Mitchell's General Theory of the Business Cycle and the Recent Crisis in the U.S. Economy

Adil Mouhammed
University of Illinois at Springfield

This paper attempts to explain the current crisis in the U.S. economy. The tool that handles the situation is Wesley Mitchell's theory of the business cycle. The theory claims that rising costs and declining revenues will squeeze the profit margin. Rising costs are generated by the increased prices of raw materials, wages, rents, administrative office, taxes, interests, and the like. The decline of revenues is explained by lower investment and consumption expenditures, a less volume of exports and more imports, lower prices, a higher exchange rate. Empirically, this theory successfully explains the current crisis in the US economy. Basic variables explaining the crisis are credit crunch, international trade deficit, initial higher interest rates, and higher oil prices. Deficit spending explains the increases in inflation and the decreases in the dollar's value. A quick policy remedy is to reduce government spending by finding a new efficient method for fighting terrorism and to redirect public spending for developing the infrastructure, education, innovations, health care, and technologies.

INTRODUCTION

The beauty of the global economy is when the American economy is booming. The American people are working and earning incomes, and so are the business enterprises. Economic interdependence makes the fruit of the American economic prosperity by diffusing it to the lower chains, helping many individuals and small businesses. In fact, the propagation and diffusion of economic prosperity will affect the country trade's partners as well. When the United States of America is prospering, many other countries will be prosperous, because the American people are purchasing from partners, and consequently these countries are creating more jobs and incomes for their individuals and business enterprises. Their governments are also obtaining revenues through taxes, and spend these revenues for developing infrastructure and other vital institutions. It is not a surprise to vindicate Hume's proposition that when we become rich our neighbors become rich and the opposite is also correct.

But all these positive linkages that affect people's life are suddenly disturbed when a problem emerges to hurt the U.S. economy. When the problem occurs, the repercussion will be diffused to many sectors and individuals domestically and globally, affecting many of them negatively. The optimistic tendency about life is now reversed. This reversed life process has just occurred

in the U.S. economy. The economy is indeed in a crisis, and many partners of this economy will pay their dues. This crisis is characterized by a collapse in the housing sector, a drastic increase in the budget deficit, a higher rate of inflation, a higher level of money supply (or interest rate cuts), lower increases in wages, higher costs of education and healthcare, a drastic deterioration of the infrastructure, and the quagmire of the two wars that seem to become permanent. All these indicators have to be explained in order to reverse the course of the crisis, and Wesley C. Mitchell provides the profession with a well-integrated explanation which is capable for making such a change in the current course of action. This paper aims at presenting and analyzing Mitchell's view on the subject of the business cycle.

Mitchell's theory of the business cycle argues that the dynamic phases of the cycle in the economic activity are explained by the augmentation and the squeeze of the profit margins which are affected by many important variables. This theory, I argue, is very relevant in explaining the current condition of the U.S. economy. Section two provides a review of some of the important literature on Mitchell's business cycle, and section three furnishes brief explanations for the most dominant theories of the business cycle. This section is important for the purpose of comparing Mitchell's theory to these dominant theories. Section four formulates and analyzes Mitchell's theory of the business cycle. Section five is designed to use Mitchell's theory to explain the current crisis in the American economy. This section is also verification for the relevance of his magnificent theory of the business cycle. Section six, using the theoretical analysis of section four, provides some policy implications aiming at mitigating the business cycle. The last section is devoted to a summary and conclusions of this study.

REVIEW OF IMPORTANT LITERATURE

"Mitchell appealed to no final causes of the cycle", Homan (1928) points out, which means that there are many variables affecting prices and cost of production, which must be accounted for in explaining the business cycle. Mills (1949) points out that Mitchell was a man of integrity that could not ignore any part of reality with which he was dealing. Friedman (1950) argues that a scientific analysis requires an integrated explanation, and Mitchell was seeking such a comprehensive theory explaining the business cycle.

Many important studies are available in the literature about Mitchell and his business cycles. Homan (1928), Schumpeter (1930 and 1950), Hansen (1949), Mills (1949), Kuznets (1949), Koopmans (1947), Friedman (1950), Lucas (1980), Kydland and Prescott (1990), Sherman (1991), and Sherman and Kolk (1996) provided various views and critiques about Mitchell's work on the business cycle. The most damaging view of Mitchell's theory of the business cycle was presented by Koopmans (1947) about measurement without theory. He criticized Mitchell and Burns (1927) by arguing that collection of data and statistical analysis were performed without having a theory in mind. Koopmans' proposition was not a new one, because Homan (1928) has a similar argument. But Schumpeter thinks that Mitchell's methodology "will indeed destroy many preconceptions," including the loyalty to certain mathematical models of the business cycle (1950, p.143). That is to say, Mitchell's theory of business cycle required a very advanced mathematical dynamic model that Koopmans and others have knowledge about. Thus, the easy way out for Koopmans is to criticize Mitchell's theory rather than developing a mathematical model that reflects what Mitchell has in mind, as Friedman (1950) does.

Hansen thinks that Mitchell provided no real theory for the business cycle. He states: "There is no real explanation" (Hansen, 1949, p.246). But this paper will provide an analysis of

Mitchell's business cycle to disprove Hansen's proposition. Friedman (1950) has provided an excellent analysis of Mitchell's economic work by considering him a theorist who provides an integrated explanation of facts. But Friedman does not incorporate important variables for Mitchell's explanation of the business cycle such as the relationship of wages to productivity, which is one of the most important variables of the business cycle. Friedman (1950) also neglects the role of military spending in raising prices, which will be taken in this study.

Sherman and Kolk (1996) provide extremely useful analysis of Mitchell's theory of the business cycle. As we shall show, Mitchell explains the prosperity and crisis by concentrating on two components: the decreased (increased) costs of doing business and the increase (decline) in revenues, or the augmentation (squeeze) of profit margins. Sherman (1991) and Sherman and Kolk (1996) call this condition of the profit augmentation (squeeze) the nutcracker. When the two ends of the nutcracker open, profit margins will rise; otherwise, profit margins will decline, creating the prosperity and crisis, respectively. Mouhammed (2008) develops Mitchell's crisis in a global context, and this paper tries to provide an integrated explanation of the Mitchell's business cycle, which is used to analyze the current crisis in the U.S. economy and to suggest some policies to mitigate it.

THE DOMINANT THEORIES OF THE BUSINESS CYCLE

There have been very dominant theories of the business cycle in the literature but they are not as powerful as Mitchell's theory. Marx's theory of crisis contends that capital accumulation is the independent variable, and when it increases and reaches a critical point the profit rate will be declining. This rate is the surplus value (S) divided by the sum of fixed (C) and variable capital (V). Due to the accumulation process of capital, the fixed capital will increase and consequently the rate of profit, *ceteris paribus*, will decline, creating a crisis in the economy (see also Mouhammed 2005 and 2008). Marx suggests various forces to counter the decline in the rate of profit such as wage reduction, increases in productivity and surplus value, new imperialist adventures, and a reduction in the value of fixed capital through imports.

Schumpeter's theory of the business cycle concentrates on innovations by the entrepreneur for explaining expansions and recessions. For example, Schumpeter (1939) argues that innovations cause a sequence of investments in innovative items, which will produce significant causes and effects for many years to come. In other words, the diffusion of innovations generates more investments and profits. This is because innovations will force many firms to use the new technologies (imitation) in order to compete through cost reduction, high efficiency, high quality of output, and high revenues. Once innovations die out, the sequence is reversed and economic slowdown and a recession will occur in the economy, generating a higher rate of unemployment, lower incomes, and lower prices.

Keynes (1936) explains the business (trade) cycle by the collapse of the marginal efficiency of capital (MEC). Assuming the economy is booming, savings will increase and investments will slow down. In fact, investments will decline when MEC collapses; consequently, income will decline by the multiplier, so will consumption expenditure and savings. Because of this fear, capitalists, individuals, and banks will hoard money rather than spending it. The fear will create a condition called the liquidity trap according to which the monetary policy becomes ineffective. It follows that the tools of fiscal policy such as public works and investment, lowering taxes, and increasing transfer payments are the required tools for countering the crisis and depression. In contrast to Keynes, Friedman and Schwartz (1963 and Knoop 2004) thinks that a recession is

generated by the reduction in money supply. Banks are misinformed and make mistakes. Because of the fear of inflation, a central bank cuts the money supply (or increase the interest rate) and sends the economy into a recession. For them, the Great Depression was the outcome of the reduction in the supply of money. In fact, many other recessions were generated by the same mistake.

Lucas (1975, 1980, 1981, and 1987) analyzes the business cycle which is a temporary deviation of actual output from its natural rate as a mistake made by economic agents. If money supply, e.g., increases unexpectedly by the monetary authority, then prices and price level will be rising. Producers interpret the increase in price level as a result of higher demands for their products. They expand production and employment, and workers will provide more hours of work, as their wages rise. The actual unemployment rate will decline compared to the natural rate of unemployment. Eventually, producers and other people will realize that they made a mistake. Consequently, producers will cut production, employment, and prices. Workers will cut money wages as well. Output and employment will return to their natural rates. When producers and workers cut their prices, deflationary prices appear, and the purchasing power of the dollar will rise. Thus, people will start spending again, and the economy will expand.

The real business cycle (Kydland and Prescott 1982 and 1990), which is grounded in micro foundations, argues that technological shocks to aggregate supply are the driving force for the economic expansion and contraction. These shocks affect the components of the production function of labor and capital, and spread out influencing the growth rate of the aggregate output. For example, a positive shock of technological advance increases demand for investments, capital, employment, and income. After the shock, aggregate output grows in a way that does not return to the normal trend prevailed before the shock, because it grows at a certain growth rate plus a term of the random shock called drift. In other words, output grows at a rate higher or lower than its normal trend.

New Keynesian theory (Mankiw and Romer 1991 and Mouhammed 2005) contends that the business cycle is generated by the instability of aggregate demand and supply. In the short run aggregate demand increases both prices and output, but prices rise modestly relative to demand, because mark-up prices and labor cost are not completely flexible (i.e., stickiness of nominal wages). This is due to factors such as contracts, menu cost, and near rationality, which are associated with imperfect markets. As price level increases, real wages decline, and employment and output will increase. Positive aggregate supply shocks such as the decline in oil prices and improvements in technology reduce marginal costs and increase the aggregate supply. But negative supply shocks tend to increase marginal cost and reduce aggregate supply, generating an economic downturn. Similarly, a decline in consumption and investment expenditures produce a recession, because prices do not decline rapidly when aggregate demand decreases. Consequently, real wages will increase, causing a decline in employment and output.

Post Keynesian theory of the business cycle developed by Minsky (1986) whose theory is determined endogenously and grounded in Keynes's (1936) and Fisher's (1933) works argues that under uncertainty when demand price of capital is greater than the supply price, investments will increase, so will earnings and profits. Consequently, firms borrow more funds so that the ratio of total debt to assets (or leverage) will rise. In a boom condition actual earnings may be even higher than the expected earnings, which simulate firms to borrow (or to be in debt) to finance investments. But the boom ends when the interest rate increases, because investments and revenues will decrease, creating a situation of financial fragility for many firms. This

fragility reduces the sources of new loans to finance investments and other operations, making many firms unable to pay their debts; hence, a recession appears

MITCHELL'S GENERAL THEORY OF THE BUSINESS CYCLE

Mitchell (1913, 1927, 1941, and Mouhammed 2008) defines the business cycle as "a descriptive analysis of the cumulative changes by which one set of business conditions transforms itself into another set", which consists of four phases are prosperity, crisis, depression, and revival, then prosperity again. Mitchell and Burns (1946) also measure these phases, and their method of measurement which cannot be explained here due to space limitation is clearly explained by Sherman (1991) and Sherman and Kolk (1996). At any rate, a sequence of events in each phase is cumulatively caused, because variables are affecting each other, creating a wider expansion or a deepest contraction. If we assume that a capitalist economy is in **depression**, then consumers' demand decreases, because unemployment rises, and incomes, particularly wages, decline. Producers of consumption goods will demand less raw materials and equipment to produce these goods. Investments in construction will decline as well. This sequence will continue cumulatively in that as employment and income decline, consumers' demand will decline, so will investments (by the accelerator), so will employment and income (by the multiplier) again (Mitchell, 1941, p.160). Contraction of businesses and trade will reduce wholesale and retail prices in various enterprises, reducing their profit margins: "Of course contraction of trade and the fall in prices reduce the margin of present and prospective profits" (Mitchell, 1941, p.161). Hence, "Whatever affects profits and solvency…comes within the sweep of the analysis" (Mitchell, 1941, p. xii). Cost of materials and supplementary cost such as rent and interest rates will decline. Efficiency of labor will rise, as employment is scarce. These cost cuts developed a wide reduction in the cost of doing business.

While the cost of doing business continues to decline during the depression, some other important forces are developed, which will transform the depression into a new phase called **revival**. Demand for consumption's goods will cease to decline, as people need to replace their durable goods by new ones. Population continues to increase and new taste is developed, and these events will "increase aggregate consumers' demand" (Mitchell, 1941, p.143). Producers usually find new methods of production (or innovations), giving rise for new novel (innovative) products. Investment demand for industrial equipment will rise as well, and capitalists become less timid (Mitchell, 1941, p.162). Technical improvements will be employed, and interest rates on borrowing are declining as a result of availability of money seeking investment opportunities (Mitchell, 1941, pp.144-145). Given these forces of change, Mitchell concludes, "Everything is ready for a revival of activity, which will begin whenever some fortunate circumstance gives a sudden fillip to demand, or, in the absence of such an event, when the slow growth of business has filled order books and paved the way for a new rise in prices" (1941, p.162). In fact, Mitchell thinks that the fortunate circumstance can be the emergence of the new profitable activity, the increase in government spending, the increase in exports, and the development of technology embedded in industries such as electro-technical and chemical industries. Usually, the increase in exports occurs if there is prosperity abroad or a decline in the exchange rate of the currency due for example to the low interest rates during the depression, or a reduction in tariffs enacted by some foreign countries. As usually known, government spending (G) and exports (X) became important factors in Mr. Keynes's theory of effective demand, because they can augment employment and income.

Based upon these variables of effective demand a small number of firms, or the center (the hub) of the business sector, is affected by these increases in spending. These firms will increase demand for materials, borrowing, and labor to produce goods that accommodate these new expenditures. Family's income will also rise, and so will the demand for consumer goods. Orders for the manufacturing good industries will grow. Demand for producers' goods will increase. This condition will instill optimism in business enterprises and business people, which will help them to expand. Hence, the new phase of **prosperity** is under way. Prices will be rising, because productive capacity although has a wide margin or reserve power is under pressure by the demand of consumer and producers' goods. Incomes continue rising, and new machines and factories will be brought to the production process (Mitchell, 1941, p.41). Higher prices keep spreading and firms increase their profit margins, because interest rates and wages are rising slowly compared to commodity prices, and the increases in the profit margins will encourage more investments. Mitchell states:

> Every increase in profits resulting from expanding business and the rising level of prices encourages new investments in business still more, drive prices still higher, favor new advances in wages, interest, and rents, and augment afresh the profits of numerous trades (1941, p.26).

Simply, this suggests that higher profits will increase investments, and increased investments will in turn increase employment and incomes, including profits.

During the revival and prosperity phases of the business cycle prices of shares in the stock market will rise, because present and prospective profits are rising. Usually, share prices rise faster than commodity prices; hence, financers are making money. This cumulative dynamic process of rising sales and profit margins and business optimism will generate more consumption and investment expenditures, generating in turn higher income (employment) and prices and more production, which will augment profit margins, investment, trade, and optimism again. All these variables influence the stock market positively, which will generate huge profits for the financiers, and banks will create credits and make profits as well. As can be realized these variables are dynamically linked backward and forward, governed by a chained sequence of cumulative process unrelated to equilibrium analysis.

But the prosperity phase will create a **crisis** when the condition of the increased costs of doing business and the decline in revenues, or the squeeze of profit margins, rises, a condition which is generated endogenously and "regularly within the world of business itself" (Mitchell, 1941, p. 26). How does the **crisis** phase arise during prosperity? Mitchell starts his analysis by stating, "Among the threatening stresses that gradually accumulate within the system of business during seasons of high prosperity is the slow but sure increase in the costs of doing business" (1941, p.29). He outlines various components augmenting business costs, which are conducive to a crisis, or a **recession**. First, it is the increase in supplementary and other costs of doing business. When business grows to a point that taxes full capacity, it becomes necessary to enlarge the old or to find new enterprises to meet additional orders. Such extensions of the existing industrial equipment involve, besides repairing costs, new supplementary costs: interest, rent, depreciation, insurance, and salaries for the general office (Mitchell, 1941, p.29). All these business costs do increase during the prosperity condition, which will affect profit margins negatively.

In addition to the increase in supplementary cost, there are increases in the prime cost of weak enterprises. These enterprises enter the business world when prosperity is intensifying, because

they are needed to accommodate certain types of consumers' demand. They are inefficient but they can satisfy some needs. These enterprises purchase inputs, including labor, for production and waste materials. They have their own overhead cost as well. Hence, they raise prices of materials and labor in general, contributing significantly for the increased costs of doing business and for the reduction in commodity prices.

Second, it is the increase in cost of labor. During the early stage of a revival the average rise in the rate of wages is slow, but at a later time the rate of the increased cost of labor becomes rapid, since "Employers find it hard to get sufficient number of hands to fill their orders" (Mitchell, 1941, p.31). In fact, employers are forced to hire 'driftwood', "men who would not be given a job in ordinary times" (Mitchell, 1941, p.33). Mitchell emphasizes several significant characteristics related to labor: "Inefficient reserve army of labor is...called into active service" (Mitchell, 1941, p.32); "Overtime labor is especially expensive...because it...commands extra rates of wages [and it] is tired labor" (Mitchell,1941, p.32); " 'Spoiled work' increases often at an alarming pace..."(Mitchell,1941, p.33); and workers "cannot be induced to work at so fast a pace when employment is abundant as when it is scarce"(Mitchell,1941, p.33). Mitchell concludes:

> This combination of advancing prices for labor and declining efficiency produces a serious increase in the cost of getting work done is beyond question....Of course, the most serious inroad are made upon profits in these industries where wages constitute a large proportion of the total outlay (1941, p.34).

Basically, Mitchell analyzes a condition called the increase in labor cost per unit of output. If the average wage (Wage / Labor) is divided by the average product of labor (Output / Labor), considered as a proxy for labor efficiency (or productivity), then the labor cost per unit of output, which is a very important indicator for firms whose labor costs are high, rises. For these firms, if productivity increases faster than wages, then profitability per unit of output will rise. It should be noted that the Fed always increases the federal funds rate when the labor cost per unit of output rises. Veblen thinks that the acceleration in the unit labor cost largely reflects a slower growth in productivity and higher wages during an economic expansion, a situation he calls 'sabotage' (1983, p.40).This indicator also rises when wages do not increase but labor productivity slows down.

Third, it is the increase in material costs. Mitchell thinks, "An increase in the cost of materials, wares, or supplies is often an increase in .single item of expense"; therefore, when "buying prices creep up on selling prices during prosperity", a reduction in profits is materialized (1941, p.35). For example, Mr. Bernanke, the Chairman of the Fed, always contends in his testimonies that in the manufacturing sector much of the pickup in inflation is generated by the higher unit price of oil. Over the last five years the price of a barrel of oil has been around $60 on the average, a price which increases the per unit cost of output in industries using oil significantly such as the airline and the petrochemical. But during March 2008, the price per barrel of oil was more than $111.00

Fourth, it is the increase in cost of bank loans. Usually, interest rate represents a cost of doing business, "that trenches upon profits in the later stages of prosperity" (Mitchell,1941, p.38). But why does the interest rate increase? During prosperity employment and income increase, and so does the demand for liquidity. The extension of industrial equipment is usually financed by internal funds, borrowing, and selling new stocks; but after heavy borrowing, given limited funds, the interest rate increases reflecting stringency in money market, a "scarcity of capital"

(Mitchell, 1941, p.42 and p.59). In short, when the interest rates rise, investment and consumption expenditures will slow down, so will the profit margins (Mitchell, 1920, pp.138- 9, p.141, and pp.153-154). When interest rates rise and employment slows down, construction will decline. It is also true to state that shortage of credits, or liquidity, will create, if not a panic, industrial depression.

Fifth, it is the inefficient management (entrepreneurship) that causes the increased cost of production. Mitchell believes, "Progress in industrial techniques and in business methods would be slower if business communities were always prosperous" (1941, p.39). This problem suggests that managers and subordinators have neither time nor patience to keep waste down. Recently, many management specialists argue that (1) American companies are overstaffed; (2) American managers have not had to compete until recently, because the world market was dominated by American corporations; (3) American managers are weak in the area of labor-management relations (such as worker participation in decision making); and (4) managers are concerned with making profits in the short-run and ignoring the long-run, a concern placing more emphasis on marketing than manufacturing which is the core of the economy. What these studies suggest for many corporations is the cut of employment of working people through downsizing and outsourcing in order to reduce cost per unit of output and increase profit margins. And these two issues require innovative entrepreneurs that will be able to generate increasing returns in the future.

Sixth, it is the exhaustion of the wide margin of the reserve productive capacity. During the earlier time of the prosperity, the productive capacity of the existing enterprises is not used fully (Mitchell,1941, p.40). As orders keep coming, this margin of reserve productive capacity is exhausted and many enterprises are interested in installing new equipment in very short time (Mitchell, 1941, p.41 and p.57). It follows that these firms have to hire workers to operate the equipment and to purchase materials to produce output. This activity increases cost of doing business and exerts pressure on prices to decline.

Having explained the basic reasons generating the increased cost of doing business, one can extend Mitchell's analysis by introducing various factors exerting more pressure on prices to decline, which are related to demand-side. The first factor is the reduction in demand for capital for opening new areas, for population growth, and for building the infrastructure. All-in-all, it can be argued that these demand components which reflect public investments had provided (during the past periods) one of the basic incentives for the capitalist class to keep a high rate of investment and consequently higher levels of output and employment. Unfortunately, these demand components have been on the decline for the last forty years, and no countering alternatives have been found; accordingly, investments, employment, and prices have been negatively affected.

The second factor leading to a decline in prices is the evolution of the global economy brought about by the economic development of Europe, Japan, India, China, India, and other countries from the Third World. This factor is essentially the most important one in affecting a recession, because foreign competition does prevent American producers from increasing prices to defend profit margins. After the World War II until the 1970s the American economy was the dominant force internationally and was able to provide goods and services to many countries. To be able to do so, necessary levels of investment, employment, credits, and infrastructure were provided. But the economic development in Europe, Japan, China, and India, has made American producers lose some of their global and domestic market shares, which may partly explain the structural change in the US economy from the manufacturing to the service sector.

In fact, Mitchell (1920) introduces three international factors contributing for the decline in domestic prices. He argues that prices of products decline if foreign demand on US products (exports) decreases. This may be due to shrinkage in the availability of foreign markets and to the end of prosperity in countries linked to the U.S. economy. Mitchell (1920) suggests three more variables that decrease demand for U.S. exports are the higher exchange rate of the dollar, high tariffs, and the lower credits for foreign buyers. When the demand for U.S. exports declines; profits, employment, and investment will decrease later on, which will in turn push prices to decline (Mitchell,1920, p.135). It is also true that as the exchange rate of the dollar is appreciated and interest rate rises, imports will increase, exerting a pressure on domestic prices to decline. And the opposite is correct if the dollar is depreciated. Under this condition, prices of imports will rise, and so will the inflation rate. Lastly, foreign tariffs on U.S. exports are no doubt another factor reducing U.S. exports, because these exports become expensive after the tariffs.

The third factor generating the decline in prices is the decline in government spending on wars or militarism. The decline in this spending will reduce demand for military equipment and materials related to the war economy. This decline will in turn reduce profitability and investments in the military and other related industries (Mitchell,1920, p.138 and p.140). Consequently, this reduction will reduce employment and income in these sectors, which will reduce people's consumption spending. Eventually, this interdependent and cumulative process will reduce investments, incomes, and prices further in all economic sectors. But the sequence is reversed if military spending rises. That is, the increase in military spending will generate higher investments and incomes in the military-related industries and will increase prices, interest rates, and inflation.

The fourth factor generating the decline in prices is related to debts of corporations, consumers, and governments, particularly the pyramiding of corporate debts (Mitchell 1941, pp.65-66). During prosperity corporations borrow because of their high profits to finance their ventures such as acquisition of other firms. And when stocks are quoted higher in the stock markets, these corporations can borrow more. But when interest rate increases, the capitalized value of prospective profits decline, so will the credits extended to these firms, because their borrowing power is weakened. That is, when the cost of doing business rises, credit extension declines, and so will new orders. Debt has made corporations spend a part of their profits on interest payments rather than on investments. Similarly, debt has made consumers spend a proportion of their income on interest payments rather than on spending and savings. Government debt has been on the rise due to the deficit expenditure on wars, which increases interest rates. Annually, the federal government pays more than 20 percent of its spending on interests to people holding government means of debt. Consequently, government debt has down-sized government activities and crowded out private investment spending, which may eventually lead to privatization of public activities such as education.

Debt (or credits and money supply) can be negatively affected by the changes in the required reserve ratio. Mitchell (1920 and 1941) makes the argument that the required reserve ratio can be raised by the Fed to reduce bank loans and money supply, which will affects debt and spending negatively (Mitchell,1941, p.59). Consequently, prices will decline. Similarly, if banks refuse to purchase of government bonds, then the banking system will generate a smaller quantity of money; consequently, prices and price level will have to decline as well. But price decline was the prime issue for reducing profitability: "The price decline provided the great economic issue of that day" (Mills, 1949, p.736). In contrast, if banks do purchase government bonds, then new money will be injected in the economy, and the inflation rate will be significantly enhanced.

It should be stated that Mitchell explains some institutional changes that prevent the decline in prices, or they may raise prices. For example, the establishment of oligopoly and monopoly through mergers and acquisitions according to Mitchell can help some big producers to raise prices to defend profit margins (see Homan 1928). For example, some oil corporations can merge (such as the merger of Exxon and Mobile) in order to raise oil prices. In contrast, if these business methods of concentration and centralization are not allowed by courts, the tendency towards competition will be enhanced. Consequently, prices will normally decline.

Given the increased costs of doing business and the forces leading to a decline in prices, producers will not be able to defend their profit margins due to global competition. Once profits margins decline or expected to decline, capitalists will invest less and will try to reduce employment. Wages will decline and workers' spending will decrease. Hence, a pressure on prices to decline further will continue. At the same time Mitchell thinks that when prices and wholesale prices are declining, stock prices will decline as well (1910, p.520). In fact, Mitchell thinks that stock prices even fall sooner than commodity prices, and if the anticipation of future dividends is gloomy, stock prices will decline further (1910, p.373). This condition reduces corporate values and weakens their ability of obtaining more credits, creating pessimism that will affect prices of stock negatively and will erode confidence in the economy. The weak confidence will push prices to go down, contributing for the creation of what Mitchell calls, "the rich man's panic", a condition that pushes prices of stocks further down (1910, p.373).

Indeed, profit margins are squeezed, so is the effective capitalization and credits. Mitchell explains:

> When profit margins are threatened by the encroachment of costs, when these encroachments cannot be offset by ... advances in selling prices, and when the rate at which profits are capitalized is reduced...then creditors press their claims (1941, p.71).

When creditors press their claims, the debtor has various ways of raising funds: applying to other lenders, putting pressure upon those who owe them money, persuading other creditors to allow more time on sums due, forcing cash sales of wares on hand, or sacrificing their securities. If these measures succeed, a debtor may escape bankruptcy (Mitchell, 1941, p.72), but these measures increase the difficulties of others who may start pressing their claims. This process of liquidation (the process of forcing the settlement of outstanding accounts), aggravated by the facts that "banks are...loath to increase loans at such seasons" (Mitchell. 1941. pp.73-74, p.97, and p.128) and that they try to increase their reserves will create more tension in the money and investment markets. Eventually, Mitchell thinks, the "crisis may degenerate into a panic" (1941, p.74), a situation when many banks are failed; when distrust in the financial system is born; and when economic agents cannot obtain cash (see also Mitchell,1941, p. 81 and pp.126-127).

The crisis may sink the economy into a depression. When demand declines firms reduce employment and operations. As unemployment increases, incomes will decline, so will consumption and saving (Mitchell, 1941, p. 131 and p.136). Demand by producers for materials and renewal of equipment will decline. Many existing factors will stay idle, causing in turn higher unemployment and reduction in incomes. Demand for construction will decline. Falling prices continue and "a reserve army of capital and labor" is formed. Weak enterprises take work at low prices relative to other enterprises. Interest rate declines further and bond prices rise. But prices of common stock fall due to a reduction of present and prospective profitability. Later on

banks start having more deposits compared to withdrawals and a large reserve which increases their ability to provide credits at low rates, a process that will increase prices relative to cost. But this positive aspect of the quantity of money is impeded by the decline in velocity of money resulting from the slowdown in economic activity. Along with the other forces discussed in the beginning of this section, these variables will create the necessary condition for the transition from depression to revival and then to prosperity.

EMPIRICAL FACTS

We can use the theoretical segment of the crisis provided by the Mitchell's theory of the business cycle to explain the recent economic crisis in the U.S. economy. It must be understood that a recent economic condition means a situation that was evolved by forces operating over sometime ago. The important current facts which have been evolving during the revival and prosperity periods started after the end of the last recession of March 2001, and are as follows.

Wages have not increased relative to productivity, and the cost of labor per unit of output has been on the decline due to a higher growth rate of productivity and a low growth rate of wages resulting from the process of outsourcing. Actually, productivity rose by about 5.4 percent over the last three years and real labor compensation per hour increased by 4.2 percent, indicating that the difference was converted into more profits. Consequently, stock market was rising during 2007.

The interest rates have increased several times (about 17 times) between June 2004 and August 2007. The federal funds rate, which is the rate charged by banks for overnight lending, increased from 1.0 to 5.25 percent, and these increases were engineered by the Fed to control the inflation rate. But these increases, given the economic condition, will push the long run interest rate to rise. As it is widely known, the Fed can control the federal funds rate but cannot control the long run interest rate. The latter is determined by the capital market which consists of private and public financial institutions. This long run interest rate is based first on the rate quoted by the U.S. Treasury when it issues treasury notes. The federal budget has been in deficit, and the government needs to borrow. The Treasury does the borrowing when it auctions its paper. This is usually a safe place for lenders to lend their money. So, the Treasury obtains the funds to finance the budget deficit. If the financial institutions are interested in taking the risk, they can lend their money for a higher long term rate of interest, which includes the Treasury rate plus a risk premium. Thus, the long run rate becomes higher than the short-term, and when the Fed increases the short term, and the government borrows more funds, it is most likely that the long term interest rate will rise. Stated differently, financiers do not lend their funds at a low interest rate during inflationary and uncertain environment. In short, the Fed has no control on the long run rate of interest, and the financiers do not provide loans during this bad economic condition, because the real value of their loans will decline. Thus, credit crunch, or liquidity shortage, will emerge.

The increases in the interest rates led to several increases in adjustable mortgage rates and have bankrupted many individuals who borrowed funds at these rates. This is because their monthly payments increased tremendously, and many borrowers defaulted. For example, some mortgage monthly payments increased from $1200 to $2300, an increase that many borrowers could not afford to pay. In fact, those borrowers may need more than one job to pay just these marginal increases in the mortgage rate. Following these defaults foreclosure ensued and prices of houses have declined to levels such that their values cannot cover their loans. Consequently,

financial creditors, banks, and other financial institutions such as Bear Sterns have lost billions of dollars, and these losses will continue, creating pessimism and destroying confidence. Some people who have equities in their houses have lost such equities and will not be able to refinance their homes for obtaining funds to spend for investment and consumption. That is to say, their wealth effect is eliminated and may become negative.

Since August 2007, given that the Fed started cutting the short term interest rates, the impact of the previous increases in the interest rates on the U.S. economic performance has been disastrous. Higher interest rates have created credit crunch. Many bankers have developed fear toward lending many to individuals and business firms that are in need for credits for consumption and investments. Consumer confidence has been very weak in September 2007 and February 2008 (about 78 percent) because of the housing market, the increased oil prices, and the tightened credit market. Many home owners have been facing foreclosure, and others have already left their houses. Simply, the increased interest rates created a financial burden on many individuals and business enterprises, and at a minimum they will increase the rate of unemployment and will reduce the Gross Domestic Product (GDP). This is because they reduce consumption expenditures and contributing significantly for the reduction of private domestic investments which have already declined due to the collapse of the housing market. Once consumption expenditures decline, retailers will be affected negatively. It is true that the Fed has reduced the short run interest rate to 3.0 percent in January 2008 and 2.25 percent on 18 March 2008, but the economic performance has been already negatively affected.

Despite the early increases in interest rates, the dollar continues to decline against the euro and other leading currencies, and this decline has been intensified since August 2007 when the Fed cut the short term interest rate. This decline increases U.S. exports and reduces imports, a situation that will reduce the deficit in the U.S. international trade balance (which is about $2 billion a day) and will increase domestic prices. Higher prices of U.S. imports do eventually contribute for increasing prices of imported items and the rate of inflation. Other countries exporting goods and services to the United States of America such as the European countries will be affected negatively, as their exported goods and services become expensive in the U.S. economy. Hence, their economies will suffer from a reduction in export revenues and a rise in the rate of unemployment. The declining dollar also increases profitability in dollar values when profits generated globally are converted from other expensive currencies to the dollar, a situation that makes the stock market looks more reasonable. Moreover, tourism will increase to the United States of America and so will direct foreign investments, because US assets are becoming, e.g., cheaper in terms of the euro.

The danger of the declining value of the dollar, however, is that many countries and investors holding dollars may be forced to dump (or switch from) the dollars collectively for other alternative currencies, and consequently the dollar will collapse and other leading currencies will be appreciated. In other words, investors have to diversify their portfolios for higher returns by holding a less amount of dollars, and this behavior is exacerbated when bad news are coming about losses reported by large financial institutions, higher oil prices, and the collapse of the housing market. An interesting reaction comes from China. China is purchasing more dollars by the yuan, a behavior that keeps the value of the yuan in terms of the dollar low. Hence, China's exports to the United States of America, which becomes an absorbing machine for U.S. jobs, continue to increase.

Another important danger of the continued decline of the dollar is the possibility of the emergence of conflict between the Unites States of America and some European countries whose

currencies, euro and pound, have been appreciating against the dollar. This appreciation, along with the higher rates of interest in Europe relative to the Unites States of America, will reduce their exports significantly to many countries, a decline that affects their economic condition. Their exporting industries will be contracted and their rates of unemployment will rise, generating lower incomes to their own people: propagation of a recessionary condition. Once people's consumption declines, investments will stop rising. Usually, these friendly countries may respond to such economic deterioration. Most likely, Airbus received a $40 billion contract form the U.S. air force in order to grease its economic wheels at the expense of the American workers whose wheels will be degreased by the loss of this contract. However, others may argue that the contract was awarded due to the high quality of Airbus military products.

Despite the previous increases in the federal funds rate, the inflation rate has been increasing. The federal government has created a large budget deficit (and national debt) which has become a very important element for generating higher inflation rates. The deliberate increases in government spending on militarism, particularly after the occupation of Afghanistan and Iraq, have been responsible for increasing prices of commodities and services that have increased the domestic rate of inflation. The government has been trying to finance the wars in Afghanistan and Iraq through deficit financing or selling government bonds to domestic and foreign purchasers such as China and India. Usually, a war is financed by increasing taxes, but recently this has not been the case, because the Bush administration is reluctant to raise taxes, which is an inconsistent policy with the supply-side economics whose basic element is the reduction of tax rates in order to stimulate business enterprises. Consequently, these two wars have forced the government to increase spending, and the expectations of higher future inflation rates have become an easy issue to predict.

But the war expenditures (which are estimated on 13 November 2007 to be $1.6 trillion, ignoring the cost suffered by the Iraqi and the Afghan peoples) have benefited oil corporations and the military complex, because the more bombs that are dropped in the Middle East, the higher the prices of oil and the higher the demand for military hardware will be. Hence, very high revenues and profits for these industries (and other related ones) have been generated. The danger of this condition is that these corporations are very powerful and have their supporters every where in the world and will take a defensive position for their profits. They can play a crucial role to keep the military approach of the U.S. foreign policy. That is, these corporations can always influence a democratic government to use bombs and missiles in dealing with foreign affairs.

Not surprisingly, there is a strong linkage between deficit spending, inflation, and the declining value of the dollar. When the Fed finances the government for its spending, the money supply will be increasing, because new high-powered money is injected in the economy. The increased money supply (or the deliberate reduction in the interest rate) will push agents to hold the desired amount of money and spend the excess for purchasing domestic and foreign goods, services, and assets. More spending increases the inflation rate and affects the exchange rate of the dollar. As more dollars are dumped in the world market, the exchange rate of the dollar against leading currencies such as the British pound and the Euro will decline. When the exchange rate of the dollar falls, oil prices (determined in dollar) rise, for oil producers are not willing to sacrifice part of their revenues for the decline in the exchange rate of the dollar. That is, the Fed is partly responsible for the increased price of oil, which results from cutting the short term rate of interest. The Fed has been doing that in order to prevent the economy from drifting towards a recession, a situation called a Philips curve: a higher rate of inflation is associated with

a lower rate of unemployment, which was proved to be wrong by the late Milton Friedman a long time ago.

The increased prices of crude oil do increase the cost of intermediate goods (inputs) and production cost, and reduce the rate of return, or profitability, and generate a higher inflation rate. Historically, higher oil prices did contribute for the occurrence of many recessions over the last 60 years, including the U.S. recession of 2001, because they reduced profitability of many business enterprises. The price per barrel of crude oil rose from $21.00 in 1999 to about $32.00 in December of the same year. The high price of oil continued until the first week of September 2001 and then declined to about $24.00 after the end of September 2001. Many arguments had been proposed suggesting that the American economy could not be affected by the high price of oil, for the economy was able to absorb oil shocks due to technological progress. But the reality turned out to be different, because the higher oil prices did affect people's spending negatively and did increase production cost for business enterprises.

In March 2007, oil prices have reached $111 a barrel and have increased the cost of production of many industries using oil as a basic input for their operations such as the airline, the auto, and the food industries. (In fact, the American auto industry is cutting production, because people are switching towards small efficient foreign cars.) These increases in oil prices have also deteriorated people's real income such that department stores suffered more than 15 percent decline in sales during the first quarter of 2008. Once these industries' profits are affected negatively, other related industries suffer as well, a situation that culminates in a severe crisis in the economic activity. Furthermore, on the average, an American spent annually more than $3000 on oil, and this high cost absorbs a reasonable percentage of consumer's income, which deprives other industries from obtaining advantages of consumers' spending. In other words, demand for oil is inelastic, and when the price of oil goes up, total expenditures on oil will mount, and total expenditures on non-oil products will decline. Therefore, the only beneficiary institutions of higher oil prices are foreign oil producers and oil corporations, and both have generated super profits. For example, Exxon/Mobile generated $41 billions in revenues during 2007.

It should be noted that the ongoing increases in oil prices play the same role played by the increases in corn prices during the early period of the 1800s. The increased corn prices helped landlords to increase their rents at the expense of capitalists. Similarly, the current high oil prices are increasing the profits of oil corporations at the expense of consumers and other capitalists. Consumers have to reallocate part of their expenditures to purchase oil at the expense of a reduction of their spending on other goods and services. Many capitalists have to pay higher prices for oil, a situation that increases production cost and reduces capitalists' returns. The danger of this situation can easily come when these increases in costs generate cost-push inflation, as the current US economic condition partly shows.

Many other factors can lead to an increase in the cost of production, a situation that tends to generate a crisis, or a recession. Higher health cost and insurance premiums will increase the cost of production and will reduce net returns. These higher costs are contributing to force many capitalist firms to outsource their business operations to foreign countries. Immigration regulations which are important for capitalists have not yet passed by the Congress. If regulations are not enacted to damage the capitalists, wages of foreign labor in the United States will be low; a condition that will increase the rate of returns but will deteriorate people's standard of living. Many firms such as Microsoft will try to bring foreign labor to work in the country. If immigration regulations are enacted to decrease immigrant labor to the United States

of America, then this condition will keep wages relatively higher in the economy, a situation that will increase cost of production for many business enterprises. It is also clear that the high cost of health and insurance are cutting people's income and are reducing their consumption spending.

Essentially, the impacts of the earlier increases in the short-term rate of interest and the continued increases in costs of healthcare, oil, and education have affected the aggregate supply of the economy negatively. The aggregate supply will decline. These higher costs have also affected consumption and investment expenditures negatively, which usually lead to a decline in the aggregate demand. Given higher exports and government spending which affect the aggregate demand of the economy positively, then the condition of the economy depends on which effect outweighs the other. If the effect of the increase in the aggregate demand is larger that the effect of the reduction in the aggregate supply, then the economy can be in a growing condition with a very high rate of inflation. If the effect of the increase in the aggregate demand is the same as the reduction in the aggregate supply, then the economy is in a stagnating condition with inflation. If the effect of the increases in the aggregate demand is smaller than the reduction in the aggregate supply, then the economy is in stagflation: a higher rate of inflation and a lower rate of growth in the Gross Domestic Product (GDP). These outcomes are grounded in the wars which are bad for the American economy and people. (It should be stated, however, that if for an unpredictable reason a new technology or new methods of innovations are suddenly introduced in the economy by our entrepreneurs and are able to increase the aggregate supply significantly in a short period of time, then the GDP will rise and inflation will decline. But such a possibility is remote in the short run.)

The Bush administration and the Fed are banking on the first outcome which is a high rate of inflation with a high growth rate of GDP. First, in a global economy this case is unlikely to occur. The magnification effect of the increased government spending and exports will not be kept internally, a situation that will weaken the multiplier effect. Second, the dollar will continue falling and the cost of imports will be rising, creating a very high rate of inflation. If the Fed does not increase the federal funds rate, hyperinflation will be created and the economy will be collapsing, as capitalists will go on strike of their own.

POLICY IMPLICATIONS

Mitchell who is similar to Veblen provides a theoretical framework and empirical analysis but furnishes no direct policies for solving the problem of the business cycle. This paper tries to use Mitchell's theory of the business cycle to formulate policies for countering a crisis. Fiscal and monetary policies are the available tools for decision makers for correcting economic problems. Fiscal policy consists of government spending and taxes, and can be used as follows.

Government spending must be directed toward establishing effective research and development centers. These centers can provide research which can be used for developing new products, services, and technologies. Such items are important for the competitive advantage of business enterprises and the nation. That is, these new technologies and products will help entrepreneurs for investing in the economy, an act that will increase income and employment for economic agents. Government spending should also be directed toward developing education (or knowledge) and entrepreneurship. Education needs to emphasize innovations, entrepreneurship, leadership, marketing, and ethics. This type of education will create informed citizens and innovative entrepreneurs. Education contributes significantly for generating productive labor force and for minimizing cost of production. Education will also enforce the development of new

technologies. Since education has become very expensive, the government must help people to have higher education and training, and these two types of knowledge require government financial support for those people seeking to achieve a relevant level of education and training.

The spending that goes toward education, in turn should call for government spending that should be directed toward developing new technologies. New technologies cut cost and increase investments. Both are very viable goals for business enterprises. Technologies are also important for generating new jobs and incomes for the working people. They are also indispensable for the capital-good industries. When the latter are affected by new technologies, they will expand and prosper, which will in turn affect other industries positively. Development of new technologies, education, and entrepreneurs will provide the necessary foundations for new innovations that can be used for enhancing the competitive nature of the country. If the country becomes more competitive globally, world market's share will expand, allowing US producers to sell more goods and services globally. Likewise, government spending is necessary for developing the infrastructure of the country. Roads and bridges, communications, power stations, and transportation are crucially important for the development of the country. This sound infrastructure will minimize production cost and will generate many important jobs for the working people. Government spending also has to be directed toward improving the health care. A sound healthcare system helps people to be productive, and consequently allows people to contribute for the economy and for business enterprises. Thus, government expenditure on health will increase business profitability and people's income. Additionally, government spending must also take into consideration the protection of the environment. Historically, many places were destroyed because of environmental problems. In order to have reasonable places of living with healthy environment for natural resources to grow, government has to spend funds for protecting this environment. And this spending will generate employment and income for people and huge investment opportunity for businesses to produce new means of production.

With respect to the tax tool, taxes should be used as follows. Generally, government spending has to be financed by tax revenues in order to avoid any public borrowing. Taxes are restricting consumption and investment spending, and consequently, while the tax system must be progressive in that as income increases tax must rise, the tax rate must be optimal. That is, this rate must be fair and must allow economic agents (working people and businesses) to pay a tax rate that should not discourage their savings, investments, and working ability. Such a tax rate will stimulate business enterprises for investments and expansion, and consequently, employment and income will rise, making people more cohesive and happy.

The second policy tool is monetary policy. This policy must properly deal with the issue of liquidity. Credits need to be provided to businesses for enlarging the productive capacity of the economy and to people for building houses and increasing consumption. Investments always create employment and income which in turn stimulate more investments and profits whether in consumption or capital goods industries. The Fed, the authority that conducts the monetary policy, should also regulate and control the operations of the financial institutions to avoid manipulation and dishonest operations such as the sub-prime lending. Thus, this policy can help the economy stabilizing prices and avoiding credit crises.

Given these two policies in a global competitive economy, the country always needs very competitive firms under the leadership of honest entrepreneurs who always innovate new products, new methods of production, new organization, new technologies, to mention a few. Under their leadership entrepreneurs can dominate the world and benefit their nation in term of employment, high money wages, more investments, better environment, industrialization, high

quality education, high productivity, high consumption, better health care system, developed infrastructure, and more happiness to all citizens. If firms can achieve the goal of greatness, the American people will realize that free international trade and labor movement are the best complementary approaches to democracy and freedom the country preaches. Consequently, the country cannot compete globally without innovative entrepreneurs and honest leadership.

In short, the essence of this policy recommendation is aiming at developing the nation's competitive advantage, which in turn enlarges the domestic market and the aggregate demand. Mitchell according to Hansen (1949) thinks that public works, unemployment insurance, and economic planning are reasonable tools to diffuse economic prosperity and development in the country.

SUMMARY AND CONCLUSIONS

Mitchell's theory of the business cycle is indeed a comprehensive disequilibrium dynamic theory of the entire economy. Economic variables are well-connected, affecting each other cumulatively over time. For example, prices depend on current and past prices, and consumption depends on current and past incomes. Investment depends on present and prospective profits, and profits increase when investments rise. These variables are microeconomic and macroeconomic variables which are grounded in money and banking, technologies and innovations, stock markets, and the theory of finance. This theory is very fascinating, because it includes several vital concepts such as reserve productive capacity and markup pricing. It also covers other important concepts such as uncertainty, expectations, multiplier, accelerator, and aggregate demand.

Comparing Mitchell's theory of the business cycle with the dominant theories provides several favorable points towards his theory. Friedman (1950) thinks that Mitchell's theory is general and he is correct. It is general because it includes many causes each of which represents an explanation adopted by a certain theory of the business cycle. Sherman's and Kolk's Marxist theory of the business cycle concentrates on the class conflict in terms of higher wage share compared to profit share in explaining the crisis. Mitchell's theory has an important variable showing the relationship of wages to productivity, which reflects the class conflict. If wages increase relative to productivity, the labor cost per unit of output rises, and profits share and profit margins will decline. Hence, the crisis occurs. Keynes explains the trade cycle by uncertainty and the collapse of the marginal efficiency of capital and confidence, and Mitchell's theory explains the crisis by the collapse of the profit margins and the business confidence, and both variables are important indicators for generating uncertainty.

Schumpeter's theory of the business cycle concentrates on innovations as the basic explanation of the business cycle. Mitchell's theory Which Schumpeter admires considers innovations as a triggering variable for prosperity. Real business cycle emphasizes the unpredictable part of technology (or the Solow residual) as the driving force of economic expansion and development, and Mitchell's theory considers technology as an important factor in augmenting aggregate demand and productive capacity.

Minsky's Post Keynesian business cycle theory concentrates on the role of high interest rate and debt in explaining crisis and bankruptcies of many economic agents, and Mitchell's theory argues that higher interest rate reduces the capitalized value of profits and credit extension, pushing many firms towards financial collapse. A higher interest rate generated by a reduction in the quantity of money is also the most important variable in explaining recessions according to

Friedman, and the same reasoning is suggested by Mitchell. New Keynesian economists partly explain a recession in terms of coordination failure and higher costs of production, which reduce investments, aggregate supply, and employment. Mitchell's theory also uses the same variables for explaining the crisis.

Mitchell's theory of the business cycle is very relevant for explaining the current crisis in the U.S. economy. The current crisis is explained by the increases in oil prices and health cost, the increases in the prices of imported materials such as oil, the initial increases in interest rates, and the credit crunch, and Mitchell's theory is very useful in explaining this crisis, because it emphasizes the rising cost of doing business.

Mitchell's theory can direct policy makers in two ways. The first way which ensures business prosperity by enhancing the competitive advantage of the economy is the formulation of a strategy that can enhance education and research, entrepreneurship, innovations and technological development, and the infrastructure of the country. This strategy can be financed by government spending which is accommodated by tax revenues generated by setting optimal tax rates on people and business enterprises. Monetary policy is also used for providing people and business enterprises with sufficient amounts of credits. The second way the theory can be used to direct policy makers is the massive cut in cost of production. This is because all those components, including a plan for the health care and education, will reduce cost of production for many economic agents, making them more competitive globally. Basically, this reduction in cost can be generated by having skilled workers, better technologies, lower taxes and interests, and efficient entrepreneurs who can cut waste and inefficiencies for more profits with high employment and wages. Innovations become the best way for achieving this goal.

REFERENCES

Burns, A. F. and Mitchell, W. C. (1946). Measuring Business Cycles, New York: NBER.

Fisher, I. (1933). The Debt-Deflation Theory of Great Depressions. Econometrica, (1), 337-352.

Friedman, M. (1950). Wesley C. Mitchell as an Economic Theorist. Journal of Political Economy, 58, (6), 465-493.

Friedman, M. and Schwartz, A. (1963). Money and Business Cycles. The Review of Economics and Statistics, 45, (1), Supplement, 32-64.

Hansen, A. H. (1949). Wesley Mitchell, Social Scientist and Social Counselor. The Review of Economics and Statistics, 31, (4), 245-255.

Homan, P. (1928). Contemporary Economic Thought, New York: Harper.

Hoxie, R. F. (1903). The American Colonial Policy and the Tariff. Journal of Political Economy, 11, (2), 198-219.

Keynes, J. M. (1936). The General Theory of Employment, Interest and Money, New York: Harcourt.

Knoop, T. (2004). Recessions and Depressions, London: Praeger.

Koopmans, T.C. (1947). Measurement Without Theory. The Review of Economic Statistics, 29, (3), 161-172.

Kuznets, S. (1949). Wesley Clair Mitchell, 1874-1948: An Appreciation. Journal of the American Statistical Association, 44, (245), 126-131.

Kydland, F. and Prescott, E. (1982). Time to Build and Aggregate Fluctuations. Econometrica, 50, (8), 1345-1370.

Kydland, F. and Prescott, E. (1990). Business Cycles: Real Facts and a Monetary Myth. Quarterly Review, Federal Reserve Bank of Minneapolis, 14, (2), 3-18.

Lucas, R. (1980). Methods and Problems in Business Cycle Theory. Journal of Money, Credit and Banking, 12, (4), Part 2, 696-715.

Lucas, R. (1981). Studies in Business Cycles, Cambridge, MA.: MIT Press.

Lucas, R. (1987). Models of Business Cycles, Oxford: Basil Blackwell.

Mankiw, N. and Romer, D. (1991). New Keynesian Economics, Cambridge, MA.: MIT Press.

Marx, K. (1967). Capital, three volumes, New York: International Publishers.

Mills, F. C. (1949). Wesley Clair Mitchell, 1874-1948. The American Economic Review, 39, (3), 730-742.

Minsky, H. (1986). Stabilizing An Unstable Economy, New Haven, CT.: Yale University Press.

Mitchell, W. C. (1910). The Prices of American Stocks: 1890-1909. Journal of Political Economy, 18, (5), 345-380.

Mitchell, W. C. (1910). The Prices of Preferred and Common Stocks: 1890-1909. Journal of Political Economy, 18, (7) 513-524.

Mitchell, W. C. (1913). Business Cycles, Berkeley, CA.: University of California Press.

Mitchell, W. C. (1918). Bentham's Felicific Calculus. Political Science Quarterly, 33, (2), 161-183.

Mitchell, W.C. (1919). Statistics and Government. Journal of the American Statistical Association, 16, (125), 223-235.

Mitchell, W. C. (1920). Price and Construction. The American Economic Review, 10, (1), 129-155.

Mitchell, W.C. (1927). Business Cycles And Its Setting, New York: NBER.

Mitchell, W.C. (1941). Business Cycles And Their Causes, Berkeley and Los Angeles, CA.: University of California Press.

Mouhammed, A. (2005). A General Explanation of the American Business Cycle of 1991-2001. Journal of Academy of Business and Economics, 5, (2), 1-12.

Mouhammed, A. (2008). Mitchell's Business Crisis in a Globally-Linked Capitalist Economy. Journal of American Academy of Business, Cambridge, 13, (1), 53-64.

Schumpeter, J. (1930). Mitchell's Business Cycle. The Quarterly Journal of Economics, 45, (1), 150-172.

Schumpeter, J. (1939). Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process, New York: McGraw-Hill.

Schumpeter, J. (1950). Wesley Clair Mitchell (1874-1948). The Quarterly Journal of Economics, 64, (1), 139-155.

Sherman, H. (1991). The Business Cycle: Growth and Crisis Under Capitalism, Princeton, N.J.: Princeton University Press.

Sherman, H. and Kolk, D. X. (1996). Business Cycles And Forecasting, New York: Harper.

Veblen, T. (1983). The Engineers and the Price System, London: Transaction Books.