SIGNIFICANT ISSUES ON CONSUMPTION AND SAVING

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Abstract

In this article, the authors analyze some aspects of correlation between consumption and savings. Consumption and savings are addressed to certain conditions, fluctuation in time of consumption, the possibilities of increasing consumption in optimally with certainty. The models presented are described in detail and commented.

Between saving and consumption whole dynamic menus subjective human behavior that oscillates between purchasing goods and securities and preservation in some form of money. In one form or another, for the acquisition of securities or shares, beyond the commercial character of the action, signifies still investing in securities with appropriate amount of money, which ultimately represents her papers invested with a certain value and inevitably and significance.

These two aspects of the dynamics of decision-makers form part of the spring while important in shaping behavior subjective decision-maker. Removing the initial act of modeling out of time, by considering the approach decision to run a single time, they set the rules of mathematical modeling behavior decision in a static framework, subject only action of a number of variables, which are as less under the sway of subjectivity and as much below the obictivităţii.

Keywords: certainty, decision, consumption, saving resources
JEL Classification: E20, E21

Introduction

Until now, we assumed that the decision maker only covers one cycle. This perspective obscures important intertemporal dimension of risk. In real life, agencies can postpone the risk for later. Indeed, the ability to defer risky choices increase the value of their own choosing, usually called "value real choice." Policy makers can choose to share the possible gains and losses in the current elections that we have done several times and cycles, which becomes

a kind of temporal diversification of risk effects on final consumption. Alternatively, they can hope to recover some of the losses current assuming additional risks in the future. In the extreme, this strategy can lead to "assume your total loss", as a player from Las Vegas to bet the little money available in a final and ultimate bet, hoping to recoup the massive losses suffered. Finally, agencies can change levels of consumption and saving pending planned future confrontation with uncertainty and to save a little more in the earlier phases as a kind of protection against future risks. We will continue to analyze the relationship between risk and time. Mment we will focus on the impact of risk on the organization judicious consumption and saving.

Literature review

Understanding consumer behavior is probably one of the most important challenges of modern macroeconomics. In this area there have been numerous approaches from the works of Modigliani and Brumberg (1954) and Friedman (1957). These developments relate to real business cycle theory. Estimates relating to the degree of resistance to fluctuations in consumption can be mentioned in various papers. Hall (1988) mentioned an estimate around 10, while Epstein and Zin (1991) found values between 1.25 and 5. An experiment in this regard was made by Barsky, Juster, Kimball and Shapiro (1997). Precu first formal analysis of savings is due to Leland (1968), Sandmo (1970) and Drez and Modigliani (1972). Kimball (1990) examining fashioned term care premium properties caution. Over time it has consolidated a significant literature on the effect of liquidity constraints in the optimal rates of saving. Strotz (1956) was the first to put the issue of temporal consistency for consumers using a discount factor that decreases exponentially with time horizon. Pollack (1968) solved the problem using a temporal consistency from game theory approach in which different players of the same consumer is different sivariante in different periods. Laibson (1997) review this issue to explain different aspects of the credit markets so that we have today is a vast literature on "reducing hyperbolic".

Anghelache and Anghel (2016, 2014) presents econometric tools useful in micro and macro level analyzes and modeling economic and financial instruments. Anghelache (2008) is a work of reference in economic statistics. Anghelache, Anghelache Jackal (2016) analyzes the evolution of capital investment in Romania. Anghelache, Manole and Anghel (2015) study, regression unifactorial, final consumption characteristics, Anghelache, Manole and Anghel (2015) analyzes the growth rate of final consumption and investment on Romania's Gross Domestic Product. Anghelache, Manole Dumitrescu (2015) evaluated the correlation between final consumption, gross disposable income and investments.

Methodology and Data

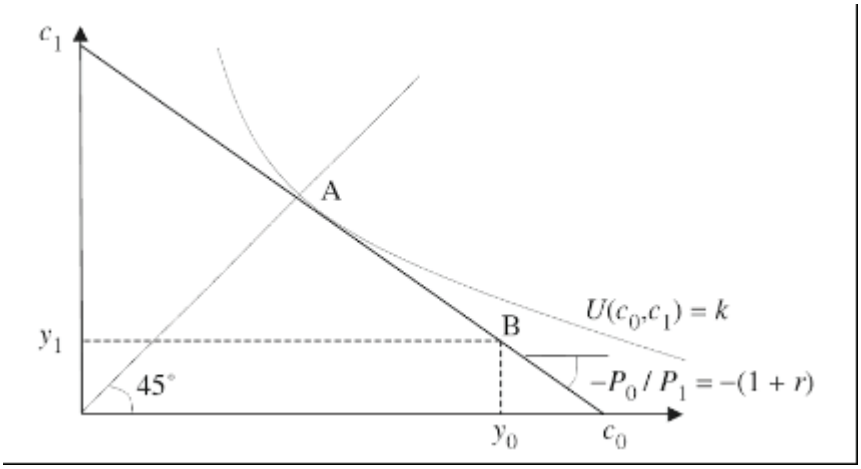
1. Consumption and savings under certain

Casuistically as a benchmark, we start with the characterization of optimal consumption with certainty Suppose a decider lives agent for a known number of cycles. During indexing na denotes the date t = 0, ... n - 1. agent has a secure financial flow yt where yt denotes the date t receipts safe. It assumes a credit market lacks effective rate constant for both credit derisc r and for the loan. In each cycle, the agent decides how much to consume, which would implicitly define how much you spend or how much it will save. If ct denotes consumption at time t, conditioning dynamic of the budget can be expressed as:

$$zt+1 = (1 + r)[zt + yt \quad ct], t =0,\ldots,n - 1, \tag{1}$$

where zt represents the amount transferred in time t - 1 to time t. We assume that z0 is zero initial amount.

Figure 1



Since lenders will not accept to give credit agents will not be able to repay the debt later, it makes a final constraint zn 0: when the agent dies, he can not be positioned with a net negative debt. Since I assumed certainty regarding both wealth and income, this constraint may be imposed on debt financing. Making use of dynamic constraint on the budget (1) recursive condition zn 0 can be written as:

$$\sum_{t=0}^{n-1} \frac{y_t - c_t}{(1+r)^t} \geq 0 \tag{2}$$

This budget constraint agent is alive. It means that the net present value of the stream of savings yt - ct must be non-negative; or equivalent,

the present value of lifetime consumption can not exceed the current value of income throughout life. More directly, we can write

$$\sum_{t=0}^{n-1} \Pi_t c_t \tag{3}$$

where Π (1 + r) t and w0 Πtyt life is wealth, for example, net present value of the income stream. Note that Πt a coupon of zero value of an action with maturity date t, for example, a good generating unit cash only at the time t. For a given value w0, the objective of the agent is to choose the path of optimal consumption (which in turn will define the optimum plan savings) over time.

Let me outline a consumer preference towards younger set of all possible liquidity throughout life. Let U (c0, c1, ..., cn-1) denoting usefulness life when choosing the agent consumption c = (c0, c1, ..., cn-1). Suppose U is increasing and concave function. Optimal consumption is obtained by solving the following schedule:

$$\max_c U(c_0, c_1, ..., c_{n-1}) \tag{4}$$

This issue is described JV decision Figure 1 for two investment cycles. This plan is characterized optimal consumption point "A", where indiferenţăa curve is tangent to the budget line AB.

Before any discussions about resolving this problem as analytical, suppose the agent will choose a profile of income (y0, ..., yn-1) in a particular context of opportunity. This investment is typical investor with an investment of more chances, each with a different stream of earnings. Problem structure (4) Vident mode implies that the optimal revenue profile is one that maximizes the net present their own value (NPV) w0 = Πtyt, regardless of consumer preferences caraxcterizează time that the decider. This result is known as Fisher's separation theorem. It supports NPV rule, which is one of the most important rules of economic ştinţele: Any investor should choose an investment that maximizes the net present value ΣΠt (1 + r) -t financial flow.

The problem (4) is not too different from static decision problem of an agent who consume physical goods in a classical theory of demand. The general properties of these functions are well known. The model can be enriched with a proposal on time preferences, namely the introduction of an axiom which assumes that the order of preference top pair (c0, c1) does not depend on how consumption for two cycles n-2, that is, if (a, b, c2, ..., cn-1) is preferred to (d, e, c2, ..., cn-1), then (a, b, x2, ..., xn-1) is preferred to (d, e, x2, ... , xn-1) for

all (x2, ..., xn-1). This excludes phenomena such as the formation of behavior. This assumption of independence implies that the utility function U must be separable, U (c) t (ct), where ut is the utility (intraperioadă) consumption at time t. To distinguish between the utility function intertemporal U, which call ut as a "function of happiness" of consumption at time t. a common assumption is that the functions of happiness are equivalent: ut (·) = pt u (·) for some functions increasing and concave u and scalar pt 0 . Most researchers have adopted this set of assumptions in the last 50 years. Keeping the character of generality, we consider p0 as a unit. Thus p can be interpreted as a reduction factor fericireu (ct) at time t. If pt is less than unity, can be interpreted as a loss proportional to the utility due to the postponement of consumption, for example, it indicates a preference for eating sooner than later. It is important to separate for a psychological parameter, r, a financial variable. The parameter is used for the happiness factor reduction in the interest rate r timpp is only useful in reducing monetary flows, as seen above.

Using these restrictions, we can rewrite consumption problem as follows:

$$\max_{c} \sum_{t=0}^{n-1} p_t u(c_t) \quad \text{subject to} \quad \sum_{t=0}^{n-1} \Pi_t c_t = \omega_0 \tag{5}$$

The first order conditions for this problem can be written as

PTU (ct) = ξ Πt for t = 0, ... n-1 (6)

together with the tightening budget, where ξ Lagrange multiplier associated with the problem (6.5). Lagrage multiplier ξ is simply marginal utility increases the life of the present value of welfare.

This problem is formally equivalent to Arrow-Debreu static portfolio problem. Just replace "state of nature" with data, probabilities with reduction factors, and "securities" Arrow-Debreu coupons - bonds with zero. Equivalence has many consequences for the working assumptions.

2. Considerations regarding consumption fluctuations while

First, we can interpret the concavity function u happiness in the context of consumption-saving problem in a certain period of time. That is decreasing marginal utility of consumption generates incentives for the decider in terms of a constant consumption over time. Let us consider the special case where pt = 1 for all t, and r = 0, which implies Πt = 1 for all t. Since the conditions of first-order (6.6) that u (ct) = ξ for each period so optimal consumption path that do not show any fluctuation in consumption from one period to another: ct = w0 / n for all values of t. This is a circumstance canâplanul optimal

consumption is a line in Figure 6.1.Dacă income 45□ fluctuates lifelong consumer saving optimal strategy is to save any extra income over w0 / n, or borrow money in the cycle where earnings are lower than w0 / n. Concavity of u implies that second order conditions are satisfied, so that utility-long learning is maximized by eating an equal amount in each period. So if u would be convex, this approach would be a minimum useful life and it is easy to show that maximum utility is achieved by use of a single investment cycle. We conclude that when there is forward (pt = 1), and the interest rate is zero (r = 0), the optimal situation if you can even out consumption function is concave happiness. Thus, the assumption U ' 0 expresses an aversion to fluctuations in consumption over the "natural state" of the Arrow-Debreu static portfolio problem. In the last model, it implies that comprehensive insurance is optimal when the prices of goods equals the probability of each state.

It can measure the intensity of the desire to equalize consumption while considering the situation in which there is no market for loans, so ct = yt. Suppose y0 income at time 0 is strictly less than the income at the time Y1 1. Since the marginal utility of consumption is higher than when the deadline 0 1 u (y0) 1), we know that the agent will not like to change today a unit of consumption per unit of consumption tomorrow.

Agreement on such a model of understanding, would increase the consumption time difference between 0 and 1 moment, and would reduce the overall usefulness. Questioned about the killing unit of consumption at this time, the agent decider tomorrow will require more than a consumer unit for the following day in compensation. One way to measure the strength of this resistance to negotiate the current consumption for the next intake is to define additional compensation k> 0, the consumer should be granted when one agent in order to minimize the loss in consumption at time zero. Considering losses in consumption is sufficiently small k is defined as

$u'(y_0) = (1 + k)u'(y_1)$.

The left side of this equality is the marginal cost of reducing consumption today, while the right side represents the marginal benefit of future growth in consumption by factor 1 + k. In other words, k can be defined so that the loss of utility marginalăprin divest a unit of consumption at time 0 must equal marginal increase his usefulness by adding 1 + k consumer units when Y1 is close to y0 1. If I use first-order Taylor expansion of u (y0) to get closer to y1

$$k \cong \frac{y_1 - y_0}{y_1}\left[\frac{-y_1 u''(y_1)}{u'(y_1)}\right] \tag{7}$$

Resistance to inter-temporal substitution is approximately proportional to the rate of increase in consumption. The multiplication factor, (y) = '-Yu (y) / u (y) is also called the measure aversion fluctuation relative or relative degree of resistance to intertemporal substitution of consumption. Obviously, (y) is similar measure relative to risk aversion Arrow -Pratt model. Both assesses the percentage decreasing marginal utility with respect to a minor percentage increase in wealth or consumption. Currently, we can consider a local measure of consumer aversion to postpone consumption to once or time consuming to one with low consumption slightly increased. In this regard, attention should be given greater empirical estimates of (y), considered somewhere between 1 and 5.

3. Consumption with certainty - increase optimal

In principle, the real interest rate is zero, which feeds anxiety agents makers. Suppose that consumers are calling the discount principle exponentially, p1 = t for scalar less than 1. This implies a yield of pure preference rate at the present time (1) / positive value. In other words, -1 and happiness rate u (ct) multiplied by t is equivalent to happiness decrease at a constant rate for that time period. Using a constant rate reductions subsequent utilities is important for temporal consistency in consumer decisions, as will be seen below.

Impatience and a positive profit in saving has two balancing reasons so as not to equalize consumption over time. A high level of impatience, or higher, causing agents need to consume earlier that time. In other words, impatience tends to question the ways consumer preference in favor of that decrease over time. These two contradictory effects to be combined with aversion to fluctuations in consumption, in order to achieve optimal growth characterizations safe consumption.

Analytical problem solving exemplify this particular function if happiness presents a constant degree of aversion to fluctuations in consumption. Using Arrow-Debreu model analogy, we get the solution

$$c_t = c_0 a^t \tag{8}$$

where:

$$a = \left(\frac{1+r}{1+\delta} \right)^{1/\gamma}$$

and c0 is a consumer initially chose to meet budget constraints across lifetimes. Thus, when the reduction is exponential psychological and relative

aversion is constant, the consumer is best to keep consumption growth at a constant rate g, where

$$g \equiv \left(\frac{1+r}{1+\delta}\right)^{1/\gamma} - 1 \cong \frac{r-\delta}{\gamma} \tag{9}$$

Approximation is closer when not much different from r. Optimum consumption growth rate is positive when above. This property is maintained independently of happiness accurate function. This is where speculative facvoarea caremotivul saving effect dominates forward. Notice here and intuitive aversion effect of fluctuations: an increase in the rate of growth reduces consumption while optimal. But balance is optimal for complete consumption throughout life only when r =, δ as happened when I was r = $\delta = 0$.

Conclusion

In the real world, consumption growth is ascribed business cycles, which put pressure on consumption fluctuation over time. It has been debated over the past 30 years. This cycle was found to have a negative impact on well-being. Forcing her to collapse equalization cycles productive, we benefit consumers whom dislike anyway fluctuations in consumption growth rate optimal g. In 1987, Lucas shows that important effect induced business cycle on welfare has been overrated by specialists . It can measure the business cycle cost by reducing consumption growth rate that the agent would accept in exchange for complete elimination cycle afeceri. Using information concerning fluctuations of the US consumption, Lucas says that "price" business cycle consists of a reduction than one-tenth less than one percent of the annual growth rate of the US economy, which is totally insignificant. The reason is simple: the same as for the risk aversion we deal with the effect of second-order model additional EU aversion to fluctuations in consumption as a result of second order present in the model plus the temporal dimension of model. In other words, consumers have an aversion to fluctuations in extremely low consumption low. Lucas concluded that economists should be concerned rather the characteristics of long-term growth than reducing volatility.

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