

The Austrian Theory: A Summary

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Grounded in the economic theory set out in Carl Menger's *Principles of Economics* and built on the vision of a capital-using production process developed in Eugen von Böhm-Bawerk's *Capital and Interest*, the Austrian theory of the business cycle remains sufficiently distinct to justify its national identification. But even in its earliest rendition in Ludwig von Mises's *Theory of Money and Credit* and in subsequent exposition and extension in F. A. Hayek's *Prices and Production*, the theory incorporated important elements from Swedish and British economics. Knut Wicksell's *Interest and Prices*, which showed how prices respond to a discrepancy between the bank rate and the real rate of interest, provided the basis for the Austrian account of the misallocation of capital during the boom. The market process that eventually reveals the intertemporal misallocation and turns boom into bust resembles an analogous process described by the British Currency School, in which international misallocations induced by credit expansion are subsequently eliminated by changes in the terms of trade and hence in specie flow.

The Austrian theory of the business cycle emerges straightforwardly from a simple comparison of savings-induced growth, which is sustainable, with a credit-induced boom, which is not. An increase in saving by individuals and a credit expansion orchestrated by the central bank set into motion market processes whose initial allocational effects on the economy's capital structure are similar. But the ultimate consequences of the two processes stand in stark contrast: Saving gets us genuine growth; credit expansion gets us boom and bust.

The general thrust of the theory, though not the full argument, can be stated in terms of the conventional macro-economic aggregates of saving and investment. The level of investment is determined by the supply of and demand for loanable funds, as shown in Figures 1a and 1b. Supply reflects the willingness of individuals to save at various rates of interest; demand reflects the willingness of businesses to borrow and undertake investment projects. Each figure represents a state of equilibrium in the loan market:

the market-clearing rate of interest is i , as shown on the vertical axis; the amount of income saved and borrowed for investment purposes is A , as shown on the horizontal axis.

An increase in the supply of loanable funds, as shown in both figures, has obvious initial effects on the interest rate and on the level of investment borrowing. But the market process plays itself out differently depending upon whether the increased supply of loanable funds derives from increased saving by individuals or from increased credit creation by the central bank.

Figure 1a shows the market's reaction to an increase in the thriftiness of individuals, as represented by a shift of the supply curve from S to S' . People have become more future-oriented; they prefer to shift consumption from the present to the future. As a result of the increased availability of loanable funds, the rate of interest falls from i to i' , enticing businesses to undertake investment projects previously considered unprofitable. At the new lower market-clearing rate of interest, both saving and investment increase by the amount AB . This increase in the economy's productive capacity constitutes genuine growth.

Figure 1b shows the effect of an increase in credit creation brought about by the central bank, as represented by a shift of the supply curve from S to $S + \Delta M$. Here it is assumed that people have *not* become more thrifty or future-oriented; the central bank has simply inflated the supply of loanable funds by injecting new money into credit markets. As the market-clearing rate of interest falls from i to i' , businesses are enticed to increase investment by the amount AB , while genuine saving actually falls by the amount AC . Padding the supply of loanable funds with newly created money holds the interest rate artificially low and drives a wedge between saving and investment. The low bank rate of interest has stimulated growth in the absence of any new saving. The credit-induced artificial boom is inherently unsustainable and is followed inevitably by a bust, as investment falls back into line with saving.

Even in this simple loanable-funds framework, many aspects of the Austrian theory of the business cycle are evident. The natural rate of interest is the rate that equates saving and investment. The bank rate diverges from the natural rate as a result of credit expansion. When new money is injected into credit markets, the injection effects, which the Austrian theorists emphasize

over price-level effects, take the form of too much investment. And actual investment in excess of desired saving, $-B$, constitutes what Austrian theorists call forced saving.

Other significant aspects of the Austrian theory of the business cycle can be identified only after the simple concept of investment represented in Figures 1a and 1b is replaced by the Austrian vision of a multistage, time-consuming production process. The rate of interest governs not only the level of investment but also the allocation of resources *within* the investment sector. The economy's intertemporal structure of production consists of investment subaggregates, which are defined in terms of their temporal relationship to the consumer goods they help to produce. Some stages of production, such as research and development and resource extraction, are temporally distant from the output of consumer goods. Other stages, such as wholesale and retail operations, are temporally close to final goods in the hands of consumers. As implied by standard calculations of discounted factor values, interest-rate sensitivity increases with the temporal distance of the investment subaggregate, or stage of production, from final consumption.

The interest rate governs the intertemporal pattern of resource allocation. For an economy to exhibit equilibrating tendencies over time, the intertemporal pattern of resource allocation must adjust to changes in the intertemporal pattern of consumption preferences. An increase in the rate of saving implies a change in the preferred consumption pattern such that planned consumption is shifted from the near future to the remote future. A savings-induced decrease in the rate of interest favors investment over current consumption, as shown in Figures 1a and 1b. Further—and more significant in Austrian theorizing—it favors investment in more durable over less durable capital and in capital suited for temporally more remote rather than less remote stages of production. These are the kinds of changes within the capital structure that are necessary to shift output from the near future to the more remote future in conformity with changing intertemporal consumption preferences.

The shift of capital away from final output—and hence the shift of output towards the more remote future—can also be induced by credit creation. However, the credit-induced decrease in the rate of interest engenders a *disconformity* between intertemporal resource usage and intertemporal consumption preferences. Market mechanisms that allocate resources

within the capital structure are imperfect enough to permit substantial intertemporal disequilibria, but the market process that shifts output from the near to the more remote future when savings preferences have not changed is bound to be ill-fated. The spending pattern of income earners clashes with the production decisions that generated their income. The intertemporal mismatch between earning and spending patterns eventually turns boom into bust. More specifically, the artificially low rate of interest that triggered the boom eventually gives way to a high real rate of interest as overcommitted investors bid against one another for increasingly scarce resources. The bust, which is simply the market's recognition of the unsustainability of the boom, is followed by liquidation and capital restructuring through which production activities are brought back into conformity with consumption preferences.

Mainstream macroeconomics bypasses all issues involving intertemporal capital structure by positing a simple inverse relationship between aggregate (net) investment and the interest rate. The investment aggregate is typically taken to be interest-inelastic in the context of short-run macroeconomic theory and policy prescription and interest-elastic in the context of long-run growth. Further, the very simplicity of this formulation suggests that expectations—which are formulated in the light of current and anticipated policy prescriptions—can make or break policy effectiveness. The Austrian theory recognizes that whatever the interest elasticity of the conventionally defined investment aggregate, the impact of interest-rate movements on the structure of capital is crucial to the maintenance of intertemporal equilibrium. Changes within the capital structure may be significant even when the change in net investment is not. And those structural changes can be equilibrating or disequilibrating depending on whether they are savings-induced or credit-induced, or—more generally—depending on whether they are preference-induced or policy-induced. Further, the very complexity of the interplay between preferences and policy within a multistage intertemporal capital structure suggests that market participants cannot fully sort out and hedge against the effects of policy on product and factor prices.

In mainstream theory, a change in the conventionally defined investment aggregate not accommodated by an increase in saving, commonly identified as *overinvestment* and represented as —B in Figure 1b, is often downplayed

on both theoretical and empirical grounds. In Austrian theory, the possibility of overinvestment is recognized, but the central concern is with the more complex and insidious *mal*investment (not represented at all in Figure 1b) which involves the intertemporal misallocation of resources within the capital structure.

Conventionally, business cycles are marked by changes in employment and in total output. The Austrian theory suggests that the boom and bust are more meaningfully identified with intertemporal misallocations of resources within the economy's capital structure followed by liquidation and capital restructuring. Under extreme assumptions about labor mobility, an economy could undergo policy-induced intertemporal misallocations and the subsequent reallocation with no change in total employment. Actual market processes, however, involve adjustments in both capital and labor markets that translate capital-market misallocations into labor-market fluctuations. During the artificial boom, when workers are bid away from late stages of production into earlier stages, unemployment is low; when the boom ends, workers are simply released from failing businesses, and their absorption into new or surviving firms is time-consuming.

Mainstream theory distinguishes between broadly conceived structural unemployment (a mismatch of job openings and job applicants) and cyclical unemployment (a decrease in job openings). In the Austrian view, cyclical unemployment is, at least initially, a particular kind of structural unemployment: the credit-induced restructuring of capital has created too many jobs in the early stages of production. A relatively high level of unemployment ushered in by the bust involves workers whose subsequent employment prospects depend on reversing the credit-induced capital restructuring.

The Austrian theory allows for the possibility that while malinvested capital is being liquidated and reabsorbed elsewhere in the economy's intertemporal capital structure, unemployment can increase dramatically as reduced incomes and reduced spending feed upon one another. The self-aggravating contraction of economic activity was designated as a "secondary depression" by the Austrians to distinguish it from the structural maladjustment that, in their view, is the primary problem. By contrast, mainstream theories, particularly Keynesianism, which ignore the intertemporal capital structure, deal exclusively with the downward spiral.

Questions of policy and institutional reform are answered differently by Austrian and mainstream economists because of the difference in focus as between intertemporal misallocations and downward spirals. The Austrians, who see the intertemporal distortion of the capital structure as the more fundamental problem, recommend monetary reform aimed at avoiding credit-induced booms. Hard money and decentralized banking are key elements of the Austrian reform agenda. Mainstream macroeconomists take structural problems (intertemporal or otherwise) to be completely separate from the general problem of demand deficiency and the periodic problem of downward spirals of demand and income. Their policy prescriptions, which include fiscal and monetary stimulants aimed at maintaining economic expansion, are seen by the Austrians as the primary source of intertemporal distortions of the capital structure.

Although the purging in the 1930s of capital theory from macroeconomics consigned the Austrian theory of the business cycle to a minority view, a number of economists working within the Austrian tradition continue the development of capital-based macroeconomics.

This "Summary" is adapted from Roger W. Garrison, "The Austrian Theory of the Business Cycle," in David Glasner, ed., *Business Cycles and Depressions: An Encyclopedia* (New York: Garland Publishing, 1996).