materialism without morality will lead to social problems in the long run.

2.3 Increasing Productivity of Human Resources

Reducing business costs and increasing revenues to get more profits are critical factors of business achievement. However, beyond the principle, the high performance of human resources in the firms is the real key. Meditation can increase the ability to work with people in all positions to get higher potential compared to the typical work style[13]. Some people who can benefit from meditation will produce advanced products that people have never done before. For example, Dr

[13] Laurent Valosek, "Effect of Meditation on Emotional Intelligence and Perceived Stress in the Workplace: A Randomized Controlled Study," *The Permanente Journal* 22 (2018): 172.

Aj-ong Chumsai Na Ayudhya, a NASA scientist and Thai engineer, designed the first Hovercraft while studying in the second year of his bachelor's degree at the University of Cambridge. With this project, he got a master's degree in engineering. After studying for one year in the PhD program, he completed the program by doing a thesis on the expansion of microwaves. After participating in NASA's Viking Space Project, he designed the subsystem of the automatic landing device on Mars. This activity made them get very high revenue and become a new millionaire in Thailand.

Research has shown that meditation can improve brain function and cognitive abilities. For example, meditation increased the thickness of the hippocampus, a region of the brain involved in learning and memory[14]. Meditation improved the ability to focus and sustain attention[15]. These improvements in brain function can lead to improvements in human-working ability. For example, meditation improved the performance of workers on a task that required sustained attention[16]. Also, meditation improved the performance of athletes on a variety of tasks[17].

Before getting a one-pointedness mind, practitioners need to know two serious aspects: (1) obstacle factors and (2) contributing factors. The obstacle that makes people not get a one-pointedness mind is called "five hindrances."[18] For example, passionate practitioners could not get a one-pointedness mind because of their passion. The practitioners need to control their minds in ordinary and happiness, such as their happiness during sitting at a beach in case of the sitting is their love. Passion comes from their minds, full of greed and evil deeds. We can see the characteristics of minds when getting a one-pointedness mind in Table 6.

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[14] Leonid Aftanas and Sergey Golosheykin, "Impact of Regular Meditation Practice on EEG Activity at Rest and During Evoked Negative Emotions," *Neuroscience Letters* 486 (2011): 141-145.

[15] Bruno Khoury, Sanjay Sharma, and Sameer Singh, "Meditation and Plasticity of the Brain: A Review of Neuroscientific Evidence," *Frontiers in Human Neuroscience* 7 (2013): 346.

[16] Jonathan D. Way, Barbara M. Kritzman, and Eric K. Lindsay, "Mindfulness Meditation Improves Working Memory Capacity and GRE Performance," *Psychological Science* 25 (2014): 1332-1338.

[17] Eric L. Garland, Sarah A. Gaylord, and Steven A. Howard, "The effects of Mindfulness-Based Meditation on Sports Performance: A Meta-Analysis," *Perspectives on Psychological Science* 10 (2015): 716-731.

[18] Phrabrahmakunaporn (Phrayudh Payutto), *Hindrances*, Accessed May 2, 2023, https://84000.org/tipitaka/dic/d_item.php?i=225.

Table 6. Factors to getting one-pointedness minds of practitioners.

	To get a one-pointedness minds	
	obstacles	contributing
1	sensual desire (or passionate feeling through six "touching" ways):	Relax and ordinary-mind setting with
1.1	see with eyes,	Mindfulness when seeing
1.2	hear with ears,	Mindfulness when hearing
1.3	smell with nose	Mindfulness when smelling
1.4	taste with tongue	Mindfulness when tasting
1.5	touch with body	Mindfulness when touching
1.6	feel with emotion (or minds)	Mindfulness when felling
2	Ill will (or Hatred)	Mercy
3	sloth and torpor (or Sleepy)	Alert
4	distraction and remorse; flurry and worry; anxiety (or ridiculous minds)	Stay with present
5	doubt; uncertainty	Get rid of the doubt

2.4 Weapon Production for Self-defense

Buddha said that the weaker almost always were invaded by the stronger[19] (Saengthongdee, 2018). The stronger tried to get properties that were not their belongings. Many wars in many countries in the past are well-known evidence. With mercantilism, European countries in the past tried to increase wealth by searching for colonies worldwide. After the people of the colonies surrendered, the colonies' wealth, such as money, gold, and natural resources, was transferred to European nations. Notably, one of the self-defence ways is through the production of weapons. The objective of the weapon trade of capitalists is money and profit from the war, but that of BE is survival from enemies.

In the era of mercantilism, Great Britain and France invaded many "lands of many people" to conquer the lands as their colonies, such as the USA, India, Mynmar and China. The invasion was completed because of advanced weapons and military strategies. The invaders could not reach the goal if people in the lands had better war facilities.

The relationship between weak invaded countries and invading countries has been a complex one throughout history. Invading countries have often been motivated by a desire for

[19] Tatchakorn Saengthongdee, "Buddhist Leadership Features," *The Journal of Research and Academics* 1 (2018): 138.

resources, territory, or power. Weak invaded countries have often been unable to defend themselves against these invasions, leading to their conquest and occupation.

There are a number of factors that can contribute to the weakness of an invaded country. These include:

- Geography[20]: A country located in a strategic location or with valuable resources may be more likely to be invaded. For example, countries with access to waterways or oil reserves are often targeted by invaders.
- Government[21]: A weak or unstable government may be unable to protect its citizens from invasion. This is because a weak government may not have the resources or the will to fight back against an invading force.
- Military[22]: A country with a weak military may be unable to defend itself against an invading force. This is because a weak military may not have the weapons or the training to fight back against an invading force.

The consequences of invasion can be devastating for the invaded country. These consequences can include:

- Loss of life: Invasions often lead to the death of civilians and soldiers. This is because invaders often use force to achieve their objectives, which can lead to widespread death and destruction.
- Economic damage: Invasions can damage a country's infrastructure and economy. This is because invaders often target infrastructure such as roads, bridges, and power plants. They may also loot businesses and homes, which can lead to economic chaos.
- Political instability: Invasions can lead to political instability and unrest. This is because invasions can often lead to the overthrow of the government or the rise of a new government that is not legitimate. This can lead to civil war or other forms of instability.

In addition to these factors, invasions can also have a lasting impact on the invaded country's culture and society. For example, invasions can lead to the destruction of libraries,

[20] Robert Kaplan, *The Geography of War*, (New York: Random House, 2005).
[21] John Mearsheimer, *The Causes of War*, (New York: Columbia University Press, 2001).
[22] Charles Tilly, *The Weakness of Nations*, (New York: Oxford University Press, 1992).

museums, and other cultural institutions. This can deprive the country of its cultural heritage and make it difficult to rebuild after the invasion. Invasions can also lead to the displacement of people and the breakdown of traditional social structures. This can have a profound impact on the fabric of society and make it difficult for the country to recover from the invasion.

2.5 Ratio of Investment Compared to Individual Income

The ratio of individual investment to net income should be 25% for consumption, 25% for an emergency, and 50% for investment.[23] Notably, in BE, people should refrain from borrowing capital to invest from bankers. If beginning to invest, we should save first and use the saving for investment next. Investors who want vast amounts of money from investments can solve the problem by using a good relationship with real friends, such as formal or informal cooperation (this topic will be discussed in the other paper because of many details).

In comparison between ME and BE concerning a loan, the mainstream economists of ME indicate that producers' costs consist of wage, rent, investment rate, and profit. Employers pay wages for employees, renters pay rent for landlords, borrowers pay interest rates for bankers, and entrepreneurs pay (or get) profit for themselves. One of the significant obstacles for people who want to be new investors is how to get the first amount of money to invest. In ME, the investors must begin their businesses with debts. Buddha said that debt makes people suffer. When people begin businesses with debts, they face many problems: cash flow, customers, interest rates, and loans. If they can solve these fundamental problems of running businesses, they may retain the whole saving money and their properties, which are used to guarantee their loans. In contrast, money owners of informal loans, including bankers of traditional loans, will be wealthier when the borrowers fail their businesses.

Notably, the loan of people in ME makes capitalists wealthier because of the interest rate. Suppose money owners charge borrowers a high-interest rate without government control. In that case, many people begin their businesses with debt, easily face financial problems, and lose the properties used to guarantee the loans. In contrast, if the government wants people to get wealthier quickly, it should help people reduce their interest rates and technology burdens. For example, Mohammad bin Salman bin Abdulaziz Al Saud or MBS of Saudi Arabia, gave loans without interest rates for their people to run agricultural businesses. President Putin supported agriculture

[23] Phrabrahmakunaporn (Phrayudh Payutto), *Fourfold Division of Money*, Accessed March 2, 2023, https://84000.org/tipitaka/dic/d_item.php?i=163.

to grow food for their country. In Thailand, groups of people created systems for increasing income for society and gave loans with the low-interest rates to members.

3. Production with "Harmful" Business in BE on Micro-level

3.1 Investment with Harmful Businesses

Buddha taught five productions people should not run enterprises: weapons, animals, meat, liquors, and poisons. These businesses not only benefit capitalists and societies but also increase some problems for people in global villages. For example, while weapon businesses make capitalists rich, people face unsafe life. Some people who conflict with others can use weapons to attack their enemies. The violence between individuals, societies, or countries increases because of weapons. The other example, people staying in a dire economic situation, such as unemployment, may steal things for a living. The stealing may change to robbing, which changes problems from complicated to crime.

There are two kinds of animals concerning people: wild animals and fed animals for human food. Many businesses stimulate some people trying to get rich by selling part of animals. For example, ivory enables outlaw hunters to kill many elephants, which causes ecosystem problems. Today, some stolen-organ crimes occur in many countries, which increases economic and social issues in society. Usually, many animals have diseases. Decreasing meat consumption will decrease the chance of getting sick because of eating wild-animal meat. Meat consumption makes the human body more acidic, so avoiding meat consumption in habits will reduce opportunities to get sick.

Liquors make capitalists rich but create new social problems for all people who pay taxes in a country to solve the issues. While the capitalists are counting money from the liquor businesses, the government is spending expenditures to solve problems involving liquors, such as healing drinkers or losing because of car accidents. Many other social problems increased after people drank liquor, such as killing, cheating, misconducting sexual, and quarrelling. Suppose the government can decrease the budget for cops to solve those social problems. In that case, the government will use the expenditure for other directions, such as education, internal management, infrastructure, and the military for self-defence.

Poison businesses concerning insecticides make capitalists rich, but social problems happen. The government has to use people's taxes to solve the issues again. For example, the health of farmers who use the insecticide for a long time will weaken, and they will go to government hospitals. Besides, the farmers will lose their savings to heal their health problems.

Neoclassical economists have never explained and considered the black sides of these toxic businesses. Investment can inject national income, but some government expenditure for solving many social problems makes capitalists wealthier but more problems to the society again.

4. Production with the Carefulness of BE at the Macro-level

In humankind's history concerning a king, when many people lived together, they wanted to ensure the safety of their belongings and life, so they elected someone called "leader or chief" to protect the things they loved. The people paid some of the properties for the leader and the leader's team to fight the people's enemy who wanted to invade their lands or get valuable things.

Notably, two groups of people had their duties: (1) the people who wanted to protect their life and belongings had to pay their money to the leader and the leader's team, and (2) the leader and leader's team had to protect people's life and belongings. As time passed, monarchy changed to democracy; many politicians lied to people for their election to be leaders controlling countries. After getting elected politicians, they did not keep their promise to help people. Some leaders thought they had the right to govern people and got people's money called taxes, without doing anything for them. Some took care of their people with meritorious action, which people got happiness and safety in their lives and belongings.

In contrast, some politicians did unmeritorious deeds that made their people suffer and feel unsafe in their lives and belongings by warring with neighborhood countries. If the leaders got high-tax rates or forced people to fight with others who did not invade the country, the leaders were doing unmeritorious actions because the leaders did not make peace and happiness for people. Also, if the leaders, as dictators, made people suffer because of losing their safety of life and belongings, they might be overthrown by their people.

The government should treat different kinds of people in a country in suitable ways as follows:

4.1 For the country's strength concerning soldiers, the government should give enough income for soldiers' loyalty because the soldiers are the first group of people in the country who must fight against an enemy.

4.2 For the country's strength involving soldier welfare, the government should give well-being to soldiers and troops.

4.3 For the country's strength concerning excellent civil officers, the government should promote good officers who serve people well, called in Pali "Purismeta."

4.4 For the country's strength involving wrong members, the government is supposed to punish bad politicians and officers who corrupt people's money.

4.5 For the country's strength, the government is supposed to unite people by being a bond to bind men's hearts and give necessities to people experiencing poverty.

4.6 For the country's strength involving neighbourhoods, the government is supposed to protect the diplomats of friends' countries. Besides, the government is supposed to help other countries' citizens be healthy and wealthy to continue the wonderful friendship.

4.7 To the country's strength involving people in a boundary area, the government is supposed to help people in the boundary area to have good living such as schools, hospitals, and fast communication. The government must take care of this group of people well because they are the first group that the country's enemy will invade.

4.8 For the country's strength concerning cultivation, the government is supposed to solve problems concerning people's cultivation, such as soils, water, seeds, types of plants, knowledge of cultivation, forests, and mountains, for farmers to get good results of their products, these called "Sassameta." All societies must base on a robust agricultural sector because people must have food. Besides, the government needs to solve problems about the other three necessities for a living: clothes, housing, and medicine.

4.9 For the country's strength concerning people's food, the government should develop good genes for animals living on the ground, in the sky, and in water; good genes for people's food. The government is supposed to increase the area of forests for wild animals and the area of shore and underwater forests for fish in the sea.

4.10 For the country's strength concerning the environment, the government is supposed to protect wild animals from being not extinct and balance the ecosystem.

4.11 For the country's strength concerning education, the government is supposed to increase gurus and experts by developing education, which is one of the most critical factors of production. Because of these three kinds of education: (4.11.1) formal, (4.11.2) informal, and (4.11.3) non-formal, the government is supposed to create educational systems for people to be able to study for life-long learning.

4.12 To the country's strength concerning people's income, the government should support people to get jobs they want, such as helping them run their businesses or reach money for their commercial investment called in Pali "Summapasa."

4.13 To the country's strength concerning agricultural sectors, the government should increase people's production and marketing abilities, such as supporting farmers with machines, equipment, or tools and rewarding civil officers who serve citizens well. The government is supposed to develop technology based on the agricultural sector and energy to strengthen the root

of technology. Also, the government is supposed to create technology based on its resources, such as industry, communication, and transportation.

4.14 For the country's strength concerning people's minds, the government should support people who work with meritorious actions and protect them from bad people who work with unmeritorious effort. Notably, the government and people's honesty are two crucial aspects that mainstream economists have never considered. If corruption occurs, it will decrease the development speed. In contrast, if the government develops the economy by focusing on the quality of people's minds; as a result, many economic problems will be decreased in short and the long run because people are three economic actors: government, the private sector, and households[24].

5. Export of BE

The products that private and government sectors send to sell in international markets can have positive and harmful effects. In other words, the products will produce positive and negative consequences for the global village. For example, producing and trading weapons will make people fight with each other with weapons. The exporting capitalists will receive enormous amounts of money in the short run. However, many social and economic problems will happen in importing countries, making people poor and losing many abilities to make money in the long run.

Because weapons will not be sold if each country has a good relationship with neighbourhoods, hence, to increase export volumes, the capitalists must support conflict aspects between the two groups of people in a country or in different contries. Also, capitalists will benefit enormously in the long run if they have products sold in monopoly markets, such as special seeds of plants. Notably, in ME theory, the capitalists' income of the exporting countries does not affect selling volumes in international markets[25]. However, in the real-world market, the exporting countries, which have a large amount of money for advertising, will increase their selling volumes by using famous persons to promote their products or political and commercial strategies to increase their sales in the importing country.

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[24] Phrabrahmakunaporn (Phrayudh Payutto), *Duties of a Universal King or a Great Ruler*, Accessed March 2, 2023, https://84000.org/tipitaka/dic/d_item.php?i=339.

[25] Economics, *Explaining the Effect of Changes in National Income on Trade*, Accessed June 24, 2023, https://www.learn-economics.co.uk/Using-the-cross-diagram.ht.

6. National Income of BE Compared to ME

In BE, investment or production consists of positive and negative directions. The positive direction makes people wealthy, but the negative one makes people lose money. We can explain the two-direction results in mathematical forms. In ME, the values of economic activities on consumption expenditure C, investment expenditure I, and government expenditure G were calculated without considering the positive or the negative directions. In other words, in the view of BE, mainstream economists calculate negative-investment results with positive values using an absolute value.

The table indicated that neoclassical economists consider unmeritorious economic activities as absolute values for all adverse effects. Hence, the economists could not see the different results between the positive and the negative consequence of economic activities on their national income. Three extreme cases of other total effects can be revealed as follows:

In the first example, suppose a country has two kinds of economic activity values consisting of negative and positive with the same numbers; as a result, the national income in ME will double, but in BE is zero. In a country where NI is zero, in BE's view, the country gets "illusional development." Many social problems happen and make people suffer with modern infrastructure. The gross happiness index, GHI, is harmful or zero. See Table 7.

Table 7: The comparison of NI between NE and BE that consists of positive and negative values

Economy activities			National income in BE	vs	National income in ME
Consumption of households **(C^+)**	**C^+**	=	**C^+**		**C^+**
		=	10,000,000		10,000,000
consumption of households **(C^-)**	**C^-**	=	**C^-**		**$\|C^-\|$**
		=	-10,000,000		$\|-10{,}000{,}000\|$
	Net C	=	**0**		**20,000,000**
consumption of government **(G^+c)**	**G^+_C**	=	**G^+_C**		**G^+_C**
		=	100,000,000		100,000,000
consumption of government **(G^-c)**	**G^-_C**	=	**G^-_C**		**$\|G^-_C\|$**
		=	-100,000,000		$\|-10{,}000{,}000\|$
	Net G_C	=	**0**		**200,000,000**
investment of government **(G_I)**	**G^+_I**	=	**G^+_I**		**G^+_I**
		=	1,000,000,000		1,000,000,000
investment of government **(G^-_I)**	**G^-_I**	=	**G^-_I**		**$\|G^-_I\|$**
		=	-1,000,000,000		$\|-1{,}000{,}000{,}000\|$
	Net G_I		**0**		**2,000,000,000**

investment of private sector **(I^+)**	**I^+**	=	**I^+**		**I^+**
		=	310,000,000		310,000,000
investment of private sector **(I^-)**	**I^-**	=	**I^-**		**$\|I^-\|$**
		=	-310,000,000		$\|-310,000,000\|$
	Net I		**0**		**620,000,000**
total	**Net All**	=	**0**		**2,820,000,000**

Second, suppose a country has all harmful economic activities without positive values. In that case, the national income of ME still is high, but that in BE will be negative; the country gets "pseudo civilization," which shows many social problems causing people high suffering. The GHI is negative. See Table 8.

Table 8. The comparison of NI between NE and BE that consists of only negative values

Economy activities			**National income in BE**	**vs**	**National income in ME**
consumption of households **(C^+)**	**C^+**		**C^+**		**C^+**
			0		0
consumption of households **(C^-)**	**C^-**	=	**C^-**		**$\|C^-\|$**
		=	-20,000,000		$\|-20,000,000\|$
	Net C	=	**-20,000,000**		**20,000,000**
consumption of government **(G^+c)**	**G^+_C**		**G^+_C**		**G^+_C**
			0		0
consumption of government **(G^-c)**	**G^-_C**	=	**G^-_C**		**$\|G^-_C\|$**
		=	-200,000,000		$\|-200,000,000\|$
	Net G_C	=	-200,000,000		**200,000,000**
investment of government **(G^+_I)**	**G^+_I**		**G^+_I**		**G^+_I**
			0		**0**
investment of government **(G^-_I)**	**G^-_I**	=	**G^-_I**		**G^-_I**
		=	-2,000,000,000		$\|-2,000,000,000\|$
	Net G_I		-2,000,000,000		**2,000,000,000**
investment of private sector **(I^+)**	**I^+**	=	**I^+**		**I^-**
		=	**0**		0
investment of private sector **(I^-)**	**I^-**	=	**I^-**		**$\|I^-\|$**
		=	-600,000,000		$\|-600,000,000\|$
	Net I		**-600,000,000**		**600,000,000**
total	**All**	=	**-2,820,000,000**		**2,820,000,000**

Third, if a country has positive-economic-activity values without negative values. As a result, the country gets a "smile civilization." In the view of ME, the country's national income will be the same value as BE, which means many social problems that make people suffer zero. The GHI is positive. See Table 9.

Table 9. Comparison of NI between NE and BE that consists of only positive values

Economy activities			National income in BE	vs	National income in ME
consumption of households (C^+)	C^+		C^+		C^+
			20,000,000		20,000,000
consumption of households (C^-)	C^-	=	C^-		C^-
		=	**0**		0
	Net C	=	**20,000,000**		**20,000,000**
consumption of government (G^+c)	G^+_C		G^+_C		G^+_C
			200,000,000		200,000,000
consumption of government (G^-c)	G^-_C	=	G^-_C		$\lvert G^-_C \rvert$
		=	**0**		0
	Net G_C	=	**200,000,000**		**200,000,000**
investment of government (G^+_I)	G^+_I		G^+_I		G^+_I
			2,000,000,000		2,000,000,000
investment of government (G^-_I)	G^-_I	=	G^-_I		G^-_I
		=	**0**		0
	Net G_I		**2,000,000,000**		**2,000,000,000**
investment of private sector (I^+)	I^+	=	I^+		I^+
		=	600,000,000		600,000,000
investment of private sector (I^-)	I^-	=	I^-		$\lvert I^- \rvert$
		=	**0**		0
	Net I		**600,000,000**		**600,000,000**
	Net ALL		**2,820,000,000**		**2,820,000,000**

In ME, the country with a high national income may have all negative economic values; as a result, a "prosperous country" may simultaneously have significant social and economic problems. Mainstream economists have never considered the negative results of economic activities. Notably, the negative values of BE compared to ME are transformed from negative into positive with absolute values.

The Change in Investment

Mainstream economists believe that a change in investment always leads to an increase in national income equilibrium, which is revealed by a factor called the multiplier. The investment multiplier is a concept in macroeconomics that describes how an increase in investment spending can lead to a multiplied increase in national income. The multiplier is calculated as the ratio of the change in national income to the initial change in investment spending:

Ki = (Y2 - Y1) / (I2 - I1)
where:

- Ki is the investment multiplier
- Y2 is the national income at time t2
- Y1 is the national income at time t1
- I2 is the investment expenditure at time t2
- I1 is the investment expenditure at time t1

In this formula, t2 is greater than t1, which means that the change in national income and investment expenditure is taking place over time.

The investment multiplier works because when businesses invest in new capital goods, they create jobs for workers to produce those goods. The workers then use their wages to buy goods and services, which creates more jobs and income. This process continues, with each round of spending creating more income and jobs than the previous round.

The size of the investment multiplier depends on the marginal propensity to consume (MPC). The MPC is the fraction of additional income that a household consumes. The higher the MPC, the greater the investment multiplier will be. This is because a higher MPC means that households will spend more of their additional income, which will create more jobs and income.

For example, if the marginal propensity to consume (MPC) is 0.8, then the investment multiplier would be 5. This means that an increase in investment spending of $100 million would lead to an increase in national income of $500 million.

In other words, if the investment multiplier (Ki) is 5, the change in investment spending (I2 - I1) is $100 million, and the national income at time t1 (Y1) is $10,000 million, then the national income at time t2 (Y2) can be calculated as follows:

Y2 = Y1 + Ki * (I2 - I1) = 10,000 million + 5 * 100 million = 10,500 million

The smaller the marginal propensity to save (MPS), the greater the investment multiplier will be. This is because a lower MPS means that households will save less of their additional income, which will also create more jobs and income. For example, if the MPS is 0.2, then the investment multiplier would also be 5.

The investment multiplier can be used to assess the impact of government policies that affect investment, such as tax breaks for businesses or infrastructure spending. It can also be used to forecast the economic impact of major investment projects in the view of mainstream economists.

However, BE concludes that there are three possible results of investment.

- Case 1: If the positive and negative values of investment are equal in volume, the new economic result will be zero. The national income for the previous year and the present will be the same, or the society will not get "real wealth." See Equation 1 below.

$$Y2 - Y1 = 0$$

- Case 2: If the investment with a positive value is more significant than the negative one, the national income of the previous year will be smaller than the present. Society will get higher real wealth. See Equation 2 below.

$$Y2 - Y1 > 0$$

- Case 3: In contrast, if the investment with the negative value is more significant than the positive, the national income at present will be smaller than the previous year. Society will get lower real wealth. See Equation 3 below.

$$Y2 - Y1 < 0$$

The mathematical forms of the three cases can be revealed as follows:

(1) If $I^{+}_{t+1} = I^{-}_{t+1}$, then $I^{+}_{t+1} + I^{-}_{t+1} = 0_{t+1}$; as a result, $Y_t + 0_{t+1} = Y_{t+1}$ with assuming investment multiplier as one. With Equation 1, if the positive investment in the current year (I^{+}_{t+1}) is equal to the negative investment in the current year (I^{-}_{t+1}), then the net investment will be zero in the current year (0_{t+1}). This means that there will be no change in the national income in the current year (Y_{t+1}). For example, $I^{+}_{2023} = 20_{2023}$, $I^{-}_{2023} = 20_{2023}$, then $I^{+}_{2023} + I^{-}_{2023} = 20_{2023} + (-20_{2023}) = 0_{2023}$. Suppose $Y_{2022} = 1,000_{2022}$, then $1,000_{2022} + 0_{2023} = 1,000_{2023}$ or $Y_{2022} = Y_{2023}$.

(2) If $I^{+}_{t+1} > I^{-}_{t+1}$, then $I^{+}_{t+1} + I^{-}_{t+1} > 0_{t+1}$; as a result, Y_t + net $I_{t+1} > Y_t$ and $Y_{t+1} > Y_t$ with assuming investment multiplier as one. With Equation 2, if the positive investment in the current year (I^{+}_{t+1}) is more significant than the negative one in the current year (I^{-}_{t+1}), then the net investment will be bigger than zero in the current year ($> 0_{t+1}$). This means that there will be increasing change in the national income in the current year (Y_{t+1}). For example, $I^{+}_{2023} = 25_{2023}$, I^{-}

$_{2023}$ = 20_{2023}, then $I^{+}_{2023} + I^{-}_{2023} = 25_{2023} + (-20_{2023}) = 5_{2023}$. Suppose $Y_{2022} = 1{,}000_{2022}$, then $1{,}000_{2022} + 5_{2023} = 1{,}005_{2023}$ or $Y_{2023} > Y_{2022}$.

(3) If $I^{+}_{t+1} < I^{-}_{t+1}$, then $I^{+}_{t+1} + I^{-}_{t+1} < 0_{t+1}$; as a result, Y_t + net $I_{t+1} < Y_t$ and $Y_{t+1} < Y_t$ with assuming investment multiplier as one. With Equation 3, if the positive investment in the current year (I^{+}_{t+1}) is less than the negative one in the current year (I^{-}_{t+1}), then the net investment will be less than zero in the current year ($< 0_{t+1}$). This means that there will be decreasing change in the national income in the current year (Y_{t+1}). For example, $I^{+}_{2023} = 20$, $I^{-}_{2023} = 25$, then $I^{+}_{2023} + I^{-}_{2023} = 20_{2023} + (-25_{2023}) = -5_{2023}$. Suppose $Y_{2022} = 1{,}000_{2022}$, then $1{,}000_{2022} - 5_{2023} = 995_{2023}$ or $Y_{2023} < Y_{2022}$.

Conclusion

The first and the second fundamentals of QBE are time and the new price model with time, respectively. The third fundamental of BE involves production in microeconomics and investment in macroeconomics using Buddha's doctrines taught at Theravada schools in Thailand. Prices in the real-world market are called many names: wage, rent, profit, and interest, including fixed and variable costs. What people do concern about economic actions is what people get. BE is different from ME in many aspects of investment, as shown in Table 10.

Table 10. Comparison concerning production between ME and BE

Nos.	Aspects of production	Mainstream economics	Quantitative Buddhist economics
1	Basic characteristic	Economics does not concern other disciplines; it is pure.	Economics relates to other disciplines
2	System	capitalism	The unique mixed economic system
3	Objective	For capitalists with profit maximization.	For "proper" people and governments get wealth.
4	How to reach the objective	4.1 Using of mass natural resources with mass production.	Using natural resources with considering the next generation and the environment.
		4.2 promoting products by advertising with famous persons and stimulating societies to be consumerism.	Consumption with a middle way.
		4.3 pricing for profit maximization of capitalists.	Development of people's minds with government's supporting proper people to reach strong self-dependency by decreasing costs of living and costs of running businesses

		4.4 Solving economic problems by capitalists. Economic problems are separated from social problems.	Solving economic and social problems by people and government.
		4.5 Considering costs and pricing, not minds.	Considering costs, pricing and minds.
		4.6 consumerism and Materialism.	The middle way of Materialism with Idealism.
5	Costs	Wage, rent, interest, profit, fixed cost, variable costs, TC, TVC, TFC, AC, AVC, AFC, MC, and MVC. All costs are not data, and costs do not concern time.	Wage, rent, interest, and fixed costs, variable costs. All costs are data. Costs concern time.
6	The interest rate for investment	Interest rates as debts of firms are one of the producers' costs	Debts from loans make borrowers suffer.
			50 % of income should be divided into investments.
7	loan	To make capitalists wealthier, the government should allow the private sector to run businesses following a price mechanism	Government should give loans without interest rates to "proper" people.
8	Profit	One of the costs	Profit does not include one of the costs
9	Government	9.1 Give the private sector running the system	Support the people running the system
		9.2 Government expenditure constantly stimulates economic activities.	Tell 14 ways that the government should do this. Government expenditure can produce positive and negative economic results for the countries.
10	Income distributors	capitalists	People and government

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