A Comparison Between Mainstream Economics and the Economics of Choice

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This document provides a non-exhaustive comparison between mainstream economic theory and the Economics of Choice model, which challenges some mainstream cornerstones.

The Economics of Choice model is rooted in the fundamental relationship between time spent at work, natural resources, and the opportunity to pursue happiness. We spend time transforming natural resources into capital, and additional time using that capital to transform additional natural resources into the goods and services that we consume. The opportunity to pursue happiness increases when we successfully spend time increasing productivity or reducing the time it takes to produce goods and services. Two equations summarize the Economics of Choice model. The first equation relates short- and long-term economic growth to how people spend their time. The second equation relates the capacity to consume to labor productivity and relative income.

This document has three sections, "Overview," "Growth Theory," and "Business Cycle Theory." Each section includes multiple comparisons, and each comparison features four parts, *"Mainstream Economics," "Economics of Choice," "Synergy, Similarities, and Differences," and "Importance."* "Mainstream Economics" attempts to summarize the current consensus among economists. For additional information supporting the Economics of Choice, please see the Economics of Choice website: https://www.economicsofchoice.com/ (This comparison includes some recent improvements not shown on the website). The last section, "*Importance,*" highlights the benefit of analyzing an economy using the Economics of Choice approach.

We welcome your feedback and comments on this draft document.

Table of Contents

Section 1: Overview ***4***

Introduction: **4**

GDP: **5**

Purchasing Power: **5**

Productivity: **6**

Supply and Demand: **7**

Section 2: Growth Theory – The Economy in the Very Long Run ***7***

The Production Function: **7**

Labor, Capital, Innovation, and Economic Growth Overview: **7**

The Growth Accounting Equation **8**

The Unmeasured Sector: **9**

Production and Consumption Productivity: **9**

Housing and The National Identity GDP=C+G+I+NX **10**

Section 3: Business Cycle Theory – The Economy in the Short Run and Long Run ***10***

The Simple Economy – No Government or Exports: **11**

The IS Curve: **11**

Debt and Debt Payments: **12**

The Natural Rate of Employment: **12**

The Federal Reserve Dual Mandate of Low Unemployment and Stable Prices: **13**

Labor Productivity Shocks: **13**

References ***14***

The below chart provides a summary of the comparisons that follow.

Comparison Overview		
Section 1: Overview		
Subject	Mainstream Economics	Economics of Choice
Introduction	Far more emphasis placed on money relative to how people spend their time	Rooted in how people throughout society choose to use their time
GDP	The most important measure of economic activity	The opportunity to pursue happiness (OPH) is the most important measure of economic activity. OPH increases with time for leisure and the capacity to consume. Actual happiness does not necessarily increase with OPH or GDP.
Purchasing Power	No equation	The Purchasing Power Equation: B=Productivity/(1 + *F* + *I* + *P* + *TX*). Our capacity to consume is a function of productivity and relative income.
Productivity	Important but not central	Central! Productivity explicitly connects all aspects of the "Economics of Choice" model. The only way to simultaneously increase time for leisure and the capacity to consume is by improving productivity.
Section 2: Growth Theory – The Economy in the Very Long Run		
The Production Function	$Y = f(K, L)$ Economic output is a function of capital (K) and labor (L)	$Y = f(N, T)$ Economic output is a function of natural resource scarcity (N) and time spent at work (T).
Labor, Capital, Innovation, and Economic Growth	Labor and capital contribute to economic output. Total factor productivity accounts for economic output not attributed to labor and capital.	Economic output increases with time spent at work and the productivity of that time. Productivity increases because of time spent producing capital and time spent on improvement. Increasing resource scarcity harms productivity and, therefore, economic output.
The Growth Accounting Equation	$\Delta Y/Y_1$ = (labor share × labor gwth) + (capital share × capital growth) + (TFP)	The fundamental equation of the Economics of Choice is $\Delta Y/Y_1 = \{(Pr_1)(\Delta T_g) + (Pr_1[(H_k)(T_{k3} - T_{km}) + (H_e)(T_{e4} - T_{em})](T_{g2})\}/Y_1$. Economic output is equal to the time spent at production (T_g) multiplied by that time's productivity (Pr). Productivity increases when the time spent producing capital (T_{k3}) and making improvements (T_{e4}) is sufficient.
The Unmeasured Sector	Not discussed adequately	Time-saving goods in homes serve the same function as capital in businesses. Productivity improvement within homes has led to greater measured sector labor force participation.

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Production and Consumption Productivity	Changes in consumption productivity do not receive adequate consideration	Service societies develop when production productivity increases faster than consumption productivity.
Housing and The National Identity GDP=C+G+I+NX	Investment spending includes housing	Since housing is a timesaving and leisure-enhancing good, it is part of consumption spending.
Section 3: Business Cycle Theory – The Economy in the Short Run		
The Simple Economy (No Exports or Government Spending)	Savings and Investments are equal (I=S)	The leveraging of savings in a fractional reserve banking system makes savings and investments unequal.
The IS Curve	Y=C(Y-T)+I(*r*)+G where the economic output (Y) and interest rates (r) are the endogenous values	Y=C+I+G. Consumption (C), investment (I), and government (G) spending increase with debt-fueled spending (ΔD). Where consumption spending $C=c+\Delta D_c$, investment spending $I=i+\Delta D_i$, and government spending $G=g+\Delta D_g$.
Debt and Debt Payments	Not adequately considered, particularly by the Federal Reserve	Debt-fueled changes in aggregate demand drive the business cycle, and the use of debt affects aggregate supply in the long-run.
The Natural Rate of Employment	The average rate of employment	The average rate of unemployment assuming no per capita changes in debt. Long periods of expansionary fiscal and monetary policy can distort the natural rate of employment
The Federal Reserve Dual Mandate of Low Unemployment and Stable Prices	The Federal Reserve models are focused on the short term	The Federal Reserve policy needs to consider the long-term consequences of expansionary monetary policy.
Labor Productivity Shocks	Economists conceptualize the factors of production as being productive. The labor force becomes less productive during economic downturns.	Only people are productive—the factors of production affect the productive capacity of individuals. Productivity shocks are generally a product of how the BLS calculates productivity. Productivity usually does not decline during economic downturns.

Section 1: Overview

Introduction:

Mainstream Economics: Economists use factors like money, interest rates, and prices to explain business cycle theory. Growth theory attributes economic output to labor share, capital share, and total factor productivity.

Economics of Choice: Belief systems affect how people use their time, and how individuals use their time within the constraint of Earth's natural abundance largely determines how an economy functions.

Individuals throughout society spend time transforming natural resources into goods and services. Those goods and services are the benefit of time spent working. Relative income largely determines how those goods and services are distributed among members of society.

Synergy, Similarities, and Differences: How individuals spend their time and the financial aspects of an economy are integrally related. For example, when the Federal Reserve lowers interest rates by purchasing bonds with money it creates, individuals borrow and spend more, and demand increases. People spend more time working to meet demand increases.

Importance: As stated in Jonathan Gershuny's book *Changing Times: Work and Leisure in Postindustrial Society*, "changes in how we spend our time, in aggregate, captures an understanding of an economy that the financial accounts of a nation do not provide" (Changing Times: Work and Leisure in Postindustrial Society, 2000). In any given situation, values or belief systems influence choices and, in aggregate, are a primary determinant of national economic vitality.

GDP:

Mainstream Economics: GDP is the most important measure of economic activity.

Economics of Choice: The opportunity to pursue happiness (OPH) is the most important economic measure. OPH has two dimensions, time for leisure and purchasing power, or the capacity to consume. Productivity improvement is the only way to simultaneously improve leisure time and purchasing power, and thereby OPH.

Synergy, Similarities, and Differences: GDP increases with time spent at work or when that time becomes more productive. By definition, productivity increases when the production of goods and services takes less time. People use the time saved to expand leisure or produce more goods and services, and the production of more goods increases GDP and the average capacity to consume.

Importance: GDP increases with time spent producing goods and services and with the productivity of time spent. Since the time people can spend at production is finite, continuous per capita growth is not achievable through increases in work time. The only way to continuously increase per capita economic output is through productivity improvement. Productivity improvement causes OPH and our standard of living to increase.

Since many factors beyond economic output and leisure contribute to happiness, both GDP and OPH should be supplemented with other measures of well-being.

Purchasing Power:

Mainstream Economics: Although productivity and relative income generally contribute to individual or household capacity to consume, no equation defines the relationship.

Economics of Choice: The Purchasing Power Equation: B = Productivity/(1 + *F* + *I* + *P* + *TX*). The benefit of time spent producing goods and services is the goods and services produced. The benefit that an individual or group of individuals obtain depends on the total quantity of goods and services produced in a given time, or productivity, and relative income. B is equal to the benefit retained by all those who produce goods and services in the above purchasing power

equation. F is equal to the benefit received by those who control natural resources divided by the benefit received by those who produce goods and services (B). I, P, and TX are similar ratios that respectively determine what proportion of total benefit is received by the government through taxes (TX), those who make improvements (I), and profits (P).

Importance: The real cost of producing goods and services is time spent at work. The benefit of the time spent making goods and services are the goods and services. The distribution of goods and services amongst individuals or groups depends on relative income from wage compensation, profits, and transfer.

To maintain relative income, the income of all individuals or groups must increase at the rate of inflation plus productivity improvement. If relative income and per capita work time remain constant, then the capacity to consume for all individuals in society will increase and decrease with productivity.

Productivity:

Mainstream Economics: Productivity is important but not central to mainstream economic thought. Labor, capital and total factor productivity (TFP) are all productive.

Economics of Choice: Productivity only applies to labor in the Economics of Choice model. The use of capital causes labor productivity to increase. The terms productivity and labor productivity are used interchangeably in the Economics of Choice model.

Productivity is central to and connects all aspects of the Economics of Choice model. Productivity improves when the time it takes to consume or produce a good or service declines in the measured or unmeasured sectors of an economy. For example, a new induction cooktop decreases the time needed to prepare a meal, legislation that reduces tax preparation time, a new road that causes transport time to decline, and online purchasing that decreases consumption time all increase productivity. The opportunity to pursue happiness increases with productivity since time saved is used to increase leisure or purchasing power.

Synergy, Similarities, and Differences: Mainstream economic thought discusses the productivity of labor, capital, and TFP. In the Economics of Choice model, people spend time transforming natural resources into goods, services, and capital. People produce capital from natural resources and use capital to transform additional natural resources into goods and services. It takes production time to transform natural resources into capital and transform more natural resources into goods and services using that capital. The productivity of capital production improves when the production of that capital takes less time. The productivity of goods and services production improves when the sum of allocated time spent making capital and goods and services using that capital declines. (The allocated time of capital is equal to the time spent producing the capital divided by the total number of goods and services produced using that capital).

Importance: The opportunity to pursue happiness increases with productivity or when the time it takes to produce goods and services decreases. Individual and societal values and belief systems, honesty and integrity, human capital, laws and regulations, natural resource scarcity,

physical capital, and innovation are critical factors that affect productivity in the Economics of Choice model.

Section 2: Growth Theory – The Economy in the Very Long Run

Mainstream economists essentially divide economic output into three components: labor, capital, and total factor productivity (TFP). Economic output is the sum of the labor, capital, and TFP shares. A mechanism that explains how labor, capital, and TFP increase independently, or relate to each other in the growth process, is generally not provided.

The Economics of Choice states that economic output grows with production time and the productivity of that time. Production time increases when people throughout society, on average, spend more time at production, and when the population increases. Productivity increases when a sufficient amount of time is spent at capital production and improvement, including innovation.

The Production Function:

Mainstream Economics: Y = f(K, L). GDP is a function of labor (L) and capital (K) or tools, equipment, machines, and buildings. Labor and capital both contribute to economic output.

Economics of Choice: Y = f(N, T). People produce all economic output from two inputs, time spent at work (T) and natural resources (N).

Synergy, Similarities, and Differences: We spend time transforming natural resources into capital and additional time transforming more natural resources into goods and services using that capital.

Importance: Our connection with Earth is fundamental. Capital and harnessing of the latent energy of fossil fuels enabled us to transform an ever-increasing quantity and variety of natural resources into the vast array of goods and services that we consume today. Increasing natural resource scarcity is harming our opportunity to pursue happiness. For example, climate change, water shortages (Unquenchable: America's Water Crises And What To Do About It, 2009), greater scarcity in the sand used to produce cement (Why there is a shortage of sand, 2017), the availability of rare earth metals (A Scarcity of Rare Metals Is Hindering Green Technologies, 2013), and increasingly challenging to access crude oil deposits (Resource Scarcity, 2020) are all affecting productivity and the opportunity to pursue happiness adversely.

Labor, Capital, Innovation, and Economic Growth Overview:

Mainstream Economics: Economists attribute economic output to labor and capital, however this attribution does not fully explain continuous economic growth. Total factor productivity explains the difference between total economic output and that attributed to labor and capital.

Economics of Choice: Time spent at work, in the measured sector of the economy, is divided between the production of goods and services, the production of capital, and improvement. The only way to produce goods and services, regardless of how much capital is available, is by spending time producing them. For example, people catch fish and build wooden tables when time is spent fishing and crafting tables, not during the production of fishing poles and table

saws. Time spent at capital production and improvement, when sufficient, result in time spent producing goods and services to become more productive. When fishing poles are successful, we catch more fish during time spent fishing.

Economic growth occurs when people spend sufficient time producing goods, producing capital, and making improvements, including innovation. Economic output decreases when the time spent on production and improvement is insufficient.

Synergy, Similarities, and Differences: As is stated by N. Gregory Mankiw in his intermediate economic textbook *Macroeconomics*, "the decline in economic output attributed to labor relative to capital is not well understood." (Mankiw, 2019) The Economics of Choice explanation of why the capital share is increasing is as follows. Productivity increases when the sum of the allocated time of capital (e.g., the time spent producing the fishing pole divided by the number of fish caught over the entire life of that pole) plus the time needed to produce goods and services, using that capital, declines. When the ratio of allocated time of capital to time spent making goods and services increases, the capital share of economic output increases. Over the past century, the proportion of time dedicated to capital production has increased, and this causes an increase in the economic output attributed to capital.

Importance: Continuous growth in per capita economic output depends on productivity improvement. Productivity improvement depends on many factors, including innovation and the production of capital.

The Growth Accounting Equation

Mainstream Economics: $\Delta Y/Y=\alpha(\Delta K/K)+(1-\alpha)(\Delta L/L)+\Delta A/A$ where $\alpha(\Delta K/K)$ is the capital contribution, $(1-\alpha)(\Delta L/L)$ is the labor contribution, and $\Delta A/A$ is the growth in total factor productivity.

Economics of Choice: $\Delta Y/Y_1 = \{(Pr_1)(\Delta T_g) + (Pr_1[(H_k)(T_{k3} - T_{km}) + (H_e)(T_{e4} - T_{em})](T_{g2})\}/Y_1$. The change in economic output is equal to the change in time spent at work multiplied by the initial level of productivity plus the change in productivity multiplied by the final time spent at work. The change in productivity is a function of time spent producing capital and making improvements.

Synergy, Similarities, and Differences: The factors $(1-\alpha)(\Delta L/L)$ in mainstream economics and $(Pr_1)(\Delta T_g)$ in the Economics of Choice correspond to time spent at work. $\alpha(\Delta K/K)$ and $\Delta A/A$ in the growth accounting equation, and $(Pr_1[(H_k)(T_{k3} - T_{km}) + (H_e)(T_{e4} - T_{em})]$ in the Economics of Choice relate to productivity improvement.

The growth accounting equation does not explain how growth occurs. Labor and capital contribute to economic output, and total factor productivity explains the difference, but the growth accounting equation does not model how labor, capital, or TFP increases. The fundamental equation of the Economics of Choice states that economic output is equal to time spent at production multiplied by the productivity of that time. Productivity increases when sufficient time is spent at improvement (T_{e4} greater than T_{em}) and producing capital (T_{k3} greater than T_{km}).

Importance: How people spend their time determines economic output in the short and long term. Time spent at capital production and improvement cannot be spent at leisure, sleep, or the production of goods and services to decline in the short run. When successful, it causes productivity to increase over the long-term. People maximize short-term economic growth by eliminating time spent at leisure, producing capital, making improvements, and spending all-time at production. Over the long term, time successfully spent producing capital and making improvements causes production productivity and the opportunity to pursue happiness to increase.

The Unmeasured Sector:

Mainstream Economics: Consideration of the below relationship is not adequate.

Economics of Choice: People produce goods and services within the measured and unmeasured sectors of the economy. Like capital in the economy's measured sector, people use time-saving goods to make goods and services within households. The price of time-saving goods decreases or incomes increase with productivity improvement in the measured sector, enabling households to purchase and use more time-saving goods. Productivity within homes increases with the use of time-saving goods, and this saves time. The time saved because of productivity improvements within homes can be used to produce goods and services in the measured sector. This mechanism gave many women the opportunity to participate in the measured sector.

Synergy, Similarities, and Differences: The fact that productivity-enhancing or time-saving goods such as central heating systems, laundry machines, dishwashers, and refrigerators have emancipated many women from toil is well known. The Economics of Choice formalizes this relationship.

Importance: Productivity improvement in the measured sector leads to productivity improvement in the unmeasured sector. Productivity improvement in the unmeasured sector can lead to increased labor force participation.

The work done in the unmeasured sector, including but not limited to voting, volunteering, running households, and transmitting values or belief systems, provides the foundation for work done in the measured sector. Understanding the relationship between work done in the measured and unmeasured sectors of society is essential.

Production and Consumption Productivity:

Mainstream Economics: The below relationship is generally not discussed.

Economics of Choice: People throughout society spend time producing and additional time consuming those goods and services. The number of goods and services produced is equal to the time spent at production multiplied by that time's productivity. Likewise, the number of goods consumed is equal to the time spent multiplied by that time's productivity. When production productivity improves faster than consumption productivity, the time spent at consumption relative to production must increase. To achieve this, all individuals within society can spend proportionately more time at consumption, or a larger proportion of the individuals in society can specialize in consumption. For example, homeowners can purchase supplies and paint their homes or hire contractors who paint houses on their behalf. Service societies

develop when production productivity increases faster than consumption productivity, and the increased use of consumption services balances production and consumption time.

Synergy, Similarities, and Differences: Consumption productivity is generally not discussed in mainstream economics but is an integral part of the Economics of Choice.

Importance: Consumption productivity is increasing with the internet and smartphone-enabled online shopping. (i.e., people can purchase a greater quantity and variety of goods and services per hour) The saved time is a powerful economic force that will cause economic output to increase if used to produce more goods and services or improve productivity.

Housing and The National Identity GDP=C+G+I+NX

Mainstream Economics: Housing in the national identity, GDP=C+G+I+NX, is included in investment spending.

Economics of Choice: Housing in the national identity, GDP=C+G+I+NX, is included in consumption spending.

Synergy, Similarities, and Differences: Households in the economy's unmeasured sector serve the same function as factories in the measured sector. We use time-saving goods in households and capital in businesses to produce goods and services. Homes are both timesaving and leisure-enhancing goods.

Importance: The national identity and the related national income and product accounts provide a systematic approach to determining measured sector economic output. Housing does not have a direct effect on measured sector productivity or productive capacity. Also, large open floor plans, hot tubs, entertainment rooms, expansive manicured yards and many other features in modern homes are leisure enhancing and do not increase productivity or productive capacity. Therefore, housing currently distorts investment spending.

Section 3: Business Cycle Theory – The Economy in the Short Run and Long Run

Most economists subscribe to using changes in prices to explain the business cycle (Macroeconomics, 2019, p. 283) The fact that a change in prices does not affect output in the long term supports the concept that governments with their own fiat currency can borrow and spend indefinitely, the basis of Modern Monetary Theory (MMT).

Changes in household, business, and government debt is used to explain the business cycle in the Economics of Choice model. Debt fueled spending always stimulates the economy and debt payments have the opposite effect. Debt used to increase productivity causes income to increase and this offsets the adverse effect of debt payments. The creation of money by the Federal Reserve transfers and hides the adverse effect of debt payments.

The use of debt to continuously prop up an economy without sufficient productivity or productive capacity enhancement may cause asset and debt bubbles. Debt and asset bubbles are two of the four primary indicators of a future financial crisis. The other two indicators are a decline in economic output and imports that exceed exports. (This Time is Different: Eight Centuries of Financial Folly, 2009) All four indicators currently exist in the United States.

The Simple Economy – No Government or Exports:

Mainstream Economics: As is explained in many economic textbooks, economic output is equal to consumption plus investment spending (Y=C+I), and savings plus consumption spending (Y=S+C). Therefore, investment is equal to savings (I=S) in a simple economy.

Economics of Choice: Investment is generally not equal to savings. Households and businesses purchase products with earned and borrowed money. In the modern economy where a central bank (Federal Reserve in the U.S.) creates money, and money creation occurs in the fractional reserve banking system, savings generally do not equal investments. Households and businesses place savings into bank accounts, that money becomes a bank reserve, and the bank reserve ratio determines leveraging limits. During periods of expanding debt, consumption or investment spending can easily exceed earned income.

Synergy, Similarities, and Differences: In a simple economy without money creation by the Federal Reserve or banks, investment is also equal to savings in the Economics of Choice model.

Over long periods, the sum of all economic output and the sum of all income earned, even with debt, become close to being equal.

Importance: In a modern, simple economy with a fractional reserve banking system, businesses and households can purchase products at a rate that exceeds income, and investment spending might exceed savings.

The IS Curve:

Mainstream Economics: Y=C(Y-T)+I(*r*)+G where government spending (G), taxes (T), and monetary and fiscal policy are exogenous variables, and economic output (Y) and the interest rate (*r)* are the endogenous variables.

Economics of Choice: Assuming that net exports are zero, economic output (Y) equals the sum of consumption (C), investment (I), and government (G) spending, Y=C+I+G. Spending equals the sum of income earned or obtained through wage compensation, profits, and transfer (c), plus increases in debt minus increases in savings (ΔD). Therefore, consumption spending $C=c+\Delta D_c$, investment spending $I=i+\Delta D_i$, and government spending $G=g+\Delta D_g$. The increased use of debt causes demand and income to increase in the short-term.

Synergy, Similarities, and Differences: Economic output is the same. Income, prices, and interest rates are the primary short-term economic output determinants in mainstream economic thought. Changes in debt and savings are the primary determinant of short-term economic fluctuations in the Economics of Choice model. When interest rates decline, and credit becomes more available debt-fueled spending increases.

Mainstream economic analysis indicates that interest rates only affect investment spending. The Economics of Choice states that interest rates affect consumption and investment spending.

Importance: Expansionary fiscal and monetary policy stimulates the economy through debt-fueled expenditures. Debt payments have the opposite effect of borrowing. Economic output declines unless increases in income from productivity improvement or time spent working more than offsets the adverse impact of debt payments.

Debt and Debt Payments:

Mainstream Economics: How increases in debt and debt payments affect the economy in the short- and long-run is generally not discussed, particularly by the Federal Reserve.

Economics of Choice: People can spend time earning an income, save some of the earned income, and then use the saved income to purchase a product, or people can borrow and spend immediately and then spend time in the future working to earn the income needed to satisfy debt obligations. The use of debt moves spending forward. Debt-fueled spending stimulates the economy and tends to be inflationary. Debt payments adversely affect the economy and tend to be deflationary.

Over the long-run, debt successfully used to increase income through productivity improvement or productive capacity enhancement can more than offset the adverse effect of debt payments.

Synergy, Similarities, and Differences: Both expansionary monetary and fiscal policy work through increased debt-fueled spending. When the Federal Reserve lowers interest rates or makes credit more available, businesses and households borrow and spend more.

Importance: Debt and asset bubbles form when expansionary monetary or fiscal policy is continuously used to prop up an economy without a corresponding sufficient increase in productivity or sustainable, productive capacity. Rapidly increasing asset prices and expanding debt to economic output are primary indicators of an impending financial crisis.

The Natural Rate of Employment:

Mainstream Economics: Over the long run, the natural rate of unemployment is equal to the average rate of unemployment. (Mankiw, 2019, p. 180)

Economics of Choice: Over the long run, the natural rate of unemployment is equal to the average employment rate when the ratio of total debt to GDP remains constant. Frictional and structural unemployment, and therefore the natural rate of unemployment, increase with the speed of productivity improvement. Productivity causes OPH and society's structure to change, and the natural rate of unemployment increases with greater rates of change.

Unsustainable fiscal and monetary policy that continuously increases debt-fueled spending over extended periods can cause the natural rate of unemployment to seem lower.

Synergy, Similarities, and Differences: Both mainstream and the Economics of Choice recognize the correlation between employment and short-term growth and technology and long-term growth. Mainstream economics does not consider how rising levels of debt affect the natural rate of employment, whereas the Economics of Choice does.

Importance: Productivity improvement causes the structure of society to change, and change requires sacrifice. Firms that innovate and improve more effectively than others gain market share, others lose market share and close, and people need to learn skills and lose their jobs during this process. Frictional and structural unemployment increases with greater rates of productivity improvement. Regarding wealthy nations, is the sacrifice associated with achieving greater rates of productivity improvement worth it? After obtaining a moderate-income, actual happiness generally does not increase with the opportunity to pursue happiness. (Buettner, 2010)

The Federal Reserve Dual Mandate of Low Unemployment and Stable Prices:

Mainstream Economics: The Federal Reserve is taking a short-term perspective on achieving the dual mandate. Mainstream economic models do not make a strong connection between expansionary monetary and fiscal policy and its effect on the long-term. Ben Bernanke stated during a January 2020 speech that there is a debate about whether the Federal Reserve should concern itself with the long term. (Bernanke, 2020) Most economists attribute the transmission mechanism of monetary policy to price behavior. (Mankiw, 2019, p. 283) An increase in prices is inflationary but does not affect the economy in the long term.

Economics of Choice: Primarily by lowering interest rates and increasing credit availability, the Federal Reserve stimulates the economy by increasing private sector debt-fueled spending, which reduces unemployment in the short run. Unless the use of debt-fueled spending sufficiently increases productivity or sustainable, productive capacity expansionary monetary policy causes decreased financial stability.

Synergy, Similarities, and Differences: The Federal Reserve's economic models do not adequately consider the long-term consequences of expansionary monetary policy. The Economics of Choice model provides an understanding of the relationship between policy's effect on the short and long-run.

Importance: The Federal Reserve promotes the short-term benefits of expansionary policy but generally does not mention the potential long-term consequences. For example, the Federal Reserve sells the fact that QE increased the rate of economic growth and reduced unemployment but generally did not discuss the effect on decreased financial stability. Although QE increased employment, it also contributed to or caused the following: 1) A decrease in financial stability because of the low-interest-rate environment. 2) Financialization of the economy via increased debt, interest on excess reserves (IOER-effectively a tax on the American public paid to banks), and expanded repo purchases. 3) A hidden tax on savings because inflation is greater than the interest earned on savings.

Labor Productivity Shocks:

Mainstream Economics: Productivity and labor supply shocks affect the business cycles. Labor productivity has two components, one that steadily increases with innovation and another, productivity shocks associated with the business cycle. (The FRNBY DSGE Model/Staff Report No. 647, 2013, p. 37)

Economics of Choice: Business cycles primarily occur because of changes in time spent at work, not productivity, or the time it takes to locate, extract, transport, and transform natural

resources into goods, services, and capital. Over the long-run, productivity increases when improvement and capital production time is sufficient. Over the short run, the time it takes to locate, extract, transport, and transform natural resources into capital, plus the time spent using that capital to locate, extract, ship, and transform additional natural resources into goods and services generally do not change.

Synergy, Similarities, and Differences: Economic output is equal to the time spent or labor multiplied by that time's productivity. Productivity depends on the type of work included in labor.

The Bureau of Labor Statistics (BLS) includes supervisory, non-supervisory, and production work in labor. The BLS divides economic output by the sum of supervisory, non-supervisory, and production work to determine labor productivity. (Handbook of Methods, 2020) The exclusion of supervisory and non-supervisory work and the inclusion of only production work changes the productivity calculation.

Supervisory work and other non-production tasks indirectly affect production and economic output. Economic output changes with production time/work. When production workers are fired and supervisory, and non-supervisory employees are not, then economic output declines faster than total labor, which causes BLS calculated productivity to decline even when the efficiency of producing product does not change. Productivity may stay constant with the inclusion of only production time in the productivity calculation.

Importance: Short-term fluctuations in per capita economic output are associated mainly with time spent at production not changes in productivity.

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